DEPARTMENT OF ENVIRONMENTAL QUALITY

DIRECTOR'S OFFICE

GREAT LAKES SHORELANDS

R 281.21 Definitions.

Rule 1. (1) As used in these rules:

(a) "Act" means Part 323 oF Act No. 451 of the Public Acts of 1994, as amended, being Section 324.32301 et seq. of the Michigan Compiled Laws, and known as shorelands protection and management.

(b) "Alteration of vegetation" means to change the natural density and composition of plants by human activity such as mowing, cutting, clearing, spraying, burning, trimming, thinning, and other means.

(c) "Erosion hazard line" means the line along the shoreland that is the landward edge of the zone of active erosion or the line where the 583.0 feet international Great Lakes datum contour on Lake Michigan, the 582.2 feet international Great Lakes datum contour on Lake Huron, or the 603.3 feet international Great Lakes datum contour on Lake Superior meets the shoreland, whichever is furthest landward.

(d) "High bluff" means a bluff or dune that is more than 25 feet in height measured from the appropriate elevation contour set forth in the definition of erosion hazard line.

(e) "Low bluff" means a bluff or dune that is 25 feet or less in height measured from the appropriate elevation contour set forth in the definition of erosion hazard line.

(f) "Nonconforming structure" means a permanent structure which does not conform to the required setback distance at the time of designation or which became nonconforming due to erosion or became nonconforming due to a change in the required setback distance. Permanent structures that are constructed in violation of these rules shall not be considered to be nonconforming structures.

(g) "One hundred-year flood" means a flood that has a l% chance of being equaled or exceeded in any given year.

(h) "Parcel" means a continuous area or acreage of land that is under the same ownership at the time of designation.

(i) "Permanent structure" means any 1 of the following structures that is erected, installed, or moved on a parcel of property:

(i) A residential building.

(ii) A commercial building.

(iii) An industrial building.

(iv) An institutional building.

(v) A mobile home.

(vi) Accessory and related buildings.

(vii) A swimming pool or deck that has a roof or walls.

(viii) Septic systems.

(ix) File fields.

(x) Other waste-handling facilities.

A permanent structure shall be considered small if it has a foundation size of 3,500 square feet or less and less than 5 individual living units. All other permanent structures shall be considered large. "Permanent structure" does not include recreational vehicles, travel trailers, swimming pools, or decks constructed on pilings if the pool or deck does not have a roof or walls. A "Permanent Structure" also does not include separate appurtenant structures which have less than 225 square feet, which are used for picnicking or storing of recreational or lawn equipment, and which are constructed in a manner that facilitates easy removal. The appurtenant structure shall not have a permanent foundation and shall not be used as a residential facility.

(j) "Projected recession distance" means the distance, in feet, determined by the department under R 281.22.

(k) "Readily moveable structure" means a small permanent structure which is designed, sited, and

constructed to accomplish relocation at a reasonable cost relative to other structures of the same size and construction. Access to and from the site shall be of sufficient width and acceptable grade to permit the structure to be relocated. New construction and installations shall meet the following criteria to be considered readily moveable structures:

(i) The buildings shall be on pilings, a basement, or crawl space. Except as noted in paragraph (ii) of this subdivision, a slab-on-grade foundation does not meet this criterion.

(ii) Above-grade walls shall be stud wall or whole log construction. Above-grade walls that are constructed of masonry, including stone walls, concrete poured, or concrete block walls do not meet this criterion. Existing permanent structures shall be considered readily moveable structures if the cost of relocation landward of the required setback distance is not more than 25% of the replacement cost of the structure or if the existing structure meets the criteria for new construction in this subdivision. A 1- or 2-car garage which is bolted to a slab foundation and which does not have plumbing or interior walls is a readily moveable structure if it meets the remainder of the requirements specified in this subdivision. Septic systems, tile fields, or other waste-handling facilities are not readily moveable structures.

(l) "Required setback distance" means the least distance a permanent structure can be constructed from the erosion hazard line without a special exception. The required setback distance is calculated using the following criteria:

(i) For low bluffs, the required setback distance shall be at the projected recession distance from the erosion hazard line.

(ii) For high bluffs, the required setback distance is calculated by adding 1.0 to the product of the percentage points of slope over 25% and 0.05 to a maximum of 2.O. The answer is multiplied by the projected recession distance in feet. The following table shows sample calculations using this formula:

Percent Slope	**1.0**	**(Percent Slope over 25% x 0.05)**	**Required Setback Multiplier**
25	1.0+	(0 x 0.05) =	1
30	1.0+	(5 x 0.05) =	1.25
35	1.0+	(10 x 0.05) =	1.5
40	1.0+	(15 x 0.05) =	1.75
45	1.0+	(20 x 0.05) =	2.0

The slope of the bluff or dune is measured over a 50-foot distance on the lower portion of the lakeward facing slope of the dune or bluff.

(iii) The required setback distance shall not be greater than the projected recession distance from the top of the lakeward facing slope of a dune or bluff.

(iv) For bluffs and dunes which have slopes of more than 60% and which are more than 100 feet in elevation above the appropriate lake elevation set forth in the definition of erosion hazard line, the required setback distance shall be established not less than 30 feet landward of the lakeward facing slope of the dune or bluff.

(m) "Structure zone" means an area within an environmental area where a permit under this part is not required to engage in the activities specified in R 281.23(6).

(n) "Setback line" means the line which is the required setback distance landward of the erosion hazard line and which is the lakeward limit for the construction of permanent structures without a special exception.

(o) "Substandard parcel" means a lot or parcel of record or a lot or parcel which is described in a land contract or deed that is executed and delivered before the designation of a high-risk erosion area and which does not have adequate depth to provide the required setback distance from the erosion hazard line for a permanent structure. "Substandard Parcel" also means those lots which are legally created after the designation of a high-risk erosion area and which have sufficient depth to meet setback requirements for permanent structures, but which subsequently become substandard due to erosion processes or become substandard due to a change in the required setback distance.

(p) "Wetland-oriented birds" means any of the following:

(i) Waterfowl.

(ii) Shorebirds.

(iii) Gulls.
(iv) Terns.
(v) Herons.
(vi) Rails.
(vii) Bitterns.
(viii) Other birds associated with coastal or wetland areas.
(q) "Wetland-oriented mammals" means any of the following:
(i) Muskrats.
(ii) Mink.
(iii) Beavers.
(iv) Otter.
(v) Other mammals associated with coastal or wetland habitats.
(r) "Zone of active erosion" means the area of the shoreland where the disturbance or loss of soil and substrate has occurred with sufficient frequency to cause unstable slopes or prevent vegetation of the area.
(2) The terms defined in the act have the same meanings when used in these rules.
History: 1954 ACS 96, Eff. Aug. 17, 1978; 1979 AC; 1979 ACS 9, Eff. Dec. 29, 1981; 1992 MR 4, Eff. May 2, 1992; 1998 MR 8, Eff. Sep. 16, 1998.

R 281.22
Source: 1992 AACS.

R 281.23 Environmental areas.

Rule 3. (1) In determining whether an area is necessary for the preservation and maintenance of fish, all of the following uses shall be considered:
(a) Spawning, which is the placement and fertilization of eggs by fish for the propagation of young fish.
(b) Nursery, which is the utilization of an area by young fish as a sheltered habitat in which to feed and grow.
(c) Feeding, which is the process of obtaining and ingesting plant or animal matter necessary for maintaining growth and life functions.
(d) Protection, which is the utilization of an area as escape cover from predators or unsuitable environmental conditions.
(e) Migration, which is a daily or seasonal movement.
(2) In determining whether an area is necessary for the preservation and maintenance of wildlife, all of the following uses by wetland-oriented birds and wetland-oriented mammals shall be considered:
(a) Breeding, which is the process of courting, pairing, and mating.
(b) Nesting, which is the process of laying, incubating, and hatching eggs.
(c) Rearing of young, which is the feeding and protection of young.
(d) Feeding, which is the process of obtaining and ingesting plant or animal matter necessary for maintaining growth and life functions.
(e) Resting, which is a period of inactivity in the daily routine or seasonal migration.
(3) Not less than 30 days before designation of environmental areas, the department shall mail predesignation letters to affected landowners of record as shown in the last assessment rolls. The letter shall explain that the property is being considered for designation as an environmental area and shall invite comments from the affected landowners. The department shall schedule a meeting before designation to explain the proposed designation to property owners and local governmental agencies.
(4) The department shall designate environmental areas determined to be necessary for the preservation and maintenance of fish or wildlife, or both. The department shall personally deliver the notice of designation or send it by certified mail to the landowner of record at the address given in the last assessment roll and to the local governmental agency.
(5) The notice of designation to affected landowners and local governmental agencies shall include all of the following information:
(a) The authority and reasons for designation of environmental areas.
(b) A description or map of the limits of the environmental area.

(c) An explanation of any regulatory measures that may be required in environmental areas and the regulatory role of the local governmental agency.
(d) The procedure by which the designation may be appealed.
(6) The following shoreland uses in an environmental area require a permit from the department in accordance with these rules or from a local governmental agency under an ordinance approved by the department:
(a) Dredging, filling, grading, or other alterations of the soil.
(b) Alteration of natural drainage, but not including the reasonable care and maintenance of established drainage improvement works. A permit is not required for maintenance of existing dikes.
(c) Alteration of vegetation utilized by fish or wildlife, or both, for the uses covered in subrules (1) and (2) of this rule. A permit may be issued if the department finds that the alteration of vegetation is dependent upon being located in an environmental area, no other feasible and prudent alternatives exist, and that the alteration will not adversely impact essential fish or wildlife habitat. A permit is not required for the following:
(i) The removal of tree branches that threaten existing permanent structures or public safety.
(ii) The pruning of trees that have a diameter at breast height of 3 inches or more for a view of a Great Lake if the area being pruned does not exceed 40 feet in width and 10 feet above ground level.
(iii) Maintenance of previously permitted trails and boardwalks through environmental areas. Maintenance is limited to the trail or boardwalk surface to a height of 10 feet above the ground.
(d) The placement of permanent structures.
(7) Farming of lands within the environmental area is allowed without a permit if all of the following provisions are complied with:
(a) Artificial draining, diking, dredging, or filling is not used.
(b) The natural contour of the land is not altered.
(c) Only normal farming implements and generally accepted agricultural practices are used.
(d) The environmental area is utilized by a person who is engaged in the business of farming, and the land is to be used for the production and harvesting of agricultural products.
(8) The pumping of water into an environmental area is allowed without a permit.
(9) A structure zone that is not more than 12,000 square feet shall be delineated for all parcels of land which are totally included within the boundaries of an environmental area at the time of designation. Structure zones will typically be located adjacent to or in proximity to existing roadways, within upland ridges or previously disturbed areas, and to minimize human disturbance to surrounding fish and wildlife habitat. The structure zone shall be configured to minimize fragmentation of the environmental areas. If a parcel has less than 12,000 square feet of land outside the environmental area, then a structure zone shall be delineated which, in conjunction with the land outside the environmental area, shall total 12,000 square feet. Use of a structure zone is subject to all other statutes, ordinances, and rules and regulations.
(10) The department shall consider additional environmental areas as may be proposed by local governmental agencies, citizens, or interested groups.
(11) In the absence of an approved zoning ordinance enacted under sections 7,8,9, and 10 of the act, any person or local governmental agency proposing one of the uses regulated in subrule (6) of this rule outside the structure zone or proposing a change in the location of a structure zone shall submit to the department a permit application for the proposed use. The permit application shall contain all of the following:
(a) A legal description of the property.
(b) A drawing of the site with the proposed project clearly shown.
(c) A detailed description of the proposed project.
(d) The signature and address of the applicant.
(12) A permit application, as described in subrule (11) of this rule, shall be approved if both of the following conditions are satisfied:
(a) The adverse effects to the uses described in subrules (1) and (2) of this rule are minimal and are mitigated to the maximum extent feasible.
(b) A feasible and prudent alternative to the proposed plan is not available.
(13) Not more than 60 days after receipt of a permit application, the department shall send to the applicant, by certified mail, a notice of its approval or disapproval. In case of disapproval, the department shall state

the reasons for disapproval. The department shall process a permit application that does not require field investigation within 20 days.
(14) Approval of a permit does not exempt the applicant from complying with other statutes, ordinances, and rules and regulations.
(15) Any aggrieved party that contests the designation of an environmental area or the disapproval of a permit application shall be granted a hearing if the party files a petition with the department not more than 60 days after the designation letter or the notice of disapproval is sent. The party shall send the petition to the director of the Department of Environmental Quality, P.O. BOX 30458, Lansing, Michigan 48909-7958. The department shall conduct the hearing in accordance with sections 71 to 87 of Act No. 306 of the Public Acts of 1969, as amended, being "24.271 to 24.287 of the Michigan Compiled Laws, and R 299.3071 to R 299.3081 of the Michigan Administrative Code.
(16) The department shall send the landowner of record and the local governmental agency a notice by certified mail if the environmental area designation is removed.
(17) All environmental area designations in existence on the effective date of these rules shall remain in full force and effect.
History: 1954 ACS 96, Eff. Aug. 17, 1978; 1979 AC; 1979 ACS 9, Eff. Dec. 29, 1981; 1998 MR 8, Eff. Sep. 16, 1998.

R 281.24
Source: 1992 AACS.

DEPARTMENT OF NATURAL RESOURCES
LAND AND WATER MANAGEMENT DIVISION
BETSIE RIVER NATURAL RIVER ZONING

R 281.31—R 281.41
Source: 1997 AACS.

WHITE RIVER NATURAL RIVER ZONING

R 281.71—R 281.82
Source: 1997 AACS.

PERE MARQUETTE RIVER NATURAL RIVER ZONING

R 281.101—R 281.114
Source: 1997 AACS.

BETSIE RIVER NATURAL RIVER ZONING

R 281.131
Source: 1992 AACS.

R 281.132
Source: 1992 AACS.

R 281.133
Source: 1992 AACS.

R 281.134
Source: 1992 AACS.

R 281.135
Source: 1992 AACS.

R 281.136
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R 281.137
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R 281.138
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R 281.139
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R 281.140
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R 281.141
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R 281.142
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R 281.143
Source: 1992 AACS.

R 281.144
Source: 1992 AACS.

R 281.145
Source: 1992 AACS.

HURON RIVER NATURAL RIVER ZONING

R 281.151
Source: 1981 AACS.

R 281.152
Source: 1981 AACS.

R 281.153
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R 281.154
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R 281.162
Source: 1981 AACS.

R 281.163
Source: 1981 AACS.

R 281.164
Source: 1981 AACS.

RIFLE RIVER NATURAL RIVER ZONING

R 281.171—R 281.184
Source: 1997 AACS.

ROGUE RIVER NATURAL RIVER ZONING

R 281.201
Source: 1981 AACS.

R 281.202
Source: 1981 AACS.

R 281.203
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R 281.213
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R 281.214
Source: 1981 AACS.

FLAT RIVER NATURAL RIVER ZONING

R 281.221
Source: 1985 AACS.

R 281.222
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R 281.234
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BOARDMAN RIVER NATURAL RIVER ZONING

R 281.251
Source: 1981 AACS.

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PIGEON RIVER NATURAL RIVER ZONING

R 281.271
Source: 1985 AACS.

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R 281.284
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AU SABLE RIVER NATURAL RIVER ZONING

R 281.321
Source: 1990 AACS.

R 281.322
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R 281.323
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R 281.334
Source: 1990 AACS.

PERE MARQUETTE RIVER NATURAL RIVER ZONING

R 281.341
Source: 1992 AACS.

R 281.342
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R 281.355
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RIFLE RIVER NATURAL RIVER ZONING

R 281.361
Source: 1992 AACS.

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WHITE RIVER NATURAL RIVER ZONING

R 281.381
Source: 1992 AACS.

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R 281.395
Source: 1992 AACS.

DEPARTMENT OF ENVIRONMENTAL QUALITY

DIRECTOR'S OFFICE

SAND DUNE AREAS

R 281.408
Source: 1981 AACS.

R 281.409
Source: 1981 AACS.

R 281.410
Source: 1981 AACS.

R 281.411
Source: 1981 AACS.

R 281.412
Source: 1981 AACS.

R 281.413
Source: 1981 AACS.

DEPARTMENT OF ENVIRONMENTAL QUALITY

LAND AND WATER MANAGEMENT DIVISION

INLAND LAKES AND STREAMS

R 281.814 Environmental assessment.

Rule 4. In each application for a permit, all existing and potential adverse environmental effects shall be determined and the department shall not issue a permit unless the department determines both of the following:

(a) That the adverse impacts to the public trust, riparian rights, and the environment will be minimal.

(b) That a feasible and prudent alternative is not available.

History: 1954 ACS 79, Eff. May 11, 1974; 1979 AC; 1985 MR 11, Eff. Nov. 21, 1985; 2000 MR 8, Eff. Jun. 15, 2000.

R 281.816 Minor project categories.

Rule 6. (1) Upon receipt of an application for a permit for any of the following minor projects, the department may act upon the application as provided in section 30105(6) of the act:

(a) Noncommercial piers, docks, and boat hoists that meet all of the following design criteria:

(i) The length or size of the proposed structure is not greater than the length or size of similar structures in the vicinity and on the watercourse and will not unreasonably interfere with the navigability or boatability of the water involved.

(ii) Free littoral flow of water and drift material is provided for.

(iii) Clean, nonpolluting materials will be used for the construction.

(iv) The structure is a single pier or dock appurtenant to the applicant's upland or is an added boat hoist, minor pier, or extension to the existing boat hoist, pier, or dock.

(b) Spring piles and pile clusters that meet all of the following design and purpose criteria:

(i) The location, number, and purpose for placement is usual for such projects in the vicinity and watercourse involved.

(ii) All piles and other materials used in their placement are clean, nonpolluting materials.

(iii) The location and placement will not create an obstruction to navigation.

(c) Seawalls, bulkheads, and other permanent revetment structures that meet all of the following purpose and design criteria:

(i) The proposed structure fulfills an identifiable need for erosion protection, bank stabilization, or the protection of, or improvements on, uplands.

(ii) The structure will be constructed of suitable materials free from pollutants, waste metal products, debris, or organic materials.

(iii) The structure is not more than 300 feet in length and is located in an area on the body of water where other similar structures already exist. However, the department shall provide written notification to the adjoining riparian property owners for structures more than 200 feet in length. The department shall not complete action upon applications for such structures that are more than 200 feet in length for a period of 7 days from the mailing of the notification to allow adjoining riparian owners the opportunity to comment.

(iv) The placement of backfill or other fill associated with the construction does not exceed an average of 2 cubic yards per running foot along the shoreline and a maximum of 300 cubic yards.

(v) The structure or any associated fill will not be placed in a wetland area or placed in any manner that impairs surface water flow into or out of any wetland area.

(d) Filling for the creation and improvement of swimming areas and beaches, the restoration of existing permitted fills, fills placed incidental to construction of other structures, and fills that do not exceed 300 cubic yards as a single and complete project that meet both of the following design criteria:

(i) The fill is of suitable material free from pollutants, waste metal products, debris, or organic materials.

(ii) Fill for the improvement of swimming areas or beaches, utilizing clean sand or gravel, will not exceed a blanket depth of 6 inches and will not be placed in a water depth exceeding 4 feet.

(e) Dredging for the maintenance of previously dredged areas or dredging of not more than 300 cubic yards as a single and complete project when both of the following criteria are met:

(i) No reasonable expectation exists that the materials to be dredged are polluted.

(ii) All dredging spoils will be removed to an upland site exclusive of wetland areas.
(f) Construction of bridges and culverts, whether new, replacement, or temporary, and the removal of bridges or culverts with the restoration of the crossing site that meet all of the following criteria:
(i) The bridge or culvert structure proposed is of a type and design, including certifications, described by 1 of the following:
(A) A clear span bridge that has the lowest bottom of beam elevation at or above the natural ground elevations on either bank and the approach fill sloping to natural ground elevations is within 10 feet on either end of the bridge.
(B) A culvert which has an effective waterway opening that equals or exceeds the cross-sectional area of the channel, which has fill over the culvert that is not more than 1.5 feet, and which has approach fill that slopes to natural ground elevations within 10 feet of either side of the culvert.
(C) The proposed structure is a replacement stream crossing which fully spans the bottomlands and the owner or the owner's engineering consultant certifies that the proposed structure is of equal or greater hydraulic capacity, that deletion of auxiliary waterway openings is not planned, and that available information does not indicate the presence of a harmful interference.
(D) The proposed structure is a new stream crossing structure that fully spans the bottomlands. The design of the structure is certified by a registered professional engineer to pass the 100-year flood, as determined by the department, without causing harmful interference. The certification includes hydraulic waterway design calculations.
(E) The proposed structure is a new or replacement structure to be placed on an upland channel or similar artificially constructed waterway where consideration for the passage of flow is not a significant design factor.
(F) The proposed structure is an extension of an existing bridge or culvert where the total extended length does not exceed 24 feet.
(ii) The structure will provide sufficient underclearance to facilitate passage of watercraft that could be expected to navigate the waters involved.
(iii) The total volume of fill to be placed below the ordinary high watermark for placement of the structure does not exceed 200 cubic yards.
(iv) The removal of existing structures will be conducted without dropping demolition materials in the watercourse, and haul roads, work pads, or other structures to facilitate the removal will not be placed below the ordinary high watermark.
(v) The structures will be designed and placed to assure that any increase in stream erosion or downcutting is prevented.
(g) Watercourse crossings by utilities, pipelines, cables, and sewer lines that meet all of the following design criteria:
(i) A minimum of 30 inches of cover will be maintained between the top of the cable or pipe and the bed of the stream or other watercourse on buried crossings.
(ii) The method of construction proposed is the least disturbing to the environment employable at the given site.
(iii) Any necessary backfilling will be of washed gravel.
(iv) The diameter of pipe, cable, or encasement does not exceed 20 inches.
(h) Dredging and construction or enlargement of ponds, lagoons, ditches, stormwater management basins, and similar artificial waterways if the proposed activity meets both of the following criteria:
(i) The artificial watercourse will have a surface area of less than 5 acres and have no direct connection to an existing inland lake or stream.
(ii) The resulting spoils will be placed on an appropriate upland site in a manner that will not impair flood flows or be eroded into public waters.
(i) Structural repair of man-made structures that meets all of the following design and purpose criteria:
(i) The repair will not alter the original use of a currently serviceable structure.
(ii) The repair will not adversely affect public trust values or interests, including navigation, fish migration, and water quality.
(iii) Any materials used for repair will be made of nonpolluting materials.
(j) Fish or wildlife habitat structures that meet all of the following criteria:

(i) The structures are placed so as not to impede navigation or create a navigational hazard.
(ii) The structures are anchored to the bottomlands.
(iii) The structures are constructed of nonpolluting materials.
(iv) The structure placement has the written authorization of the riparian owner and the appropriate department district fisheries or wildlife biologist, or both.
(k) Scientific structures, such as staff gauges, water monitoring devices, water quality testing devices, survey devices, and core sampling devices, that meet all of the following design and purpose criteria:
(i) The structures do not impede navigation or create a navigational hazard.
(ii) The devices are constructed of nonpolluting materials.
(iii) The placement of any scientific structure has the written authorization of the riparian owner.
(l) Navigational aids that meet either of the following criteria:
(i) The aids are approved by the United States coast guard.
(ii) The aids are approved under part 801 of the act.
(m) Extension of a project under a current permit that will not result in any damage to natural resources.
(n) Physical removal of man-made structures or natural obstructions that meet all of the following criteria:
(i) The debris and spoils shall be removed to an upland site in a manner that will not impair flood flows or be eroded into public waters.
(ii) The stream bank or shoreline and bottom contours shall be restored to an acceptable condition.
(iii) Upon completion of structure removal, the site does not constitute a safety or navigational hazard.
(iv) Department staff shall consider fisheries and wildlife resource values when evaluating applications for natural obstruction removal.
(o) Lake or impoundment drawdowns or the associated reflooding, or both, that meet the following design and purpose criteria:
(i) The purpose of the drawdown is described by 1 of the following criteria:
(A) The drawdown is temporary in nature for the purpose of inspection to determine the integrity of the impounding structure.
(B) The drawdown is associated with the routine operations of fish or wildlife floodings, ponds, or impoundments where the purpose of the drawdown is the enhancement or production of fish, wildlife, or associated habitat.
(C) A drawdown authorized by court order under the provisions of part 307 of the act if the court has incorporated the department requirements into the court order or concurred in department recommendations to address environmental concerns under part 301 of the act.
(ii) The potential adverse environmental effects of the drawdown have been determined to be minimal under R 281.814.
(p) Seismic cables across lakes and streams which are temporary in nature and which will be clearly identifiable by recreationists normally expected to use the body of water.
(q) Aquatic weed bottomland barriers that do not exceed 1600 square feet singly or in combination and that are installed with an anchoring system to assure permanent placement.
(r) Dry fire hydrant installations where the intake line will not interfere with navigability of the water involved.
(s) Storm water outlet structures where the activities do not exceed criteria of the designated minor project criteria for filling or dredging.
(t) Off line storm water basins constructed for storm water management that provide retention/detention and sediment settling or filtration before discharge.
(u) Boat ramps designed for single-family, private usage where the installation will not involve more than 10 cubic yards of dredging, with upland disposal, or filling.
(v) Aquatic plant removal with mechanical equipment designed to operate by air or water pressure or by raking or rolling actions if the treatment areas are 1600 square feet or less, if the water depth is 4 feet or less, and if the uprooted floating debris is removed and disposed of within upland areas.
(w) Recreational mineral (gold) prospecting by mechanical methods, such as portable (backpack) suction dredges or sluice boxes, if the activity is for recreational reasons only and if all of the following conditions are met:
(i) Individual prospecting areas are 300 square feet or less per location.

(ii) The intake nozzle for suction dredges is 2 inches in diameter or less.
(iii) Prospecting will not be done before July 1 or after August 31.
(iv) Stream bank excavation will not occur.
(v) The stream bottom is predominately gravel.
(x) Ditch plugs with or without water flow controls if the purpose is to reestablish the hydrology to previously drained areas, if all impacted parties acknowledge and provide their written authorizations, and if the proposed activities do not exceed other minor project criteria.
(2) The department shall process applications determined not to meet the minor project criteria of subrule (1) of this rule in accordance with section 30105(2) of the act.
History: 1979 ACS 10, Eff. Mar. 31, 1982; 1985 MR 11, Eff. Nov. 21, 1985; 2000 MR 8, Eff Jun. 15, 2000.

R 281.817 Minor drainage structures and facilities.

Rule 7. All of the following structures are minor drainage structures and facilities that do not require a permit under section 30103(f) of the act:
(a) Cross road culverts that serve only to equalize the existing water surfaces at the ends of the culvert.
(b) Cross road culverts constructed to continue the existence of drainage courses other than inland lake and streams.
(c) Roadside ditches which serve to convey storm water runoff from the highway right-of-way and which do not serve as a stream.
(d) Standard appurtenances, including riprap or other shore protection, for storm water runoff facilities, such as manholes, catch basins, headwalls, and outlets from off-line water retention/detention systems.
History: 1979 ACS 10, Eff. Mar. 31, 1982; 2000 MR, Eff. Jun. 15, 2000.

R 281.819 Marina operating permit application and renewal; criteria for processing.

Rule 9.(1) In acting upon an application for marina operating permit, the department shall not issue a permit unless the department determines that the facility meets all of the following criteria:
(a) The facility does not unreasonably affect the public trust or riparian interests.
(b) Ingress and egress are within the riparian owner's interest area or written authorization is secured from the adjacent owner whose riparian or property interest is or may be affected.
(c) The increased use brought about by the marina, and the increased use attributable to the marina will not create congestion or safety problems or aggravate existing recognized congestion or safety problems.
(d) Operation of the facility will not destroy or adversely impair the use of the waters or natural resources of the state.
(e) The facility is not aesthetically displeasing and conforms to similar structures and activities in the area on similar watercourses.
(f) The facility has adequate parking space to accommodate anticipated users.
(g) The facility is in compliance with local zoning ordinances. If the facility is not in compliance and if the local unit of government having proper jurisdiction notifies the department at the time of public notice objecting to the issuance of a permit, the department shall withhold permit issuance for 30 days from the date of the expiration of the public notice. If the local unit of government does not file an action to restrain operation of the facility in a public forum within the specified 30-day time frame, then the department may issue a permit for marina operation if all other criteria are met.
(h) The structures do not constitute a safety or navigational hazard and are in good repair.
(i) The potential adverse environmental effects of operating a marina have been determined under R 281.814.
(2) If the marina facility meets the criteria specified in subrule (1) and is constructed in accordance with the plans, specifications, and terms and conditions of the department construction permit, and is otherwise lawful, then the department shall issue the marina operating permit for a period of up to 3 years. The marina operating permit is subject to review and renewal by the department.
(3) The department shall use the following procedure for applications to renew marina operating permits:
(a) In October of the year that the marina operating permit expires, department staff send the marina owner/operator the application for renewal together with a copy of the authorized site plan for the facility.
(b) The permittee shall complete the marina operating permit renewal application, sign and date the site

plan verifying that the site plan represents the current marina configuration, and return the plan, marina renewal application, and the required fee to the department.
(c) Upon submittal of the information specified in subdivision (b) of this subrule, and upon a site inspection, if necessary, the department shall renew the marina operating permit for the facility for a period of 3 years, with the date of the expiration at the end of the calendar year.
(d) If the requested information specified in subdivision (b) of this subrule is returned and is determined to be incomplete, then department staff shall return the forms to the permittee identifying the required information to make the renewal application complete. Upon submittal of the required information, the department shall review the marina operating permit under subdivision (c) of this subrule. If the forms are not returned, then the department may initiate appropriate action to bring the facility into compliance.
History: 1979 ACS 10, Eff. Mar. 31, 1982; 1985 MR 11, Eff. Nov. 21, 1985; 2000 MR 8, Eff. Jun. 15, 2000.

R 281.832 Pipelines and conduits generally.

Rule 22. (1) In the planning stages for pipeline and other utility water course crossings, the applicant shall consider and evaluate the economic and environmental feasibility of using existing utility corridors for new installations. Applicants shall also consider and evaluate the economic and environmental feasibility of using directional drilling/boring technology and other available methods to conduct lake and stream crossings. Based on the applicant's evaluations, the applicant shall propose to use corridors and watercourse crossing methods that, with all factors considered, represent the least overall environmental impact while still allowing the project to be completed in a reasonable and cost effective time frame.
(2) The use of directional drilling/boring methods to conduct lake and stream crossings will not be regulated by part 301 of the act if all of the following provisions are satisfied:
(a) A minimum of 10 feet is maintained from the top of the conduit and the bottom of the lake or stream.
(b) The entry and exit points are located far enough away from the lake or stream banks to assure that bank disturbance does not occur.
(c) The drilling or boring sites (pits) are located outside of any applicable natural river designation setback requirements.
(d) The drilling or boring operations will not result in the eruption/release of any drilling fluids up through the ground and into the lake or stream. If, however, the eruptions/releases occur below the ordinary high watermark of the water body, then an after-the-fact permit application shall be submitted with a detailed description of how the crossing was completed, how the eruption was minimized, contained, and cleaned up, and how the site was restored.
(3) As part of the permit application other than as specified in subrule (2) of this rule, an applicant shall submit to the department 5 copies of general construction plans, including, but not limited to, a complete route map that identifies each lake, stream, and wetland crossing, soil erosion control plans, if a soil erosion and sedimentation control permit from the state is required, and an explanation, together with plans and specifications, of the methods to be used to complete all crossings. Before solicitation of bids and acquisition of rights-of-way, a permit applicant may submit an application to the department for review and permit issuance under part 301 of the act.
(4) If either the department or the applicant deem it necessary, a preconstruction meeting shall be held in order to thoroughly acquaint all concerned parties with the measures that must be taken to minimize erosion and siltation and properly protect the natural resources in the project area.
(5) A permittee shall give the department 10 days' written notice before beginning work.
(6) A permittee shall take all necessary steps to prevent damage to fish and game habitat and to preserve the natural resources of the state. A permittee shall carry out excavation so as to minimize the discharge of damaging material into any stream, lake, or reservoir.
(7) A permittee shall complete the work of clearing, scalping, grading, slope erosion protection, ditching, backfilling, and final cleanup within 50 feet of streams, lakes, and reservoirs within as short a period as reasonably possible, but not more than 24 hours, in order to minimize erosion occurring from wind and precipitation.
(8) A permittee shall complete final site stabilization measures within 3 days of completing the final site grading and final site cleanup.
(9) A permittee shall stop trench excavation on any 1 spread when 10,000 feet remain open, except as

authorized in the permit issued by the department.
(10) A permittee shall accomplish replacing bank plugs and grading stream banks within 50 feet immediately after laying pipe.
History: 1954 ACS 79, Eff. May 11, 1974; 1979 AC; 2000 MR, Eff. Jun. 15, 2000.

R 281.833 Rescinded.
History: 1954 ACS 79, Eff. May 11, 1974; 1979 AC; rescinded 2000 MR 8, Eff. Jun. 15, 2000.

R 281.834 Sedimentation basins and cofferdams.

Rule 24. (1) A permittee shall construct sedimentation basins or cofferdams, where required by permit condition, before any other work is performed at the site crossing. The permittee shall maintain sediment removal efficiency of sediment basins during the development period by regular cleaning of sediment from the basins and proper spoil disposal. A detail sketch of a sediment basin is available on request from the department.
(2) A permittee shall remove temporary weirs or cofferdams, including any materials trapped by them in the control of siltation, within 2 weeks of final cleanup. The department may require the intermittent removal of silt or sand by the permittee during construction for proper operation of sedimentation basins. In any event, a permittee shall clean the sedimentation basins before removal of weirs and coffer dams.
(3) A permittee shall construct weirs of continuous interlocking steel sheeting, except where the department authorizes other substitute materials. When specified by the department, a permittee shall furnish a detail sheet of the weir installation.
(4) A applicant is responsible for securing the necessary approval of private land owners where temporary additional right-of-way or easement is necessary to construct and operate a settling basin. An easement is not required in locations where the crossing is made on state-owned lands.
History: 1954 ACS 79, Eff. May 11, 1974; 1979 AC; 2000 MR, Eff. Jun. 15, 2000.

R 281.835 Haul roads.

Rule 25. (1) The method for crossing streams where temporary haul roads are being constructed shall involve technologically available clear span structures, such as bailey bridges or flat beds or, alternatively, haul roads shall be constructed of coarse aggregate with culverts or logs, or both, laid parallel to the stream. A permittee may use only course aggregate or metal or wood mats as a running surface on log construction. A permittee shall protect the side slopes with permanent riprap, as specified in R 281.837, up to a level 2 rows above the normal water level and over the ends of the culverts.
(2) A permittee shall ensure that permanent haul roads crossing streams, that is roads that are to be left in place at the request of the property owner comply with part 31 of the act. The property owner shall submit plans and specifications for the crossing to the department together with his application for a permit to construct the facilities.
(3) A permittee shall ensure that both temporary and permanent haul roads have adequate top width to permit passage of all construction equipment without sloughing of side slopes.
(4) A permittee shall ensure that culverts which are of an adequate size and length and which are approved by the department are utilized in the construction of both temporary and permanent haul roads.
(5) The fording of streams which causes only minimal disturbance of stream banks or bottomland and which results in no more than momentary sedimentation or siltation is not regulated by this rule. Where temporary fording areas are potentially available to the public, such as along utility easements, a permittee shall place vehicle barriers to deter continuous use by the public for reasons other than the original purpose of the ford.
History: 1954 ACS 79, Eff. May 11, 1974; 1979 AC; 2000 MR, Eff. Jun. 15 2000.

R 281.837 Stream bank protection; pipeline and utility projects.

Rule 27. (1) Following the installation of the pipeline or cable, A permittee shall immediately restore all work areas along or across streams or lakes and shall stabilize the exposed beds and banks within 7 days, except where subsequent permission is provided for a pumping and testing operation.
(2) A permittee shall ensure that all disturbed stream banks have a finished slope not steeper than 1 vertical

to 2 horizontal to prevent sloughing until stabilized by vegetative cover or riprap. A permittee shall ensure that the 1 on 2 slope is graded up and back to the high waterline. A permittee shall ensure that if the top of the natural bank is more than 3 feet above the high waterline, a minimum 10-foot long berm is constructed at the highwater line and the remaining slope is constructed upward parallel with, or on a flatter slope than, the original natural bank.

(3) A permittee shall ensure that all raw soil exposed above the permanent riprap protection line is sodded, riprapped, or seeded, fertilized, and mulched. A permittee may use temporary riprap (sandbags).

(4) A permittee shall ensure that mulching, seeding, and fertilizing is done in accordance with natural resource conservation service standards and specific soil test analysis for appropriate fertilizer application rates.

(5) A permittee shall ensure that permanent riprap is placed from the bed of the channel to an elevation necessary to assure bank stabilization. A permittee shall ensure that permanent riprap is a 5-to-1 mix of sand to cement in burlap or canvas bags or biodegradable sacks, fitted broken concrete, properly sized rock, or other material approved by the department. A permittee shall ensure that riprap is free of protruding reinforcing metal.

(6) A permittee shall ensure that deflecting dikes, which are reinforced by 1 row of sandbags, are used to divert runoff and minimize slope erosion from steep slopes adjacent to water crossings where the contributing runoff could be great enough to cause slope erosion. A permittee shall ensure that water is diverted to undisturbed areas adjacent to the right-of-way.

(7) A permittee shall ensure that deflecting dikes are placed along the top of all stream banks where the entire slope is not protected with riprap. A permittee shall also place deflecting dikes at the top of, and at 100-foot intervals or less on, slopes greater than 20%.

History: 1954 ACS 79, Eff. May 11, 1974; 1979 AC; 1979 ACS 10, Eff. Mar. 31, 1982; 1985 MR 11, Eff. Nov. 21, 1985; 2000 MR, Eff. Jun. 15, 2000.

R 281.843 Hearings.

Rule 33. (1) The department may hold a public informational hearing when a proposed project appears to be controversial or when additional information is desired before action by the department.

(2) All other hearings shall be conducted under section 30110(2) of the act.

(3) All persons who receive notification under section 30105(1) of the act shall receive not less than 10 days' prior notification of any hearings held under the act.

(4) An aggrieved person requesting a formal hearing under section 30110(2) of the act shall request the hearing within 60 days of the department's decision on an application.

History: 1954 ACS 79, Eff. May 11, 1974; 1979 AC; 1979 ACS 10, Eff. Mar. 31, 1982; 1985 MR 11, Eff. Nov. 21, 1985; 2000 MR, Eff. Jun. 15, 2000.

DEPARTMENT OF ENVIRONMENTAL QUALITY

LAND AND WATER MANAGEMENT DIVISION

WETLAND PROTECTION

R 281.922a. Permit application review criteria.

Rule 2a. (1) The department shall review a permit application to undertake an activity listed in section 30304 of the act according to the criteria in section 30311 of the act.

(2) As required by subsection 30311(4) of the act, a permit applicant shall bear the burden of demonstrating that an unacceptable disruption to aquatic resources will not occur as a result of the proposed activity and demonstrating either of the following:

(a) The proposed activity is primarily dependent upon being located in the wetland.

(b) There are no feasible and prudent alternatives to the proposed activity.

(3) A permit applicant shall provide adequate information, including documentation as required by the department, to support the demonstrations required by section 30311 of the act. The department shall independently evaluate the information provided by the applicant to determine if the applicant has made the

required demonstrations.

(4) A permit applicant shall completely define the purpose for which the permit is sought, including all associated activities. An applicant shall not so narrowly define the purpose as to limit a complete analysis of whether an activity is primarily dependent upon being located in the wetland and of feasible and prudent alternatives. The department shall independently evaluate and determine if the project purpose has been appropriately and adequately defined by the applicant, and shall process the application based on that determination.

(5) The department shall consider a proposed activity as primarily dependent upon being located in the wetland only if the activity is the type that requires a location within the wetland and wetland conditions to fulfill its basic purpose; that is, it is wetland-dependent. Any activity that can be undertaken in a non-wetland location is not primarily dependent upon being located in the wetland.

(6) An alternative is feasible and prudent if both of the following provisions apply:

(a) The alternative is available and capable of being done after taking into consideration cost, existing technology, and logistics.

(b) The alternative would have less adverse impact on aquatic resources. A feasible and prudent alternative may include any or all of the following:

Use of a location other than the proposed location.

A different configuration.

Size.

Method that will accomplish the basic project purpose.

The applicant shall demonstrate that, given all pertinent information, there are no feasible and prudent alternatives that have less impact on aquatic resources. In making this demonstration, the applicant may provide information regarding factors such as alternative construction technologies; alternative project layout and design; local land use regulations and infrastructure; and pertinent environmental and resource issues. This list of factors is not exhaustive and no particular factor will necessarily be dispositive in any given case.

(7) If an activity is not primarily dependent upon being located in the wetland, it is presumed that a feasible and prudent alternative exists unless an applicant clearly demonstrates that a feasible and prudent alternative does not exist.

(8) Unless an applicant clearly demonstrates otherwise, it is presumed that a feasible and prudent alternative involving a non-wetland location will have less adverse impact on aquatic resources than an alternative involving a wetland location.

(9) An area not presently owned by the permit applicant that could reasonably be obtained, utilized, expanded, or managed in order to fulfill the basic purpose of the proposed activity is a feasible and prudent alternative location.

(10) An alternative may be considered feasible and prudent even if it does not accommodate components of a proposed activity that are incidental to or severable from the basic purpose of the proposed activity.

(11) An alternative may be considered feasible and prudent even if it entails higher costs or reduced profit. However, the department shall consider the reasonableness of the higher costs or reduced profit in making its determination.

(12) The department may offer a permit for a modification of an activity proposed in an application if the proposed activity cannot be permitted under the criteria listed in section 30311 of the act and if the modification makes that activity consistent with the criteria listed in section 30311 of the act.

(a) The applicant may accept the permit for the modification of the proposed activity by signing it and returning it to the department within 30 days of the date of the offer. The permit shall be considered issued upon countersignature by the department.

(b) The permit application is considered denied if the applicant does not sign and return the permit for the modification of the proposed activity to the department within thirty days of the date of the offer. The permit applicant may then appeal the denial pursuant to sections 30307(2) and 30319(2) of the act.

(c) The date on which the modification is offered shall be considered the date of the department's approval or disapproval of the application pursuant to section 30307(2) of the act.

History: 1988 MR 6, Eff. July 8, 1988.

R 281.924 Wetland Assessments.

Rule 4. (1) When performing wetland assessments, as required by section 30321 of Act No. 451 of The Public Acts of 1994, as amended, being §324.30321 of the Michigan Compiled Laws, the department shall utilize criteria consistent with the definition of "wetland" provided in section 30301(d) of Act No. 451 of the Public Acts of 1994, as amended, being §324.30321(d) of the Michigan Compiled Laws, and shall provide a written wetland assessment report to the person who owns or leases the property or his or her agent within 30 days of the on-site evaluation, whether the parcel contains wetland or nonwetland, or both, and the basis for the determination. The department shall assess a parcel or any portion of a parcel as identified by the person making the request.

(2) When performing wetland assessments, the department shall rely on visible evidence that the normal seasonal frequency and duration of water is above, at, or near the surface of the area to verify the existence of a wetland. Under normal circumstances, the frequency and duration of water that is necessary to determine an area to be a wetland will be reflected in the vegetation or aquatic life present within the area being considered. A wetland that has not been recently or severely disturbed will contain a predominance, not just an occurrence, of wetland vegetation or aquatic life. If there is a predominance of wetland vegetation, and if there is no direct visible evidence that water is, or has been, at or above the surface, then the department shall use the following characteristics of the soils or substrate to verify the existence of a wetland:

(a) The presence of a soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part of the soil that favor the growth and regeneration of wetland vegetation.

(b) Physical or chemical characteristics of a soil column that provide evidence of the current and recent degree of saturation or inundation. Characteristics, such as a gleyed or low chroma matrix, mottling, or chemically demonstrated anaerobic conditions, can beutilized to identify the current and recent depth and fluctuation of thewater table or inundation.

(3) If the department makes a determination that a wetland otherwise outside of the jurisdiction of the act is essential to the preservation of the natural resources of the state under section 30301(d)(iii) of Act No. 451 of the Public Acts of 1994, as amended, being §324.30321(d)(iii) of the Michigan Compiled Laws, the department shall provide the findings, in writing, to the legal landowner or lessee stating the reasons for the determination. In making the determination, the department must find that 1 or more of the following functions apply to a particular site:

(a) It supports state or federal endangered or threatened plants, fish, or wildlife specified in section 36501 of Act No. 457 of the Public Acts of 1994, as amended, being §324.36501 of the Michigan Compiled Laws.

(b) It represents what the state has identified as a rare or unique ecosystem.

(c) It supports plants or animals of an identified regional importance.

(d) It provides groundwater recharge documented by a public agency.

(4) Upon the request of a person who owns or leases a parcel of property or his or her agent, the department shall determine if there is no surface or groundwater connection that meets the definition of "contiguous" under R281.921(l)(b)(iii). The department shall make the determination in writing and shall provide the determination to the person making the request within a reasonable period of time after receipt of the request.

(5) (1) A person who requests a wetland assessment shall submit a form provided by the department. The form shall contain all information required under section 30321(3) of Act No. 451 of the Public Acts of 1994, as amended, being §324.30321(3) of the Michigan Compiled Laws, and shall be accompanied by a check for the appropriate fee as set forth in this rule.

(2) All fees are nonrefundable.

(3) A person who owns or leases a parcel of property or his or her agent may request any of the following 3 levels of wetland assessment with corresponding levels of fees:

(a) For a fee of $50.00, the department will provide copies of wetland information immediately available for an identified area, including state and federal maps on file with the department that show the approximate location of wetlands on the parcel. In addition, information specified by section 30321(e),

(f), and (g) of Act No. 451 of the Public Acts of 1994, as amended, being §324.30321(e), (f), and (g) of the Michigan Compiled Laws, regarding regulatory processes, limitations, and appeals will be provided to a

person who makes a request. Since the information and maps provided will not be based upon an on-site review, they will be useful for planning purposes, but the department will not certify where wetlands are and are not specifically located on the given parcel.

(b) For a fee of $200.00 for 1 acre or less, the department will perform an on-site assessment of a parcel or portion of a parcel that has its boundaries marked by the person who makes the request, to identify and describe areas that are and are not wetland on the site, unless identification and description are not possible under the conditions of the site, as outlined under (4), below. The fee for the service will increase by $50.00 per acre for an assessment area larger than 1 acre. If the assessment report determines that the area assessed or part of the area assessed is not wetland, then the report will state that the department lacks jurisdiction over the area that is not wetland,if any,and that the determination that an area is not wetland is binding on the department for 3 years from the date of the assessment.

(c) For a fee of $150.00 for 1 acre or less, the department will perform an on-site review of a mapped, flagged, and otherwise identifiable area to confirm specific boundaries established by a professional wetland consultant between wetlands and areas that are not wetlands. The fee for the service will increase by $15.00 per acre for larger parcels. The wetland and nonwetland boundaries delineated must be flagged by a wetland consultant representing the person who made the request. The boundaries must have been established utilizing methods and procedures consistent with Act No. 451 of the Public Acts of 1994, as amended, being §324.30319 et seq. of the Michigan Compiled Laws and these rules. If the department finds substantial errors during the confirmation process and the person making the request wishes to proceed, then the department will require that a new delineation by a consultant representing the person who made the request be completed and that new fees in the amount of 1/2 of the original fee be submitted for the on-site confirmation of the new delineation and the assessment report. If the assessment report determines that the area assessed or part of the area assessed is not wetland, then the report will state that the department lacks jurisdiction over the area that is not wetland and that the determination that an area is not wetland is binding on the department for 3 years from the date of the assessment. If documentation of the specific boundary is desired, then the person who is making the request will provide, for department approval, an acceptable and reproducible survey of the agreed upon boundaries.

(4) If recent severe disturbances of the site have occurred, for example, removal of native vegetation, disturbance of soils, or diversion of drainage, making it impossible during a routine site visit to determine whether or not the area requested for assessment contains or has contained wetland or nonwetland, then the department will provide the person who made the request with a report that specifies the reasons for its inability to make a determination. The department will include with the report a description of the necessary technical information to be provided by the person who made the request in order for the department to make a final assessment or confirm a delineated boundary.

History: 1988 MR 6, Eff. July 8, 1988; 1998 MR 7, Eff. July 18, 1998.

R 281.925 Mitigation.

Rule 5. (1) As authorized by section 30312(2) of the act, the department may impose conditions on a permit for a use or development if the conditions are designed to remove an impairment to the wetland benefits, to mitigate the impact of a discharge of fill material, or to otherwise improve the water quality.

(2) The department shall consider mitigation only after all of the following conditions are met:

(a) The wetland impacts are otherwise permittable under sections 30302 and 30311 of the act.

(b) No feasible and prudent alternative to avoid wetland impacts exists.

(c) An applicant has used all practical means to minimize impacts to wetlands. This may include the permanent protection of wetlands on the site not directly impacted by the proposed activity.

(3) The department shall require mitigation as a condition of a wetland permit issued under part 303 of the act, except as follows:

(a) The department may waive the mitigation condition if either of the following provisions applies:

(i) The permitted wetland impact is less than 1/3 of an acre and no reasonable opportunity for mitigation exists.

(ii) The basic purpose of the permitted activity is to create or restore wetlands or to increase wetland habitat.

(b) If an activity is authorized and permitted under the authority of a general permit issued under section 30312(1) of the act, then the department shall not require mitigation. Public transportation agencies

may provide mitigation for projects authorized under a general permit at sites approved by the department under a memorandum of understanding between the department and public transportation agencies.

(4) The department shall require mitigation to compensate for unavoidable wetland impacts permitted under part 303 of the act utilizing one or more of the following methods:

(a) The restoration of previously existing wetlands.

(b) The creation of new wetlands.

(c) The acquisition of approved credits from a wetland mitigation bank established under R 281.951 et seq.

(d) In certain circumstances, the preservation of existing wetlands. The preservation of existing wetlands may be considered as mitigation only if the department determines that all of the following conditions are met:

(i) The wetlands to be preserved perform exceptional physical or biological functions that are essential to the preservation of the natural resources of the state or the preserved wetlands are an ecological type that is rare or endangered.

(ii) The wetlands to be preserved are under a demonstrable threat of loss or substantial degradation due to human activities that are not under the control of the applicant and that are not otherwise restricted by state law.

(iii) The preservation of the wetlands as mitigation will ensure the permanent protection of the wetlands that would otherwise be lost or substantially degraded.

(5) The restoration of previously existing wetlands is preferred over the creation of new wetlands where none previously existed. Enhancement of existing wetlands is not considered mitigation. For purposes of this rule, wetland restoration means the reestablishment of wetland characteristics and functions at a site where they have ceased to exist through the replacement of wetland hydrology, vegetation, or soils.

(6) An applicant shall submit a mitigation plan when requested by the department. The department may incorporate all or part of the proposed mitigation plan as permit conditions. The mitigation plan shall include all of the following elements:

(a) A statement of mitigation goals and objectives, including the wetland types to be restored, created, or preserved.

(b) Information regarding the mitigation site location and ownership.

(c) A site development plan.

(d) A description of baseline conditions at the proposed mitigation site, including a vicinity map showing all existing rivers, lakes, and streams, and a delineation of existing surface waters and wetlands within the proposed mitigation area.

(e) Performance standards to evaluate the mitigation.

(f) A monitoring plan.

(g) A schedule for completion of the mitigation.

(h) Provisions for the management and long-term protection of the site. The department shall, when requested by the applicant, meet with the applicant to review the applicant's mitigation plan.

(7) An applicant shall provide mitigation to assure that, upon completion, there will be no net loss of wetlands. The mitigation shall meet the following criteria as determined by the department:

(a) Mitigation shall be provided on-site where it is practical to mitigate on site and where beneficial to the wetland resources.

(b) If subdivision (a) of this subrule does not apply, then an applicant shall provide mitigation in the immediate vicinity of the permitted activity if practical and beneficial to the wetland resources. "Immediate vicinity" means within the same watershed as the location of the proposed project. For purposes of this rule, a watershed
refers to a drainage area in which the permitted activity
occurs where it may be possible to restore certain wetland functions, including hydrologic, water quality, and aquatic habitat functions. Watershed boundaries are shown in Figure 1 in R 281.951.

(c) Mitigation shall be on-site or in the immediate vicinity of the permitted activity unless the department determines that subdivisions (a) and (b) of this subrule are infeasible and impractical.

(d) The department shall require that mitigation be of a similar ecological type as the impacted wetland where feasible and practical.

(e) If the replacement wetland is of a similar ecological type as the impacted wetland, then the department

shall require that the ratio of acres of wetland mitigation provided for each acre of permitted wetland loss shall be as follows:

(i) Restoration or creation of 5.0 acres of mitigation for 1.0 acre of permitted impact on wetland types that are rare or imperiled on a statewide basis.

(ii) Restoration or creation of 2.0 acres of mitigation for 1.0 acre of permitted impact on forested wetland types, coastal wetlands not included under (i) of this subdivision, and wetlands that border upon inland lakes.

(iii) Restoration or creation of 1.5 acres of mitigation for 1.0 acre of permitted impact on all other wetland types.

(iv) 10 acres of mitigation for 1.0 acre of impact in situations where the mitigation is in the form of preservation of existing wetland as defined in subrule (4) of this rule.

(f) The department may adjust the ratios prescribed by this rule as follows:

(i) The ratio may be increased if the replacement wetland is of a different ecological type than the impacted wetland.

(ii) If the department determines that an adjustment would be beneficial to the wetland resources due to factors specific to the mitigation site or the site of the proposed activity, then the department may increase or decrease the number of acres of mitigation to be provided by no more than 20 percent. This shall not limit the amount which a ratio may be increased under subdivision (f)(i) of this subrule.

(g) The mitigation shall give consideration to replacement of the predominant wetland benefits lost within the impacted wetland.

(h) The department shall double the required ratios if a permit is issued for an application accepted under section 30306(5) of the act.

(i) The department shall determine mitigation ratios for wetland dependent activities on a site-specific basis.

(8) Except where mitigation is to occur on state or federally owned property or where the mitigation is to occur in the same municipality where the project is proposed, the department shall give notice to the municipality where the proposed mitigation site is located and shall provide an opportunity to comment in writing to the department on the proposed mitigation plan before a mitigation plan is approved by the department.

(9) An applicant shall complete mitigation activities before initiating other permitted activities, unless a concurrent schedule is agreed upon between the department and the applicant, and an adequate financial assurance mechanism is provided by the applicant.

(10) The department may require financial assurances to ensure that mitigation is accomplished as specified.

(11) An applicant shall protect the mitigation area by a permanent conservation easement or similar instrument that provides for the permanent protection of the natural resource functions and values of the mitigation site, unless the department determines that such controls are impractical to impose in conjunction with mitigation that was undertaken as part of state funded response activity under Act No. 451 of the Public Acts of 1994, as amended.

(12) An applicant, with the approval of the department, may provide all or a portion of the mitigation through the acquisition of approved credits from a wetland mitigation bank established under R 281.951 et seq. One credit shall be utilized for each acre of mitigation required under subrule (7) of this rule.

History: 1988 MR 6, Eff. July 8, 1988; 2000 MR 6, Eff. Apr. 27, 2000.

DEPARTMENT OF NATURAL RESOURCES

LAW ENFORCEMENT DIVISION

SPECIAL LOCAL WATERCRAFT CONTROLS

Regulation No. 3, Allegan county.

R 281.703.12
Source: 1984 AACS.

Regulation No. 5, Antrim county.

R 281.705.5
Source: 1981 AACS.

Regulation No. 7, Baraga county.

R 281.707.8
Source: 1981 AACS.

Regulation No. 9, Bay county.

R 281.709.4
Source: 1982 AACS.

R 281.709.5
Source: 1983 AACS.

Regulation No. 10, Benzie county.

R 281.710.7
Source: 1980 AACS.

R 281.710.8
Source: 1980 AACS.

Regulation No. 11, Berrien county.

R 281.711.5
Source: 1982 AACS.

R 281.711.6
Source: 1984 AACS.

Regulation No. 13, Calhoun county.

R 281.713.8
Source: 1984 AACS.

Regulation No. 14, Cass county.

R 281.714.17
Source: 1984 AACS.

Regulation No. 16, Cheboygan county.

R 281.716.7
Source: 1980 AACS.

Regulation No. 17, Chippewa county.

R 281.717.9
Source: 1980 AACS.

R 281.717.10
Source: 1984 AACS.

Regulation No. 18, Clare county.

R 281.718.13

Source: 1982 AACS.

Regulation No. 19, Clinton county.

R 281.719.1
Source: 1997 AACS.

Regulation No. 20, Crawford county.

R 281.720.12
Source: 1985 AACS.

Regulation No. 22, Dickinson county.

R 281.722.1
Source: 1997 AACS.

Regulation No. 24, Emmet county.

R 281.724.3
Source: 1985 AACS.

Regulation No. 25, Genesee county.

R 281.725.15
Source: 1985 AACS.

R 281.725.16
Source: 1985 AACS.

Regulation No. 28, Grand Traverse county.

R 281.728.9
Source: 1980 AACS.

Regulation No. 30, Hillsdale county.

R 281.730.9
Source: 1983 AACS.

R 281.730.10
Source: 1984 AACS.

R 281.730.11
Source: 1985 AACS.

Regulation No. 36, Iron county.

R 281.736.7
Source: 1984 AACS.

Regulation No. 39, Kalamazoo county.

R 281.739.7
Source: 1997 AACS.

R 281.739.10
Source: 1981 AACS.

Regulation No. 40, Kalkaska county.

R 281.740.10
Source: 1984 AACS.

R 281.740.11
Source: 1984 AACS.

R 281.740.12
Source: 1984 AACS.

Regulation No. 44, Lapeer county.

R 281.744.7
Source: 1982 AACS.

R 281.744.8
Source: 1985 AACS.

Regulation No. 46, Lenawee county.

R 281.746.8
Source: 1980 AACS.

R 281.746.9
Source: 1982 AACS.

R 281.746.10
Source: 1983 AACS.

Regulation No. 47, Livingston county.

R 281.747.18
Source: 1997 AACS.

R 281.747.21
Source: 1981 AACS.

R 281.747.22
Source: 1981 AACS.

Regulation No. 54, Mecosta county.

R 281.754.12
Source: 1984 AACS.

Regulation No. 59, Montcalm county.

R 281.759.11
Source: 1982 AACS.

Regulation No. 61, Muskegon county.

R 281.761.8
Source: 1983 AACS.

Regulation No. 63, Oakland county.

R 281.763.44
Source: 1997 AACS.

R 281.763.45
Source: 1997 AACS.

R 281.763.54
Source: 1997 AACS.

R 281.763.58
Source: 1980 AACS.

R 281.763.59
Source: 1997 AACS.

R 281.763.60
Source: 1980 AACS.

R 281.763.61
Source: 1980 AACS.

R 281.763.62
Source: 1980 AACS.

R 281.763.63
Source: 1980 AACS.

R 281.763.64
Source: 1980 AACS.

R 281.763.65
Source: 1982 AACS.

R 281.763.67
Source: 1982 AACS.

Regulation No. 64, Oceana county.

R 281.764.4
Source: 1982 AACS.

Regulation No. 70, Ottawa county.

R 281.770.2
Source: 1982 AACS.

Regulation No. 71, Presque Isle county.

R 281.771.9
Source: 1980 AACS.

Regulation No. 74, St. Clair county.

R 281.774.18
Source: 1983 AACS.

Regulation No. 77, Schoolcraft county.

R 281.777.4
Source: 1981 AACS.

Regulation No. 80, Van Buren county.

R 281.780.9
Source: 1983 AACS.

Regulation No. 81, Washtenaw county.

R 281.781.10
Source: 1997 AACS.

R 281.781.12
Source: 1980 AACS.

Regulation No. 82, Wayne county.

R 281.782.25
Source: 1997 AACS.

R 281.782.26
Source: 1985 AACS.

DEPARTMENT OF ENVIRONMENTAL QUALITY
LAND AND WATER MANAGEMENT DIVISION
INLAND LAKES AND STREAMS

R 281.811 Definitions.

Rule 1. (1) As used in these rules:

(a) "Act" means Act No. 451 of the Public Acts of 1994, as amended, being S324.101 et seq. of the Michigan Compiled Laws.

(b) "Applicant" means a person applying for a permit under the act.

(c) "Bottomland dredging" means dredging of channels and canals and the removal of any rock, stone, soil, or other material from bottomlands.

(d) "Bottomland filling" means the placement of rock, stone, soil, or other material on bottomlands.

(e) "Enlarge or diminish an inland lake or stream" means the dredging or filling of bottomlands, or the dredging of adjacent shorelands, to increase or decrease a body of water's surface area or storage capacity or the placement of fill or structures, or the manipulation, operation, or removal of fill or structures, to increase or decrease water levels in a lake, stream, or impoundment.

(f) "Placement of structures on bottomlands" does not mean the installation of clear span overhead utility wires if they do not restrict navigation for watercraft that typically ply the waterway and if they provide equal or greater clearance than other permanent overhead restrictions in the immediate area or utility lines installed as an integral part of a bridge superstructure and above the elevation of the low beam or utility lines immediately above the top of a culvert.

(g) "Public trust" means all of the following:

(i) The paramount right of the public to navigate and fish in all inland lakes and streams that are navigable.

(ii) The perpetual duty of the state to preserve and protect the public's right to navigate and fish in all inland lakes and streams that are navigable.

(iii) The paramount concern of the public and the protection of the air, water, and other natural resources of this state against pollution, impairment, and destruction.

(iv) The duty of the state to protect the air, water, and other natural resources of this state against pollution, impairment, or destruction.

(h) "Reasonable sanding of beaches to the existing water's edge" means placing a layer of sand which is free of organic or other pollutant materials and which does not shift the location of the existing ordinary high watermark or shoreline contour.
(2) "Riparian rights," as defined in the act, means all the rights accruing to the owners of riparian property, including the following rights, subject to the public trust:
(a) Access to the navigable waters.
(b) Dockage to boatable waters, known as wharfage.
(c) Use of water for general purposes, such as bathing and domestic use.
(d) Title to natural accretions.
(3) Terms defined in the act have the same meanings when used in these rules.
History: 1954 ACS 79, Eff. May 11, 1974; 1979 AC; 1979 ACS 10, Eff. Mar. 31, 1982; 1985 MR 11, Eff. Nov. 21, 1985; 1999 MR 6, Eff. Jun. 30, 1999.

R 281.812
Source: 1985 AACS.

R 281.813 Permit conditions.

Rule 3. (1) A permit shall provide that the work authorized in the permit shall be completed within a specified term, normally not more than 1 year From the date of issuance, or as otherwise determined by the department. For long-term projects, the department may authorize a permit for up to 5 years. The department may grant an extension of time. The department shall not require an administrative fee for processing requests for an extension of time.
(2) The department shall ensure that a permit that authorizes a project which involves a lake or stream crossing by pipelines or utilities specifically conditions the activity to be subject to the requirements and specifications of R 281.832.
(3) A permit does not obviate the necessity of receiving approval from the Drinking Water and Radiological Protection Division of the department or a local unit of government when applicable, including a local unit of government responsible for administering parts 91 and 323 of the act and the United States army corps of engineers, where applicable.
(4) The department shall not issue a permit, except for a conditional permit or a permit under a minor project category, until 20 days after the mailing of the list to each eligible subscriber as provided for in section 30105(1) of the act.
(5) Upon request, the department shall provide any person with a copy of a permit application and supporting documents under Act No. 442 of the Public Acts of 1976, as amended, being S15.231 et seq. of the Michigan Compiled Laws.
(6) The department may consider a mitigation plan submitted by the applicant and incorporate the mitigation actions as permit conditions for the improvement of the existing resources or the creation of a new resource to offset resource losses resulting from the proposed project, if acceptable.
(7) The department may reissue a permit for an expired permit without an additional fee if a written request is made within 1 year of the expiration date of the expired permit. The department must find that the basis for issuing the original permit is still valid before reissuing an expired permit.
History: 1954 ACS 79, Eff. May 11, 1974; 1979 AC; 1979 ACS 10, Eff. Mar. 31, 1982; 1985 MR 11, Eff. Nov. 21, 1985; 1999 MR 6, Eff. Jun. 30, 1999.

R 281.814
Source: 1985 AACS.

R 281.815 Structure maintenance.

Rule 5. The following structures may be maintained in accordance with section 30103(j) of the act:
(a) Seawalls, if the repair is only of the seawall facing or sheeting or support piling and if the maintenance does not encompass more than 25% of the permitted seawall length. Cap maintenance or replacement can be done for 100% of permitted seawalls.
(b) Riprap shore protection structures, if original materials have been displaced by erosion or ice damage

and the placement of earthen fill will not be required as part of the maintenance and if retrieval of the riprap will not cause disruption of adjacent bottomland.
(c) Noncommercial docks, boat hoists, and pilings.
(d) Boat ramps if the maintenance does not require dredging.
(e) Bridges and culverts, if the maintenance is of an existing in-place structure and does not involve removal of the structure or alteration of the watercourse, streambed, or adjacent banks.
(f) Dams and lake level control structures, if the maintenance will be conducted without drawing down the lake or impoundment and is limited to minor surface repairs; the repair or replacement of stop logs, racks, and gates; or surface stabilization of earthen embankment-type structures where the work is above the existing water surface.
(g) Docks and pilings of a marina that has a current operating permit from the department.
(h) Lake level control structures, if the temporary variance (winter-summer) is established by court order or previously permitted by the department as an impoundment operational variation from the crest elevation if adverse environmental impacts have not occurred.
History: 1979 ACS 10, Eff. Mar. 31, 1982; 1985 MR 11, Eff. Nov. 21, 1985; 1999 MR 6, Eff. Jun. 30, 1999.

R 281.816
Source: 1985 AACS.

R 281.817
Source: 1982 AACS.

R 281.818
Source: 1982 AACS.

R 281.819
Source: 1985 AACS.

R 281.821
Source: 1982 AACS.

R 281.822
Source: 1997 AACS.

R 281.823
Source: 1985 AACS.

R 281.824
Source: 1982 AACS.

R 281.831
Source: 1997 AACS.

R 281.837
Source: 1985 AACS.

R 281.839 Rescinded.
History: 1954 ACS 79, Eff. May 11, 1974; 1979 AC; 1985 MR 11, Eff. Nov. 21, 1985; rescinded 1999 MR 6, Eff. Jun. 30, 1999.

R 281.841 Rescinded.
History: 1954 ACS 79, Eff. May 11, 1974; 1979 AC; 1979 ACS 10, Eff. Mar. 31, 1982; rescinded 1999 MR 6, Eff. Jun. 30, 1999.

R 281.842 Notification of pending applications.
Rule 32. The list prepared and mailed by the department under section 6 (1) of the act shall include

permit applications received during each week. The department shall mail the list monthly to each subscriber. The list shall include all of the following information:
(a) Process number.
(b) Applicant's name and address.
(c) Watercourse.
(d) Location of proposal by town, range, and section.
(e) Project description.
History: 1954 ACS 79, Eff. May 11, 1974; 1979 AC; 1979 ACS 10, Eff. Mar. 31, 1982; 1985 MR 11, Eff. Nov. 21, 1985; 1999 MR 6, Eff. Jun. 30, 1999.

R 281.843
Source: 1985 AACS.

R 281.844 Notification and inspection of completed project.
Rule 34. An applicant shall notify the land and water management division of the department within 10 days of completion of a project to facilitate scheduling a final inspection. An applicant need not notify the land and water management division of a minor project unless required as a permit condition.
History: 1954 ACS 79, Eff. May 11, 1974; 1979 AC; 1979 ACS 10, Eff. Mar. 31, 1982; 1999 MR 6, Eff. Jun. 30, 1999.

GREAT LAKES SUBMERGED LANDS

R 281.901—R 281.915
Source: 1997 AACS.

WETLAND PROTECTION

R 281.921
Source: 1988 AACS.

R 281.922
Source: 1988 AACS.

R 281.923
Source: 1988 AACS.

R 281.924 Wetland Assessments.
Rule 4. (1) When performing wetland assessments, as required by section 30321 of Act No. 451 of The Public Acts of 1994, as amended, being §324.30321 of the Michigan Compiled Laws, the department shall utilize criteria consistent with the definition of “wetland” provided in section 30301(d) of Act No. 451 of the Public Acts of 1994, as amended, being §324.30321(d) of the Michigan Compiled Laws, and shall provide a written wetland assessment report to the person who owns or leases the property or his or her agent within 30 days of the on-site evaluation, whether the parcel contains wetland or nonwetland, or both, and the basis for the determination. The department shall assess a parcel or any portion of a parcel as identified by the person making the request.
(2) When performing wetland assessments, the department shall rely on visible evidence that the normal seasonal frequency and duration of water is above, at, or near the surface of the area to verify the existence of a wetland. Under normal circumstances, the frequency and duration of water that is necessary to determine an area to be a wetland will be reflected in the vegetation or aquatic life present within the area being considered. A wetland that has not been recently or severely disturbed will contain a predominance, not just an occurrence, of wetland vegetation or aquatic life. If there is a predominance of wetland vegetation, and if there is no direct visible evidence that water is, or has been, at or above the surface, then the department shall use the following characteristics of the soils or substrate to verify the existence of a

wetland:
(a) The presence of a soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part of the soil that favor the growth and regeneration of wetland vegetation.
(b) Physical or chemical characteristics of a soil column that provide evidence of the current and recent degree of saturation or inundation. Characteristics, such as a gleyed or low chroma matrix, mottling, or chemically demonstrated anaerobic conditions, can beutilized to identify the current and recent depth and fluctuation of thewater table or inundation.
(3) If the department makes a determination that a wetland otherwise outside of the jurisdiction of the act is essential to the preservation of the natural resources of the state under section 30301(d)(iii) of Act No. 451 of the Public Acts of 1994, as amended, being §324.30321(d)(iii) of the Michigan Compiled Laws, the department shall provide the findings, in writing, to the legal landowner or lessee stating the reasons for the determination. In making the determination, the department must find that 1 or more of the following functions apply to a particular site:
(a) It supports state or federal endangered or threatened plants, fish, or wildlife specified in section 36501 of Act No. 457 of the Public Acts of 1994, as amended, being §324.36501 of the Michigan Compiled Laws.
(b) It represents what the state has identified as a rare or unique ecosystem.
(c) It supports plants or animals of an identified regional importance.
(d) It provides groundwater recharge documented by a public agency.
(4) Upon the request of a person who owns or leases a parcel of property or his or her agent, the department shall determine if there is no surface or groundwater connection that meets the definition of "contiguous" under R281.921(l)(b)(iii). The department shall make the determination in writing and shall provide the determination to the person making the request within a reasonable period of time after receipt of the request.
(5) (1) A person who requests a wetland assessment shall submit a form provided by the department. The form shall contain all information required under section 30321(3) of Act No. 451 of the Public Acts of 1994, as amended, being §324.30321(3) of the Michigan Compiled Laws, and shall be accompanied by a check for the appropriate fee as set forth in this rule.
(2) All fees are nonrefundable.
(3) A person who owns or leases a parcel of property or his or her agent may request any of the following 3 levels of wetland assessment with corresponding levels of fees:
(a) For a fee of $50.00, the department will provide copies of wetland information immediately available for an identified area, including state and federal maps on file with the department that show the approximate location of wetlands on the parcel. In addition, information specified by section 30321(e), (f), and (g) of Act No. 451 of the Public Acts of 1994, as amended, being §324.30321(e), (f), and (g) of the Michigan Compiled Laws, regarding regulatory processes, limitations, and appeals will be provided to a person who makes a request. Since the information and maps provided will not be based upon an on-site review, they will be useful for planning purposes, but the department will not certify where wetlands are and are not specifically located on the given parcel.
(b) For a fee of $200.00 for 1 acre or less, the department will perform an on-site assessment of a parcel or portion of a parcel that has its boundaries marked by the person who makes the request, to identify and describe areas that are and are not wetland on the site, unless identification and description are not possible under the conditions of the site, as outlined under (4), below. The fee for the service will increase by $50.00 per acre for an assessment area larger than 1 acre. If the assessment report determines that the area assessed or part of the area assessed is not wetland, then the report will state that the department lacks jurisdiction over the area that is not wetland,if any,and that the determination that an area is not wetland is binding on the department for 3 years from the date of the assessment.
(c) For a fee of $150.00 for 1 acre or less, the department will perform an on-site review of a mapped, flagged, and otherwise identifiable area to confirm specific boundaries established by a professional wetland consultant between wetlands and areas that are not wetlands. The fee for the service will increase by $15.00 per acre for larger parcels. The wetland and nonwetland boundaries delineated must be flagged by a wetland consultant representing the person who made the request. The boundaries must have been established utilizing methods and procedures consistent with Act No. 451 of the Public Acts of 1994, as

amended, being §324.30319 et seq. of the Michigan Compiled Laws and these rules. If the department finds substantial errors during the confirmation process and the person making the request wishes to proceed, then the department will require that a new delineation by a consultant representing the person who made the request be completed and that new fees in the amount of ½ of the original fee be submitted for the on-site confirmation of the new delineation and the assessment report. If the assessment report determines that the area assessed or part of the area assessed is not wetland, then the report will state that the department lacks jurisdiction over the area that is not wetland and that the determination that an area is not wetland is binding on the department for 3 years from the date of the assessment. If documentation of the specific boundary is desired, then the person who is making the request will provide, for department approval, an acceptable and reproducible survey of the agreed upon boundaries.

(4) If recent severe disturbances of the site have occurred, for example, removal of native vegetation, disturbance of soils, or diversion of drainage, making it impossible during a routine site visit to determine whether or not the area requested for assessment contains or has contained wetland or nonwetland, then the department will provide the person who made the request with a report that specifies the reasons for its inability to make a determination. The department will include with the report a description of the necessary technical information to be provided by the person who made the request in order for the department to make a final assessment or confirm a delineated boundary.

History: 1988 MR 6, Eff. July 8, 1988; 1998 MR 7, Eff. July 18, 1998.

R 281.925
Source: 1988 AACS.

LAND AND WATER MANAGEMENT DIVISION

WETLAND MITIGATION BANKING

R 281.951
Source: 1997 AACS.

R 281.952
Source: 1997 AACS.

R 281.953
Source: 1997 AACS.

R 281.954
Source: 1997 AACS.

R 281.955
Source: 1997 AACS.

R 281.956
Source: 1997 AACS.

R 281.957
Source: 1997 AACS.

R 281.958
Source: 1997 AACS.

R 281.959
Source: 1997 AACS.

R 281.960
Source: 1997 AACS.

R 281.961
Source: 1997 AACS.

DAM SAFETY

R 281.1301
Source: 1993 AACS.

R 281.1302
Source: 1993 AACS.

R 281.1303
Source: 1993 AACS.

R 281.1304
Source: 1993 AACS.

R 281.1305
Source: 1993 AACS.

R 281.1306
Source: 1993 AACS.

R 281.1307
Source: 1993 AACS.

R 281.1308
Source: 1993 AACS.

R 281.1309
Source: 1993 AACS.

R 281.1310
Source: 1993 AACS.

R 281.1311
Source: 1993 AACS.

R 281.1312
Source: 1993 AACS.

R 281.1313
Source: 1993 AACS.

DEPARTMENT OF NATURAL RESOURCES
STATE WATERWAYS COMMISSION
VESSELS CARRYING PASSENGERS FOR HIRE

R 281.2001—R 281.2130
Source: 1997 AACS.

DEPARTMENT OF STATE
BUREAU OF DRIVER AND VEHICLE SERVICES

WATERCRAFT TITLING

R 281.2201
Source: 1980 AACS.

R 281.2202
Source: 1980 AACS.

R 281.2203
Source: 1980 AACS.

R 281.2204
Source: 1980 AACS.

R 281.2205
Source: 1980 AACS.

R 281.2206
Source: 1980 AACS.

R 281.2207
Source: 1980 AACS.

R 281.2208
Source: 1980 AACS.

R 281.2209
Source: 1980 AACS.

R 281.2210
Source: 1980 AACS.

R 281.2211
Source: 1980 AACS.

R 281.2212
Source: 1980 AACS.

R 281.2213
Source: 1980 AACS.

R 281.2214
Source: 1980 AACS.

R 281.2215
Source: 1980 AACS.

R 281.2216
Source: 1980 AACS.

R 281.2217
Source: 1980 AACS.

R 281.2218
Source: 1980 AACS.

R 281.2219
Source: 1980 AACS.

DEPARTMENT OF NATURAL RESOURCES

LAW ENFORCEMENT DIVISION

VESSELS CARRYING PASSENGERS FOR HIRE

PART 1. GENERAL PROVISIONS

R 281.3101
Source: 1982 AACS.

R 281.3102
Source: 1982 AACS.

R 281.3103
Source: 1982 AACS.

R 281.3104
Source: 1982 AACS.

R 281.3105
Source: 1982 AACS.

R 281.3106
Source: 1982 AACS.

R 281.3107
Source: 1982 AACS.

R 281.3108
Source: 1982 AACS.

R 281.3109
Source: 1982 AACS.

R 281.3110
Source: 1982 AACS.

R 281.3111
Source: 1982 AACS.

R 281.3112
Source: 1982 AACS.

R 281.3113
Source: 1982 AACS.

R 281.3114
Source: 1982 AACS.

R 281.3115
Source: 1982 AACS.

R 281.3116
Source: 1982 AACS.

R 281.3117
Source: 1982 AACS.

R 281.3118
Source: 1982 AACS.

R 281.3119
Source: 1982 AACS.

R 281.3120
Source: 1982 AACS.

R 281.3121
Source: 1982 AACS.

R 281.3122
Source: 1982 AACS.

R 281.3123
Source: 1982 AACS.

R 281.3124
Source: 1982 AACS.

R 281.3125
Source: 1982 AACS.

R 281.3126
Source: 1982 AACS.

R 281.3127
Source: 1982 AACS.

R 281.3128
Source: 1982 AACS.

R 281.3129
Source: 1982 AACS.

R 281.3130
Source: 1982 AACS.

PART 2. CLASS A VESSELS

R 281.3201
Source: 1982 AACS.

R 281.3202
Source: 1982 AACS.

R 281.3203
Source: 1982 AACS.

R 281.3204
Source: 1982 AACS.

R 281.3205
Source: 1982 AACS.

PART 3. CLASS B VESSELS

R 281.3301
Source: 1982 AACS.

R 281.3302
Source: 1982 AACS.

R 281.3303
Source: 1982 AACS.

PART 4. CLASS C VESSELS

R 281.3401
Source: 1982 AACS.

R 281.3402
Source: 1982 AACS.

R 281.3403
Source: 1982 AACS.

R 281.3404
Source: 1982 AACS.

R 281.3405
Source: 1982 AACS.

R 281.3406
Source: 1982 AACS.

R 281.3407
Source: 1982 AACS.

PART 5. CLASS D VESSELS

R 281.3501
Source: 1982 AACS.

R 281.3502
Source: 1982 AACS.

R 281.3503
Source: 1982 AACS.

R 281.3504
Source: 1982 AACS.

R 281.3505
Source: 1982 AACS.

R 281.3506
Source: 1982 AACS.

DEPARTMENT OF NATURAL RESOURCES

LAW ENFORCEMENT DIVISION

SPECIAL LOCAL WATERCRAFT CONTROLS

Regulation No. 70, Ottawa county.

R 281.770.2 Rescinded
History: 1954 ACS 50, Eff. May 15, 1967; 1979 AC; 1999 MR 8, Eff. Sep. 6, 1999.

DEPARTMENT OF AGRICULTURE

ANIMAL HEALTH DIVISION

REGULATION NO. 100. PAYMENT OF INDEMNITIES

R 285.100.1
Source: 1997 AACS.

REGULATION NO. 101. PREVENTION OF SPREAD OF BOVINE TUBERCULOSIS OR BRUCELLOSIS

R 285.101.1
Source: 1997 AACS.

REGULATION NO. 102. TUBERCULIN TESTING AND CONTROL OF TUBERCULOSIS

R 285.102.1
Source: 1997 AACS.

REGULATION NO. 107. CONTAGIOUS AND INFECTIOUS DISEASES IN POULTRY

R 285.107.1 Rescinded.
History: 1944 AC; 1954 AC; 1979 AC; rescinded 1998 MR 6, Eff. June 29, 1998.

REGULATION NO. 109. INTRASTATE MOVEMENT OF SWINE

R 285.109.1
Source: 1997 AACS.

REGULATION NO. 110. IMPORTATION OF SWINE

R 285.110.1
Source: 1997 AACS.

REGULATION NO. 114. CONTAGIOUS AND INFECTIOUS LIVESTOCK DISEASES

R 285.114.1 Rescinded.
History: 1944 AC; 1954 AC; 1954 ACS 31, Eff. Aug. 14, 1962; 1979 AC; rescinded 1998 MR 6, Eff. June 29, 1998.

REGULATION NO. 117. PUBLIC EXHIBITION OF LIVESTOCK

R 285.117.1 Rescinded.
History: 1944 AC; 1954 AC; 1979 AC; rescinded 1998 MR 6, Eff. June 29, 1998.

REGULATION NO. 118. REDUCTION PLANTS FOR DISPOSAL OF DEAD ANIMALS

R 285.118.1 Rescinded.
History: 1944 AC; 1954 AC; 1979 AC; rescinded 1998 MR 6, Eff. June 29, 1998.

REGULATION NO. 120. LICENSING OF LIVESTOCK YARDS

R 285.120.1
Source: 1997 AACS.

REGULATION NO. 121. LIVESTOCK DISEASES

R 285.121.1 Rescinded.
History: 1944 AC; 1954 AC; 1979 AC; rescinded 1998 MR 6, Eff. June 29, 1998.

REGULATION NO. 123. PREVENTING SPREAD OF BRUCELLOSIS

R 285.123.1, R 285.123.2
Source: 1997 AACS.

REGULATION NO. 124. TUBERCULIN AND BLOOD TESTING

R 285.124.1 Rescinded.
History: 1944 AC; 1954 AC; 1954 ACS 31, Eff. Aug. 14, 1962; 1979 AC; rescinded 1998 MR 6, Eff. June 29, 1998.

REGULATION NO. 127. TUBERCULIN TESTING AND TESTING FOR CONTROL OF BRUCELLOSIS

R 285.127.1
Source: 1997 AACS.

REGULATION NO. 133. PUBLIC EXHIBITION OF POULTRY

(By authority of Act No. 181 of the Public Acts of 1919, as amended, being S287.2 et seq. of the Michigan Compiled Laws)

R 285.133.1 Rescinded
History: 1944 ACS 18; 1944 ACS 27; 1954 AC; 1979 AC; rescinded 1998 MR 6, Eff. June 29, 1998.

REGULATION NO. 135. SERUMS, ANTIGENS, AND VACCINES

R 285.135.1 Rescinded.
History: 1944 ACS 27; 1944 ACS 29; 1954 AC; 1979 AC; rescinded 1998 MR 6, Eff. June 29, 1998.

REGULATION NO. 140. BRUCELLOSIS-FREE HERDS

R 285.140.1 Rescinded.
History: 1954 ACS 2, Eff. May 13, 1955; 1954 ACS 6, Eff. May 15, 1956; 1954 ACS 31, Eff. Aug. 14, 1962; 1979 AC; rescinded 1998 MR 6, Eff. June 29, 1998.

REGULATION NO. 141. APPROVAL OF CALFHOOD VACCINATIONS

R 285.141.1 Rescinded.
History: 1954 ACS 6, Eff. May 15, 1956; 1954 ACS 27, Eff. Aug. 14, 1961; 1954 ACS 32, Eff. Nov. 14, 1962; 1954 ACS 33, Eff. Feb. 14, 1963; 1979 AC; rescinded 1998 MR 6, Eff. June 29, 1998.

REGULATION NO. 142. AREA TESTING

R 285.142.1 Rescinded.
History: 1954 ACS 6, Eff. May 15, 1956; 1954 ACS 27, Eff. Aug. 14, 1961; 1954 ACS 32, Eff. Nov. 14, 1962; 1954 ACS 42, Eff. May 15, 1965; 1979 AC; rescinded 1998 MR 6, Eff. June 29, 1998.

REGULATION NO. 145. MOVEMENT OF SHEEP

R 285.145.1 Rescinded.
History: 1954 ACS 34, Eff. May 15, 1963; rescinded 1998 MR 6, Eff. June 29, 1998.

REGULATION NO. 148. STATEWIDE MEAT INSPECTION

PART 1. GENERAL PROVISIONS

R 285.148.1—R 285.148.21
Source: 1997 AACS.

PART 2. CONSTRUCTION, EQUIPMENT, AND SANITATION

R 285.148.101—R 285.148.125
Source: 1997 AACS.

PART 3. PROTECTION OF PRODUCT

R 285.148.201—R 285.148.218
Source: 1997 AACS.

PART 4. ANTE-MORTEM AND POST-MORTEM INSPECTIONS

R 285.148.301—R 285.148.387
Source: 1997 AACS.

PART 5. DISPOSAL OF DISEASED CARCASSES AND PARTS

R 285.148.401—R 285.148.438
Source: 1997 AACS.

PART 6. TANKING AND RENDERING

R 285.148.501—R 285.148.513
Source: 1997 AACS.

PART 7. MARKING, BRANDING, AND IDENTIFYING

R 285.148.601—R 285.148.615
Source: 1997 AACS.

PART 10. MISCELLANEOUS

R 285.148.901—R 285.148.914
Source: 1997 AACS.

REGULATION NO. 152. FEEDLOTS

R 285.152.1 - R 285.152.10 Rescinded.
History: 1954 ACS 71, Eff. May 2, 1972; 1979 AC; rescinded 1998 MR 6, Eff. June 29, 1998.

REGULATION NO. 156. DISPOSITION OF ANIMALS EXPOSED TO BRUCELLOSIS

R 285.156.1 Rescinded.
History: 1954 ACS 91, Eff. May 11, 1977; 1979 AC; rescinded 1998 MR 6, Eff. June 29, 1998.

REGULATION NO. 401. SEDIMENT TESTS

R 285.401.1 Rescinded.
History: 1944 AC; 1954 AC; 1979 AC; rescinded 1998 MR 6, Eff. June 29, 1998.

REGULATION NO. 403. MILK AND CREAM SOLD FOR DIRECT CONSUMPTION

R 285.403.1 Rescinded.
History: 1944 AC; 1944 ACS 9; 1944 ACS 36; 1944 ACS 39; 1954 AC; 1954 ACS 1, Eff. Mar. 18, 1955; 1954 ACS 16, Eff. Nov. 14, 1958; 1954 ACS 27, Eff. Aug. 14, 1961; 1954 ACS 36, Eff. Nov. 14, 1963; 1979 AC; rescinded 1998 MR 6, Eff. June 29, 1998.

REGULATION NO. 406. COTTAGE CHEESE

R 285.406.1 Rescinded.
History: 1954 ACS 80, Eff. Sept. 17, 1974; 1979 AC; rescinded 1998 MR 6, Eff. June 29, 1998

R 285.406.2 Rescinded.
History: 1954 ACS 80, Eff. Sept. 17, 1974; 1979 AC; rescinded 1998 MR 6, Eff. June 29, 1998.

DAIRY DIVISION

REGULATION NO. 409. PRODUCER SECURITY

R 285.409.1
Source: 1983 AACS.

FOOD INSPECTION DIVISION

REGULATION NO. 514. FOODS AND BEVERAGES OFFERED FOR SALE

R 285.514.1
Source: 1997 AACS.

AGRICULTURAL DEVELOPMENT DIVISION

REGULATION NO. 523. DRY EDIBLE BEANS
DEPARTMENT OF AGRICULTURE

R 285.523.1 Michigan standards for dry edible beans.

Rule 1. (1) Michigan standards for dry edible beans are as follows:

Processed Bean Grades
Grade Requirements
Navy/Small White/Great Northern Beans

Maximum Limits of

Grade	Total Defects3	Badly Damaged	Contrasting Classes	Foreign Material	Other Classes That Blend	Average Color of Crop Year
	Percent	Percent	Percent	Percent	Percent	
Michigan Choice	2	0.1	0.01	0.01	1.0	Good
Michigan Prime	3	0.2	0.01	0.01	1.0	Fair

Maximum Limits of

Grade	Total Defects3	Contrasting Classes	Foreign Materials Total	Foreign Materials Stones	Other Classes That Blend	Average Color of Crop Year
	Percent	Percent	Percent	Percent	Percent	
Michigan No. 1	2.0	0.1	0.2	0.1	1.0	Good
Michigan No. 2	3.0	1.0	0.6	0.2	5.0	Fair
Michigan No. 3	6.0	1.0	0.6	0.2	5.0	Fair
Michigan Generic	10.0	1.0	0.1	0.0	5.0	Fair

Grade Requirements
Pinto Beans

Grade	Total Defects3	Contrasting Classes	Foreign Materials Total	Foreign Materials Stones	Other Classes That Blend	Average Color of Crop Year
	Percent	Percent	Percent	Percent	Percent	
Michigan No. 1	3.0	0.5	0.4	0.2	1.0	Good
Michigan No. 2	5.0	1.0	0.6	0.2	5.0	Fair
Michigan No. 3	7.0	2.0	0.6	0.2	10.0	Fair
Michigan Generic	10.0	1.0	0.6	0.2	5.0	Fair

Grade Requirements
Black, Kidney, Pink, and Small Red Beans

Grade	Total Defects3	Contrasting Classes	Foreign Materials Total	Foreign Materials Stones	Other Classes That Blend	Average Color of Crop Year
	Percent	Percent	Percent	Percent	Percent	
Michigan No. 1	2.0	0.5	0.4	0.2	1.0	Good
Michigan No. 2	4.0	1.0	0.6	0.2	5.0	Fair

Michigan No. 3	6.0	2.0	0.6	0.2	10.0	Fair
Michigan Generic	10.0	1.0	0.6	0.2	5.0	Fair

Grade Requirements
Cranberry, Yelloweye, and Marrow Beans

Grade	Total Defects 2/3/4	Contrasting Classes	Foreign Materials Total	Foreign Materials Stones	Other Classes That Blend	Average Color of Crop Year
	Percent	Percent	Percent	Percent	Percent	
Michigan No. 1	2.0	0.5	0.4	0.2	1.0	Good
Michigan No. 2	3.0	1.0	0.6	0.2	5.0	Fair
Michigan No. 3	4.0	2.0	0.6	0.2	10.0	Fair
Michigan Generic	8.0	1.0	0.6	0.2	6.0	Fair

Grade Requirements
Adzuki Beans

Grade	Total Defects2	Contrasting Classes	Foreign Materials Total	Foreign Materials Stones	Other Classes That Blend	Average Color of Crop Year
	Percent	Percent	Percent	Percent	Percent	
Michigan No. 1	1.0	0.5	0.2	0.1	1.0	Good
Michigan No. 2	2.0	1.0	0.2	0.1	2.0	Fair
Michigan No. 3	3.0	2.0	0.3	0.2	5.0	Fair
Michigan Generic	5.0	2.0	0.3	0.2	5.0	Fair

[1] The beans of the class yelloweye in any established grade may contain not more than 12% white beans similar to yelloweye in size and shape.
[2] The beans in the classes cranberry and pinto may contain faintly or indistinctly mottled beans of the same type in the following percentages:
(a) Not more than 3% Michigan No. 1 grade.
(b) Not more than 4% Michigan No. 2 grade.
(c) Not more than 5% Michigan No. 3 grade.
(d) Not more than 5% Michigan generic grade.
[3] All graded beans shall be dry and well screened, show evidence of being processed and graded, possess a clean natural odor, and be free from objectionable foreign material.
[4] The beans in the classes of cranberry, yelloweye, and marrow may contain an additional 2% split, but otherwise sound, beans of the same class in any of the established grades.

SPECIAL GRADES
REQUIREMENTS

(2) Michigan split beans shall be beans of any class that have been split or broken and may contain not more than 5% of otherwise damaged beans, 1% of foreign material, and 2% of contrasting classes. The sample shall be reasonably free from chaff, dust, and loose skins or seed coats.
(3) Michigan mixed split beans shall be a mixture of 2 or more classes of split and broken beans and may contain not more than 5% of otherwise damaged beans and 1% of foreign material. The sample shall be reasonably free from chaff, dust, and loose skins or seed coats.

History: 1954 ACS 18, Eff. May 15, 1959; 1979 AC; 1987 MR 1, Eff. Jan. 22, 1987; 1998 MR 12, Eff. Dec. 17, 1998.

R. 285.523.2 Definitions.

Rule 2. As used in these rules:

(a) "Badly damaged beans" means beans and pieces of beans that are seriously injured or discolored so as to seriously affect the appearance and quality of the sample.

(b) "Certified shipper" means a processor, packer, shipper, or authorized representative approved by the director of the department of agriculture to draw samples and submit self-drawn samples to the official grading agency for grading.

(c) "Contrasting classes" means beans of other classes that are of a contrasting color, size, or shape to the beans of the class designated.

(d) "Damaged beans" (culls) means beans and pieces of beans that are seriously injured or discolored by any of the following so as to affect the appearance and quality of the samples:

(i) Frost.

(ii) Bin burn.

(iii) Weather.

(iv) Diseases.

(v) Insects.

(vi) Other causes.

(e) "Defects" means splits, damaged beans, contrasting classes, and foreign material.

(f) "Foreign material" means any of the following:

(i) Stones.

(ii) Dirt.

(iii) Weed seeds.

(iv) Cereal grain of 1 kernel per 500 grams maximum.

(v) All matter other than dry edible beans.

(g) "Graded beans" means dry, edible beans that meet the quality and condition requirements of any 1 of the specific processed grades as indicated in R 285.523.1 as determined by a licensed bean inspector at the point of origin or as a submitted sample.

(h) "Labeling" means labels or other written, printed, or graphic matter upon or accompanying dry edible beans.

(i) "Licensed bean inspector" means a person trained and licensed by the Michigan department of agriculture to sample and grade dry edible beans .

(j) "Mixed beans" means any lot of dry edible beans composed of 2 or more classes mixed together. The mixture shall meet the regular grade requirements for the predominating class in the sample in all respects except for the presence of sound split beans of any class, sound sports or faders, and other classes.

(k) "Off-color beans" means beans of any class which, after removal of defects, do not meet the standards for good or fair color, which are distinctly below normal color standards, due to any natural cause, but which are not materially weathered and are otherwise sound. Off-color beans shall be graded and designated according to the grade requirements of the standards applicable to off-color beans that are not off-color; however, the standards shall not apply to choice, prime, and no. 1 grades. The word "off-color" shall be added to, and made a part of, the grade designation following the name of the class.

(l) "Official grading agency" means the Michigan bean shippers association or other agency approved by the director of the department of agriculture to grade dry edible beans and issue official grade documents.

(m) "Other classes that blend" means sound beans of other classes that are similar in color, size, and shape to the beans of the class designated.

(n) "Peewee beans" or "small beans" means all sound navy beans that screen out by using a 9/64-inch screen. The beans shall be known as "Peewee" and the regular grade requirements for dry beans shall apply in the grading of Peewee beans. The inspection certificate shall bear the "Peewee" designation and the labeling on the package shall also include the "Peewee" designation.

(o) "Percentage of moisture" means moisture content as ascertained by the water oven or air oven and the method of use as described in service and regulatory announcement no. 147 of the agricultural marketing

service of the United States department of agriculture or moisture content as ascertained by any device and method that gives equivalent results. Moisture content shall be designated in units of half percent and whole percent. A fraction of a percent that is equal to or greater than 1/2 shall be stated as 1/2 and when less than 1/2 shall be disregarded.

(p) "Percentages," except in the case of moisture, means percentages ascertained by weight.

(q) "Picking stock beans," also known as beans of "no established grade" means dry beans of any class that fail to qualify for any of the processed grades because of condition, excessive total defects, other disqualifying factors, or not having been well-screened or well-processed.

(r) "Point of origin inspection" means an inspection performed by a licensed bean inspector at the point where the product is processed and packaged before being placed into channels of commercial trade.

(s) "Sound beans" means beans which have a natural odor and which are free from must, mold, damage, and other defects.

(t) "Splits" means pieces of beans which are not damaged and which consist of 3/4 or less of the whole bean and includes bean halves that are held together loosely, but does not include beans that have only cracked or checked skins.

(u) "Stones" means any of the following:

(i) Rocks.

(ii) Pebbles.

(iii) Shale.

(iv) Other concreted earthly matter.

(v) Other substances of similar composition and hardness that do not readily disintegrate in water.

(v) "Submitted samples" means a sample of dry edible beans which is drawn by a certified shipper using approved methods and which is submitted to the official grading agency for grading.

(w) "Weevily beans" means beans which are infested with weevils or other inspects injurious to stored beans or which contain beans that have been damaged by weevils or insects.

(x) "Well screened," as applied to the general appearance of beans, means that the beans are as free from small, shriveled, undeveloped, split, and broken beans, large beans, and foreign materials as practicable through the proper use of top and bottom mill screens as is generally recognized by the bean industry. The recognized top and bottom screen sizes to be used in combination on navy beans are as follows:

Minimum Bottom	Maximum Top
9/64-inch by 3/4-inch slotted with	no. 20 or 20/64-inch diameter perforation
11/64-inch by 3/4-inch slotted with	no 21 or 21/64-inch diameter perforation
12/64-inch by 3/4-inch slotted with	no. 22 or 22/64-inch diameter perforation

The Recommended minimum bottom and maximum top screen sizes for use in screening colored beans are as follows:

	Top Range	Bottom
Cranberry	26 to 28	12/64-inch by 3/4 inch
Yelloweye	24 to 26	12/64-inch by 3/4 inch
Kidney	26 to 30	11/64-inch by 3/4 inch

History: 1954 ACS 18, Eff. May 15, 1959; 1979 AC; 1987 MR 1, Eff. Jan. 22, 1987; 1998 MR 12, Eff. Dec. 17, 1998.

R 285.523.3 Beans placed in consuming trade channels; grading, labeling, packing, and inspection; shipping and transportation; moisture content.

Rule 3. (1) All dry edible beans sold, shipped, or distributed in michigan shall be labeled using 1 of the following criteria:
(a) Grade based on a point of origin inspection by a licensed bean inspector.
(b) Grade based on samples submitted by a certified shipper to the official grading agency for analysis. All certificates and labeling for lots graded by submitted sample shall carry the statement: ?grade derived from submitted sample.?
(c) No inspection. Lots not examined by the official grading agency shall not be labeled with an official Michigan grade.
(2) All dry edible beans which are grown in Michigan, which are placed in consuming trade channels, and which are graded at the point of origin by a licensed bean inspector or are graded by means of submitted samples shall be in compliance with the requirements and specifications of the official Michigan grades for dry beans.
(3) The person, firm, association, or corporation in Michigan responsible for placing graded beans into consuming trade channels or placing graded beans on the market for resale or consumption shall be responsible for the grading, labeling, packing, and voluntary inspection of the beans.
(4) Labeling shall be performed at the point of origin on the lot or shipment as follows:
(a) All containers of 100 pounds or less shall be conspicuously and legibly labeled on the face of the container showing all of the following information:
(i) The net weight of the contents.
(ii) The name of the product, including the word ?Michigan?when produced in this state.
(iii) The official state grade of the contents if inspected and approved by a licensed bean inspector.
(iv) The name and address of the person or firm responsible for placing the product on the market.
(b) On 100-pound bags or containers inspected and approved by a licensed bean inspector for shipment to canners, packagers, and processors, and when there is positive assurance that the beans will not be displayed to the consuming public in the original shipping container, the grade labeling may be shown as specified in subdivision (a) of this subrule or the shipper may declare the grade using a placard as described in R 285.523.4(6). All other labeling, as required in subdivision (a) of this subrule shall appear in its entirety. The shipper or packer whose name must appear on the bag or container will be held fully responsible for any diversion of shipments not bearing the grade label on the individual bag or container.
(c) Every lot or shipment that is inspected and approved by a licensed bean inspector shall be issued an official grade certificate.
(5) Beans that are graded by a licensed bean inspector may be shipped in bulk to canners, packagers, and processors, subject to the inspection requirements of these rules.
(6) All conveying vehicles shall be in compliance with all of the following specifications:
(a) The floors, walls, and ceilings shall be thoroughly cleaned and tightly fitted to protect the load from the weather, contamination, and extraneous matter. Conveying vehicles shall also be free from objectionable foreign odors.
(b) There shall be adequate space above the loaded mass to permit thorough sampling, when requested, throughout the length and depth of the load and also to provide for circulating air space between the top of the load and the roof of the vehicle.
(c) If a point of origin inspection is requested utilizing a licensed bean inspector, then the type and construction of any conveyance that might be considered hazardous to the inspector or prevent the performance of his or her duties prescribed for adequate and thorough sampling and inspection shall not be used to transport beans. The shipper shall sign a bulk conveyance report which shows that the provisions of subdivision (a) of this subrule were complied with before loading.
(7) The standard moisture content of beans defined in the grades in these rules shall not be in excess of 18% moisture and shall be within the limits of the tolerance as defined in R 285.523.2(k). High-moisture beans may be graded and designated according to the grade requirements of the standards otherwise applicable. The words "except moisture" shall be added to, and made a part of, the grade designation in every case of high moisture content, following the name of the class, followed by a statement of the percentage of moisture of the beans in terms of whole percent and half percent. The statement shall appear on the inspection certificate to establish and protect the grade.
(8) Official bean inspection certificates declaring an established grade shall not be issued by any authorized

inspector until all the containers and conveyances conform to all labeling and condition requirements.
History: 1954 ACS 18, Eff. May 15, 1959; 1979 AC; 1987 MR 1, Eff. Jan. 22, 1987; 1998 MR 12, Eff. Dec. 17, 1998.

R 285.523.4 Beans placed in any trade channels; grading, labeling, and inspection.

Rule 4. (1) All dry edible beans, whether for human consumption, precooking, manufacturing, or canning, before being placed into any trade channels, through purchase, sale, or by transportation shall be labeled or placarded. At the option of the processor, packager, or shipper, the dry edible beans may be officially inspected for grade by a licensed bean inspector.
(2) All bags or containers used in packing and shipping beans graded by a licensed bean inspector shall be standard, sound, clean, free from holes, and neatly and legibly printed or stenciled.
(3) All of the following information shall appear on the face of the bag, carton, parcel, or package used in packing and shipping beans or on a tag affixed to a bag, carton, parcel, or package:
(a) The name of the product, including the word "Michigan" when grown in Michigan.
(b) The official state grade of the beans if inspected by a licensed bean inspector.
(c) The net metric weight (grams, kilograms, milliliters, liters) and the net United States customary system weight (ounces, pounds, fluid ounces).
(d) The name and address of the person or firm responsible for placing the product on the market.
(4) The labeling of bags, cartons, parcels, or packages shall be legible, conspicuous, neatly and uniformly applied, and comply with all of the following specifications and requirements:
(a) The word "Michigan" and the word "beans" shall appear on the container as a part of the trademark or identification. For a product inspected by a licensed bean inspector, the words ?Michigan?and ?beans?shall appear in the declaration of the grade in the following order and form: "Michigan Choice Navy Beans" or "Michigan No. 1 Light Red Kidney Beans."
(b) All container labeling shall meet food and drug administration (FDA) regulations as referenced in 21 C.F.R. ?101 et seq.
(c) When a shipper so desires, all the required labeling may appear on a tag made from cloth or tough paper. The tag shall not be less than 2 1/2 inches by 5 inches in size, shall be furnished by the shipper, and shall be securely attached to the top and outside of the package. The proper grade, the name and address of the packer or distributor, or the net weight may appear alone on the tag if the other required label information appears on the container.
(d) A shipper shall not use containers bearing the names of other shippers without having, in his or her possession, a signed authorization from the other shippers to use the containers.
(e) Containers bearing grade labels that do not conform to the grade of beans being packaged shall be rebranded or stenciled in a neat and legible manner and improper labeling shall be completely obliterated. If rebranding is necessary and the shipper elects to use the tag labeling, then the containers may be turned with the plain side out if, in the judgment of the shipper, the procedure would improve the general appearance of the package.
(5) Each lot or shipment of dry beans which is inspected by a licensed bean inspector and which is being transported and moving into trade channels, as described in subrule (1) of this rule, shall be accompanied by a copy of the official grade certificate or, instead of a copy of the official grade certificate, in the case of warehouse lots inspected by a licensed bean inspector, the driver of the vehicle or the transporting agent shall have, in his or her possession, documentary evidence giving all pertinent information regarding the grading and identification of the lot. For carload shipments inspected by a licensed bean inspector, the transport copy of the grade certificate shall be fastened to the inside of the car.
(6) For all shipments of beans Which are graded by a licensed bean inspector and which are loaded in bulk or packed in 100-pound bags or containers on which the grade label does not appear, the correct grade and other required information shall appear on a placard supplied by the shipper or the applicant. The shipper or the applicant shall post the placard in a conspicuous place on the inside of the conveying vehicle. The placard shall be not less than 6 inches by 12 inches in size. The grade shall appear on the placard on a separate line in letters or figures that are a minimum size of 1/2 inch, shall be of the form and wording used in the standards as provided in subrule (7) of this rule, and shall agree in every detail with the grade as stated on the transport copy of the inspection certificate, which the shipper shall also conspicuously post

near the shipper's placard on the inside of the railroad vehicle.
(7) To achieve uniformity and to be consistent, the following form is required for the placard:

	NOTICE MICHIGAN BEAN PLACARD	Inspection Cert. No. A-77902
(Letter Size 1/2")	MICHIGAN CHOICE NAVY BEANS	
		(Grade & Class)
Big 4-49785		Bean Transport-Mich. 478-524
(Car Number)		(Truck Name & Number)
Seal Record-M.D.A. 210149-50	Quantity	78,000#
		(Bags or Lbs.)
Loaded at - Bean-Town		By County Elevator
(Location-Town or City)		(Elevator or Firm Name)
Date: June 20, 1958	SIGNATURE	John Doe

IMPORTANT: The receiver of this shipment shall remove this card and inspection copy and keep on file.
History: 1954 ACS 18, Eff. May 15, 1959; 1979 AC; 1987 MR 1, Eff. Jan. 22, 1987; 1998 MR 12, Eff. Dec. 17, 1998.

R 285.523.5 Point of origin inspection on loaded lots.

Rule 5. (1) Shippers or others requesting point of origin inspection on any lot of beans shall give the inspector ample advance notice of desired inspection service.
(2) All shipments shall be completely loaded before official inspection is made. Beans shall not be loaded to a depth that would hinder or prevent thorough sampling of the load throughout the length and depth of the shipment. Official inspection shall not be made of beans that are sampled in the loading bins.
(3) Shippers shall furnish help to the inspector to provide for thorough sampling or to gain access to all parts of any specific lot on which inspection is desired.
(4) Inspectors shall thoroughly sample not less than 10% of all 100-pound bags in the lot and not less than 10 packages from every 10,000 pounds represented if containers hold less than 100 pounds each. Not less than 5 packages shall be selected for sampling of any sized lot. If small packages become mutilated as a result of sampling, then similar packages containing beans of equivalent quality may be substituted for the ones selected for sampling.
(5) Extreme care shall be exercised by the inspector at all times when sampling so as not to unnecessarily damage the containers.
(6) Samples shall be taken from all parts of the lots at random. The inspector shall be personally responsible for all samples and shall vouch that all samples drawn are truly representative to the best of his or her knowledge and belief.
(7) Sufficiently large samples shall be drawn by the sampler or inspector so that not less than a 1-pound portion may be filed with the inspection laboratory and a portion that is equal to or greater than the 1-pound

portion shall be kept on file by the inspector for not less than 90 days.
(8) Bulk sampling methods and procedures shall be uniform for all inspectors and shall be in accordance with the instructionsthat shall be issued, in writing, to all inspectors from time to time as required.
(9) Grade certificate for an established grade shall not be issued if there is an apparent wide variation of quality, but picking stock regulations shall then govern the inspection and disposition of the load.
(10) An inspector shall at all times be in a position to furnish a sworn affidavit on any sample to substantiate and verify the origin and identity of the sample. An affidavits shall also specify that the sample was personally taken by the inspector strictly in accordance with the instructions provided under subrule (8) of this rule.
(11) Entire composite samples of all bulk loads inspected shall be kept intact in approved sample bags and filed by the inspector for not less than 90 days.
(12) Inspectors shall seal all trucks, cars, and other vehicles with official seals of the department of agriculture. Warehouse lots shall be sealed and identified in accordance with the provision of R 285.523.7.
istory: 1954 ACS 18, Eff. May 15, 1959; 1979 AC; 1987 MR 1, Eff. Jan. 22, 1987; 1998 MR 12, Eff. Dec. 17, 1998.

R 285.523.6 Submitted sample inspection.

Rule 6. (1) Dry edible beans may be inspected and graded based on a sample of product submitted by certified shippers.
(2) Certified shippers shall utilize the following sampling procedures when drawing samples for submission to the official grading agency for analysis:
(a) All lots or loads to be graded on the basis of a submitted sample shall be sampled by a certified shipper.
(b) A certified shipper shall thoroughly sample not less than 10% of all 100-pound bags in the lot and not less than 10 packages from every 10,000 pounds represented if containers hold less than 100 pounds each. Not less than 5 packages shall be selected for sampling of any sized lot.
(c) Samples shall be taken from all parts of the lots at random. The certified shipper shall be responsible for all samples and shall vouch that all samples drawn are truly representative to the best of his or her knowledge and belief.
(d) Sufficiently large samples shall be drawn by the certified shipper so that not less than a 1,000 gram portion may be filed with the inspection laboratory. The following is the minimum sample sizes for various conveyances:

Conveyance	Size/Cwt	Sample Size/Grams
Containers	420	1,000
Truck/Bulk Bagged	450	1,000
Railcar/Hopper	1,500/2,000	2,000

(3) A shipper shall be certified by the director of the Michigan department of agriculture based on a minimum of 4 hours of basic training and 2 hours of supplemental instruction each year after the year in which basic training is provided. The training and instruction shall be provided by the official grading agency and monitored by the Michigan department of agriculture.
(4) A certified shipper shall be immediately disqualified from the privilege of participating in the submitted sample grading program for failing to utilize a certified sampler, failing to draw samples using an approved protocol, falsifying any samples or shipping documents, or failing to prevent shipments that do not meet the standards specified by the shipping documents. Disqualification shall remain in effect for a period of not less than 3 years from the date of declaration by the director. In addition, the shipper shall be provided a Michigan grade solely on a point of origin inspection during the disqualification period.
(5) The documents accompanying the submitted sample shall include the shipper? key number, lot number, proposed grade and weight of shipment, the name of the person drawing the sample, and the date of sampling.
(6) Certified submitted samples shall be sent or delivered to the official grading agency where a moisture reading and grade analysis will be performed.

(7) File samples shall be retained by the official grading agency for not less than 90 days. The certified shipper shall retain the remainder of the composite samples for not less than 90 days from the date of sampling. The labeling of the composite sample must include the shippers key number, lot number, date of sample, proposed grade and weight of shipment, the name of shipper and location, and the name of the person drawing the sample.
(8) A shipper will be furnished a grade certificate if the beans in the sample are in compliance with the criteria of the specific grade.
(9) A grade certificate will indicate that the grade was based on a submitted sample and that the grade applies to the contents of the submitted sample only and not to the lot or load that it is meant to represent.
History: 1954 ACS 18, Eff. May 15, 1959; 1979 AC; 1987 MR 1, Eff. Jan. 22, 1987; 1998 MR 12, Eff. Dec. 17, 1998.

R 285.523.7 Point of origin inspection on warehouse lots.

Rule 7. (1) Warehouse point of origin inspection service shall be granted to dealers who comply with both of the following requirements:
(a) A warehouseman or shipper shall positively and adequately identify warehouse lots with a key number and lot number for 100% of the containers before sampling and inspection.
(b) A shipper or warehouseman shall furnish help to the inspector that enables the inspector to thoroughly sample, identify, and seal all warehouse inspected lots.
(2) Warehouse inspection shall be refused by the department of agriculture for noncompliance with the required procedures set forth in these rules.
(3) The transport copy of the grade certificate or other positive and adequate evidence of inspection shall be supplied to the transporting agent by the shipper.
History: 1954 ACS 18, Eff. May 15, 1959; 1979 AC; 1987 MR 1, Eff. Jan. 22, 1987; 1998 MR 12, Eff. Dec. 17, 1998.

R 285.523.8 Issuance and use of official grade certificates.

Rule 8. (1) The official bean grade certificate of the Michigan department of agriculture shall consist of a form and words mutually agreed upon and approved by the department and the official grading agency and shall carry the official state seal.
(2) Throughout the duration of the cooperative agreement between the Michigan department of agriculture and the official grading agency, the chief bean inspector of the official grading agency shall be the official grading authority for the determination of conformance of any lot of beans to the official state grade.
(3) Each grade certificate shall have the key identification number of the shipper, as furnished by the Michigan department of agriculture, recorded on the certificate.
(4) A grade certificate shall not be valid if the beans are not shipped within 15 days of the date on the certificate.
(5) Each car lot and truck lot of beans inspected by a licensed bean inspector at the point of origin shall be sealed with the official seal of the Michigan department of agriculture and the seal numbers shall be recorded on the grade certificate. Lot numbers or symbols of identification of warehouse lots shall appear on the grade certificate.
(6) For lots inspected by a licensed bean inspector the original grade certificate or suitable manifests shall, in all cases, be delivered to the buyer with the invoice or other documents covering the shipment.
History: 1954 ACS 18, Eff. May 15, 1959; 1979 AC; 1987 MR 1, Eff. Jan. 22, 1987; 1998 MR 12, Eff. Dec. 17, 1998.

R 285.523.9 Reinspection.

Rule 9. A shipper, owner, or seller of an officially certified lot of beans is entitled to reinspection at the point of origin if he or she has sufficient grounds to differ with the grading of the lot by the inspector making the original point of origin inspection. The request for a reinspection shall be filed with the chief inspector. The chief inspector shall supervise or direct the resampling or he or she may use the inspector's sample for analysis. If the chief inspector's grading differs from the original inspector's grading, then all copies of the certificate covering the first inspection shall be surrendered and a new certificate shall be issued by the chief

inspector. If the grading of the first inspector is confirmed, then the applicant for a reinspection shall bear all additional costs incurred in connection with the reinspection.
History: 1954 ACS 18, Eff. May 15, 1959; 1979 AC; 1987 MR 1, Eff. Jan. 22, 1987; 1998 MR 12, Eff. Dec. 17, 1998.

R 285.523.10 Appeal inspections.

Rule 10. (1) A financially interested party is entitled to appeal the grade of a lot or shipment of beans officially inspected as a point of origin inspection if the quality and condition of the lot, upon arrival at the destination, does not conform to the grade and condition as shown on the official bean grade certificate. The request for an appeal inspection shall be filed with the chief inspector within 3 full business days after arrival of the shipment and before the shipment is unloaded and loses its identity. The chief inspector shall supervise and direct the sampling and the grade shall be determined by the director of the Michigan department of agriculture on the basis of the sample submitted to him or her by the chief inspector. An advisory board shall be established for the purpose of advising the director of the Michigan department of agriculture. The board shall consist of the chief inspector, the state supervisor, and 1 disinterested licensed bean in spector.
(2) If the original grade is reversed, then the outstanding certificate shall be recalled and a certificate giving the correct grade shall be issued by the director of the Michigan department of agriculture. The decision of the director of the Michigan department of agriculture is final. The loser in the appeal shall bear the cost incurred in connection with the appeal.
History: 1954 ACS 18, Eff. May 15, 1959; 1979 AC; 1987 MR 1, Eff. Jan. 22, 1987; 1998 MR 12, Eff. Dec. 17, 1998.

R 285.523.11 Interpretation and amendment of rules.

Rule 11. (1) The director of the Michigan department of agriculture is charged with responsibility of the administration of these rules and is authorized to interpret their provisions and set up procedures that he or she deems necessary to carry out the intent and purposes of these rules.
(2) These rules may be amended at any time throughout the year by the commission of agriculture upon agreement between the parties of the latest cooperative contract between the Michigan department of agriculture and the official grading agency. The amendments shall be made by means of a special committee. The members of the special committee shall consist of persons appointed by the official grading agency to represent its interests in the contract and the director of the Michigan department of agriculture who represents the commission of agriculture, and who represents the department's interest in the contract. Amendments shall be promulgated under Act No. 306 of the Public Acts of 1969, as amended, being 24.201 et seq. of the Michigan Compiled Laws.
History: 1954 ACS 18, Eff. May 15, 1959; 1979 AC; 1987 MR 1, Eff. Jan. 22, 1987; 1998 MR 12, Eff. Dec. 17, 1998.

R 285.523.12 Rescinded.

FOOD INSPECTION DIVISION

REGULATION NO. 530. CONTROLLED ATMOSPHERE STORAGE FOR APPLES

R 285.530.3
Source: 1994 AACS.

REGULATION NO. 541. SMOKED FISH

R 285.541.1—R 285.541.11
Source: 1997 AACS.

FOOD AND DAIRY DIVISION

REGULATION NO. 556. FOOD CONCESSIONS AT STATE AND COUNTY FAIRS

R 285.556.1
Source: 1981 AACS.

R 285.556.2
Source: 1981 AACS.

R 285.556.3
Source: 1981 AACS.

R 285.556.4
Source: 1981 AACS.

R 285.556.5
Source: 1981 AACS.

R 285.556.6
Source: 1981 AACS.

R 285.556.7
Source: 1981 AACS.

R 285.556.8
Source: 1981 AACS.

R 285.556.9
Source: 1981 AACS.

R 285.556.10
Source: 1981 AACS.

R 285.556.11
Source: 1981 AACS.

R 285.556.12
Source: 1981 AACS.

R 285.556.13
Source: 1981 AACS.

R 285.556.14
Source: 1981 AACS.

R 285.556.15
Source: 1981 AACS.

R 285.556.16
Source: 1981 AACS.

R 285.556.17
Source: 1981 AACS.

R 285.556.18
Source: 1981 AACS.

R 285.556.19

Source: 1981 AACS.

R 285.556.20
Source: 1981 AACS.

FOOD INSPECTION DIVISION

REGULATION NO. 557. FOOD ESTABLISHMENT LICENSING

R 285.557.1
Source: 1980 AACS.

R 285.557.2
Source: 1980 AACS.

R 285.557.3
Source: 1980 AACS.

R 285.557.4
Source: 1980 AACS.

R 285.557.5
Source: 1980 AACS.

R 285.557.6
Source: 1980 AACS.

R 285.557.7
Source: 1980 AACS.

R 285.557.8
Source: 1980 AACS.

R 285.557.9
Source: 1980 AACS.

FOOD DIVISION

REGULATION NO. 558. TEMPORARY FOOD ESTABLISHMENTS

R 285.558.1
Source: 1982 AACS.

R 285.558.2
Source: 1982 AACS.

R 285.558.3
Source: 1982 AACS.

R 285.558.4
Source: 1982 AACS.

R 285.558.5
Source: 1982 AACS.

REGULATION NO. 559. LIQUID MEASURING DEVICES

R 285.559.1
Source: 1981 AACS.

R 285.559.2
Source: 1981 AACS.

R 285.559.3
Source: 1981 AACS.

R 285.559.4
Source: 1981 AACS.

R 285.559.5
Source: 1982 AACS.

R 285.559.6
Source: 1981 AACS.

REGULATION NO. 560. GRAIN DEALERS

R 285.560.1
Source: 1984 AACS.

R 285.560.2
Source: 1984 AACS.

R 285.560.3
Source: 1984 AACS.

R 285.560.4
Source: 1984 AACS.

R 285.560.5
Source: 1984 AACS.

R 285.560.6
Source: 1984 AACS.

R 285.560.7
Source: 1984 AACS.

R 285.560.8
Source: 1984 AACS.

R 285.560.9
Source: 1984 AACS.

R 285.560.10
Source: 1984 AACS.

R 285.560.11
Source: 1984 AACS.

REGULATION NO. 561. DISPENSING FACILITY REID VAPOR PRESSURE

R 285.561.1
Source: 1997 AACS.

R 285.561.2
Source: 1997 AACS.

R 285.561.3
Source: 1997 AACS.

R 285.561.4
Source: 1997 AACS.

R 285.561.5
Source: 1997 AACS.

R 285.561.6
Source: 1997 AACS.

R 285.561.7
Source: 1997 AACS.

R 285.561.8
Source: 1997 AACS.

R 285.561.9
Source: 1997 AACS.

R 285.561.10
Source: 1997 AACS.

REGULATION NO. 562. LABELING OF RETAIL GASOLINE DISPENSERS

R 285.562.1
Source: 1987 AACS.

R 285.562.2
Source: 1987 AACS.

R 285.562.3
Source: 1987 AACS.

R 285.562.4
Source: 1987 AACS.

REGULATION NO. 563. RETAIL GASOLINE DEALER LICENSING

R 285.563.1
Source: 1985 AACS.

R 285.563.2
Source: 1985 AACS.

R 285.563.3
Source: 1985 AACS.

R 285.563.4
Source: 1985 AACS.

R 285.563.5
Source: 1985 AACS.

R 285.563.6
Source: 1985 AACS.

R 285.563.7
Source: 1985 AACS.

REGULATION NO. 564. AUTOMOTIVE GASOLINE PURITY, ADDITIVES, AND GRADING

R 285.564.1
Source: 1987 AACS.

R 285.564.2
Source: 1987 AACS.

R 285.564.3
Source: 1987 AACS.

R 285.564.4
Source: 1987 AACS.

R 285.564.5
Source: 1987 AACS.

R 285.564.6
Source: 1987 AACS.

R 285.564.7
Source: 1987 AACS.

R 285.564.8
Source: 1987 AACS.

R 285.564.9
Source: 1987 AACS.

R 285.564.10
Source: 1987 AACS.

R 285.564.11
Source: 1987 AACS.

R 285.564.12
Source: 1987 AACS.

R 285.564.13
Source: 1987 AACS.

REGULATION NO. 565. SULFITE-TREATED FOOD LABELING AND PLACARDING

R 285.565.1
Source: 1987 AACS.

R 285.565.2
Source: 1987 AACS.

R 285.565.3

Source: 1987 AACS.

R 285.565.4
Source: 1987 AACS.

R 285.565.5
Source: 1987 AACS.

R 285.565.6
Source: 1987 AACS.

R 285.565.7
Source: 1987 AACS.

REGULATION NO. 569. SMOKED FISH

R 285.569.1
Source: 1997 AACS.

R 285.569.2
Source: 1997 AACS.

R 285.569.3
Source: 1997 AACS.

R 285.569.4
Source: 1997 AACS.

R 285.569.5
Source: 1997 AACS.

R 285.569.6
Source: 1997 AACS.

R 285.569.7
Source: 1997 AACS.

R 285.569.8
Source: 1997 AACS.

R 285.569.9
Source: 1997 AACS.

R 285.569.10
Source: 1997 AACS.

R 285.569.11
Source: 1997 AACS.

R 285.569.12
Source: 1997 AACS.

R 285.569.13
Source: 1997 AACS.

R 285.569.14
Source: 1997 AACS.

R 285.569.15
Source: 1997 AACS.

R 285.569.16
Source: 1997 AACS.

R 285.569.17
Source: 1997 AACS.

R 285.569.18
Source: 1997 AACS.

R 285.569.19
Source: 1997 AACS.

PLANT INDUSTRY DIVISION

REGULATION NO. 606. BLUEBERRY REGULATION

R 285.606.1
Source: 1984 AACS.

REGULATION NO. 610. INSPECTION FEES

R 285.610.1
Source: 1980 AACS.

R 285.610.2
Source: 1997 AACS.

R 285.610.3
Source: 1997 AACS.

REGULATION NO. 615. ALFALFA WEEVIL

R 285.615.1
Source: 1997 AACS.

REGULATION NO. 619. FRUIT TREE SCIONWOOD, UNDERSTOCK, AND NURSERY STOCK

R 285.619.1
Source: 1984 AACS.

R 285.619.2
Source: 1984 AACS.

R 285.619.3
Source: 1984 AACS.

R 285.619.4
Source: 1984 AACS.

R 285.619.31
Source: 1984 AACS.

REGULATION NO. 623. FIELD SEED CERTIFICATION

PART 1. GENERAL PROVISIONS

R 285.623.1
Source: 1997 AACS.

R 285.623.2
Source: 1997 AACS.

R 285.623.3
Source: 1997 AACS.

R 285.623.4
Source: 1997 AACS.

R 285.623.5
Source: 1997 AACS.

R 285.623.6
Source: 1997 AACS.

R 285.623.7
Source: 1997 AACS.

R 285.623.8, R 285.623.11
Source: 1997 AACS.

R 285.623.12
Source: 1997 AACS.

R 285.623.15
Source: 1997 AACS.

PART 2. INDIVIDUAL CROP STANDARDS

R 285.623.21
Source: 1997 AACS.

R 285.623.21a
Source: 1997 AACS.

R 285.623.22
Source: 1997 AACS.

R 285.623.23, R 285.623.24
Source: 1997 AACS.

R 285.623.25
Source: 1997 AACS.

R 285.623.26
Source: 1997 AACS.

R 285.623.27—R 285.623.29

Source: 1997 AACS.

PESTICIDE AND PLANT PEST MANAGEMENT DIVISION

REGULATION NO. 623. FIELD CROP AND TURFGRASS SEED CERTIFICATION

PART 1. GENERAL PROVISIONS

R 285.623.101
Source: 1994 AACS.

R 285.623.102
Source: 1994 AACS.

R 285.623.103
Source: 1994 AACS.

R 285.623.104
Source: 1994 AACS.

R 285.623.105
Source: 1994 AACS.

R 285.623.106
Source: 1994 AACS.

R 285.623.107
Source: 1994 AACS.

R 285.623.108
Source: 1994 AACS.

R 285.623.109
Source: 1994 AACS.

R 285.623.110
Source: 1994 AACS.

R 285.623.111
Source: 1994 AACS.

R 285.623.199
Source: 1994 AACS.

PART 2. FIELD CROP STANDARDS

R 285.623.201
Source: 1994 AACS.

R 285.623.202
Source: 1994 AACS.

R 285.623.203
Source: 1994 AACS.

R 285.623.204
Source: 1994 AACS.

R 285.623.205
Source: 1994 AACS.

R 285.623.206
Source: 1994 AACS.

R 285.623.207
Source: 1994 AACS.

R 285.623.208
Source: 1994 AACS.

R 285.623.209
Source: 1994 AACS.

R 285.623.210
Source: 1994 AACS.

R 285.623.211
Source: 1994 AACS.

R 285.623.212
Source: 1994 AACS.

R 285.623.213
Source: 1994 AACS.

R 285.623.214
Source: 1994 AACS.

R 285.623.215
Source: 1994 AACS.

R 285.623.216
Source: 1997 AACS.

PART 3. TURFGRASS SEED STANDARDS

R 285.623.301
Source: 1994 AACS.

R 285.623.302
Source: 1994 AACS.

R 285.623.303
Source: 1994 AACS.

R 285.623.304
Source: 1994 AACS.

R 285.623.305
Source: 1994 AACS.

R 285.623.306
Source: 1994 AACS.

R 285.623.307
Source: 1994 AACS.

PART 4. SOD QUALITY SEED STANDARDS

R 285.623.401
Source: 1994 AACS.

R 285.623.402
Source: 1994 AACS.

R 285.623.403
Source: 1994 AACS.

R 285.623.404
Source: 1994 AACS.

REGULATION NO. 628. SEED POTATO CERTIFICATION

R 285.628.1
Source: 1994 AACS.

R 285.628.3
Source: 1994 AACS.

R 285.628.4
Source: 1994 AACS.

R 285.628.4a
Source: 1994 AACS.

R 285.628.5
Source: 1994 AACS.

R 285.628.5a
Source: 1994 AACS.

R 285.628.6
Source: 1994 AACS.

R 285.628.7
Source: 1997 AACS.

R 285.628.8
Source: 1994 AACS.

R 285.628.9
Source: 1994 AACS.

R 285.628.11
Source: 1994 AACS.

R 285.628.12
Source: 1997 AACS.

R 285.628.14—R 285.628.27
Source: 1997 AACS.

REGULATION NO. 633. RESTRICTED USE PESTICIDES

R 285.633.2
Source: 1985 AACS.

REGULATION NO. 636. PESTICIDE APPLICATORS

R 285.636.1
Source: 1991 AACS.

R 285.636.2
Source: 1991 AACS.

R 285.636.3
Source: 1991 AACS.

R 285.636.4
Source: 1991 AACS.

R 285.636.5
Source: 1991 AACS.

R 285.636.6
Source: 1991 AACS.

R 285.636.7
Source: 1991 AACS.

R 285.636.8
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R 285.636.9
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R 285.636.10
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R 285.636.11
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R 285.636.12
Source: 1991 AACS.

R 285.636.13
Source: 1991 AACS.

R 285.636.14
Source: 1991 AACS.

R 285.636.15
Source: 1991 AACS.

R 285.636.16
Source: 1991 AACS.

R 285.636.17
Source: 1991 AACS.

REGULATION NO. 637. PESTICIDE USE

R 285.637.1
Source: 1995 AACS.

R 285.637.2
Source: 1995 AACS.

R 285.637.3
Source: 1992 AACS.

R 285.637.4
Source: 1992 AACS.

R 285.637.5
Source: 1995 AACS.

R 285.637.6
Source: 1992 AACS.

R 285.637.7
Source: 1992 AACS.

R 285.637.8
Source: 1992 AACS.

R 285.637.9
Source: 1992 AACS.

R 285.637.10
Source: 1992 AACS.

R 285.637.11
Source: 1995 AACS.

R 285.637.12
Source: 1995 AACS.

R 285.637.13
Source: 1992 AACS.

R 285.637.14
Source: 1992 AACS.

R 285.637.15
Source: 1995 AACS.

R 285.637.16
Source: 1992 AACS.

R 285.637.17
Source: 1995 AACS.

REGULATION NO. 640. COMMERCIAL PESTICIDE BULK STORAGE

R 285.640.1
Source: 1992 AACS.

R 285.640.2
Source: 1992 AACS.

R 285.640.3
Source: 1992 AACS.

R 285.640.4
Source: 1992 AACS.

R 285.640.5
Source: 1992 AACS.

R 285.640.6
Source: 1992 AACS.

R 285.640.7
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R 285.640.8
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R 285.640.9
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R 285.640.10
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R 285.640.11
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R 285.640.12
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R 285.640.13
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R 285.640.14
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R 285.640.15
Source: 1992 AACS.

R 285.640.16
Source: 1992 AACS.

R 285.640.17
Source: 1992 AACS.

R 285.640.18
Source: 1992 AACS.

R 285.640.19
Source: 1992 AACS.

REGULATION NO. 641. COMMERCIAL FERTILIZER BULK STORAGE

R 285.641.1 Definitions.

Rule 1. (1) As used in these rules:

(a) "Approved" means approval by the director of the department or his or her representative.

(b) "Appurtenances" mean any of the following which are connected to a bulk fertilizer container or which are used for transferring bulk fertilizer between containers:

(i) Valves.
(ii) Gauges.
(iii) Portable manufacturing units.
(iv) Pumps.
(v) Fittings.
(vi) Hoses.
(vii) Mixing containers.
(viii) Plumbing.
(ix) Metering devices.
(c) "Aqua ammonia" means an aqueous solution of anhydrous ammonia which generally contains 18% to 30% of ammonia (NH3) by weight and which has a vapor pressure that usually varies from 0 to 10 pounds per square inch
gauge (psig) at 104 degrees Fahrenheit.
(d) "Bulk fertilizer" means fluid fertilizer in a single container that has a capacity of more than 2,500 United States gallons, fluid fertilizer in containers that have a combined total capacity for all storage containers or tanks located at a single site or location of more than 7,500 United States gallons, or dry fertilizer in an individual quantity of more than 2,000 pounds. For purposes of these rules, use solutions and rinsates are bulk fertilizers if they are in containers that meet the capacities specified in this subdivision.
(e) "Department" means the Michigan department of agriculture.
(f) "Discharge" means an uncontained release to the environment in a quantity that is more than 55 United States gallons of liquid or 650 pounds of dry bulk fertilizer. "Discharge" does not include a fully contained transfer of bulk fertilizer that is made pursuant to sale, storage, distribution, or intended use.
(g) "Distribute" has the meaning as defined in section 8501 of Act No. 451 of the Public Acts of 1994, as amended, being §324.8501 of the Michigan Compiled Laws.
(h) "Elephant ring" means a storage container which has an open top and which serves as a secondary containment vessel into which a primary storage container with a smaller volume is placed.
(i) "Existing bulk storage facility" means a facility that, on the effective date of this rule, is being used to store or hold bulk fertilizers where the location of bulk containers remains the same whether bulk containers are replaced, added to, or reorganized.
(j) "Fertilizer" has the meaning as defined in section 8501 of Act No. 451 of the Public Acts of 1994, as amended, being §324.8501 of the Michigan Compiled Laws.
(k) "Field operations" means the application of fertilizer to soil or plants in the course of normal agricultural or horticultural practice.
(l) "Floodplain" means any land area that is subject to a 1% or greater chance of flooding. This is equivalent to a 100-year flood.
(m) "Fluid fertilizer" means fertilizer in fluid form and includes solutions, emulsions, suspensions, and slurries. "Fluid fertilizer" does not include anhydrous ammonia.
(n) "Mobile container" means a container designed or used for transporting fertilizer.
(o) "Modification" means changes in structures, processes, or activities at a bulk fertilizer storage facility that alter the efficiency or capacity of containment structures or systems.
(p) "New bulk storage facility" means a storage facility designated by the director or a storage facility that locates new, used, or refurbished bulk containers where, before the effective date of this rule, bulk storage was not conducted.
(q) "Operational area containment" means a structure or system that is designed and constructed to effectively intercept and contain spills, container or equipment washwater, and precipitation to prevent the runoff or leaching of fertilizer from an area or areas at a storage facility where bulk fertilizers are transferred, loaded, unloaded, mixed, impregnated, repackaged, or refilled.
(r) "Primary containment" means the storage of bulk fertilizer in storage containers at a storage facility.
(s) "Primary containment piping" consists of any conveyance utilized to transport liquid fertilizer into or out of the storage area.
(t) "Rinsate" means the liquid that is generated from the rinsing of the interior surface of fertilizer application equipment or a fertilizer container that has come in direct contact with fertilizer. The liquid is a mixture of water and a relatively low concentration of fertilizer. "Rinsate" includes the liquid that is

generated by cleaning a containment area under R 285.641.10(3).
(u) "Secondary containment" means a structure, including dikes, that is effectively designed and constructed to contain spills or leaks and to prevent escapes, runoff, and leaching of fertilizer from bulk storage containers and appurtenances.
(v) "Spill" means a contained release, within a containment area or operational pad, in a quantity that is more than 55 United States gallons of liquid or 650 pounds of dry bulk fertilizer. "Spill" does not include a fully contained transfer of bulk fertilizer that is made pursuant to sale, storage, distribution, or intended use.
(w) "Storage" means the storage of bulk fertilizer by a person who manufactures or distributes bulk fertilizer.
(x) "Storage container" means a container, rail car, nurse tank, or mobile container that is used for the storage of bulk fertilizer. "Storage container" does not include any of the following:
(i) A mobile container that stores bulk fertilizer at a storage facility for less than 30 consecutive days if the storage is incidental to the loading or unloading of a storage container at the storage facility.
(ii) A mobile container that is located on property other than property which is owned, operated, or controlled by an owner or operator of a storage facility for less than 30 consecutive days.
(iii) A rail car that stores bulk fertilizer at a storage facility for less than 30 consecutive days without reloading or unloading.
(iv) A container which is 2,500 gallons or less and which is used solely as emergency storage for leaking fertilizer containers.
(y) "Storage facility" means a facility which is used to store or hold bulk fertilizer and which is owned, operated, controlled, or leased by a person who manufactures or distributes bulk fertilizer.
(z) "Surface water" means a body of water that has its top surface exposed to the atmosphere and includes lakes, ponds, or water holes that cover an area of more than 0.25 acres and streams, rivers, or waterways that maintain a flow year-round. "Surface water" does not include waterways that have an intermittent flow.
(aa) "Washwater" means the liquid that is generated from rinsing the exterior surfaces of application, handling, storage, transportation, or nurse equipment. "Washwater" does not include the liquid that is generated by cleaning a containment area under R 285.641.10(3).
History: 1999 MR 10, Eff. Oct. 25, 1999.

R 285.641.2 Storage facility registration.

Rule 2. (1) A person shall not operate a storage facility in Michigan until it is registered with the department. Each facility shall submit a registration application on forms provided by the department. The registration application shall disclose the physical location of the facility and its mailing address if different from the address on the application. A person shall submit a discharge response plan under R 285.641.14 and a site plan of the facility with the registration application. The site plan shall include all of the following:
(a) A plot plan or map of the property that shows all structures and the location of all wells on the site.
(b) A plot plan or map that shows all of the following:
(i) Precipitation runoff routes to and from the storage facility.
(ii) Approximate distance to, and the identity of, lakes, streams, drainage ditches, or storm drains within 0.5 mile of the storage facility location.
(iii) The distance and direction to the nearest public and private wells.
(iv) Site soil characteristics.
(v) Depth to groundwater.
(c) A plot plan or map that shows the location of bulk storage tanks and their horizontal, raised, or vertical situation at the site, and a tank schedule that provides all of the following information for each tank:
(i) The construction material.
(ii) The capacity.
(iii) The diameter.
(iv) The height.
(v) The product stored.

(vi) The date of installation.
(d) Secondary and operational area containment construction plans and the capacity of the containments in gallons.
(e) If synthetic liners or synthetic materials are used, containment structure manufacturer installation instructions and confirmation of compatibility with fertilizer. If prefabricated basins are used, containment structure manufacturer confirmation of compatibility with fertilizer and an estimate of the life expectancy of the structure.
(f) An operational plan for containment areas that shows the handling and utilization of recovered fertilizer materials, rinsewater, and precipitation accumulation.
(2) For a facility which is in operation on the effective date of this rule and which does not meet the containment requirements of this rule, the facility shall submit both of the following with the registration application:
(a) Items that are required under subrule (1) of this rule.
(b) Designs for required containment structures, including the amount of construction that has been completed and a timetable for complete compliance with this rule.
(3) All registrations expire on December 31 of each year. The facility site plan need not be submitted with the registration application after the first registration is approved unless modifications to the facility occur affecting subrules (1) and (2) of this rule.
(4) For a facility that has containments under construction or that has plans for construction, the facility shall submit annually the items specified in subrule (2) of this rule with the registration application until the construction has been completed.
(5) After an initial storage facility registration has been completed, if changes or modifications have not occurred since the latest registration, then facility need not submit the items in subrules (1) and (2) of this rule with the storage facility registration application/renewal.
(6) The department may approve a registration application with conditions if the applicant facility has met the requirements of subrules (2) to (5) of this rule. A facility applying for an approval with conditions shall meet timetables for project completion as approved by the department and may have a maximum of 5 years to fully complete a project.
(7) The department may deny a registration if the applicant facility does not meet the requirements of this rule. The applicant facility may appeal a registration denial to the department director for reevaluation.
(8) The department shall notify an applicant regarding the status of their registration within 120 days of receipt of the registration. This notification shall indicate the conditions of approval or the reasons for denial of registration, if applicable. An applicant facility shall be deemed registered for operation for 1 year if the department does not respond within the 120 days.
(9) The department may exempt any person from a requirement under these rules if compliance is not technically feasible and if the department finds that alternative measures provide substantially similar protection against a discharge to the environment. The person who requests the exemption shall provide all information which is required to prove that substantially similar protection is possible to the department.
(10) For the year in which this rule takes effect, a facility applicant shall submit a registration application to the department within 180 days of the effective date of this rule.
History: 1999 MR 10, Eff. Oct. 25, 1999.

R 285.641.3 Siting of storage facilities.

Rule 3. (1) The siting of a bulk fertilizer storage facility shall comply with applicable local, state, and federal regulations.
(2) A storage facility shall locate its new bulk storage facilities and its respective containment areas shall be located as follows:
(a) Above a floodplain as defined in R 285.641.1(1).
(b) A minimum of 200 feet from surface water.
(c) A minimum of 2,000 feet from type I and type IIa public water supply wells, as defined in Act No. 399 of the Public Acts of 1976, as amended, being §325.1001 et seq. of the Michigan Compiled Laws.
(d) A minimum of 800 feet from type IIb and type III public water supply wells, as defined in Act No. 399 of the Public Acts of 1976, as amended, being §325.1001 et seq. of the Michigan Compiled Laws.

(e) A minimum of 150 feet from all other drinking water supplies that are not defined in Act No. 399 of the Public Acts of 1976, as amended, being §325.1001 et seq. of the Michigan Compiled Laws.
(3) Existing bulk storage facilities that have approved containment shall have the outside base of the containment areas located as follows:
(a) A minimum of 200 feet from type I and type IIa public water supply wells, as defined in Act No. 399 of the Public Acts of 1976, as amended, being §325.1001 et seq. of the Michigan Compiled Laws.
(b) A minimum of 75 feet from type IIb and type III public water supply wells, as defined in Act No. 399 of the Public Acts of 1976, as amended, being §325.1001 et seq. of the Michigan Compiled Laws.
(c) A minimum of 50 feet from all other drinking water supplies that are not defined in Act No. 399 of the Public Acts of 1976, as amended, being §325.1001 et seq. of the Michigan Compiled Laws.
(4) All bulk storage facilities shall utilize appropriate engineering safeguards to prevent water supply contamination if the floodplain, surface water, or water supply setback requirements in subrules (2) and (3) of this rule cannot be met. A storage facility shall implement the engineering safeguards before initial approval of a facility registration by the department.
(5) A storage facility shall ensure that bulk storage construction standards for primary, secondary, and operational containment facilities that are constructed after the effective date of this rule are of a type recommended by any of the following entities:
(a) Michigan state university.
(b) Midwest plan service.
(c) Tennessee valley authority.
(d) United States Department of Agriculture natural resources conservation service.
(e) A licensed engineer.
(f) Other sources approved by the department.
(6) The department is not liable for the structural integrity of a department-approved storage facility.
History: 1999 MR 10, Eff. Oct. 25, 1999.

R 285.641.4 Primary containment of bulk liquid fertilizer.

Rule 4. (1) A storage facility shall ensure that a storage container and an appurtenance are constructed, installed, and maintained to prevent the unintentional discharge of fluid fertilizer.
(2) A storage facility shall ensure that a storage container and an appurtenance are constructed of materials that are resistant to corrosion, puncture, or cracking.
(3) A storage facility shall ensure that metals which are used for valves, fittings, and repairs on metal containers are compatible with the metals that are used in the construction of the storage container so that the combination of metals does not cause or increase corrosion which may weaken the storage container or its appurtenances or create a risk of discharge.
(4) A storage facility shall ensure that a storage container and an appurtenance are designed to handle all operating stresses, taking into account static head, pressure buildup from pumps and compressors, and any other mechanical stresses to which the storage containers and appurtenances may be subject in the course of operations.
(5) A storage facility shall ensure that a storage container and an appurtenance, including pipes, are protected against reasonably foreseeable risks of damage by trucks and other moving vehicles that are engaged in the handling of bulk fertilizers.
(6) A storage facility shall ensure that a storage container and an appurtenance are constructed of materials that are compatible with the product or products being stored and handled.
(7) A storage facility shall ensure that a storage container is not filled beyond the capacity for which it is designed, taking into account the physical characteristics of the fluid that is being stored.
(8) A storage facility shall ensure that flexible connections and properly supported appurtenances are utilized as dictated by engineering practices to reduce vibrational and stress-related deterioration.
(9) A storage facility shall ensure that backflow protection or a fixed air gap is utilized to protect water lines as required by standard engineering and plumbing practices.
(10) A storage facility shall locate primary containment piping above the ground and within secondary containment. The end of primary containment piping or any manifold device shall remain within secondary containment. Underground primary containment piping is permitted provided the piping is made of

stainless steel, is enclosed in secondary containment (a pipe within a pipe) or is hydrostatically tested annually.
(11) A storage facility shall ensure that a storage container is anchored, elevated, or secured by some other means as necessary to prevent flotation or instability.
(12) A storage facility shall locate mobile storage container that contains liquid fertilizer not less than 100 feet from a water well or surface water.
(13) A person shall not store liquid fertilizer in a container that is located underground.
(14) A storage facility shall ensure that an adequate distance to allow for inspection and maintenance is maintained between storage containers and between storage containers and the secondary containment wall.
(15) A facility that has an existing secondary containment area on the effective date of this rule which does not provide adequate distance to allow for inspection and maintenance shall provide an adequate distance when a physical change to a storage container or the secondary containment takes place.
(16) A storage facility shall ensure that a bulk fertilizer storage container is labeled in a prominent location with lettering that is a minimum of 4 inches in height. In addition to meeting the provisions of Act No. 451 of the Public Acts of 1994, as amended, being §324.8501 et seq. of the Michigan Compiled Laws, a storage facility shall ensure that the labeling includes the capacity of the storage container.
(17) A facility that is placed in service after the effective date of this rule shall immediately comply with this rule. A facility that is in service before the effective date of this rule has 2 years to comply with this rule.
History: 1999 MR 10, Eff. Oct. 25, 1999.

R 285.641.5 Liquid level-gauging devices.

Rule 5. (1) A storage facility shall ensure that a storage container permits easy and safe measurement of the liquid level within the storage container. Liquid level gauging may be accomplished using any of the following:
(a) Tank markings.
(b) See-through gradations.
(c) Dip sticks.
(d) Site gauge tubes.
(e) Other approved means.
(2) A storage facility shall ensure that exterior liquid level gauging devices are secured to protect against breakage and vandalism.
(3) A storage facility shall ensure that a storage container which has external sight gauges has a lockable bottom valve and is locked closed when not in use.
(4) A facility that is placed in service after the effective date of this rule shall immediately comply with this rule. A facility that is in service before the effective date of this rule has 2 years to comply with this rule.
History: 1999 MR 10, Eff. Oct. 25, 1999.

R 285.641.6 Security requirements.

Rule 6. (1) A storage facility shall ensure that storage container and an appurtenance are secured to provide reasonable protection from wildlife, vandalism, and unauthorized access at all times. The container and appurtenance may be secured using any of the following:
(a) Fencing.
(b) Lighting.
(c) Locks.
(d) Other approved means.
(2) For nonapplication season storage, a storage facility shall ensure that an appurtenance and a valve on a storage container or mobile container are locked or otherwise secured.
(3) A storage facility shall ensure that a storage container is equipped with a shutoff valve that is located on the storage container or at a distance from the storage container dictated by standard engineering practice.
(4) For multiple valves that are located on a single line, a storage facility shall ensure that the valve closest to its storage container is securable.
(5) A storage facility shall ensure that a valve on an empty container is closed.

(6) A storage facility shall fully comply with the provisions of this rule 180 days after the effective date of this rule.
History: 1999 MR 10, Eff. Oct. 25, 1999.

R 285.641.7 Secondary containment of bulk liquid fertilizer.

Rule 7. (1) A storage facility shall locate a primary storage container of bulk fertilizer within a secondary containment area. Construction of containment areas that have discharge valves or drains will not be permitted after the effective date of this rule.
(2) A storage facility shall comply with all of the following capacity requirements for a secondary containment area, as applicable:
(a) A storage facility shall ensure that a secondary containment area that is not protected from rainfall contains a minimum of 110% of the volume of the largest storage container within the diked area, plus the volume that is occupied by all other tanks within and below the height of the dike, plus the volume of a 6-inch rainfall.
(b) A storage facility shall ensure that a secondary containment area that is protected from rainfall contains a minimum of 110% of the volume of the largest storage container within the diked area, plus the volume that is occupied by all other tanks within and below the height of the dike.
(c) A secondary containment area which was constructed before the effective date of this rule and which does not have a capacity that includes the 6-inch rainfall complies with this rule. A storage facility to which this subdivision applies shall, upon alteration of the secondary containment area or increases in storage container volume, provide a capacity that includes a 6-inch rainfall within 1 year of the alteration or increase.
(d) A storage facility shall ensure that a secondary containment area that is not protected from rainfall provides for separation between bulk pesticides and bulk fertilizers to the extent that a common wall or curb between the pesticide and fertilizer areas will accomplish either of the following:
(i) Prevent pesticide from entering the fertilizer area, but allow fertilizer to enter and utilize the pesticide area while maintaining the capacity requirements specified in subdivisions (a) to (c) of this subrule.
(ii) Maintain a complete separation of fertilizer and pesticide, with or without a common wall, if each separate area maintains the capacity requirements specified in subdivisions (a) to (c) of this subrule.
(e) A storage facility shall ensure that tile drainage that underlies areas which are contained by earthen dikes is eliminated.
(3) A storage facility shall comply with all of the following construction requirements for secondary containment areas:
(a) A storage facility shall ensure that the walls and floors of a secondary containment area are constructed of any of the following materials and are designed to withstand a full hydrostatic head of any discharged liquid and weight load of material:
(i) Earth.
(ii) Steel.
(iii) Poured reinforced concrete.
(iv) Precast concrete modules.
(v) Solid masonry.
(vi) Other materials approved by the department.
(b) A storage facility shall ensure that all joints, seams, and
cracking are sealed to prevent leakage.
(c) A storage facility shall ensure that walls are not more than 6 feet in height above interior grade unless provision is made for safe access and exiting.
(d) A storage facility shall ensure that earthen walls have a horizontal-to-vertical slope consistent with good engineering practice, are packed and protected from erosion, and the top are not less than 2.5 feet wide.
(e) A storage facility shall ensure that piping is not installed through the secondary containment wall, except for interconnections between multiple secondary containment structures. This prohibition does not apply to existing bulk storage facilities that have properly engineered, monitored, and maintained through-wall piping, as determined by the department.
(f) The floor of a secondary containment area may slope to a watertight catch basin or sump.

(g) A storage facility shall ensure that a secondary containment area that is constructed of earth or other permeable materials is lined with concrete, steel, approved synthetic liners, or a clay liner to achieve watertightness.
(h) If steel plates are used as a liner, then the department shall approve the installation plans. A storage facility shall ensure that the plates are protected against corrosion and joined in a manner to provide watertight joints.
(i) The department shall approve synthetic liners and installation plans before installation. A storage facility shall comply with all of the following provisions before the department will grant synthetic liner approval:
(i) The manufacturer of the liner shall provide written confirmation of compatibility and an estimate of the life expectancy of the liner.
(ii) A synthetic liner shall have a minimum thickness of 30 mils (0.8 millimeter) and be compatible with the materials being stored within the secondary containment area.
(iii) A synthetic liner shall be installed under the supervision of a qualified representative of the manufacturer, and all field-constructed seams shall be tested and repaired, if necessary, in accordance with the manufacturer's recommendations.
(j) A storage facility may use a soil or earthen liner for fertilizer bulk storage secondary containment structures if the liner meets all of the following requirements:
(i) The soil liner is maintained free of major cracking and vegetation.
(ii) The internal surface soil is sealed, including the berm of an earthen dike, with a sealing agent, such as sodium bentonite, attapulgite, or a similar clay material.
(iii) The soil liner is constructed in accordance with reliable engineering recommendations to achieve a coefficient of permeability of not more than 1.0 x 10-6 cm/sec at construction, is maintained at a permeability of 1.0 x 10-5 cm/sec, and is a minimum of 6 inches in thickness.
(k) A storage facility shall ensure that sump construction is of the same thickness on all sides including the base of the sump, as for the remainder of the containment area base and shall be watertight.
(l) A storage facility shall ensure that design and construction specifications for the sump address sediment accumulation, sediment removal, and freeze-thaw cycles.
(m) The department may approve the use of experimental materials upon written confirmation from the manufacturer regarding the pertinent specifications of the material for use in fertilizer containment.
(4) To be exempt from secondary containment lining requirements, a storage facility need not install a liner directly under a storage container which has a capacity of 100,000 gallons or more and which has been constructed on-site and put into use before the effective date of this rule if the facility complies with 1 of the following alternative procedures:
(a) The following provisions pertain to alternative procedure 1:
(i) A storage facility shall ensure that a second bottom that is made of the same material as the remainder of the storage container is constructed for the storage container. The facility shall ensure that the second bottom is placed over the original bottom and minimum 3-inch layer of smooth, fine gravel, coarse sand, or other material approved by the department. The department may approve alternate methods or materials under this provision provided the department determines that substantially similar protection will be achieved.
(ii) A storage facility shall test the original bottom of the storage container for leaks before the sand layer and second bottom are installed. The storage facility shall keep a record of the test on file.
(iii) A storage facility shall test the newly constructed bottom for leaks before any fluid fertilizer is stored on the newly constructed bottom. The storage facility shall keep a record of the test on file.
(iv) A storage facility shall employ a method by which leaks from the newly constructed bottom into the sand layer are readily detected.
(v) A storage facility shall test the newly constructed bottom at least once every 5 years for leaks. The storage facility shall maintain a record of the tests.
(b) The following provisions pertain to alternative procedure 2:
(i) A storage facility shall empty, clean, and test a container for leaks. The storage facility shall test the walls and floors of the container to assure that the welds and the thickness of the steel plates are sound and strong enough to contain the fertilizer. The storage facility shall keep a record of the inspection, test results,

and any repairs made to the storage container on file.
(ii) A storage facility shall coat the interior floor and 24 inches up the walls of the container with an approved liner to inhibit corrosion. The storage facility shall keep a record of the liner's compatibility with fertilizer, life expectancy, and installation procedures on file.
(iii) A storage facility shall conduct an approved test for leaks, liner deterioration, and metal corrosion at least once every 5 years. The storage facility shall keep a record of the tests.
(c) The following provisions pertain to alternative procedure 3:
(i) A storage facility shall install approved monitoring devices in angled borings under each tank. The monitoring devices shall constitute a leak detection system for each tank that will detect any leak before reaching groundwater.
(ii) A storage facility shall use standard engineering practices and the specific characteristics of the site to determine the characteristics of the monitoring devices. The location of the monitoring devices shall provide the best practical early warning detection system for tank leakage.
(iii) The department shall approve each monitoring system to be implemented under this alternative procedure before installation.
(5) A facility that is placed in service after the effective date of this rule shall immediately comply with this rule. A facility that is in service before the effective date of this rule has 2 years to comply with this rule, except for containers specified in subrule (4) of this rule, for which a facility has 5 years to comply with this rule.
History: 1999 MR 10, Eff. Oct. 25, 1999.

R 285.641.8 Alternative to diking for storage containers.

Rule 8. (1) An individual storage container that does not have a capacity of more than 3,000 gallons may be contained within a secondary storage container, that is, an elephant ring, instead of a diked containment area.
(2) A storage facility shall ensure that both the primary storage container and the elephant ring are fabricated of material that is compatible with each other and with the fertilizer that is being stored.
(3) A storage facility shall ensure that the height of the elephant ring wall is not more than 4 feet.
(4) A storage facility shall ensure that the volume that is contained within the secondary storage walls up to the working height of the elephant ring is sufficient to contain 110% of the volume that is contained in the primary storage container plus the volume that is displaced by the footings of any equipment which is placed within the secondary containment vessel.
(5) A storage facility shall ensure that the elephant ring is free of leaks and structural defects. A storage facility shall ensure that the base is protected from corrosion, both from inside and outside, and is underlaid with a concrete pad or with 8 inches of compacted gravel beneath 4 inches of compacted sand or clay or is protected as recommended by the manufacturer of the elephant ring and as approved by the department.
(6) A storage facility shall ensure that all piping connections to the primary storage container are made over the wall of the elephant ring and are adequately supported and braced. A storage facility shall ensure that pumps and other fixtures, if located within the elephant ring containment structure, are placed on an elevated platform or otherwise protected from water accumulation.
(7) A storage facility shall ensure that accumulations of storm water and other material are pumped over the wall of the elephant ring by means of a pump within the secondary container or by means of an exterior portable pump and are disposed of in accordance with R 285.641.10(2).
(8) A storage facility shall fully comply with the provisions of this rule 2 years after the effective date of this rule.
History: 1999 MR 10, Eff. Oct. 25, 1999.

R 285.641.9 Operational area containment of liquid fertilizer.

Rule 9. (1) A storage facility shall ensure that operational areas are curbed or sloped to allow the containment of accumulated liquids. The storage facility shall construct the area of reinforced concrete or other suitable material approved by the department, to provide an impermeable surface. A storage facility shall ensure that operational area activities at the fertilizer storage facility are carried out within this area.
(2) A storage facility shall construct the operational area containment and reinforce the area to handle at

least the foreseeable maximum gross load that could be on the pad.
(3) A storage facility shall comply with all of the following size and capacity requirements for operational area containments:
(a) A storage facility shall ensure that the operational area containment is a minimum width of 10 feet and a minimum length of 20 feet.
(b) A storage facility shall ensure that, except as provided in subdivision (c) of this subrule, curbed surfaces and catch basins are of an adequate size and design to contain a minimum of 1,500 gallons of discharged liquid.
(c) A storage facility shall ensure that if there are no storage containers that are used at the storage facility which have a capacity of more than 1,000 gallons, and if there are no mobile containers that are used to transfer liquid fertilizer to and from storage containers which have a capacity of more than 1,000 gallons, the curbed surface and catch basin are of an adequate size and design to contain 110% of the volume of the largest storage container or the largest mobile container that is used, whichever is greater.
(d) The operational area containment capacity may include an aboveground container for temporary storage if a pump is installed which automatically transfers the contents of the sump into the container and if the container is located within secondary containment.
(4) A storage facility shall ensure that any filling or unloading point of a mobile container is positioned over the paved area during loading or unloading to assure retention of any discharge.
(5) A storage facility shall ensure that the secondary containment area which is described in R 285.641.7 can, under the following conditions, be jointly utilized as an operational containment area instead of a separate operational containment area:
(a) The secondary containment area is not lined with a synthetic or soil liner only.
(b) The storage facility complies with sufficient capacity requirements, R 285.641.7, and this rule.
(6) A storage facility shall ensure that a storage container and an appurtenance, including pipes, are protected against reasonably foreseeable risks of damage by trucks and other moving vehicles that are engaged in the loading or unloading of bulk fertilizer.
(7) A storage facility shall ensure that loading and unloading operations are supervised at all times by an attendant who is familiar with the operation of the mechanical appurtenances in use at the facility and who is familiar with the procedures that are used for the control and recovery of discharges.
(8) This rule does not apply to a mobile container that is used to nurse field operations when the mobile container is at a field unloading site.
(9) Marine vessels and rail cars are exempt from the operational area containment requirements of this rule if appropriate protective actions are implemented to prevent uncontained discharges and are in compliance with applicable United States coast guard and department of transportation regulations.
(10) A facility that is placed in service after the effective date of this rule shall immediately comply with this rule. A facility that is in service before the effective date of this rule has 2 years to comply with this rule.
History: 1999 MR 10, Eff. Oct. 25, 1999.

R 285.641.10 Containment area management and operation.

Rule 10. (1) If a secondary containment area is in use, then a storage facility shall manage accumulated precipitation, spills, or leaks within the containment area as follows:
(a) Remove accumulated liquids by a manually activated pump. Automatic pumps that have float switches are prohibited.
(b) Promptly recover accumulated liquids, discharges, or spills from containment areas.
(c) For accumulated liquids that do not contain any fertilizer, a storage facility may discharge liquids from containment areas as surface runoff, but shall not discharge the liquids directly into any surface water, waterway, storm drain, or field tile.
(d) For accumulated liquids that may contain fertilizer, a storage facility shall remove liquids from containment areas and may apply the liquids at agronomic rates to sites where the fertilizer can be utilized as intended.
(e) In the event of a spill within a containment area and following collection and recovery of the fertilizer containing liquids, a storage facility shall clean the area in accordance with subrule (2) of this rule before resuming the management practice of discharging accumulated liquids that do not contain fertilizer as

surface runoff.
(2) A storage facility shall clean nonearthen containment areas as follows:
(a) Wash the area using clean water.
(b) Double rinse the area using clean water.
(c) Remove all rinsate that is generated by the containment area cleaning process.
(3) A storage facility shall promptly remediate earthen dikes if there is a spill or leak, which may require the removal of the soil in the containment area. A storage facility shall carry out soil remediation in accordance with department directives.
(4) A facility that is placed in service after the effective date of this rule shall immediately comply with this rule. A facility that is in service before the effective date of this rule and that has completed secondary or operational containment areas shall immediately comply with this rule. A facility that is in service before the effective date of this rule shall immediately comply with this rule upon completion of secondary or operational containment areas in compliance with R 285.641.7, R 285.641.8, or R 285.641.9.
History: 1999 MR 10, Eff. Oct. 25, 1999.

R 285.641.11 Abandoned containers.

Rule 11. (1) Storage containers and other containers that are used at a storage facility to hold bulk fertilizer or fertilizer rinsates are considered abandoned if they have been out of service for more than 6 months because of a weakness or leak or have been out of service for any reason for more than 2 years.
(2) A storage facility shall thoroughly clean abandoned containers by double rinsing.
(3) A storage facility shall fully comply with the provisions of this rule 90 days after the effective date of this rule.
History: 1999 MR 10, Eff. Oct. 25, 1999.

R 285.641.12 Site closure and discontinuation of operation.

Rule 12. (1) If a bulk fertilizer storage facility is closed or operations are discontinued, then both of the following provisions shall be complied with:
(a) A storage facility shall remove all fertilizers, rinsates, washwaters, and other materials that contain fertilizers from the facility site and utilize them for the original intended purpose of the product or dispose of them in a manner approved by the department.
(b) A storage facility shall thoroughly clean the storage containers at the facility by double rinsing or the equivalent.
(2) A storage facility shall fully comply with the provisions of this rule 90 days after the effective date of this rule.
History: 1999 MR 10, Eff. Oct. 25, 1999.

R 285.641.13 Storage of bulk dry fertilizer.

Rule 13. (1) A storage facility shall store and handle dry fertilizer materials in a manner to prevent contamination by minimizing losses to the air, surface water, groundwater, or subsoil.
(2) A storage facility shall store nonfluid fertilizers inside a sound structure or device that has a cover or roof top, sidewalls, and a base sufficient to prevent contact with precipitation and surface waters. If bulk dry fertilizer is stored outdoors, the storage facility shall place the dry fertilizer on a ground cover that is sufficiently impermeable to prevent seepage or runoff and shall completely cover the dry fertilizer with a tarpaulin or other suitable covering to prevent contact with precipitation and surface water.
(3) A storage facility shall conduct all loading, unloading, mixing, and handling of dry fertilizer at the storage facility on a paved impermeable surface of a size and design that will contain the fertilizer and allow for the collection of spilled material to be recycled, applied at agronomic rates, or disposed of in a manner approved by the department.
(4) A storage facility shall use containment devices, structures, or techniques to minimize the emission of dust and vapors beyond the facility boundaries.
(5) A facility that is placed in service after the effective date of this rule shall immediately comply with this rule. A facility that is in service before the effective date of this rule has 2 years to comply with this rule.
History: 1999 MR 10, Eff. Oct. 25, 1999.

R 285.641.14 Discharge response plan.

Rule 14. (1) An operator of a storage facility shall prepare a written discharge response plan for the storage facility. The plan shall include all of the following information:

(a) The identities and telephone numbers of the persons or agencies that are to be contacted in the event of a discharge, including the persons who are responsible for the stored fertilizer.

(b) For each bulk fertilizer that is stored at the facility, a complete copy of the storage container labeling that is required by this rule and the labeling required by Part 85 of Act No. 451 of the Public Acts of 1994, as amended, being §324.8501 et seq. of the Michigan Compiled Laws, to accompany the sale of the fertilizer.

(c) An identification, by location, of every bulk storage container that is located at the bulk storage facility together with the type of fertilizer it contains. The plan need not include the specific location of each mobile fertilizer container if the plan includes the general location within the facility where the containers are held.

(d) For each type of bulk fertilizer that is stored at the facility, the procedures to be used in controlling and recovering, or otherwise responding to, a discharge or spill.

(e) The procedures to be followed in using or disposing of a recovered discharge or spill.

(2) An operator shall keep the plan current and readily available and shall inform the local fire and police departments of the existence of the plan.

(3) The owner or manager of the bulk fertilizer storage facility shall conduct emergency and discharge response training for all new and existing employees of the facility annually before the beginning of the fertilizer use season. New employees shall receive training within 30 days of employment. A firm's owner, manager, and employees are responsible for following the firm's emergency and discharge response plan procedures.

(4) Every storage facility shall have an appropriate spill kit readily available in the event of a discharge or spill.

(5) A storage facility shall immediately report any discharges to the environment to the department at 1-800-405-0101, which is available 24 hours a day.

(6) A storage facility shall fully comply with this rule on the effective date of this rule.

History: 1999 MR 10, Eff. Oct. 25, 1999.

R 285.641.15 Inspection and maintenance requirements.

Rule 15. (1) An operator of a storage facility shall maintain the facility to minimize the risk of a discharge.

(2) An operator of a storage facility shall visually inspect the facility at least monthly while the facility is being utilized for the storage of bulk fertilizer.

(3) A storage facility shall maintain all secondary containment and operational areas free of debris and foreign matter.

(4) A storage facility shall make a written record of all inspections and maintenance on the day of the inspection or maintenance. A storage facility shall keep the record on file at the storage facility or at the nearest local office from which the storage facility is administered.

(5) A storage facility shall fully comply with the provisions of this rule on the effective date of this rule.

History: 1999 MR 10, Eff. Oct. 25, 1999.

R 285.641.16 Recordkeeping requirements.

Rule 16. (1) A storage facility shall prepare, maintain, and keep readily available all of the following records for a period of not less than 3 years at every storage facility or at the nearest local office from which the storage facility is administered:

(a) A record of all discharges to the environment or spills within containment areas at the storage facility.

(b) An inventory reconciliation for each storage container at facilities that utilize earthen dikes and soil liners. When facilities are in use for storage, a storage facility shall conduct an inventory reconciliation at least once every 3 months to compare the measured level in a storage container against shipments in and out of the container.

(c) Inspection and maintenance records.

(d) Facility site plan information required under R 285.641.2(1) and (2).

(2) A storage facility shall fully comply with this rule on the effective date of this rule.
History: 1999 MR 10, Eff. Oct. 25, 1999.

R 285.641.17 Remediation actions.

Rule 17. (1) If a discharge to the environment is reported or it is determined that a discharge to the environment has occurred, then an operator shall comply with both of the following provisions:
(a) Remove contaminated materials from the site, determine the concentration of fertilizer, and field-apply at or below agronomic rates or properly dispose of the contaminated material according to department directives.
(b) If the facility operator decides to close the facility as a result of a contamination notification, then the facility shall be closed in accordance with R 285.641.12.
(2) A storage facility shall fully comply with rule on the effective date of this rule.
History: 1999 MR 10, Eff. Oct. 25, 1999.

R 285.641.18 Advisory information.

Rule 18. (1) The information specified in this rule is offered by the department with respect to other state agencies and their policies and regulations that may have an impact on bulk storage facilities.
(2) All the following provisions apply to the pollution incident prevention plan (PIPP) requirements:
(a) A person who operates a bulk storage facility is advised that the department of environmental quality may require the submittal of a plan of loss prevention and recovery depending upon the type of material being processed or stored.
(b) A storage facility may submit the registration application, discharge response plan, and facility site plans required by R 285.640.2 as a PIPP plan to the department of environmental quality. The department of environmental quality may determine that the information meets all, or only a portion of, the requirements for the PIPP plan.
(c) The provisions of R 323.1151 to R 323.1169 of the water resources commission promulgated under Act No. 245 of the Public Acts of 1929, as amended, being §323.1 et seq. of the Michigan Compiled Laws, require that a pollution incident prevention plan be submitted for approval to the district office of the department of natural resources, waste management division. Copies of Act 245 of the Public Acts of 1929, other pertinent rules, district office locations, and requirements for the PIPP plans are available from the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909.
(3) Both of the following provisions apply to national pollution discharge elimination system (NPDES) storm water permit requirements:
(a) A person who operates a bulk storage facility is advised that the department of environmental quality may require a storm water permit to be obtained dependent upon the type of standard industrial classification (SIC) code that the facility falls within.
(b) Copies of pertinent rules, district office locations, and requirements for the NPDES storm water permit are available from the Michigan Department of Environmental Quality, Surface Water Quality Division, P.O. Box 30273, Lansing, Michigan 48909.
(4) Both of the following provisions apply to bulk storage facility designs:
(a) A person who operates a bulk storage facility is advised that the department, upon issuing a facility registration, is not liable for the structural integrity of the storage facility.
(b) It is recommended that a person who operates a bulk storage facility consult with a licensed professional engineer for designs and construction specifications for the modification or construction of a bulk storage facility to meet the requirements of these rules.
History: 1999 MR 10, Eff. Oct. 25, 1999.

LABORATORY DIVISION

REGULATION NO. 714. SEED LAW IMPLEMENTATION

R 285.714.1—R 285.714.21
Source: 1997 AACS.

PESTICIDE AND PLANT PEST MANAGEMENT DIVISION

REGULATION NO. 715. SEED LAW IMPLEMENTATION

R 285.715.1
Source: 1990 AACS.

R 285.715.2
Source: 1990 AACS.

R 285.715.3
Source: 1990 AACS.

R 285.715.4
Source: 1990 AACS.

R 285.715.5
Source: 1990 AACS.

R 285.715.6
Source: 1990 AACS.

R 285.715.7
Source: 1990 AACS.

R 285.715.8
Source: 1990 AACS.

R 285.715.9
Source: 1990 AACS.

R 285.715.10
Source: 1990 AACS.

R 285.715.11
Source: 1990 AACS.

R 285.715.12
Source: 1990 AACS.

R 285.715.13
Source: 1990 AACS.

R 285.715.14
Source: 1990 AACS.

FINANCE DIVISION

REGULATION NO. 804. RACE TRACK IMPROVEMENT

R 285.804
Source: 1997 AACS.

EXPOSITIONS AND RACING SECTION

REGULATION NO. 805. MATCHING ASSISTANCE TO FAIRS

R 285.805.1
Source: 1992 AACS.

R 285.805.3
Source: 1992 AACS.

R 285.805.4
Source: 1992 AACS.

R 285.805.5
Source: 1992 AACS.

R 285.805.6
Source: 1992 AACS.

R 285.805.7
Source: 1984 AACS.

R 285.805.8
Source: 1984 AACS.

REGULATION NO. 808. STANDARDBRED BREEDERS' AWARDS

R 285.808.1
Source: 1981 AACS.

R 285.808.1a
Source: 1981 AACS.

R 285.808.2
Source: 1981 AACS.

R 285.808.2a
Source: 1981 AACS.

R 285.808.3
Source: 1981 AACS.

R 285.808.4
Source: 1997 AACS.

REGULATION NO. 809. THOROUGHBRED ALLOTMENTS FOR TRAINING AND STABLING FACILITIES

R 285.809.1
Source: 1983 AACS.

R 285.809.2
Source: 1983 AACS.

R 285.809.3
Source: 1983 AACS.

R 285.809.4
Source: 1983 AACS.

R 285.809.5
Source: 1983 AACS.

R 285.809.6
Source: 1983 AACS.

R 285.809.7
Source: 1983 AACS.

REGULATION NO. 810. THOROUGHBRED BREEDERS' AWARDS AND STATE SUPPLEMENTS

R 285.810.1 Definitions.

Rule 1. As used in these rules:

(a) "Breeder" means an individual, partnership, association, or corporation that owns a mare at the time of foaling. The lessee of a mare, which is registered with the jockey club, incorporated, at the time of foaling, is deemed the owner of the mare.

(b) "Conditions" means the specification of terms under which a race is conducted.

(c) "Department" means the Michigan department of agriculture.

(d) "Director" means the director of the department or his or her designee.

(e) "Earned track purse" means the portion of a purse offered by a thoroughbred racing association that is awarded for the order of finish up to 3 placings, but does not include a state supplement or any other awarded funds.

(f) "Foaling year" means the calendar year in which the mare foaled.

(g) "Michigan-bred horse" means a horse that meets the requirements of R 285.810.2.

(h) "Owner" means an individual, partnership, association, or corporation which owns a Michigan-bred horse and which is licensed under section 16 of Act No. 279 of the Public Acts of 1995, being §431.316 of the Michigan compiled laws.

(i) "State supplement" means money allocated by the director from state funds for an approved race conducted exclusively for Michigan-bred horses.

(j) "Thoroughbred racing association" means an association licensed by the Michigan racing commissioner to conduct thoroughbred horse races in Michigan.

(k) "Track purse" means the money offered by a thoroughbred racing association for 1 race, but does not include a state supplement.

(l) "First-time breeder" is an individual, partnership, or corporation that has never registered as a breeder with the department. Any partnership or corporation of which any part of the ownership has registered as a breeder with the department is not eligible as a first-time breeder.

History: 1954 ACS 72, Eff. July 19, 1972; 1954 ACS 87, Eff. June 15, 1976; 1979 AC; 1979 ACS 15, Eff. Aug. 10, 1983; 2000 MR 12, Eff. Aug. 21, 2000.

R 285.810.2 Eligibility of foals for breeders' awards, owners' awards, and state supplements.

Rule 2. (1) To be eligible for breeders' awards, owners' awards, and state supplements, an owner shall comply with all of the following provisions:

(a) A mare shall be registered with the director by February 15 of the foaling year.

(b) A foal shall be from a mare which was registered with the director and which was in Michigan on or before February 15 of the foaling year. The mare shall remain in this state until foaling and for not less than 7 months of the foaling year.

(c) The jockey club, incorporated, certificate of foal registration shall state: foaled in Michigan, U.S.A.

(d) Within 15 days of the date of departure of a registered mare, an owner shall give the director written notice of the mare's departure from Michigan. In addition, an owner shall give the director written notice of the mare's return to Michigan within 15 days of the date of return.

(e) A department Michigan-bred certificate of thoroughbred foal eligibility shall accompany the jockey club, incorporated, certificate at the time of entry in a race. The certificate shall be issued 48 hours or more before

post time.
(2) If a breeder or owner has complied with all other rules, then the director may waive the date requirements of subrule (1)(a) and (d) of this rule for the first time a breeder or owner registers with the department.
(3) A Michigan-bred certificate of thoroughbred foal eligibility shall be issued by the director for a Michigan-bred horse that meets all of the above requirements set forth in subrules (1) and (2) of this rule.
History: 1954 ACS 72, Eff. July 19, 1972; 1954 ACS 87, Eff. June 15, 1976; 1979 AC; 1979 ACS 15, Eff. Aug. 10, 1983; 2000 MR 12, Eff. Aug. 21, 2000.

R 285.810.3
Source: 1983 AACS.

R 285.810.4 Conditions for races; allocations of state supplements.
Rule 4. (1) The racing association of the track where Michigan-bred horse races are to be conducted shall propose conditions and purses for all Michigan-bred horse races, including the distances to be run for specified stakes races in R 285.810.3. The conditions of all Michigan-bred horse races are subject to the approval of the director. The track shall submit race conditions to the director, in writing, not less than 18 calendar days before the first race is conducted for each condition book at each track. Changes in the conditions shall be submitted by the track to the director not less than 24 hours before the race is conducted.
(2) The director, with the advice of a representative of licensed thoroughbred racing associations, a certified thoroughbred horsemen's organization, and the Michigan thoroughbred breeders and owners association, shall determine the allocation of state supplements.
(3) The director shall announce, not later than 14 calendar days after receiving the proposed racing conditions, his or her allocation of state supplements to purses for each of the approved Michigan-bred horse races in the condition book. If proposed conditions of the Michigan-bred horse races are not submitted to the director within the time fixed by subrule (1) of this rule, then the director may allocate state supplements for Michigan-bred horse races at his or her discretion, but state supplements shall not be allocated more than 24 hours before post time for the race. A state supplement shall not be allocated to a Michigan-bred horse race after the race has been run if the race was not approved by the director.
(4) An extra Michigan-bred horse race shall be proposed by the track to the director by phone or other means 24 hours or more before post time for tentative approval. The track shall follow the proposal with a written proposal postmarked not later than the day of the race.
(5) If an approved Michigan-bred horse race does not fill, then a substitute race may be proposed by the track to the director by phone or other means 24 hours or more before post time for tentative approval. The track shall follow the proposal with a written proposal postmarked not later than the day of the race.
History: 1954 ACS 72, Eff. July 19, 1972; 1979 AC; 1979 ACS 15, Eff. Aug. 10, 1983; 2000 MR 12, Eff. Aug. 21, 2000.

R 285.810.5
Source: 1983 AACS.

R 285.810.6 Payment of breeders' awards, owners' awards, and state supplements.
Rule 6. (1) The racing commissioner shall certify, to the director, at the completion of racing, in each condition book, the results of all races won by Michigan-bred horses and their breeders and the results of all races in which a Michigan-bred horse finished first, second, or third in a race that was not restricted to Michigan-bred horses.
(2) If the eligibility of a breeder or owner to receive a breeders' award or owners' award is questioned, then the burden of proof that a horse was Michigan-bred or is in compliance with these rules is on the breeder and owner.
(3) State supplements and owners awards may be paid to the owners of winning horses at least twice each year, after June 30 and after December 31, upon certification under this rule.
(4) Payment of breeders' awards and owners awards shall be processed at least twice each year, after June 30 and after December 31.

History: 1954 ACS 72, Eff. July 19, 1972; 1979 AC; 2000 MR 12, Eff. Aug. 21, 2000.

R 285.810.7
Source: 1997 AACS.

R 285.810.9 Owners' awards.

Rule 9. (1) An award of up to 30% of the earned track purse shall be paid to the purse account of the owner of a Michigan-bred horse that finishes first, second, or third in an eligible race that was not restricted to Michigan-bred or sired horses at a state-licensed pari-mutuel track in Michigan.
(2) The director, with advice from the certified thoroughbred horsemen's organization and the Michigan thoroughbred breeders and owners association, shall determine the allocation of owners award percentages.
(3) A single owners' award is limited to $10,000.00.
History: 2000 MR 12, Eff. Aug. 21, 2000.

R 285.810.10 Payment of owners awards.

Rule 10. (1) The racing commissioner shall certify, to the director, at the completion of racing, in each condition book, the names of the owners of all Michigan-bred horses that finished first, second, or third in a race that was not restricted to Michigan-bred or sired horses.
(2) If the eligibility of an owner to receive an owners' award is questioned, then the burden of proof that a horse was Michigan-bred or is in compliance with these rules is on the owner.
(3) Owners' awards are paid in the same manner as state purse supplements under R 285.810.6.
History: 2000 MR 12, Eff. Aug. 21, 2000.

REGULATION NO. 811. PREMIUM ALLOTMENTS TO FAIRS AND EXPOSITIONS

R 285.811.1
Source: 1985 AACS.

R 285.811.1a
Source: 1985 AACS.

R 285.811.2
Source: 1985 AACS.

R 285.811.3
Source: 1985 AACS.

R 285.811.4
Source: 1985 AACS.

R 285.811.5
Source: 1985 AACS.

R 285.811.5a
Source: 1980 AACS.

R 285.811.6
Source: 1985 AACS.

R 285.811.7
Source: 1997 AACS.

R 285.811.8
Source: 1985 AACS.

REGULATION NO. 812. STATE AID FOR HARNESS HORSE RACING AT FAIRS

R 285.812.1 Definitions.

Rule 1. As used in these rules:

(a) "Department" means the Michigan department of agriculture.

(b) "Director" means the director of the department.

(c) "Domicile" means the fixed, permanent, and principal home to which a person intends to return.

(d) "Fair" means a county, district, community, or 4-H fair; the Upper Peninsula state fair; and any other state fair that has been approved by the director to conduct harness horse races during the fair.

(e) "Licensed pari-mutuel track" means a facility that is owned by a person who is licensed by the office of racing commissioner to conduct standardbred races in Michigan.

(f) "Owner" means a person or persons who are domiciled in Michigan and who have been recorded with the United States trotting association register as being horse owners.

(g) "Person" means an individual, partnership, association, or corporation.

(h) "Purse offered" means the purse requested by the fair association or licensed pari-mutuel track at the time of application to the department for approval of purse funds.

History: 1954 ACS 62, Eff. May 18, 1970; 1954 ACS 73, Eff. Nov. 14, 1972; 1979 AC; 1979 ACS 6, Eff. Apr. 22, 1981; 1998 MR 3, Eff. Mar. 26, 1998.

R 285.812.1a

Source: 1981 AACS.

R 285.812.2 Eligibility to receive state purse supplement.

Rule 2. To be eligible to receive state purse supplements for standardbred horse races that a fair or pari-mutuel track offers, the fair or pari-mutuel track shall conduct races that are designated by the director for state purse supplements under R 285.812.5. A fair shall also file its proposed annual harness horse racing program with the department by February 1 of each year. Director approval of the plan is required. A fair or pari-mutuel racetrack that receives state purse supplements under this rule shall file reports with the department as required by the director.

History: 1954 ACS 62, Eff. May 18, 1970; 1954 ACS 69, Eff. Oct. 4, 1971; 1954 ACS 73, Eff. Nov. 14, 1972; 1979 AC; 1998 MR 3, Eff. Mar. 26, 1998.

R 285.812.3 Presiding judges at fairs.

Rule 3. (1) A fair shall hire United States trotting association-licensed presiding judges and clerks for harness horse races conducted at the fair and shall be allotted a sum to pay for the judges and clerks.

(2) The presiding judge shall enforce all department rules pertaining to harness horse racing at fairs and any penalties imposed by the department or by reciprocal agreement with the office of racing commissioner.

(3) The presiding judge shall approve all associate judges and timers at each fair race meet to which the presiding judge is assigned.

History: 1954 ACS 62, Eff. May 18, 1970; 1979 AC; 1979 ACS 6, Eff. Apr. 22, 1981; 1995 MR 4, Eff. May 17, 1995; 1998 MR 3, Eff. Mar. 26, 1998.

R 285.812.4 Track maintenance; track equipment; head and saddle pad numbers.

Rule 4. (1) A fair that may conduct harness horse races shall maintain its racetrack in a manner that makes harness horse racing safe. The track shall be adequately drained, shall be kept in a smooth condition during the races, and shall be sprinkled between races when necessary. If purses are paid in part by funds allocated under this rule, then the track condition shall be approved by a representative of the director before any races are conducted.

(2) An approved starting gate and starter shall be used in a harness horse race.

A fair shall be reimbursed up to $150.00 for each harness horse race program conducted at the fair for the payment of approved mobile starting gates. The fair shall submit, to the director, within 15 days after completion of the harness race program or September 30, whichever is sooner, receipted invoices for the starting gate operations.

(3) A fair shall use adequate photo finish equipment and an experienced photographer for all harness horse races. The fair shall be reimbursed up to $150.00 for each harness horse race program conducted at the fair for the payment of approved photo finish operations. The fair shall submit, to the director, within 15 days after completion of the harness race program or September 30, whichever is sooner, receipted invoices for the photo finish operations.
(4) A harness horse race entry shall be provided with a head number or a saddle pad, or both.
History: 1954 ACS 62, Eff. May 18, 1970; 1954 ACS 73, Eff. Nov. 14, 1972; 1979 AC; 1979 ACS 6, Eff. Apr. 22, 1981; 1995 MR 4, Eff. May 17, 1995; 1998 MR 3, Eff. Mar. 26, 1998.

R 285.812.5 Race program development and allocation.

Rule 5. (1) The director shall designate annually which standardbred horse races conducted at fairs and licensed pari-mutuel racetracks shall be eligible for state purse supplements. To assist the director in designating the races and determining the number, location, time, conditions, and amount of the state purse supplements for each race, an advisory committee is established consisting of the following persons:
(a) The president or designee of the Michigan harness horsemen's association.
(b) The president or designee of the Michigan association of fairs and exhibitions.
(c) The president or designee of the Michigan standardbred breeders association.
(d) The president or designee of the northern Michigan fair and racing association.
(e) The designated representative of the office of racing commissioner.
(f) A pari-mutuel racetrack representative designated by the racing commissioner.
(g) A representative of the department who shall chair the committee.
(h) Other if deemed appropriate by the director.
(2) The advisory committee shall develop and recommend to the director an overall standardbred racing program each year. The overall program shall include the proposed number, location, time, conditions, and amount of state purse supplements to allocate for program races. The standardbred racing program shall be designed to promote positive growth and development of the state's standardbred horse racing and breeding industry.
(3) The director shall make the allocation of funds based on his or her determination of what best promotes the positive growth and development of the horse racing and breeding industry in the state of Michigan.
History: 1954 ACS 62, Eff. May 18, 1970; 1954 ACS 69, Eff. Oct. 4, 1971; 1954 ACS 73, Eff. Nov. 14, 1972; 1954 ACS 82, Eff. Feb. 5, 1975; 1979 AC; 1979 ACS 6, Eff. Apr. 22, 1981; 1979 ACS 13, Eff. Feb. 18, 1983; 1994 MR 6, Eff. July 14, 1994; 1998 MR 3, Eff. Mar. 26, 1998.

R 285.812.5a Rescinded.

Editor's note: Pursuant to section 56 of Act No. 306 of the Public Acts of 1969, as amended, being S24.256 of the Michigan Compiled Laws, R 285.812.5a is rescinded to correct an obvious error.
History: 1994 MR 6, Eff. July 14, 1994; Rescinded 1998 MR 3, Eff. Mar. 26 1998.

R 285.812.6 Allocations for purse supplements.

Rule 6. (1) Before a designated race, the director shall make allocations to a fair or licensed pari-mutuel track for purses for harness horse races as follows:
(a) The allocation shall be not more than 75% of the purse offered by a fair or licensed pari-mutuel track.
(b) The allocation for a purse on an overnight race shall not exceed the lowest purse offered for overnight races at any licensed race meeting in this state during the previous year or be more than $1,000.00.
(c) The allocation for a purse on an early closing 2- and 3-year-old filly and colt race shall not be more than $10,000.00.
(d) The allocation for futurities for 2- and 3-year-old horses shall be not more than 75% of the purse offered and shall not be more than $18,750.00 for each race. The allocation for the Charles Coon memorial 4-year-old horse futurity shall not be more than $37,500.00 for each race.
(e) All fair racing shall be conducted under the 1996 regulations of the United States trotting association, which are adopted by reference in these rules, if the regulations are not in conflict with department rules. Copies of the United States trotting association rules may be obtained from the United States Trotting Association, 750 Michigan Avenue, Columbus, OH 43215-1191, at no cost as of the time of adoption of these

rules, or from the Michigan Department of Agriculture, P.O. Box 30017, Lansing, MI 48909, at no cost as of the time of adoption of these rules.

(f) All pari-mutuel racing conducted under these rules shall be conducted under the rules or orders of the office of the racing commissioner.

(2) Any harness horse sired outside of Michigan and owned outside of Michigan is ineligible to participate in the allocation of state funds paid at any harness horse race contest, unless the director gives written permission.

(3) A harness horse sired by a standardbred stallion which served no mares at a location outside of Michigan during the calendar year and which is owned or leased exclusively by a resident or residents of Michigan shall not be barred from a fair harness horse race if the Michigan-sired harness horse conforms to the age, gait, sex, and earnings stipulated in the conditions of the race.

(4) If a purse for an early closing colt stake or futurity race is supplemented by state funds, then the race shall be restricted to horses sired by standardbred stallions registered with the state of Michigan.

(5) A stallion shall be registered, on forms provided by the department, with the director by January 1 of each year that the stallion will be standing at service in Michigan. A newly acquired stallion that is purchased after January 1 of the breeding year shall be registered with the director before serving a mare.

(6) A fair has the authority to race any of the races specified in this rule as 1 heat.

(7) The Michigan harness horsemen's association is designated and shall serve as the department's agent for purposes of administering approved procedures governing nominations and sustaining functions for all stakes and futurities and may be designated the collecting and holding agent for all fees by the sponsors of the stakes and futurities. While acting as the department's agent under this rule, the Michigan harness horsemen's association shall not require that persons be members of the Michigan harness horsemen's association as a condition of nominating and participating in stake and futurity races designated by the director to be eligible to receive state purse supplements. The Michigan harness horsemen's association may charge a reasonable service fee to non-members to perform this function. If the Michigan harness horsemen's association is unable or unwilling to serve as the department's agent under this rule, then the director may designate and appoint another agent of his or her choice. Final decisions on application of procedures will be made by the director.

History: 1998 MR 3, Eff. Mar. 26, 1998

R 285.812.6a Semen transport.

Rule 6a. (1) The person who controls a registered standardbred stallion's stud book shall maintain a record of and receipts for all semen transports for the current breeding season.

(2) If the records and supporting receipts establish that all semen transports from the registered stallion have been to a Michigan address of a person who is a Michigan resident and who is a current United States trotting association member and that the semen is to be used for artificial insemination of a specifically named mare at a location in Michigan, then the stallion's Michigan registry shall not be voided because of the transport of the stallion's semen by others, and the stallion's foals from standardbred mares that were artificially inseminated in Michigan are Michigan-bred horses for the purposes of R 285.814.1(j), R 285.818.1(g), and R 285.820.1(f).

(3) Every semen transaction shall be recorded and kept for a period of not less than 5 years.

History: 1998 MR 3, Eff. Mar. 26, 1998.

R 285.812.7 Split races.

Rule 7. A fair that conducts a split race required under United States trotting association rules shall not receive an allocation in addition to the amounts described in R 285.812.6.

Editor's note: Pursuant to section 56 of Act No. 306 of the PublicActs of 1969, as amended, being S24.256 of the Michigan Compiled Laws,the reference to "R 285.812.5" was changed to R 285.812.6" tocorrect an obvious error.

History: 1954 ACS 62, Eff. May 18, 1970; 1954 ACS 73, Eff. Nov. 14, 1972; 1979 AC; 1995 MR 4, Eff. May 17, 1995; 1998 MR 3, Eff. Mar. 26, 1998.

R 285.812.7a Driving in race under influence of alcohol prohibited; breath analyzer test.

Rule 7a. If a purse is paid in part or in full by state funds, then a driver shall not drive in a fair harness race while under the influence of alcohol. A driver shall submit to a breath analyzer test when directed by a representative of the director. A driver is in violation of these rules if test results show a reading of 0.05% or more of alcohol in the blood and shall not be permitted to drive for at least 12 hours.
History: 1954 ACS 73, Eff. Nov. 14, 1972; 1979 AC; 1998 MR 3, Eff. Mar. 26, 1998.

R 285.812.8 Hearings.

Rule 8. If a provision of these rules or any other rules or state law related to a harness race program is violated, then the director shall notify the horse's owner of the violation and shall hold a hearing within 14 days from the date that the violation is reported to the director. The owner or his or her representative may appear and be heard. From testimony taken, the director shall render a decision on the eligibility of the owner, his or her representative, and the horse, or any of them, to participate in state-funded races or in any future state, county, district, or community fair harness horse race.
History: 1954 ACS 62, Eff. May 18, 1970; 1954 ACS 73, Eff. Nov. 14, 1972; 1979 AC; 1998 MR. 3, Eff. Mar. 26, 1998.

R 285.812.9 Final reports; preservation of records.

Rule 9. (1) Within 15 days after completion of the harness race program or September 30, whichever is sooner, an association shall submit to the director originals of the judges' sheets signed by the presiding judge, a sworn statement on forms provided by the director, and a copy of the printed race program indicating the order of finish of the horses.
(2) The association shall supply the director with any additional information required in the auditing of the report.
(3) Association records pertaining to the payment of purses shall be kept for the state auditors for not less than 4 years.
History: 1998 MR 3, Eff. Mar. 26, 1998.

REGULATION NO. 814. MICHIGAN AND FEDELE FAURI FUTURITY RACES

R 285.814.1
Source: 1995 AACS.

R 285.814.1a
Source: 1981 AACS.

R 285.814.2
Source: 1988 AACS.

R 285.814.3
Source: 1995 AACS.

R 285.814.4
Source: 1988 AACS.

R 285.814.5
Source: 1981 AACS.

R 285.814.6
Source: 1981 AACS.

R 285.814.7
Source: 1988 AACS.

R 285.814.8
Source: 1981 AACS.

REGULATION NO. 815. STATE AID FOR REGISTERED LIGHT HORSE RACES AT FAIRS

R 285.815.1
Source: 1981 AACS.

R 285.815.1a
Source: 1981 AACS.

R 285.815.2
Source: 1981 AACS.

R 285.815.3
Source: 1981 AACS.

R 285.815.4
Source: 1981 AACS.

R 285.815.5
Source: 1981 AACS.

R 285.815.6
Source: 1981 AACS.

R 285.815.8
Source: 1981 AACS.

R 285.815.11
Source: 1981 AACS.

R 285.815.15
Source: 1981 AACS.

R 285.815.16
Source: 1981 AACS.

REGULATION NO. 817. QUARTER HORSE BREEDERS' AWARDS AND STATE SUPPLEMENTS

R 285.817.1
Source: 1982 AACS.

R 285.817.1a
Source: 1982 AACS.

R 285.817.2
Source: 1991 AACS.

R 285.817.5
Source: 1982 AACS.

REGULATION NO. 818. MICHIGAN SIRE STAKE RACES

R 285.818.3
Source: 1995 AACS.

REGULATION NO. 819. APPALOOSA HORSE BREEDERS' AWARDS AND STATE SUPPLEMENTS

R 285.819.1
Source: 1982 AACS.

R 285.819.1a
Source: 1982 AACS.

R 285.819.2
Source: 1982 AACS.

R 285.819.5
Source: 1982 AACS.

R 285.819.7
Source: 1997 AACS.

REGULATION NO. 820. MICHIGAN-BRED PARI-MUTUEL RACES

R 285.820.1
Source: 1983 AACS.

R 285.820.3
Source: 1995 AACS.

R 285.820.5
Source: 1983 AACS.

REGULATION NO. 821. THOROUGHBRED SIRE STAKE RACES

R 285.821.1 Definitions.

Rule 1. As used in these rules:

(a) "Department" means the Michigan department of agriculture.

(b) "Director" means the director of the department or his or her designee.

(c) "Domicile" means the fixed, permanent, and principal home to which a person intends to return.

(d) "Earned purse" means the portion of a purse distribution that is awarded for the order of finish up to 3 placings, the term includes any state purse supplement, but does not include any other award funds.

(e) "Gross purse" means the total money offered for a purse.

(f) "H.B.P.A." means the horsemen's benevolent and protective association, Michigan division.

(g) "Host track" means the licensed racing association designated by the director to conduct thoroughbred sire stake races.

(h) "Jockey club" means the jockey club, incorporated.

(i) "Lessee" means a person who is domiciled in Michigan, who leases a stallion, and whose name has been recorded with the jockey club register as the registered lessee of a horse. A copy of the lease shall be filed with the department.

(j) "Michigan stallion" means a registered stallion which was leased or owned exclusively by a resident of this state and which did not serve a mare at a location outside of this state during the calendar year in which the service occurred. A stallion shall be registered with the director, on forms provided by the department, by January 1 of each year in which the stallion will be standing at service in this state. A newly acquired stallion purchased after January 1 of the breeding year shall be eligible for mares bred after the stallion is registered with the director if the stallion has not served any mares outside of this state during the calendar year.

(k) "Michigan-sired horse" means a horse sired by a registered stallion and duly nominated under R

285.821.4.
(l) "M.T.O.B.A." means the Michigan thoroughbred owners and breeders association.
(m) "Stallion owner" or "owner of a Michigan stallion" means an individual, partnership, association, or corporation that owns a stallion at the time of registration.
(n) "Owner of a Michigan-sired horse" means a person who is licensed under section 16 of Act No. 279 of the Public Acts of 1995, being '431.316 of the Michigan Compiled Laws, and who owns a registered Michigan-sired horse.
(o) "Person" means an individual, partnership, association, or corporation that owns a stallion at the time of service.
(p) "Sire stake" means a race condition for 2-year-old, 3-year-old, and 4-year-old and up Michigan-sired thoroughbred horses.
(q) "Thoroughbred racing association" means an association that is licensed by the Michigan racing commissioner to conduct thoroughbred horse races in Michigan at a host track approved by the director.
History: 1979 ACS 15, Eff. June 28, 1983; 1988 MR 12, Eff. Jan. 12, 1989; 2000 MR 12, Eff. Aug. 21, 2000.

R 285.821.2
Source: 1983 AACS.

R 285.821.3 Foals eligible for nomination; racing divisions.
Rule 3. The Michigan sire stakes races shall be raced in not less than 6 separate divisions as follows:
(a) Two-year-old colts and geldings.
(b) Two-year-old fillies.
(c) Three-year-old colts and geldings.
(d) Three-year-old fillies.
(e) Four-year-old and up colts and geldings.
(f) Four-year-old and up fillies and mares.
History: 1979 ACS 15, Eff. June 28, 1983; 2000 MR 12, Eff. Aug. 21, 2000.

R 285.821.4 Fees; nominations; award percentages.
Rule 4. (1) The payment schedule shall be as follows:
(a) Year of foaling - nomination shall be made by December thirty-first at no fee and shall be recorded with the department.
(b) All fees shall be determined by a committee of 1 member each from the thoroughbred racing association, the H.B.P.A., and the M.T.O.B.A., shall be payable to the racing association commencing 30 days before racing of the finals, and shall be added to the respective divisions.
(c) The department is responsible for providing applications and accepting nominations.
(2) In 1996 and all years thereafter, up to 75% or $600,000.00, if appropriated, whichever is greater, of the money allocated to the sire stakes program available by statute shall be utilized for special races for horses by registered Michigan sires and such races shall include but not be limited to the following 6 divisions which shall at all times be of equal purse value.
(a) Two-year-old colts and geldings.
(b) Two-year-old fillies.
(c) Three-year-old colts and geldings.
(d) Three-year-old fillies.
(e) Four-year-old and up colts and geldings.
(f) Four-year-old and up fillies and mares.
Included in the 75% or $600,000, if appropriated, whichever is greater, may be additional races with separate purse value for race conditions determined by the committee, described in R 285.821.4(3).
(3) The director shall allocate Michigan-sired horse owner awards and stallion owner awards after reviewing recommendations made by a committee consisting of a representative of the director, The H.B.P.A., M.T.O.B.A., O.R.C., and a representative of the host track.
(4) The department shall not be the holding agent for fees provided by this rule.
History: 1979 ACS 15, Eff. June 28, 1983; 2000 MR 12, Eff. Aug. 21, 2000.

R 285.821.5
Source: 1983 AACS.

R 285.821.6 Determination of field; applicable rules.

Rule 6. (1) If the field, after the nomination and entry fees are paid, contains more than the track's maximum available field, then the field shall be determined by the lifetime money earnings of the top entries to fill the track's maximum field.

(2) Racing of sire stake races, where not specifically covered by these rules, shall be raced under the rules of the Michigan racing commissioner, being R 431.1 to R 431.4290.

(3) The racing commissioner shall certify, to the director, at the completion of racing, in each condition book, the results of all races won by a Michigan-sired horse and also the results of all races in which a Michigan-sired horse finished first, second, or third in a race that was not restricted to Michigan-sired horses.

History: 1979 ACS 15, Eff. June 28, 1983; 1988 MR 12, Eff. Jan. 12, 1989; 2000 MR 12, Eff. Aug, 21, 2000.

R 285.821.7
Source: 1983 AACS.

R 285.821.8 Michigan-sired horse owner awards.

Rule 8. (1) An award of up to 30% of the earned purse shall be paid to the owner of a Michigan-sired horse that wins an eligible race which is not restricted to Michigan-sired horses at a state-licensed pari-mutuel track in Michigan. An award may also be paid of up to 30% of the earned purse to the owner of a Michigan-sired horse that finished second or third in a race which was not restricted to Michigan-sired horses at a state-licensed pari-mutuel track in Michigan.

(2) An award is limited to $10,000.00 for any 1 race.

(3) Michigan-sired horse owner awards shall be paid in the same manner as state purse supplements under R 285.810.6.

History: 1979 ACS 15, Eff. June 28, 1983; 2000 MR 12, Eff. Aug, 21, 2000.

R 285.821.9 Stallion owner awards.

Rule 9. (1) An award of up to 5% of the gross purse shall be paid to the owner of a Michigan stallion whose progeny wins a race at a state-licensed pari-mutuel track in Michigan.

(2) An award is limited to $10,000.00 for any 1 race.

(3) Payment of stallion owner awards shall be determined and processed at the end of each fiscal year. Stallion owner awards will not be paid if total award is less than $250.00 per year.

History: 1979 ACS 15, Eff. June 28, 1983; 2000 MR 12, Eff. Aug, 21, 2000.

R 285.821.10 Ineligibility of person or entity to participate in future sire stakes program.

Rule 10. A person who willfully falsifies a document required by these rules or who willfully accepts and retains any purse monies contrary to these rules is ineligible to participate in any future sire stakes program under the provisions of these rules.

History: 1979 ACS 15, Eff. June 28, 1983; 2000 MR 12, Eff. Aug, 21, 2000.

REGULATION NO. 822. ARABIAN BREEDERS' AWARDS AND STATE SUPPLEMENTS

R 285.822.1
Source: 1985 AACS.

R 285.822.2
Source: 1985 AACS.

R 285.822.3

Source: 1985 AACS.

R 285.822.4
Source: 1985 AACS.

R 285.822.5
Source: 1985 AACS.

R 285.822.6
Source: 1985 AACS.

R 285.822.7
Source: 1985 AACS.

DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES

BOARD OF LANDSCAPE ARCHITECTS

R 285.901.1—R 285.901.5
Source: 1997 AACS.

DEPARTMENT OF AGRICULTURE

MICHIGAN FAMILY FARM DEVELOPMENT AUTHORITY

GENERAL RULES

PART 1. GENERAL PROVISIONS

R 285.2101
Source: 1983 AACS.

R 285.2102
Source: 1983 AACS.

R 285.2103
Source: 1983 AACS.

R 285.2104
Source: 1983 AACS.

R 285.2105
Source: 1983 AACS.

R 285.2106
Source: 1983 AACS.

R 285.2107
Source: 1983 AACS.

R 285.2108
Source: 1983 AACS.

R 285.2109
Source: 1983 AACS.

R 285.2110
Source: 1983 AACS.

R 285.2111
Source: 1983 AACS.

R 285.2112
Source: 1983 AACS.

R 285.2113
Source: 1983 AACS.

PART 2. APPLICANT ELIGIBILITY AND APPLICATIONS

R 285.2201
Source: 1983 AACS.

R 285.2202
Source: 1983 AACS.

R 285.2203
Source: 1983 AACS.

R 285.2204
Source: 1983 AACS.

R 285.2205
Source: 1983 AACS.

PART 3. INDIVIDUAL AGRICULTURAL REVENUE BOND PROGRAM

R 285.2301
Source: 1983 AACS.

R 285.2302
Source: 1983 AACS.

R 285.2303
Source: 1983 AACS.

R 285.2304
Source: 1983 AACS.

R 285.2305
Source: 1983 AACS.

R 285.2306
Source: 1983 AACS.

DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES

STATE BOARD OF VETERINARY EXAMINERS

PROCEDURE FOR CONDUCTING HEARINGS

R 287.1
Source: 1997 AACS.

GENERAL RULES

R 287.451—R 287.459

Source: 1997 AACS.

R 287.461
Source: 1997 AACS.

ANIMAL TECHNICIAN CERTIFICATION

R 287.481—R 287.492
Source: 1997 AACS.

DEPARTMENT OF AGRICULTURE

ANIMAL INDUSTRY DIVISION

BODIES OF DEAD ANIMALS

R 287.651
Source: 1995 AACS.

R 287.652
Source: 1995 AACS.

R 287.653
Source: 1995 AACS.

R 287.654
Source: 1995 AACS.

R 287.655
Source: 1995 AACS.

R 287.656 Livestock composting.

Rule 6. (1) as used in this rule:

(a) "Afterbirth" means fetal fluids, placenta, and fetal mortality.

(b) "Bulking agent" means any carbon source material added to compost to decrease its bulk density and promote aeration for composting livestock other than poultry, for biological decomposition of carcasses, including, but not limited to, any of the following materials that are unpainted and do not have additives or preservatives:

(i) Sawdust.
(ii) Chopped straw.
(iii) Spelt hulls.
(iv) Bean pods.
(v) Grass clippings.
(vi) Leaves.
(vii) Shredded cardboard or newspaper.
(viii) Chopped cornstalks.
(ix) Finished compost from a secondary compost pile.

(c) "Livestock" means a species of animal used for human food or fiber or a species used for service to humans. Livestock includes, but is not limited to any of the following:

(i) Cattle.
(ii) Sheep.
(iii) New world camelids.
(iv) Bison.
(v) Captive cervidae.
(vi) Ratites.

(vii) Swine.
(viii) Equine.
(ix) Aquaculture.
(x) Rabbits.
(d) "Primary compost pile" means the first phase of composting during which bulking agent is added to mortality and afterbirth to begin the process of organic decomposition and during which the compost material is aerated and turned at intervals dependent on attaining acceptable temperatures.
(e) "Secondary compost pile" means a compost pile that has been turned after the primary composting process is complete.
(2) A person shall not operate a composting structure unless both of the following provisions are complied with:
(a)The site for construction of a composting structure shall be not less than 200 feet from the nearest natural surface water. The site shall not be closer to a water source than the distance between a septic drain field and a potable water well permitted by Act No. 399 of the Public Acts of 1976, as amended, and Act No. 368 of the Public Acts of 1978, as amended, being "325. 1001 et seq. and 333.1001 et seq., respectively.
(b) The composting structure shall be constructed in accordance with all of the following provisions:
(i) Be built with reinforced concrete floors which are impervious to moisture, which are adequate to bear the weight of equipment used to move composted material, and which are capable of supporting static and dynamic frost loads.
(ii) Consist of 2 or more bins, each constructed with not less than 3 side walls built to at least the height of the highest point of any composting material contained within and a roof over any area used to compost dead livestock; thereby preventing seepage, runoff, and the windblown movement of compost.
(iii) A composting structure and bins shall be constructed of a rot-resistant material or materials and the facility construction shall be strong enough to resist mechanical forces generated when turning the pile. Any structural damage to the composting structure shall be repaired before the composing facility is used for any further composting.
(iv) Have a capacity large enough to handle the volume of material placed in the facility through the endpoint of the composting process.
(3) A person shall manage the composting process in compliance with all of the following provisions:
(a) The compost pile shall be constructed with a base of bulking agent that is 1 foot deep before any livestock carcass is added for composting.
(b) Carcasses and bulking agent shall be added in layers so that the carbon-to-nitrogen ratio in the primary compost pile is between 15 to 1 and 35 to 1, seeking the optimal ratio of 25 parts carbon to 1 part nitrogen.
(c) Livestock tissue shall not be placed in the pile closer than 6 inches to any wall or pile edge.
(d) Dead livestock shall be added to the compost pile within 24 hours following death.
(e) Afterbirth may be stored in closed impervious containers and added to the pile every 1 to 3 days.
(f) Material added to the pile for composting shall be covered by not less than 6 inches of bulking agent within 24 hours.
(g) A layer of bulking agent that does not contain material added from a secondary compost pile shall cover the compost pile to a depth of not less than 3 inches at all times. The total depth of the pile shall not be more than 6 feet.
(h) The temperature deep within the primary and secondary compost pile shall be monitored and recorded twice weekly. The compost pile temperature shall reach a minimum of 130 degrees Fahrenheit on 2 successive readings.
(i) The primary composting pile shall be turned no sooner than 60 days following the last addition of any mortality, carcass, or afterbirth. A temperature of not less than 130 degrees Fahrenheit within the compost pile on 2 successive readings shall be reached after turning the compost pile.
(j) Compost material shall remain in a secondary compost pile to which no new material has been added for not less than 60 days before being added to a primary compost pile as bulking agent, before it is tested for its nutrient content, or before application to fields as a finished compost soil amendment.
(k) The disposition of finished compost may be by direct application to soils, sale, or other transfer of ownership. The final disposition of finished compost shall be application to soils following generally accepted agricultural and management practices as specified in Act No. 93 of 1981, as amended; being '286.471 et seq.

of the Michigan Complied Laws.
(l) Composted material from a secondary compost pile may be used as bulking agent in a 1 to 1 mix with fresh bulking agent material to begin a new primary compost pile.
(m) Water may be added to compost piles in a manner that raises moisture content of the pile to a level of 40 to 60%, but the addition of water shall not create or cause runoff or leachate that leaves the composting facility.
(n) A composted livestock carcass shall not be removed from the composting facility, except as a finished compost material, unless the carcass is buried in accordance with section 21 of Act No. 239 of the Public Acts of 1982, as amended, being '287.671 of the Michigan Compiled Laws.
(o) Bones or hides remaining in a finished compost shall be removed and added to a primary compost pile or shall be disposed of under section 21 of Act No. 239 of the Public Acts of 1982, as amended, being '287.671 of the Michigan Compiled Laws, before the compost may be sold or transferred or applied to crop land.
(p) Flies, rodents, pests, vermin, and other scavengers or predators shall be controlled so as not to disrupt the compost piles in the composting structure or constitute a risk or health hazard to human or animal populations.
(q) The director of the department of agriculture may require that any composted material be tested at a laboratory approved by the director for certain pathogenic organisms or any contaminant at any time before the material leaves the composting structure. The person operating the composting structure shall pay for the testing.
(r) A composting structure shall be used to compost only the normal and natural daily mortality associated with a livestock production unit under common ownership or management. Any increase in mortality shall be reported to the director of the department of agriculture immediately. A carcass that results from an increase in mortality shall not be added to the composting structure without the permission of the director.
(s) The director of the department of agriculture may authorize alternative methods of composting livestock for emergency, commercial, research, or other applications.
(4) The owner or operator of the composting facility shall keep records containing all of the following information for a minimum of 2 years and shall make the records available to the director of the department of agriculture immediately upon request:
(a) The start date of each primary compost pile.
(b) The quantity of livestock or afterbirth added each time an addition is made and the dates the material is added to any compost pile.
(c) The internal temperature of each pile measured twice weekly with a 3-foot probe-type thermometer.
(d) The date each compost pile or bin is turned and becomes a secondary compost pile.
(e) The final disposition of finished compost, including the method, location, date, and volume for the secondary pile.
History: 1999 MR 8, Eff. Sep. 3, 1999.

ANIMAL INDUSTRY

R 287.701
Source: 1994 AACS.

R 287.702
Source: 1994 AACS.

R 287.703
Source: 1994 AACS.

R 287.704
Source: 1994 AACS.

R 287.705
Source: 1994 AACS.

R 287.706
Source: 1994 AACS.

R 287.707
Source: 1994 AACS.

R 287.708
Source: 1994 AACS.

R 287.709
Source: 1994 AACS.

R 287.710
Source: 1994 AACS.

R 287.711
Source: 1994 AACS.

R 287.712
Source: 1994 AACS.

R 287.713
Source: 1994 AACS.

DEPARTMENT OF ENVIRONMENTAL QUALITY

SUPERVISOR OF WELLS

PUBLIC HEARINGS

R 299.251—R 299.258
Source: 1997 AACS.

DEPARTMENT OF NATURAL RESOURCES

PARKS AND RECREATION DIVISION

STATE PARKS AND RECREATION AREAS

R 299.321
Source: 1982 AACS.

R 299.323
Source: 1982 AACS.

R 299.326
Source: 1994 AACS.

LANDS DIVISION

STATE LANDS OTHER THAN STATE PARKS AND RECREATION AREAS

R 299.331
Source: 1980 AACS.
Editor's note: This rule took effect 90 days after the department of natural resources certified to the commission of natural resources the completion of 1500 miles of designated forest trail on state forest lands. The certification occurred on October 5, 1989.

R 299.334

Source: 1980 AACS.
Editor's note: This rule took effect 90 days after the department of natural resources certified to the commission of natural resources the completion of 1500 miles of designated forest trail on state forest lands. The certification occurred on October 5, 1989.

DEPARTMENT OF ENVIRONMENTAL QUALITY

GEOLOGICAL SURVEY DIVISION

OIL AND GAS OPERATIONS

R 299.501—R 299.544
Source: 1997 AACS.

DEPARTMENT OF NATURAL RESOURCES

LAW ENFORCEMENT DIVISION

SHOOTING RANGES ON STATE-OWNED LANDS

R 299.671
Source: 1986 AACS.

R 299.672
Source: 1986 AACS.

R 299.673a
Source: 1986 AACS.

WILDLIFE DIVISION

PUBLIC ACCESS STAMP PROGRAM

R 299.984
Source: 1980 AACS.

ROSE LAKE WILDLIFE RESEARCH AREA

R 299.1001
Source: 1986 AACS.

R 299.1002
Source: 1986 AACS.

R 299.1003
Source: 1986 AACS.

R 299.1004
Source: 1986 AACS.

WILDLIFE AND FISHERIES DIVISIONS

ENDANGERED AND THREATENED SPECIES

R 299.1021 Mollusks.

Rule 1. (1) The following species of mollusks of class Pelecypoda (mussels) are included on the state list of endangered species:

(a) Epioblasma obliqua perobliqua (Lea) [Dysnomia sulcata (Conrad)]	White catspaw
(b) Epioblasma torulosa rangiana (Rafinesque) [Dysnomia torulosa rangiana (Lea)]	Northern riffleshell
(c) Epioblasma triquetra (Rafinesque) [Dysnomia triquetra (Rafinesque)]	Snuffbox
(d) Obovaria subrotunda (Rafinesque)	Round hickorynut
(e) Pleurobema clava (Lamarck)	Clubshell
(f) Simpsonaias ambigua (Say) [Simpsoniconcha ambigua (Say)]	Salamander mussel
(g) Toxolasma lividus (Rafinesque) [Carunculina glans (Lea)]	Purple lilliput
(h) Villosa fabalis (Lea)	Rayed bean

(2) The following species of mollusks of class Pelecypoda (mussels) are included on the state list of threatened species:

(a) Anodonta subgibbosa (Anthony)	Lake floater
(b) Lampsilis fasciola Rafinesque lampmussel	Wavyrayed

(3) The following species of mollusks of class Gastropoda (snails) are included on the state list of endangered species:

(a) Planorbella multivolvis(Case) [Helisoma multivolvis]	Acorn ramshorn
(b) Stagnicola petoskeyensis (Walker)	Petoskey pondsnail

(4) The following species of mollusks of class Gastropoda (snails) are included on the state list of threatened species:

(a) Hendersonia occulta (Say)	Cherrystone drop
(b) Stagnicola contracta (Currier) [Lymanaea contracta]	Deepwater pondsnail

History: 1954 ACS 89, Eff. Dec. 4, 1976; 1979 AC; 1979 ACS 1, Eff. Feb. 7, 1980; 1979 ACS 13, Eff. Feb. 24, 1983; 1987 MR 9, Eff. Sept. 22, 1987; 1991 MR 10, Eff. Nov. 15, 1991; 1999 MR 3, Eff. Mar. 21, 1999.

R 299.1022 Insects.

Rule 2. (1) The following species of insects are included on the state list of endangered species:

(a) Brychius hungerfordi Spangler	Hungerford's crawling water beetle
(b) Catocala amestris Strecker	Three-staff underwing
(c) Neonympha mitchellii mitchellii French	Mitchell's satyr
(d) Nicrophorus americanus Olivier	American burying beetle
(e) Schinia indiana (Smith)	Phlox moth
(f) Schinia lucens (Morrison)	Leadplant moth
(g) Somatochlora hineana Williamson	Hine's emerald dragonfly
(h) Speyeria idalia (Drury)	Regal fritillary

(2) The following species of insects are included on the state list of threatened species:

(a) Atrytonopsis hianna Scudder	Dusted skipper
(b) Erynnis persius persius Scudder	Persius dusky wing
(c) Euphyes dukesi (Lindsey)	Dukes' skipper

(d) Hesperia ottoe Edwards	Ottoe skipper
(e) Incisalia irus Godart	Frosted elfin
(f) Lepyronia gibbosa Ball	Great Plains spittlebug
(g) Lycaeides idas nabokovi Masters	Northern blue
(h) Lycaeides melissa samuelis Nabakov	Karner blue
(i) Oarisma powesheik (Parker)	Powesheik skipperling
(j) Papaipema silphii Bird	Silphium borer moth
(k) Trimerotropis huroniana E. M. Walker	Lake Huron locust

History: 1954 ACS 89, Eff. Dec. 4, 1976; 1979 AC; 1987 MR 9, Eff. Sept. 22, 1987; 1991 MR 10, Eff. Nov. 15, 1991; 1999 MR 3, Eff. Mar. 21, 1999.

R 299.1023 Fishes.

Rule 3. (1) The following species of fishes are included on the state list of endangered species:

(a) Clinostomus elongatus (Kirtland)	Redside dace
(b) Erimyzon oblongus (Mitchill)	Creek chubsucker
(c) Notropis photogenis (Cope)	Silver shiner
(d) Noturus stigmosus Taylor	Northern madtom
(e) Opsopoeodus emiliae Hay	Pugnose minnow
(f) Percina shumardi (Girard)	River darter
(g) Percina copelandi (Jordan)	Channel darter
(h) Phoxinus erythrogaster (Rafinesque)	Southern redbelly dace

(2) The following species of fishes are included on the state list of threatened species:

(a) Acipenser fulvescens Rafinesque	Lake sturgeon
(b) Ammocrypta pellucida (Putnam)	Eastern sand darter
(c) Coregonus artedii Lesueur	Cisco or lake herring
(d) Coregonus zenithicus (Jordan and Evermann)	Shortjaw cisco
(e) Hiodon tergisus Lesueur	Mooneye
(f) Moxostoma carinatum (Cope)	River redhorse
(g) Stizostedion canadense (Smith)	Sauger

(3) The following species of fishes are thought to be extirpated in Michigan, but, if rediscovered, will automatically be listed as threatened:

(a) Coregonus johannae (Wagner)	Deepwater cisco
(b) Coregonus nigripinnis (Gill)	Blackfin cisco
(c) Coregonus reighardi (Koelz)	Shortnose cisco
(d) Notropis amblops (Rafinesque)	Bigeye chub
(e) Notropis chalybaeus (Cope)	Ironcolor shiner
(f) Notropis texanus (Girard)	Weed shiner
(g) Polyodon spathula (Walbaum)	Paddlefish
(h) Stizostedion vitreum glaucum (Hubbs)	Bluepike
(i) Thymallus arcticus (Richardson)	Arctic grayling

History: 1954 ACS 89, Eff. Dec. 4, 1976; 1979 AC; 1979 ACS 1, Eff. Feb. 7, 1980; 1979 ACS 13, Eff. Feb. 24, 1983; 1987 MR 9, Eff. Sept. 22, 1987; 1991 MR 10, Eff. Nov. 15, 1991; 1999 MR 3, Eff. Mar. 21, 1999.

R 299.1024 Amphibians.

Rule 4. (1) The following species of amphibians is included on the state list of endangered species:

Ambystoma texanum (Matthews)	Smallmouth Salamander

(2) The following species of amphibians is included on the state list of threatened species:

Ambystoma opacum (Gravenhorst)	Marbled salamander

History: 1954 ACS 89, Eff. Dec. 4, 1976; 1979 AC; 1979 ACS 13, Eff. Feb. 24, 1983; 1987 MR 9, Eff. Sept. 22, 1987; 1991 MR 10, Eff. Nov. 15, 1991; 1999 MR 3, Eff. Mar. 21, 1999.

R 299.1025 Reptiles.

Rule 5. (1) The following species of reptiles are included on the state list of endangered species:

(a) Clonophis kirtlandii (Kennicott)	Kirtland's snake
(b) Nerodia erythrogaster neglecta (Conant)	Copperbelly watersnake

(2) The following species of reptiles are included on the state list of threatened species:

(a) Elaphe vulpina gloydi Conant	Eastern fox snake
(b) Clemmys guttata	Spotted turtle

History: 1954 ACS 89, Eff. Dec. 4, 1976; 1979 AC; 1979 ACS 1, Eff. Feb. 7, 1980; 1979 ACS 13, Eff. Feb. 24, 1983; 1987 MR 9, Eff. Sept. 22, 1987; 1991 MR 10, Eff. Nov. 15, 1991; 1999 MR 3, Eff. Mar. 21, 1999.

R 299.1026 Birds.

Rule 6. (1) The following species of birds are included on the state list of endangered species:

(a) Asio flammeus (Pontoppidan)	Short-eared owl
(b) Charadrius melodus Ord	Piping plover
(c) Dendroica discolor (Vieillot)	Prairie warbler
(d) Dendroica kirtlandii (Baird)	Kirtland's warbler
(e) Falco peregrinus Tunstall	Peregrine falcon
(f) Lanius ludovicianus migrans (Palmer)	Migrant loggerhead shrike
(g) Rallus elegans Audubon	King rail
(h) Tyto alba (Scopoli)	Barn owl

(2) The following species of birds are included on the state list of threatened species:

(a) Ammodramus henslowii Audubon	Henslow's sparrow
(b) Asio otis (Linnaeus)	Long-eared owl
(c) Buteo lineatus (Gmelin)	Red-shouldered hawk
(d) Corturnicops noveboracensis (Gmelin)	Yellow rail
(e) Dendroica dominica (Linnaeus)	Yellow-throated warbler
(f) Falco columbarius (Linnaeus)	Merlin
(g) Gavia immer (Brunnich)	Common loon
(h) Haliaeetus leucocephalus (Linnaeus)	Bald eagle

(i) Ixobrychus exilis (Gmelin)	Least bittern
(j) Pandion haliaetus (Linnaeus)	Osprey
(k) Sterna caspia Pallas	Caspian tern
(l) Sterna hirundo Linnaeus	Common tern
(m) Cygnus buccinator Richardson	Trumpeter swan

(3) The following species of birds are thought to be extirpated in Michigan, but, if rediscovered, will automatically be listed as threatened:

Chondestes grammacus (Say)	Lark sparrow

History: 1954 ACS 89, Eff. Dec. 4, 1976; 1979 AC; 1979 ACS 1, Eff. Feb. 7, 1980; 1979 ACS 13, Eff. Feb. 24, 1983; 1987 MR 9, Eff. Sept. 22, 1987; 1991 MR 10, Eff. Nov. 15, 1991; 1999 MR 3, Eff. Mar. 21, 1999.

R 299.1027 Mammals.

Rule 7. (1) The following species of mammals are included on the state list of endangered species:

(a) Canis lupus Linnaeus	Gray wolf
(b) Felis concolor Linnaeus	Cougar
(c) Lynx canadensis Kerr	Lynx
(d) Microtus ochrogaster (Wagner)	Prairie vole
(e) Myotis sodalis Miller and Allen	Indiana bat

(2) The following species of mammals is included on the state list of threatened species:

Cryptotis parva (Say)	Least shrew

History: 1954 ACS 89, Eff. Dec. 4, 1976; 1979 AC; 1979 ACS 1, Eff. Feb. 7, 1980; 1979 ACS 13, Eff. Feb. 24, 1983; 1987 MR 9, Eff. Sept. 22, 1987; 1991 MR 10, Eff. Nov. 15, 1991; 1999 MR 3, Eff. Mar. 21, 1999.

R 299.1028 Plants.

Rule 8. (1) The following species of plants are included on the state list of endangered species:

(a) Agalinas gattingeri Small [Gerardia gattingeri Small]	Gattinger's gerardia
(b) A. skinneriana (A. Wood) Britton [Gerardia skinneriana A. Wood]	Skinner's gerardia
(c) Amerorchis rotundifolia (Pursh) Hultén	Small round-leaved orchis
(d) Asclepias ovalifolia Dcne.	Dwarf milkweed
(e) Androsace occidentalis Pursh	Rock-jasmine
(f) Arnica cordifolia Hooker	Heart-leaved arnica
(g) Asplenium ruta-muraria L.	Wall-rue
(h) A. scolopendrium L. var. americana (Fernald) Kartesz & Ghandi [Phyllitis scolopendrium var. americanum Fern.]	Hart's-tongue fern
(i) Baptisia leucophaea Nutt.	Cream wild indigo
(j) Botrychium acuminatum W. H. Wagner	Moonwort
(k) Carex heleonastes Ehrh.	Hudson Bay sedge
(l) C. nigra (L.) Reichard	Black sedge
(m) C. straminea Willd.	Straw sedge

(n) Castanea dentata (Marsh.) Borkh.	American chestnut
(o) Chamaerhodos nuttallii Fern.	Rock-rose
(p) Chelone obliqua L.	Purple turtlehead
(q) Cryptogramma acrostichoides R. Br.	American rock-brake
(r) Disporum hookeri (Torrey) Nicholson	Fairy bells
(s) Dodecatheon meadia L.	Shooting star
(t) Draba glabella Pursh.	Smooth whitlow grass
(u) Echinodorus tenellus (Mart.) Buchenau	Dwarf burhead
(v) Eleocharis atropurpurea (Retz.) Kunth	Purple spike rush
(w) E. microcarpa Torrey	Small-fruited spike-rush
(x) E. nitida Fern.	Slender spike rush
(y) Gentiana flavida A. Gray [G. alba Muhl.]	White gentian
(z) G. puberulenta J. Pringle [G. puberula Michaux]	Downy gentian
(aa) Gymnocarpium jessoense (Koidz.) Koidz.	Northern oak fern
(bb) Hedysarum alpinum L.	Alpine sainfoin
(cc) Hymenoxys herbacea (Greene) Cusick [Hymenoxys acaulis var. glabra (Gray) Parker	Lakeside daisy
(dd) Isoetes engelmannii A. Braun	Engelmann's quillwort
(ee) Isotria medeoloides (Pursh) Raf.	Smaller whorled pognia
(ff) Lygodium palmatum (Bernh.) Sw.	Climbing fern
(gg) Mimulus glabratus var. michiganensis (Pennell) Fassett	Michigan monkey flower
(hh) Nuphar pumila (Timm) DC. [N. microphylla (Pers.) Fern.]	Small yellow pond lily
(ii) Nymphaea tetragona Georgi	Pygmy water lily
(jj) Opuntia fragilis (Nutt.) Haw	Fragile prickly pear
(kk) Panicum polyanthes Schultes	Many-flowered panic grass
(ll) Penstemon gracilis Nutt	Slender beard tongue
(mm) Platanthera leucophaea (Nutt.) Lindley [Habenaria leucophea (Nutt.) A. Gray]	Prairie white-fringed orchid
(nn) Plantago cordata Lam.	Heart-leaved plantain
(oo) Poa canbyi (Scribner) Piper	Canbyi's bluegrass
(pp) Populus heterophylla L.	Swamp or Black cottonwood
(qq) Proserpinaca pectinata Lam.	Mermaid-weed
(rr) Rhynchospora globularis (Chapman) Small	Globe beak-rush
(ss) Rubus acaulis Michaux	Dwarf raspberry
(tt) Rumex occidentalis S. Wats	Western dock
(uu) Scleria pauciflora Willd.	Few-flowered nut rush
(vv) Subularia aquatica L.	Awlwort
(ww) Trillium undulatum Willd	Painted trillium
(xx) Utricularia inflata Walter [U. radiata Small]	Floating bladderwort
(yy) Vaccinium vitis-idaea L.	Mountain cranberry

(2) The following species of plants, listed by major group and family, are included on the state list of threatened species:

(a) PTERIDOPHYTES:	
(i) ASPLENIACEAE (Spleenwort Fanily):	

(A) Asplenium rhizophyllum L. [Camptosorus rhizophyllus (L.) Link]	Walking fern
(B) A. trichomanes-ramosum L. [A. viride Hudson]	Green spleenwort
(ii) DRYOPTERIDACEAE (Wood Fern Family):	
(A) Dryopteris celsa (W. Palmer) Small	Small log fern
(B) Gymnocarpium robertianum (Hoffman) Newman	Limestone oak fern
(C) Woodsia alpina (Bolton) S. F. Gray	Northern woodsia
(D) W. obtusa (Sprengel) Torrey	Blunt-lobed woodsia
(iii) LYCOPODIACEAE (Clubmoss family):Lycopodiella margaritae J. G. Bruce, W. H. Wagner, & Beitel	Clubmoss
(iv) OPHIOGLOSSACEAE (Adder's-tongue family):	
(A) Botrychium campestre W. H. Wagner	Prairie Moonwort or Dunewort
(B) B. hesperium (Maxon & Clausen) W. H. Wagner & Lellinger	Western moonwort
(C) B. mormo W. H. Wagner	Goblin moonwort
(D) Ophioglossum vulgatum L. [O. pycnostichum (Fern.) Löve & Löve]	Southeastern adder's-tongue
(v) PTERIDACEAE (Maidenhair Fern Family) Pellaea atropurpurea (L.) Link.	Purple cliff brake
(b) MONOCOTYLEDONS:	
(i) ALISMATACEAE (Water-plantain family):	
Sagittaria montevidensis Cham. & Schlecht.	Arrowhead
(ii) CYPERACEAE (Sedge family):	
(A) Carex albolutescens Schw.	Sedge
(B) C. assiniboinensis W. Boott	Assiniboia sedge
(C) C. atratiformis Britton	Sedge
(D) C. conjuncta F. Boott.	Sedge
(E) C. crus-corvi Kunze	Raven's-foot sedge
(F) C. lupuliformis Dewey	False hop sedge
(G) C. media R. Br.	Sedge
(H) C. novae-angliae Schwein.	New England sedge
(I) C. oligocarpa Willd.	Eastern few-fruited sedge
(J) C. platyphylla Carey	Broad-leaved sedge
(K) C. rossii Boott	Ross's sedge
(L) C. scirpoidea Michaux	Bulrush sedge
(M) C. seorsa Howe	Sedge
(N) C. typhina Michaux	Cattail sedge
(O) C. wiegandii Mackenzie	Wiegand's sedge
(P) Eleocharis geniculata (L.) R & S. [E.caribaea (Rottb.) S. F. Blake]	Spike rush
(Q) E. compressa Sulliv.	Flattened spike rush
(R) E. parvula (R. & S.) Link.	Dwarf spike rush
(S) E. tricostata Torrey	Three-ribbed spike rush
(T) Fuirena squarrosa Michaux	Umbrella grass
(U) Psilocarya scirpoides Torrey	Bald rush
(V) Scirpus hallii A. Gray	Hall's bulrush
(W) S. americanus Pers. [S. olneyi A. Gray]	Olney's bulrush

(X) Scleria reticularis Michaux	Netted nut rush
(iii) IRIDACEAE (Iris family):	
(A) Iris lacustris Nutt.	Dwarf lake iris
(B) Sisyrinchium atlanticum Bickn.	Atlantic blue-eyed-grass
(iv) JUNCACEAE (Rush family):	
(A) Juncus brachycarpus Engelm.	Short-fruited rush
(B) J. militaris Bigelow	Bayonet rush
(C) J. scirpoides Lam.	Scirpus-like rush
(D) J. stygius L.	Moor rush
(E) J. vaseyi Engelm.	Vasey's rush
(F) Luzula parviflora (Ehrh.) Desv.	Small-flowered wood rush
(v) LEMNACEAE (Duckweed family): Wolffia papulifera Thompson [W. brasiliensis Weddell]	Watermeal
(vi) LILIACEAE (Lily family):	
(A) Allium schoenoprasum L. (native variety)	Chives
(B) Camassia scilloides (Raf.) Cory	Wild hyacinth
(C) Disporum trachycarpum (Wats) B. & H.	Northern fairy bells
(D) Tofieldia pusilla (Michaux) Pers.	False asphodel
(E) Trillium nivale Riddell	Snow trillium
(F) T. recurvatum Beck	Prairie trillium
(G) T. sessile L.	Toadshade
(vii) ORCHIDACEAE (Orchid family):	
(A) Calypso bulbosa (L.) Oakes	Calypso or fairy-slipper
(B) Cypripedium candidum Willd.	White lady slipper
(C) Galearis spectabilis (L.) Raf.	Showy orchis
(D) Isotria verticillata (Willd.) Raf.	Whorled pogonia
(E) Platanthera ciliaris (L.) Lindley [Habenaria ciliaris (L.) R. Br.]	Orange- or yellow-fringed orchis
(F) Spiranthes ovalis Lindley	Lesser ladies'-tresses
(G) Tipularia discolor (Pursh) Nutt.	Cranefly orchid
(H) Triphora trianthophora (Sw.) Rydb.	Nodding pogonia or three birds orchid
(viii) POACEAE (Grass family):	
(A) Aristida longespica Poiret	Three-awned grass
(B) A. tuberculosa Nutt.	Beach three-awned grass
(C) Beckmannia syzigachne (Steudel) Fern.	Slough grass
(D) Bouteloua curtipendula (Michaux)	Torrey Side oats grama
(E) Bromus pumpellianus Scribner	Pumpelly's bromegrass
(F) Calamagrostis lacustris (Kearney) Nash	Northern reedgrass
(G) C. stricta (Timm) Koeler	Narrow-leaved reedgrass
(H) Chasmanthium latifolium (Michx.) Yates [Uniola latifolia Michaux]	Wild oats
(I) Diarrhena americana Beauv.	Beak grass
(J) Festuca scabrella Torrey [F. altaica Trin.]	Rough fescue
(K) Muhlenbergia richardsonis (Trin.) Rydb.	Mat muhly
(L) Oryzopsis canadensis (Poiret) Torrey	Canada rice grass
(M) Panicum leibergii (Vasey) Scribner	Leiberg's panic grass
(N) P. longifolium Torrey	Panic grass
(O) P. verrucosum Muhl.	Warty panic grass

(P) Poa alpina L.	Alpine bluegrass
(Q) P. paludigena Fern. & Wieg.	Bog bluegrass
(R) Zizania aquatica var. aquatica L.	Wild rice
(ix) POTAMOGETONACEAE (Pondweed family):	
(A) Potamogeton bicupulatus Fern. [P. capillaceus Poiret]	Waterthread pondweed
(B) P. hillii Morong	Hill's pondweed
(C) P. pulcher Tuckerman	Spotted pondweed
(D) P. vaseyi Robins	Vasey's pondweed
(x) RUPPIACEAE (Widgeon grass family): Ruppia maritima L.	Widgeon grass
(c) DICOTYLEDONS:	
(i) ACANTHACEAE (Acanthus family):	
(A) Justicia americana (L.) Vahl	Water willow
(B) Ruellia humilis Nutt.	Hairy wild petunia
(C) R. strepens L.	Smooth wild petunia
(ii) APIACEAE (Parsley family):	
(A) Berula erecta (Nutt.) Fern. [B. pusilla (Nutt.) Fern.]	Cut-leaved water parsnip
(B) Eryngium yuccifolium Michaux	Rattlesnake-master or button snakeroot
(C) Osmorhiza depauperata Phil.	Sweet Cicely
(D) Zizia aptera (A. Gray) Fern.	Prairie golden alexanders
(iii) ARALIACEAE (Ginseng family):	
(A) Oplopanax horridus (Smith) Miq.	Devil's club
(B) Panax quinquefolius L.	Ginseng
(iv) ARISTOLOCHIACEAE (Birthwort family): Aristolochia serpentaria L.	Virginia snakeroot
(v) ASCLEPIADACEAE (Milkweed family):	
(A) Asclepias hirtella (Pennell) Woodson	Tall green milkweed
(B) A. sullivantii Engelm.	Sullivant's milkweed
(vi) ASTERACEAE (Composite family):	
(A) Agoseris glauca (Pursh) Raf.	Prairie or pale agoseris
(B) Antennaria rosea Greene	Rosy pussytoes
(C) Artemisia ludoviciana Nutt.	Western mugwort
(D) Aster furcatus Burgess	Forked aster
(E) A. modestus Lindley	Great northern aster
(F) A. sericeus Vent.	Western silvery aster
(G) Cirsium pitcheri (Eaton) Torrey & A. Gray	Pitcher's thistle
(H) Coreopsis palmata Nutt.	Prairie coreopsis
(I) Erigeron hyssopifolius Michaux	Hyssop-leaved fleabane
(J) Eupatorium fistulosum Barratt	Hollow-stemmed Joe-pye weed
(K) E. sessilifolium L.	Upland boneset
(L) Gnaphalium sylvaticum L.	Woodland everlasting
(M) Helianthus mollis Lam.	Downy sunflower
(N) Lactuca floridana (L.) Gaertner	Woodland lettuce
(O) L. pulchella (Pursh) DC.	Wild blue lettuce
(P) Petasites sagittatus (Pursh) A. Gray	Sweet coltsfoot

(Q) Polymnia uvedalia L.	Yellow-flowered leafcup
(R) Senecio indecorus Greene	Northern ragwort
(S) Silphium integrifolium Michaux	Rosinweed
(T) S. laciniatum L.	Compass plant
(U) S. perfoliatum L.	Cup plant
(V) Solidago houghtonii A. Gray	Houghton's goldenrod
(W) S. missouriensis Nutt.	Missouri goldenrod
(X) Tanacetum huronense Nutt.	Lake Huron tansy
(vii) BORAGINACEAE (Borage family): Mertensia virginica Pers. (L.)	Virginia bluebells
(viii)BRASSICACEAE (Mustard family):	
(A) Arabis perstellata E. L. Braun	Rock cress
(B) Armoracia lacustris (A. Gray) Al-Shehbaz & V. Bates [A. aquatica (Eaton Wiegand)]	Lake cress
(C) Braya humilis (C. A. Meyer) Robinson	Low northern rock cress
(D) Dentaria maxima Nutt.	Large toothwort
(F) Draba cana Rydb.	Ashy whitlow grass
(G) D. incana L.	Twisted whitlow grass
(H) D. reptans (Lam.) Fern.	Creeping whitlow grass
(ix) CALLITRICHACEAE (Water-starwort family): Callitriche heterophylla Pursh	Large water starwort
(x) CAPRIFOLIACEAE (Honeysuckle family):	
(A) Lonicera involucrata (Richardson) Banks	Black twinberry
(B) Viburnum edule (Michx.) Raf.	Squashberry or mooseberry
(xi) CARYOPHYLLACEAE (Pink family):	
(A) Arenaria macrophylla Hooker	Large-leaved sandwort
(B) Sagina nodosa (L.) Fenzl	Pearlwort
(C) Silene stellata (L.) Aiton f.	Starry campion
(D) S. virginica L.	Fire pink
(E) Stellaria crassifolia Ehrh.	Fleshy stitchwort
(xii) CISTACEAE (Rockrose family): Lechea pulchella Raf. Leggett's pinweed [L. leggettii Britton & Hollick]	Leggett's pinweed
(xiii) CONVOLVULACEAE (Morning-glory family): Ipomoea pandurata (L.) G. F. W. Meyer	Wild potato vine or man-of- the-earth
(xiv) EMPETRACEAE (Crowberry family): Empetrum nigrum L.	Black crowberry
(xv) ERICACEAE (Heath family):	
(A) Pterospora andromedea Nutt.	Pine-drops
(B) Vaccinium cespitosum Michaux	Dwarf bilberry
(C) V. uliginosum L.	Alpine blueberry
(xvi) EUPHORBIACEAE (Spurge family): Euphorbia commutata Engelm.	Tinted spurge
(xvii) FABACEAE (Pea family):	
(A) Astragalus canadensis L.	Canadian milk vetch
(B) Wisteria frutescens (L.) Poiret	Wisteria
(xviii) FUMARIACEAE (Fumitory family): Corydalis flavula (Raf.) DC.	Yellow fumewort
(xix) GENTIANACEAE (Gentian family):	

(A) Bartonia paniculata (Michaux) Muhl.	Panicled screwstem
(A) Gentiana linearis Froel.	Narrow-leaved gentian
(B) Gentianella quinquefolia (L.) Small	Stiff gentian
(C) Sabatia angularis (L.) Pursh	Rosepink
(xx) HALORAGACEAE (Water-milfoil family): Myriophyllium farwellii Morong	Farwell's water milfoil
(xxi) HYDROPHYLLACEAE (Waterleaf family): Phacelia franklinii (R. Br.) A. Gray	Franklin's phacelia
(xxii) HYPERICACEAE (St. John's-wort family): Hypericum sphaerocarpum Michaux	Round-fruited St. John's-wort
(xxiii) LAMIACEAE (Mint family):	
(A) Lycopus virginicus L.	Virginia water-horehound
(B) Pycnanthemum muticum (Michx.) Pers.	Mountain mint
(C) P. pilosum Nutt.	Hairy mountain mint
(D) Scutellaria nervosa Pursh	Skullcap
(E) S. parvula Michaux [sensu lato]	Small skullcap
(F) Trichostema brachiatum L. [Isanthus brachiatus (L.) BSP.]	False pennyroyal
(G) T. dichotomum L.	Bastard pennyroyal
(xxiv) LENTIBULARIACEAE (Bladderwort family): Utricularia subulata L.	Bladderwort
(xxv) LINACEAE (Flax family): Linum virginianum L.	Virginia flax
(xxvi) MELASTOMATACEAE (Melastome family): Rhexia mariana L.	Maryland meadow beauty
(xxvii) MORACEAE (Mulberry family): Morus rubra L.	Red mulberry
(xxviii) NYMPHAEACEAE (Water-lily family): Nelumbo lutea (Willd.) Pers. [N. pentapetala (Walter) Fern.]	American lotus
(xxix) OLEACEAE (Olive family): Fraxinus profunda (Bush) Bush [F. tomentosa F. Michaux]	Pumpkin ash
(xxx) ONAGRACEAE (Evening-primrose family): Ludwigia sphaerocarpa Ell.	Globe-fruited seedbox
(xxxi) OROANCHACEAE (Evening-primrose family): Orobanche fasciculata Nutt.	Broomrape
(xxxii) OXALIDACEAE (Wood-sorrel family): Oxalis violacea L.	Violet wood sorrel
(xxxiii) POLEMONIACEAE (Phlox family):	
(A) Phlox bifida Beck.	Cleft phlox
(B) P. maculata L.	Wild sweet William
(C) Polemonium reptans L.	Jacob's ladder
(xxxiv) POLYGONACEAE (Smartweed family):	
(A) Polygonum careyi Olney	Carey's smartweed
(B) P. viviparum L.	Alpine bistort
(xxxv) RANUNCULACEAE (Crowfoot family):	
(A) Hydrastis canadensis L.	Goldenseal
(B) Ranunculus ambigens Watson	Spearwort
(C) R. cymbalaria Pursh	Seaside crowfoot

(D) R. lapponicus L.	Lapland buttercup
(E) R. macounii Britton	Macoun's buttercup
(F) R. rhomboideus Goldie	Prairie buttercup
(xxxvi) RHAMNACEAE (Buckthorn family): Ceanothus sanguineus Pursh	Wild lilac
(xxxvii) RUBIACEAE (Madder family): Galium kamtschaticum Schultes & J. H. Schultes	Bedstraw
(xxxviii) ROSACEAE (Rose family):	
(A) Dalibarda repens L.	False violet
(B) Filipendula rubra (Hill) Robinson	Queen-of-the-prairie
(C) Geum triflorum Pursh	Prairie smoke
(D) Porteranthus trifoliatus (L.) Britton [Gillenia trifoliata (L.) Moench.]	Bowman's root
(E) Potentilla paradoxa Nutt.	Sand cinquefoil
(F) P. pensylvanica L.	Prairie cinquefoil
(G) Sanguisorba canadensis L.	Canadian burnet
(xxix) SALICACEAE (Willow family): Salix planifolia Pursh	Tea-leaved willow
(xl) SARRACENIACEAE (Pitcher-plant family): Sarracenia purpurea f. heterophylla (Eaton) Fern.	Yellow pitcher plant
(xli) SAXIFRAGACEAE (Saxifrage family):	
(A) Parnassia palustris L.	Marsh grass-of-parnassus
(B) Saxifraga paniculata Miller [S. aizoön Jacq.]	Encrusted saxifrage
(C) S. tricuspidata Rottb.	Prickly saxifrage
(xliii) SCROPHULARIACEAE (Figwort family):	
(A) Besseya bullii (Eaton) Rydb.	Kitten-tails
(B) Castilleja septentrionalis Lindley	Pale Indian paintbrush
(C) Collinsia parviflora Lindley	Small blue-eyed Mary
(D) Dasystoma macrophylla (Nutt.) Raf.	Mullein foxglove
(E) Euphrasia hudsoniana Fernald & Weigand	Eyebright
(F) E. nemorosa (Pers.) Wallr.	Eyebright
(G) Gratiola aurea Pursh)[G. lutea Raf.]	Hedge-hyssop
(H) G. virginiana L.	Annual hedge hyssop
(I) Penstemon calycosus Small	Beard tongue
(xliii) VALERIANACEAE (Valerian family):	
(A) Valeriana edulis var. ciliata (T. & G.)	Edible valerian
(B) Valerianella chenopodiifolia (Pursh) DC.	Goosefoot corn salad
(C) V. umbilicata (Sull.) A. W. Wood	Corn salad
(xliv) VIOLACEAE (Violet family):	
(A) Viola epipsila Ledeb.	Northern marsh violet
(B) V. novae-angliae House	New England violet
(C) V. pedatifida G. Don	Prairie birdfoot violet
(xlv) VITACEAE (Grape family): Vitis vulpina L.	Frost grape

(3) This rule does not apply to cultivated plants.
(4) The following species of plants are thought to be extirpated in Michigan, but, if rediscovered, will automatically be listed as threatened:

(a) Agropyron spicatum (Pursh) Scribner & J. G. Smith	Bluebunch wheatgrass
(b) Aristida dichotoma Michaux	Three-awned grass
(c) Asplenium montanum Willd.	Mountain spleenwort
(d) Buchnera americana L.	Bluehearts
(e) Carex decomposita Muhl.	Log sedge
(f) C gravida Bailey	Sedge
(g) C. haydenii Dewey	Hayden's sedge
(h) Commelina erecta L.	Slender dayflower
(i) Cyperus acuminatus Torrey & Hooker	Cyperus, Nut grass
(j) Dalea purpurea Vent. [Petalostemon purpurem (Vent.) Rydb.]	purple prairie clover
(k) Dennstaedtia punctiloba (Michx.) T. Moore	Hay-scented fern
(l) Digitaria filiformis (L.) Koeler	Slender finger grass
(m) Disporum maculatum (Buckley) Britton	Nodding madarin
(n) Draba nemorosa L.	Whitlow grass
(o) Eleocharis radicans (Poiret) Kunth	Spike rush
(p) Echinacea purpurea (L.) Moench.	Purple coneflower
(q) Equisetum telmateia Ehrh.	Giant horsetail
(r) Fimbristylis puberula (Michaux) Vahl	Chestnut sedge
(s) Gentiana saponaria L.	Soapwort gentian
(t) Glyceria acutiflora Torrey	Manna grass
(u) Hedyotis nigricans (Lam.) Fosb.	Hedyotis
(v) Helianthus microcephalus Torrey & Gray	Small wood sunflower
(w) Lemna valdiviana Phil.	Pale duckweed
(x) Lespedeza procumbens Michaux	Trailing bush clover
(y) Liatris punctata Hooker	Dotted blazing star
(z) L. squarrosa (L.) Michx.	Plains blazing star
(aa) Lithospermum incisum Lehm.	Narrow-leaved puccoon
(bb) Mikania scandens (L.) Willd.	Mikania
(cc) Mimulus alatus Aiton	Winged monkey flower
(dd) Monarda didyma L.	Bee balm, Oswego tea
(ee) Muhlenbergia cuspidata (Hooker) Rydb.	Plains muhly
(ff) Onosmodium molle Michx.	Marbleweed
(gg) Phleum alpinum L.	Mountain timothy
(hh) Polygala incarnata L.	Pink milkwort
(ii) Polygonatum biflorum var. melleum (Farw.) Ownbey	Honey-flowered solomon seal
(jj) Polytaenia nuttallii DC.	Prairie parsley
(kk) Rudbeckia subtomentosa Pursh	Sweet coneflower
(ll) Scutellaria incana Biehler	Skullcap
(mm) S. ovata Hill	Forest skullcap
(nn) Senecio congestus (R. Br.) DC.	Marsh fleabane
(oo) Sisyrinchium farwellii Bickn.	Farwell's blue-eyed grass
(pp) S. hastile Bickn.	Blue-eyed grass
(qq) Tomanthera auriculata (Michaux) Raf. [Agalinas auriculata (Michaux) S. F. Blake]	Eared foxglove
(rr) Tradescantia bracteata Small.	Long-bracted spiderwort
(ss) Trillium viride Beck	Green trillium
(tt) Woodwardia areolata (L.) T. Moore	Netted chain fern

History: 1954 ACS 89, Eff. Dec. 4, 1976; 1979 AC; 1979 ACS 1, Eff. Feb. 7, 1980; 1979 ACS 13, Eff. Feb. 24, 1983; 1987 MR 9, Eff. Sept. 22, 1987; 1991 MR 10, Eff. Nov. 15, 1991; 1999 MR 3, Eff. Mar. 21, 1999.

DEPARTMENT OF ENVIRONMENTAL QUALITY

GEOLOGICAL SURVEY DIVISION

OIL AND GAS OPERATIONS

PERMITS TO DRILL

R 299.1101, R 299.1102
Source: 1997 AACS.

R 299.1103
Source: 1997 AACS.

R 299.1104
Source: 1997 AACS.

R 299.1105
Source: 1997 AACS.

R 299.1105a
Source: 1997 AACS.

R 299.1106
Source: 1997 AACS.

R 299.1107
Source: 1997 AACS.

R 299.1108
Source: 1997 AACS.

R 299.1109—R 299.1111
Source: 1997 AACS.

R 299.1112
Source: 1997 AACS.

LOCATION AND SPACING OF WELLS

R 299.1201—R 299.1206
Source: 1997 AACS.

DRILLING

R 299.1301
Source: 1997 AACS.

R 299.1302
Source: 1997 AACS.

R 299.1303
Source: 1997 AACS.

R 299.1304 Rescinded.
Source: 1997 AACS.

R 299.1305—R 299.1308
Source: 1997 AACS.

R 299.1309
Source: 1997 AACS.

R 299.1310—R 299.1314
Source: 1997 AACS.

R 299.1315
Source: 1997 AACS.

R 299.1316—R 299.1322
Source: 1997 AACS.

PRODUCTION

R 299.1401—R 299.1409
Source: 1997 AACS.

R 299.1410
Source: 1997 AACS.

PRORATION

R 299.1501—R 299.1517
Source: 1997 AACS.

BRINE DISPOSAL

R 299.1601—R 299.1604
Source: 1997 AACS.

R 299.1605
Source: 1997 AACS.

R 299.1606
Source: 1997 AACS.

SECONDARY RECOVERY AND PRESSURE MAINTENANCE

R 299.1701—R 299.1704
Source: 1997 AACS.

PLUGGING

R 299.1801—R 299.1802
Source: 1997 AACS.

R 299.1803
Source: 1997 AACS.

R 299.1804
Source: 1997 AACS.

R 299.1805
Source: 1997 AACS.

R 299.1806, R 299.1807
Source: 1997 AACS.

R 299.1808
Source: 1997 AACS.

R 299.1809
Source: 1997 AACS.

R 299.1810
Source: 1997 AACS.

R 299.1811
Source: 1997 AACS.

PREVENTION OF FIRES AND POLLUTION AND DANGER OR DESTRUCTION OF PROPERTY AND LIFE

R 299.1901
Source: 1997 AACS.

R 299.1902
Source: 1997 AACS.

R 299.1903
Source: 1997 AACS.

R 299.1904
Source: 1997 AACS.

R 299.1905
Source: 1997 AACS.

R 299.1906, R 299.1907
Source: 1997 AACS.

R 299.1907a
Source: 1997 AACS.

R 299.1908
Source: 1997 AACS.

R 299.1909
Source: 1997 AACS.

R 299.1910
Source: 1997 AACS.

HYDROGEN SULFIDE MANAGEMENT

R 299.1911—R 299.1999
Source: 1997 AACS.

PUBLIC HEARING

R 299.2001—R 299.2006
Source: 1997 AACS.

R 299.2007—R 299.2010
Source: 1997 AACS.

ENFORCEMENT

R 299.2101
Source: 1997 AACS.

DEPARTMENT OF NATURAL RESOURCES

WILDLIFE DIVISION

GAME BREEDERS

R 299.2521—R 299.2533
Source: 1997 AACS.

FOREST MANAGEMENT DIVISION

COMMERCIAL FORESTS

R 299.2601
Source: 1987 AACS.

R 299.2602
Source: 1997 AACS.

R 299.2603
Source: 1987 AACS.

R 299.2603a
Source: 1987 AACS.

R 299.2604
Source: 1987 AACS.

R 299.2605
Source: 1987 AACS.

R 299.2605a
Source: 1987 AACS.

R 299.2606
Source: 1987 AACS.

R 299.2607
Source: 1987 AACS.

R 299.2608
Source: 1987 AACS.

R 299.2609
Source: 1987 AACS.

R 299.2610

Source: 1987 AACS.

R 299.2611
Source: 1987 AACS.

FOREST AND MINERAL RESOURCE DEVELOPMENT FUND BOARD

FOREST AND MINERAL RESOURCE DEVELOPMENT FUND PROGRAM

R 299.2651
Source: 1991 AACS.

R 299.2652
Source: 1991 AACS.

R 299.2653
Source: 1991 AACS.

R 299.2654
Source: 1991 AACS.

R 299.2655
Source: 1991 AACS.

R 299.2656
Source: 1991 AACS.

R 299.2657
Source: 1991 AACS.

R 299.2658
Source: 1991 AACS.

R 299.2659
Source: 1991 AACS.

R 299.2660
Source: 1991 AACS.

R 299.2661
Source: 1991 AACS.

R 299.2662
Source: 1991 AACS.

R 299.2663
Source: 1991 AACS.

R 299.2664
Source: 1991 AACS.

R 299.2665
Source: 1991 AACS.

R 299.2666
Source: 1991 AACS.

LAW ENFORCEMENT DIVISION

USE OF RIVERS

PART 1. GENERAL PROVISIONS

R 299.2701—R 299.2719
Source: 1997 AACS.

PART 2. AU SABLE, MANISTEE, PINE, AND PERE MARQUETTE RIVERS

R 299.2721—R 299.2727
Source: 1997 AACS.

WILDLIFE DIVISION

PUBLIC EXHIBITIONS OF WILD ANIMALS AND BIRDS

PART 1. GENERAL PROVISIONS

R 299.2801—R 299.2809
Source: 1997 AACS.

PART 2. PERMITS

R 299.2811—R 299.2818
Source: 1997 AACS.

PART 3. PENS AND HOUSING

R 299.2821—R 299.2839
Source: 1997 AACS.

PART 4. PERMITTEES' OPERATIONS

R 299.2851—R 299.2860
Source: 1997 AACS.

DEPARTMENT OF ENVIRONMENTAL QUALITY

ENVIRONMENTAL ASSISTANCE DIVISION

GENERAL RULES

PART 1. GENERAL PROVISIONS

R 299.2903 Definitions.

Rule 3. As used in these rules:

(a) "Act" means Act No. 451 of the Public Acts of 1994, as amended, being §324.101 et seq. of the Michigan Compiled Laws.

(b) "Board" means the board of examiners established by R 299.2916.

(c) "Department" means the director of the department of environmental quality or his or her designee.

(d) "Division" means the surface water quality division.

(e) "Governmental agency" means a city, village, township, county, metropolitan district, other unit of government, or officers of the entities specified in this subdivision.

(f) "Operator" means an individual who works in a treatment facility and who has some responsibility for the operation of the facility.
(g) "Person" means an individual, partnership, association, corporation, or any government agency.
(h) "Sewerage system" means sewer systems and treatment facilities that are required to collect, transport, and treat domestic and industrial wastes.
(i) "Sewer system" means the pipes, channels, conduits, manholes, pumping stations, and appurtenances, collectively or severally, actually used or intended for use by the public for the purpose of collecting, conveying, or transporting domestic and industrial wastes to a treatment facility.
(j) "Superintendent" means an individual who is in charge of and responsible for the operation of a treatment facility and in whom is vested the authority and responsibility for the establishment and execution of specific practices and procedures controlling the operations of the treatment facility in accordance with the policies of the owner of the facility and the department.
(k) "Treatment facility" means a sewage or waste treatment works, structures, equipment, and appurtenances, collectively or severally, actually used or intended for use by the public for the purpose of treating or otherwise handling domestic and industrial wastes.
History: 1954 ACS 85, Eff. Sept. 24, 1975; 1979 AC; 1999 MR 1, Eff. Jan. 25, 1999.

PART 2. TREATMENT FACILITY CLASSIFICATIONS AND OPERATOR CERTIFICATION

R 299.2927 Appeals.

Rule 27. (1) A person who is aggrieved by any action of the board under these rules, or who wishes to appeal any other action of the board with respect to his or her certification, shall have an opportunity for a hearing before the department.
(2) A hearing conducted under this rule shall be conducted in accordance with R 299.2971 through R 299.2974.
History: 1954 ACS 85, Eff. Sept. 24, 1975; 1979 AC; 1999 MR 1, Eff. Jan. 25, 1999.

PART 4. OPERATION AND MAINTENANCE OF SEWERAGE SYSTEMS

R 299.2959 Emergency measures, reports to department.

Rule 59. (1) If a breakdown of a sewerage system or system component or any emergency situation results in the diversion from or bypass of facilities necessary for the effective collection, transportation, or treatment of the wastes and in the discharge of pollutants in excess of those authorized by a discharge permit issued by the department under the act, then the system owner shall take all necessary measures to correct the breakdown or emergency and eliminate or reduce the discharge of excessive pollutants.
(2) The owner of a sewerage system that discharges, or permits to be discharged, excessive pollutant to the waters of the state as a result of a facility breakdown or emergency shall notify the division promptly. The owner shall supplement the notice by a written report filed with the division within 72 hours outlining the cause, its discovery, and the corrective actions taken to minimize adverse impact to the waters of the state, restore facilities to operative condition, and eliminate the need for future diversion or bypass. This rule does not supersede, rescind, or otherwise alter any other existing or future procedure, rule, or statute pertaining to pollution of the waters of the state.
History: 1954 ACS 85, Eff. Sept. 24, 1975; 1979 AC; 1999 MR 1, Eff. Jan. 25, 1999.

PART 5. HEARINGS

R 299.2971 Opportunity for hearings.

Rule 71. (1) A person who is aggrieved by an action undertaken under the act or these rules may file a sworn petition with the department setting forth the grounds and reasons for his or her complaint or appeal and asking for a hearing before the department. The department shall then fix the time and place for the hearing and notify the petitioner of the time and place by certified mail. At the hearing, the petitioner and any other interested party may appear, present witnesses, and submit evidence. Following the hearing, the

final decision or disposition of the case by the department is conclusive unless reviewed in accordance with and subject to Act No. 306 or the Public Acts of 1969, as amended, being §24.201 et seq. of the Michigan Compiled Laws, in the circuit court for the county of Ingham or for the county in which the person resides.
(2) An appearance at a hearing shall be either in person, by a duly authorized agent, or by counsel.
History: 1954 ACS 85, Eff. Sept. 24, 1975; 1979 AC; 1999 MR 1, Eff. Jan. 25, 1999.

R 299.2972 Hearing commissioner.

Rule 72. (1) The part of a hearing in a contested case in which testimony and evidence are to be taken may be referred to a hearing commissioner. The hearing commissioner shall be designated and authorized by the department to preside at the hearing.
(2) The hearing commissioner shall hear the evidence and prepare a record of the proceedings and a proposal for a decision, including findings of fact and conclusions of law. The hearing commissioner shall file the record of the proceedings and proposal for decision at the department offices as early as possible after completion of the hearing. The hearing commissioner shall transmit a copy of the proposal for decision to the department and shall serve a copy, by certified mail, on all other parties to the proceedings.
History: 1954 ACS 85, Eff. Sept. 24, 1975; 1979 AC; 1999 MR 1, Eff. Jan. 25, 1999.

R 299.2973 Department files and records; use in connection with hearings.

Rule 73. The department shall make its files and records that are applicable to hearings conducted under these rules, except the materials exempted by section 22 of Act No. 306 of the Public Acts of 1969, as amended, being §24.222 of the Michigan Compiled Laws, available for inspection before or at the hearings held by the department or hearing commissioner. The department's files and records may be offered at a hearing as evidence on behalf of the department.
History: 1954 ACS 85, Eff. Sept. 24, 1975; 1979 AC; 1999 MR 1, Eff. Jan. 25, 1999.

R 299.2974 Department hearings.

Rule 74. (1) The department shall provide an opportunity for either party to a contested case to submit arguments, exceptions, or appeals to the department regarding a hearing commissioner's report and proposal for decision. A party shall file arguments, exceptions, and appeals in writing and in a timely manner. To be considered by the department, written briefs or exceptions shall be received at the office of the department in Lansing not later than 2 weeks before the date set by the department for consideration of the hearing commissioner's report. The department may provide an opportunity for a party to present oral argument to the department. The department shall notify all parties if the department decides to permit oral argument.
(2) The department shall prepare and serve a certified copy of a final decision adopted in a contested case by the department. The department shall serve the copy by certified mail on the contesting parties or their attorneys. The copy of a final decision shall contain a resume of the facts and the grounds for decision.
History: 1954 ACS 85, Eff. Sept. 24, 1975; 1979 AC; 1999 MR 1, Eff. Jan. 25, 1999.

NATURAL RESOURCES COMMISSION

DEPARTMENT ORGANIZATION AND GENERAL FUNCTIONS

PART 1. NATURAL RESOURCES COMMISSION

R 299.3003
Source: 1997 AACS.

R 299.3006
Source: 1997 AACS.

PART 2. NATURAL RESOURCES DEPARTMENT

R 299.3006a
Source: 1989 AACS.

R 299.3007—R 299.3039
Source: 1997 AACS.

LANDS DIVISION

METALLIC MINERALS LEASES ON STATE LANDS

R 299.4001
Source: 1984 AACS.

R 299.4002
Source: 1984 AACS.

R 299.4003
Source: 1984 AACS.

R 299.4004
Source: 1984 AACS.

R 299.4005
Source: 1984 AACS.

R 299.4006
Source: 1984 AACS.

R 299.4007
Source: 1984 AACS.

NONMETALLIC MINERALS LEASES ON STATE LANDS

R 299.4021
Source: 1987 AACS.

R 299.4022
Source: 1987 AACS.

R 299.4023
Source: 1987 AACS.

R 299.4024
Source: 1987 AACS.

R 299.4025
Source: 1987 AACS.

R 299.4026
Source: 1987 AACS.

R 299.4027
Source: 1987 AACS.

REAL ESTATE DIVISION

UNDERGROUND GAS STORAGE LEASES ON STATE LANDS

R 299.4051
Source: 1990 AACS.

R 299.4052
Source: 1990 AACS.

R 299.4053
Source: 1990 AACS.

R 299.4054
Source: 1990 AACS.

R 299.4055
Source: 1990 AACS.

DEPARTMENT OF ENVIRONMENTAL QUALITY

WASTE MANAGEMENT DIVISION

SOLID WASTE MANAGEMENT

PART 1. GENERAL PROVISIONS

R 299.4101 Definitions; A, B.

Rule 101. As used in these rules:

(a) "Aashto" means American association of state highway and transportation officials.

(b) "Act" means Act No. 451 of the Public Acts of 1994, as amended, being §324.101 et seq. of the Michigan Compiled Laws, and known as the natural resources and environmental protection act.

(c) "Act 299" means Act No. 299 of the Public Acts of 1980, as amended, being §399.101 et seq. of the Michigan Compiled Laws, and known as the occupational code.

(d) "Act 399" means Act No. 399 of the Public Acts of 1976, as amended, being §325.1001 et seq. of the Michigan Compiled Laws, and known as the safe drinking water act.

(e) "Active life" means the period of operation beginning with the initial receipt of solid waste and ending with the completion of closure activities in accordance with the act and these rules.

(f) "Active portion" means that part of a facility or unit that has received or is receiving wastes and that has not been partially or finally closed in accordance with these rules. The active portion does not include areas that have interim cover which complies with R 299.4429(7) or a constructed unit or portion of a unit that has not received waste.

(g) "Active work area" means the area which is or will be used for the storage, transport, or disposal of solid waste, methane gas, or leachate or in which heavy equipment is or will be used as part of the landfill operation. The active work area includes all of the following:

(i) The active portion.

(ii) Leachate collection and storage systems, exclusive of any of the following:

(A) Forcemains.

(B) Sewers.

(C) Enclosed manholes.

(D) Sewer hookups.

(iii) Gas collection and handling systems, exclusive of any of the following:

(A) Enclosed flares.

(B) Energy recovery facilities.

(C) Pipelines for gas and gas condensate associated with energy recovery facilities.

(iv) Heavy equipment storage and maintenance areas and borrow areas in which heavy equipment is or will be used.

(v) Haul roads used for waste transport, exclusive of the entrance and scales.

(vi) Any on-site processing plant.

(vii) Other operations that involve the storage or disposal of solid waste or leachate. Operations that do not involve the storage or disposal of solid waste or leachate, such as any of the following, are not part of the active work area:
(A) Monitoring wells.
(B) Access roads.
(C) Berms.
(D) Screening.
(E) Stormwater retention ponds.
(F) Light duty maintenance buildings.
(G) Office buildings.
(h) "Agronomic rate" means the addition of wastes to the soil at rates that are recognized to improve soil and crop production.
(i) "Applicant" means an owner or operator who has applied for a construction permit or operating license under part 115 of the act.
(j) "Appropriate organization" means any organization that has demonstrated, or is demonstrating, a substantial interest in solid waste management.
(k) "Aquifer" means a geologic formation, group of formations, or portion of a formation that is capable of yielding significant quantities of groundwater to wells or springs.
(l) "Asbestos waste" means asbestos-containing waste material, as defined in 40 C.F.R §61.141 under the national emission standard for asbestos. The definition of asbestos-containing waste material and related definitions are adopted by reference in R 299.4131.
(m) "ASTM" means the American society for testing and materials.
(n) "Attendant" means the individual who accepts solid waste at the entrance to the solid waste disposal area.
(o) "Average daily flow rate" means the average flow, in gallons per acre per day, removed from a secondary collection system or leak detection during the last 3 months. The average daily flow rate shall be calculated monthly by averaging the flow rate for the current month with those from the preceding 2 months.
(p) "Background" means the concentration or level of a substance which exists in the environment at or regionally proximate to a site and which is not attributable to any release at or regionally proximate to the site.
History: 1979 ACS 9, Eff. Jan. 6, 1982; 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4102 Definitions; C to E.

Rule 102. As used in these rules:
(a) "Cement kiln dust" means particulate material that is collected in air emission control devices which serve portland cement kilns.
(b) "Closed unit" means a landfill unit at which final closure has been completed and certified in accordance with R 299.4317 or R 299.4449.
(c) "Commercial waste" means all types of solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities, but does not include household waste from single residences, hazardous waste, and industrial wastes. Commercial waste includes solid waste from any of the following:
(i) Multiple residences.
(ii) Hotels and motels.
(iii) Bunkhouses.
(iv) Ranger stations.
(v) Crew quarters.
(vi) Campgrounds.
(vii) Picnic grounds.
(viii) Day-use recreation areas.
(d) "Composite liner" means a system that consists of both of the following components:
(i) An upper component that consists of a flexible membrane liner which is installed in direct and uniform contact with the lower compacted soil component. The flexible membrane liner shall have a nominal thickness not less than 30 mils thick. For high-density polyethylene components, the flexible membrane

shall have a nominal thickness not less than 60 mils.
(ii) A lower component that consists of any of the following soil layers:
(A) Compacted soil which is not less than 2 feet thick and which is in compliance with R 299.4913.
(B) A bentonite geocomposite liner that is in compliance with R 299.4914.
(C) An alternative soil layer that is approved under these rules.
(e) "Composting" means the process by which biological decomposition of yard clippings or compostable material is carried out under controlled aerobic conditions and which stabilizes the organic fraction into a material that can easily and safely be stored, handled, and used in an environmentally acceptable manner. The presence of insignificant anaerobic zones within the composting material will not cause the process to be classified as other than composting.
(f) "Composting facility" means a facility where composting of yard clippings or compostable material occurs using composting technology. Composting technology may include physical turning, windrowing, aeration, or other mechanical handling of organic matter.
(g) "Construction and demolition waste" means waste building materials, packaging, and rubble that results from construction, remodeling, repair, and demolition operations on houses, commercial or industrial buildings, and other structures. Construction and demolition waste includes trees and stumps which are more than 4 feet in length and 2 inches in diameter and which are removed from property during construction, maintenance, or repair. Construction and demolition waste does not include any of the following, even if it results from the construction, remodeling, repair, and
demolition of structures:
(i) Asbestos waste.
(ii) Household waste.
(iii) Corrugated container board.
(iv) Appliances.
(v) Drums and containers.
(vi) Any aboveground or underground tank and associated piping, except septic tanks.
(vii) Solid waste that results from any processing technique which renders individual waste components unrecognizable, such as pulverizing or shredding, unless the type and origin of such waste is known not to contain the wastes listed in paragraphs (i) to (vi) of this subdivision.
(h) "Contiguous property" means the same or geographically contiguous property that may be divided by a public or private right-of-way. Pieces of property owned by the same person and connected by a right-of-way which the owner controls and to which the public does not have access are also
contiguous.
(i) "Designated planning agency" means a governmental unit or regional planning agency that is determined, under the act, to be responsible for the preparation of a solid waste management plan.
(j) "Disease vectors" means any rodents, flies, mosquitoes, or other animals, including insects, that are capable of transmitting disease to humans.
(k) "Disposal" means any of the following:
(i) The discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste into or on any land or water so that the solid waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including groundwaters. Disposal includes the placement of solid waste in an open dump, landfill, or waste piles that are not exempt under R 299.4129(2) or R 299.4130.
(ii) The open burning or incineration of solid waste.
(iii) The processing of solid waste.
(iv) The storage or handling of solid waste at a solid waste transfer facility.
(v) The abandonment of solid waste in place of other disposal.
(l) "Disposal area type" means 1 of the following types of disposal areas defined by the act and these rules:
(i) Municipal solid waste landfill.
(ii) Industrial waste landfill.
(iii) Construction and demolition waste landfill.
(iv) Municipal incinerator ash landfill.
(v) Incinerator.
(vi) Processing plant.

(vii) Transfer facility.
(viii) Waste pile.
(m) "Enforceable mechanism" means a legal method whereby the state, a county or municipal government, or a person can take action to guarantee compliance with an approved county solid waste management plan. Enforceable mechanisms include any of the following:
(i) Contracts.
(ii) Intergovernmental agreements.
(iii) Laws.
(iv) Ordinances.
(v) Rules.
(vi) Regulations.
(n) "Environmental contamination" means the release of a hazardous substance in a quantity that is or may become injurious to the environment or to the public health, safety, or welfare.
(o) "Environmental interest group" means a nonprofit citizens' organization that has bylaws which support environmental enhancement or the conservation of Michigan's natural resources and that has an organization which does not directly reflect an economic interest of its members.
(p) "Existing disposal area" means any of the following:
(i) A disposal area that has been issued a construction permit under the act.
(ii) A disposal area that had engineering plans approved by the director before January 11, 1979.
(iii) An industrial waste landfill that was authorized to operate by the director or by court order before October 9, 1993.
(iv) An industrial waste pile that is located at the site of generation on October 9, 1993.
(q) "Existing unit" or "existing landfill unit" means any landfill unit that receives solid waste as of October 9, 1993. Waste placement in existing landfill units shall be consistent with past operating practices or modified practices to ensure good management.
History: 1979 ACS 9, Eff. Jan. 6, 1982; 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4103 Definitions; F to L.

Rule 103. As used in these rules:
(a) "Facility" means a solid waste disposal area as defined in R 299.4106a.
(b) "Floodplain" means the lowland and relatively flat areas which adjoin inland and coastal waters and which are inundated by the 100-year flood. The 100-year flood is a flood that has a 1% or greater chance of recurring in any given year or a flood of a magnitude equaled or exceeded once in 100 years on the average over a significantly long period.
(c) "Floodway" means the channel of a watercourse and those portions of the floodplain adjoining the channel that are reasonably required to transmit the 100-year flood.
(d) "Food processing wastes" means solid wastes that result from processing fruits and vegetables for preservation by freezing, drying, or canning.
(e) "General public" means private citizens who are unlikely to incur a financial gain or loss greater than that of an average homeowner, taxpayer, or consumer as a result of any action taken by a planning committee.
(f) "Geologist" or "qualified groundwater scientist" means a scientist or engineer who has received a baccalaureate or postgraduate degree in the natural sciences or engineering and who has sufficient training and experience in groundwater hydrology and related fields, as demonstrated by state registration, professional certifications, or completion of accredited university programs, to make sound professional judgments regarding groundwater monitoring, contaminant fate and transport, and corrective action.
(g) "Geotextile" means any permeable material that is used with foundation, soil, rock, earth, or any other geotechnical engineering-related material as an integral part of a man-made structure or system.
(h) "Groundwater" means water below the land surface in a zone of saturation.
(i) "Groundwater level" means the surface of the groundwater in the uppermost aquifer in unconfined conditions or the bottom of the confining bed in confined conditions.
(j) "Hazardous substance" means a hazardous substance as defined in Part 201 of the act. (k) "Household waste" means any solid waste that is derived from single households, but does not include any of the

following:
(i) Commercial waste.
(ii) Industrial waste.
(iii) Construction and demolition waste.
(l) "Hydraulic conductivity" or "permeability" means the rate of flow of a liquid under a differential pressure through a material. The hydraulic conductivity of cohesive soils shall be determined using the methods specified in R 299.4920.
(m) "Incinerator" means a device which is specifically designed for the destruction, by burning, of garbage or other combustible refuse or waste material, or both, and in which the products of combustion are emitted into the outer air by passing through a stack or chimney. For purposes of the act and these rules, the following devices are not incinerators:
(i) A thermal treatment unit that is designed solely for the purpose of destroying contaminants in soil.
(ii) Boilers, industrial furnaces, or power plants that burn site-separated material, source-separated material, or industrial waste as fuel.
(iii) A device that is used to incinerate medical waste and other waste from a facility that generates medical waste.
(n) "Industrial waste" means solid waste which is generated by manufacturing or industrial processes or originates from an industrial site and which is not a hazardous waste regulated under part 111 of the act.
(o) "Industrial waste landfill" means a landfill that is used for the disposal of industrial waste which has been characterized for hazard and which has been determined to be nonhazardous under part 111 of the act. An industrial waste landfill may accept industrial waste of different types and from different generators, but shall not accept hazardous waste generated by conditionally exempt small quantity generators, as defined under part 111 of the act.
(p) "Landfill unit" means a discrete area of land which is permitted to receive waste for permanent disposal and which is not a waste pile. For purposes of these rules, the discrete area shall consist of all areas where waste is or will be contiguous, excluding any portion that has been closed under part 111 of the act. Contiguous portions may be separated by berms and may contain different liner or leachate collection designs and separate leachate collection systems, if waste in one portion is or will be in contact with waste in another portion. The boundaries of a landfill unit may be increased by lateral extensions consistent with the construction permit or plans approved by the department. A landfill unit may be any of the following:
(i) A new unit.
(ii) An existing unit.
(iii) A preexisting unit.
(iv) A closed unit.
(q) "Lateral expansion" means a horizontal expansion of the solid waste boundary of a landfill beyond the limit established in a construction permit or engineering plans approved by the solid waste control agency before January 11, 1979.
(r) "Lateral extension" means the extension of an existing unit within the solid waste boundary, but beyond that area constructed and licensed on October 9, 1993.
(s) "Leachate" means liquid which has come in contact with, passed through, or emerged from, solid waste and which contains soluble, suspended, or miscible materials that are removed from the wastes.
(t) "Lead acid battery" means a storage battery in which the electrodes are grids of lead oxides that change in composition during charging and discharging and in which the electrolyte is dilute sulfuric acid.
(u) "Leak detection system" means the secondary collection system of an unmonitorable unit. The purpose of a leak detection system is to detect, collect, and remove leaks of hazardous substances at the earliest practicable time through all areas of the top liner likely to be exposed to waste or leachate during the active life and postclosure period.
(v) "Lift" means a layer of placed material, including a layer of compacted clay in a landfill layer or cap, or a layer of waste in a sanitary landfill.
(w) "Liquid waste" means any waste material that is determined to contain free liquids as defined by method 9095, the paint filter liquids test, as described in the publication entitled "Test Methods for Evaluating Solid Wastes, Physical-Chemical Methods" SW-846, which is adopted by reference in R 299.4133. For purposes of the act and these rules, liquid waste does not include industrial waste sludges that are disposed of at a

location other than a type II landfill.
(x) "Low-hazard industrial waste" means an industrial waste that has a low potential for groundwater contamination when managed in accordance with these rules. Wastes that meet this definition are designated in R 299.4122.
History: 1979 ACS 9, Eff. Jan. 6, 1982; 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4104 Definitions; M to R.

Rule 104. As used in these rules:
(a) "Medical waste" means waste as defined in section 13825 of Act No. 368 of the Public Acts of 1978, as amended, being §333.13825 of the Michigan Compiled Laws.
(b) "Method detection limit" means the minimum concentration of a substance which can be measured and reported with 99% confidence, for which the analyte concentration is greater than zero, and which is determined from analysis of a sample in a given matrix that contains the analyte.
(c) "Monitorable unit" means a landfill unit for which it is possible to determine the unit's impact on groundwater using groundwater monitoring. A unit remains a monitorable unit in any of the following circumstances:
(i) A unit's monitoring system detects hazardous substances above background, but the owner or operator demonstrates that the source of hazardous substances is not a landfill unit at or adjacent to the facility and that other substances that do not exceed background can be used as reliable indicators of leakage from the unit.
(ii) The unit is constructed over or adjacent to an open dump or another unit, but an impact on the groundwater has not been detected from the open dump or another unit.
(iii) The director waives groundwater monitoring for the unit.
(d) "Municipal solid waste landfill" or "type II landfill" means a landfill which receives household waste or municipal solid waste incinerator ash, and which is not a land application unit, surface impoundment, injection well, or waste pile. A municipal solid waste landfill also may receive other types of solid waste, such as any of the following:
(i) Construction and demolition waste.
(ii) Sewage sludge.
(iii) Commercial waste.
(iv) Nonhazardous sludge.
(v) Hazardous waste from conditionally exempt small quantity generators. (vi) Industrial waste. Such a landfill may be publicly or privately owned.
(e) "New disposal area" means a disposal area that requires a construction permit under the act and includes all of the following:
(i) A disposal area, other than an existing disposal area, that is proposed for construction.
(ii) For landfills, a lateral expansion, vertical expansion, or other expansion that results in an increase in the design capacity of an existing disposal area.
(iii) For disposal areas other than landfills, an enlargement in capacity beyond that indicated in the construction permit or in engineering plans approved before January 11, 1979.
(iv) For all disposal areas, an alteration of an existing disposal area to a different disposal area type than had been specified in the previous construction permit application or in engineering plans that were approved by the director or his or her designee before January 11, 1979.
(f) "Natural soil barrier" means any combination of natural or recompacted soil which is not less than 10 feet thick and which consists predominantly of soils that have a unified soil classification of SC, ML, CL, CL/ML, or CH. A natural soil barrier may contain soil types other than SC, ML, CL, CL/ML, or CH if the anamalous soils are not hydraulically connected to the uppermost aquifer, do not extend beyond the solid waste boundary, and are not considered as part of the thickness determination.
(g) "New unit" means any landfill unit that has not received solid waste before October 9, 1993.
(h) "Nuisance" means conditions that unreasonably interfere with the enjoyment of life and property, such as noise, blowing debris, odors, vectors, or pest animals.
(i) "Open burning" means either of the following:
(i) A fire from which the products of combustion are emitted directly into the outer air without passing

through a stack or chimney.
(ii) The combustion of solid waste without controlling combustion air to maintain adequate temperature for efficient combustion, containment of the combustion reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion, and control of the emission of the combustion products.
(j) "Open dump" means a disposal area which is not licensed under the act and which is not otherwise authorized by the director.
(k) "Operator" means the person who is in control of, or responsible for, the operation of a facility or part of a facility.
(l) "Owner" means the person who owns a facility or part of a facility.
(m) "Paper mill waste" means all of the following waste that is generated by pulp or paper mills:
(i) Wastewater treatment sludge.
(ii) Bark and wood residue.
(iii) Scrap paper.
(iv) Lime mud and grit.
(v) Rejects from screens, cleaners, and pulp mills.
(vi) Green liquor dregs.
(vii) Other wastes that the department determines have similar characteristics.
(n) "Pile" means any noncontainerized accumulation of solid waste that is used for treatment or storage.
(o) "Planning committee" means a committee that is established under the act to aid in the preparation of a county solid waste management plan.
(p) "Practical quantitation limit" means the lowest level that can be reliably achieved within specified limits of precision and accuracy under routine laboratory conditions and based on all of the following:
(i) Quantitation.
(ii) Precision and accuracy.
(iii) Normal operation of the laboratory.
(iv) The practical need in a compliance monitoring program to have a sufficient number of laboratories available to conduct the analyses.
(q) "Preexisting unit" means any landfill unit which is or was licensed under the act, but which does not receive waste after October 9, 1993. (r) "Processing" means changing the physical or chemical character of solid waste, by separation, treatment, or other methods, so as to make the waste or a constituent of the waste disposable or usable as a resource. The following activities do not constitute processing:
(i) Compaction.
(ii) Incineration, thermal treatment of contaminated soil, or burning waste as fuel, if these activities are permitted under part 55 of the act.
(iii) Metal processing by scrap dealers.
(iv) Industrial operations that use, reuse, or reclaim industrial waste, source-separated material, or site-separated material to make a raw material or new product.
(v) Separation of recyclable materials from small quantities of solid waste. A small quantity is not more than 2 tons per day or 60 tons per month.
(vi) Separation of recyclable material at a landfill.
(vii) The separation of small quantities of solid waste from source- separated material. The volume of solid waste removed shall be considered a small quantity if it is less than 10% of the total volume of material received.
(viii) Composting of yard clippings, if the requirements of R299.4120 are met.
(ix) Composting of material other than yard clippings which is approved under R 299.4121 and which does not involve more than 500 cubic yards at any time. Composting facilities exceeding 500 cubic yards shall be licensed as processing plants.
(x) Shredding or chipping of trees, stumps, and brush.
(xi) Treatment of contaminated soil or other waste generated from the remediation of environmental contamination at the site of environmental contamination before disposal at a facility licensed under this part.
(xii) The addition of small quantities of sorbent material to individual loads of waste within the active portion of a type II landfill.

(s) "Public meeting" means a regularly scheduled meeting of the designated planning agency.
(t) "Regulated hazardous waste" means a hazardous waste, as defined in R 299.9203, that is not excluded from regulation under R 299.9204 or that was not generated by a conditionally exempt small quantity generator as defined in R 299.9205.
(u) "Responsible individual" means an individual who is familiar with the requirements of the act and these rules as they relate to the daily operation and maintenance of the solid waste disposal area where he or she is employed and who has the capability and the authority to make decisions regarding the daily operation and maintenance of that disposal area which are necessary to comply with the act and these rules.
(v) "Runoff" means any rainwater, leachate, or other liquid that drains over land from any part of a facility.
(w) "Run-on" means any rainwater, leachate, or other liquid that drains over land onto any part of a facility.
History: 1979 ACS 9, Eff. Jan. 6, 1982; 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Apr. 12, 1999.

R 299.4105 Definitions; S to W.

Rule 105. As used in these rules:
(a) "Sanitary landfill" means a type of disposal area consisting of 1 or more landfill units and the active work areas associated with these units. Sanitary landfills shall be classified as 1 of the following types of landfills:
(i) A type II landfill, which is a municipal solid waste landfill and includes a municipal solid waste incinerator ash landfill.
(ii) A type III landfill, which is any landfill that is not a municipal solid waste landfill or hazardous waste landfill and includes all of the following:
(A) Construction and demolition waste landfills.
(B) Industrial waste landfills.
(C) Landfills which accept waste other than household waste, municipal solid waste incinerator ash, or hazardous waste from conditionally exempt small quantity generators.
(b) "Saturated zone" or "zone of saturation" means that part of the earth's crust in which all voids are filled with water.
(c) "Scavenging" means the uncontrolled picking of materials from solid waste.
(d) "Secondary collection system" means the liquid collection and removal system between the liners of a multiple liner system in a landfill cell. In the case of an unmonitorable unit, the secondary collection system is also a leak detection system.
(e) "Sludge" means any solid or semisolid, waste that is generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility. "Sludge" also includes any other semisolid industrial waste.
(f) "Specific site" means an area within a municipality or municipalities.
(g) "Sole-source aquifer" means those aquifers that are designated under section 1424(e) of the federal safe drinking water act of 1974, Public Law 93-523, 42 U.S.C. §300h et seq.
(h) "Solid waste boundary" means the outermost perimeter of the solid waste (projected in the horizontal plane) as it would exist at completion of the sanitary landfill and as authorized in a construction permit or in engineering plans approved for the landfill unit by the solid waste control agency before January 11, 1979.
(i) "Solid waste control agency" means the certified health department that has jurisdiction in the county or, in the absence of a certified health department, the department.
(j) "Solid waste management industry" means any of the following:
(i) An individual or organization that derives a substantial portion of its income from the collection, transportation, or disposal of solid waste.
(ii) A manufacturing industry that collects, transports, and disposes of solid waste that is generated incidental to its operation.
(iii) A unit of government or subdivision thereof that collects, transports, or disposes of solid waste within its political boundary when 4 members, as defined in paragraphs (i) and (ii) of this subdivision, cannot be found.
(k) "Solid waste management system" means a set of procedures that provides for the collection, transportation, separation, recycling, recovery, and disposal of solid waste.
(l) "Speculative accumulation" means the storage of material intended for recycling or reuse at a site for a period of over 1 year, or for low-hazard industrial waste accumulated at the site of generation, a period of 3

years. A material is not accumulated speculatively, however, if the person who accumulates it can show that the material can be recycled into marketable raw materials or new products and that, during the period, the amount of material that is recycled or that is transferred to a different site for recycling equals not less than 75%, by weight or volume, of the amount of material that was accumulated at the beginning of the period.

(m) "Standard industrial classification number" means the number assigned to an industry by the United States office of management and budget and contained in the standard industrial classification manual. The manual is adopted by reference in R 299.4126.

(n) "Sump" means any lined pit, manhole, or reservoir that serves to collect liquids drained from a leachate collection and removal system, secondary collection system, or leak detection system.

(o) "Surface water" means a body of water that has its top surface exposed to the atmosphere and includes a flowing body, a pond, or a lake, except for drainageways and ponds that are used solely for wastewater conveyance, treatment, or control.

(p) "Synthetic liner" or "flexible membrane liner" means very low- permeability synthetic membrane liners or barriers that are used with any geotechnical engineering-related material as an integral part of a man-made project, structure, or system.

(q) "Total inorganic nitrogen" means the sum of ammonia-nitrogen, nitrate- nitrogen, and nitrite-nitrogen.

(r) "TSCA" means the toxic substances control act, 15 U.S.C. §2601 et seq.

(s) "Unmonitorable unit" means a landfill unit that is not a monitorable unit.

(t) "Uppermost aquifer" means the geologic formation which is nearest to the natural ground surface and which is an aquifer and includes lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary.

(u) "Vertical expansion" means the landfilling of solid waste above the elevations indicated in the construction permit or in engineering plans approved for the landfill unit by the solid waste control agency before January 11, 1979. Increases in elevation approved by the director are not new disposal areas if the volume of waste to be disposed of is not expanded beyond the volume previously approved and if the expansion is in compliance with the act and these rules.

(v) "Wetland" means the areas defined as wetlands in part 303 of the act.

History: 1979 ACS 9, Eff. Jan. 6, 1982; 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4106

Source: 1982 AACS.

R 299.4106a Definitions of terms used in act.

Rule 106a. As used in the act:

(a) "Approved hydrogeologic monitoring program" means a monitoring program which is approved by the director and which is in compliance under R 299.4905.

(b) "Compost" means organic matter from yard clippings or compostable materials which have undergone biological decomposition by composting, which have been stabilized to a degree that it is potentially beneficial to plant growth without creating a nuisance, and which are used or sold for use as a soil amendment, artificial topsoil, or growing medium amendment or for other similar uses.

(c) "Conversion" means the process by which any of the following is recycled into marketable raw materials or new products:

(i) Glass.

(ii) Metal.

(iii) Wood.

(iv) Paper products.

(v) Plastics.

(vi) Rubber.

(vii) Textiles.

(viii) Garbage.

(ix) Yard clippings.

(x) Other materials approved by the department. Conversion includes the composting of yard clippings and compostable material in accordance with these rules, but does not include the speculative accumulation of

the materials specified in this subdivision.
(d) "Establish a disposal area" as used in the act, means to create a new disposal area, as defined in these rules.
(e) "Modification" means a significant change in the approved plans for a landfill that does not constitute an upgrading, including any of the following:
(i) An increase in the final elevation of a landfill unit that does not result in an increase in design capacity or a change in the solid waste boundary. An increase in the final elevation of a landfill which is necessary to comply with changes in the act or these rules, but which does not result in a vertical expansion, is not a modification.
(ii) A reduction in the protection provided by a liner or cover system.
(iii) Other significant changes in design. The substitution of one equivalent type of material for another in a landfill design shall not be considered significant, if the change is approved by the department.
(f) "New products" means marketable consumer goods produced from site- separated or source-separated material. New products shall not be used in a manner constituting disposal, unless the new products are any of the following:
(i) Inert materials.
(ii) Compost produced from yard clippings.
(iii) Compostable material.
(iv) Material applied to the land for agricultural or silvicultural use in a manner consistent with the act and these rules.
(g) "Operating landfill," as used in section 11525a of the act, means a landfill which is either open or closed, but which has not completed the postclosure period specified in the act.
(h) "Raw materials" means materials which are returned for reuse to the original industry which produced the material, which are sold for use in an industrial process to make new products, or which are used as fuel in a unit permitted to burn the material as fuel under part 55 of the act.
(i) "Rubber" means crumb rubber or ground tires that does not contain steel and fiber.
(j) "Scrap" means metal that is a recyclable material. Used appliances shall not be considered scrap unless capacitors or other parts that may contain polychlorinated biphenyls have been removed and disposed of in compliance with the act and TSCA, if applicable.
(k) "Solid waste disposal area" means the disposal area that is approved in a construction permit or engineering plans approved by the solid waste control agency before January 11, 1979, and all contiguous property that is owned by the same person which has been approved for the disposal of solid waste in other construction permits.
(l) "Upgrading," as used in section 11510 of the act, means any of the following:
(i) The installation of thicker or additional liners in the bottom or final cover of a landfill.
(ii) The installation of gas recovery systems at a landfill.
(iii) The installation of equipment to separate recyclable material at a landfill.
(iv) A restriction in the type of waste that is received at a landfill beyond that previously approved.
(v) Other improvements to a disposal area that are approved by the director.
(m) "Wood" means any of the following:
(i) Trees.
(ii) Branches.
(iii) Bark.
(iv) Wood pallets.
(v) Lumber or other wood product which has not been treated, painted, mixed with glues and fillers, or otherwise contaminated during manufacture or use.
(vi) Wood chips or sawdust from the materials listed in this subdivision.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4107 Construction permit; applicability; permit modification; incomplete application.

Rule 107. (1) A person shall not establish a new disposal area without receiving a construction permit from the director, except as provided in the act and these rules.
(2) A person who applies for a modification of a construction permit shall submit an application on a form

provided by the department. The application shall include both revised engineering plans for the effected changes that comply with these rules and the fee required by the act. An application for a modification is not required to contain other information required for a new disposal area by the act and these rules. An application for a construction permit modification shall be reviewed in accordance with sections 11510 and 11511 of the act.

(3) A person shall not construct a disposal area contrary to a construction permit or plans approved before January 11, 1979, unless the change is approved by the director. Changes to approved plans that do not constitute a new disposal area or a modification may be approved by the director or his or her designee without following the process specified by section 11510 and section 11511 of the act.

(4) The statutory review periods set forth in sections 11511 and 11516 of the act shall not commence until the director, his or her designated representative, or a certified health department determines that an application is administratively complete in that it includes all submittals that are specified in the act and these rules. The determination shall be made and acknowledged within 15 working days of receipt of an application by the certified health department or the director. An application that is determined to be administratively incomplete shall be returned to the applicant, without prejudice, specifically listing those items that are required to make the application complete, together with all filing fees, within 15 working days of receipt by the certified health department or the director.

(5) A determination by a certified health department, the director, or his or her designee that an application is complete shall not be construed as a determination that the application is in compliance with all of the requirements of the act and these rules.

History: 1979 ACS 9, Eff. Jan. 6, 1982; 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4108 Variances for type III landfills.

Rule 108. (1) A request for a variance for a type III landfill that is a new disposal area shall be in writing, shall accompany the application for a construction permit, and shall include justification for the variance.

(2) A request for a variance for a type III landfill that is an existing disposal area shall be in writing, shall accompany the application for an operating license, and shall include the justification for the variance.

(3) The notice that is published under the act shall include a listing and description of the variances requested by the applicant.

(4) Variances to the following rules that are applicable to type III landfills shall be granted in writing by the solid waste control agency upon a demonstration by the applicant that the requirement in the rules is not feasible and prudent and that either the substitute requirement will provide an equivalent degree of protection for the public health and environment or that the public health, welfare, and environment will not be additionally impaired:

(a) R 299.4304(4), time required to reach final grades.

(b) R 299.4304(5), final cover slope.

(c) R 299.4305(2)(b), horizontal isolation.

(d) R 299.4306(1) for an alternative boundary of compliance in place of the solid waste boundary if the criteria for classification of solid waste disposal facilities and practices, 40 C.F.R. part 257.3-4, are met. The provisions of 40 C.F.R. part 257.3-4 are adopted by reference in R 299.4134.

(e) R 299.4315(3), access.

(f) R 299.4315(4), waste placement supervision.

(g) R 299.4315(5), control of dust and blowing paper.

(h) R 299.4316(1), daily and interim cover.

(i) R 299.4316(2), intermediate cover.

(j) R 299.4317(1), closure time period.

(k) The specifications of R 299.4306, R 299.4307, or R 299.4310(1) and

(2) under exceptional circumstances considering only the following factors:

(i) Unique hydrogeological situations.

(ii) The unusual nature of a specific waste with limited potential for environmental damage.

(iii) An opportunity to utilize a waste for a useful purpose.

(iv) The volume of waste to be disposed of.

(v) A demonstration by the applicant that granting the waiver will not result in impairment of the current

uses of affected natural resources and that use of the selected disposal area is as reasonable and prudent as the utilization of an alternative disposal area.
(vi) Public comments on the proposed variance. Before granting a variance under this rule, the director shall do all of the following:
(A) Consult with the certified health department.
(B) Discuss the requested variance at the public hearing if a hearing is held under section 11510 of the act.
(C) Notify adjacent property owners of the proposed variance.
History: 1979 ACS 9, Eff. Jan. 6, 1982; 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4109
Source: 1982 AACS.

R 299.4110 "Other wastes regulated by statute" defined.
Rule 110. As provided by section 11506 of the act, the following wastes are "other wastes regulated by statute" and are exempt from regulation as solid wastes under part 115 of the act:
(a) Hazardous waste regulated under part 111 of the act.
(b) Waste which is contaminated by polychlorinated biphenyls and which is disposed of in a facility that is licensed under TSCA.
(c) Drilling muds, land clearing debris, and other wastes associated with the exploration, development, or production of crude oil, natural gas, or geothermal energy, when managed within the same field where it was generated and where such management is authorized by the supervisor of wells in a permit or order issued under part 615 of the act.
(d) Dredgings that are approved by the department for disposal under either of the following provisions:
(i) By issuance of a permit issued under part 301 of the act authorizing the disposal, if dredgings of more than 300 cubic yards that are removed from either an area of concern identified by the international joint commission or an area adjacent to or immediately downstream of a facility regulated under part 201 of the act are evaluated for contamination and, if contaminated, are managed in a manner consistent with part 201 of the act. To evaluate dredgings for contamination, a person shall do either of the following: (A) Analyze for PCB's, polynuclear aromatic hydrocarbons, and the metals identified in table 101. Dredgings shall not be considered contaminated if they meet the criteria for inert material specified in R 299.4115.
(B) Instead of analyses, demonstrate that the particle sizes of the dredgings are such that 95% or more of the particles will be retained on a No. 200 sieve.
(ii) by department approval of a finding of no significant impact prepared under the national environmental policy act of 1969, §42 U.S.C. 4321 et seq.
(e) Tires that are managed in compliance with part 169 of the act.
(f) Animals that are composted or disposed of in accordance with Act No. 239 of the Public Acts of 1982, being §287.651 et seq. of the Michigan Compiled Laws.
(g) Earth overburden, rock, lean ore, and iron ore tailings that are regulated under part 631 of the act.
(h) Septage waste which is regulated under part 117 of the act and which is disposed of in a land application unit.
(i) The following waste that is regulated under part 31 of the act:
(i) Liquid waste that is disposed of in accordance with a permit or order issued under part 31 of the act, except for sludges or residues that are generated from the disposal.
Sludge that is disposed of in a land application unit under a residuals management plan which is approved under part 31 of the act.
(j) The following waste, at the point that it is regulated under part 55 of the act:
(i) Wood and stumps that are burned in accordance with part 55 and part 515 of the act.
(ii) Medical waste that is burned in a unit which is permitted or licensed to burn the waste under part 55 of the act. Medical waste that is disposed of at a location other than at a unit as specified in this paragraph is not exempt from part 115 of the act and these rules.
(iii) Contaminated soil that is treated in a thermal treatment unit which is permitted under part 55 of the act, if the soil is contained at the treatment site so that the operation does not expose the soil to the atmosphere and the elements. Residues from the treatment shall be disposed of under a plan that is

approved by the department.
(iv) Chipped tires, creosote railroad ties, and industrial waste that is burned as fuel in a boiler, industrial furnace, or power plant which is permitted under part 55 of the act, to burn the waste as fuel.
(k) Contaminated soil or other waste that is generated from the remediation of environmental contamination, and that is allowed to be disposed of at the site of environmental contamination or at other property which is owned by the responsible party under a remedial action plan that is approved under part 201 or part 213 of the act.
(l) Solid waste in open dumps which did not receive waste after October 9, 1991, and which receive final cover pursuant to either of the following provisions:
(i) A remedial action plan that is approved under part 201 of the act.
(ii) A grant under part 191 or part 195 of the act.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4111 Nondetrimental material managed for agricultural or silvicultural use; conditions for exemption as solid waste.

Rule 111. (1) A person shall not apply sludges, ashes, or other solid waste to the land without having obtained a license under the act, unless the director has approved a plan for managing the wastes as nondetrimental materials that are appropriate for agricultural or silvicultural use or has otherwise authorized the application under part 31 of the act.
(2) A plan for managing nondetrimental materials that are appropriate for agricultural or silvicultural use shall contain all of the following information:
(a) Analytical data that is required under R 299.4118 to characterize the material.
(b) Additional characteristics of the material applicable to its proposed use. Wastes that are proposed for use as fertilizer shall be characterized by representative sampling and analysis for all of the following using analytical procedures that are specified by the EPA publication entitled "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods", SW-846, 3rd edition, which is adopted by reference in R 299.4133, or the document entitled "Standard Methods for the Examination of Water and Wastewater," 19th edition, which is adopted by reference in R 299.4139:
(i) Percent dry solids.
(ii) Total kjeldahl nitrogen.
(iii) Total ammonia nitrogen.
(iv) Nitrate nitrogen.
(v) Total phosphorus.
(vi) Specific gravity.
(vii) Chemical oxygen demand.
(viii) Five-day biological oxygen demand.
(ix) pH.
(c) All of the following information to characterize the soil types at the application area or areas:
(i) Soil type.
(ii) Soil pH.
(iii) Lime index.
(iv) Cation exchange capacity.
(v) Proposed nutrient application rates.
(d) The name and address and written approval of the titleholder of the land or lands.
(e) The proposed application rate.
(f) The proposed method of application, including the equipment to be used.
(g) The method and frequency of soil tilling to be employed.
(h) The type of vegetation to be maintained, and how it will be managed.
(3) The director shall approve a plan that is submitted under this rule if he or she finds that application of the material to the land will serve as an effective fertilizer or soil conditioner or serve another beneficial use and will be applied to the soil at an agronomic rate, but will not violate part 31 or part 55 of the act or any other state law and will not create a nuisance.
(4) The director shall approve or deny a plan that is submitted under this rule within 120 days of receiving a

plan that contains the information specified in subrule (2) of this rule. The director shall impose any conditions on a plan that are necessary to protect human health and the environment.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4112
Source: 1993 AACS.

R 299.4113 Coal ash used to reclaim, develop, or enhance land; conditions for approval.

Rule 113. (1) A person who seeks to use ash from the combustion of coal to reclaim, develop, or otherwise enhance land shall prepare a plan for such use for review and approval by the director. The plan shall describe how the proposed use will reclaim, develop, or enhance the land and shall do 1 of the following:
(a) Demonstrate that the ash is inert under R 299.4114 to R 299.4117.
(b) Demonstrate that site conditions are sufficient to prevent the migration of ash constituents in a manner that will violate the water quality performance standard of R 299.4306.
(c) Demonstrate that the plan is otherwise protective of human health and the environment.
(2) A plan that proposes the use of ash which meets the leaching criteria of R 299.4116 shall include all of the following information:
(a) Information that is required under R 299.4116.
(b) A demonstration that the ash will not adversely affect human health or the environment from all exposure routes other than groundwater.
(c) Topographic maps of the area to be reclaimed, developed, or otherwise enhanced. The maps shall be in compliance with R 299.4909. The area shall be in compliance with the location standards of R 299.4305.
(d) A closure plan that contains the information specified in R 299.4446.
(e) Authorization of the titleholder of the land approving the land use.
(f) Restrictions on postclosure use, including a restrictive covenant that is in compliance with the act.
(3) A plan that proposes the use of ash which does not meet the leaching criteria of R 299.4116 shall include all of the following:
(a) A hydrogeological report which is in compliance with R 299.4904 and which does any of the following:
(i) Verifies the presence of a natural soil barrier that is in compliance with R 299.4912.
(ii) Demonstrates that hazardous substances will be attenuated before reaching the saturated zone.
(iii) Demonstrates that the water quality performance standard of R 299.4306 will otherwise be met.
(b) Engineering plans and an engineering report that are prepared and sealed by a registered professional engineer.
(c) The information specified by subrule (2) of this rule.
(4) The director shall approve a plan for using ash to reclaim, develop, or enhance land if he or she determines that reclamation in accordance with the plan will satisfy all of the following provisions:
(a) The requirements of the act and this rule.
(b) Other state law.
(c) Will not create a nuisance.
(5) The director shall approve or deny a plan submitted under this rule within 120 days of receiving a plan containing the information specified in subrule (2) or (3) of this rule. The director shall impose any conditions on a plan that are necessary to protect human health and the environment.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4114 Inert materials.

Rule 114. (1) The use of inert material on land does not require a construction permit or operating license under the act.
(2) Except as specified in subrule (3) of this rule, all of the following are inert materials:
(a) Rock.
(b) Trees, stumps, and other land clearing debris that is buried on the site of generation, or other location approved by the landowner, if all of the following conditions are met:
(i) The burial is not in a floodplain or wetland.
(ii) The debris is buried not less than 4 feet above the level of the groundwater.

(iii) The burial does not violate other federal, state, or local law.
(iv) The burial does not create a nuisance.
(v) The amount of debris is not more than 1 acre in size and is not more than 20 feet in depth.
(c) Excavated soil, except as provided in subrule (3) of this rule.
(d) Construction brick, masonry, pavement, and broken concrete that is reused for fill, riprap, slope stabilization, or other construction if all of the following conditions are met:
(i) The use does not violate part 301 or part 303 of the act or subrule (3) of this rule.
(ii) The material does not include exposed reinforcing bars or other construction and demolition waste.
(iii) The owner or operator of a site that is intended to receive more than 1,000 cubic yards of construction brick, masonry, pavement and broken concrete notifies the director or his or her designee by submitting a form that is provided by the director.
(e) Chipped tires used in the construction and operation of a sanitary landfill, if approved by the department.
(f) Portland cement clinker produced by a cement kiln using solid waste as a fuel or feed stock, but not including cement kiln dust that is generated as a waste in the process.
(g) Low-hazard industrial waste that, based on representative sampling, is in compliance with the inertness criteria contained in R 299.4115, if the generator notifies the director of the reuse, on a form provided by the department, and maintains characterization records for not less than 3 years.
(h) Low-hazard industrial waste which is used as aggregate, road, or building material and which in ultimate use will be stabilized or bonded by cement, limes, or asphalt, if the waste is not stored in a manner constituting speculative accumulation before use.
(i) Other materials that are designated as inert for uses approved by the director based on either of the following:
(ii) A petition that is submitted under R 299.4118.
(iii) An approval by the director before the effective date of these rules.
(3) Materials that are specified in subrule (2)(c) and (d)) of this rule are not inert materials if they are contaminated by hazardous substances in concentrations sufficient to cause environmental contamination. To determine whether a material is contaminated, a person may do either of the following:
(a) Test the material in accordance with the test methods listed in R 299.4118. A material shall not be considered contaminated if the concentration of hazardous substances in the material is less than the concentrations listed for inert materials in R 299.4115.
(b) Apply knowledge of the material. Materials that are specified in subrule (2)(c) and (d) of this rule are not contaminated unless they have been contaminated during use, such as by chemical spills, application of paint or coatings, or by changes in the material during use.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4115
Source: 1993 AACS.

R 299.4116
Source: 1993 AACS.

R 299.4117
Source: 1993 AACS.

R 299.4118 Petitions to classify wastes.

Rule 118. (1) A person may petition the director to designate a solid waste as an inert material, compostable material, or, low-hazard industrial waste.
(2) A petition to classify a waste shall include all of the following information on a form provided by the department:
(a) The name and site address of the facility that generates the material.
(b) The facility contact person and phone number.
(c) A general description of the material for which the petition is submitted, including all of the following:
(i) A description of the process that is used to produce the material, including a schematic diagram of the process and a list of raw materials that are used in the process.

(ii) The maximum and average amounts of material generated monthly and annually.
(iii) Documentation that the material is not a hazardous waste, as defined in part 111 of the act and the administrative rules promulgated under part 111 of the act.
(iv) A description of the current disposal location for the material.
(v) The proposed use or disposal method for the material.
(d) For uses where the waste may present an inhalation or direct contact hazard, a description of the total concentration of each of the following chemical constituents that may be present in the material in light of the process used:
(i) Any hazardous constituents listed in 40 C.F.R. part 258, appendix II, that may be present in the material, in light of the process used. The list contained in 40 C.F.R. part 258, appendix II, is adopted by reference in R 299.4134.
(ii) Any constituents which are not listed in 40 C.F.R. part 258, appendix II, but which have had a primary or secondary drinking water standard established under 40 C.F.R. parts 141 and 143, including all of the following:
(A) Total chloride.
(B) Total nitrogen.
(C) Total iron.
(D) Total manganese.
(E) Total sulfates.
(iii) The following constituents, based on health advisories issued by the United States environmental protection agency for these compounds:
(A) Total molybdenum.
(B) Total sodium.
(iv) Any indicator parameters that may be useful in establishing a groundwater monitoring program for the waste.
(e) For constituents that are present in the material at potential levels of concern, a determination of the leaching potential of the constituents using any of the following:
(i) The toxicity characteristic leaching procedure, being EPA test method 1311 contained in the EPA document entitled "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods," SW-846 3rd edition, which is adopted by reference in R 299.4133.
(ii) The synthetic precipitation leaching procedure, being EPA test method 1312 contained in the EPA document entitled "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods," SW-846 3rd edition, which is adopted by reference in R 299.4133.
(iii) Other test methods which are approved by the department and which more accurately simulate conditions at the site.
(f) A description of the techniques that are used to sample and analyze the waste, including all of the following:
(i) The name, address, and contact person of the facility that sampled and analyzed the material.
(ii) A description of the sampling plan used to ensure that the samples were representative of the material. The description shall include sample locations, the number of samples taken, and sampling methods used. Sampling plans shall be consistent with those contained in the EPA document entitled "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods," SW-846 3rd edition, which is adopted by reference in R 299.4133.
(iii) A description of the sample preservation method and the type of container used to collect samples.
(iv) A description of the specific analytical methods used for each constituent and the method detection limits achieved. Analytical methods shall be appropriate methods contained in the EPA document entitled "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods," SW-846 3rd edition, which is adopted by reference in R 299.4133, or other methods approved by the director and shall achieve practical quantitation limits approved by the director or his or her designee.
(v) Chain of custody procedures.
(3) After receiving a petition under this rule, the director shall do both of the following:
(a) Within 60 days of receiving the petition, determine whether the petition contains all of the information required by this rule and request any additional information that is necessary to evaluate the petition.

(b) Within 180 days of receiving all of the information necessary to evaluate the petition, either approve the petition with any conditions that are necessary to protect human health and the environment or deny the petition.
(4) Material that is classified by the director based on a petition under this rule shall be retested to confirm the classification not less than annually using procedures specified in this rule. The test results shall be submitted to the director. The director shall specify a more frequent schedule for testing if the characteristics of the material may vary significantly.
(5) If a hazardous substance is reported to be present in a sample at concentrations above the waste classification criteria of these rules, a person may demonstrate that the data are not statistically significant, using 1 of the methods specified in R 299.4908.
(6) The EPA document entitled "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods," SW-846 3rd edition, which is adopted by reference in R 299.4133.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4119 The approval of site and source-separated materials not listed in the act.

Rule 119. (1) Except as specified in subrule (2) of this rule, the director shall approve materials that are not specified in the act as site or source separated material if the person who seeks the exemption demonstrates that the materials will not violate subrule (2) of this rule and that they can be converted into raw materials or new products by any of the following means:
(a) By being returned to the original process from which they were generated.
(b) By being used or reused as ingredients in an industrial process to make a product.
(c) By being used or reused as effective substitutes for commercial products.
(2) For purposes of the act and these rules, waste materials shall not be considered site or source separated for the purpose of conversion into raw materials or new products if the materials are any of the following:
(a) Stored in a manner constituting speculative accumulation.
(b) Mixed with other material so that the waste materials cannot be converted into raw materials or new products without processing to remove the other material.
(c) Applied to or placed on the land, or used to produce products that are placed on the land, in a manner that constitutes disposal, unless the materials are any of the following:
(i) Yard clippings that are separated for conversion into compost in accordance with R 299.4120.
(ii) Waste other than yard clippings approved for use as compost under R 299.4121.
(iii) Nondetrimental materials that are applied to the land in accordance with a plan approved under R 299.4111.
(iv) Inert materials that are specified in R 299.4114 to R 299.4117.
(v) Other materials approved pursuant to this rule.
(d) Injurious to human health or the environment or materials which will create a nuisance during storage or use.
(3) All of the following shall be considered source-separated material if the criteria of subrule (2) of this rule are met:
(a) Utility poles or pole segments reused as poles, posts, or similar uses.
(b) Railroad ties reused in landscaping, embankments, or similar uses.
(c) Any of the following, when used to stabilize, solidify, or otherwise treat waste at a site of environmental contamination or at a facility licensed under part 111 or part 115 of the act:
(i) Cement kiln dust.
(ii) Lime kiln dust.
(iii) Water softening limes.
(iv) Sugar beet limes.
(v) Coal flyash.
(vi) Wood ash.
(vii) Other material approved by the director.
History: 1993 MR 9, Eff. Oct. 8, 1993;1999 MR 3, Eff. Apr. 12, 1999.

R 299.4120 Yard clippings separated for use as compost.

Rule 120. (1) Yard clippings shall be considered to be site or source- separated for the purpose of conversion into compost if all of the following provisions apply to the yard clippings:
(a) The yard clippings are separated from other solid waste, and maintained separately until used as compost.
(b) The yard clippings are composted at the site of generation or transported to an off-site composting facility where conversion to compost occurs, except as specified in subrule (2) of this rule.
(c) The yard clippings are not stored in a manner constituting, speculative accumulation, as specified in subrules (3) and (4) of this rule.
(d) The yard clippings are managed as a product or resource in a manner that does not create a nuisance.
(2) Yard clippings may be composted at a location other than a composting facility in the following circumstances:
(a) The disposal occurs at the site of generation.
(b) The disposal occurs as a part of normal farming operations. For purposes of this rule, the use of yard clippings by persons on their own property for their own use on that property as part of agricultural, horticultural, or silvacultural operations is considered to be normal farming operations.
(c) The disposal occurs at a location that contains limited volumes of yard clippings and where conversion to compost may occur under natural decay without creating a nuisance.
(3) Yard clippings accumulated at a transfer facility or staging area that is not designed for composting shall not be stored in a manner that constitutes speculative accumulation. The owner or operator of the transfer facility or staging area is responsible for maintaining the records necessary to demonstrate that speculative accumulation is not occurring.
(4) Yard clippings at a composting facility are subject to the definition of speculative accumulation starting in the third year after the yard clippings are received. The owner or operator of the composting facility is responsible for maintaining the records necessary to demonstrate that speculative accumulation of compost is not occurring.
(5) Deleterious material removed from yard clippings or from compost produced from yard clippings may be landfilled as solid waste and is not subject to the landfill prohibition in section 11521 of the act.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4121
Source: 1993 AACS.

R 299.4122
Source: 1993 AACS.

R 299.4123
Source: 1993 AACS.

R 299.4124
Source: 1993 AACS.

R 299.4125
Source: 1993 AACS.

R 299.4126
Source: 1993 AACS.

R 299.4127
Source: 1993 AACS.

R 299.4128 Open dumping and open burning prohibited.
Rule 128. (1) A person shall not dispose of solid waste in an open dump, except as provided in the act.
(2) Solid waste from an individual's own household or from the planting of privately owned farmland shall be considered a hazard to health and shall not be disposed of in an open dump upon the individual's own land, as provided in section 11512 of the act, if it is any of the following:

(a) Asbestos waste.
(b) A hazardous commercial chemical product.
(c) A used battery.
(d) A pesticide container.
(e) Waste from the demolition of the residence, except for components that are listed as inert material in R 299.4114.
(3) Open burning of solid waste is prohibited, except as provided in subrules (4), (5), and (6) of this rule.
(4) If not prohibited by local ordinance, an individual is not prohibited by the act and these rules from burning solid waste from the individual's own household upon the individual's own land if both of the following conditions are met:
(a) The burning does not create a nuisance and is otherwise in compliance with part 55 of the act and the administrative rules promulgated under part 55 of the act.
(b) The burning is conducted in an approved container constructed of metal or masonry that has a metal covering device that does not have openings larger than ¾ inch.
(5) A person may burn waste for energy recovery in a facility other than an incinerator under R 299.4110.
(6) A person may burn trees, logs, brush, and stumps under R 299.4110.
(7) The open burning of grass clippings or leaves, or both, is prohibited in any municipality that has a population of 7,500 or more persons under section 11522 of the act, unless specifically authorized by local ordinance. A municipality shall report an open burning ordanance to the department within 30 days of the enactment of the ordinance.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4129 Storage of solid waste in uncontained waste piles.

Rule 129. (1) Except as provided in subrule (2) of this rule, the storage of waste in a pile that is not contained in accordance with R 299.4130 constitutes disposal and requires a permit or license under the act. A waste pile that is required to have a permit or license under the act shall be in compliance with the hydrogeological report, groundwater monitoring, and groundwater performance standards which are applicable to type III landfills and which are specified in part 3 of these rules.
(2) The storage of the following waste in piles before reuse or disposal does not require a permit or license under the act and these rules if the conditions specified in subrule (3) of this rule are met:
(a) Low-hazard industrial waste that is separated and stored before being returned to the original process from which the waste was generated or was being used or reused as ingredients in an industrial process to make a product, unless The materials are being stored in a manner which constitutes speculative accumulation.
(b) Low-hazard industrial waste that is stored in a waste pile which was in existence on October 8, 1993, if the pile does not expand horizontally.
(c) Low-hazard industrial waste that is stored for less than 60 days before being transported for disposal.
(d) Construction and demolition waste that is stored at the site of generation for less than 1 year before being transported for disposal.
(3) Owners and operators of waste piles that are specified in subrule (2) of this rule shall ensure that the unit is not in violation of part 31 or part 55 of the act, does not create a nuisance, and does not result in environmental contamination after closure.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4130
Source: 1993 AACS.

R 299.4131 Federal asbestos regulations; adoption by reference.

Rule 131. (1) The definition of asbestos-containing waste material and related definitions contained in 40 C.F.R. §61.141 are adopted by reference in these rules.
(2) The asbestos standards for active waste disposal sites contained in 40 C.F.R. §61.154 are adopted by reference in these rules.
(3) Federal asbestos regulations are contained in 40 C.F.R. parts 61 to 62, July 1, 1997 edition. The 1997

edition is available from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, at a cost as of the time of adoption of these rules of $19.00, or from the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at a cost as of the time of adoption of these rules of $19.00. The regulations specified in this rule are available for inspection at the Lansing office of the department.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4132 Standard industrial classification manual; adoption by reference.

Rule 132. (1) The office of management and budget document entitled "Standard Industrial Classification Manual," 1987 edition, 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 a cost as of the time of adoption of these rules of $29.00 each, or from the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at a cost as of the time of adoption of these rules of $29.00. The document adopted in this rule is available for inspection at the Lansing office of the department.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4133 Test methods for evaluation of solid waste; adoption by reference.

Rule 133. (1) The publication entitled "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods," being EPA publication SW-846, 3rd edition, November 1986, and its updates I (July 1992), II (September 1994), 11A (August 1993), IIB (January 1995), and III (June 1997) are adopted by reference in these rules.
(2) The documents listed in subrule (1) of this rule are available from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, at a cost as of the time of adoption of these rules of $319.00, or from the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at a cost as of the time of adoption of these rules of $319.00. The documents are available for inspection at the Lansing office of the department.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4134 List of hazardous inorganic and organic constituents; adoption by reference.

Rule 134. (1) The list of hazardous inorganic and organic constituents contained in 40 C.F.R. part 258, appendix II, is adopted by reference in these rules.
(2) The regulations setting forth the classification of solid waste disposal facilities and practices are contained in 40 C.F.R. part 257.3-4 and 40 C.F.R. part 257, appendix I, and are adopted by reference in these rules.
(3) The appendices specified in subrules (1) and (2) of this rule are contained in 40 C.F.R. parts 190 to 259, July 1, 1997 edition. The 1997 edition is available from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, at a cost as of the time of adoption of these rules of $22.00, or from the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at a cost as of the time of adoption of these rules of $22.00. The regulations are available for inspection at the Lansing office of the department.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4135 ASTM standards; adoption by reference.

Rule 135. (1) The following ASTM standards are adopted by reference in these rules:
(a) D422-63(90), test method for particle size analysis of soils.
(b) D698-91, test method for laboratory compaction characteristics of soil using standard effort.
(c) D1557-91, test method for laboratory compaction characteristics of soil using modified effort.
(d) D2434-68)(94), test method for determining permeability of granular soils (constant head).
(e) D2922-96, test method for determining the density of soil and soil aggregate in place by nuclear methods (shallow depth).
(f) D2487-93, classification of soils for engineering purposes (unified soil classification system).
(g) D4318-95a, test method for liquid limit, plastic limit and plasticity index of soils.

(h) D5084-90, test method for hydraulic conductivity of saturated porous materials using a flexible wall permeameter.
(2) The standards listed in subrule (1)(a) to (e) and (h) of this rule are available from the American Society for Testing and Materials, Sales Service, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428, at a cost as of the time of adoption of these rules of $18.00 each. The standard listed in subrule (1)(f) and (g) of this rule is available from the American Society for Testing and Materials, Sales Service, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428, at a cost as of the time of adoption of these rules of $21.00. The standards listed may also be obtained from the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at a cost as of the time of adoption of these rules of $18.00 and $21.00 each, respectively. The standards adopted in this rule are available for inspection at the Lansing office of the department.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4136 Federal tank and surface impoundment standards; adopted by reference.

Rule 136. (1) The technical standards for tanks contained in 40 C.F.R. §264.193 are adopted by reference in these rules.
(2) The technical standards for surface impoundments contained in 40 C.F.R. §264.221 are adopted by reference in these rules.
(3) The regulations specified in this rule are contained in 40 C.F.R. parts 260 to 265, July 1, 1997 edition. The 1997 edition is available from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, at a cost as of the time of adoption of these rules of $29.00, or from the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at a cost as of the time of adoption of these rules of $29.00. The regulations are available for inspection at the Lansing office of the department.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4137 Flexible membrane liner specifications; adoption by reference.

Rule 137. (1) The flexible membrane liner specifications contained in the national sanitation foundation document NSF 54-1993 and the PVC geomembrane institute specification PGI 1197 are adopted by reference in these rules.
(2) Copies of NSF 54-1993 may be purchased at a cost as of the time of adoption of these rules of $50.00 from NSF International, 3475 Plymouth Road, Ann Arbor, Michigan 48106, or from the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at a cost as of the time of adoption of these rules of $50.00. The document is available for inspection at the Lansing office of the department.
(3) Copies of PGI 1197 may be obtained from the PVC Geomembrane Institute, P.O. Box 4226, Traverse City, Michigan 49685, at no cost, or from the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at no cost. The document is available for inspection at the Lansing office of the department.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4138

Source: 1993 AACS.

R 299.4139 Standard methods for the examination of water and wastewater; adoption by reference.

Rule 139. (1) The test methods contained in the document entitled "Standard Methods for the Examination of Water and Wastewater," 19th edition, are adopted by reference in these rules.
(2) Copies of the document entitled "Standard Methods for the Examination of Water and Wastewater," 19th edition, may be purchased at a cost of $180.00, plus $12.00 shipping, from the American Public Health Association, 1015 15th Street, NW, Washington, DC 20005, or from the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at a cost as of the time of adoption of these rules of $192.00. The test methods are available for inspection at the

Lansing office of the department.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4140 Definition of PCBs and PCB items; adoption by reference.

Rule 140. (1) The definition of PCBs and PCB items contained in 40 C.F.R. §761.3 is adopted by reference in these rules.
(2) The provisions of 40 C.F.R. §761.3 are contained in 40 C.F.R. parts 700 to 789, July 1, 1997 edition. The 1997 edition is available from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, at a cost as of the time of adoption of these rules of $38.00, or from the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at a cost as of the time of adoption of these rules of $38.00. The regulations are available for inspection at the Lansing office of the department.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4141 Natural resources conservation service critical area planting guide; adoption by reference.

Rule 141. (1) The natural resources conservation service critical area planting guide is adopted by reference in these rules.
(2) Copies of the document entitled "The Natural Resources Conservation Service Critical Area Planting Guide" may be obtained at no cost from the United States Department of Agriculture, Natural Resources Conservation Service, 1405 South Harrison Street, East Lansing, Michigan 48823, or from the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at no cost. The guide is available for inspection at the Lansing office of the department.
History: 1999 MR 3, Eff. Apr. 12, 1999.

PART 2. CERTIFICATION OF LOCAL HEALTH DEPARTMENTS

R 299.4201
Source: 1993 AACS.

R 299.4202
Source: 1982 AACS.

R 299.4203 Certified health department; performance requirements; solid waste disposal areas.

Rule 203. (1) Except as provided in subrules (2) and (3) of this rule, a certified health department shall do all of the following:
(a) At the request of an applicant, provide an advisory analysis of each proposed disposal area within 15 working days of the request. An advisory analysis shall include a site inspection and written report to the applicant regarding the preliminary feasibility of the disposal area as described in R 299.4503. A copy of the advisory analysis shall be provided to the department. Nothing in the advisory analysis shall be considered to constitute an approval or denial for a construction permit or operating license.
(b) Receive all construction permit and operating license application forms and documents.
(c) Immediately forward each application package to the department for review.
(d) Upon the receipt of a construction permit application, obtain information for the proper notification of all parties that is required by section 11510 of the act.
(e) Assist the department in arranging newspaper publication of the required public notice in the vicinity of the proposed undertaking. The certified health department's obligation for such costs shall not be more than ½ of the construction permit application fee that is remitted by the applicant under the act.
(f) Provide a location where the complete construction permit application may be reviewed by the public.
(g) Assist the department in conducting all public hearings relative to an application for a construction permit.
(h) Conduct a site inspection upon receipt of an operating license application to determine compliance with the act and these rules.

(i) Submit a written report of the site inspection and a recommendation for or against license issuance to the department within 15 working days of receipt of the operating license application package. The applicant shall be sent a copy of the recommendation.
(j) Provide the department and the licensee with written recommendations regarding appropriate action on existing facilities, which may include closure, remedial measures, and a compliance schedule.
(k) File an instrument that is prepared by the applicant in the office of the register of deeds of the county in which a sanitary landfill is located that imposes a restrictive covenant upon the land involved at the time of licensing as required by section 11518 of the act and provide the department with a copy of the recorded instrument or a receipt that verifies the proper filing.
(l) Provide a minimum of quarterly, routine, written inspection reports of all disposal areas, unless a more frequent inspection schedule is established by the department. A written notice of deficiencies, together with requirements for their correction, shall be provided to the licensee. Copies of all inspection reports and correspondence shall be provided to the department.
(m) Follow-up inspections of disposal areas shall be conducted when necessary. (n) Maintain a complete file of transactions relative to the inspection report activities for each disposal area.
(o) Investigate and document all complaints on solid waste disposal areas and dumps. Reports of actions taken shall be provided to the department.
(p) Notify the department of any unresolved problems or violations that continue beyond 90 days of the health department's investigations of complaints.
(q) Be willing and prepared to present documentation and testimony at show cause hearings, formal administrative hearings, or at any other informal or formal legal proceedings.
(r) In cooperation with the department, issue cease and desist orders for unlicensed waste disposal areas or dumps. The department shall be provided with copies of any cease and desist orders that may be issued.
(s) Program enforcement and review responsibilities shall be uniformly applied to the public and private sectors.
(t) Assist in developing and encouraging environmentally sound methods of disposal, including resource recovery and conservation.
(2) A health department that employs a qualified geologist and engineer may apply to the department to review all construction permits and operating license applications for completeness and content. A health department that is certified to conduct a review shall do all of the following:
(a) Review each construction permit and operating license application for completeness and notify the applicant, within 15 working days of receipt of the application, as to the completeness of the application.
(b) Provide the department with a copy of all completeness reviews.
(c) Review complete construction permit applications for compliance with the act and these rules and forward a review report and recommendation for or against issuance of a permit to the department within 45 calendar days of receipt of the complete application package.
(d) Review complete operating license applications, including bonds and construction certification documents, for compliance with the act and these rules and forward a review report and recommendation for or against issuance of a license to the department within 15 working days of receipt of the complete application package.
(e) Conduct inspections to verify that construction of a disposal area is proceeding in accordance with approved plans.
(3) A health department may apply to the department for authorization to conduct other activities that are not specified in subrules (1) and (2) of this rule.
(4) A certified health department is not responsible for inspecting or reviewing applications for disposal areas that are owned or operated by the county within the certified health department's jurisdiction. The department is responsible for conducting the inspections.
(5) A certified health department shall not authorize changes to engineering plans that are approved by the director.
History: 1979 ACS 9, Eff. Jan. 6, 1982; 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4204
Source: 1982 AACS.

R 299.4205
Source: 1982 AACS.

R 299.4206
Source: 1982 AACS.

PART 3. TYPE III LANDFILLS

R 299.4301 Purpose, scope, and applicability.

Rule 301. (1) The purpose of this part is to establish standards under the act for all type III landfill units. These standards ensure the protection of human health and the environment.

(2) Type III landfills that are new disposal areas shall not be issued an operating license unless the construction permit process specified in the act and R 299.4902 to R 299.4920 has been complied with.

(3) Except as otherwise specifically provided in this part, the standards of this part apply to the owners and operators of all of the following:

(a) New type III landfill units.

(b) Existing type III landfill units.

(c) Vertical and lateral expansions of existing units.

(d) Preexisting type III landfill units. All other solid waste disposal areas and practices that are not regulated under part 111 of the act are subject to the standards contained in parts 2, 4, and 5 of these rules.

(4) Variances to the rules that are applicable to type III landfills may be granted, in writing, by the solid waste control agency under R 299.4108.

History: 1979 ACS 9, Eff. Jan. 6, 1982; 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4302 Existing industrial waste landfills.

Rule 302. (1) The owner and operator of an industrial waste landfill that has been issued a permit or license under the act on the effective date of these rules may construct, operate, and close the disposal area in accordance with existing permits, licenses, and approved plans if the owner and operator do all of the following:

(a) Comply with the performance standards specified in R 299.4306.

(b) Comply with other portions of the act and these rules applicable to existing disposal areas.

(c) Not later than October 1, 1995, revise existing hydrogeologic monitoring plans, as necessary, to comply with R 299.4905 and submit the plans to the director with the first operating license application that is applied for after this date.

(d) For any unit which is a possible source of groundwater contamination or which is an unmonitorable unit, submit a response action plan under R 299.4319.

(e) Comply with the waste restrictions specified in subrule (2) of this rule.

(2) To be disposed of in an industrial waste landfill that is an existing disposal area, all wastes, except for construction and demolition waste, trees, and stumps, shall have been subjected to the leaching test protocol specified in R 299.4311 and have been approved for disposal at the specific landfill based on a determination by the solid waste control agency that the disposal has a minimal potential for groundwater contamination. Waste that is approved for disposal in an industrial solid waste landfill which is an existing disposal area shall be retested annually, or on a more frequent schedule as specified by the solid waste control agency, to confirm that disposal of the waste presents a minimal potential for groundwater contamination. The owner or operator of an existing industrial waste landfill may petition the director to waive the tests specified in R 299.4311 for new waste or waste previously approved. The director shall approve such a petition if either of the following conditions is met:

(a) The waste is listed as a low-hazard industrial waste or meets the criteria for a low-hazard industrial waste specified in R 299.4122 and the design of the landfill meets the criteria for a low-hazard industrial waste landfill specified in R 299.4307(3)(a) or (4).

(b) The petition demonstrates that the location or design of the landfill minimize the potential for groundwater contamination, and that the concentration of constituents in the waste is not a significant factor.

(3) The owners and operators of existing industrial waste landfill units which are not licensed under the act as type III landfills on the effective date of these rules, but which receive waste under other authority, shall notify the director of the nature and extent of the disposal area not less than 6 months after the effective date of these rules. At any time after such date, the owner or operator of an industrial waste landfill specified in this subrule may be required, by the director, to submit an operating license application. An owner and operator that are required to submit an operating license application under this rule shall be allowed not less than 6 months to submit the application. An operating license application shall include all of the following information:
(a) A waste characterization that is in compliance with R 299.4118.
(b) A hydrogeologic report and monitoring program that is sufficient to comply with R 299.4904 and R 299.4905.
(c) Engineering plans that are sufficient to comply with both of the following:
(i) The final cover requirements of R 299.4304 for all units.
(ii) The design requirements of R 299.4307 for all new units or lateral extensions of existing units.
(d) Information that is required by R 299.4922.
(4) Engineering plans, hydrogeologic evaluations, and the surface water and groundwater monitoring program for industrial waste landfills that are not licensed under the act shall be reviewed by the director to assure compliance with these rules. The owners and operators of landfills that the director determines are not in compliance with these rules may be issued a timetable or schedule of remedial measures that will lead to compliance within a reasonable time period, which shall not be more than 2 years from the date of the determination.
History: 1979 ACS 9, Eff. Jan. 6, 1982; 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4303
Source: 1993 AACS.

R 299.4304 Type III landfill final cover design.
Rule 304. (1) The owner and operator of a type III landfill unit shall install a final cover system which is designed to minimize erosion and infiltration to the extent necessary to protect the public health and the environment.
(2) If methane or other decomposition gases will be generated within a type III landfill, the owner and operator shall design and employ a means of ensuring that gases cannot travel laterally from the site or accumulate in structures.
(3) The owner and operator of a type III landfill shall grade portions of the landfill that have received final cover so as to prevent storm water runoff from entering the active portion.
(4) The owner and operator of a type III landfill shall design and operate the landfill so as to bring the active portion up to final grade as soon as possible.
(5) To prevent the ponding of water on completed fill surfaces, the grading contours shall tend to forestall development of local depressions due to post- construction settlement. Slopes of the final cover shall not exceed 1 vertical on 4 horizontal or as necessary to permit the establishment of vegetative cover. The final slope for a type III landfill that is a new disposal area shall not be less than 2%, unless the director approves a final cover that is not designed to minimize infiltration, as provided in subrule (7) of this rule, or otherwise approves a variance under R 299.4108.
(6) Except as provided in subrule (7) of this rule, final cover for type III landfills shall be comprised of an erosion layer underlain by an infiltration layer, as follows:
(a) The infiltration layer shall be comprised of 1 of the following:
(i) A minimum of 2 feet of compacted soil that is in compliance with R 299.4913. For new disposal areas, the compacted soil shall also be protected by at least 2 feet of additional soil.
(ii) A flexible membrane liner that is in compliance with R 299.4915. when properly sloped and protected by at least 2 feet of soil.
(iii) An approved alternative material, when properly sloped and protected, if equivalent protection is provided.
(b) The erosion layer shall consist of a minimum of 6 inches of earthen material that is capable of supporting

native plant growth.
(7) The owner and operator of a type III landfill may install a final cover that is not designed to minimize infiltration if the landfill unit meets the design criteria of R 299.4307(3)(b) and the owner and operator demonstrate that infiltration through the final cover will not violate the performance standards of R 299.4306 throughout the postclosure period.
History: 1979 ACS 9, Eff. Jan. 6, 1982; 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4305 Type III landfill location restrictions.

Rule 305. (1) The requirements of this rule apply to type III landfills that are new disposal areas.
(2) Horizontal isolation distances shall be in compliance with the following provisions, as applicable:
(a) The isolation distances established for a specific landfill shall take into consideration immediate and long-term environmental factors, including all of the following:
(i) Noise.
(ii) Blowing papers.
(iii) Dust.
(iv) Odor.
(v) Vectors.
(vi) Pest animals.
(vii) Equipment vibration.
(b) Unless a variance is obtained under R 299.4108, the active work area for type III landfills that are new disposal areas shall not be located closer than 100 feet to adjacent property lines, road rights-of-way, or lakes and perennial streams or closer than 300 feet to domiciles that exist at the time of issuance of a construction permit. In addition, approval of less than 200 feet of isolation distance requires either a berm which is not less than 8 feet high with a 4-foot fence on top and which is constructed around the perimeter of the active work area or natural screening that offers equivalent protection. Greater isolation distances may be required in any of the following situations:
(i) Geological conditions require it.
(ii) The site is adjacent to special quiet zones, as designated by local or state government.
(iii) The site is near an airport.
(iv) Federal or state regulations apply.
(v) Dewatering will adversely affect adjacent aquifers.
(vi) Construction and demolition waste landfills which are new disposal areas and which will accept waste from more than 1 generator shall comply with the location restrictions for type II landfills specified in R 299.4412 to R 299.4418.
(3) A type III landfill shall not be located within a floodplain unless the necessity for such a location can be substantiated through an environmental assessment and unless it can be demonstrated that the fill will not affect upstream or downstream flood stages. To demonstrate that the fill will not affect upstream or downstream flood stages, the owner or operator shall obtain a permit under part 31 of the act.
(4) A type III landfill shall not be located within a wetland unless it meets both of the following requirements:
(a) The location can be substantiated through an environmental assessment which considers alternatives and assures that all potentially negative impacts can be mitigated.
(b) Where applicable, the applicant obtains a permit under part 303 of the act.
(5) The applicant shall demonstrate, as part of the permit application, that operation of the proposed type III landfill will not result in noise exceeding the following levels for specified adjacent land uses when measured at the common property line nearest the active work area:

Adjacent Use	Maximum Sound Level
Residential	75 dBA.
Commercial	85 dBA.
Industrial and other	90 dBA.

Objectionable noises due to intermittence, beat, frequency, or shrillness shall be muffled so as not to become a nuisance to adjacent users.
History: 1979 ACS 9, Eff. Jan. 6, 1982; 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4306 Type III landfill water quality performance standard

Rule 306. (1) The design and siting of type III landfills shall ensure that groundwater at the solid waste boundary will not exceed standards described in the criteria for the classification of solid waste disposal facilities and practices, 40 C.F.R. part 257.3-4 and appendix I of 40 C.F.R. part 257, or that the concentration of substances will not be increased where their existing concentration exceeds the maximum levels established in 40 C.F.R. part 257, appendix I, unless groundwater is unsuitable for human consumption by having more than 10,000 mg/l total dissolved solids. The provisions of 40 C.F.R. part 257.3-4 and 40 C.F.R. part 257, appendix I are adopted by reference in R 299.4134.
(2) The design, siting, and operation of a type III landfill shall ensure that all of the requirements for the protection of surface and groundwater that are contained in part 31 of the act and rules promulgated under part 31 of the act shall be met.
History: 1979 ACS 9, Eff. Jan. 6, 1982; 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4307 Type III landfills; design standards; natural soil sites; lined sites.

Rule 307. (1) The design standards of this rule apply to both of the following:
(a) New disposal areas for industrial waste.
(b) New units and lateral extensions of existing units at a construction and demolition waste landfill.
(2) Except as required by subrules (5) and (6) of this rule, a type III landfill shall be located and designed with either of the following:
(a) A liner that is in compliance with subrule (4) of this rule.
(b) A natural soil barrier that is in compliance with subrule (3)(a) of this rule.
(c) For low-hazard industrial waste, a means of otherwise preventing groundwater contamination, as provided by subrule 3(b) of this rule.
(3) The following provisions apply with respect to natural soil sites for type III landfills:
(a) A natural soil barrier shall have a maximum demonstrated hydraulic conductivity of 1.0 X 10-7 cm/sec and shall meet the criteria specified in R 299.4912. The director may approve a combination of natural soils with a maximum demonstrated hydraulic conductivity of 1.0 X 10-6 cm/sec having a thickness that provides equivalent protection to 10 feet of 1.0 X 10-7 cm/sec soil. Type III natural clay sites where the clay does not extend to the surface shall include side cutoff walls or other barriers and controls to impede the lateral infiltration of water into the fill and to impede lateral flow of leachate out of the fill interior.
(b) Applications for low-hazard industrial waste landfills at natural soil sites that do not meet the permeability or soil classifications of subdivision (a) of this subrule shall be considered based on the hydrogeologic characteristics of the site, including the permeability and thickness of the soils, the ability of the soils to attenuate leachate, groundwater level, and other factors particular to a specific site. In addition, all of the following requirements apply:
(i) The applicant shall characterize the waste in accordance with R 299.4118 and shall retest the waste annually, or on a more frequent schedule, as specified by the solid waste control agency if the character of the waste is variable.
(ii) In the application, an applicant shall explain the rationale for the design using calculations, if applicable, and professional analyses to show how the proposed design is expected to be in compliance with the performance standards specified in R 299.4306.
(iii) Two thousand feet of horizontal isolation shall exist in the direction of groundwater flow measured from the solid waste boundary to public water supply wells and domestic wells in existence at the time of an advisory analysis.
(iv) One thousand feet of horizontal isolation shall exist in directions lateral to or upgradient of the direction of groundwater flow measured from the solid waste boundary to public water supply wells and off-site domestic wells in existence at the time of advisory analysis.
(v) Based on the hydrogeological evaluation, the director may approve a decrease in the isolation distances specified in paragraphs (ii) to (iv) of this subdivision.

(vi) An applicant shall demonstrate, by technical calculations, considering the design details and operational procedures specific to the site, how runoff from those portions of the landfill that contain solid waste will be managed to comply with R 299.4306.
(4) All of the following may be used as a liner system for type III landfills:
(a) A compacted soil liner which has a minimum thickness of 3 feet and which is in compliance with the specifications of R 299.4913.
(b) A composite liner.
(c) A flexible membrane liner which is in compliance with the specifications of R 299.4915 and which is not less than 30 mils thick, if the liner is installed on stable soil not less than 4 feet thick and which has a hydraulic conductivity that is less than 1.0 X 10-5 cm/sec.
(d) Other liner materials, modified soils, or technologically advanced liner systems, based on data supplied by the applicant regarding the system's durability, permeability, resistance to sunlight and chemicals, and performance in similar applications. The director shall determine the acceptability of the data and proposed design.
(5) New disposal areas for industrial solid waste that do not meet the criteria for low-hazard industrial solid waste contained in R 299.4122 shall, at a minimum, contain a composite liner.
(6) A new unit or a lateral extension of an existing unit at a type III landfill that is an unmonitorable unit shall not be licensed unless the unit contains a leak detection system that is monitored in accordance with the approved hydrogeological monitoring plan.
History: 1979 ACS 9, Eff. Jan. 6, 1982; 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4308 Type III landfill leachate collection and treatment.

Rule 308. (1) The following type III landfills, except for those established under R 299.4307(3)(b) or R 299.4309, shall have systems to collect and remove leachate:
(a) Industrial waste landfills that are new disposal areas.
(b) New units and lateral extensions of existing units at construction and demolition waste landfills.
(2) Leachate collection systems for type III landfills shall be designed, constructed, and operated to limit the head at the lowest point in the system to not more than 1 foot, excluding the sump. Except as provided in subrule (1) of this rule, type III landfills shall have leachate collection systems that are in compliance with R 299.4423.
(3) Leachate that is removed shall either be reintroduced into the landfill if it can be demonstrated that such leachate will be absorbed by the landfill or shall be conveyed to a wastewater treatment facility that is capable of treating the leachate to meet appropriate discharge standards specified in a wastewater discharge permit issued under part 31 of the act.
History: 1979 ACCS 9, Eff. Jan. 6, 1982; 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4309 Industrial waste surface impoundments closed as landfills; design standards; testing of wastes.

Rule 309. (1) The requirements of this rule apply to a surface impoundment which receives low-hazard industrial waste sludges or slurries that contain free liquids and which is an impoundment where solid waste will remain after closure. This rule does not apply to landfills that are in compliance with the leachate management requirements of R 299.4308, except as provided in this rule. An industrial waste surface impoundment that is closed as a landfill shall be in compliance with all parts of these rules designated as applying to type III landfills.
(2) In the construction permit application for an industrial waste surface impoundment that is closed as a landfill, the engineer shall explain the rationale for the design, using calculations, if applicable, and professional analyses to show how the proposed design is expected to comply with the groundwater quality performance standards of R 299.4306.
(3) All wastes to be disposed of in an industrial waste surface impoundment that is closed as a landfill, shall have been subjected to the leaching test protocol specified in R 299.4311 and shall be classed as a low-hazard industrial waste.
(4) Free liquids in an industrial waste surface impoundment shall be discharged in accordance with a permitwhich is issued under part 31 of the act and which considers the effect of the discharge on surface and

groundwater.
(5) A surface impoundment shall maintain enough freeboard to prevent any overtopping of the dike by overfilling, wave action, or a storm, but not less than 2 feet at any time. The owner or operator shall inspect the freeboard level at least once each week to ensure compliance with this subrule.
(6) An earthen dike at a surface impoundment shall have a protective cover, such as grass or rock, to minimize wind and water erosion and to preserve its structural integrity. The owner or operator shall inspect an earthen dike at least once per week to detect any deterioration or failure in the impoundment.
(7) At closure, the owner or operator of a surface impoundment that is closed as a landfill shall do all of the following unless the director determines that such actions are not necessary:
(a) Eliminate free liquids by removing liquid wastes or solidifying the remaining wastes and waste residues.
(b) Stabilize remaining wastes to a bearing capacity that is sufficient to support final cover.
(c) Cover the surface impoundment with a final cover that is in compliance with the requirements of R 299.4304.
(d) Conduct groundwater monitoring and postclosure maintenance in accordance with rules applicable to type III landfills.
History: 1979 ACS 9, Eff. Jan. 6, 1982; 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4310 Type III landfill location restrictions; groundwater isolation.

Rule 310. (1) Type III landfills that do not have a liner or leachate collection system shall have a permanent minimum clearance of 4 feet from the bottom of the waste to the groundwater level, unless the director authorizes a variance from this requirement under R 299.4108.
(2) Type III landfills that have a liner shall have a permanent minimum clearance of 4 feet from the top of the liner to the groundwater level, unless the director authorizes a variance from this requirement under R 299.4108.
(3) Gravity interception of groundwater to maintain the minimum clearance to groundwater level specified by this rule may be utilized. The pumping of groundwater to control groundwater level is not considered permanent and shall not be utilized.
History: 1979 ACS 9, Eff. Jan. 6, 1982; 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4311 Leaching tests to evaluate potential for groundwater contamination at unlined industrial waste landfills.

Rule 311. (1) A license applicant for a new low-hazard industrial waste landfill that does not have a liner system meeting the standards of R 299.4307(3)(a) or (4) and a leachate collection system meeting the standards of R 299.4308, or any person who intendS to place new waste in an existing industrial waste landfill that does not have a liner and leachate collection system, shall subject the waste to a leaching test procedure specified in subrule (2) of this rule to assist in the evaluation of groundwater contamination potential, and the applicant shall demonstrate to the director that such concentration does not pose more than a minimal potential of groundwater contamination. Where actual field data on a waste is available at existing facilities, it shall also be used to assist in the evaluation of groundwater contamination potential. The director shall approve new wastes at an existing industrial waste landfill which does not contain a liner and leachate collection system if the concentration of hazardous substances in the new waste is not significantly greater than wastes previously approved, as demonstrated by a statistical test consistent with R 299.4908 and if the landfill is otherwise in compliance with these rules.
(2) To evaluate the leaching potential of an industrial waste, the person shall analyze representative samples of the waste in accordance with the toxicity characteristic leaching procedure, EPA method 1311, or the synthetic precipitation leaching procedure, EPA method 1312. Samples shall be collected and analyzed in accordance with the publication entitled "Test Methods for Evaluating Solid Waste," SW-846 3rd edition, which is adopted by reference in R 299.4133. As specified in that document, 4 discrete samples shall constitute the minimum number of samples necessary to be considered representative of a waste. If an alternate leach test procedure is proposed, the leaching test procedure shall have been developed by a recognized independent testing association, trade association, professional society, or regulatory agency and shall be documented as to applicability and reproducibility.
(3) Waste that is disposed of in an industrial waste landfill which is an existing disposal area shall be

retested to evaluate the potential for groundwater contamination annually or on a more frequent schedule as specified by the solid waste control agency, unless the director approves a petition to discontinue such testing under R 299.4302. Test results shall be submitted to the solid waste control agency.
(4) A waste that is classified as a type III waste may be disposed of in a type II landfill.
(5) The department may specify that a waste be segregated from other wastes in a type III landfill or that other special handling procedures be used.
History: 1979 ACS 9, Eff. Jan. 6, 1982; 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4312
Source: 1997 AACS.

R 299.4313
Source: 1993 AACS.

R 299.4314
Source: 1997 AACS.

R 299.4315 Type III landfill operating requirements; equipment; supervision; access; unloading of solid waste; control of dust and blowing papers; spreading and compaction; cell volume; hazardous waste, liquids, or sewage; burning; on-site roads; salvaging; insects and rodents; sloping, grading, and drainage; noise levels; monitor well sampling; leachate removal and disposal.

Rule 315. (1) Properly maintained equipment of adequate number, type, and size shall be used in operating a type III landfill pursuant to established engineering practice and these rules. Backup equipment shall be available on the site or suitable arrangements shall be made to provide for such equipment from other sources during equipment breakdown or during peak loads.
(2) A type III landfill operation shall be under the immediate direction of a responsible individual.
(3) Access to a type III landfill shall be limited to those times when an attendant is on duty or when an alternative monitoring device is in use and shall be limited to those persons who are authorized to use the site for the disposal of solid waste. Access to the site shall be controlled by a suitable barrier.
(4) The unloading of solid waste shall be continuously supervised.
(5) Measures shall be provided to control fugitive dust, odors, and other emissions at a type III landfill. These measures shall be sufficient to ensure that the operation of the landfill will not produce any emission that results in a violation of part 55 of the act.
(6) Solid waste at a construction and demolition waste landfill shall be spread so that it can be compacted in layers that are not more than 2 feet deep. Large and bulky items, when not excluded from the site, shall be disposed of in a manner that is approved by the solid waste control agency.
(7) The owner or operator of a type III landfill shall record the quantity of waste that is disposed of in tons or cubic yards. Records of waste disposal shall be used to calculate deposits into the perpetual care fund that are required by section 11525 of the act.
(8) The following wastes shall not be disposed of in a type III landfill:
(a) Materials that would adversely affect the liner.
(b) Household waste.
(c) Hazardous waste, as defined in R 299.9203.
(d) Liquid waste, except for industrial sludges and leachate recirculated under R 299.4308(2).
(9) The burning of trees, stumps, and brush at a type III landfill shall be severely restricted and shall be conducted only in designated areas with the permission of the solid waste control agency and other appropriate authorities. Suitable measures shall be available to extinguish accidental fires.
(10) On-site roads shall be designed and constructed so that traffic flows smoothly and is not interrupted by ordinary inclement weather.
(11) Salvaging at a construction and demolition waste landfill, if allowed by the licensee, shall be organized so that it does not interfere with the prompt sanitary disposal of solid waste or create unsightliness or health hazards. Scavenging is not permitted. White goods and other recyclable metals may be stored for eventual recycling on the site of a construction and demolition waste landfill in a separate area away from the active

work area if a nuisance or health hazard does not develop. The period of storage shall not be longer than a period of time that constitutes speculative accumulation.
(12) Conditions unfavorable to the propagation of insects and rodents shall be maintained at a construction and demolition waste landfill by carrying out routine landfill operations promptly and systematically. Supplemental insect and rodent control measures shall be instituted when necessary.
(13) The entire site, including the fill surface, shall be sloped, graded, and provided with drainage facilities to accomplish all of the following purposes:
(a) Minimize runoff onto and into the fill.
(b) Prevent erosion or washing of the fill.
(c) Drain off rainwater falling on the fill.
(d) Prevent the collection of standing water.
(14) Landfill operations shall be conducted in a manner that will not exceed the noise levels specified in R 299.4305(5). The solid waste control agency shall monitor noise levels using weighted decibel measurements, referenced to 20 micropascals, with a type of audio output meter approved by the United States bureau of standards.
(15) A licensee shall have the monitoring wells sampled and analyzed at least quarterly during the landfill's operation. Following the closure of the landfill, biannual sampling and reporting are required during the 30-year postclosure period. Sampling, preservation, and analysis procedures shall be approved by the department. Analyses shall be submitted to the solid waste control agency within 30 days of the end of the calendar quarter.
(16) A licensee shall remove leachate from a leachate collection sump as frequently as necessary to maintain less than 1 foot of liquid in the leachate collection and removal system and shall check the leachate collection sump at least monthly to assure compliance with this requirement.
(17) The collected leachate shall be disposed of in a manner that does not damage the environment. Disposal options may include conveying the leachate to a publicly owned treatment works upon written approval of the municipality that operates the treatment works or other facility permitted under part 31 of the act. This rule does not preclude the need for any other authorization that is required for the leachate disposal method selected.
History: 1979 ACS 9, Eff. Jan. 6, 1982; 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4316
Source: 1993 AACS.

R 299.4317 Type III landfill operating requirements; closure and postclosure care.
Rule 317. (1) The owner or operator of a type III landfill shall place landfill cover materials that are described in R 299.4304 over the entire surface of each portion of the final lift not more than 6 months after the placement of solid waste within that portion.
(2) Erosion control measures shall be instituted during closure and throughout the postclosure period to minimize erosion of the final cover. The measures shall comply with part 91 of the act.
(3) Final cover depths shall be maintained for a period of 30 years after the final cover is certified in accordance with this rule.
(4) All final covered areas shall be seeded and stabilized as soon as practical after placement of final cover. Appropriate seed for the soil type, slope, and moisture condition shall be selected for this purpose. The owner or operator shall regularly inspect seeded areas during and after closure and shall take measures to assure that the vegetation is established and maintained.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4318
Source: 1993 AACS.

R 299.4319
Source: 1993 AACS.

PART 4. MUNICIPAL SOLID WASTE LANDFILLS

R 299.4401
Source: 1997 AACS.

R 299.4402
Source: 1997 AACS.

R 299.4403
Source: 1997 AACS.

R 299.4404
Source: 1997 AACS.

R 299.4405
Source: 1997 AACS.

R 299.4406
Source: 1997 AACS.

R 299.4407
Source: 1997 AACS.

R 299.4408
Source: 1997 AACS.

R 299.4409
Source: 1993 AACS.

R 299.4410 Type II landfill; purpose, scope, and applicability.

Rule 410. (1) The purpose of this part is to establish rules under the act for all municipal solid waste landfill units. Municipal solid waste landfills shall generally be referred to as type II landfills for purposes of this part. These rules ensure the protection of human health and the environment.

(2) The rules of this part apply to owners and operators of new type II landfill units, existing type II landfill units and lateral extensions of existing units, and preexisting type II landfill units, except as otherwise specifically provided in this part. All other solid waste disposal areas and practices that are not regulated under part 111 of this act are subject to the rules contained in parts 1, 3, and 5 of these rules.

(3) The rules of this part do not apply to type II landfill units which have not been issued a construction permit or operating license under the act and which did not receive waste after October 9, 1991.

(4) Type II landfill units which received waste after October 9, 1991, but which stopped receiving waste before October 9, 1993, are exempt from all of the design requirements of this part, except the final cover requirement specified in R 299.4425. The final cover shall be installed within 6 months of the last receipt of wastes. An owner or operator of a type II landfill unit described in this subrule who fails to complete cover installation within the 6-month period shall be subject to all of the requirements of this part, unless otherwise specified.

(5) All type II landfill units that receive waste on or after October 9, 1993, shall be in compliance with all of the requirements of this part unless otherwise specified.

(6) An Owner or operator of A new type II landfill unit, existing type II landfill unit, or lateral extension of an existing unit that disposes of less than 20 tons of municipal solid waste daily, based on an annual average, is exempt from the design requirements of this part if there is no evidence of existing groundwater contamination from the type II landfill unit or lateral expansion if the type II landfill unit serves a community that experiences an annual interruption of not less than 3 consecutive months of surface transportation that prevents access to a regional waste management facility and if both of the following conditions are met:

(a) The owner or operator of a new type II landfill unit, existing type II landfill unit, or lateral extension of an existing unit that meets the criteria shall demonstrate to the director that the criteria have been met and shall place documentation in the operating record that evidences compliance with the criteria.

(b) The owner or operator of a new unit, existing unit, or lateral extension of an existing unit comply with the design requirements for type III landfills specified in R 299.4307.
(7) If the owner or operator of a new type II landfill unit, existing type II landfill unit, or lateral extension of an existing unit has knowledge of groundwater contamination that results from the unit or expansion, then the owner or operator shall notify the director of the contamination and, thereafter, comply with all of the requirements of this part.
(8) A type II landfill unit that does not satisfy the rules of this part is considered an open dump for purposes of the act and these rules and is prohibited.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4411 Type II landfill location restrictions; groundwater isolation.

Rule 411. (1) The requirements of this rule apply to new disposal areas and all units at an existing disposal area that are or have been licensed under the act, including closed units.
(2) A type II landfill shall maintain the following permanent minimum clearances from the top of the primary liner:
(a) Ten feet to natural groundwater level.
(b) Seven feet to a permanently depressed groundwater level.
(3) Gravity interception of groundwater to control groundwater level may be utilized. The pumping of groundwater to control the groundwater level is not considered permanent and shall not be utilized.
(4) The requirements of this rule do not apply to groundwater which is not capable of yielding significant quantities of water that is not an aquifer and which is located above natural soil that is in compliance with the requirements of R 299.4912, if all of the following conditions are met:
(a) The liner system of the landfill extends into the clay or soil barrier.
(b) Where feasible, gravity dewatering of the clay surface is employed.
(c) The design includes a soil dike which is 10 feet wide, which is in compliance with the specifications of R 299.4913, and which is keyed into the lower confining layer.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4412 Type II landfill location restrictions; horizontal isolation distances.

Rule 412. (1) The requirements of this rule apply to type II landfills that are new disposal areas.
(2) A type II landfill shall be located and designed to ensure that the isolation distance between the active work area of the landfill and adjacent property is adequate to prevent the creation of nuisance conditions due to any of the following:
(a) Noise in excess of the levels specified in R 299.4431.
(b) Blowing papers.
(c) Dust.
(d) Odor.
(e) Vectors.
(f) Pest animals.
(g) Equipment vibration.
(3) An applicant for a type II landfill construction permit shall submit a management plan for controlling nuisance conditions and their impact on adjoining land uses. The plan shall include recommended isolation distances to prevent nuisances based on the environmental assessment submitted under R 299.4903. However, the director shall require greater isolation distances from adjacent property lines if the director determines that greater isolation is necessary to meet the performance standards of these rules.
(4) The active work area at the facility shall not be located closer than 100 feet to adjacent property lines or road rights-of-way or closer than 300 feet to domiciles that exist at the time an advisory analysis is requested. In addition, the approval of an isolation distance that is less than 200 feet from adjacent property lines or road rights-of-way requires the existence of a berm which is not less than 8 feet high, which has a 4-foot fence on top, and which is constructed around the perimeter of the active work area or the existence of natural screening that offers equivalent protection.
(5) The active work area of a type II landfill shall not be located within the following distances of surface waters:

(a) Within 400 feet of inland lakes and streams, as defined in part 301 of the act, but not including drains, as defined by Act No. 40 of the Public Acts of 1956, as amended, being §280.1 et seq. of the Michigan Compiled Laws. The distance is equivalent to that isolation distance required from natural rivers by part 305 of the act.
(b) Within 2,000 feet of the Great Lakes or Lake St. Clair.
(6) The active work area of a type II landfill shall not be located within the isolation area of a wellhead which is used as a domestic or public water supply, as defined in act 399, and which is in existence at the time an advisory analysis is requested for the disposal area under section 11510 of the act. Except as provided in subrule (7) of this rule, the isolation area shall be as follows:
(a) The active work area shall be a minimum of 2,000 feet from wells that serve type I and type IIa water supplies, as defined in R 325.10502.
(b) The active work area shall be a minimum distance of 800 feet from wells that serve type IIb and type III public water supplies, as defined in R 325.10502, and from off-site domestic wells.
(7) The director shall require an increase or approve a decrease in the isolation area to a public water supply based on the hydrogeological report and act 399.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4413 Type II landfill location restrictions; sensitive areas.

Rule 413. (1) The requirements of this rule apply to type II landfills that are new disposal areas.
(2) A type II landfill shall not be located within either of the following sensitive areas:
(a) A critical dune area that is designated under part 353 of the act.
(b) A high-risk erosion area or environmental area that is designated under part 323 of the act.
(3) A type II landfill shall not be located in a manner that alters or destroys a property which is listed, or is eligible for listing, on the Michigan or national register of historic places.
(4) A type II landfill shall not be located within the range of a threatened or endangered species that is identified under part 365 of the act, unless the applicant demonstrates that the landfill will not have an adverse effect on the threatened or endangered species.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4414

Source: 1993 AACS.

R 299.4415 Type II landfill location restrictions; floodplains.

Rule 415. (1) An owner and operator of A new type II landfill unit, existing landfill unit, or lateral extension of an existing unit that is located within a floodplain shall demonstrate all of the following:
(a) The unit will not restrict the flow of the 100-year flood.
(b) The unit will not reduce the temporary water storage capacity of the floodplain.
(c) The unit will not result in washout of solid waste so as to pose a hazard to human health and the environment.
(d) The unit does not encroach upon the floodway and will not increase upstream or downstream flood stages.
(e) The unit has a natural or compacted soil base which is not less than 10 feet thick and which is in compliance with the criteria specified in R 299.4912.
(f) The distance from the normal water line of the water body to the solid waste boundary of the landfill will not be less than 500 feet.
(g) The design of the landfill will include a dike to preclude floodwater inundation with a top elevation that is not less than 5 feet above the 100-year flood elevation.
(2) The owner and operator of a new disposal area that is proposed in a floodplain shall obtain a permit under part 31 of the act and shall substantiate the need for the disposal area through an environmental assessment which considers alternatives and which assures that all potentially negative impacts can be mitigated.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4416 Type II landfill location restrictions; wetlands.

Rule 416. A new type II landfill unit and a lateral extension of an existing unit shall not be located in wetlands, unless the owner and operator can demonstrate all of the following to the director:

(a) The owner or operator has obtained a permit under part 303 of the act and, to the extent required under part 303 of the act, has demonstrated that a practicable alternative to the proposed landfill that does not involve wetlands is not available.

(b) Construction and operation of the type II landfill unit will not do any of the following:

(i) Cause or contribute to violations of any applicable state water quality standard.

(ii) Violate any applicable toxic effluent standard or prohibition under section 307 of the federal clean water act.

(iii) Jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of a critical habitat, that is protected under the federal endangered species act of 1973.

(iv) Violate any requirement under the federal marine protection, research, and sanctuaries act of 1972 for the protection of a marine sanctuary.

(c) The type II landfill unit shall not cause or contribute to a significant degradation of wetlands. The owner or operator shall demonstrate the integrity of the type II landfill unit and its ability to protect ecological resources by addressing all of the following factors:

(i) Erosion, stability, and migration potential of native wetland soils, muds, and deposits that are used to support the unit.

(ii) Erosion, stability, and migration potential of dredged and fill materials that are used to support the unit.

(iii) The volume and chemical nature of the waste that is managed in the unit.

(iv) Impacts on fish, wildlife, and other aquatic resources and their habitat from release of the solid waste.

(v) The potential effects of a catastrophic release of waste to the wetland and the resulting impacts on the environment.

(vi) Any additional factors, as necessary, to demonstrate that ecological resources in the wetland are sufficiently protected.

(d) To the extent required under part 303 of the act, that steps have been taken to attempt to achieve no net loss of wetlands, as defined by acreage and function, by first avoiding impacts to wetlands to the maximum extent practicable as required by subdivision (b) of this rule, then minimizing unavoidable impacts to the maximum extent practicable, and finally offsetting remaining unavoidable wetland impacts through all appropriate and practicable compensatory mitigation actions, such as the restoration of existing degraded wetlands or creation of man-made wetlands.

(e) Sufficient information is available to make a reasonable determination with respect to the demonstrations specified in subdivisions (a) to (d) of this rule.

History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4417

Source: 1993 AACS.

R 299.4418

Source: 1993 AACS.

R 299.4419 Type II landfill location restrictions; closure of existing units; vertical expansions of existing units.

Rule 419. (1) Existing units that cannot make the demonstrations specified in R 299.4414 pertaining to airports, R 299.4415 pertaining to floodplains, or R 299.4418 pertaining to unstable areas shall close by October 9, 1996, in accordance with R 299.4448 and conduct postclosure activities in accordance with R 299.4449. The deadline for closure required by this rule may be extended up to 2 years if the owner or operator demonstrates both of the following to the director:

(a) There is no alternative disposal capacity.

(b) There is no immediate threat to human health or the environment.

(2) An owner or operator of an existing unit or a preexisting unit that can make the demonstration specified in subrule (1) of this rule may apply for a construction permit for the vertical expansion of the unit if the

applicant demonstrates compliance with subrule (5) of this rule.
(3) The director shall approve the vertical expansion of a unit that is in compliance with R 299.4421(1) and (2).
(4) The director shall not approve a vertical expansion of a type II landfill unit that does not comply with R 299.4421(1) and (2), except in either of the following cases:
(a)The unit contains 2 or more liners and has a leak detection system between the liners and a leachate collection system capable of limiting the head on the primary liner, excluding the sump, to less than 1 foot.
(b) The overfill is constructed with a composite liner system that drains leachate from the overfill to a unit which is in compliance with R 299.4421 (1) and (2), and both of the following conditions are met:
(i) The overfilling only occurs over the portion of the existing unit that has slopes of more than 10%, unless either of the following conditions applies:
(A) The existing unit has slopes of more than 4% and the director determines that little or no settlement will occur in the existing unit based on waste thickness, age, degree of compaction, and other factors.
(B) Inert material is used as a wedge to create adequate slopes. Alternatively, the director shall approve the use of low-hazard industrial waste if the liner system of the unit is equivalent to the design required in part 3 of these rules.
(ii) For unmonitorable units, the overfill contains a leak detection system that is in compliance with the leakage control criteria contained in R 299.4422(3).
(5) The director shall approve the vertical expansion of a unit that meets the liner requirements of this rule if the applicant demonstrates that all of the following conditions are met:
(i) The unit is stable and has a foundation, liner system, and leachaete collection system that can support the overburden pressure.
(ii) Leachate collection pipes in the unit will maintain a bottom slope of 0.5% or more, toward the sump, after consolidation settlement.
(iii) The applicant submits plans for final cover that are in compliance with the final cover requirements specified in R 299.4425.
(iv) The application is otherwise in compliance with the act and these rules and does not conflict with any remedial action at the facility.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4420 Type II landfill design standards; municipal solid waste incinerator ash landfills.

Rule 420. (1) A new unit and a lateral extension of an existing unit at a type II landfill unit that accepts municipal solid waste incinerator ash shall be designed and constructed in accordance with section 11542 of the act, except that a municipal incinerator ash landfill that is an unmonitorable unit shall have a secondary leachate collection system and a flexible membrane liner as part of the secondary liner system.
(2) An existing unit, new unit, and lateral extension of an existing unit at a landfill that accepts municipal solid waste incinerator ash shall be closed with a final cover that is in compliance with section 11542 of the act. Grades of the final cover shall be in compliance with R 299.4425.
(3) An owner and operator of a new unit and a lateral extension of an existing unit at a municipal solid waste incinerator ash landfill shall ensure that all of the following requirements are complied with:
(a) Leachate collection systems that are required by section 11542 of the act are in compliance with R 299.4423.
(b) Secondary leachate collection or leak detection systems that are required by section 11542 of the act are in compliance with R 299.4424.
(c) Compacted clay liners that are required by section 11542 of the act are in compliance with R 299.4913.
(d) Flexible membrane liners that are required by section 11542 of the act are in compliance with R 299.4915.
(4) The director shall approve a process to substantially diminish the toxicity of municipal solid waste incinerator ash or the leachability of the ash, instead of disposal that is required under section 11542(1) of the act, if the applicant for such a process demonstrates all of the following:
(a) That, during storage or processing, ash will be contained within a tank, container, or waste pile that is in compliance with R 299.4124.
(b) The process does not in any way dilute ash constituents as a substitute for adequate treatment.

(c) The process does not create a nuisance.
(d) The process will not produce fugitive dust or other emissions in violation of part 55 of the act.
(e) The waste is tested after processing in accordance with the testing protocol of subrule (5) of this rule.
(5) Municipal solid waste incinerator ash that is processed under section 11542 of the act shall be tested in accordance with the protocol specified in R 299.4118 on a frequency that is adequate to ensure that the criteria specified in subrules (6) and (7) of this rule are met. The applicant shall propose a leaching procedure to simulate native conditions in addition to the leaching procedure specified in R 299.4118.
(6) The director shall approve processed municipal solid waste incinerator ash for recycling or reuse if the processed ash is in compliance with the criteria for inert material that are specified in R 299.4115 to R 299.4117.
(7) The director shall approve processed municipal solid waste incinerator ash for disposal in a type II landfill if the processed ash is in compliance with both of the following provisions:
(a) The ash does not leach constituents in concentrations greater than the toxicity characteristic specified in R 299.9217 based on leaching tests under both acidic and native conditions.
(b) Does not cause any emission that results in a violation of part 55 of the act or otherwise causes unacceptable risks to human health or the environment.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4421
Source: 1993 AACS.

R 299.4422 Type II landfill design standards; leakage control criteria.

Rule 422. (1) A landfill unit that is subject to the requirements of this rule shall be located, designed, and constructed so that the risks posed by leakage through the composite liner required by R 299.4421(1) are minimized. To do so, a landfill unit shall be either of the following:
(a) A monitorable unit which is located over a natural soil barrier and which is in compliance with subrule (2) of this rule so as to restrict the migration of leakage from the unit.
(b) Designed with a double liner system which is in compliance with subrule
(3) of this rule and which is capable of detecting and collecting leakage through the primary composite liner.
(2) To meet the leakage control criteria of this rule, a type II landfill unit that is a monitorable unit may, in addition to the composite liner required in R 299.4421, be located over a natural soil barrier that is sufficient to prevent the migration of leakage from the unit to the uppermost aquifer, for as long as use of the site is restricted under section 11518 of the act, in the event of a failure of the composite liner. Any of the following geologic conditions shall be in compliance with location criteria if verified in accordance with the provisions of R 299.4912:
(a) A natural soil barrier that has a maximum demonstrated permeability of 1.0 x 10-7 cm/sec.
(b) A natural soil barrier that has a thickness and permeability that is sufficient to prevent the migration of leakage from the unit to the uppermost aquifer for that time period (TP) specified in section 11518 of the act. An owner or operator may demonstrate the sufficiency of the natural soil barrier by showing that the time of travel (TOT) through the natural soil barrier is as follows:

$TOT > (t)\ n/(k)$
where: TOT = TP specified in section 11518 of the act
t = thickness of low permeability soil above the
uppermost aquifer
k = maximum permeability of soil
n = soil porosity = 0.5, assuming total porosity equals
effective porosity, unless demonstrated otherwise.

(c) A natural soil barrier underlain by an uppermost aquifer that is sufficiently artesian to prevent the vertical migration of contaminants from the site to the uppermost aquifer by advection or dispersion. An owner or operator utilizing such a design shall demonstrate that sufficient controls exist to maintain artesian conditions for that period after closure specified by section 11518 of the act.

(d) Any combination of hydrogeology and innovative design that minimizes the risk of leakage through the primary composite liner at least as effectively as the conditions specified in subdivision (a), (b), or (c) of this subrule.
(3) To meet the leakage control criteria of this rule, a type II landfill unit may contain a double liner system or equivalent system that is capable of detecting leakage through the primary liner. A double liner system shall consist of all of the following components:
(a) A primary composite liner. For monitorable units that have a secondary composite liner, the soil component of the primary liner is optional on the portion of the side slope that is both of the following:
(i) Of a slope greater than or equal to 20%.
(ii) At a vertical elevation not less than 5 feet above the bottom of the side slope.
(b) A secondary collection system or leak detection system which is located immediately below the primary composite liner and which is in compliance with the requirements of R 299.4424.
(c) A secondary composite liner or any of the following alternate systems:
(i) A composite liner that uses, in place of compacted soil, a natural soil barrier which has an equivalent combination of permeability and thickness as 2 feet of 1.0 x 10-7 cm/sec compacted soil.
(ii) A natural soil barrier underlain by an uppermost aquifer that is sufficiently artesian to prevent the vertical migration of contaminants from the site to the uppermost aquifer by advection or dispersion. An owner or operator utilizing such a design shall demonstrate that sufficient controls exist to maintain artesian conditions for that period after closure specified by section 11518 of the act.
(iii) An alternate system which is approved by the director and which prevents the migration of hazardous substances at least as effectively as the other options specified in this subrule.
(4) Existing disposal areas that permit natural soil barriers in place of liners shall be deemed to be in compliance with the location criteria specified in subrule (2) of this rule if the owner and operator verify the presence of such soil in accordance with existing permits and licenses. Owners and operators of existing disposal areas that were not previously permitted as natural clay sites may demonstrate compliance with either the location criteria specified in subrule (2) of this rule or the design criteria specified in subrule (3) of this rule. Owners and operators shall submit certification that demonstrates compliance in accordance with R 299.4912 and R 299.4921 with the operating license application for the unit. An owner or operator may, at the owner's or operator's discretion, submit either the information specified in R 299.4912 or revised engineering plans to the solid waste control agency before or during construction of the unit. The solid waste control agency shall approve or deny the plans within 90 days of submittal.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4423 Type II landfill design standards; leachate collection and removal systems.

Rule 423. (1) All new units and lateral extensions of existing units at a type II landfill shall have a leachate collection system that is designed and constructed to maintain less than a 1-foot depth of leachate over the primary liner. To do so, the system shall be designed to do all of the following :

(a) Limit the head at any point in the system, excluding the sump, to not more than 1 foot using the design criteria specified in this rule or alternate criteria demonstrated under subrule (5) of this rule.
(b) Extend across the entire bottom of the system.
(c) Be chemically resistant to the waste that is managed in the landfill and the leachate that is expected to be generated and be of sufficient strength and thickness to prevent collapse under the pressures that are exerted by overlying wastes, waste cover materials, and equipment that is used at the landfill.
(d) Minimize clogging during the active life and postclosure care period.
(e) Drain leachate to sumps using pumps that are of a sufficient size to collect and remove liquids from the sump and prevent liquids from backing up into the drainage layer. Each unit shall have its own sump. The design of each sump and removal system shall provide a method for measuring and recording the volume of liquids removed and the depth of leachate in the sump.
(2) Except as provided in subrule (5) of this rule, a leachate collection system shall consist of a soil drainage layer that is designed to the following requirements:
(a) Is a minimum of 1 foot thick and has a hydraulic conductivity equal to or greater than either of the following:

(i) 1.0 x 10-2 centimeters per second.
(ii) 1.0 X 10-3 centimeters per second, if used in conjunction with a geonet or other synthetic drainage material that has a hydraulic conductivity of 1 centimeter per second.
(b) Is free of any organic material and has less than 5% of the material, by weight, pass the Number 200 sieve.
(c) Is placed on a minimum slope of 2% in directions perpendicular to perforated pipes to promote drainage and prevent ponding above the liner.
(d) Is used in conjunction with perforated pipes that are in compliance with the subrule (3) of this rule.
(e) Is free of angular stones or other debris that may puncture, tear, or otherwise damage any flexible membrane liner adjacent to the drainage layer, unless a geosynthetic is provided over the liner to prevent such puncture.
(f) Is capable of preventing puncture of the liner by waste. To do so, the owner or operator may do any of the following:
(i) Increase the thickness to 2 feet using soil that has a hydraulic conductivity of at least 1.0 x 10-4 cm/sec.
(ii) Install a geosynthetic designed to prevent puncture of the liner.
(iii) Limit the type of waste received in the first =5 feet of the unit.
(3) Except as provided in subrule (5) of this rule, a leachate collection system shall include perforated pipes to aid in drainage. The pipes shall be designed to meet all of the following requirements:
(a) Have a wall thickness that is sufficient to withstand overburden pressures.
(b) Have a diameter that is sufficient to withstand the maximum design flow.
(c) A slope of 1% or more in a direction to intercept liquid flow. In addition, an applicant for a new disposal area shall demonstrate that the bottom slope will be 1% or more after consolidation settlement, except as provided for vertical expansions of a unit in R 299.4419.
(d) Be constructed with sufficient manholes and cleanout risers to allow for the cleaning and maintenance of pipes.
(e) Be spaced not more than 50 feet from the high point of the drainage layer. Perforated pipes may be spaced at greater distances, based on a demonstration under subrule (5) of this rule.
(4) All leachate collection systems shall include a filter layer, if necessary, to prevent clogging. A filter layer shall consist of 1 or both of the following:
(a) A graded, cohesionless soil filter which does not have more than 5%, by weight, that passes the no. 200 sieve and which does not permit the passage of soil particles that are more than 3 inches in any dimension.
(b) A geotextile filter that has both of the following:
(i) A hydraulic conductivity, as determined by ASTM D4491, that is capable of passing the projected inflow.
(ii) An apparent opening size that is in compliance with both of the following criteria:
(A) ?95 of the geotextile < 2 d85 of the soil where the ?95 is the apparent opening size of the geotextile at which 5% or less of the soil particles will pass and where the d85 is the soil particle size at which 85% of the sample is finer.
(B) The opening is designed to minimize the influence of retained particles on the permitivity of the geotextile.
(5) The owner and operator of a type II landfill may propose the use of an alternative drainage system design for a primary leachate collection system if the owner and operator can demonstrate, using mounding calculations and data on liner slope, drainage layer permeability, and flow length, that the alternative system will limit the head on the liner to the same extent as the design specified in subrule (3) of this rule and protect the liner system from waste, ultraviolet light, and other deleterious effects.
(6) A new unit and lateral extension of an existing unit at a type II landfill shall have a system for storing leachate outside the active portion if necessary to maintain compliance with the leachate depth requirements of R 299.4432(1). Tanks that are used to store leachate shall be in compliance with the technical standards of 40 C.F.R. §264.193. Surface impoundments, if used, shall be in compliance with the technical standards of 40 C.F.R. §264.221 and shall be operated in a manner that does not create a nuisance. The provisions of 40 C.F.R. §264.193 and 40 C.F.R. §264.221 are adopted by reference in R 299.4136.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4424 Type II landfill design standards; secondary collection systems and leak detection systems.

Rule 424. (1) A secondary collection system shall be designed to operate as a leak detection system.
(2) A secondary collection system shall be capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest practicable time through all areas of the top liner that are likely to be exposed to waste or leachate during the active life and postclosure care period. The requirements of this subrule are satisfied by a system that, at a minimum, satisfies all of the following requirements:
(a) Is designed to have a bottom slope of 1% or more. An applicant for a new disposal area shall demonstrate that the bottom slope will be 1% or more after consolidation settlement, except as provided for vertical expansions of a unit in R 299.4419.
(b) Is designed with either of the following:
(i) Granular drainage materials that have a hydraulic conductivity of 1.0 x 10-2 centimeters per second or more and a thickness of 12 inches or more.
(ii) Synthetic or geonet drainage materials which have a hydraulic conductivity of 1 centimeter per second and a layer thickness that is not less than 100 mils or which have other combinations capable of providing a hydraulic transmissivity of 5.0 x 10-4 meters2 per second.
(c) Is designed with materials which are chemically resistant to the waste that is managed in the landfill and the leachate that is expected to be generated and which are of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials, and equipment used at the landfills.
(d) Is designed and operated to minimize clogging during the active life and postclosure care period.
(e) Is designed with a sump and pumps that are sized to efficiently collect and remove liquids and prevent liquids from backing up into the drainage layer. Each unit shall have its own sump. The design of the sump and the removal system shall provide a method for measuring and recording the liquid volume that is removed.
(3) The director shall approve alternative materials to those specified in subrule (2) of this rule if the owner and operator demonstrate that the alternate design is capable of detecting a primary liner leak at least as effectively.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4425 Type II landfill design standards; final cover.

Rule 425. (1) The owner or operator of a type II landfill unit shall install a final cover system which is designed to minimize infiltration and erosion and which is comprised of an erosion layer underlain by an infiltration layer, as specified in this rule.
(2) Except as provided for existing or preexisting units in subrules (3) and (4) of this rule, the owner or operator of a type II landfill shall install a final cover system that is comprised of all of the following components:
(a) An infiltration layer that is comprised of a composite liner. The lower soil component of such a composite liner shall consist of either of the following:
(i) A minimum of 18 inches of earthen material that has a permeability which is less than or equal to 1.0 x 10-5 cm/sec, as determined by test methods specified in R 299.4920.
(ii) A bentonite geocomposite liner which is in compliance with R 299.4914 and which is underlain by not less than 18 inches of earthen material to protect the liner from waste and minimize the effect of settlement.
(b) An erosion layer that consists of both of the following:
(i) A soil layer which is not less than 2 feet thick, which is immediately above the composite cover liner, and which is designed to do all of the following:
(A) Provide for the lateral drainage of precipitation off the cover of the landfill. The owner or operator may use permeable soil, geosynthetic drainage material, an alternative equivalent material approved by the director, or a combination to provide the lateral drainage.
(B) Minimize frost penetration into the infiltration layer.
(C) Protect the flexible membrane liner from root penetration, ultraviolet light, and other deleterious effects.
(ii) A minimum of 6 inches of earthen material capable of sustaining native plant growth.

(3) The owner or operator of an existing or preexisting type II landfill unit that does not contain a flexible membrane liner in all or portions of the bottom liner system may install a final cover system previously approved by the director over those portions if the final cover system contains both of the following:
(a) An infiltration layer that is comprised of a minimum of 2 feet of earthen material which has a hydraulic conductivity that is less than or equal to 1.0 x 10-7 cm/sec, as determined by test methods specified in R 299.4920. The earthen material shall meet standards for soil liners specified in R 299.4913.
(b) An erosion layer that consists of a minimum of 6 inches of earthen material which is capable of sustaining native plant growth.
(4) The owner or operator of an existing or preexisting type II landfill unit that does not contain a flexible membrane liner in the bottom liner system may enhance the final cover specified in subrule (3) of this rule by adding a flexible membrane liner if the erosion layer specified in subrule (2)(b) of this rule is provided. The addition of the layer shall not constitute a vertical expansion.
(5) The director shall approve an alternative final cover design if the owner or operator of the landfill units demonstrates that the cover design includes both of the following components:
(a) An infiltration layer that achieves an equivalent reduction in infiltration as the infiltration layer specified in subrule (2) or (3) of this rule.
(b) An erosion layer that provides equivalent protection from wind and water erosion as the erosion layer specified in subrules (2) and (3) of this rule.
(6) The final cover of a type II landfill shall have either of the following to meet the gas control requirements of R 299.4433:
(a) A permeable soil layer which is not less than 1 foot thick and which is located directly below the infiltration layer that vents landfill gas to gas risers.
(b) Other means of assuring that gases cannot travel laterally from the site or accumulate in structures.
(7) To prevent the ponding of water on completed fill surfaces, the grading contours shall be sufficient to prevent the development of local depressions due to postconstruction settlement. Slopes of the final cover shall not be less than 4% at any location.
(8) Slopes of the final cover shall not exceed those necessary to prevent erosion and maintain slope stability. The final slope shall not be more than 1 vertical to 4 horizontal at any location, except where necessary to install berms for erosion control. If the final slope is more than 15%, then the slope shall include controls that the applicant demonstrates are sufficient to maintain slope stability, prevent erosion, and allow access. The controls shall be sufficient to limit erosion to not more than 2 tons per acre per year after vegetation is established based on the universal soil loss equation or other method approved by the director. The following ground cover estimates may be used in calculating erosion loss:
(a) Up to 95%, if the closure and postclosure plan provides for all of the following:
(i) Topsoil that has an organic matter content of more than 2.5%.
(ii) Fertilization consistent with the natural resources conservation service critical area planting guide.
(iii) Mowing twice annually until the required coverage is achieved.
(b) Up to 90%, if the closure and postclosure plan for the unit provides for both of the following:
(i) Topsoil that has an organic matter content of more than 1.25%.
(ii) Mowing annually until the required coverage is achieved.
(c) Up to 80%, if the organic content or mowing schedule is not specified.
(d) Other estimates approved by the director, if the estimates are supported by measures to establish vegetation specified in the closure and postclosure plan.
(9) All final covered areas shall be stabilized using appropriate shallow- rooted vegetation for the soil type, slope, and moisture conditions present. Seed and mulch rates shall, at a minimum, be consistent with recommendations contained in the United States department of agriculture document entitled "Natural Resources Conservation Service Critical Area Planting Guide." The natural resources conservation service critical area planting guide is adopted by reference in R 299.4141.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4426
Source: 1993 AACS.

R 299.4427
Source: 1993 AACS.

R 299.4428
Source: 1993 AACS.

R 299.4429 Type II landfill operation; daily and interim cover material and disease vector control.

Rule 429. (1) Except as provided in subrule (2) of this rule, an owner or operator of a type II landfill unit shall cover disposed of solid waste with 6 inches of earthen material at the end of each operating day or at more frequent intervals, if necessary, to control disease vectors, fires, odors, blowing litter, and scavenging. If clay or other low-permeability material is used as daily cover, then the operator shall scrape back the previous day's cover to allow the free movement of liquids and gases through the landfill.

(2) Alternative materials of an alternative thickness, other than at least 6 inches of earthen material, may be used as daily cover at a type II landfill if the alternative material is approved in the landfill operating license. The following alternative materials shall be approved by the director for use as daily cover if the owner or operator of the type II landfill demonstrates that the alternative material and thickness control disease vectors, fires, odors, blowing litter, and scavenging without presenting a threat to human health or the environment by submitting an operational plan for use of the material in accordance with subrule (3) of this rule:

(a) The following manufactured products, designated as class a daily cover material:

(i) Geotextiles.

(ii) Flexible membrane liners.

(iii) Woven mats.

(iv) Spray on materials, such as foams and emulsions.

(b) The following waste materials, designated as class b daily cover, if 95% of the material is retained on a no. 200 sieve:

(i) Chipped tires.

(ii) Wood chips.

(iii) Ash from the combustion of coal or wood.

(iv) Ground shingles and other roofing material that do not contain friable asbestos.

(v) Alum sludge from the treatment of potable water at municipally owned water treatment facilities.

(vi) Foundry sand.

(vii) Dredge spoils.

(viii) Paper mill sludge.

(c) The following waste materials, designated as class c daily cover, if the operational plan provides for documenting the waste is not hazardous, as defined in part 111 of the act, and does not contain hazardous constituents in concentrations exceeding criteria established by the director for daily cover:

(i) Contaminated soil from a leaking underground storage tank containing petroleum products.

(ii) Auto fluff.

(iii) Materials listed in paragraph (b) of this subrule which have less than 95% of the material retained on a no. 200 sieve.

(iv) Other wastes approved by the director.

(3) An application for an alternative daily cover material specified in subrule (2) of this rule shall include an operational plan for the use of the proposed material. The operational plan shall include all of the following information:

(a) The thickness of cover to be used. Alternative materials shall be placed in 6-inch lifts or in a manner that forms a binding crust or matting over the waste.

(b) The method of placement. Alternative daily cover material shall be placed in a manner that allows the free movement of liquids and gases.

(c) For class C alternate daily cover materials specified in subrule (2) of this rule, procedures for testing the alternative material to ensure that it is not hazardous, as defined by part 111 of the act and does not exceed criteria established by the director for daily cover. Test results on class C daily cover shall be maintained in

the operating log.
(d) Documentation that the proposed cover material is either not flammable, or will be used in conjunction with nonflammable material to prevent the spread of fires within the landfill.
(e) Documentation that the proposed cover material is not capable, upon compaction, of producing any emission that results in a violation of part 55 of the act.
(f) The method of storage before use. Alternative material shall be stored in a manner that does not produce fugitive dust or create a nuisance.
(4) The director may grant a temporary waiver from the requirements of subrules (1) and (2) of this rule if the owner or operator demonstrates that there are extreme seasonal climatic conditions that make meeting the requirements impractical.
(5) If an approved daily cover does not meet the performance standards of this rule, then the owner and operator shall modify daily cover application, as necessary, to meet the standards.
(6) To minimize nuisance conditions, the operator of a landfill shall place 1 foot of compacted cover, which may include the 6-inch daily cover, on the surface of any lift that will be exposed for a period of 3 months or more before additional lifts are constructed.
(7) To minimize infiltration, the operator of a landfill may place interim cover on the surface of the landfill and manage runoff from the cover in accordance with R 299.4435. The extent of the interim cover shall be documented in the operating log at least quarterly and shall consist of either of the following:
(a) Not less than 1 foot of low-permeability soil that has a unified soil classification of SC, ML, CL, CL/ML or CH, or another soil type that has a permeability of 1.0 x 10-5 cm/sec or less after compaction. Interim soil cover shall be compacted to the extent necessary to minimize infiltration and prevent leachate discharges through the soil, but need not be compacted to the standards specified in R 299.4913.
(b) A flexible membrane liner.
(8) All daily cover shall be continually maintained unless the removal of daily cover is authorized by the director based upon a demonstration under subrule (2) of this rule.
(9) An owner and an operator of a unit shall prevent or control on-site populations of disease vectors using techniques appropriate for the protection of human health and the environment.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4430 Type II landfill operation; prohibited wastes; procedures for excluding the receipt of prohibited waste.

Rule 430. (1) The operator of a type II landfill shall ensure that the unloading of solid waste is continuously supervised by facility personnel upon receipt.
(2) The following wastes shall not be disposed of in a type II landfill:
(a) Regulated hazardous waste.
(b) PCB's or PCB items, as defined in 40 C.F.R. §761.3.
(c) Bulk or noncontainerized liquid waste or waste that contains free liquids, unless the waste is household waste other than septic waste or the waste is leachate or gas condensate that is approved for recirculation under R 299.4432.
(d) Containers that hold liquid waste, unless the container is household waste or is a small container similar in size to that normally found in household waste.
(e) Sewage.
(f) Materials that would adversely affect a liner or leachate collection and removal system.
(g) Asbestos waste, unless the disposal area complies with 40 C.F.R. §61.154.
(h) Empty drums, unless crushed to eliminate voids.
(i) Used lead acid batteries.
(j) Yard clippings, as specified in the act.
(3) The owner and operator of a landfill shall implement a program at the facility for detecting and preventing the disposal of wastes that are prohibited by subrule (1) of this rule. The program shall include all of the following:
(a) Random inspections of incoming loads.
(b) Inspections of suspicious loads.
(c) Records of any inspections.

(d) Training of facility personnel to recognize prohibited waste.
(e) Procedures for notifying all of the following persons if regulated hazardous waste or PCB waste is discovered at the facility:
(i) The generator of the waste.
(ii) The transporter of the waste.
(iii) The director or his or her designee.
(iv) For PCB waste, the EPA regional administrator.
(v) The certified health department, if any.
(4) The definition of PCB waste and PCB items contained in 40 C.F.R. §761.3 is adopted by reference in R 299.4140. The provisions of 40 C.F.R. §61.154 pertaining to asbestos waste are adopted by reference in R 299.4131.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4431 Type II landfill operation; noise.

Rule 431. (1) Operation of a type II landfill shall not result in noise exceeding the following levels when measured at the common property line nearest the active work area:
(a) For adjacent residential property, 75 dBA.
(b) For adjacent commercial property, 85 dBA.
(c) For adjacent industrial and other property, 90 dBA.
(2) Noise levels may be monitored by the solid waste control agency using weighted decibel measurements, referenced to 20 micropascals, with an audio output meter that is approved by the United States bureau of standards.
(3) Objectionable noises due to intermittence beat, frequency, or shrillness shall be muffled so as not to become a nuisance to adjacent uses.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4432 Type II landfill operation; leachate and secondary collection system monitoring; leachate treatment, storage, and disposal.

Rule 432. (1) The owner and operator of a type II landfill shall remove leachate from a disposal unit as frequently as necessary to ensure that the leachate depth on the liner, excluding the sump, is not more than 1 foot, except after a significant storm event. The leachate depth on the liner shall not be more than 1 foot for more than 7 days after a significant storm event. A significant storm event is a storm that generates 0.1 inches or more of rainfall in 24 hours.
(2) The owner and operator shall monitor the leachate collection system and record all of the following:
(a) Leachate depths on a schedule that assures compliance with this subrule.
(b) The monthly volume of leachate pumped from all units.
(c) The quality of leachate generated from the landfill by sampling and analyzing for both of the following:
(i) The primary inorganic indicators listed in R 299.4450 and primary volatile organics listed in R 299.4453 on a quarterly basis during the active life and on an annual basis during the postclosure period.
(ii) Other constituents listed in R 299.4451, R 299.4452, and R 299.4454 on an annual basis during the active life and postclosure period.
(3) The owner and operator of a sanitary landfill that contains a secondary collection system shall do all of the following:
(a) Remove pumpable liquids in the secondary collection system sumps on a frequency that is sufficient to minimize the head on the bottom liner.
(b) During the active life, do both of the following:
(i) Record in the operating record the amount of liquid removed from each system sump at least weekly.
(ii) Calculate and record in the operating record the average daily flow rate, monthly.
(c) During the postclosure period, do both of the following:
(i) Record in the operating record the amount of liquids removed from each secondary collection system sump, at least monthly. If the liquid level in the sump stays below the pump operating level for 2 consecutive months, the amount of liquids in the sumps may be recorded quarterly. If the liquid level in the sump stays below the pump operating level for 2 consecutive quarters, the amounts of liquids in the sumps

may be recorded semiannually. If at any time during the postclosure care period the pump operating level is exceeded at units on quarterly or semiannual recording schedules, the owner or operator shall return to the monthly recording of amounts of liquids removed from each sump until the liquid level again stays below the pump operating level for 2 consecutive months.

(ii) Calculate and record in the operating record the average daily flow rate, monthly, unless the owner and operator are on a reduced frequency for recording flow under subparagraph (i) of this paragraph. An owner and operator who qualify for recording flow on a reduced frequency are exempt from calculating an average daily flow rate.

(d) If the average daily flow rate removed from the sump of a secondary collection system during any month averages more than the action flow rates specified in subrule (4) of this rule, do one of the following within 30 days of the end of the month in which the exceedance occurred:

(i) Initiate a liquids management plan to reduce the flow in the secondary collection system and the potential impact of this flow and place this plan in the operating record, and for unmonitorable units, comply with the leak detection requirements of R 299.4437. A liquids management plan may provide for increasing the frequency or rate of leachate removal, the suspension of leachate reintroduction, the application of interim cover to reduce leachate generation, or other actions which are appropriate to reduce the flow rate in the secondary collection system. The owner and operator may discontinue actions under a liquids management plan if the average daily flow rate in a subsequent month no longer exceeds the action flow rate which initiated the action.

(ii) Demonstrate to the director that the flow in the secondary collection system is due to construction or consolidation water from the primary liner and not by excessive leakage from the landfill cell. The demonstration shall be certified by a registered professional engineer. In the event the director denies this demonstration, the owner and operator shall initiate a liquids management plan within 30 days of the denial.

(iii) For monitorable units which have a natural soil barrier or equivalent geologic protection below the secondary collection system which meets the criteria of R 299.4422(2), continue to remove pumpable liquids on a frequency which minimizes the head on the bottom liner. Landfill cells which meet this criteria are exempt from the liquids management plan requirements of this paragraph.

(4) In order to evaluate the performance of a secondary collection system, the director shall establish an action flow rate for each landfill cell containing such a system in the operating license. For purposes of this rule and R 299.4437, a "landfill cell" means a portion of a landfill unit which contains a separate secondary collection system and sump. The action flow rate shall be equal to the following:

(a) A value of 5 gallons per acre per day, for unmonitorable units with less than 2 feet of compacted clay in the primary liner.

(b) A value of 25 gallons per acre per day, for monitorable units with less than 2 feet of clay in the primary liner.

(c) A value of 50 gallons per acre per day, for unmonitorable units with at least 2 feet of compacted clay in the primary liner.

(d) A value of 200 gallons per acre per day, for monitorable units with at least 2 feet of compacted clay in the primary liner.

(5) The owner and operator of a type II landfill shall inspect all leachate collection pipes on a schedule that assures the proper operation of the leachate collection system. All pipes shall be cleaned or flushed as necessary to assure proper operation.

(6) The owner and operator of a type II landfill shall ensure that all leachate that is generated by the landfill is disposed of in compliance with part 31 of the act. To do so, the owner and operator shall provide for 1 of the following:

(a) On-site treatment and discharge by a facility that is permitted under part 31 of the act or is otherwise approved by the director.

(b) Discharge, by sewer or pipeline, to an off-site publicly owned treatment works or other facility that is permitted under part 31 of the act or is otherwise approved by the director.

(c) Discharge, by pump and haul, to an off-site publicly owned treatment works or other facility that is permitted under part 31 of the act or is otherwise approved by the director.

(7) The owner and operator of a type II landfill that discharges to an off- site publicly owned treatment

works or other facility that is permitted under part 31 of the act shall do all of the following:
(a) Secure written permission to discharge to the facility before discharge.
(b) Meet any applicable pretreatment requirements.
(c) If the discharge is by pump and haul, provide, for hauling a volume necessary to comply with subrule (1) of this rule.
(8) The owner and operator may recirculate leachate, liquid from the secondary collection system, or gas condensate back to a disposal unit if the director approves a plan for the recirculation in an operating license.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4433 Type II landfill operation; explosive gas control and monitoring.

Rule 433. (1) The owner and operator of a type II landfill shall ensure all of the following:
(a) That the concentration of methane gas generated by the facility is not more than 25% of the lower explosive limit for methane in facility structures, excluding gas control or recovery system components, and the leachate collection system.
(b) That the concentration of methane gas is not more than the lower explosive limit at or beyond the facility property boundary.
(c) That gases generated by the facility do not create a nuisance and are not otherwise in violation of part 55 of the act at the property boundary.
(2) The owner and operator of a type II landfill shall implement a routine methane monitoring program to ensure that the requirements of subrule (1) of this rule are met. The type and frequency of monitoring shall be based on all of the following factors:
(a) Soil conditions.
(b) The hydrogeologic conditions surrounding the facility.
(c) The hydraulic conditions surrounding the facility.
(d) The location of facility structures and property boundaries.
(3) The minimum frequency of methane monitoring shall be quarterly.
(4) If methane gas levels exceeding the limits specified in subrule (1) of this rule are detected from either an active or closed unit, the owner and operator shall do all of the following:
(a) Immediately take all necessary steps to ensure protection of human health and notify the director.
(b) Within 7 days of detection, place, in the operating record, the methane gas levels detected and a description of the steps taken to protect human health.
(c) Within 60 days of detection, implement a remediation plan for the methane gas releases, place a copy of the plan in the operating record, and notify the director that the plan has been implemented. The plan shall describe the nature and extent of the problem and the proposed remedy.
(5) The director may establish alternative schedules for demonstrating compliance under subrule (4) of this rule.
(6) An active gas management system shall be installed at a type II landfill if necessary under subrule (4) of this rule. An active gas management system shall do all of the following:
(a) Include a control system that includes 1 or both of the following:
(i) A system within the unit that is in compliance with subrule (7) of this rule.
(ii) A system outside the unit that is in compliance with subrule (8) of this rule.
(b) Include a collection system for transporting gas to a central point or points for process or disposal.
(c) Include provisions for collecting and draining gas condensate to the leachate collection and removal system.
(d) Prevent the migration of gas out of the unit.
(e) Operate until the waste is stabilized and no longer producing gas in quantities that are in violation of subrule (1) or (4) of this rule.
(7) An active gas control system that is installed within the perimeter of a solid waste disposal unit shall be designed and constructed to do the all of the following:
(a) Function for the active life of the disposal unit and the postclosure period.
(b) Operate safely in hazardous or explosive environments.
(c) Be resistant to corrosion by the constituents of landfill gas.

(d) Withstand all normal landfill conditions, including settlement.
(e) Provide for the collection and draining of gas condensate.
(f) Not adversely affect the integrity of any liner, leachate collection system, or final cover.
(g) Be airtight.
(8) An active gas control system that is located outside the perimeter of the solid waste disposal unit shall consist of either trenches or gas wells which effectively cut off the lateral migration of gas and which extend down to 1 of the following:
(a) A natural soil barrier that is in compliance with R 299.4912.
(b) The seasonal high water table.
(c) The elevation of the liner within the solid waste disposal unit.
(d) Other barriers approved by the director.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4434 Type II landfill operation; air criteria.

Rule 434. (1) The owner and operator of a type II landfill shall ensure that the unit is not in violation of any applicable requirements developed under part 55 of the act or the state implementation plan approved or promulgated by the administrator under section 110 of the clean air act, as amended.
(2) The burning of solid waste, except for the infrequent burning of agricultural wastes, silvicultural wastes, land-clearing debris, diseased trees, or debris from emergency cleanup operations, is prohibited at all type II landfills.
(3) The burning of waste specified in subrule (2) of this rule shall be conducted only in designated areas with the permission of the solid waste control agency and other appropriate authorities. Suitable measures shall be available to extinguish accidental fires.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4435 Type II landfill operation; run-on and runoff control systems.

Rule 435. (1) The owner and operator of a type II landfill shall design, construct, and maintain both of the following systems:
(a) A run-on control system to prevent flow onto the active portion of the landfill during the peak discharge from a 25-year, 24-hour storm.
(b) A runoff control system from the active portion of the landfill to collect and control at least the water volume that results from a 24-hour, 25-year storm.
(2) The owner and operator of a type II landfill shall manage runoff from the active portion of the landfill that does not have interim cover as leachate in accordance with R 299.4432.
(3) The owner and operator of a type II landfill shall control runoff from the active work area of the landfill and shall institute erosion control measures as necessary to comply with part 91 of the act.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4436 Type II landfill operation; surface and groundwater performance requirements.

Rule 436. (1) The operation of a type II landfill unit shall not do any of the following:
(a) Cause a discharge of pollutants into waters of the United States, including wetlands, that is in violation of any of the requirements of the federal clean water act, including the national pollutant discharge elimination system (NPDES) requirements under section 402 of the federal clean water act.
(b) Cause the discharge of a nonpoint source of pollution to waters of the United States, including wetlands, that is in violation of any of the requirements of an areawide or statewide water quality management plan that has been approved under section 208 or 319 of the federal clean water act.
(c) Cause a discharge in violation of part 31 of the act or rules promulgated under part 31 of the act.
(2) The owner and operator of a type II landfill shall conduct a surface water monitoring program approved by the director for any surface water that may receive runoff from the active work area. Monitoring results shall be submitted to the director or his or her designee not more than 30 days after the end of the calendar quarter.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4437 Landfill operation; leak detection systems.

Rule 437. (1) For unmonitorable units, the secondary collection system is also a leak detection system. To evaluate the performance of a leak detection system, the director shall establish a response flow rate for each landfill cell that contains a leak detection system in the operating license for the unit. The response flow rate for a leak detection system is determined by the following criteria:

(a) By using a value of 200 gallons per acre per day for A landfill design that has a primary liner which uses 2 feet or more of compacted clay. This flow rate accounts for water from the consolidation of clay or natural groundwater.

(b) By using a value of 25 gallons per acre per day for A landfill design which has A primary liner without 2 feet or more of compacted clay.

(2) If the average daily flow rate removed from the sump of a leak detection system is more than the action flow rate for that cell specified in R 299.4432, the owner and operator shall evaluate the chemical characteristics of liquid in the leak detection system by sampling and analyzing the system in accordance with subrule (6) of this rule and evaluating for the presence of a leak by a statistical test under R 299.4908, a trend analysis, or other means. Before solid waste is placed in any new unit that has a leak detection system, the owner and operator may, at their discretion, establish a baseline concentration of constituents in the secondary collection system based on an analysis of representative samples from the system.

(3) The owner and operator of a landfill shall conduct the response actions required under subrule (5) of this rule if monitoring of the leak detection system determines that both of the following apply to liquid that is removed from the system:

(a) The average daily flow rate is more than the response flow rate that is established for the unit under subrule (1) of this rule.

(b) The liquid contains hazardous substances indicative of leachate from the unit.

(4) The owner and operator of a landfill that has a leak detection system that exceeds the response flow rate may demonstrate to the director that hazardous substance concentrations present are not above the baseline concentration established pursuant to subrule (2) of this rule or that the flow is due to construction or consolidation water from the primary liner and is not due to excessive leakage from the unit. The demonstration shall be certified by a registered professional engineer. Upon director approval of a demonstration, the owner and operator shall be exempt from the response action plan requirements of this rule.

(5) An owner and operator who are required to conduct response actions pursuant to this rule shall take all of the following actions:

(a) Within 7 days of a determination that the response flow rate has been exceeded, notify the director, in writing, that the response flow rate has been exceeded.

(b) Submit a preliminary written assessment to the director within 14 days of a determination that the response flow rate has been exceeded. A preliminary written assessment shall include all of the following information for the landfill cell in which the response flow rate was exceeded:

(i) The amount of liquids removed from the leak detection system.

(ii) The likely sources of liquids, including the depth of leachate in the leachate collection system.

(iii) The possible location, size, and cause of any leaks.

(iv) The short-term actions taken and planned.

(c) Determine, to the extent practicable, the location, size, and cause of any leak.

(d) Determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the landfill cell for inspection, repairs, or controls, and whether or not the unit should be closed.

(e) Determine any other short-term and longer-term actions to be taken to mitigate or stop any leaks.

(f) After a determination that the response flow rate has been exceeded, and for as long as the flow rate in the system exceeds the response flow rate, the owner or operator shall submit to the director, within 30 days of the end of the calendar quarter, a report that summarizes the results of any remedial actions taken and planned.

(g) To make the leak or remediation determinations specified in this subrule, the owner or operator shall do all of the following:

(i) Assess the source of liquids and amounts of liquids by source.

(ii) Conduct a fingerprint, hazardous constituent, or other analysis of the liquids in the system to identify the

source of liquids and possible location of any leaks and the hazard and mobility of the liquid.
(iii) Assess the seriousness of any leaks in terms of potential for escaping into the environment or document why the assessments are not needed.
(6) An owner or operator who is required to evaluate the chemical characteristics of a leak detection system under this rule shall sample and analyze for the constituents listed in R 299.4450 to R 299.4454 or the approved hydrogeological monitoring plan, quarterly during the active life and postclosure period, except as provided in subrule (7) of this rule, and shall submit the results of the monitoring and any required notifications and reports to the director not more than 30 days after the end of the calendar quarter. If none of the constituents or their breakdown products are detected in leachate at practical quantitation limits approved by the director for 2 consecutive sampling events, then the owner and operator may reduce the frequency of analysis of the constituents in the leak detection system to annually for as long as the constituents are not detected in the leachate.
(7) The owner or operator of a landfill unit who initiates chemical characterization of a leak detection system or response actions after exceeding an action flow rate or response flow rate may discontinue the action if the average daily flow rate in a subsequent calendar month no longer exceeds the applicable flow rate that initiated the action.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4438 Type II landfill operation; recordkeeping requirements.

Rule 438. (1) The owner and operator of a type II landfill unit shall record and retain, near the facility in an operating record or in an alternative location approved by the director, all of the following information as it becomes available:
(a) Any location restriction demonstration that is required under this part.
(b) Inspection records, training procedures, and notification procedures that are required under R 299.4430.
(c) Gas monitoring results from monitoring and any remediation plans that are required under R 299.4433.
(d) Any type II landfill unit design documentation for the placement of leachate or gas condensate in a type II landfill unit as required by these rules.
(e) Any demonstration, certification, finding, monitoring, testing, or analytical data required by these rules for groundwater or secondary collection system monitoring.
(f) Records of the quantity of waste received that are required to determine payments into the perpetual care fund.
(g) Closure and postclosure care plans and any monitoring, testing, or analytical data required by these rules.
(h) Any cost estimates and financial assurance documentation required by these rules.
(i) Test results documenting that class C alternate daily cover material meets criteria established by the director for daily cover.
(2) The owner and operator shall notify the director when the documents specified in subrule (1) of this rule have been placed in or added to the operating record. All information that is contained in the operating record shall be furnished upon request to the director or be made available at reasonable times for inspection by the director.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4439

Source: 1993 AACS.

R 299.4440 Type II landfill groundwater monitoring; detection monitoringprogram.

Rule 440. (1) Detection monitoring is required at type II landfill units at all groundwater monitoring wells defined in R 299.4906. At a minimum, a detection monitoring program for a type II landfill shall include monitoring for all of the following constituents:
(a) The primary indicators listed in R 299.4450 and pH, at least quarterly during the active life and semiannually during the postclosure period.
(b) The following constituents listed at least semiannually during the active life of the facility and the postclosure period, except as provided in subrules (2) to (6) of this rule:

(i) Heavy metals that are listed in R 299.4452.
(ii) Primary volatile organic constituents listed in R 299.4453.
(iii) Secondary organic constituents listed in R 299.4454.
(2) The director shall waive the sampling and analysis of some or all of the heavy metals specified in R 299.4452 if other inorganic indicator parameters listed in R 299.4450 or R 299.4451 provide a reliable indication of inorganic releases from the unit to groundwater. In determining whether to approve a waiver, the director shall consider all of the following factors:
(a) The types, quantities, and concentrations of constituents in the wastes that are managed at the type II landfill unit.
(b) The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the type II landfill unit.
(c) The detectability of indicator parameters, waste constituents, and reaction products in the groundwater.
(d) The concentration or values and coefficients of variation of monitoring parameters or constituents in the groundwater background.
(3) The owner and operator of a type II landfill unit that contains a secondary collection system shall be deemed to have met the criteria of subrule (2) of this rule and may conduct sampling and analysis for primary indicators listed in R 299.4450 in place of the heavy metals listed in R 299.4452 if all of the following conditions are met:
(a) Leachate monitoring shows that the concentration of all of the indicators in leachate is not less than 10 times the concentration in groundwater.
(b) Secondary collection system monitoring shows all of the following:
(i) That the allowable flow rate has not been exceeded.
(ii) That the concentration of 2 or more indicators in the system is not more than the following threshold values for 2 consecutive sampling events:
(A) For chlorides, 250 mg/l.
(B) For iron, 0.3 mg/l.
(C) For sulfates, 250 mg/l.
(D) For total inorganic nitrogen, 10 mg/l.
(E) For total dissolved solids, 500 mg/l.
(F) For other constituents, a value approved by the director.
(iii) That volatile organics listed in R 299.4453 have not been detected in the secondary collection system.
(iv) That the concentration of metals listed in R 299.4452 has not exceeded 1/10 the value specified in R 299.4123.
(c) The unit is a monitorable unit.
(d) The concentration of the indicators in groundwater is normally distributed.
(4) The director shall delete any of the monitoring parameters listed in R 299.4452 to R 299.4454 for a type II landfill unit if it can be shown that the removed constituents are not reasonably expected to be in or derived from the waste that is contained in the unit. An owner or operator may demonstrate that a constituent is not expected to be in or derived from the waste if the constituent and any breakdown products are not detectable in leachate at practical quantitation limits approved by the director based on historic analysis of leachate from not less than 2 sampling events.
(5) The owner and operator of a type II landfill may apply to the director for an appropriate alternative frequency for repeated sampling and analysis for constituents specified in R 299.4452 to R 299.4454, during the active life, including closure, and the postclosure care period. The alternative frequency during the active life, including closure, shall be at least annually. The alternative frequency shall be based on consideration of all of the following factors:
(a) The lithology of the aquifer and unsaturated zone.
(b) The hydraulic conductivity of the aquifer and unsaturated zone.
(c) The groundwater flow rates.
(d) The minimum distance of travel between waste and the closest downgradient monitoring well screen, or the presence of an alternative monitoring system, such as a secondary collection system.
(e) The resource value of the aquifer.
(6) The owner or operator of a type II landfill unit shall be deemed to meet the criteria of subrule (5) of this

rule and may reduce sampling of the following constituents to the following frequency during the active life and postclosure period if the following conditions are met as applicable:

(a) The heavy metals listed in R 299.4452 and secondary organic constituents listed in R 299.4454 to annually if the active portions of the unit contain a composite liner underlain by a natural soil barrier in compliance with the leakage control criteria of R 299.4422(2).

(b) For monitorable units which contain a secondary collection system in the active portion, but which are not underlain by a natural soil barrier meeting the criteria of R 299.4422(2), all constituents listed in R 299.4450 to R 299.4454 to the following frequency:

(i) To annually, if the average daily flow rate in the secondary collection system of all landfill cells in the active portion does not exceed the following flow rates during the previous 6 months:

(A) A value of 5 gallons per acre per day for landfill cells that have less than 2 feet of compacted clay in the primary liner.

(B) A value of 50 gallons per acre per day for landfill cells that have not less than 2 feet of compacted clay in the primary liner.

(ii) To semiannually, if the average daily flow rate in the secondary collection system of any landfill cell in the active portion has exceeded the flow rates specified in paragraph (i) of this subdivision in the previous 6 months, but has not exceeded the following action flow rates for the cell during the previous 6 months:

(A) A value of 25 gallons per acre per day for landfill cells that have less than 2 feet of compacted clay in the primary liner.

(B) A value of 200 gallons per acre per day for landfill cells that have not less than at least 2 feet of compacted clay in the primary liner.

(c) For monitorable units that contain a secondary collection system in the active portion underlain by a natural soil barrier meeting the criteria of R 299.4422(2), to annually if the average daily flow rate in the secondary collection system of any landfill cell in the active portion has not exceeded the following flow rates during the previous 6 months:

(i) A value of 25 gallons per acre per day for landfill cells that have less than 2 feet of compacted clay in the primary liner.

(ii) A value of 200 gallons per acre per day for landfill cells that have not less than 2 feet of compacted clay in the primary liner.

(7) A minimum of 4 independent samples from each background and downgradient well shall be collected and analyzed during the first sampling event. At least 1 sample from each background and downgradient well shall be collected and analyzed during subsequent sampling events.

(8) If the owner and operator determine, pursuant to a statistical test specified in R 299.4908, that there is a statistically significant increase over background for 1 or more of the constituents at any monitoring well at the solid waste boundary or at other monitoring locations required by the director, then the owner and operator shall do both of the following:

(a) Within 14 days of the determination, place a notice in the operating record that indicates which constituents have shown statistically significant changes from background levels and notify the director that the notice is placed in the operating record.

(b) Prepare an assessment monitoring plan that is in compliance with the requirements of R 299.4441 and a response action plan that is in compliance with the requirements of R 299.4442 within 90 days of the determination, except as provided in subrule (9) of this rule.

(9) The owner and operator may demonstrate to the director that a source other than a type II landfill unit caused the contamination or that the statistically significant increase resulted from error in sampling, analysis, or statistical evaluation or from natural variation in groundwater quality. A report that documents the demonstration shall be certified by a qualified groundwater scientist, be submitted to the director within 60 days of the determination specified in subrule (8) of this rule, and be placed in the operating record. If a successful demonstration is made and documented, then the owner or operator may continue detectionmonitoring as specified in this rule. If the director notifies the owner and operator that a successful demonstration has not been made, then, within 30 days of notification by the director, the owner and operator shall initiate an assessment monitoring program as required in R 299.4441.

History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4441
Source: 1993 AACS.

R 299.4442
Source: 1993 AACS.

R 299.4443
Source: 1993 AACS.

R 299.4444
Source: 1993 AACS.

R 299.4445
Source: 1993 AACS.

R 299.4446
Source: 1993 AACS.

R 299.4447
Source: 1993 AACS.

R 299.4448
Source: 1993 AACS.

R 299.4449
Source: 1993 AACS.

R 299.4450 Type II landfill monitoring; primary inorganic indicators.

Rule 450. (1) All of the following constituents are primary inorganic indicators for purposes of monitoring type II landfills under this part, unless alternate inorganic indicators are approved under subrule (3) of this rule:

(a) Chlorides.

(b) Iron.

(c) Sulfates.

(d) Total inorganic nitrogen.

(e) Total dissolved solids.

(2) To be considered a primary inorganic indicator, both of the following conditions shall be met:

(a) The concentration of the constituent in leachate shall be high enough to ensure detection at the solid waste boundary in the event of a release from the unit.

(b) An appropriate statistical method that meets the requirements of R 299.4908 is available to ensure early detection in the event of a release from the unit.

(3) An owner and operator may, at their discretion, propose 1 or more constituents from R 299.4451 to replace 1 or more indicators listed in subrule (1) of this rule. The director shall approve the use of alternate indicators if the owner and operator demonstrate that the conditions of subrule (2) of this rule are met and the proposed alternates will detect leakage from the unit at least as effectively.

(4) The constituents listed in this rule shall be analyzed in accordance with methods contained in the publication entitled "Standard Methods for the Examination of Water and Wastewater, 19th edition," which is adopted by reference in R 299.4139 or by other methods approved by the director or his or her designee.

History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4451 Type II landfill monitoring; alternate indicators.

Rule 451. (1) The following constituents are alternate indicators for purposes of monitoring type II landfills under this part:

(a) Magnesium.

(b) Manganese.
(c) Potassium.
(d) Sodium.
(e) Bicarbonate alkalinity.
(f) Carbonate alkalinity.
(g) Conductivity.
(h) Phenolics.
(i) Cyanide.
(j) Total organic carbon.
(k) Chemical oxygen demand.
(l) Boron.
(2) A person may propose constituents other than those listed in this rule as an alternate indicator.
(3) The constituents listed in this rule shall be analyzed by methods specified in the EPA document entitled "Standard Methods for the Examination of Water and Wastewater, 19th edition," which is adopted by reference in R 299.4139, or by other methods approved by the director or his or her designee.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4452 Type II landfill monitoring; metals.

Rule 452. (1) The constituents in this rule shall be considered heavy metals for purposes of type II landfill monitoring. Samples for the metals from groundwater or secondary collection systems shall be field-filtered before analysis, unless the director determines that filtered samples alone do not accurately measure the concentration of metals in the groundwater or in a secondary collection system at the facility. Samples of leachate shall not be filtered before analysis.
(2) The following metals shall be analyzed in accordance with subrule (3) of this rule:
(a) Antimony.
(b) Arsenic.
(c) Barium.
(d) Beryllium.
(e) Cadmium.
(f) Chromium.
(g) Cobalt.
(h) Copper.
(i) Lead.
(j) Nickel.
(k) Selenium.
(l) Silver.
(m) Thallium.
(n) Vanadium.
(o) Zinc.
(3) The metals listed in this rule shall be analyzed by methods that are contained in the publication entitled "Standard Methods for the Examination of Water and Wastewater, 19th edition," which is adopted by reference in R 299.4139 or by other methods approved by the director or his or her designee.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4453 Type II landfill monitoring; primary volatile organic constituents.

Rule 453. (1) The constituents specified in this rule are considered primary volatile organic constituents for purposes of type II landfill monitoring.
(2) The following are halogenated volatile organic constituents:
(a) Bromodichloromethane.
(b) Bromoform; tribromomethane.
(c) Carbon tetrachloride.
(d) Chlorobenzene.
(e) Chloroethane; ethyl chloride.

(f) Chloroform; trichloromethane.
(g) Dibromochloromethane; chlorodibromomethane.
(h) o-Dichlorobenzene; 1,2-dichlorobenzene.
(i) p-Dichlorobenzene; 1,4-dichlorobenzene.
(j) 1,1-Dichloroethane; ethylidene chloride.
(k) 1,2-Dichloroethane; ethylene dichloride.
(l) 1,1-Dichloroethylene; 1,1-dichloroethene; vinylidene chloride.
(m) cis-1,2-Dichloroethylene; cis-1-2-dichloroethene.
(n) Trans-1,2-dichlorothylene; trans-1,2-dichloroethene.
(o) 1,2-Dichloropropane; propylene dichloride.
(p) cis-1,3-dichloropropene.
(q) Trans-1,3-dichloropropene.
(r) Methyl bromide; bromomethane.
(s) Methyl chloride; chloromethane.
(t) Methylene bromide; dibromomethane.
(u) Methylene chloride; dichloromethane.
(v) Methyl iodide; iodomethane.
(w) 1,1,1,2-Tetrachloroethane.
(x) 1,1,2,2-Tetrachloroethane.
(y) Tetrachloroethylene; tetrachloroethene; perchloroethylene.
(z) 1,1,1-Trichloroethane; methyl chloroform.
(aa) 1,1,2-Trichloroethane.
(bb) Trichloroethylene; trichloroethene.
(cc) Trichlorofluoromethane.
(dd) 1,2,3-Trichloropropane.
(ee) Vinyl chloride.
(3) All of the following are aromatic volatile organic constituents:
(a) Benzene.
(b) Ethyl benzene.
(c) Sytrene.
(d) Toluene.
(e) Xylenes.
(4) The constituents listed in this rule shall be analyzed using methods that are contained in the publication entitled "Standard Methods for the Examination of Water and Wastewater, 19th edition," which is adopted by reference in R 299.4139, or by other methods approved by the director or his or her designee.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4454 Type II landfill monitoring; secondary organic constituents.

Rule 454. (1) The constituents specified in this rule are considered secondary volatile organic constituents for purposes of type II landfill monitoring.
(2) All of the following are secondary organic constituents:
(a) Acetone.
(b) Acrylonitrile.
(c) Bromochloromethane.
(d) Carbon disulfide.
(e) 1,2-Dibromo-3-chloropropane; DBCP.
(f) 1,2-Dibromoethane; ethylene dibromide; EDB.
(g) Methyl ethyl ketone; 2-butanone.
(h) 4-Methyl-2-pentanone; methyl isobutyl ketone.
(i) Trans-1,4-dichloro-2-butene.
(j) 2-Hexanone; methyl butyl ketone.
(3) The constituents listed in this rule shall be analyzed using methods that are contained in the publication entitled "Standard Methods for the Examination of Water and Wastewater, 19th edition," which is adopted by

reference in R 299.4139 or by other methods approved by the director or his or her designee.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

PART 5. SOLID WASTE TRANSFER FACILITIES AND PROCESSING PLANTS

R 299.4501 Facilities exempted from construction permit and license requirements; operating requirements for facilities exempted; facility classification; facilities licensed before effective date of act.

Rule 501. (1) Transfer facilities are not subject to the construction permit and license requirements of the act if they are in compliance with the criteria of section 11529 of the act.
(2) A solid waste transfer facility that is exempted from licensure as a transfer facility shall be operated in accordance with R 299.4507 in a manner that does not create a nuisance or public health or environmental hazard.
(3) Based on design and type of refuse received, solid waste transfer facilities are classified as follows:
(a) A type A facility is a facility that is designed and operated to receive solid waste primarily from mechanically unloaded vehicles.
(b) A type B facility is a facility that is designed and operated to receive domestic and commercial solid waste from vehicles unloaded by hand.
(4) Transfer facilities and processing plants that are licensed before the effective date of the act are not required to apply for construction permits, except for facility expansion.
History: 1979 ACS 9, Eff. Jan. 6, 1982; 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4502
Source: 1993 AACS.

R 299.4503
Source: 1982 AACS.

R 299.4504 Construction permits; requirements before issuance.

Rule 504. (1) Before being issued a construction permit, an applicant shall do all of the following:
(a) Submit a hydrogeological report and monitoring program as specified by the director and obtain approval of the report and program.
(b) Submit engineering plans that are prepared and sealed by a registered professional engineer as required by act 299 and obtain approval of the plans. The plans shall include all of the following information:
(i) The specific location of the facility as shown on a vicinity map. (ii) The location of public roadways, habitable structures, and places of public use on the site and on other properties that are influenced by the project.
(iii) The legal description and site boundaries.
(iv) The means of limiting access, including fencing, gates, natural barriers, or other methods.
(v) Details of an approved method of collecting, storing, and removing liquid wastes that result from the operation of the facility.
(vi) Details, drawings, and specifications of all structures, equipment, and site plans.
(vii) The general layout of equipment and a flow pattern. (viii) A detailed description and statement, in paragraph form, of the facilities and procedures that are intended to handle salvage and heavy or bulky items, store solid waste, and control dust, odors, and fire. (ix) The location of existing and proposed utilities that are available to the site.
(x) The method of volume reduction, if used, such as compacting, grinding, compression, or tamping equipment.
(xi) Daily cleanup procedures.
(xii) The types of solid waste to be handled.
(xiii) An explanation of how the facility is consistent with the approved solid waste management plan described in part 7 of these rules.
(xiv) Other details that are required by the director.

(c) Submit an environmental assessment, including all of the following information:
(i) A description of the existing environment.
(ii) The anticipated environmental impact of proposed action.
(iii) Alternatives considered.
(iv) Mitigating measures.
(2) In addition to the requirements of subrule (1) of this rule, an applicant for a processing plant construction permit shall submit all of the following information pertaining to engineering plans:
(a) Drawings and specifications of the site plan, including all of the following:
(i) Existing and proposed drainage patterns.
(ii) Utilities.
(iii) Structures and equipment.
(iv) Streams.
(v) Contours.
(vi) Significant environmental features.
(b) The layout of equipment and the flow pattern of wastes through the processing system.
(c) A detailed statement, in paragraph form, of the equipment, facilities, and procedures to be used in processing wastes to be handled at the plant, including the methods of separation and other processing.
(d) A description of the final disposition of residues, end products, and by-products.
(e) A description of the methods for maintaining noise and vibration at levels that do not create a public nuisance or a health hazard.
(f) Provision for routine maintenance of the plant and equipment. (3) The owner and operator of a solid waste processing plant shall obtain the necessary air use permits under part 55 of the act before construction.
History: 1979 ACS 9, Eff. Jan. 6, 1982; 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4505 Special design and location requirements for transfer facilities and processing plants.

Rule 505. (1) All facility containers shall be leakproof and shall be manufactured of rat-proof material.
(2) A type A transfer facility shall consist of a building that has walls and a roof or shall be otherwise enclosed to satisfactorily control dust and papers.
(3) A solid waste transfer facility or processing plant shall not be located in a floodplain or wetland unless it meets all of the following requirements:
(a) The site does not encroach upon the floodway and will not increase upstream or downstream flood stages.
(b) The location can be substantiated through an environmental assessment which considers alternatives and which assures that all potentially negative impacts can be mitigated.
(c) The design will include a dike to preclude floodwater inundation with a top elevation that is not less than 5 feet above the 100-year floodplain.
(d) Where applicable, an applicant shall obtain a permit under parts 31 and 303 of the act.
(4) A solid waste transfer facility or processing plant that is located within 500 feet of a residence shall be obscured by a fence which is not less than 8 feet high and which is 75% screening if the residence is established before a construction permit for the facility is issued.
History: 1979 ACS 9, Eff. Jan. 6, 1982; 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4506
Source: 1993 AACS.

R 299.4507
Source: 1993 AACS.

R 299.4508
Source: 1982 AACS.

R 299.4509
Source: 1993 AACS.

PART 6. SOLID WASTE TRANSPORTING UNITS

R 299.4601
Source: 1982 AACS.

R 299.4602
Source: 1982 AACS.

PART 7. SOLID WASTE MANAGEMENT PLANS

R 299.4701
Source: 1982 AACS.

R 299.4702
Source: 1982 AACS.

R 299.4703
Source: 1982 AACS.

R 299.4704
Source: 1982 AACS.

R 299.4705
Source: 1982 AACS.

R 299.4706
Source: 1982 AACS.

R 299.4707
Source: 1982 AACS.

R 299.4708
Source: 1982 AACS.

R 299.4709
Source: 1982 AACS.

R 299.4710
Source: 1982 AACS.

R 299.4711
Source: 1982 AACS.

R 299.4712
Source: 1982 AACS.

PART 8. GRANTS

R 299.4801
Source: 1982 AACS.

R 299.4802
Source: 1982 AACS.

R 299.4803
Source: 1982 AACS.

R 299.4804

Source: 1982 AACS.

R 299.4805
Source: 1982 AACS.

R 299.4806
Source: 1982 AACS.

R 299.4807
Source: 1982 AACS.

PART 9. LANDFILL CONSTRUCTION PERMITS AND OPERATING LICENSES

R 299.4901 Advisory analysis; purpose.

Rule 901. The purpose of the advisory analysis before application is made for a landfill construction permit under section 11510 of the act is to do all of the following:

(a) To inform the applicant of other permits that may be required for the proposed disposal area, such as air emission and water discharge permits or soil erosion and sedimentation control permits.

(b) To provide information on known conditions that may affect the proposed site.

(c) To discuss the application and submission requirements and procedures.

(d) To comment on any work plans that are submitted by the applicant to complete the hydrogeological study or other work that is required to complete a construction permit application.

History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4902 Landfill construction permit applications; content.

Rule 902. (1) A construction permit application for a landfill shall include 3 copies of all of the following information:

(a) All of the following general information on a form provided by the director:

(i) The name and location of the facility.

(ii) The name and address of the operator, including the name and telephone number of a contact person for the operator.

(iii) The name and address of the property owner and any mineral rights owners, including a name and telephone number of a contact person for the property owner.

(iv) The type of disposal area and application type proposed.

(v) The type of waste proposed for disposal.

(vi) The number of acres and design capacity applied for. for horizontal and vertical expansions, the application shall also specify existing permitted acreage, design capacity, and capacity remaining.

(vii) The amount of the application fee.

(viii) The signature of the owner and proposed operator.

(b) Construction permit application fees specified by the act.

(c) An environmental assessment that contains the information specified by R 299.4903.

(d) A hydrogeological report that is in compliance with R 299.4904.

(e) A hydrogeological monitoring plan that is in compliance with R 299.4905.

(f) Topographic maps that are in compliance with R 299.4909.

(g) Engineering plans and engineering reports, as specified in R 299.4910.

(h) The operation plans specified in R 299.4911.

(i) The construction quality assurance plans specified in R 299.4916.

(2) To demonstrate consistency with the approved county solid waste management plan, an applicant for a construction permit application for a landfill shall include either of the following with the application:

(a) A letter, resolution, or other document from the body designated in the approved county solid waste management plan that indicates that the proposed disposal area is consistent with the approved county solid waste management plan.

(b) If the county determines that a disposal area is inconsistent with the approved plan, or if the planning agency refuses to provide a document in accordance with subdivision (a) of this subrule, documentation of

this finding or refusal and a statement from the owner or operator that describes why he or she believes that the proposed disposal area is consistent with the county plan based on the requirements of the plan. (3) A construction permit application for any landfill facility that has been determined, by the hydrogeological report under R 299.4904 or otherwise, to be a source or probable source of groundwater contamination shall include a remedial action plan that is in compliance with part 201 of the act and these rules.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4903 Landfill environmental assessment; contents.

Rule 903. (1) An environmental assessment for a landfill shall satisfy all of the following requirements:
(a) Document consistency with the county solid waste plan.
(b) Identify necessary state and federal permits.
(c) Document compliance with the location standards specified in these rules.
(d) Demonstrate compliance with the performance standards for surface water, groundwater, and air quality specified in these rules.
(2) An environmental assessment shall contain all of the following information:
(a) A description of the proposed facility, including all of the following:
(i) The type and size of the disposal area.
(ii) The public roads to be used to access the facility.
(iii) The anticipated volume of waste to be received per day.
(iv) The anticipated counties to be served.
(v) The anticipated useful life of the facility.
(b) A description of the existing environment, including all of the following:
(i) The existing topography, land use, and residences that surround the facility, which shall be shown on maps as specified in subrule (3) of this rule.
(ii) Existing air quality, including a wind rose from the closest available station.
(iii) The hydrology, including both of the following records from the nearest available station:
(A) The magnitude of the 24-hour, 25-year storm.
(B) The average annual rainfall.
(iv) The maximum floodplain elevation of surface waters proximate to the facility.
(v) A list of any endangered or threatened species whose range lies within the property boundaries of the facility.
(vi) A list of historic or archaeological sites proximate to the property boundary, including any listed on the state or natural register of historic places.
(vii) A list of any known sites of environmental contamination, proximate to the facility, including sites that are listed under part 201 of the act.
(viii) Identification of any significant public resource within or adjacent to the proposed facility boundary.
(ix) Identification of any airports within 10,000 feet of the facility.
(c) A listing of required governmental permits and licenses that are required for the disposal area and interrelationship with other solid waste projects.
(d) A statement of the anticipated environmental impacts of the project. The statement shall elaborate on the impact on each component of the environment that is included in the description of the existing environment.
(e) A listing of alternative actions to achieve waste disposal in the county or region, including all of the following:
(i) Alternatives considered.
(ii) Quantitative and qualitative descriptions of each alternative in terms of both positive and negative economic and environmental impacts.
(iii) The alternative of no action.
(f) A summary statement on the unavoidable adverse impacts.
(g) A statement of protective and corrective measures that will be taken to reduce and mitigate adverse impacts to acceptable levels.
(3) In addition to the information specified in subrule (1) of this rule, an environmental assessment shall include all of the following graphic displays and references:

(a) Maps that show the location of the proposed action, if applicable, with respect to communities or features that are readily identifiable as locations in the state. Maps shall be of a reasonable size, preferably 8 by 11 inches, or of a size that can easily be incorporated in a standard statement. A map or maps shall be provided that show the location of the project within the state, within the region, and within the immediate environmental setting of the project.
(b) Maps, diagrams, or photographs that illustrate the relationship of the disposal area to the environmental element or elements being impacted.
(c) References to the literature or other sources of information from which data in the environmental impact statement is taken and upon which conclusions are based.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4904 Contents of a hydrogeological report.

Rule 904. (1) The purpose of a hydrogeological report for a landfill is to do all of the following:
(a) To determine existing groundwater quality, including the areal and vertical extent of any groundwater contamination.
(b) To determine background groundwater quality in the uppermost aquifer.
(c) To determine the groundwater level and to determine compliance with the groundwater isolation requirements of these rules and, if necessary, to define engineering modifications to reduce the groundwater level.
(d) To define a proposed groundwater monitoring program.
(e) To define all of the following aquifers:
(i) The uppermost aquifer and aquifers that are hydraulically interconnected to the uppermost aquifer beneath the facility property.
(ii) Any aquifer that is utilized by type I and type IIa public water supplies, as defined in R 325.10502, within ½ mile of the proposed active work area.
(iii) Any aquifer that is utilized by type IIb and type III public water supplies, as defined in R 325.10502, within 1,000 feet of the proposed active work area.
(f) To define the areal and vertical extent of the site earth materials under the proposed facility.
(2) Hydrogeological studies shall be prepared by, or under the direction of, a qualified groundwater scientist or geologist.
(3) A determination of hydrogeological conditions shall cover sufficient area to allow for a definition of the potential impact of the landfill on groundwater.
(4) A hydrogeological report for a landfill or other disposal area shall include all of the following:
(a) A determination of the background groundwater quality.
(b) A map of the site and surrounding area which is drawn to scale and which shows all of the following:
(i) The distance to existing wells and the properties in the surrounding area that have potential for groundwater supplies. The map shall identify all soil borings and wells at the facility and within ½ mile of the site, including all domestic, municipal, industrial, oil, and gas wells for which copies of logs are available in the public record.
(ii) Existing lakes or ponds.
(iii) Streams, springs, or wetlands.
(iv) The direction of surface drainage and the direction of groundwater movement in the site area.
(v) The locations of borings, observation wells, and other well data used in the report.
(vi) The topography, including predominant topographic features.
(vii) The location of any existing open dump, underground storage tank, or other known or potential source of groundwater contamination.
(c) Observation well records or soil borings to locate and identify aquifers beneath the facility property. All of the following shall be identified:
(i) Depth to the groundwater.
(ii) Aquifer thickness.
(iii) Vertical and horizontal groundwater flow directions.
(iv) Vertical and horizontal flow rates.
(d) A groundwater elevation map which is based on stabilized water level readings, which uses values

contoured on an interval of not more than 1 foot, and which is referenced to United States geological survey datum. Data shall be included to determine both of the following:
(i) Groundwater flow direction and possible variations in groundwater flow direction.
(ii) Depth to the groundwater.
(e) Evaluation of site earth materials. The evaluation shall be based on soil boring logs and the results of soil sampling from the borings to define soil and groundwater conditions at the site, including bedrock characteristics, if bedrock exists, within 50 feet of the proposed base of the fill. All of the following procedures shall be utilized in collecting this data:
(i) Soil samples shall be collected by standard soil sampling techniques. Representative uncomposited soil samples shall be tested for by all of the following methods, unless other methods are approved by the director:
(A) The particle size distribution, by both sieve and hydrometer.
(B) For cohesive soils, the Atterberg limits under ASTM D4318-94, which is adopted by reference in R 299.4135.
(C) The classification under the unified soil classification system, under ASTM D2487-93, which is adopted by reference in R 299.4135.
(D) Undisturbed hydraulic conductivity under the methods approved in R 299.4920.
(ii) Boring logs shall include all of the following information:
(A) Soil and rock descriptions.
(B) Methods of sampling.
(C) Sample depth.
(D) Date of boring.
(E) Water level measurements at the time of the boring.
(F) Soil test data.
(G) Boring locations.
(iii) All soil borings that are not converted to observation wells shall be carefully backfilled with bentonite or cement grout, plugged, and recorded under part 625 of the act.
(iv) All elevations shall be referenced to United States geological survey datum.
(f) A series of geologic cross-sections or fence diagrams that pass through representative borings and illustrate all of the following:
(i) Existing topography.
(ii) Soil borings.
(iii) Soil classification.
(iv) Stratigraphy.
(v) Bedrock.
(vi) Wells.
(vii) Stabilized water level readings.
(viii) Proposed site grades.
All of the data specified in this subdivision shall be referenced to a site map that shows the locations of all wells and borings.
(g) The nature, extent, and consequence of any mounding that results from the diversion of infiltration and surface water runoff, both during the active life of the facility and during the postclosure period.
(h) A description of any proposed engineering modifications intended to modify groundwater level.
(i) A determination of the horizontal and vertical flow system, and diagrams that illustrate horizontal and vertical flow directions of groundwater.
(j) A proposed hydrogeologic monitoring plan that is in compliance with R 299.4905.
(k) A compilation and interpretation of data, maps, and charts based on site conditions to support the conclusions and recommendations of the report.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4905
Source: 1993 AACS.

R 299.4906 Landfill groundwater monitoring; systems.

Rule 906. (1) A landfill groundwater monitoring system shall be installed and shall consist of a sufficient number of wells, installed at appropriate locations and depths, to yield groundwater samples from the uppermost aquifer that are in compliance with both of the following provisions:

(a) Represent the quality of background groundwater that has not been affected by leakage from a unit. A determination of background groundwater quality may include sampling of wells that are not hydraulically upgradient of the waste management area where either of the following conditions exist:

(i) Hydrogeologic conditions do not allow the owner or operator to determine that wells are hydraulically upgradient.

(ii) Sampling at other wells will provide an indication of background groundwater quality that is as representative or more representative than that provided by the upgradient wells. In cases where the director has approved the sampling of wells that are not upgradient to determine background groundwater quality, the owner and operator shall maintain 1 or more upgradient wells to verify that the alternate wells are as or more representative.

(b) Represent the quality of groundwater hydraulically downgradient of the solid waste boundary and ensure detection of groundwater contamination in the uppermost aquifer and other groundwater specified by the director. When physical obstacles preclude the installation of groundwater monitoring wells at the solid waste boundary, the downgradient monitoring system shall be installed at the closest practicable distance hydraulically downgradient from the solid waste boundary to ensure detection of groundwater contamination in the uppermost aquifer and other groundwater specified by the director.

(2) The director may approve a multiunit groundwater monitoring system instead of separate groundwater monitoring systems for each type II landfill unit when the facility has several discrete units, if both of the following conditions are met:

(a) Groundwater monitoring wells are not more than 150 meters from the solid waste boundary of each unit and are located on land that is owned by the owner of the unit.

(b) The multiunit groundwater monitoring system is in compliance with the requirements of subrule (1) of this rule and will be as protective of human health and the environment as individual monitoring systems for each unit, based on the following factors:

(i) The number, spacing, and orientation of the units.

(ii) The hydrogeologic setting.

(iii) The site history.

(iv) The engineering design of the units.

(v) The type of waste accepted at the units.

(3) Monitoring wells shall be cased in a manner that maintains the integrity of the monitoring well bore hole. The casing shall be screened or perforated and packed with gravel or sand, where necessary, to enable the collecting of groundwater samples. The annular space between the bore hole and well casing above the sampling depth shall be sealed to prevent the contamination of samples and the groundwater.

(4) The owner and operator shall notify the director that documentation of the design, installation, development, and decommission of any monitoring wells, piezometers, and other measurement, sampling, and analytical devices has been placed in the operating record.

(5) All monitoring wells, piezometers, and other measurement, sampling, and analytical devices shall be designed, operated, and maintained so that they perform to design specifications throughout the life of the monitoring program.

(6) All monitoring wells shall be designed to minimize the time that is necessary to recharge the well, given the hydraulic conductivity of the aquifer.

(7) The number, spacing, and depths of monitoring systems shall be in compliance with all of the following provisions:

(a) Be based upon site-specific technical information, including a thorough characterization of both of the following:

(i) The uppermost aquifer, including all of the following information:

(A) Aquifer thickness.

(B) Groundwater flow rate.

(C) Groundwater flow direction, including seasonal and temporal fluctuations in groundwater flow.

(ii) Saturated and unsaturated geologic units and fill materials that overlie the uppermost aquifer, materials that comprise the uppermost aquifer, and materials that comprise the confining unit defining the lower boundary of the uppermost aquifer, including all of the following information:
(A) Thicknesses.
(B) Stratigraphy.
(C) Lithology.
(D) Hydraulic conductivities.
(E) Porosities.
(F) Effective porosities.
(b) Be certified by a geologist.
(c) Be approved by the director. Within 14 days of the approval, the owner or operator shall notify the director that the certification and approval have been placed in the operating record.
(8) All wells shall be clearly labeled and shall be properly vented, capped, and locked when not in use. All wells shall be visible throughout the year. (9) The owner or operator shall not undertake well replacement, plugging, abandonment, or repair without the approval of the director or his or her designee.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4907 Landfill groundwater monitoring; sampling and analysis requirements.

Rule 907. (1) The groundwater monitoring program for a landfill shall include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide an accurate representation of groundwater quality at the background and downgradient wells that are installed in compliance with R 299.4906. The owner or operator shall notify the director that the sampling and analysis program documentation has been placed in the operating record and that the program shall include procedures and techniques for all of the following:
(a) Sample collection.
(b) Sample preservation and shipment.
(c) Analytical procedures.
(d) Chain of custody control.
(e) Quality assurance and quality control.
(2) The groundwater monitoring program shall include sampling and analytical methods that are appropriate for groundwater sampling and that accurately measure hazardous constituents and other monitoring parameters in groundwater samples. Groundwater samples for metals shall be field-filtered before laboratory analysis, unless filtered samples alone will not accurately measure the concentration of metals in the given geologic setting, such as in permeable soils and karst terrains.
(3) The sampling procedures and frequency shall be protective of human health and the environment.
(4) Analytical methods that are used for groundwater monitoring samples shall be those specified in R 299.4450 to R 299.4454 and shall achieve practical quantitation limits approved by the director.
(5) Groundwater elevations shall be measured in each well immediately before purging each time groundwater is sampled. The owner or operator shall determine the rate and direction of groundwater flow each time groundwater is sampled. Groundwater elevations in wells that monitor the same disposal area shall be measured within a period of time that is short enough to avoid temporal variations in groundwater flow which could preclude an accurate determination of groundwater flow rate and direction.
(6) Groundwater elevations shall be determined by methods that are precise to 1/8 of an inch or 0.01 feet, as measured from the top of the well casing. The top of the well casing shall be related to a permanent reference point using United States geological survey datum.
(7) The owner and operator shall establish background groundwater quality in a hydraulically upgradient or background well or wells for each of the monitoring parameters or constituents that are required in the particular groundwater monitoring program which applies to the unit, as determined under this part. Background groundwater quality may be established at wells that are not located hydraulically upgradient from the unit if the well meets the requirements of R 299.4906(1)(a).
(8) The number of samples that are collected to establish groundwater quality data shall be consistent with the appropriate statistical procedures that are determined under R 299.4908. For type II landfills, the sampling procedures shall be those specified in R 299.4440 for detection monitoring, R 299.4441 for

assessment monitoring, and R 299.4444 for remedial action.
(9) All samples that are obtained shall be representative of the site's groundwater quality. To ensure a representative sample, before a sample for collection and analysis is obtained, each well shall be purged until dry or until not less than 3 times the amount of water in the well casing has been removed. Groundwater monitoring wells shall be sampled immediately after purging where recovery rates allow. Where detection monitoring wells are pumped dry during purging, samples shall be taken within 24 hours.
(10) If nondedicated pumps or mobile sampling equipment is used, the owner or operator shall use the following procedures to minimize the potential for the cross-contamination of samples:
(a) All groundwater monitoring wells shall be sampled from upgradient to downgradient, except that monitoring wells that are located in areas of known groundwater contamination shall be sampled in order, from the least contaminated well to the most contaminated well.
(b) Each piece of equipment shall be thoroughly cleaned and rinsed with distilled water before use in each monitoring or detection well.
(c) Other procedures that are approved by the department.
(11) The owner and operator of a landfill shall submit all monitoring results to the director or his or her designee not later than 30 days after the end of the calendar quarter.
(12) The owner and operator of a landfill shall sample and analyze groundwater in accordance with the publication entitled "Test Methods for Evaluating Solid Waste, Physical-Chemical Methods," EPA publication SW-846, 3d edition, which is adopted by reference in R 299.4133, the publication entitled "Standard Methods for the Examination of Water and Wastewater, 19th edition," which is adopted by reference in R 299.4139, or by other methods approved by the director or his or her designee.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4908 Landfill groundwater monitoring; statistical procedures.

Rule 908. (1) The owner and operator of a landfill shall evaluate groundwater monitoring data for each hazardous constituent using 1 of the following statistical tests:
(a) A parametric analysis of variance (ANOVA) followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method shall include estimation and testing of the contrasts between each compliance well's mean and the background mean levels for each constituent.
(b) An analysis of variance (ANOVA) based on ranks followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method shall include estimation and testing of the contrasts between each compliance well's median and the background median levels for each constituent.
(c) A tolerance or prediction interval procedure in which an interval for each constituent is established from the distribution of the background data and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.
(d) A control chart approach that gives control limits for each constituent.
(e) Another statistical test method that is in compliance with the performance standards of subrule (2) of this rule. The owner or operator shall place a justification for this alternative in the operating record and notify the director of the use of this alternative test. The justification shall demonstrate that the alternative method is in compliance with the performance standards of subrule (2) of this rule.
(2) Any statistical method chosen under subrule (1) of this rule shall be in compliance with all of the following performance standards:
(a) The statistical method used to evaluate groundwater monitoring data shall be appropriate for the distribution of chemical parameters or hazardous constituents. If the distribution of the chemical parameters or hazardous constituents is shown by the owner or operator to be inappropriate for a normal theory test, then the data shall be transformed or a distribution-free theory test shall be used. If the distributions for the constituents differ, more than 1 statistical method may be needed.
(b) If an individual well comparison procedure is used to compare an individual compliance well constituent concentration with background constituent concentrations or a groundwater protection standard, the test shall be done at a type I error level of not less than 0.01 for each testing period. If a multiple comparisons procedure is used, the type I experiment wise error rate for each testing period shall be not less than 0.05; however, the type I error of not less than 0.01 for individual well comparisons shall be maintained. This performance standard does not apply to tolerance intervals, prediction intervals, or control charts.

(c) If a control chart approach is used to evaluate groundwater monitoring data, the specific type of control chart and its associated parameter values shall be protective of human health and the environment. The parameters shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.
(d) If a tolerance interval or a predictional interval is used to evaluate groundwater monitoring data, then the levels of confidence and, for tolerance intervals, the percentage of the population that the interval must contain shall be protective of human health and the environment. These parameters shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.
(e) The statistical method shall account for data below the limit of detection with 1 or more statistical procedures that are protective of human health and the environment. Any practical quantitation limit (PQL) that is used in the statistical method shall be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility.
(f) If necessary, the statistical method shall include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.
(3) The statistical test chosen shall be specified in the operating record and shall be conducted separately for each hazardous constituent at each well.
(4) The owner or operator shall determine whether or not there is a statistically significant increase over background values for each parameter or constituent required in the particular groundwater monitoring program that applies to the unit.
(5) In determining whether a statistically significant increase has occurred, the owner or operator shall compare the groundwater quality of each parameter or constituent at each monitoring well that is designated under R 299.4906 to the background value of that constituent, according to the statistical procedures and performance standards specified in this rule.
(6) The owner or operator shall determine whether there has been a statistically significant increase over background at each monitoring well within 30 days of the end of the calendar quarter in which sampling and analysis was conducted.
(7) Nothing in this rule prohibits the department from evaluating monitoring data using statistical procedures it deems appropriate at a given location.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4909 Landfill engineering plans; topographic maps.

Rule 909. (1) Engineering plans for a landfill shall include topographic maps that are referenced to United States geological survey datum at a scale of not more than 200 feet to the inch with contour intervals that clearly show the character of the land and land use within 1,500 feet of the solid waste disposal unit or units.
(2) Topographic maps that are required by this rule shall include all of the following:
(a) A legal description of the property included in the application.
(b) Proposed solid waste disposal units.
(c) Structures on the site.
(d) Existing and known proposed utilities.
(e) Borrow areas.
(f) Surface waters, wetlands, or floodplains.
(g) Special drainage devices, if necessary.
(h) On-site roads.
(i) Public access roads.
(j) Fencing and other means of controlling access, such as gates and natural barriers.
(k) The location of all residences.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4910 Landfill engineering plans; design plans and engineering reports.

Rule 910. (1) Engineering plans for a landfill shall include detailed engineering plans of the proposed

design and an engineering report that details all of the following for each disposal unit:
(a) Soils underlying each liner system, as specified in subrule (2) of this rule.
(b) Compacted soil liners or natural soil that is used in place of a compacted liner, as specified in subrule (3) of this rule.
(c) Bentonite geocomposite or flexible membrane liners, as specified in subrule (4) of this rule.
(d) Primary leachate collection and removal systems, as specified in subrule (5) of this rule.
(e) Secondary leachate collection systems, as specified in subrule (6) of this rule.
(f) Dewatering systems, as specified in subrule (7) of this rule.
(g) Other control systems, as specified in subrule (8) of this rule.
(h) The final cover, as specified in a closure plan that is in compliance with R 299.4446.
(i) Postclosure maintenance and monitoring, as specified in a plan that is in compliance with R 299.4447.
(2) An engineering report on the characteristics of soils underlying any liner shall include all of the following information:
(a) A settlement analysis that estimates total and differential settlement, including immediate settlement, primary consolidation, and secondary consolidation based on maximum loading.
(b) A slope stability analysis.
(c) A performance analysis under varying groundwater conditions.
(d) Calculations that show the potential for bottom heave or blowout.
(3) An engineering report on the soils that are likely to be used for any compacted or natural soil liner shall include all of the following information:
(a) The location and thickness of soils to be used for the compacted or natural soil liner.
(b) Copies of well or boring logs that document the soil deposit.
(c) Data documenting that the soil source is in compliance with the soil classifications specified in R 299.4913.
(d) For compacted soil liners, calculations which show that the volume of the source is sufficient for liner construction.
(4) An engineering report on any bentonite geocomposite or flexible membrane liner to be used shall include all of the following information:
(a) The methods of storage, handling, and installation, including any written instructions from the manufacturer, and procedures for complying with the quality control requirements of R 299.4914 and R 299.4915.
(b) The physical specifications of the liner material.
(c) The ability of liner material and scrim material, where applicable, to maintain physical properties under varying conditions of temperature, pH, ultraviolet radiation, biological attack, and prolonged leachate contact throughout the operating and postclosure life of the landfill. (5) The engineering plans for a landfill shall contain an engineering report on the design of the leachate collection and removal system. The report shall include all of the following information:
(a) Specifications for the material to be used for the leachate collection system.
(b) The design of the collection pipe, including all of the following information:
(i) Diameter.
(ii) Perforations.
(iii) Slope.
(iv) Spacing.
(v) Leachate compatibility.
(vi) Structural integrity under static and dynamic loadings.
(c) Design features that allow cleaning of drainage pipes within the system.
(d) Procedures to prevent clogging during construction and operation.
(e) Calculations to show that the leachate head will be 1 foot or less above the liner at any point in the system, except the sump.
(f) Provisions to remove obstructions from the system.
(g) Calculations to determine the anticipated volume of leachate to be generated.
(h) Information on the proposed method of disposal for the leachate collected.
(6) An engineering report on a secondary collection or leak detection system shall include the information

specified in both of the following provisions:
(a) The information required under subrule (5) of this rule.
(b) The method of detecting, removing, and analyzing any leaks that are detected in the system.
(7) The engineering plans for a landfill shall contain an engineering report for any dewatering systems to be used. The report shall include all of the following information:
(a) Design calculations for the drain pipe diameter, slope, and spacing.
(b) Design features that allow cleaning.
(c) Procedures to prevent clogging during construction and operation.
(d) An evaluation of the structural suitability of underdrain pipe under both static and dynamic loadings.
(8) The engineering plans shall contain information on systems to control all of the following:
(a) Run-on.
(b) Runoff.
(c) Wind dispersal of particulate matter, where applicable.
(d) Gas that is generated within the landfill.
(9) Engineering plans for a landfill shall be prepared and sealed by a professional engineer registered in the State of Michigan.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4911 Landfill engineering plans; operation plans and engineering reports.

Rule 911. (1) Engineering plans for a landfill shall include all of the following plans that describe how the facility is to be operated:
(a) A proposed fill progression plan that estimates, for information purposes, fill progression over the active life of the landfill, including the final slopes and elevations of the landfill. The plan shall include the location and description of the permanent survey benchmark to be used for elevation control. An owner or operator who wishes to modify a fill progression plan during the operating life of the landfill shall submit the alternate plan to the department for a consistency review with these rules, such as to ensure that the approved hydrogeologic monitoring plan provides for monitoring the areas intended for construction.
(b) A landscape plan to identify and locate existing vegetation to be retained and proposed vegetation to be used for cover, screening, and other purposes.
(c) Engineering plans that detail leachate collection and removal facilities. If applicable, these plans shall also show any systems to be used for leachate recirculation.
(d) An engineering plan that shows gas management systems, if applicable. (2) Engineering plans for a landfill shall include engineering reports that describe all of the following:
(a) All equipment to be used at the landfill for construction and operation.
(b) The landfill's personnel requirements, including the duties, training, and authority of the responsible individual who is to direct landfill operations.
(c) Access controls to be used, including all of the following:
(i) Signs.
(ii) Hours of operation.
(iii) Usage rules.
(iv) Natural and artificial barriers.
(v) Traffic control.
The description shall include a description of any convenience station at the landfill for smaller vehicles to unload refuse at an area other than the working face.
(d) The methods to be used to control dust and blowing papers from the active fill area.
(e) The methods for the disposal of large or bulky items.
(f) The on-site road design and method of controlling fugitive dust.
(g) The methods to control salvaging, if allowed.
(h) The storage locations of, and the design for, white goods and other recyclable materials.
(i) The procedures for separating recyclable materials from general refuse, if applicable.
(j) The type of daily cover to be used and the source, quantity, and method of placement of the cover.
(k) The process for receiving and unloading solid waste. This description shall include procedures for inspecting loads for hazardous waste.

(l) The procedures for the receipt and disposal of asbestos waste.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4912 Landfill construction; natural soil barrier verification.

Rule 912. (1) A natural soil barrier at a landfill that is used to comply with these rules shall be verified in accordance with this rule. Information collected under this rule shall be submitted to the solid waste control agency with either the hydrogeological report or, for existing disposal areas, the construction certification that is submitted under R 299.4921.
(2) An owner or operator shall verify that any natural soil barrier extends to the surface. Natural soil sites where the soil barrier does not extend to the surface shall include compacted side cutoff walls or an equivalent barrier to impede the lateral infiltration of water into the fill and to impede lateral flow of leachate out of the fill interior. The wall or other barrier shall be equivalent in width and permeability as that of the soil barrier required by these rules. Hydraulic head buildup outside the wall shall be limited to the extent necessary to prevent unstable conditions within the wall or liner. The hydraulic head shall be controlled by gravity or, as an alternative, the hydraulic head of groundwater that does not constitute an aquifer may be limited by pumping if the system is part of a sewerage system permitted by the director, or his or her designee, under part 41 of the act.
(3) To use a natural soil barrier, the owner and operator shall demonstrate that the natural soil barrier does both of the following:
(a) Is in compliance with the thickness and hydraulic conductivity requirements of these rules. To demonstrate this, the owner and operator shall obtain soil borings on the grid spacing specified in subrule (4) of this rule and determine all of the following at various depths:
(i) The particle size distribution, by sieve and hydrometer.
(ii) The Atterberg limits, according to ASTM D4318-95a, which is adopted by reference in R 299.4135.
(iii) The classification pursuant to the unified soil classification system, ASTM D2487-93, which is adopted by reference in R 299.4135.
(iv) The hydraulic conductivity of an undisturbed sample by a method specified in R 299.4920.
(b) Provides an adequate subbase for the overlying leachate collection and removal systems by evaluating the subgrade conditions for stability and correcting unstable areas.
(4) An owner and operator shall obtain soil borings on a grid spacing approved by the director based on either of the following:
(a) The homogeneity of soils at the site, as determined by a hydrogeologic report.
(b) Geophysical methods that are proposed under subrule (5) of this rule.
(5) An applicant may utilize geophysical methods to replace or supplement borings specified in subrule (4) of this rule if a plan for such a survey is approved by the director or his or her designee.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4913 Landfill construction; compacted soil liners and final covers.

Rule 913. (1) A compacted soil liner shall be constructed to have a saturated, vertically oriented hydraulic conductivity of not more than 1.0 x 10-7 centimeters per second after compaction.
(2) To meet the hydraulic conductivity standard specified in subrule (1) of this rule, the owner and operator shall assure that the soil source is in compliance with both of the following requirements:
(a) Has a classification of SC, CH, CL, CL/ML or ML as determined by the unified soil classification system, ASTM standard D2487-93, unless another classification has been approved as part of a modified soil approved by the director under subrule (3) of this rule.
(b) Has a laboratory hydraulic conductivity that is equal to or less than 1.0 x 10-7 centimeters per second within the density and moisture content range specified for construction as determined by a laboratory study of the relationship between moisture, density, and the hydraulic conductivity of the soil.
(3) The owner and operator of a landfill may use a soil type other than that specified in subrule (2)(a) of this rule if the soil type is used as a component in a modified soil that is prepared in accordance with a plan approved by the director. The director shall approve a plan for a modified soil if the applicant demonstrates, by laboratory methods or a test pad, all of the following:
(a) The modified soil can be compacted to achieve the hydraulic conductivity specified in subrule (2)(b) of this

rule.
(b) Engineering properties of the modified soil are equivalent to those soil types approved in subrule (2) of this rule.
(c) The modified soil will be mixed in a manner that assures consistent properties.
(4) The owner and operator of a landfill shall construct a compacted soil liner and final cover in a manner that satisfies all of the following requirements for each lift being compacted:
(a) The lift thickness is generally not more than 6 inches after compaction.
(b) Each lift is thoroughly and uniformly compacted to that density, and at that moisture content, determined necessary to achieve the required hydraulic conductivity. However, soil shall not be compacted at moisture contents that are less than optimum and shall not be compacted to less than 1 of the following:
(i) 90% of the maximum dry density, as determined by the modified proctor test, ASTM D1557-91.
(ii) 95% of the maximum dry density, as determined by the standard proctor test, ASTM D698-91.
(c) Each lift is integrated into the previous lift by techniques such as scarifying each lift and by using compaction equipment that is capable of penetrating the thickness of each compacted lift, except that such a compactor shall not be used in the first 2 lifts immediately above the synthetic liner, secondary collection system, or other sensitive liner system component.
(d) The liner is constructed so that the bottom liner and sidewall liner or dike will be continuous and completely keyed together at all construction joints.
(5) The owner and operator of a landfill shall protect a compacted soil liner and final cover from detrimental climatic effects during construction by doing all of the following to the extent necessary to maintain compliance with these rules:
(a) Removing all ice and snow during winter construction before placing a lift and not using frozen soil in any part of a liner.
(b) Before the liner is covered by a flexible membrane liner or leachate collection system, recompacting any soil lift that has had its integrity adversely affected by weather.
(c) Ensuring that soil liners and final covers are not subject to significant desiccation cracking by doing 1 of the following:
(i) Sprinkling the liner with water, as necessary.
(ii) Covering or tarping the soil.
(iii) Taking other preventative measures.
(d) If significant desiccation has occurred, by removing or repairing any soil that has experienced desiccation cracking, as necessary, before compacting the next lift or installing the next liner system component.
(6) The owner or operator of a landfill may modify the construction requirements of this rule if he or she demonstrates, to the director or his or her designee, using either of the following methods, that alternate construction techniques will achieve the desired liner permeability:
(a) A laboratory method that is approved by the director.
(b) A test pad that is in compliance with subrule (7) of this rule.
(7) A test pad demonstration shall be in compliance with all of the following provisions:
(a) Replicate the proposed liner by having all of the following dimensions:
(i) A width that is not less than twice that of the proposed roller.
(ii) A length that is not less than twice the width.
(iii) A thickness that is not less than 2 feet.
(b) Use the same materials and construction practices as those proposed for the landfill liner.
(c) Determine the hydraulic conductivity of the test pad using insitu, nondestructive testing.
(8) The owner or operator may propose alternate specifications for hydraulic conductivity and compaction in the sidewalls of the top composite liner of a landfill unit that has 2 composite liners and a secondary collection system. The director shall approve alternate specifications if the specifications are sufficient to maintain allowable flow rates in the secondary collection system.
(9) ASTM test methods D2487-93, D1557-91, and D698-91 are adopted by reference in R 299.4135.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4914
Source: 1993 AACS.

R 299.4915 Landfill construction; flexible membrane liners.

Rule 915. (1) A flexible membrane liner that is required by these rules shall be in compliance with all of the following requirements:

(a) Be of sufficient tensile strength to withstand anticipated stresses without failure.

(b) Be chemically resistant to anticipated wastes and waste leachate based on EPA method 9090. EPA method 9090 is part of the publication entitled "Test Methods for the Evaluation of Solid Waste," EPA publication SW-846, 3rd edition, which is adopted by reference in R 299.4133.

(c) Be sufficiently durable so that the properties of the liner are not significantly impaired by any of the following during the active life of the landfill and the postclosure period:

(i) Exposure to sunlight, precipitation, or anticipated temperature variations.

(ii) Abrasion, shocks, or other mechanical actions.

(iii) Irreversible shrinkage of the liner.

(d) Be of sufficient elasticity to withstand anticipated deformations.

(e) Have a friction angle that is capable of supporting overburden material without slippage on sideslopes, given the angle and length of such slopes.

(f) Be capable of being seamed so that the seam meets the manufacturer's specifications or other specifications approved by the director.

(2) A landfill shall be designed to avoid penetration of any flexible membrane liner by pipes, sumps, or supports. Where penetrations are proposed, the owner and operator shall demonstrate that subgrade settlement will not cause a liner to fail.

(3) The owner and operator of a landfill shall develop specifications for the design and installation of a flexible membrane liner that are sufficient to meet the requirements of these rules. If applicable to a proposed liner material, the specifications shall meet or exceed the following specifications:

(a) The national sanitation foundation document NSF 54-1993. NSF 54-1993 is adopted by reference in R 299.4137.

(b) For PVC, the PVC geomembrane institute specification PGI 1197. PGI 1197 is adopted by reference in R 299.4137.

(c) Other specifications approved by the director.

(4) The foundation for a flexible membrane liner shall be prepared by doing all of the following:

(a) By compacting the soil surface to the extent necessary to provide a stable base or else determining that the soils are naturally consolidated to provide a stable base without compaction.

(b) Grading the foundation to a smooth and true line and grade and not deviating more than 0.2 feet from that shown on approved plans.

(c) Removing stones, organic material, roots, or other material that may puncture the liner.

(5) Before installation, flexible membrane liner material shall be stored in a secure area and protected from adverse weather.

(6) Flexible membrane liner shall be deployed to minimize handling.

Stress conditions shall be prevented by allowing slack for shrinkage.

(7) The owner and operator of a landfill shall assure that field seams of a flexible membrane liner are made in a manner that ensures all of the following:

(a) That field seams on side slopes are generally installed parallel to the line of maximum slope, when possible.

(b) That the seam area is properly prepared for seaming and is free of moisture, dust, dirt, debris, and foreign material of any kind before seaming.

(c) That field seaming is not done in adverse weather conditions that could impair the quality of the liner, unless protective structures or other methods are used to maintain seam integrity during construction.

(8) The owner and operator of a landfill shall assure that a flexible membrane liner is otherwise installed to assure all of the following:

(a) That any imperfections that are found in a liner or seam are repaired.

(b) That the anchor trench for the liner is excavated to the depth and width shown on approved plans and that the liner is sufficiently anchored within the trench.

(c) That the liner is covered with soil or other material specified in approved plans within 30 days after

placement in a manner that protects the liner from degradation, unless the owner and operator demonstrate that the liner material is not subject to degradation by ultraviolet light or other weather conditions.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4916 Landfill construction; construction quality assurance program and construction certifications.

Rule 916. (1) A construction quality assurance (CQA) program is required for all new landfill units and lateral extensions of existing units and for the final cover of existing units. The program shall verify that the constructed unit is in compliance with all design criteria and specifications in the construction permit or approved plans. The program shall be developed and implemented under the direction of a CQA officer who is a registered professional engineer.
(2) The CQA program shall address all the following physical components, where applicable:
(a) Foundations.
(b) Dikes.
(c) Low-permeability soil liners.
(d) Flexible membrane liners.
(e) Leachate collection and removal systems and secondary collection systems.
(f) Final cover systems.
(3) Before construction begins on a unit that is subject to the CQA program under subrule (1) of this rule, the owner or operator shall develop a written CQA plan. The plan shall identify steps that will be used to monitor and document the quality of materials and the condition and manner of their installation. The CQA plan shall include all of the following:
(a) Identification of applicable units and a description of how they will be constructed.
(b) Identification of key personnel in the development and implementation of the CQA plan and CQA officer qualifications.
(c) A description of inspection and sampling activities for all unit components that are identified in subrule (2) of this rule, including the observations and tests that will be used before, during, and after construction to ensure that the construction materials and the installed unit components are in compliance with the design specifications. The description shall cover all of the following:
(i) Sampling size and locations.
(ii) Frequency of testing data evaluation procedures.
(iii) Acceptance and rejection.
(iv) Criteria for construction materials.
(v) Plans for implementing corrective measures.
(4) The CQA program shall include observations, inspections, tests, and measurements that are sufficient to ensure all of the following:
(a) The structural stability and integrity of all components of the unit that are identified in subrule (2) of this rule.
(b) Proper construction of all components of the liners, leachate collection and removal system, leak detection system, and final cover system according to permit specifications and good engineering practices and proper installation of all components according to design specifications.
(c) Conformity of all materials used with design and other material specifications under this part.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4917 Landfill construction; compacted soil liner and final cover construction records.

Rule 917. (1) A registered professional engineer or other qualified individual shall document the proper construction of all compacted soil liners and final covers in accordance with this rule. Construction records for compacted soil liners and final cover shall include information on all of the following:
(a) The excavation and subgrade, as specified in subrule (2) of this rule.
(b) Each borrow source for liner material or final cover, as specified in subrule (3) of this rule.
(c) Liner compaction, as specified in subrule (4) of this rule.
(d) The hydraulic conductivity of the constructed liner, as specified in subrule (5) of this rule.
(e) Measurements of the final liner slope and thickness.

(f) Test pad data, if any.
(2) The following information on the subgrade shall be documented for any compacted soil liner:
(a) Measurements of the slope and the depth of excavation.
(b) Measurements and observations to ensure that the subgrade surface meets specification.
(3) All of the following information shall be documented for each borrow source:
(a) The location.
(b) A description of the soil.
(c) The relationship between hydraulic conductivity, moisture, and density, as established with laboratory test data as part of an initial design report on the borrow source. The relationship shall be established using either the modified proctor test, ASTM D1557-91, or the standard proctor test, ASTM D698-91. The relationship shall be redetermined if the nature of the source changes so that the required hydraulic conductivity will not be achieved.
(d) Verification that the borrow source is in compliance with the requirements of these rules by testing both of the following every 5,000 cubic yards or when the soil texture changes:
(i) The unified soil classification, ASTM standard D2487-93.
(ii) The moisture-density relationship, by modified proctor, ASTM standard D1557-91, or standard proctor, ASTM standard D698-91, depending on the test used in subdivision (c) of this subrule.
(e) Observation of roots, rocks, rubbish, or off-specification soil that is removed from the source material.
(f) The volume of soil that is placed and compacted from each source.
(4) All of the following information shall be documented with respect to soil compaction:
(a) The type and weight of compaction equipment.
(b) The method of surface preparation.
(c) The method of adjusting soil moisture, if any.
(d) The method of controlling desiccation, if any.
(e) The thickness of each lift, after compaction.
(f) General observations of the number of passes and uniformity of compaction coverage.
(g) Observation of the reduction in clod size.
(h) Documentation of liner repair, including the removal and replacement of frozen or desiccated soil.
(5) All of the following in-place tests shall be obtained for each lift of soil after compaction, with the location of soil samples taken on a grid that is rotated with each lift to maximize coverage, and shall be documented with the construction records:
(a) Soil density and moisture content, by nuclear methods, ASTM standard D2922-96, or other methods approved by the director, with 1 test per acre and a minimum of 3 tests per day of construction or lift of soil.
(b) The undisturbed hydraulic conductivity of the soil liner, with 1 test for every 10,000 cubic yards placed, using a method specified in R 299.4920. Each landfill unit or portion thereof that is constructed at a given time shall have a minimum of 3 tests.
(6) The director shall decrease the frequency of testing that is required by this rule upon a demonstration by the owner or operator that the quality and consistency of the borrow source and construction techniques will assure compliance with the specifications of these rules.
(7) ASTM procedures D422-63(90), D1557-91, D2922-96, and D2487-93 are adopted by reference in R 299.4135.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4918 Landfill construction; flexible membrane liner construction records.

Rule 918. (1) A registered professional engineer or other qualified individual shall assure that the proper construction of all flexible membrane liners is documented in accordance with this rule. Construction records for flexible membrane liners shall include all of the following information:
(a) Information on liner panels that are shipped to the site, as specified in subrule (2) of this rule.
(b) Tests on raw materials that are used to manufacture the liner panels, as specified in subrule (3) of this rule.
(c) Tests on factory-fabricated panels and seams, as specified in subrule (4) of this rule.
(d) Documentation on the subgrade for the liner, as specified in subrule (5) of this rule.
(e) Documentation on field installation, as specified in subrule (6) of this rule.

(f) Tests on field seams, as specified in subrule (7) of this rule.
(g) Diagrams that show the location of all destructive tests, deviations from specification, and repairs made.
(2) All of the following information shall be recorded for all liner material that is shipped to the site:
(a) The name of the manufacturer and fabricator.
(b) The name and type of liner.
(c) The thickness of liner.
(d) The batch code.
(e) The date of fabrication.
(f) The physical dimensions.
(g) The panel number.
(h) The location and method of storage at the site.
(3) All of the following information shall be documented on the raw materials that are used to manufacture the synthetic liner:
(a) The origin and identification of the raw materials.
(b) Copies of quality control certificates that are issued by the producer of the raw materials.
(c) Reports of tests that are conducted to verify the quality of the raw materials, such as specific gravity, melt flow index, and percent carbon black.
(4) All of the following quality control testing shall be conducted for any flexible membrane liner that is fabricated at the factory:
(a) Visual inspection for uniformity, damage, and imperfections, including any of the following:
(i) Holes.
(ii) Cracks.
(iii) Thin spots.
(iv) Tears.
(v) Punctures.
(vi) Blisters.
(vii) Foreign materials.
(b) Nondestructive seam testing on all fabricated seams along their full lengths.
(c) At least 1 destructive seam test per fabricated unit.
(5) A registered professional engineer or other qualified individual shall document that the subgrade is properly prepared for the installation of the synthetic liner and is in compliance with all of the following provisions:
(a) Is adequately compacted to the standards of these rules.
(b) If constructed over clay, that the clay is free of roots, standing water, stones, or desiccation cracks which would adversely affect the performance of the liner.
(c) If constructed over sand, that the sand does not contain gravel that is retained on a no. 4 sieve, by testing the subgrade every 1,000 cubic yards placed.
(d) Is rolled to a smooth grade that is consistent with approved plans.
Elevations of the subgrade shall be verified before installation to verify that elevations are within plus or minus 0.2 feet of approved plans.
(6) All of the following shall be documented during the placement of the synthetic liner:
(a) Panel overlap.
(b) Location of panels.
(c) Visual inspection for uniformity, damage, and imperfections, including any of the following:
(i) Holes.
(ii) Cracks.
(iii) Thin spots.
(iv) Tears.
(v) Punctures.
(vi) Blisters.
(vii) Foreign materials.
(7) Both of the following tests shall be conducted and documented on all field seams:
(a) Nondestructive testing on all field seams throughout their lengths according to the manufacturer's

specifications or other nondestructive testing method approved by the department.
(b) Destructive testing on at least 1 field-seamed sample per day per seaming crew or machine. The sampling frequency shall be at least 1 test every 500 feet of seam, not including repairs, or an alternative frequency approved by the director. The director shall approve an alternative frequency if that frequency of tests, combined with other factors, ensures compliance with seam specifications.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4919 Landfill construction; leachate collection system construction records.

Rule 919. (1) Construction records for leachate collection systems, both above and between liners, shall include documentation of all of the following:
(a) Observations and tests on piping, as specified in subrule (2) of this rule.
(b) Observations and tests on any soil drainage layer, as specified in subrule (3) of this rule.
(c) Observations and tests on any synthetic drainage layer or geotextile, as specified in subrule (4) of this rule.
(d) Inspections of filter layers, as specified in subrule (5) of this rule.
(e) Inspection and testing of sumps and associated equipment, as specified in subrule (6) of this rule.
(2) Construction records for piping shall include documentation of all of the following:
(a) Observations and measurements to ensure that the pipes are placed at locations and in configurations specified in the design.
(b) Observations and tests to ensure that pipe grades are as specified in the design.
(c) Observations and tests to ensure that all pipes are joined together as specified in the design.
(d) Observations to ensure that the placement of any filter materials around the pipe is in compliance with the specifications in the design.
(e) Observations and tests to ensure that backfilling and compaction are completed as specified in the design and that, in the process, the pipe network is not damaged.
(3) Construction records for any soil drainage layer shall include documentation of all of the following:
(a) Observations and tests to ensure that the drainage layer material is of the particle size as specified in the design and is free from excessive amounts of fines or organic materials. Grain size distribution shall be determined every 1,000 cubic yards of material placed.
(b) Tests to verify hydraulic conductivity, as determined by ASTM) D2434-68(94), every 2,500 cubic yards of material placed.
(c) Observations and tests not less than every 200 feet on grid, to ensure that the thickness and coverage of the drainage layer are in compliance with the design specifications.
(d) A survey of the drainage layer to ensure that grades are obtained as specified in the design.
(e) Observation of construction procedures to prevent the transport of fines by runoff into the leachate collection system.
(4) Construction records for any synthetic drainage material or geotextile shall include documentation of all of the following:
(a) Observations to ensure that all synthetic drainage layer or geotextile materials are placed according to the placement plan.
(b) Measurements to ensure that the overlap of all synthetic drainage layer or geotextile material as specified in the design is achieved.
(c) Observations to ensure that the synthetic drainage layer or geotextile materials are free from excessive wrinkles and folds.
(d) Observations to ensure that weather conditions are appropriate for placement of the synthetic drainage layer or geotextile materials and that exposure to rain, wind, and direct sunlight during and after installation is in compliance with the manufacturer's recommendations.
(5) Construction records shall include an inspection of the filter layer placement to ensure that the design specifications, including material specifications, placement procedures, and thickness, are met.
(6) Construction records shall include an inspection and testing of the sump, leachate removal and detection equipment, and any other associated equipment or structures to ensure that the design specifications, including material and equipment specifications, coating specifications, and mechanical and electrical equipment installation specifications, are met.

(7) ASTM procedure D2434-68(94) is adopted by reference in R 299.4135.
History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4920
Source: 1993 AACS.

R 299.4921 Landfill construction; construction certification.

Rule 921. (1) The construction quality assurance officer shall certify that a landfill was constructed in accordance with the CQA plan, these rules, and engineering plans approved by the department. All of the following construction records shall accompany the certification of a new unit or the lateral extension of an existing unit:
(a) A daily activity log, as specified in subrule (3) of this rule.
(b) Records of any natural soil barrier, as specified in R 299.4912.
(c) Compacted soil liner records, as specified in R 299.4917.
(d) Flexible membrane liner records, as specified in R 299.4918.
(e) Leachate collection system records, as specified in R 299.4919.
(f) Final elevations, as documented on as-built plans specified in subrule (4) of this rule.
(g) Diagrams that show the location of all tests on the liner and liner system.
(2) The CQA officer shall certify that a landfill that has reached final grade, or has otherwise closed, has received final cover as specified in these rules, the CQA plan, and engineering plans approved by the department. All of the following construction records shall accompany an engineer's certification of a unit that has received final cover:
(a) A daily activity log, as specified in subrule (3) of this rule.
(b) Soil cover liner records, as specified in R 299.4917.
(c) Flexible membrane cover liner records, as specified in R 299.4918.
(d) Observations and tests of the other layers of the final cover to ensure that the design specifications are met. These activities shall include inspection of the completed cover slope, vegetation, and drainage conduits to ensure that they are in compliance with the specified design.
(e) Final elevations, as documented on as-built plans specified in subrule (4) of this rule.
(3) A daily activity log shall be completed by the on-site construction supervisor for each day of construction. A daily activity log shall include all of the following information:
(a) The name and title of construction supervisor.
(b) The date of activity.
(c) Weather, including maximum and minimum temperatures and amount of precipitation, if any.
(d) The type of activity conducted.
(e) A summary of all quality assurance tests conducted, indicating which tests passed and failed specifications.
(f) Documentation of all repairs made on the liner system.
(4) The CQA officer shall prepare as-built plans to document all elevations of a newly constructed landfill and closed landfill. All elevations shall be referenced to United States geological survey datum. As-built plans shall indicate all of the following information:
(a) The dimensions and maximum and minimum elevations of each cell in each direction. Elevations of each bottom liner component shall be within 0.2 feet of approved plans, if each component meets the minimum thickness requirements of these rules.
(b) The location and elevation of all sumps and gravity pipelines.
Elevations of sumps and pipelines shall be within 0.2 feet of approved plans.
(c) The location and elevation of all drainage facilities.
(d) The surface elevations of the final cover. The elevation of the final cover may deviate up to 1 foot above approved plans, if each component meets the minimum thickness requirements of these rules.
(5) An engineer's certification under this rule shall be a statement or declaration that is based on his or her knowledge and review of the construction records that are specified in this rule. The engineer's certification of construction conditions shall not relieve the owner, operator, or any other party from meeting other applicable requirements of the act and these rules.

History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

R 299.4922 Landfill operating license application; contents.

Rule 922. (1) An applicant for an operating license shall submit all of the following general information on a form provided by the director:

(a) The name and location of the facility and references to all construction permits or approved plans authorizing the facility's construction.

(b) The name and address of the applicant, including the name and telephone number of a contact person.

(c) The name, address, and telephone number of the property owner and any mineral rights owners.

(d) The type of disposal area proposed.

(e) The type of waste proposed for disposal.

(f) An estimate of remaining permitted capacity.

(g) The maximum waste slope in the active portion.

(h) The signature of the applicant and property owner.

(2) An applicant for an operating license shall submit information on the amount of waste received in the previous calendar year or amount projected to be received and the operating license application fee specified in the act associated with that amount, including any information necessary to support a fee adjustment.

(3) An operating license application shall include a restrictive covenant, on a form that is provided by the director, that is in compliance with the act, unless the restrictive covenant for the disposal area has been submitted previously.

(4) An operating license application shall include evidence of financial assurance that is in compliance with the act. Evidence of financial assurance includes all of the following:

(a) a facility summary that provides the acreage and a site map of each of the following:

(i) Active portions not at final grade.

(ii) Constructed areas certified with this application.

(iii) Unconstructed areas with financial assurance.

(iv) Unconstructed areas without financial assurance.

(v) Partially closed areas.

(vi) Closed preexisting units, including the date closed.

(vii) Other closed units.

(viii) Other disposal areas at the facility.

(ix) Isolation and other ancillary areas.

(x) The total facility area.

(b) A calculation of closure and postclosure cost estimates.

(c) Original bonds or documentation that the expiration date of the bond has been extended by not less than 6 months from the date of application.

(d) Evidence of a perpetual care trust fund or escrow account required by the act and the current value of the account.

(e) Documentation necessary to support a financial test, if applicable.

(5) An operating license application shall include information on any proposed operational variance allowed by these rules, including any of the following:

(a) Alternate daily cover.

(b) Leachate recirculation.

(c) Groundwater monitoring.

(d) Other variances.

History: 1993 MR 9, Eff. Oct. 8, 1993; 1999 MR 3, Eff. Apr. 12, 1999.

ENVIRONMENTAL RESPONSE DIVISION

SITE RECLAMATION GRANT/LOAN PROGRAM

R 299.5051

Source: 1991 AACS.

R 299.5052
Source: 1991 AACS.

R 299.5053
Source: 1991 AACS.

R 299.5054
Source: 1991 AACS.

R 299.5055
Source: 1991 AACS.

R 299.5056
Source: 1991 AACS.

R 299.5057
Source: 1991 AACS.

R 299.5058
Source: 1991 AACS.

R 299.5059
Source: 1991 AACS.

R 299.5060
Source: 1991 AACS.

R 299.5061
Source: 1991 AACS.

ENVIRONMENTAL CONTAMINATION RESPONSE ACTIVITY

PART 1. GENERAL PROVISIONS

R 299.5101
Source: 1990 AACS.

R 299.5103
Source: 1990 AACS.

R 299.5105
Source: 1990 AACS.

R 299.5107
Source: 1990 AACS.

R 299.5109
Source: 1990 AACS.

R 299.5111
Source: 1990 AACS.

R 299.5113
Source: 1990 AACS.

R 299.5115
Source: 1990 AACS.

PART 2. SITE IDENTIFICATION AND LIST

R 299.5201
Source: 1990 AACS.

R 299.5203
Source: 1990 AACS.

R 299.5205
Source: 1990 AACS.

R 299.5207
Source: 1990 AACS.

R 299.5209
Source: 1990 AACS.

R 299.5211
Source: 1990 AACS.

R 299.5213
Source: 1990 AACS.

R 299.5215
Source: 1990 AACS.

R 299.5217
Source: 1990 AACS.

PART 3. FUNDING

R 299.5301
Source: 1990 AACS.

R 299.5303
Source: 1990 AACS.

R 299.5305
Source: 1990 AACS.

PART 4. ALTERNATE WATER SUPPLIES

R 299.5401
Source: 1990 AACS.

R 299.5403
Source: 1990 AACS.

R 299.5405
Source: 1990 AACS.

R 299.5407
Source: 1990 AACS.

R 299.5409
Source: 1990 AACS.

R 299.5411

Source: 1990 AACS.

R 299.5413
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R 299.5415
Source: 1990 AACS.

PART 5. RESPONSE ACTIVITIES

R 299.5501
Source: 1990 AACS.

R 299.5503
Source: 1990 AACS.

R 299.5505
Source: 1990 AACS.

R 299.5507
Source: 1990 AACS.

R 299.5509
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R 299.5511
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R 299.5519
Source: 1990 AACS.

PART 6. SELECTION OF REMEDIAL ACTION

R 299.5601
Source: 1990 AACS.

R 299.5603
Source: 1990 AACS.

R 299.5605
Source: 1990 AACS.

R 299.5607
Source: 1990 AACS.

PART 7. CLEANUP CRITERIA

R 299.5701
Source: 1990 AACS.

R 299.5703
Source: 1990 AACS.

R 299.5705
Source: 1990 AACS.

R 299.5707
Source: 1990 AACS.

R 299.5709
Source: 1990 AACS.

R 299.5711
Source: 1990 AACS.

R 299.5713
Source: 1990 AACS.

R 299.5715
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R 299.5719
Source: 1990 AACS.

R 299.5721
Source: 1990 AACS.

R 299.5723
Source: 1990 AACS.

R 299.5725
Source: 1990 AACS.

R 299.5727
Source: 1990 AACS.

PART 8. SITE ASSESSMENT MODEL

R 299.5801
Source: 1990 AACS.

R 299.5803
Source: 1990 AACS.

R 299.5805
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R 299.5807
Source: 1990 AACS.

R 299.5809
Source: 1990 AACS.

R 299.5811
Source: 1990 AACS.

R 299.5813
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R 299.5815
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R 299.5817
Source: 1990 AACS.

R 299.5819
Source: 1990 AACS.

R 299.5821
Source: 1990 AACS.

R 299.5823
Source: 1990 AACS.

PART 9. BASELINE ENVIRONMENTAL ASSESSMENTS

R 299.5901 Definitions.

Rule 901. As used in this part:

(a) "Act" means Act No. 451 of the Public Acts of 1994, as amended, being §§324.101 et seq. of the Michigan Compiled Laws.

(b) "Administratively incomplete," when used in reference to a petition, means a petition that does not include 1 or more administrative or technical elements required by these rules.

(c) "Baseline environmental assessment" or "BEA" has the same meaning as defined in section 20101(1)(d) of the act.

(d) "Category D BEA" means a BEA that is conducted for a property where the hazardous substances to be considered are different from the hazardous substances that are known or reasonably believed to have previously been released at the property or are present at the property as a result of the decomposition of the substances that were released. Hazardous substances to be considered are those that are anticipated by the submitter to be present, as of the date of completion of the BEA, at the property in a quantity and manner that constitute significant hazardous substance use after ownership or occupancy commences.

(e) "Category N BEA" means a BEA that is conducted for a property where hazardous substances are not, as of the date the BEA is conducted, anticipated by the submitter to be present in a quantity and manner that constitute significant hazardous substance use at the property after ownership or occupancy commences.

(f) "Category S BEA" means a BEA that is conducted for a property where the hazardous substances to be considered are the same as the hazardous substances that are known or reasonably believed to have previously been released at the property or are present as a result of the decomposition of hazardous substances that were released, except as provided in R 299.5903(9). Hazardous substances to be considered are those that are anticipated by the submitter to be present, as of the date of completion of the BEA, in a quantity and manner that constitute significant hazardous substance use at the property after ownership or occupancy commences.

(g) "Conducted," when used in reference to the date that a BEA is conducted, means the date when all site history research, field work, laboratory analysis, and data interpretation are complete and preparation of the BEA report is substantially complete.

(h) "Date of completion," when used in reference to the date of completion of a BEA, means the date when the BEA report is finalized by the submitter for initial disclosure to the department. The date of completion shall not be more than 15 days after the date required by section 20126(1)(c) of the act or by R 299.5903(8).

(i) "Date of occupancy," except as provided in R 299.5903(8), means the date when a person first becomes an operator of the property.

(j) "Engineering control" means measures or conditions which exist or are created at the property and which are presented in the BEA as an alternative or supplement to environmental data as the means by which a

new release can be distinguished from existing contamination.
(k) "Isolation zone" means an area of uncontaminated soil or other media that can be monitored to determine whether a new release has occurred. An isolation zone may be presented in the BEA as an alternative or supplement to environmental data as the means by which a new release can be distinguished from existing contamination.
(l) "Petition" means the form and all required associated materials submitted to the department to request a determination under section 20129a of the act.
(m) "Petitioner" means a person who is seeking liability protection through the process set forth in section 20129a of the act and these rules.
(n) "Section 7a compliance analysis" means a report prepared in compliance with R 299.5915 and submitted under section 20129a of the act that documents how the use of the property by the owner or operator, or both, will assure compliance with section 20107a of the act.
(o) "Significant hazardous substance use" means the use, storage, handling, or management, at any time, of hazardous substances in quantities that exceed those commonly used for typical residential or office purposes. However, significant hazardous substance use does not include any of the following:
(i) Gasoline, oil, or other vehicle fluids that are contained in vehicles traversing or parked at a property on a short-term basis.
(ii) Storage of hazardous substances for retail sale in packaging and in quantities consistent with use by occupants of residential dwellings.
(iii) Storage or management of aboveground storage tanks, barrels, containers, or other receptacles containing hazardous substances that are appropriately identified in the BEA as being abandoned or discarded at the time of purchase, occupancy, or foreclosure.
(p) "Stipulated condition" means a statement included in a BEA or affidavit that defines a condition which is acknowledged by the submitter to be the basis for defining the scope of the evaluation provided in a BEA and the basis for resulting liability protection.
(q) "Submitter" means a person who is seeking, through a petition under section 20129a of the act or through a disclosure under section 20126(1)(c)(ii) of the act, liability protection by conducting and disclosing a BEA.
History: 1999 MR 2, Eff. Mar. 11, 1999.

R 299.5903 Use of evaluation of environmental conditions as BEA for certain property; property description; establishing basis to distinguish existing contamination from new release; determination of significant hazardous substance use; inclusion in BEA of data and information from other studies; exemption from liability not invalidated by change in property use or hazardous substance use; time to conduct BEA prepared to establish liability exemption for development of oil or gas resources; applicability of subrule (8); "site preparation activities" defined; sufficiency of BEA completed before effective date of rules.

Rule 903. (1) An evaluation of environmental conditions may be used as a BEA only for property that is a facility as defined in section 20101(1)(o) of the act.
(2) The rules in this part set forth the requirements for a BEA that describes the condition of property that is being transferred. If the property being transferred is part of a larger facility, then the BEA may describe the conditions on that property and need not address the entire facility. A BEA may address a facility that is only a portion of a property being transferred. If more than 1 contiguous property is being transferred, each property must be evaluated separately to determine if it is a facility, regardless of whether the property will be in common ownership after the transfer. A BEA may include 2 or more contiguous properties that will be in common ownership after transfer provided that each property is demonstrated in the BEA to be a facility. The BEA will provide an exemption from liability only for the property which is specified in the BEA, as required by these rules.
(3) A BEA may establish a basis to distinguish existing contamination from a new release through 1 or more of the following, provided that these elements comply with the pertinent requirements of these rules:
(a) Environmental data that characterize conditions at the property.
(b) Engineering controls.
(c) Isolation zones.
(d) Stipulated conditions.

(4) The department may issue a written determination, on a case-by-case basis, that the use, storage, or handling of hazardous substances that exceed quantities commonly used for typical residential or office purposes is not significant hazardous substance use. If the department determines that there is no significant hazardous substance use, then the hazardous substance covered by the determination can be eliminated from further consideration in the BEA.
(5) A BEA submitted by an owner shall consider significant hazardous substance use by the owner and all tenants and operators who, at the time the BEA is completed, are currently in possession of, or are under agreement to take possession of, all or part of the property.
(6) A BEA may include data and information from studies prepared by others or conducted for other purposes if the BEA provides sufficient rationale to demonstrate that the data are reliable and relevant to define conditions at the property at the time of purchase, occupancy, or foreclosure.
(7) If a person has established an exemption from liability by completing a BEA that satisfies the requirements of part 201 of the act and these rules, then a change in property use or hazardous substance use after the date of completion of the BEA will not invalidate the exemption.
(8) For the purposes of a BEA prepared to establish a liability exemption for a person who is a permittee for subsurface oil, gas, storage, or mineral rights under part 615 or part 625 of the act, the period to conduct a BEA shall end 45 days after the date when a permit is issued to the person by the department, unless, in the case of oil and gas development activities regulated under part 615 of the act, notice is provided to the department under R 324.402 not less than 5 days in advance of any site preparation work. If such notice is provided, the period to conduct a BEA shall end 45 days after the date that the department receives the notice. For the purposes of these rules, notice provided to the department under R 324.402 shall modify the period for completion of a BEA only if it is received by the department not less than 5 days before site preparation activities begin and is sent to the department by a means that provides proof of delivery. Verbal notice under R 324.402 is not sufficient to modify the date on which the 45-day period ends. If an amendment to a permit to drill and operate that changes the permitted location or increases the scope of activities allowed at the permitted location is issued by the department, then the period to conduct a BEA with respect to the revised permit location or new scope of activity covered by the amendment shall end 45 days after the amendment is issued. The provisions of this subrule apply to persons who receive a new permit to drill and operate under part 615 of the act but do not apply to the transfer of existing permits to drill and operate as provided by R 324.206(6) and (7), where site preparation activities have occurred. For the purposes of this subrule, "site preparation activities" means any change to the landscape, including cutting or removing trees or other vegetation, or any earth changes at the permitted location.
(9) A person submitting a BEA may, at their option, consider only those hazardous substances that are present at the property in excess of applicable residential cleanup criteria in determining whether the BEA will be a category S or a category D. Hazardous substances that are detected at the property, but that are not present in excess of applicable residential criteria, may be dropped from further consideration in the BEA if the BEA contains documentation that there is a reasonable basis, after all appropriate inquiry, including review of property use history and appropriate characterization, to conclude that the hazardous substance in question is not present above applicable residential cleanup criteria.
(10) A BEA which was completed before the effective date of these rules and which does not comply with the requirements of these rules is considered inadequate to establish an exemption from liability if it fails to conform with written instructions for completing BEAs issued by the department. Disclosure of such a BEA to the department shall be governed by R 299.5919(10).
History: 1999 MR 2, Eff. Mar. 11, 1999.

R 299.5905 Eligibility to conduct BEA; "date provided by law" defined.

Rule 905. (1) Except as provided in section 20126(2) of the act and subrules (2) and (4) of this rule, a person who becomes the owner or operator of a facility on or after the date provided by law is eligible to conduct a BEA to establish an exemption from liability for existing contamination at a facility.
(2) A person who was the operator of a facility before the date provided by law and who becomes the owner of the facility on or after the date provided by law without interruption in his or her status as either owner or operator is not eligible or required to complete a BEA to establish his or her liability with respect to contamination at the facility. The liability of a person who was the operator of a facility before the date

provided by law and who becomes the owner of the facility on or after the date provided by law without interruption in his or her status as owner or operator shall be determined under section 20126(1)(a), (b), (d), (e), and (f), (3), and (4) of the act, and not under section 20126(1)(c) of the act.
(3) A person who was a lessee at a facility or held another possessory interest in the facility, but was not the operator of the facility, and who becomes the owner or operator of the facility on or after the date provided by law is eligible to conduct a BEA under section 20126(1)(c) of the act. A BEA conducted by the person does not provide an exemption from liability for contamination if he or she is otherwise liable under section 20126 of the act.
(4) Except as provided in subrule (5) of this rule, an owner or an operator of a facility who changes status from operator to owner or owner to operator on or after the date provided by law is not eligible to conduct a BEA when a change in status occurs.
(5) A person who has been the owner or operator of a facility, who then is neither the owner or operator of the facility for a time, and who again becomes the owner or operator of the facility shall, if he or she wishes to establish liability protection for contamination attributable to intervening owners or operators, conduct a BEA under section 20126(1)(c) of the act. A BEA conducted by the person does not provide an exemption from liability for contamination if he or she is otherwise liable under section 20126 of the act.
(6) A land contract vendor who, on or after the date provided by law, regains possession of a facility as a result of default by a land contract vendee and who wishes to establish an exemption from liability under section 20126(1)(c) of the act for contamination that exists at the time the land contract vendor regains possession shall conduct a BEA within 45 days after the land contract vendor possession of the facility. The BEA shall be prepared in accordance with the requirements of part 201 of the act and these rules. A BEA conducted by a land contract vendor that regains possession of a facility as a result of default by the land contract vendee does not provide an exemption from liability for contamination if the land contract vendor is otherwise liable under section 20126 of the act for that contamination. If the land contract vendor institutes summary proceedings to regain possession of the facility following a default in the land contract and a writ of restitution is issued and executed, the date the writ of restitution is executed shall constitute the date the land contract vendor regained possession of the facility.
(7) For the purpose of this rule, "date provided by law" means March 6, 1996, with regard to underground storage tank systems regulated under part 213 of the act, and June 5, 1995, with respect to all other facilities or portions of facilities.
History: 1999 MR 2, Eff. Mar. 11, 1999.

R 299.5907 Minimum technical standards for categories of BEAs.

Rule 907. (1) This rule sets forth the minimum technical standards for each category of a BEA. All elements from the minimum technical standards for the appropriate category of a BEA shall be included in a BEA, except as provided in R 299.5909. In addition to the specific elements required for each category of a BEA, as set forth in subrules (2), (3), (4), and (5) of this rule, a submitter shall conduct all appropriate inquiry into the previous uses of the property, including a search of pertinent government records, consistent with good commercial or customary practice and describe the results of the inquiry in the BEA.
(2) A category N BEA shall include all of the following:
(a) A legal description and scaled map or survey depicting the property.
(b) The property tax identification numbers or ward and item numbers for parcels that are included, in whole or in part, as property covered by the BEA.
(c) The names and chemical abstract service numbers, when a chemical abstract service number is available, of all hazardous substances known to have been released at the property.
(d) The basis for the conclusion that the property is a facility.
(e) Identification, by general or specific location, of known contamination on the property, including the environmental media affected.
(f) Identification of all of the following that are known to be present at the property after a reasonable inspection of the property and review of pertinent government records:
(i) Abandoned or discarded aboveground storage tanks or surface impoundments that contain hazardous substances.
(ii) Underground storage tanks that contain hazardous substances.

(iii) Abandoned or discarded barrels, containers, and other receptacles that contain hazardous substances.
(iv) A general description of the contents of any aboveground or underground storage tank, surface impoundments, barrel, container, or other receptacle identified under paragraphs (i), (ii), and (iii) of this subdivision, and any specific information known to the submitter about the contents.
(v) An estimate of the volume of the contents of each aboveground or underground storage tank, surface impoundments, barrel, container, or other receptacle identified under paragraphs (i), (ii), and (iii) of this subdivision, unless it is impractical to make an estimate. If it is impractical to estimate the volume of the contents of tanks, barrels, surface impoundments, containers, or other receptacles at the facility, then the BEA shall include an explanation of why it is impractical.
(g) Photographs that depict important features of the property and visually evident releases, including abandoned and discarded containers, unless it is impractical to provide photographs or photographs would not provide useful information about the property. Photographs shall be accompanied by all of the following information:
(i) The actual or approximate date the photograph was taken.
(ii) A description of what the photograph illustrates.
(iii) The location where the photograph was taken.
(iv) The name of the person who took the photographs.
(h) A specific statement that there will be no significant hazardous substance use at the property and that this stipulated condition is the basis for being able to distinguish existing contamination from a new release.
(3) A category D BEA shall include all of the following:
(a) A legal description and scaled map or survey depicting the property.
(b) The property tax identification numbers or ward and item numbers for parcels that are included, in whole or in part, as property covered by the BEA.
(c) The names and chemical abstract service numbers, when a chemical abstract service number is available, of all hazardous substances that will be used or otherwise be present as a result of operations at the property in a quantity that constitutes significant hazardous substance use. Identification solely by trade name, reliance on material safety data sheets that list unidentified or unspecified substances as an ingredient in a product, or other imprecise identification of hazardous substances is acceptable only if the information is adequate to allow a new release to be distinguished from existing contamination.
(d) The names and chemical abstract service numbers, if chemical abstract service numbers are available, of all hazardous substances known to have been released at the property or to be present as a result of the decomposition of hazardous substances that were released.
(e) The basis for the conclusion that the property is a facility.
(f) Identification of all of the following that are known to be present at the property after a reasonable inspection of the property and review of pertinent government records:
(i) Abandoned or discarded aboveground storage tanks or surface impoundments that contain hazardous substances.
(ii) Underground storage tanks that contain hazardous substances.
(iii) Abandoned or discarded barrels, surface impoundments, containers, and other receptacles that contain hazardous substances.
(iv) A general description of the contents of any aboveground or underground storage tank, surface impoundments, barrel, container, or other receptacle identified under paragraphs (i), (ii), and (iii) of this subdivision, and any specific information known to the submitter about the contents.
(v) An estimate of the volume of the contents of each aboveground or underground storage tank, surface impoundment, barrel, container, or other receptacle that is identified under paragraphs (i), (ii), and (iii) of this subdivision, unless it is impractical to make an estimate. If it is impractical to estimate the volume of the contents of tanks, barrels, containers, or other receptacles at the facility, then the BEA shall include an explanation of why it is impractical.
(g) Photographs that depict important features of the property and visually evident releases, including abandoned and discarded containers, unless it is impractical to provide photographs or photographs would not provide useful information about the property.
Photographs shall be accompanied by all of the following information:
(i) The actual or approximate date the photograph was taken.

(ii) A description of what the photograph illustrates.
(iii) The location where the photograph was taken.
(iv) The name of the person who took the photographs.
(h) Identification, by general or specific location, of known contamination on the property, and the environmental media affected.
(i) Environmental data or other information to demonstrate that the hazardous substances identified in subdivision (c) of this subrule have not been released at the facility or documentation showing why the submitter does not reasonably believe that 1 or more hazardous substances identified in subdivision (c) of this subrule have ever been present at the property, or both. Those hazardous substances need not be characterized in detail.
(j) For BEAs being submitted under section 20129a of the act, an explanation of how the body of information in the BEA can be used, and why it is sufficient, to distinguish a new release from existing contamination.
(4) A category S BEA shall include all of the following:
(a) A legal description and scaled map or survey depicting the property.
(b) The property tax identification numbers or ward and item numbers for parcels that are included, in whole or in part, as property covered by the BEA.
(c) The names and chemical abstract service numbers, when a chemical abstract service number is available, of all hazardous substances that will be used or otherwise be present as a result of operations at the property in a quantity that constitutes significant hazardous substance use. Identification solely by trade name, reliance on material safety data sheets that list unidentified or unspecified substances as an ingredient in a product, or other imprecise identification of hazardous substances is acceptable only if the information is adequate to allow a new release to be distinguished from existing contamination.
(d) The names and chemical abstract service numbers, if chemical abstract service numbers are available, of all hazardous substances known to have been released at the property or that are present as the result of decomposition of hazardous substances that were released.
(e) Photographs that depict important features of the property and visually evident releases, including abandoned and discarded containers, unless it is impractical to provide photographs or photographs would not provide useful information about the property.
Photographs shall be accompanied by all of the following information:
(i) The actual or approximate date when the photograph was taken.
(ii) A description of what the photograph illustrates.
(iii) A description of the location where the photograph was taken.
(iv) The name of the person who took the photographs.
(f) The basis for the conclusion that the property is a facility.
(g) Identification of all of the following that are known to be present at the property after a reasonable inspection of the property and review of pertinent government records:
(i) Abandoned or discarded aboveground storage tanks or surface impoundments that contain hazardous substances.
(ii) Underground storage tanks that contain hazardous substances.
(iii) Abandoned or discarded barrels, containers, and other receptacles that contain hazardous substances.
(iv) A general description of the contents of any aboveground or underground storage tank, surface impoundments, barrel, container, or other receptacle identified under paragraphs (i), (ii), and (iii) of this subdivision, and any specific information known to the submitter about the contents.
(v) An estimate of the volume of the contents of each aboveground or underground storage tank, surface impoundment, barrel, container, or other receptacle that is identified under paragraphs (i), (ii), and (iii), unless it is impractical to make an estimate. If it is impractical to estimate the volume of the contents of tanks, surface impoundments, barrels, containers, or other receptacles at the facility, then the BEA shall include an explanation of why it is impractical.
(h) Identification and quantification of each hazardous substance that is part of the known existing contamination at the property if the hazardous substance will be used at the facility. Statistical analyses may be presented to characterize the mass of hazardous substances that are part of existing contamination, if mass calculations are pertinent in distinguishing a new release from existing contamination.
(i) For all hazardous substances that will be used at the facility, documentation of the extent of existing

contamination for hazardous substances known to have been released, and general projections about the fate of contamination, including all of the following:

(i) Information about significant property features that influence contaminant migration.

(ii) Identification of known sources of hazardous substance releases on the property.

(iii) Documentation of the vertical and horizontal extent of hazardous substance concentrations at the property above residential cleanup criteria.

(j) Information to confirm the presence of, quantify, and delineate the horizontal and vertical extent of, contamination with respect to any hazardous substance that has potentially been released on the property. Statistical analyses may be presented to characterize the mass of hazardous substances that are part of existing contamination, if mass calculations are pertinent in distinguishing a new release from existing contamination. Identification of hazardous substances subject to this subdivision shall be based on a thorough review of the property use to assess the likelihood that hazardous substances not addressed by subdivisions (h) and (i) of this subrule have been present on the property. Documentation showing why the submitter reasonably believes that 1 or more hazardous substances identified in subdivision (c) of this subrule have not ever been present at the property and the basis for the conclusion shall be included in the BEA and those hazardous substances need not be characterized in detail. Investigation for substances covered by this subdivision shall include areas of likely release based on historical information. Areas that should be considered for investigation include the following:

(i) Spills.

(ii) Seepage lagoons.

(iii) Floor drains.

(iv) Dry wells.

(v) Septic tank and tile field systems.

(vi) Buried wastes.

(vii) Underground storage tanks.

(k) For BEAs being submitted under section 20129a of the act, an explanation of how the body of information in the BEA can be used, and why it is sufficient, to distinguish a new release from existing contamination.

(5) If an underground storage tank is known to be present at a property where a BEA is conducted, then the BEA shall specifically state whether the underground storage tank will be used to contain a hazardous substance after the earliest of the date of purchase, occupancy, or foreclosure. The category of BEA required shall be determined in the following manner:

(a) If the underground storage tank will be used to contain a hazardous substance, then a category S or category D BEA shall be conducted as appropriate to the circumstances.

(b) If the underground storage tank will not be used to contain a hazardous substance, then a category N BEA may be conducted if a category N BEA is otherwise appropriate to the circumstances at the facility and if the underground storage tank is emptied within 45 days of the earliest of the date of purchase, occupancy, or foreclosure, or within the time frame allowed for completion of the BEA under R 299.5903(8), or, if the property has been condemned by the state or a local unit of government, within 45 days after the state or a local unit of government has possession of the portion of the property where the underground storage tank is located. The department may, at its discretion, extend the 45-day period for emptying an underground storage tank under extenuating circumstances. Extenuating circumstances that may be considered by the department in granting an extension include, but are not limited to, the presence of deteriorated structures that make removal of the underground storage tank unsafe and severe weather conditions that interfere with removal of the underground storage tank. A request for extension of the 45-day period to empty an underground storage tank under this subdivision shall be made in writing by the owner or operator and received by the department before the expiration of the 45-day period.

(c) For the purpose of this subrule, use of an underground storage tank does not include the storage of hazardous substances for 45 days or less after the earliest of the date of purchase, occupancy, or foreclosure or for another period allowed under subdivision (b) of this subrule if the underground storage tank is emptied within the period.

(d) The requirements of this subrule are in addition to any other requirements of state or federal laws and regulations applicable to underground storage tanks and do not limit the obligation of an owner or operator under any other state or federal law or regulation with respect to an underground storage tank.

(6) For the purpose of this rule, the term "known" refers to information known, at the time the BEA is conducted, to the submitter of the BEA and his or her agents, including the environmental professional who prepares the BEA.
(7) A BEA report shall follow a format specified by the department. The department may specify different formats for BEAs that are submitted with petitions and BEAs that are disclosed under section 20126(1)(c)(ii) of the act.
History: 1999 MR 2, Eff. Mar. 11, 1999.

R 299.5909 Engineering controls and stipulated conditions.

Rule 909. (1) Alternative approaches may be used to satisfy certain provisions of the minimum technical standards in conjunction with, or in place of, some of the information required by R 299.5907. Alternative approaches are acceptable only if they provide or contribute to a reliable means of distinguishing between existing contamination and a new release. The purpose and function of all engineering controls, isolation zones, and stipulated conditions shall be clearly defined in the BEA.
(2) Subject to the limitations set forth in subdivision (b) of this subrule and in subrules (3), (4), and (5) of this rule, either of the following can be included in a BEA, if the BEA, taken in its entirety, satisfies the requirements of section 20101(1)(d) of the act:
(a) Engineering controls, isolation zones, or other features that provide a verifiable means of assuring that any release that occurs after purchase, occupancy, or foreclosure will be spatially separated from existing contaminated media, will be detected, and can be responded to in a timely manner so as to prevent commingling with existing contamination. A BEA that includes engineering controls, isolation zones, or other similar features shall include, at a minimum, the information required by R 299.5907(2).
(b) For BEAs that are submitted with a petition, the BEA may include 1 or more of the following stipulated conditions specified in the affidavit from the petitioner:
(i) The petitioner acknowledges that the BEA does not provide sufficient environmental data with respect to a specific hazardous substance, and that the petitioner acknowledges that the BEA does not provide an exemption to strict liability with respect to response activity required to address a release of the hazardous substance at the property.
(ii) The petitioner acknowledges that the BEA does not provide sufficient environmental data with respect to certain areas of the property, and that the petitioner acknowledges that the BEA does not provide an exemption to strict liability with respect to response activity required to address contamination in those areas of the property.
(3) If a BEA relies on engineering controls or other similar features to prevent commingling of a new release with existing contamination, then the BEA shall include stipulated conditions in an affidavit from the petitioner or submitter acknowledging that if there is a failure of an engineering control or similar feature identified in the BEA and if a release occurs as a result of the failure, then the BEA does not provide an exemption to liability for response activity necessary to address contamination resulting from the failure. The stipulated conditions in the affidavit shall also state that the burden of distinguishing the release attributable to the failure of the engineering control from existing contamination shall be borne by the petitioner or submitter according to section 20129 of the act. The content of stipulated conditions used in conjunction with an engineering control or other similar feature may be modified from the affidavit statement on a case-by-case basis, with the approval of the department, to fit the facts and circumstances of a particular case.
(4) If a BEA relies on an isolation zone as a means of detecting a new release, then the BEA shall include a stipulated condition in an affidavit from the petitioner or submitter acknowledging that if hazardous substances are detected in the isolation zone, then the BEA does not provide an exemption to liability for response activity necessary to address the contamination. The stipulated condition in the affidavit shall also state that the burden of distinguishing a new release that has migrated beyond the isolation zone from existing contamination shall be borne by the petitioner or submitter according to section 20129 of the act. The content of stipulated conditions used in conjunction with an isolation zone or other similar feature may be modified from the affidavit statement on a case-by-case basis, with the approval of the department, to fit the facts and circumstances of a particular case.
(5) The department may, on a case-by-case basis, approve of other stipulated conditions as part of a BEA

petition. Stipulated conditions other than those provided for in subrules (2), (3), and (4) of this rule and R 299.5907(2)(h) shall not be acceptable as part of a BEA if the department determines that the stipulated condition is to be used wholly, or in large measure, in place of a technical requirement that can be complied with in a manner that is cost effective and practical. Stipulated conditions that are predicated on no hazardous substance release occurring are unacceptable for category S and category D BEAs.
(6) The form of all affidavits required under this rule shall be specified by the department.
History: 1999 MR 2, Eff. Mar. 11, 1999.

R 299.5911 Seeking department determination for exemption from liability; required forms and affidavits; department processing of petitions.

Rule 911. (1) If a person wishes to petition the department under section 20129a of the act for a determination that the person meets the requirements for an exemption from liability under section 20126(1)(c) of the act then the person shall use a form specified by the department.
(2) Each person who seeks a determination under section 20129a of the act shall submit a separate petition, unless the petitioners are joint owners of the property as tenants in common, tenants in entirety, or joint tenants. The exception for tenants in common, tenants in entirety, and joint tenants applies only when each person will be conducting the same activities at the property and have identical relationships to the property.
(3) A petition submitted under section 20129a of the act and these rules shall also be accompanied by the following affidavits:
(a) An affidavit in support of a petition for a BEA determination and optional determination of compliance with section 20107a of the act. The form of the affidavit shall be specified by the department. The affidavit shall be signed by the petitioner or a person legally authorized to bind the petitioner.
(b) An affidavit from an environmental professional in support of a petition for a BEA. The form of the affidavit shall be specified by the department. The affidavit shall be completed by the environmental professional who was the author of, or who supervised the preparation of, the BEA.
(4) If a petitioner seeks a determination by the department that the proposed use of the facility will satisfy the person's obligations under section 20107a of the act, then the petitioner shall provide a section 7a compliance analysis that complies with the requirements of R 299.5915. The petitioner shall also provide an affidavit of an environmental professional in support of a petition for a determination of compliance with section 20107a of the act. The form of the affidavit shall be specified by the department. The affidavit shall be completed by the environmental professional who was the author of, or who supervised the preparation of, the section 7a compliance analysis.
(5) The department may return to the petitioner as administratively incomplete, and without making a determination, a BEA that does not include all elements required by these rules. If the department intends to return a BEA without review or determination because it is administratively incomplete, then the department shall do so within 15 business days after receipt of the petition. Return of an administratively incomplete BEA by the department does not alter the deadlines for completion and disclosure of the BEA that are set forth under part 201 of the act and these rules.
(6) The department may provide comments on a BEA, form, affidavit, or other material associated with the BEA in a verbal and brief written communication before issuing a determination. This communication shall be directed to the contact person identified by the petitioner on the petition form or to the petitioner.
(7) If a petitioner submits information to respond to the comments made through the process provided for in subrule (6) of this rule, then the department shall make a determination within 15 business days of receipt of the additional materials. If materials that respond to the comments are not received by the department within 15 business days of the contact made under subrule (6) of this rule, or within a time that the department and the petitioner mutually agree upon, then the department shall issue a determination that the person does not meet the requirements for an exemption under section 20126(1)(c) of the act. If, after being informed of department comments under subrule (6) of this rule, the petitioner wishes to receive a determination without submitting materials to respond to the comments, then the department shall issue the determination as required by section 20129a of the act, within 15 days of being informed of that decision by the petitioner or the petitioner's contact person identified on the petition form.
(8) If the department does not respond to a petition within 15 business days after the petition is received by

the department, either by issuing a determination or providing comments according to the process described in subrule (6) of this rule, and if the delay in the department's response prevents the petitioner from curing deficiencies in the BEA within the time frames allowed by these rules, then the time allowed for the petitioner to cure any deficiencies shall be the time that would have been available to the petitioner if the department had responded on the fifteenth business day.

(9) If any of the following deficiencies are not cured by the petitioner within the time allowed under part 201 of the act and these rules, then the department may either issue a determination that the person does not meet the requirements for an exemption from liability under section 20129a of the act or, at the option of the department, inform the petitioner that the deficiency prevents the department from issuing a determination that a person meets the requirements for an exemption from liability under section 20129a of the act:

(a) A required form or affidavit is not submitted with the petition.

(b) A required form or affidavit lacks a complete response to a required element, including proper notarization, signatures, and information about the property or the petitioner. The petitioner shall respond to an inapplicable question on a form or affidavit by stating "not applicable."

(c) The text of a required form or affidavit is altered from the standard text, unless the department has authorized the petitioner or affiant to modify the standard text.

(d) The fee required by section 20129a of the act and R 299.5913 of these rules has not been paid. If the department informs the petitioner that it will not issue an affirmative determination because of the deficiency, the department shall treat the BEA as a disclosure under section 20126(1)(c)(ii) of the act.

(10) A person who submits a BEA to the department under this rule satisfies the requirement under section 20126(1)(c)(ii) of the act that the person disclose the results of a BEA to the department.

History: 1999 MR 2, Eff. Mar. 11, 1999.

R 299.5913 Fee for review of BEA and section 7a compliance analysis.

Rule 913. (1) The fee prescribed by law for review of a petition shall accompany a petition submitted for department review under section 20129a of the act. The fee shall be paid by a check or money order payable to: "State of Michigan."

(2) There is no fee for a BEA disclosed under section 20126(1)(c)(ii) of the act if the disclosure is not accompanied by a petition.

(3) If a petition and fee are received by the department and either the petition states that the property is not a facility or the department determines after review of the BEA that the BEA does not provide sufficient information to demonstrate that the property is a facility, then the department will retain the payment.

(4) Payment of the fee for BEA petition review entitles a petitioner to all of the following services:

(a) Review of, and a determination regarding, the initial BEA and other required materials.

(b) One review of, and a determination regarding the adequacy of, revisions to the BEA or other required materials if the initial determination identifies any deficiencies in the BEA or other petition documents.

(c) Review of, and a determination regarding, the initial section 7a compliance analysis if the petitioner exercises his or her option to seek a determination of compliance with the requirements of section 20107a of the act and review of a plan for response activity, if a plan is proposed, to assure compliance with section 20107a of the act.

(d) One review of, and a determination regarding, a revised section 7a compliance analysis and a plan for response activity, if relevant, if a revised analysis is prepared in response to deficiencies identified in the initial determination.

(5) If additional iterations of the BEA or section 7a compliance analysis or a plan for response activity are submitted for department determination, then the petitioner shall pay an additional statutory fee in the same amount as the initial fee, unless the department determines that payment of an additional fee is not required because of the minor nature of any remaining deficiency. Payment of the additional fee shall be made in accordance with the requirements of this rule for the initial fee.

(6) The department shall not issue determinations in response to submittals beyond the first revisions, as described in subrule (4) of this rule, that are not accompanied by the fee. The submittals may be retained in department files.

(7) If a check is returned for insufficient funds, then the petitioner shall be given 21 days in which to make the proper payment. The 21-day period shall commence on the date the department sends notice, by

certified mail, return receipt requested, of the demand for payment. If proper payment is not made within 21 days, then the department may do any of the following:
(a) If the BEA review and determination was not complete, retain the BEA as a disclosure under section 20126(1)(c)(ii) of the act.
(b) If the BEA review was complete and the BEA is inadequate to satisfy the requirements of part 201 of the act and these rules, issue a determination that the criteria for obtaining an exemption from liability have not been met.
(c) If an affirmative BEA determination has been issued, rescind that determination and retain the BEA as a disclosure under section 20126(1)(c)(ii) of the act.
History: 1999 MR 2, Eff. Mar. 11, 1999.

R 299.5915 Section 7a compliance analysis; submittal; content; format; explanation of omitted information required.

Rule 915. (1) A person who is seeking a determination from the department that his or her proposed use of the facility will satisfy the person's obligations under section 20107a of the act shall prepare and submit a section 7a compliance analysis to the department.
(2) A section 7a compliance analysis may be submitted for a determination under section 20129a of the act only in conjunction with a petition regarding a BEA. The section 7a compliance analysis may be submitted with the BEA or as a subsequent submittal if it is submitted within 6 months from the time that the BEA is complete.
(3) If a person submits a section 7a compliance analysis separately from a petition, then the section 7a compliance analysis shall be accompanied by a copy of the relevant petition form for the facility.
(4) A section 7a compliance analysis shall include the following elements, as appropriate to the facility:
(a) Hazardous substance information, including all information regarding previous and proposed hazardous substance use at the property that is relevant for the section 7a compliance analysis.
(b) Detailed characteristics of property use, including a description of current and proposed property use.
(c) Plan for response activities, if response activities are necessary for a person to satisfy his or her obligations under section 20107a of the act.
(d) Evaluation and demonstration of compliance with section 7a obligations, including an evaluation of the information provided in response to the requirements of the other subdivisions of this subrule that discusses and demonstrates how the proposed use satisfies a person's obligations under section 20107a(1)(a), (b), and (c) of the act.
(5) A section 7a compliance analysis shall be assembled and presented in a format specified by the department.
(6) If information is omitted because it is not relevant for the facility, then the section 7a compliance analysis shall include a discussion that explains which elements were omitted and why they are not relevant to the facility.
History: 1999 MR 2, Eff. Mar. 11, 1999.

R 299.5917 Submittal of information to cure deficiencies in BEA or section 7a compliance analysis; required forms and affidavits; timing.

Rule 917. (1) Data or information collected after the end of the 45-day period in section 20126(1)(c) of the act or after the expiration of an extension of the 45-day period as provided for in R 299.5903(8) may be submitted to cure a deficiency in a BEA identified by the department in response to a petition submitted under section 20129a of the act under the following circumstances:
(a) If it is necessary to collect additional samples to cure the identified deficiency, data from the samples will be accepted only if the owner or operator has not conducted business activities involving significant hazardous substance use at the property. If additional samples are taken after the 45-day period in section 20126(1)(c) of the act or after an extension of the 45-day period as provided for in R 299.5903(8) has expired, then an affidavit shall be included with the data stating that the owner or operator had not conducted business activities that involved significant hazardous substance use at the property. The department shall specify the form of the affidavit that is to be used.
(b) If additional samples are not required to cure the deficiency, then the use of hazardous substances does

not impair the opportunity to cure the deficiency and an affidavit regarding this issue is not required.
(2) Sample data and information gathered within the 45-day period may be submitted any time within the 6-month period provided for in section 20129a of the act to initiate the BEA petition review.
(3) All resubmittals prepared to cure deficiencies in the initial BEA shall also be submitted to the department within the 6-month period provided for in section 20129a of the act if a department review is requested. If the sample data are collected within the time frames allowed by these rules and submitted within 6 months of completion of the initial BEA, then the department shall review the revised BEA and other petition documents and issue a determination regarding the revised BEA petition if requested by the petitioner.
(4) The 6-month period allowed for submittal of any BEA and section 7a compliance analysis shall be counted from the time an initial BEA is complete, not from the time additional data or information is prepared.
(5) The following procedure shall be followed when submitting materials to cure a deficiency in a BEA or other petition documents:
(a) Information shall be submitted to the department's district office that serves the property.
(b) Information shall be accompanied by a letter which describes the purpose of the submittal and which summarizes how the BEA or other petition documents, or both, have been revised. This letter shall include the petition number assigned by the department to the original petition.
(6) The department will not prepare an acknowledgment of receipt of the materials specified in subrule (5) of this rule, but shall, upon request, provide a receipt for the materials that are hand-delivered.
(7) A person who submits a request for a determination of compliance with section 20107a of the act in conjunction with a BEA determination shall submit his or her completed section 7a compliance analysis and, if required, plan for response activity that will result in compliance with section 20107a of the act within 6 months from the date of completion of the initial BEA.
(8) Materials submitted under subrule (7) of this rule shall be accompanied by a copy of the original petition that was submitted with the BEA and a cover letter stating which one of the following conditions applies:
(a) The submittal provides information to cure deficiencies in the section 7a compliance analysis.
(b) The section 7a compliance analysis request is in conjunction with a prior request for determination under section 20129a of the act.
History: 1999 MR 2, Eff. Mar. 11, 1999.

R 299.5919 Disclosure of BEA under section 20126(1)(c)(ii) of the act; forms; timing.

Rule 919. (1) A person who wishes to effectuate and maintain liability protection afforded by section 20126(1)(c) of the act is required by section 20126(1)(c)(ii) of the act to disclose the results of a BEA to the department and subsequent purchasers or transferees. The requirement to disclose the results of the BEA to the department is satisfied if the person follows the procedures in this rule.
(2) Disclosure shall be made to all persons who will become the owner or operator of the property that was the subject of the BEA, unless there is information which demonstrates that the property in which interest is being transferred is not a facility at the time of the transfer of interest.
(3) A person who wishes to effectuate and maintain liability protection afforded by section 20126(1)(c) of the act shall disclose the contents of the BEA to the department not later than 8 months after the earliest of the date of purchase, occupancy, or foreclosure.
(4) The BEA shall be submitted to the department with a form specified by the department for this purpose.
(5) A person who wishes to maintain liability protection afforded by section 20126(1)(c) of the act shall disclose the contents of the BEA to a subsequent purchaser before consummating the sale of the property, consistent with the requirements of subrule (2) of this rule.
(6) A person who wishes to maintain liability protection afforded by section 20126(1)(c) of the act shall disclose the contents of the BEA to a subsequent transferee before conveying interest in the property, consistent with subrule (2) of this rule.
(7) For the purposes of subrules (5) and (6) of this rule, the requirement to disclose the results of the BEA to a subsequent purchaser or transferee may be satisfied by providing a summary of the BEA and, if requested by the person to whom an interest is being transferred, the full BEA report and related materials submitted to the department under subrules (3) and (4) of this rule. If a summary of a BEA is provided to satisfy the

requirements of this rule, then the summary shall include, but is not limited to, all of the following information:

(a) The reason that the property is a facility.

(b) The category of BEA that was conducted for the property, and the reason that that category of BEA was conducted.

(c) The general nature and extent of contamination at the property revealed by the BEA.

(8) If the BEA is disclosed to the department not later than 6 months after completion of the BEA, then the owner's or operator's liability exemption shall be effective on the date of purchase, occupancy, or foreclosure and shall remain in effect if the owner or operator complies with subrules (5) and (6) of this rule.

(9) A person who obtained liability protection under section 20126(1)(c) of the act by complying with subrules (3), (4), (5), and (6) of this rule, but who subsequently fails to comply with subrule (5) or (6) of this rule, is not exempt from liability as of the date of noncompliance with subrule (5) or (6) of this rule.

(10) A person who wishes to effectuate and maintain liability protection afforded by section 20126(1)(c) of the act and who has not disclosed to the department the contents of a BEA that was complete before the effective date of these rules shall complete his or her disclosure not later than 6 months after the effective date of these rules.

(11) If a person has conducted a BEA within 45 days of purchase, occupancy, or foreclosure, but has not yet disclosed the BEA to the department and less than 6 months has elapsed since the date of completion of the BEA, then liability under section 20126(1)(c) of the act shall be established only after a determination has been made as

to whether the requirements for an exemption from liability under section 20126(1)(c) of the act would be met if the BEA had been disclosed.

History: 1999 MR 2, Eff. Mar. 11, 1999.

LAND AND WATER MANAGEMENT DIVISION

GREAT LAKES BOTTOMLANDS PRESERVES

R 299.6001
Source: 1981 AACS.

R 299.6002
Source: 1981 AACS.

R 299.6003
Source: 1983 AACS.

R 299.6004
Source: 1985 AACS.

R 299.6005
Source: 1987 AACS.

R 299.6006
Source: 1988 AACS.

R 299.6007
Source: 1988 AACS.

R 299.6008
Source: 1991 AACS.

R 299.6009
Source: 1991 AACS.

R 299.6010 DeTour Passage Great Lakes state bottomland preserve; establishment.

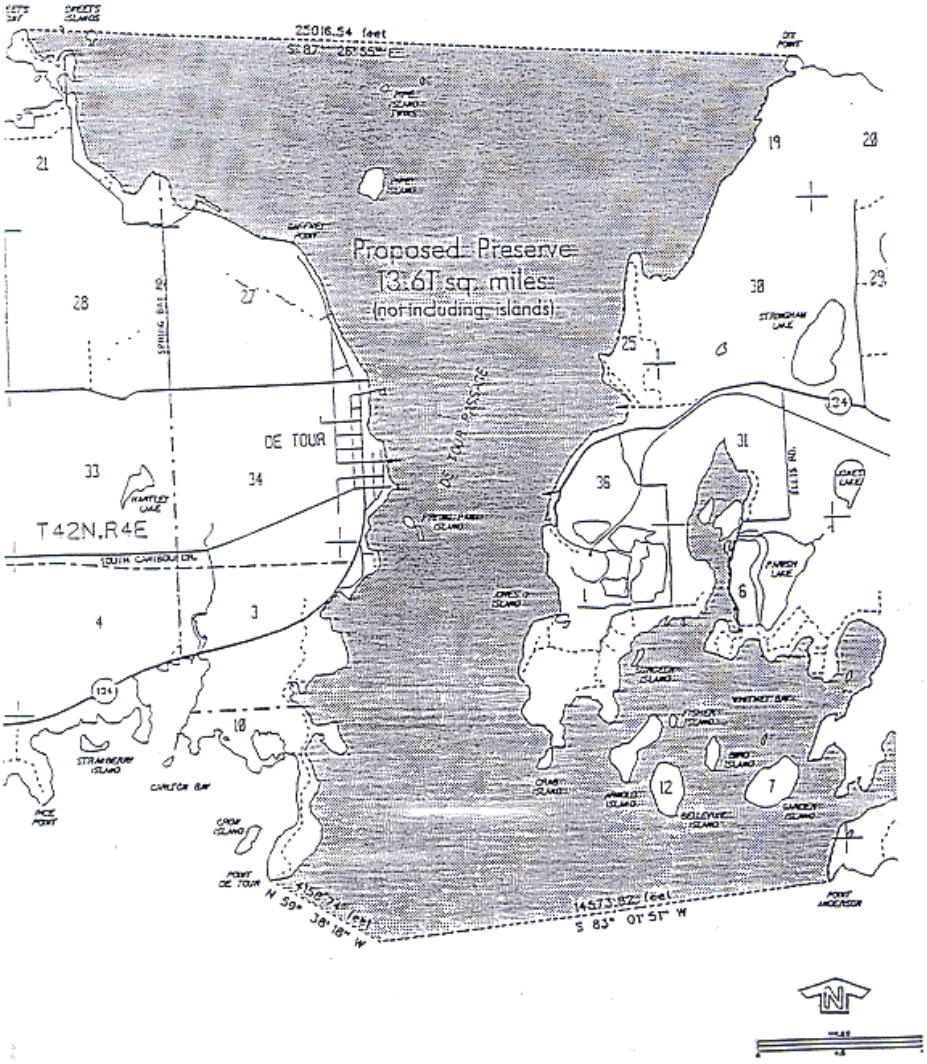
Rule 10. The following described area is established as the DeTour Passage Great Lakes state bottomland preserve:

(1) A 13.61 - square mile area of Lake Huron, including state-owned public trust bottomlands, extending upward and including the water surface described as: Beginning at the ordinary high water line (elevation 580.5 feet international Great Lakes datum 1985) at the most northerly point of Sweets Point, DeTour township, T42N, R4E, section 21, Chippewa county, thence S 87° 26' 55" E approximately 25,016.54 feet to the ordinary high water line at the most northerly point of Dix point in Drummond township, Drummond island, T42N R5E, section 20, Chippewa county, thence southerly along the ordinary high water line on Drummond island to the most southerly point of point Anderson in Drummond township, Drummond island, T41N R5E, section 17, Chippewa county, thence S 83° 01' 51" W approximately 14,573.82 feet; thence N 59° 38' 16" W approximately 4,158.74 feet to the ordinary high water line on the most southerly point of point DeTour, DeTour township T41N, R4E, section 10, Chippewa county, thence northerly along the ordinary high water mark to the point of beginning, excluding all islands and previously conveyed areas.

(2) The DeTour Passage Great Lakes state bottomland preserve is illustrated in Figure 1 as follows:

History: 1999 MR 10, Eff. Nov. 10, 1999.

DeTour Passage Bottomland Preserve



R 299.6011 Southwest Michigan Great Lakes state bottomland preserve; establishment.

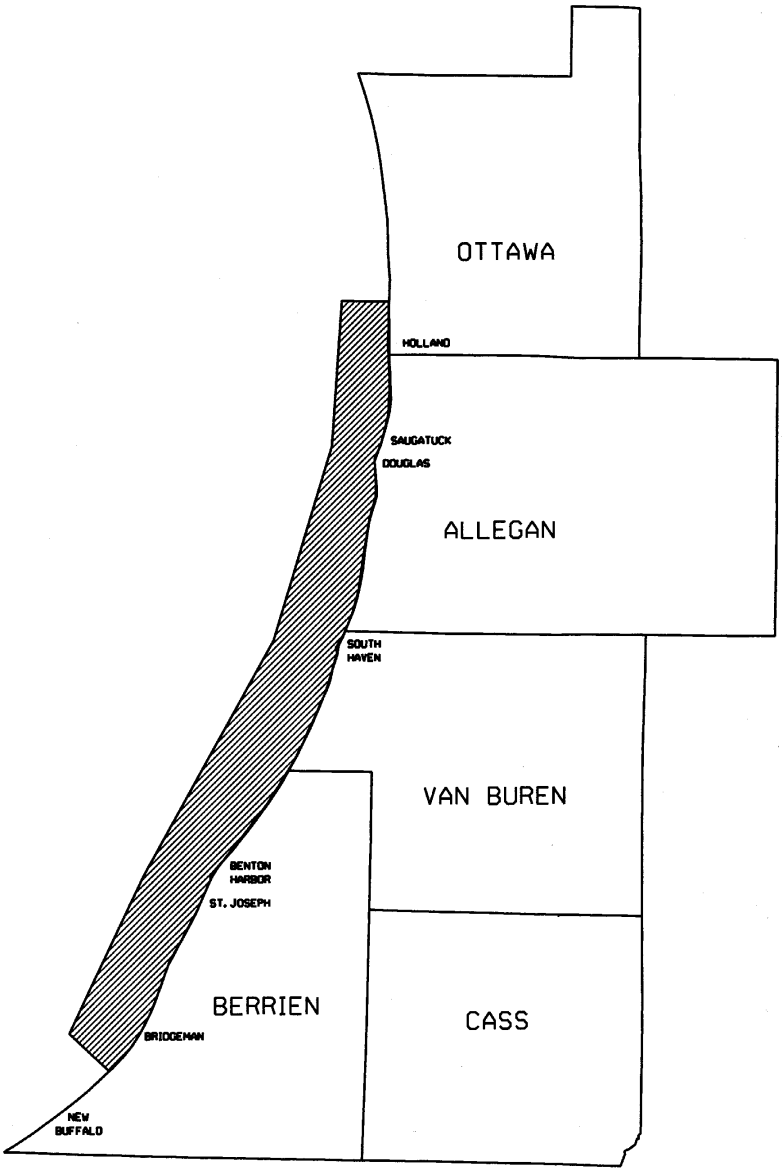
Rule 11. (1) The following described area is established as the Southwest Michigan Great Lakes state bottomland preserve:

A 370 square mile area of Lake Michigan, including state-owned public trust bottomlands, extending upward and including the water surface described as: Beginning at the point where the east-west quarter line of Section 9, township 5 north, range 16 west, Ottawa County, Michigan, intersects the ordinary high water mark of Lake Michigan(elevation 580.5 feet, international Great Lakes datum 1985), approximate latitude 42 degrees 50 minutes 01 seconds north longitude 86 degrees 12 minutes 41 seconds west; thence westerly on a heading north 88 degrees 52 minutes 35 seconds west 4.02 miles to the point at latitude 42 degrees 50 minutes north longitude 86 degrees 17 minutes 26 seconds west; thence southwesterly on a heading south 03 degrees 54 minutes 08 seconds west 12.51 miles to the point at latitude 42 degrees 39 minutes 08 seconds north longitude 86 degrees 18 minutes 06 seconds west; thence southwesterly on a heading south 16 degrees 44 minutes 13 seconds west 17.42 miles to the point at latitude 42 degrees 24 minutes 32 seconds north longitude 86 degrees 23 minutes 32 seconds west; thence southwesterly on a heading south 28 degrees 54 minutes 23 seconds west 23.01 miles to the point at latitude 42 degrees 06 minutes 47 seconds north longitude 86 degrees 35 minutes 57 seconds west; thence southwesterly on a heading south 25 degrees 15 minutes 44 seconds west 14.87 miles to the point at latitude 41 degrees 54 minutes 57 seconds north longitude 86 degrees 42 minutes 55 seconds west; thence southeasterly on a heading south 47 degrees 05 minutes 35 seconds 4.65 miles to a point where the south line of Section 9, township 7 south, range 20 west, Berrien County, intersects the ordinary high water mark of Lake Michigan (elevation 580.5 feet, international Great Lakes datum 1985), thence northerly, and northeasterly along the ordinary high water mark to the point of beginning.

(2) The Southwest Michigan Great Lakes state bottomland preserve is illustrated in Figure 1 as follows:

Figure 1

SOUTHWEST MICHIGAN
GREAT LAKES STATE BOTTOMLAND PRESERVE
370 Square Miles



History: 1999 MR 10, Eff. Nov. 10, 1999.

HAZARDOUS WASTE MANAGEMENT

R 299.6101—R 299.7305
Source: 1997 AACS.

DEPARTMENT OF NATURAL RESOURCES
REAL ESTATE DIVISION
OIL AND GAS LEASES ON STATE LANDS

R 299.8101
Source: 1981 AACS.

R 299.8102
Source: 1981 AACS.

R 299.8103
Source: 1981 AACS.

R 299.8104
Source: 1981 AACS.

R 299.8105
Source: 1981 AACS.

R 299.8106
Source: 1981 AACS.

R 299.8107
Source: 1981 AACS.

DEPARTMENT OF ENVIRONMENTAL QUALITY
SURFACE WATER QUALITY DIVISION
WASTEWATER REPORTING

R 299.9001 Definitions; A to L.

Rule 1. As used in these rules:

(a) "Act" means Part 31 of Act No. 451 of the Public Acts of 1994, as amended, being §§324.3101 et seq. of the Michigan Compiled Laws.

(b) "Annual usage threshold" means the quantity as listed on table 1. Of R 299.9003 above which a person shall report the use of a critical material under these rules.

(c) "Carcinogen" means a substance which causes an increased incidence of benign or malignant neoplasms in animals or humans or that substantially decreases the time in which neoplasms develop in animals or humans.

(d) "Critical materials" means organic and inorganic substances listed in table 1. of R 299.9003.

(e) "Department" means the director of the department of environmental quality or his or her designee to whom the director delegates a power or duty by written instrument.

(f) "Location" means an industrial or commercial operation that is located on a contiguous site and under the control of the same person.

History: 1991 MR 3, Eff. Apr. 10, 1991; 1997 MR 7, Eff. July 28, 1997; 2000 MR 12, Eff. July 28, 2000.

R 299.9002 Definitions; P to W.

Rule 2. As used in these rules:

(a) "Person" means an individual, partnership, association, corporation, or any commercial or industrial entity doing business in the state that discharges wastewater, but does not include a municipal corporation or a governmental unit or agency, or automotive service station, laundromat, or car wash.
(b) "Process material" means a material or combination of two or more chemicals that is used or produced at a location.
(c) "Reagent" means a substance used in a chemical reaction designed to detect, measure, examine, or produce other substances.
(d) "Sewer system" means enclosed pipes and conduits which conduct wastewater to a wastewater treatment facility owned or operated by a private entity or by a county, metropolitan district, city, village, or other public body created under state law.
(e) "Wastewater" means liquid waste discharges resulting from industrial or commercial processes, including contact cooling and condensing waters, but excludes noncontact cooling water, sanitary sewage, and stormwater runoff that does not come in contact with process materials, products, or by-products.
(f) "Waters of the state" means all waters within the jurisdiction of the state including all of the following:
(i) Groundwaters.
(ii) Lakes.
(iii) Rivers.
(iv) Streams.
(v) All other watercourses and waters.
(vi) The Great Lakes bordering the state.
History: 1991 MR 3, Eff. Apr. 10, 1991; 1997 MR 7,Eff. July 28, 1997; 2000 MR 12, Eff. July 28, 2000.

R 299.9003 Register of critical materials.

Rule 3. The following 1999 register of critical materials consists of the chemicals in table 1.:

Table 1. Register Of Critical Materials.

Chemical Name	Note	Parameter Number	Annual Usage Threshold (In Pounds)
Tributyltin (and salts and esters)	3	Class 06-3	10
Polychlorinated naphthalenes		Class 06-6	10
Ddt (p,p', o,p' and technical grade)	2,3	00050-29-3	10
Benzo(a)pyrene	2	00050-32-8	10
Dibenz(a,h)anthracene	2	00053-70-3	10
Benz(a)anthracene	2	00056-55-3	10
Chlordane	2,3	00057-74-9	10
Dieldrin	2,3	00060-57-1	10
Chloroform	2	00067-66-3	100
Hexachloroethane	2	00067-72-1	10
Benzene	2	00071-43-2	100
Endrin	3	00072-20-8	10
Methoxychlor	3	00072-43-5	10
p,p'-tde (p,p'-ddd)	2,3	00072-54-8	10
p,p'-dde	2,3	00072-55-9	10
Vinyl chloride	2	00075-01-4	100
Methylene chloride	2	00075-09-2	10
1,1-dichloroethylene		00075-35-4	100
Heptachlor	2,3	00076-44-8	10
Trichloroethylene	2	00079-01-6	100
1,2,3-trichlorobenzene		00087-61-6	10

Hexachlorobutadiene	2	00087-68-3	10
Pentachlorophenol (and salts)	2	00087-86-5	10
3,3'-dichlorobenzidine	2	00091-94-1	10
1,2,4,5-tetrachlorobenzene		00095-94-3	10
2,4,5-trichlorophenol		00095-95-4	10
Styrene (monomer)	2	00100-42-5	100
4,4'-methylenebis (2-chloroaniline)	2	00101-14-4	10
4-bromophenyl phenyl ether		00101-55-3	10
1,4-dichlorobenzene	2	00106-46-7	100
1,2-dichloroethane	2	00107-06-2	100
Toluene		00108-88-3	100
Chlorobenzene		00108-90-7	100
di-n-octyl phthalate		00117-84-0	10
Hexachlorobenzene	2	00118-74-1	10
1,2,4-trichlorobenzene		00120-82-1	10
Tetrachloroethylene	2	00127-18-4	100
Aldrin	2,3	00309-00-2	10
1,3-dichlorobenzene		00541-73-1	10
Hexachlorocyclohexane (all isomers)	2,3	00608-73-1	10
1,2,3,4-tetrachlorobenzene		00634-66-2	10
1,2,3,5-tetrachlorobenzene		00634-90-2	10
Heptachlor epoxide	2,3	01024-57-3	10
Xylene (all isomers)		01330-20-7	100
Polychlorinated biphenyls (pcb)	2	01336-36-3	10
Trifluralin	2,3	01582-09-8	10
2,3,7,8-tcdd (and congeners)	2	01746-01-6	10
Mirex	2,3	02385-85-5	10
2,4,5-trichlorotoluene		06639-30-1	10
Lead	1	07439-92-1	100
Mercury	1	07439-97-6	10
Nickel	1	07440-02-0	100
Silver	1	07440-22-4	100
Arsenic	1,2	07440-38-2	100
Beryllium	1	07440-41-7	100
Cadmium	1	07440-43-9	100
Chromium	1	07440-47-3	100
Copper	1	07440-50-8	100
Zinc	1	07440-66-6	100
Selenium	1	07782-49-2	100
Toxaphene	2,3	08001-35-2	10
Octachlorostyrene		29082-74-4	10
2,3,7,8-tcdf (and congeners)	2	51207-31-9	10
Polybrominated biphenyls (pbb)	2	67774-32-7	10

1. All compounds containing the listed elements shall also be reported.
2. Carcinogens.
3. Pesticides.

History: 1991 MR 3, Eff. Apr. 10, 1991; 2000 MR 12, Eff. July 28, 2000.

R 299.9004 Wastewater reports; contents and forms.

Rule 4. (1) A wastewater report or an abbreviated wastewater report shall be filed pursuant to section

3111 of the act by every person doing business within this state who either discharges wastewater to the waters of the state or to a sewer system.
(2) The wastewater report shall be on forms provided by the department and shall set forth all of the following information in detail:
(a) Name, location, and nature of the enterprise or operation.
(b) An indication of whether the report claims chemical identity as a trade secret and/or the process is a proprietary manufacturing process.
(c) An estimate of the annual total number of gallons of wastewater discharged to the waters of the state or to any sewer system.
(d) Name of the waters of the state or sewer system into which wastewater is discharged.
(e) An estimate of the annual amount of each critical material (in ranges of pounds) used in and incidental to the manufacturing processes at the location for those critical materials that exceed the annual usage threshold.
(f) An estimate of the annual amount of each critical material (in ranges of pounds) discharged to the waters of the state or to any sewer system.
(g) An estimate of the annual amount of each critical material (in ranges of pounds) reported under subdivision (e) of this subrule that was disposed of as a waste product or by-product and transferred to off-site locations.
(h) The signature of a senior management official or owner/operator certifying the form is true and accurate to the best of his or her knowledge.
(i) Other ministerial information as needed to implement the provisions of section 3111 of the act.
(3) A person required to file a wastewater report pursuant to subrule (1) of this rule may file an abbreviated wastewater report under both of the following conditions:
(a) The person does not use critical materials in or incidental to the manufacturing processes in excess of the annual usage threshold.
(b) The person does not discharge critical materials other than discharges exempted under R 299.9006(3) or (4).
(4) The abbreviated wastewater report referred to in subrules (1) and (3) of this rule shall be on forms provided by the department and shall set forth all of the following information:
(a) Name, location, and nature of the enterprise or operation.
(b) An acknowledgement that the person has a discharge of wastewater to the waters of the state or to any sewer system.
(c) An acknowledgement that the person meets the conditions specified in subrule (3) of this rule.
(d) The signature of a senior management official or owner/operator certifying the form is true and accurate to the best of his or her knowledge.
(5) Not later than April 25 of the year following the calendar year for which reports are due, the department shall mail a standardized wastewater reporting form, including the abbreviated form, and the register of critical materials to each person who is affected by the provisions of section 3111 of the act.
History: 1991 MR 3, Eff. Apr. 10, 1991; 2000 MR 12, Eff. July 28, 2000.

R 299.9005 Wastewater reports; filing and confidentiality.

Rule 5. (1) A wastewater report shall be filed annually with the department not later than August 1. The reporting period is the calendar year before the year in which the report is filed.
(2) If a person becomes aware of an error or omission in a previously filed report, then the person shall promptly file an amended report correcting the error or omission.
(3) A person doing business in more than 1 location shall file a separate report for each location.
(4) Information about the critical materials contained in a wastewater report as being used in and incidental to manufacturing processes shall be available to the public except for the usage information which the person requests the department to hold confidential as a trade secret or proprietary process, and the department grants confidentiality. If a person, municipal corporation, government unit, agency, or any other individual objects in writing to the decision by the department to grant confidentiality, the department shall review the objections and make a final decision pursuant to law.

R 299.9006 Reporting exemptions.

Rule 6. (1) If a person reports a critical material on form R under the federal toxic release inventory program (section 313 of the emergency planning and community right to know act of 1986), the person is not required to report information required under R 299.9004(2)(f) and (g).

(2) The following information is exempt from reporting under R 299.9004(2)(e):

(a) The quantity of a critical material present in a process material provided that the following conditions are met:

(i) If the critical material is designated as a carcinogen in table 1. of R 299.9003, the material is not present at a concentration of 0.1% or more by weight.

(ii) If the critical material is not designated as a carcinogen in table 1. of R 299.9003, the material is not present at a concentration of 1% or more by weight.

(iii) The person does not manufacture the process material.

(b) The quantity of a critical material contained in a manufactured product provided that the quantity of the critical material used in and incidental to manufacturing the product is reported.

(c) The quantity of a critical material present in a structural component or permanent equipment at the location.

(d) The quantity of a critical material present in materials used for routine janitorial work or for grounds maintenance, including janitorial cleaning supplies, fertilizers, and pesticides applied at rates and at concentrations similar to consumer products.

(e) The quantity of a critical material present in products used for purposes of maintaining, operating, or fueling motor vehicles operated at the location.

(f) The quantity of a critical material used by employees or other persons for personal use at the location, including foods, pharmaceuticals, cosmetics, or other personal items containing critical materials.

(g) The quantity of a critical material present in supplies or products used in a cafeteria, store, infirmary, or other non-business activity at the location.

(h) The quantity of a critical material designated as a pesticide in table 1. of R 299.9003 used by a person who does not manufacture or formulate the pesticide.

(i) The quantity of a critical material present in a laboratory reagent in a single container which can hold 500 grams or less.

(j) The quantity of a critical material that is a fixed part of premanufactured assemblies or hardware obtained from another manufacturer and incorporated into a person's product.

(3) The quantity of a critical material leaching from piping or equipment is exempt from reporting under R 299.9004(2).

(4) The quantity of a critical material present in the intake water is exempt from reporting under R 299.9004(2).

istory: 1991 MR 3, Eff. Apr. 10, 1991; 2000 Mr 12, Eff. July 28, 2000.

R 299.9007 Violations of reporting requirements.

Rule 7. A person who fails to file a wastewater report or amended wastewater report in a timely manner or who falsifies or fails to provide any information required by R 299.9004 is in violation of the act, and is subject to the enforcement provisions in the act. Upon notice from the department, a person who fails to file a report shall have 10 days from the date of the notice to file the wastewater report or submit an amended wastewater report. Failure to file a wastewater report or an amended wastewater report subjects the person to the enforcement remedies provided by law.

History: 2000 Mr 12, Eff. July 28, 2000.

R 299.9008 Rescission.

Rule 8. R 323.1231 to R 323.1236 of the Michigan Administration Code, appearing on page 1652 of the 1979 Michigan Administrative Code, and pages 362 to 364 of the 1985 Annual Supplement to the Code, are rescinded.

History: 2000 Mr 12, Eff. July 28, 2000.

R 299.9019 Rescinded.

History: 1991 MR 3, Eff. Apr. 10, 1991; rescinded 2000 MR 12, Eff. July 28, 2000.

WASTE MANAGEMENT DIVISION

HAZARDOUS WASTE MANAGEMENT

PART 1. GENERAL PROVISIONS

R 299.9101 Definitions; A, B.

Rule 101. As used in these rules:

(a) "Aboveground tank" means a device which meets the definition of "tank" in this part and which is situated in such a way 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 Act No. 451 of the Public Acts of 1994, as amended, being §324.101 et seq. of the Michigan Compiled Laws, and known as the natural resources and environmental protection act.

(c) "Act 138" means Act No. 138 of the Public Acts of 1998, as amended, being §§29.471 to 29.480 of the Michigan Compiled Laws, and known as the hazardous materials transportation act.

(d) "Act 181" means Act No. 181 of the Public Acts of 1963, being §480.14 et seq. of the Michigan Compiled Laws, and known as the motor carrier safety act.

(e) "Act 207" means Act No. 207 of the Public Acts of 1941, as amended, being §29.1 et seq. of the Michigan Compiled Laws, and known as the fire prevention act.

(f) "Act 218" means sections 3101 and 3102 of Act No. 218 of the Public Acts of 1956, as amended, being §§500.3101 and 500.3102 of the Michigan Compiled Laws.

(g) "Act 236" means Act No. 236 of the Public Acts of 1961, as amended, being §600.101 et seq. of the Michigan Compiled Laws, and known as the revised judicature act.

(h) "Act 300" means Act No. 300 of the Public Acts of 1949, as amended, being §257.1 et seq. of the Michigan Compiled Laws, and known as the Michigan vehicle code.

(i) "Act 306" means Act No. 306 of the Public Acts of 1969, as amended, being §24.201 et seq. of the Michigan Compiled Laws, and known as the administrative procedures act of 1969.

(j) "Act 368" means Act No. 368 of the Public Acts of 1978, as amended, being §333.1101 et seq. of the Michigan Compiled Laws, and known as the public health code.

(k) "Act 399" means Act No. 399 of the Public Acts of 1976, being §325.1001 et seq. of the Michigan Compiled Laws, and known as the safe drinking water act.

(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 which 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) "Administrator" means the administrator of the United States EPA or the administrator's designee.

(p) "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.

(q) "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.

(r) "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.

(s) "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.
(t) "ASTM" means the American society for testing and materials.
(u) "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.
(v) "Battery" means a device which consists of 1 or more electrically connected electrochemical cells and which 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 such 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.
(w) "Boiler" means an enclosed device which uses controlled flame combustion and which is either determined by the director to be a boiler based on the standards and procedures set forth in the provisions of 40 C.F.R. §§260.32 and 260.33, which are adopted by reference in R 299.11003, or which is in compliance with all of the following characteristics:
(i) The unit shall have 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 shall be of an integral design. To be of an integral design, the combustion chamber and the primary energy recovery section or sections, such as waterwalls and superheaters, shall 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 shall maintain 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 shall export and utilize not less than 75% of the recovered energy calculated on an annual basis. In this calculation, credit shall 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.
(x) "Burner" means an owner or operator of a facility that burns either used oil fuel or hazardous waste fuel.
(y) "By-product" means a material which is not one of the primary products of a production process and which 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 which is produced for the general public's use and which is ordinarily used in the form in which it is produced by the process.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

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) "CERCLA" means the comprehensive environmental response compensation and liability act of 1980, as amended, 42 U.S.C. §9601 et seq.
(c) "Certification" means a statement of professional opinion based upon knowledge or belief.
(d) "C.F.R." means the Code of Federal Regulations.
(e) "Chemical agents and munitions" means chemical agents and munitions as defined in 50 U.S.C. section

1521(j)(1).
(f) "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.")
(g) "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.
(h) "Commingling" means the transfer of hazardous wastes between containers or vehicles by a transporter during the course of transportation that results in the waste being mixed or repackaged.
(i) "Component" means either the tank or the ancillary equipment of a tank system.
(j) "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.
(k) "Consignee" means the ultimate treatment, storage, or disposal facility in a receiving country to which the hazardous waste will be sent.
(l) "Consolidation" means the transfer of containers of hazardous wastes between transport vehicles by a transporter during the course of transportation without the containers holding the wastes being opened and without the wastes being repackaged.
(m) "Constituent" or "hazardous waste constituent" means a constituent that caused the administrator to list the hazardous waste in the provisions of 40 C.F.R. part 261, subpart D, a constituent that is listed in table l of 40 C.F.R. §261.24, or a constituent that is listed in table 201, 202, or 205 of these rules.
(n) "Construction permit" means a permit which is issued pursuant to part 111 of the act and which is for the construction of a treatment, storage, or disposal facility.
(o) "Container" means any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.
(p) "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.
(q) "Corrective action management unit" or "CAMU" means an area within a facility that is used only for managing remediation waste in implementing corrective action or cleanup at the facility.
(r) "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.
(s) "Designated facility" means a hazardous waste treatment, storage, or disposal facility which has received a permit or has interim status pursuant to the provisions of title II of the solid waste disposal act; which has a license, permit, or interim status from a state that is authorized pursuant to the provisions of section 3006 of title II of the solid waste disposal act, which, if located in Michigan, has an operating license that is issued pursuant to the provisions of part 111 of the act, has a legally binding agreement with the director that authorizes operation, or is subject to the requirements of section 23(4) and (5) of part 111 of the act; or which is regulated pursuant to the provisions of R 299.9206(1)(c) or R 299.9803; and which has been designated on the manifest by the generator pursuant to the provisions of R 299.9304. 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.
(t) "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 C.F.R. §§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.
(u) "Dike" means an embankment or ridge which consists of either natural or man-made materials and which is used to prevent the movement of liquids, sludges, solids, or other materials.
(v) “Dioxins and furans (D/F)” means tetra, penta, hexa, hepta, and octa-chlorinated dibenzo dioxins and

furans.
(w) "Director" means the director of the department of environmental quality.
(x) "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.
(y) "Disposal" means the discharge, deposit, injection, dumping, spilling, leaking, or placing of any hazardous waste into or on land or water in such 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.
(z) "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.
(aa) "Displacement" means the relative movement of any two sides of a fault measured in any direction.
(bb) "DOD" means the United States department of defense.
(cc) "DOT" means the United States department of transportation.
(dd) "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.
(ee) "Drip pad" means an engineered structure which 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.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9103 Definitions; E, F.

Rule 103. As used in these rules:
(a) "Electric 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 electric lamps include incandescent, fluorescent, high intensity discharge, sodium vapor, mercury vapor, and neon lamps.
(b) "Element" means any constituent part of a unit or any group of constituent parts of a unit that are assembled to perform a specific function, for example, a pump seal, pump, kiln liner, or kiln thermocouple.
(c) "Elementary neutralization unit" means a device that is in compliance with 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 the provisions of 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.
(d) "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, a CERCLA remedy, or a closure or post closure plan. An enforceable document shall 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 access or sue to recover in court civil penalties, including fines, for violations of the requirements of these documents.
(e) "EPA" means the United States environmental protection agency.
(f) "EPA acknowledgment of consent" means the cable that is sent to EPA from the United States embassy in

a receiving country which acknowledges the written consent of the receiving country to accept the hazardous waste and which describes the terms and conditions of the receiving country's consent to the shipment.

(g) "EPA 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 pursuant to the provisions of these rules, but are not hazardous pursuant to the provisions of RCRA, then "EPA identification number" shall mean an equivalent number that is assigned by the director.

(h) "EPA region" means the states and territories found in any of the 10 EPA regions identified in the provisions of 40 C.F.R. §260.10.

(i) "Equivalent method" means any testing or analytical method that is approved by the director pursuant to the provisions of R 299.9215.

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

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

(l) "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 pursuant to the provisions of RCRA or an operating license pursuant to the provisions of these rules, whichever is sooner.

(m) "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 will be considered to have commenced if the owner or operator has obtained all federal, state, and local approvals or permits necessary to begin physical construction of the site or installation of the tank system and if either 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.

(n) "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 heatth, including safety, or the environment, including property, as determined by an explosives or munitions emergency response specialist. Such situations may require immediate and expeditious action by an explosives or munitions emergency specialist to control, mitigate, or eliminate the threat.

(o) "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 shall 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.

(p) "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.
(q) "Facility" means all contiguous land and structures, other appurtenances, and improvements on the land used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units, 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, "facility" shall include 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 and these rules if the site is located within such a facility.
(r) "Facility mailing list" means the mailing list for a facility that is maintained by the department in accordance with the provisions of 40 C.F.R. §124.10(c)(1)(ix).
(s) "Fault" means a fracture along which rocks on 1 side have been displaced with respect to rocks on the other side.
(t) "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 printing office.
(u) "Federal clean air act" means Public Law 95-95, 42 U.S.C. §1857 et seq.
(v) "Federal clean water act" means Public Law 92-500, 33 U.S.C. §1251 et seq.
(w) "Federal hazardous materials transportation act" means Public Law 93-633, 49 U.S.C. §1801 et seq.
(x) "Federal insecticide, fungicide, and rodenticide act" means 7 U.S.C. §§136 to 136y.
(y) "Federal resource conservation and recovery act" means Public Law 94-580, 42 U.S.C. §6901 et seq.
(z) "Federal safe drinking water act" means Public Law 95-190, 42 U.S.C. §300f et seq.
(aa) "Final closure" means the closure of all hazardous waste management units at the facility in accordance with all applicable closure requirements so that hazardous waste management activities pursuant to the provisions of parts 5 and 6 of these rules are no longer conducted at the facility, unless the activities are subject to the provisions of R 299.9306.
(bb) "Flood" means a flood that has a 1% chance of being equalled or exceeded in any given year.
(cc) "Floodplain" means any land area that is subject to a 1% or greater chance of flooding in any given year from any source.
(dd) "Food chain crops" means tobacco, crops grown for human consumption, and crops grown for feed for animals whose products are consumed by humans.
(ee) "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.
(ff) "Free liquids" means liquids that readily separate from the solid portion of a waste at ambient temperature and pressure.
(gg) "Fugitive emissions" means air contaminant emissions that emanate from non-point emission sources or sources other than stacks, ducts, or vents.
(hh) "Functionally equivalent element" means an element which performs the same function or measurement and which meets or exceeds the performance specifications of another element.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 1996 MR 9, Eff. Oct. 16, 1996; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Eff. Sept. 11, 2000.

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 waste" means a hazardous waste as defined in R 299.9203.
(e) "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.
(f) "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.
(g) "Hazardous waste number" means the code number that is used to identify a particular type of hazardous waste.
(h) "Holocene" means the most recent epoch of the quaternary period extending from the end of the Pleistocene to the present.
(i) "Home scrap metal means scrap metal as generated by steel mills, foundries, and refineries such as turnings, cuttings, punchings, and borings.
(j) "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.
(k) "Household do-it-yourselfer used oil generator" means an individual who generates household do-it-yourselfer used oil.
(l) "Import" means the act of bringing hazardous waste into the United States from a foreign country.
(m) "Inactive portion" means that portion of a facility that is not operated after November 19, 1980. (See also "active portion" and "closed portion.")
(n) "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.
(o) "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.
(p) "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 the provisions of 40 C.F.R. part 265, appendix V.
(q) "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.
(r) "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.
(s) "Infrared incinerator" means any enclosed device which uses electric powered resistance heaters as a source of radiant heat followed by an afterburner using controlled flame combustion and which is not listed as an industrial furnace.
(t) "In-ground tank" means a device which satisfies the definition of "tank" specified in R 299.9108(a) and which 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.
(u) "Injection well" means a well into which fluids are injected. (See also "underground injection.")
(v) "Inner liner" means a continuous layer of material which is placed inside a tank or container and which protects the construction materials of the tank or container from the contained waste or reagents used to treat the waste.
(w) "In operation" means that a facility is treating, storing, or disposing of hazardous waste.
(x) "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.
(y) "International shipment" means the transportation of hazardous waste into or out of the jurisdiction of the United States.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9105 Definitions; L to N.

Rule 105. As used in these rules:
(a) "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.
The term 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. The term "land disposal" does not include ocean disposal.

(b) "Landfill" means a disposal facility or part of a facility where hazardous waste is placed in or on land. The term 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.

(c) "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.

(d) "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. Such facilities are disposal facilities if the waste will remain after closure.

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

(f) "Leak detection system" means a system capable of detecting the failure of either the primary or secondary containment structure or the presence of a release of hazardous waste or accumulated liquid in the secondary containment structure. Such a system shall employ operational controls, 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.

(g) "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.

(h) "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.

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

(j) "Manifest" means the shipping document which is originated and signed by the generator and which contains the information required by R 299.9304.

(k) "Manifest document number" means the EPA 12-digit identification number assigned to the generator and a unique 5-digit document number assigned to the manifest by the generator for recording and reporting purposes.

(l) "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.

(m) "Military" means the DOD, the armed services, coast guard, national guard, department of energy or other parties under contract or acting as agent for any of the parties, who handle military munitions.

(n) "Military munitions" means all ammunition products and components produced or used by or for the OD or the United States armed services for national dedense and security, including military munitions under the control of the DOD, the United States coast guard, the United States department of energy, and national guard personnel. The term military munitions includes: 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 non-nuclear components of nuclear devices, managed under the department of energy's nuclear weapons program after all required sanitization operations under the atomic energy act of 1954, as amended, have been compiled.

(o) "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.

(p) "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.

(q) "Miscellaneous unit" means a hazardous waste management unit where hazardous waste is treated, stored, or disposed of. The term 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 the provisions of 40 C.F.R. part 146.

(xi) A unit that is eligible for a temporary operating license for research pursuant to the provisions of R 299.9501.

(xii) A corrective action management unit.

(xiii) A staging pile.

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

(s) "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 C.F.R. §§264.193(g)(2) and 265.193(g)(2), a new tank system is one for which construction commences after July 14, 1986.

(t) "NFPA" means the national fire protection association.

History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9106 Definitions; O to Q.

Rule 106. As used in these rules:

(a) "On-ground tank" means a device which satisfies the definition of "tank" in R 299.9108(a) and which 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 which the owner controls and to which the public does not have access is also considered on-site property.

(c) "On-site treatment facility" means a facility which is for the treatment of hazardous waste in tanks or containers, which is located on the site of generation of the wastes, and which 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 operate a treatment, storage, or disposal facility under the authority of part 111 of the act.
(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 such 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 in accordance with the applicable closure requirements of 40 C.F.R. 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 pursuant to 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 the requirements of part 111 of the act 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(w) of the federal food, drug, and cosmetic act of 1938, as amended, 21 U.S.C. §301 et seq.
(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(x) of the federal food, drug, and cosmetic act of 1938, as amended, 21 U.S.C. §301 et seq. 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) "Pile" means any noncontainerized accumulation of solid, nonflowing hazardous waste that is used for treatment or storage.
(o) "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.
(p) "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.
This term does not include return flows from irrigated agriculture.
(q) "Primary exporter" means any person who is required to originate the manifest for a shipment of hazardous waste in accordance with R 299.9304, which specifies a treatment, storage, or disposal facility in a receiving country as the facility to which the hazardous waste will be sent and any intermediary arranging for the export.
(r) "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 C.F.R. part 264, subpart F.
(s) "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.
(t) "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 the fuel specifications.
(iii) Filtration.
(iv) Simple distillation.
(v) Chemical or physical separation.
(vi) Re-refining.
(u) "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) Punchings.
(iv) Borings.
(v) "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. This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW

providing treatment.
(w) "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.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 1996 MR 9, Eff. Oct. 16, 1996; 2000 Mr 14, Eff. Sept. 11, 2000.

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 U.S.C. §6901 et seq.
(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.
(c) "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.
(d) "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.
(e) "Recyclable material" means hazardous waste that is recycled.
(f) "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.
(g) "Regional administrator" means the regional administrator or his or her designee for the EPA region in which the facility is located.
(h) "Regulated unit" means a surface impoundment, waste pile, land treatment unit, or landfill that received hazardous waste after July 26, 1982.
(i) "Remedial action plan" or "RAP" means a special form of an operating license that a facility owner or operator may obtain instead of a construction permit or operating license issued pursuant to the provisions of part 5 of these rules. The RAP shall authorize the treatment, storage, or disposal of hazardous remediation waste at a remediation waste management site.
(j) "Remediation waste" means all wastes and hazardous wastes, and all media, including groundwater, surface water, soils, and sediments, and debris which meet both of the following requirements:
(i) Contain a hazardous waste listed pursuant to R 299.9213 or R 299.9214 of these rules or exhibit a hazardous waste characteristic identified in R 299.9212 of these rules.
(ii) Is managed for implementing a cleanup.
(k) "Remediation waste management site" means a facility where an owner or operator is or will be treating, storing, or disposing of remediation wastes. A remediation waste mangement 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 and these rules if the site is located in such a facility.
(l) "Representative sample" means a sample of a universe or whole that can be expected to exhibit the average properties of the universe or whole.
(m) "Retention time" means the minimum time hazardous waste is subjected continuously to a required combustion zone temperature in an incinerator.
(n) "Run-off" means any rainwater, leachate, or other liquid that drains over land from any part of a facility.
(o) "Run-on" means any rainwater, leachate, or other liquid that drains over land onto any part of a facility.
(p) "Saturated zone" or "zone of saturation" means that part of the earth's crust in which all voids are filled with water.
(q) "Scrap metal" means bits and pieces of metal parts, such as bars, turnings, rods, sheets, wire, or metal

pieces, which may be combined together with bolts or by soldering, such as radiators, scrap automobiles, and railroad car boxes, and which, when worn or superfluous, can be recycled.

(r) "Secondary monitoring parameter" means ions such as calcium, sodium, magnesium, iron, chloride, sulfate, bicarbonate, and carbonate; waste constituents; reaction products; or other parameters which provide an indication of the presence of hazardous constituents in groundwater and which are not subject to the requirements of 40 C.F.R. part 264, subpart F.

(s) "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.

(t) “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.

(u) "Small quantity generator" means a generator who generates less than 1,000 kilograms of hazardous waste in a calendar month.

(v) "Sole source aquifer" means an aquifer designated pursuant to section 1424(e) of the federal safe drinking water act.

(w) "Sorb" means to adsorb or absorb, or both.

(x) "Sorbent" means a material that is used to soak up free liquids by either adsorption or absorption, or both.

(y) "Speculative accumulation" means accumulation before recycle. A material is not accumulated speculatively, however, if the person accumulating it can show both of the following:

(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.

(z) "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.

(aa) "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 shall be designated by the director in accordance with the requirements of R 299.9638.

(bb) "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.

(cc) "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.

(dd) "Sump" means any pit or reservoir which satisfies the definition of "tank" in R 299.9108(a) 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.

(ee) "Surface impoundment" or "impoundment" means a treatment, storage, or disposal facility or part of a treatment, storage, or disposal facility which is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials, although it may be lined with man-made materials, which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an

injection well. Examples of surface impoundments are holding, storage, settling and aeration pits, ponds, and lagoons.
(ff) "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.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9108 Definitions; T.

Rule 108. As used in these rules:
(a) "Tank" means a stationary device which is designed to contain an accumulation of hazardous waste and which 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 C.F.R. §§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 which is directly connected to an industrial production process and which 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 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 (8), (9), and (10) 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 pursuant to the requirements of a construction permit 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 pursuant to the requirements of an operating license to determine if the operation of the incinerator or other thermal treatment device is satisfactory.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

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 which satisfies the definition of "tank" specified in R 299.9108(a) and which 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 as to constitute 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 pursuant to the provisions of 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 C.F.R. §273.13(a) or (c) or §273.33(a) or (c).
(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) "Unsaturated zone" or "zone of aeration" means the zone between the land surface and the water table.
(n) "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.
(o) "U.S.C." means the United States Code.
(p) "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.
(q) "Used oil aboveground tank" means a tank which is used to store or process used oil and which is not an underground storage tank as defined in 40 C.F.R. §280.12.
(r) "Used oil aggregation point" means any site or facility that accepts, aggregates, and/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.
(s) "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.
(t) "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 pursuant to the provisions of R 299.9810 who transport used oil to the collection center in shipments of not more than 55 gallons under the provisions of 40 C.F.R. §279.24.
(ii) Household do-it-yourselfers.
(u) "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 the effective date of the amendments to these rules that establish the state's used oil program under RCRA. Installation will be considered to have commenced if the owner or operator has obtained all federal, state, and local approvals or permits necessary to begin physical construction of the 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, which cannot be cancelled or modified without substantial loss, for installation of the tank system to be completed within a reasonable time.
(v) "Used oil fuel" means any fuel that is produced from used oil through processing, blending, or other treatment.
(w) "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 which is to be burned for energy recovery meets the used oil specifications set forth in R 299.9809(1)(f).
(x) "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.

(y) "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 the effective date of amendments to these rules that establish the state's used oil program under RCRA.
(z) "Used oil processor/re-refiner" means a facility that processes used oil.
(aa) "Used oil tank" means a stationary device which is designed to contain an accumulation of used oil and which is constructed primarily of nonearthen materials, such as wood, concrete, steel, or plastic, that provide structural support.
(bb) "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 pursuant to the provisions of 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.
(cc) "Used oil transporter" means any person who transports used oil, any person who collects used oil from more than one 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.
(dd) "Vehicle" means each separate conveyance used in the transportation of hazardous waste that is one of the following:
(i) A railcar as defined in 49 C.F.R. §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.
(ee) "Vessel" means a watercraft that is used or is capable of being used as a means of transportation on the water.
(ff) "Washout" means the movement of hazardous waste from the active portion of the facility as a result of flooding.
(gg) "Waste" means material that is defined as waste in R 299.9202.
(hh) "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.
(ii) "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 pursuant to the provisions of either section 402 or section 307(b) of the federal clean water act.
(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.
(jj) "Water (bulk shipment)" means the bulk transportation of hazardous waste that is loaded or carried on board a vessel without containers or labels.
(kk) "Well" means any shaft or pit which is dug or bored into the earth, which is generally of a cylindrical form, and which is often walled with bricks or tubing to prevent the earth from caving in.
(ll) "Wetland" means the areas defined as wetlands in part 303 of the act.
(mm) "Zone of engineering control" means an area which is under the control of the owner or operator and which, 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.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9199
Source: 1985 AACS.

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.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1998 MR 9, Eff. Sep. 21, 1998.

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 R 299.9202(6) and (7). 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; or accumulated, stored, or treated before or instead of being abandoned by being disposed of, burned, or incinerated.
(b) A material which is recycled, or accumulated, stored, or treated before recycling, and which 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).
(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 which are listed in 40 C.F.R. part 261, appendix VIII, and which 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 which 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 which is a secondary material, which is fed to a halogen acid furnace, and which exhibits a characteristic of a hazardous waste or is listed as a hazardous waste in accordance with 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 C.F.R. 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 299.9223.
(c) Scrap metal other than excluded scrap metal.
(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 these rules, 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.
In cases where 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 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(y).
(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.
(7) The director shall use the criteria and procedures outlined in the provisions of 40 C.F.R. §§260.31 and 260.33 for making determinations under subrule (6) of this rule.
(8) The provisions of 40 C.F.R. §§260.31, 260.33, 261.31, 261.32, and 261.33 are adopted by reference in R 299.11003, with the exception that the word "director" shall replace the word "regional administrator."
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

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 the provisions of 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 the provisions of 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 the provisions of R 299.9211; 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 the provisions 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 the provisions of 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:

(A) Carbon tetrachloride.

(B) Tetrachloroethylene.

(C) Trichloroethylene.

(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:

(A) Methylene chloride.

(B) 1,1,1-Trichloroethane.

(C) Chlorobenzene.

(D) 0-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.

(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 commercial chemical product, or chemical intermediate listed in 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 include 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.

(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.
(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.
(d) It is a mixture of a waste and a hazardous waste that meets the characteristic of severe toxicity pursuant to the provisions of 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 the provisions of 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 the provisions of 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 subrule (4) 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 the provisions of 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 the provisions of 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 a 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 onetime 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 EPA 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 1 or more 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 the provisions of 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 the provisions of 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 the provisions of R 299.9211.
(6) Not withstanding 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 the provisions of R 299.9809 to R 299.9816:
(a) Hazardous debris that has been treated using one 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) The office of management and budget document entitled "Standard Industrial Classification Manual" is adopted by reference in R 299.11007.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9204 Exclusions.

Rule 204. (1) The following materials are not wastes for the purpose of part 111 of the act 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 pursuant to the provisions of section 402 of the federal clean water act, 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, as amended, 42 U.S.C. §2011 et seq.
(e) Materials which are subjected to in-situ mining techniques and which 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(y).
(g) Spent sulfuric acid that is used to produce virgin sulfuric acid, unless the spent acid is accumulated

speculatively, as defined in R 299.9107(y).
(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 such 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 which have been reclaimed and which are reused for their original intended purpose.
(j) Wastewaters from the wood preserving process which have been reclaimed and which 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 such 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) U.S. 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, subsequent to 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 which are reclaimed from used oil and which 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 C.F.R. §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, provided both the following requirements are met:

(i) The oil is hazardous only because it exhibits the characteristic of ignitability as defined in R299.9212 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 the provisions of 40 C.F.R. 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 pursuant to this exclusion, the plant owner or operator complies with all of the following requirements otherwise the exclusion shall not apply:

(A) Submits a onetime 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 onetime notification required pursuant to subparagraph (v) of this subdivision in its on-site records for a period of not less than 3 years from the date specified in the notice.

(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) Secondary 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 secondary material is legitimately recycled to recover minerals, acids, cyanide, water, or other values.

(ii) The secondary material is not speculatively accumulated.

(iii) Except as provided under subparagraph (iv) of this subdivision of this subrule, the secondary material is stored in tanks, containers, or buildings which meet the following requirements as applicable:

(A) If using a building, the building shall be an engineered structure with a floor, walls, and a roof all of which are made of non-earthen materials providing structural support, except smelter buildings which may have partially earthen floors provided that the secondary material is stored on the non-earthen portion, have a roof which 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 shall 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 which controls fugitive dust if the tank contains any particulate which 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 shall be free standing and be manufactured of a material suitable for containment of its contents, be operated in a manner which controls fugitive dust if the tank contains any particulate which may be subject to wind dispersal, and be designed, constructed, and operated to prevent significant releases of the material to the environment.
(iv) The secondary materials are placed on pads if all of the following requirements are met:
(A) The solid mineral processing secondary materials do not contain any free liquid.
(B) The pad is designed, constructed, and operated to prevent significant releases of the secondary 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 secondary 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 which 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 such 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 secondary 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 such 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 a notice to the director which identifies the following information and is updated when 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 non land-based units.
(vi) For the purposes of the exclusion under R 299.9204(2)(h), mineral processing secondary materials shall 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) Comparable fuels or comparable syngas fuels that meet the requirements of R 299.9230.
(2) The following wastes are not hazardous wastes for the purposes of part 111 of the act 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 shall not be deemed to be treating, storing, disposing of, or otherwise managing hazardous wastes for the purposes of regulation pursuant to the provisions of 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 which are generated by either of the following and which 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 C.F.R. §266.112 for facilities that burn or process hazardous waste.
(e) Drilling fluids, produced waters, and other wastes that are associated with the exploration, development, or production of crude oil, natural gas, or geothermal energy.
(f) Wastes which 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, which do not fail the test for the toxicity characteristic for any other constituent or are not listed due to the presence of any other constituent, and which do not fail the test for any other characteristic, if it is shown by a waste generator or by waste generators that all of the following provisions are met:
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.
(g) The following specific wastes that are in compliance with the standard in subdivision (f) 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:
(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 beamhouse.
(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 beamhouse.
(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.
(viii) Wastewater treatment sludges from the production of Ti02 pigment using chromium-bearing ores by the chloride process.
(h) 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 C.F.R. §266.112 for facilities that burn or process hazardous waste. For purposes of this subdivision of this subrule, 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 will 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 percent by weight normal beneficiation raw materials or normal mineral processing raw materials.
(B) Legitimately reclaims the secondary mineral processing materials.

(i) Mixtures of a waste that is excluded from regulation pursuant to the provisions of subdivision (h) of this subrule and any other waste that exhibits a hazardous waste characteristic pursuant to the provisions of R 299.9212 and that is not listed pursuant to the provisions of 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.

(j) Cement kiln dust waste, except as provided in 40 C.F.R. §266.112 for facilities that burn or process hazardous waste.

(k) Waste which consists of discarded arsenical-treated wood or wood products, which fails the test for the toxicity characteristic for hazardous waste numbers D004 through D017 and which is not a hazardous waste for any other reason, if the waste is generated by persons who utilize the arsenical-treated wood and wood products for these materials' intended end use.

(l) Petroleum-contaminated media and debris that fail the test for the toxicity characteristic pursuant to the provisions of R 299.9212 for hazardous waste numbers D018 through D043 only and are subject to the corrective action regulations pursuant to the provisions of 40 C.F.R. part 280.

(m) 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.

(n) 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 one of the following methods:

(i) Puncturing the filter anti-drain back valve or the filter dome end and hot-draining.

(ii) Hot-draining and crushing.

(iii) Dismantling and hot-draining.

(iv) Any other equivalent hot-draining method that will remove used oil.

(o) Leachate or gas condensate collected from landfills where certain wastes have been disposed of provided that all of the following requirements are met:

(i) The wastes disposed would meet one or more of the listing descriptions for hazardous waste numbers K169, K170, K171, and K172 if these wastes had been generated after February 8, 1999.

(ii) The wastes described in subparagraph (i) of this subdivision were disposed before February 8, 1999.

(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 sections 307(b) or 402 of the federal clean water act.

(v) After February 13, 2001, the leachate or gas condensate shall no longer be exempt if it is stored or managed in a surface impoundment before discharge unless all of the following requirements are met:

(A) The surface impoundment is used to store leachate or gas condensate in response to an emergency situation.

(B) The surface impoundment has a double liner system.

(C) The leachate or gas condensate is removed from the surface impoundment and continues to be managed in compliance with the conditions of this subdivision after the emergency ends.

(3) The following hazardous wastes are not subject to regulation pursuant to 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 which are generated by a farmer from his or her own use and which 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 in accordance with the provisions of 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 and these rules if 1 of the following provisions is met:
(a) The sample is being transported to a laboratory for the purpose of testing.
(b) The sample is being transported back to the sample collector after testing.
(c) The sample is being stored by the sample collector before transport to a laboratory for testing.
(d) The sample is being stored in a laboratory before testing.
(e) The sample is being stored in a laboratory after testing but before it is returned to the sample collector.
(f) 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.
(5) To qualify for the exemption specified in subrule (4) of this rule, a sample collector that ships samples to a laboratory and a laboratory that returns samples to a sample collector shall comply with DOT, United States postal service, 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, United States postal service, 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 assure that all of the following information accompanies the sample:
(a) The sample collector's name, mailing address, and telephone number.
(b) The laboratory's name, mailing address, and telephone number.
(c) The quantity of the sample.
(d) The date of shipment.
(e) A description of the sample.
(6) 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 stated in subrule (5) of this rule.
(7) Persons who generate or collect samples for the purpose of conducting treatability studies as defined in R 299.9108 are not subject to the requirements of parts 2, 3, and 4 of these rules or the notification requirements of section 3010 of RCRA and the samples are not included in the quantity determinations specified in the provisions of R 299.9205 and R 299.9306(4) 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 complied with:
(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 shall 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 Unites States department of transportation, United States postal service, 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 shall 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 EPA hazardous waste number.
(d) The sample is shipped to a laboratory or testing facility that is exempt pursuant to the provisions of subrule (10) of this rule or has an appropriate RCRA permit, state hazardous waste 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 pursuant to this exemption.
(B) The name, address, and EPA 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 pursuant to the provisions of subdivision (e)(iii) of this subrule in its biennial report.
(8) 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 (7)(a) and (b) and subrule (10)(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.
(9) The additional quantities and time frames allowed under subrule (8) of this rule are subject to all of the provisions of 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 shall 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.
(10) 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 or these rules, are not subject to any of the requirements of these rules or to the notification requirements of section 3010 of RCRA 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 pursuant to this rule.
(b) The laboratory or testing facility that conducts the treatability study has an EPA 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 the purpose of 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 shall be included for each treatability study that is conducted:
(i) The name, address, and EPA identification number of the generator or sample collector of each waste sample.
(ii) The date the shipment was received.
(iii) The quantity of waste accepted.
(iv) The quantity of "as received" waste in storage each day.
(v) The date the treatment study was initiated and the amount of "as received" waste introduced to treatment each day.
(vi) The date the treatability study was concluded.
(vii) The date any unused sample or residues generated from the treatability study were returned to the generator or sample collector or, if sent to a designated facility, the name of the facility and the EPA identification number.
(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 estimates the number of studies and the amount of waste expected to be used in treatability studies during the current year and includes all of the following information for the previous calendar year:

(i) The name, address, and EPA identification number of the facility conducting the treatability studies.
(ii) The types, by process, of treatability studies conducted.
(iii) The names and addresses of persons for whom studies have been conducted, including their EPA identification numbers.
(iv) The total quantity of waste in storage each day.
(v) The 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 pursuant to the provisions of R 299.9203 and, if so, are subject to these rules, unless the residues and unused samples are returned to the sample originator pursuant to the exemption in subrule (7) 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.
(11) The disposal of PCB-containing dielectric fluid and electric equipment that contains the fluid as authorized for use and as regulated pursuant to the provisions of 40 C.F.R. 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 pursuant to parts 2 to 7 and 9 and 10 of these rules.
(12) Dredged material, as defined in 40 C.F.R. §232.2, that is subject to the requirements of a permit that has been issued pursuant to section 404 of the federal water pollution control act, 33 U.S.C. §1344, or section 103 of the marine protection, research, and sanctuaries act of 1972, 33 U.S.C. §1413, is not a hazardous waste for the purposes of part 111 of the act and these rules. For the purposes of this exemption, the term "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 water pollution control act, 33 U.S.C. §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 U.S.C. §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.
(13) The provisions of 40 C.F.R. §261.38, part 280, and part 761are adopted by reference in R 299.11003.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9205 Special requirements for hazardous waste generated by conditionally exempt small quantity generators.

Rule 205. (1) A generator is a conditionally exempt small quantity generator if, in a calendar month, any of the following provisions apply:
(a) He or she generates less than or equal to 100 kilograms of hazardous waste in that month and does not accumulate, at any time, more than a total of 1,000 kilograms of hazardous wastes.
(b) He or she generates or accumulates, at any time, acute hazardous waste in quantities less than or equal to the following:
(i) A total of 1 kilogram of acute hazardous wastes that are listed in table 203a, 204a, 204b, or 205a of these rules.
(ii) A total of 100 kilograms of any residue or contaminated soil, waste, or other debris resulting from the cleanup of a spill into water or on any land of any acute hazardous waste that is listed in table 203a, 204a, 204b, or 205a of these rules.
(c) He or she generates or accumulates, at any time, waste that satisfies the criteria of the characteristic of severe toxicity pursuant to the provisions of R 299.9212(5) in quantities less than or equal to 1 kilogram.
(2) Except as provided in subrules (3), (4), (7), (8), and (9) of this rule, a conditionally exempt small quantity generator's hazardous wastes are not subject to regulation pursuant to the provisions of parts 3 to 10 of these rules if the generator complies with the following requirements:

(a) The waste evaluation requirements specified in R 299.9302.
(b) Either treats or disposes of his or her hazardous waste in an on-site facility or ensures delivery to a facility that will store, treat, or dispose of the waste. If the facility is located in the United States, it shall be in compliance with 1 of the following requirements:
(i) Be permitted or licensed pursuant to the provisions of part 111 of the act for that waste type or be operating pursuant to the provisions of R 299.9502(3), (4), or (5).
(ii) Be a facility that stores or treats the waste and which is in compliance with the applicable requirements of parts 31, 55, and 115 of the act.
(iii) Be a disposal facility that is in compliance with the applicable requirements of parts 31, 55, and 115 of the act.
(iv) 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.
(v) 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.
(vi) Be in another state and be permitted or licensed pursuant to the provisions of 40 C.F.R. part 270.
(vii) Be in another state and be in interim status pursuant to the provisions of 40 C.F.R. parts 270 and 265.
(viii) Be in another state and be authorized to manage hazardous waste by the state pursuant to a hazardous waste management program that is approved pursuant to the provisions of 40 C.F.R.
part 271.
(ix) Be in another state and be permitted, licensed, or registered by that state to manage municipal waste which, if managed in a municipal waste landfill, is subject to the provisions of 40 C.F.R. part 258.
(x) Be in another state and be permitted, licensed, or registered by that state to manage nonmunicipal waste which, if managed in a nonmunicipal waste disposal unit after the effective date of these rules, is subject to the provisions of 40 C.F.R. 257.5 to 257.30.
(xi) For universal waste managed in accordance with the provisions of R 299.9228, be a universal waste handler or destination facility in compliance with the provisions of R 299.9228.
(c) Accumulates waste in an area where the waste is protected from weather, fire, physical damage, and vandals.
(d) Hazardous waste accumulation 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 the provisions of part 55 of the act.
(3) If a generator exceeds the generation or accumulation limits, or both, specified in subrule (1) of this rule, then the generator and all of the accumulated hazardous wastes are subject to the following provisions:
(a) For wastes other than acute or severely toxic hazardous wastes, the special provisions of part 3 of these rules that are applicable to generators that generate between 100 kilograms and 1,000 kilograms of hazardous waste in a calendar month and the other applicable requirements of these rules. The time period specified in the provisions of R 299.9306 for the accumulation of wastes on-site begins for a conditionally exempt small quantity generator when the accumulated wastes are more than 1,000 kilograms.
(b) For waste types specified in subrule (1)(b) or (c), or both, of this rule, the requirements of part 3 of these rules that are applicable to generators that generate 1,000 kilograms or more of hazardous waste per calendar month and the other applicable requirements of these rules. The time period specified in the provisions of R 299.9306 for the accumulation of wastes on-site begins for a conditionally exempt small quantity generator when the accumulated wastes exceed 1 or more of the limits specified in subrule
(1)(b) or (c) of this rule.
(4) If a person other than the conditionally exempt small quantity generator accumulates hazardous waste generated by a conditionally exempt small quantity generator, then the person and all of the accumulated hazardous wastes shall be in compliance with the following requirements:
(a) If the quantity of hazardous wastes, other than acute or severely toxic hazardous wastes, accumulated on-site is more than 1,000 kilograms, the following requirements:
(i) Place the waste in containers and comply with the provisions of 40 C.F.R. part 265, subpart I, except for the provisions of ?265.176, and the containment requirements of 40 C.F.R. ?264.175.
(ii) Place the waste in tanks and comply with the provisions of 40 C.F.R. S265.201 and the containment

requirements of 40 C.F.R. ??265.191, 265.192, 265.193, and 265.196.
(iii) Clearly mark the date upon which each period of accumulation begins and the hazardous waste number of the waste on each container so that the information is visible for inspection.
(iv) Ensure that while the waste is being accumulated on-site, each waste container and tank is marked clearly with the words "hazardous waste."
(v) Comply with the provisions of 40 C.F.R. part 265, subpart C.
(vi) Ensure that, at all times, there is at least 1 employee either on the premises or on call who is responsible for coordinating all emergency response measures. The employee is the emergency coordinator and, if on call, shall be available to respond to an emergency by reaching the facility within a short period of time.
(vii) Post, next to the telephone, the name and 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 facility has a direct alarm.
(viii) Ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures relevant to their responsibilities during normal facility operations and emergencies.
(ix) Ensure that the emergency coordinator or his or her designee responds to any emergencies that arise. An emergency coordinator shall respond as follows:
(A) If there is a fire, call the fire department or attempt to extinguish the fire using a fire extinguisher.
(B) If there is 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 soils.
(C) 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 generator has knowledge that a spill has reached surface water or groundwater, then the generator shall immediately notify the department's pollution emergency alerting system - telephone number 800-292-4706. For releases that could threaten human health outside the individual site of generation and spills that have reached surface waters, the person shall also immediately notify the national response center at its 24-hour, toll-free number - 800-424-8802. The notifications shall include all of the following information:
(1) The name and telephone number of the person who is reporting the incident.
(2) The name, address, telephone number, and EPA identification number of the person accumulating the waste.
(3) The date, time, and type of incident.
(4) The name and quantity of the material or materials involved and released.
(5) The extent of injuries, if any.
(6) The estimated quantity and disposition of recovered materials that resulted from the incident, if any.
(7) An assessment of actual or potential hazards to human health or the environment.
(8) The immediate response action taken.
(x) Ensure that the area where the waste is accumulated is protected from weather, fire, physical damage, and vandals.
(xi) Ensure that 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 the provisions of part 55 of the act.
(xii) Ensure that waste is not accumulated on-site for a period of more than 180 days before the waste is recycled, treated, or disposed of in accordance with the provisions of subrule (2) of this rule. If the person exceeds the 180-day accumulation period, then the person and all of the accumulated waste are subject to the requirements for owners or operators of hazardous waste management facilities.
(xiii) Ensure that the volume of waste being accumulated on-site is not more than 6,000 kilograms before the waste is recycled, treated, or disposed of in accordance with the provisions of subrule (2) of this rule. If the person exceeds the 6,000-kilograms accumulation limit, then the person and all of the accumulated waste are subject to the requirements for owners or operators of hazardous waste management facilities.
(xiv) Within 15 days after accumulating 1,000 kilograms or more of waste, provide the department with a onetime written notification unless the person already has an EPA identification number. The notification shall include all of the following information:
(A) The names, addresses, and telephone numbers of the owner and operator of the accumulation site.
(B) The name, address, and telephone number of the accumulation site.

(C) The type of waste accumulated at the site.
(D) The quantity of each waste accumulated at the site.
(b) If the quantity of acute or severely toxic hazardous wastes accumulated on-site is more than the limits specified in subrule (1)(b) or (c) of this rule, the following requirements:
(i) Place the waste in containers and comply with the provisions of 40 C.F.R. part 265, subpart I, except for the provisions of ?265.176, and the containment requirements of 40 C.F.R. ?264.175.
(ii) Place the waste in tanks and comply with the provisions of 40 C.F.R. S265.201 and the containment requirements of 40 C.F.R. SS265.191, 265.192, 265.193, and 265.196.
(iii) The requirements specified in R 299.9205(4)(a)(iii) to (xi).
(iv) Ensure that waste is not accumulated on-site for a period of more than 90 days before being recycled, treated, or disposed of in accordance with the provisions of subrule (2) of this rule. If the person exceeds the 90-day accumulation period, then the person and all of the accumulated waste are subject to the requirements for owners or operators of hazardous waste management facilities.
(v) Ensure that the volume of waste being accumulated on-site is not more than the limits specified in subrule (1)(b) or (c) of this rule before the waste is recycled, treated, or disposed of in accordance with the provisions of subrule (2) of this rule. If the person exceeds the accumulation limits specified subrule (1)(b) or (c) of this rule, then the person and all of the accumulated waste are subject to the requirements for owners or operators of hazardous waste management facilities.
(vi) Notify the department, in writing, within 15 days after accumulating quantities of waste that exceed the limits specified in subrule (1)(b) or (c) of this rule. The notification shall include all of the following information:
(A) The names, addresses, and telephone numbers of the owner and operator of the accumulation site.
(B) The name, address, and telephone number of the accumulation site.
(C) The type of waste accumulated at the site.
(D) The quantity of each waste accumulated at the site.
(5) When making the quantity determinations of this rule and part 3 of these rules, the generator shall include all hazardous waste that he or she generates, except the hazardous waste that meets any of the following criteria:
(a) Is exempt from regulation pursuant to the provisions of R 299.9204(3) to (11), 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 units as defined in part 1 of these rules.
(c) Is removed from on-site storage.
(d) Is hazardous waste produced by on-site treatment, including reclamation, of his or her hazardous waste if the hazardous waste that is treated was counted once.
(e) Is recycled, without prior storage or accumulation, only in an on-site process that is subject to regulation pursuant to the provisions of R 299.9206(1)(c).
(f) Are spent materials that are generated, reclaimed, and subsequently reused on-site, if the spent materials have been counted once.
(g) Is used oil and managed pursuant to the provisions of R 299.9206(4) and R 299.9809 to R 299.9816.
(h) Are spent lead-acid batteries managed pursuant to the provisions of R 299.9804.
(i) Is universal waste managed pursuant to the provisions of R 299.9228.
(6) Hazardous waste subject to the reduced requirements of this rule may be mixed with nonhazardous waste and remain subject to these reduced requirements even though the resultant mixture exceeds the quantity limitations identified in this rule, unless the mixture meets any of the characteristics of hazardous wastes identified in R 299.9212.
(7) If a person mixes a waste with a hazardous waste that exceeds a quantity exclusion level of this rule, then the mixture is subject to full regulation.
(8) If a conditionally exempt small quantity generator's wastes are mixed with used oil, then the mixture is subject to the applicable requirements of R 299.9809 to R 299.9816 if it is to be burned for energy recovery. Any material produced from the mixture by processing, blending, or other treatment is also subject to the applicable requirements of R 299.9809 to R 299.9816 if it is to be burned for energy recovery.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1991 MR 10, Eff. Nov. 14, 1991;

1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 1998 MR 9, Eff. Sep. 21, 1998.

R 299.9206 Requirements for recyclable materials.

Rule 206. (1) Except as provided in subrules (2) to (5) 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 pursuant to 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 C.F.R. §264.11 and the manifest requirements of R 299.9608. 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 C.F.R. 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 permitting or licensing requirements specified in part 111 of the act 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 pursuant to the provisions of 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 pursuant to part 111 of the act or these rules, except for the environmental and human health standards of R 299.9602 and the provisions of R 299.9809 to R 299.9816, as applicable:

(a) Industrial ethyl alcohol that is reclaimed, except that, unless otherwise provided in an international agreement as specified in the provisions of 40 C.F.R. §262.58, the following requirements apply:

(i) A person who initiates a shipment for reclamation in a foreign country, and any intermediary who arranges for the shipment, shall comply with the requirements applicable to a primary exporter in the provisions of 40 C.F.R. §§262.53, 262.56(a)(1) to (4), (6), and (b), and 262.57, export such materials only with the consent of the receiving country and in conformance with the EPA acknowledgment of consent as defined in subpart E of 40 C.F.R. part 262, and provide a copy of the EPA acknowledgment of consent to the shipment to the transporter that transports the shipment for export.

(ii) A transporter that transports a shipment for export shall not accept a shipment if he or she knows that the shipment does not conform to the EPA acknowledgment of consent, shall ensure that a copy of the EPA acknowledgment of consent accompanies the shipment, and shall ensure that it is delivered to the facility that is designated by the person who initiates the shipment.

(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 such wastes result from normal petroleum refining, production, and transportation practices. This exemption does not apply to fuels produced from oil recovered from oil-bearing hazardous waste, if the recovered oil is already excluded under R 299.9204(1)(l).

(d) Hazardous waste fuel which is produced from oil-bearing hazardous wastes from petroleum refining, production, or transportation practices or which is produced from oil that is reclaimed from the hazardous wastes, where 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 set forth 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 which 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 set forth in R 299.9809(1)(f).
(f) Oil which 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 set forth in R 299.9809(1)(f).
(g) Textiles, including shop towels, rags, gloves, uniforms, linens, mops, and wipers, 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 pursuant to part 111 of the act or these rules, except for the environmental and human health standards outlined in the provisions of R 299.9602 and the provisions of 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 electric lamps which 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 electric lamp storage activity to the director. The notification shall 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 electric 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 pursuant to the provisions of R 299.9602.
(d) The location standards pursuant to the provisions of R 299.9603.
(e) The facility design and operating standards pursuant to the provisions of R 299.9604.
(f) The handling requirements of R 299.9228(4)©.
(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 which the facility is located. The notification shall 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 electric lamps are accumulated shall be protected, as appropriate for the type of waste being stored, from weather, fire, physical damage, and vandals.
(j) Electric lamp accumulation shall be conducted so that fugitive emissions are not in violation of the provisions of part 55 of the act.
(k) A written operating record shall be maintained on-site by the owner or operator and shall contain all of the following information:
(i) The quantity of electric lamps received on-site during the calendar year.
(ii) The quantity of electric lamps recycled at the facility during the calendar year.
(iii) The documentation necessary to demonstrate that the electric lamps are not being stored on-site for

more than 1 year.
(l) The closure standards of 40 C.F.R. §§264.111 and 264.114.
(m) The provisions of R 299.9614 if the electric lamps are being stored in containers and the provisions of R 299.9615 if the electric lamps are being stored in tanks.
(n) The electric lamps shall not be stored on-site for more than 1 year from the date that the owner or operator receives the electric lamps.
(o) Any hazardous waste that is generated from the electric lamp recycle operation is subject to the provisions of parts 2 to 7 of these rules.
(6) Hazardous waste that is exported to or imported from designated member countries of the organization for economic cooperation and development, as defined in 40 C.F.R. §262.58(a)(1), for the purpose of recovery is subject to the requirements of R 299.9312 if the hazardous waste is either a federal hazardous waste subject to the manifesting requirements of part 3 of these rules or is a universal waste subject to the provisions R 299.9228.
(7) The provisions of 40 C.F.R. §§264.11, 264.111, and 264.114, and part 265, subparts AA and BB, are adopted by reference in R 299.11003.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1989 MR 1, Eff. Feb. 15, 1989; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9206
Source: 1996 AACS.

R 299.9207
Source: 1994 AACS.

R 299.9208
Source: 1985 AACS.

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© 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.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Eff. Sept. 11, 2000.

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.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1998 MR 9, Eff. Sep. 21, 1998.

R 299.9211
Source: 1989 AACS.

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. S211.117(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 D-93-79 or D-93-80, both of which are adopted by reference in R 299.11001.
(ii) A setaflash closed cup tester using the test method specified in ASTM standard D-3278-78, which is adopted by reference in R 299.11001. (iii) An equivalent test method approved by the director, or his or her designee, pursuant to procedures set forth in the provisions of 40 C.F.R. SS260.20 and 260.21, which are adopted by reference in R 299.11003.
(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 the provisions of 49 C.F.R. S173.115, which is adopted by reference in R 299.11004, and as determined by the test methods described in the provisions of 49 C.F.R. S173.115 or equivalent test methods approved by the director pursuant to the provisions of 40 C.F.R. SS260.20 and 260.21.
(d) It is an oxidizer as defined in the provisions of 49 C.F.R. S173.127, 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 9040 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 the test method specified in the national association of corrosion engineers (NACE) standard TM-01-69, as standardized in method 5.3 of 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 the provisions of 49 C.F.R. S173.54, or it meets the definition of a class 1/division 1.1, 1.2, or 1.3 explosive as defined in the provisions of 49 C.F.R. S173.50, which are adopted by reference in R 299.11004.
(4) A 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 l 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 the provisions of 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 D00l.
(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, will consider a sample that is obtained using any of the applicable sampling methods specified in the provisions of 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 set forth 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 8280, which is contained in the provisions of 40 C.F.R. part 261, appendix X, and which is adopted by reference in R

299.11003.
(c) Alternate procedures as approved by the director or his or her designee.
(9) The provisions of 40 C.F.R. ??260.20 and 260.21 are adopted by reference in R 299.11003.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 1998 MR 9, Eff. Sep. 21, 1998.

R 299.9213
Source: 1994 AACS.

R 299.9214
Source: 1996 AACS.

R 299.9215
Source: 1988 AACS.

R 299.9216
Source: 1988 AACS.

R 299.9217
Source: 1994 AACS.

R 299.9218 Rescinded.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; rescinded 1998 MR 9, Eff. Sep. 21, 1998.

R 299.9219
Source: 1988 AACS.

R 299.9220 Table 203a; hazardous waste from nonspecific sources.
Rule 220. Table 203a reads as follows:

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 one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures	(T)
F002	The following spent halogenated solvents: tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane and 1,1,2- trichloroethane; all spent solvent mixtures and blends containing, before use, a total of 10% or more, by volume, of one or more of the above halogenated solvents or those solvents listed in FOOl, 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 one or more of those solvents listed in FOOl, 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 one or more of the above non-halogenated solvents or those solvents listed in FOOl, 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 one or more of the above nonhalogenated solvents or those solvents listed in FOOl, 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)
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	(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 intermediate, or component in a formulating process of tetra-, penta-, or hexachlorobenzenes under alkaline conditions	(H)
F023	Wastes, except wastewater and spent carbon from hydrogen chloride purification, from the production of materials on equipment previously used for the production or manufacturing use as a reactant, chemical intermediate, or component in a formulating process of tri- and tetrachlorophenols. This listing does not include wastes from equipment used only for the production or use of hexachlorophene from highly purified 2,4,5- trichlorophenol	(H)
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 and including 5, with varying amounts and positions of chlorine substitutions. This listing does not include wastewater, wastewater treatment sludges, spent catalysts, and wastes listed in the provisions of 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 and including 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 in accordance with 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 sediment sludge from the treatment of wastewater from wood preserving processes that use creosote or pentachlorophenol, or both.	(T)
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.	(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 or more additional units after wastewaters have been treated in aggressive biological treatment units; and F037, K048, and K051 wastes are not included in this listing.	(T)
F039	Leachate 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)

History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9221
Source: 1988 AACS.

R 299.9222 Table 204a; hazardous wastes from specific sources.
Rule 222. Table 204a reads as follows:

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 acetaldehyde from ethylene	(T)
	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)
	K093	Distillation light ends from the production of phthalic anhydride from ortho-xylene	(T)
	K094	Distillation bottoms from the production of phthalic anhydride from ortho-xylene	(T)
	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)
	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)
	K030	Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene	(T)
	K083	Distillation bottoms from aniline production	(T)
	K103	Process residues from aniline extraction from the production of aniline	(T)
	K104	Combined wastewater streams generated from nitrobenzene or aniline production	(T)
	K085	Distillation of fractionation column bottoms from the production of chlorobenzenes	(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)
	K117	Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene	(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, 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.	(R,T)
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)
Pesticides	K031	By-product salts generated in the production of MSMA and cacodylic acid	(T)
	K032	Wastewater treatment sludge from the production of chlordane	(T)

	K033	Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane	(T)
	K034	Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane	(T)
	K097	Vacuum stripper discharge from the chlordane chlorinator 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)
	K098	Untreated process wastewater 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)
	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 bromide	(C,T)
	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	(R)
	K045	Spent carbon from the treatment of wastewater containing explosives	(R)
	K046	Wastewater treatment sludges from the manufacturing, formulation, and loading of lead-based initiating compounds	(T)
	K047	Pink or red water from TNT operations	(R)
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)
Secondary Lead	K069	Emission control dust or sludge from secondary lead smelting	(T)
	K100	Waste leaching solution from acid leaching of emission control dust sludge from secondary lead smelting	(T)
Veterinary Pharmaceuticals	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 produced from coal	(T)
	K147	Tar storage tank residues from coal tar refining	(T)
	K148	Residues from coal tar distillation, including, but not limited to, still bottoms	(T)

History: 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9223
Source: 1994 AACS.

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:

EPA Hazard 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	
P011	1303-28-2	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-	
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	
P021	592-01-8	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	
P029	544-92-3	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	
P033	506-77-4	Cyanogen chloride (CN)C1	
P034	131-89-5	2-Cyclohexyl-4,6-dinitrophenol	
P016	542-88-1	Dichloromethyl ether	
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	0,0-Diethyl 0-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	
P051	72-20-8	Endrin, and metabolites	
P042	51-43-4	Epinephrine	
P031	460-19-5	Ethanedinitrile	
P194	23135-22-0	Ethanimidothioc 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	
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	
P063	74-90-8	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')-,	
P196	15339-36-3	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-	
P118	75-70-7	Methanethiol, trichloro-	(R)
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	
P128	315-18-4	Mexacarbate	
P072	86-88-4	alpha-Naphthylthiourea	
P073	13463-39-3	Nickel carbonyl	
P073	13463-39-3	Nickel carbonyl Ni(CO)4, (T-4)-	
P074	557-19-7	Nickel cyanide	
P074	557-19-7	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	
P076	10102-43-9	Nitrogen (II) oxide	
P078	10102-44-0	Nitrogen (IV) 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	
P087	20816-12-0	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	
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	
P098	151-50-8	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-o1	
P067	75-55-8	1,2-Propylenimine	
P102	107-19-7	2-Propyn-1-o1	
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	
P104	506-64-9	Silver cyanide Ag(CN)	
P105	26628-22-8	Sodium azide	
P106	143-33-9	Sodium cyanide	
P106	143-33-9	Sodium cyanide Na(CN)	
P108	57-24-9	Strychnidin-10-one, and salts	
P018	357-57-3	Strychnidin-10-one, 2,3-dimethoxy-	
P108	57-24-9	Strychnine and salts	
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	
P113	1314-32-5	Thallium (III) oxide	
P114	12039-52-0	Thallium (I) selenide	
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	

P120	1314-62-1	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	
P121	557-21-1	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	

History: 1988 MR 4, Eff. Apr. 20, 1988; 1991 MR 10, Eff. Nov. 14, 1991; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

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:

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)-	
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-	
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	(C,R)
U020	98-09-9	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-	
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	
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	
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	
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)
U113	140-88-5	Ethyl acrylate	(I)
U238	51-79-6	Ethyl carbamate (urethan)	
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	(C,T)
U134	7664-39-3	Hydrogen fluoride	(C,T)
U135	6/4/83	Hydrogen sulfide	
U135	6/4/83	Hydrogen sulfide H2S	
U096	80-15-9	Hydroperoxide, 1-methyl-1-phenylethyl-	(R)
U116	96-45-7	2-Imidazolidinethione	
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)
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	
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	
U161	108-10-1	Pentanonl, 4-methyl-	
U186	504-60-9	1,3-Pentadiene	(I)
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-	
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	
U202	81-07-2	Saccharin and salts	
U203	94-59-7	Safrole	
U204	7783-00-8	Selenious acid	
U204	7783-00-8	Selenium dioxide	
U205	7488-56-4	Selenium sulfide	
U205	7488-56-4	Selenium sulfide SeS2	(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)
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-Terachloroethane	
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	
U216	7791-12-0	Thallium chloride T1C1	
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 [(H2N)C(S)]252, 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 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	

History: 1988 MR 4, Eff. Apr. 20, 1988; 1991 MR 10, Eff. Nov. 14, 1991; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996.

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:

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	0-aminoazotoluene	
006U	92-67-1	4-aminobiphenyl	
007U	132-32-1	3-amino-9-ethyl carbazole	
157U	57360-17-5	3-amino-9-ethyl carbazole hydrochloride	
008U	82-28-0	1-amino-2-methyl anthraquinone	
009U	101-05-3	Anilazine	
158U	142-04-1	Aniline hydrochloride	
011U	90-04-0	o-Anisidine	
012U	134-29-2	o-Anisidine hydrochloride	
013U	Class-01-0	Antimony (when in the form of particles 100 microns or less)	
014U	1397-94-0	Antimycin A	
147U	2642-71-9	Azinphos-ethyl	
148U	86-50-0	Azinphos-methyl	
159U	103-33-3	Azobenzene	
015U	101-27-9	Barban	
016U	22781-23-3	Bendiocarb	
017U	17804-35-2	Benomyl	

020U	1689-84-5	Bromoxynil	
160U	106-99-0	1,3-Butadiene	
161U	85-68-7	Butyl benzl phthalate	
021U	140-57-8	2(p-tert-Butylphenoxy)-isopropyl-2-chloroethyl sulfite	
022U	6/1/25	Captafol	
023U	133-06-2	Captan	
024U	63-25-3	Carbaryl	
025U	1563-66-2	Carbofuran	
027U	786-19-6	Carbophenothion	
028U	Class-08-6	Chloramines	
152U	470-90-6	Chlorfenuinphos	
029U	2921-88-2	Chloropyrifos	
030U	Class-05-3	Chlorinated dibenzofurans (other than those listed in Table 202)	
031U	Class-05-4	Chlorinated dioxins (other than those listed in Table 202)	
032U	7782-50-5	Chlorine gas	
033U	107-07-3	2-Chloroethanol	
034U	6959-48-4	3-(Chloromethyl) pyridine hydrochloride	
150U	106-48-9	p-chlorophenol	
162U	7005-72-3	1-chloro-4-phenoxybenzene	
036U	5131-60-2	4-chloro-m-phenylenediamine	
037U	95-83-0	4-chloro-o-phenylenediamine	
038U	126-99-8	Chloroprene	
163U	590-21-6	1-chloropropene	
151U	96-79-4	5-chloro-o-toluidene	
040U	1420-04-8	Clonitralid	
041U	Class-01-6	Cobalt (when in the form of particles 100 microns or less)	
042U	56-72-4	Coumasphos	
043U	120-71-8	p-Cresidine	
044U	7700-17-6	Crotoxyphos	
046U	66-81-9	Cycloheximide	
164U	72-55-9	P,P' DDE	
047U	8065-48-3	Demeton	
048U	39156-41-7	2,4-Diaminoanisole sulfate	
049U	101-80-4	4,4'-Diaminodiphenyl ether	
050U	95-80-7	2,4-Diaminotoluene	
051U	333-41-5	Diazinon	
052U	117-80-6	Dichlone	
054U	62-73-7	Dichlorvos	
055U	141-66-2	Dichrotophos	
056U	64-67-5	Diethyl sulfate	
165U	105-55-5	N,N'-Diethylthiourea	
057U	39300-45-3	Dinocap	
058U	78-34-2	Dioxathion	
059U	2104-64-5	EPN	
166U	106-88-7	1,2-Epoxybutane	

061U	563-12-2	Ethion	
063U	115-90-2	Fensulfothion	
064U	55-38-9	Fenthion	
065U	33245-39-5	Fluchloralin	
068U	680-31-9	Hexamethyl phosphoramide	
070U	123-31-9	Hydroquinone	
071U	1072-52-2	N-(2-Hydroxyethyl) ethyleneimine	
072U	7778-54-3	Hypochlorite	
073U	54-85-3	Isonicotinic acid hydrazine	
167U	59299-51-3	Kanechlor C	
074U	463-51-4	Ketene	
075U	78-97-7	Lactonitril	
076U	21609-90-5	Leptophos	
077U	Class-02-0	Lithium and compounds	
078U	569-64-2	Malachite green	
079U	121-75-5	Malathion	
080U	72-33-3	Mestranol	
082U	838-88-0	4,4'-Methylenebis(2-methylaniline)	
083U	101-61-1	4,4'-Methylenebis(N,N-dimethylaniline)	
086U	90-12-0	1-Methylnaphthalene	
088U	7786-34-7	Mevinphos	
089U	315-18-4	Mexacarbate	
090U	2385-85-5	Mirex	
092U	6923-22-4	Monocrotophos	
093U	505-60-2	Mustard gas	
094U	300-76-5	Naled	
095U	2243-62-1	1,5-Napthalenediamine	
096U	Class-02-2	Nickel (when in the form of particles 100 microns or less)	
097U	61-57-4	Niridazole	
098U	139-94-6	Nithiazide	
099U	602-87-9	5-Nitroacenaphthene	
100U	99-59-2	Nitro-o-anisidine	
101U	92-93-3	Nitrobiphenyl	
102U	1836-75-5	Nitrofen	
103U	531-82-8	N-(4-(5-nitro-2-furanyl)-2-thiazolyl)-acetamide	
104U	51-75-2	Nitrogen mustard	
106U	156-10-5	p-Nitrosodiphenylamine	
168U	4549-40-0	N-Nitrosomethylvinylamine	
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	
112U	79-21-0	Peroxyacetic acid	
113U	136-40-3	Phenazopyridine hydrochloride	
114U	10/9/46	Phenesterin	
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	
120U	13171-21-6	Phosphamidon	
121U	120-62-7	Piperonyl sulfoxide	
122U	Class-07-8	Polybrominated biphenyls (PBB)	
124U	57-57-8	Propiolactone	
127U	51-52-5	Propylthiouracil	
128U	83-74-4	Rotenone	
129U	57-56-7	Semicarbazide	
170U	563-41-7	Semicarbazide hydrochloride	
153U	62-74-8	Sodium fluoroacetate	
131U	100-42-5	Styrene	
132U	95-06-7	Sulfallate	
134U	72-54-8	TDE	
135U	107-49-3	TEPP	
136U	13071-79-9	Terbufos	
137U	961-11-5	Tetrachlorvinphos	
138U	139-65-1	4,4'-Thiodianiline	
139U	95-53-4	o-Toluidine	
140U	Class-08-4	Triaryl phosphate esters	
154U	56-35-9	Bis(tri-n-butyl tin) oxide	
171U	688-73-3	Tributyltin (and other salts and esters)	
172U	87-61-6	1,2,3-Trichlorobenzene	
173U	120-82-1	1,2,4-Trichlorobenzene	
141U	52-68-6	Trichlorfon	
142U	1582-09-8	Trifluralin	
143U	137-17-7	2,4,5-Trimethylaniline	
144U	512-56-1	Triamethylphosphate	
174U	51-79-6	Urethane	
175U	593-60-2	Vinyl bromide	
155U	75-35-4	Vinylidene chloride	
146U	137-30-4	Ziram	

History: 1988 MR 4, Eff. Apr. 20, 1988; 1989 MR 1, Eff. Feb. 15, 1989; 1994 MR 6, Eff. June 21, 1994.

R 299.9226
Source: 1994 AACS.

R 299.9227
Source: 1994 AACS.

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 in accordance with 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 in accordance with the requirements of this rule:

(a) A battery, including a spent lead-acid battery that is not managed pursuant to the provisions of 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 federal insecticide, fungicide, and rodenticide act, 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 federal insecticide, fungicide, and rodenticide act, that is part of a voluntary recall by the registrant.
(ii) A stock of an unused pesticide product other than a product specified in subrule (1)(b)(i) of this rule 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 which contains only elemental mercury as the hazardous waste constituent.
(g) An electric lamp.
(2) The requirements of this rule do not apply to the following wastes:
(a) A spent lead-acid battery that is managed pursuant to the provisions of 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 the provisions of R 299.9204(3)(b).
(e) A pesticide that does not meet the requirements in subrule (1) of this rule. The pesticide shall be managed in accordance with parts 2 to 8 of these rules.
(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 pursuant to the provisions of 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 federal insecticide, fungicide, and rodenticide act.
(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 pursuant to the provisions of 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 federal insecticide, fungicide, and rodenticide act.
(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 federal insecticide, fungicide, and rodenticide act.
(g) A pesticide that is not hazardous waste. A pesticide is a hazardous waste if it is listed pursuant to the provisions of 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 which 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 which 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 which 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

which contains only elemental mercury as the hazardous waste constituent that is not hazardous waste. A thermostat, mercury switch, mercury thermometer, and a waste device which 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) An electric lamp that is not a waste under part 2 of these rules. A used electric lamp becomes a waste on the date that the universal waste handler permanently removes it from its fixture. An unused electric lamp becomes a waste on the date that the universal waste handler decides to discard it.

(k) An electric lamp that is not a hazardous waste. An electric lamp is a hazardous waste if it exhibits 1 or more of the hazardous characteristics identified in R 299.9212.

(3) A person that manages household wastes that are exempt from regulation pursuant to the provisions of R 299.9204(2)(a) and are also of the same type as the universal wastes identified in subrule (1) of this rule or conditionally exempt small quantity generator wastes that are exempt from regulation pursuant to the provisions of R 299.9205 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 pursuant to the provisions of this rule. A person who commingles household wastes or conditionally exempt 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 C.F.R. part 273, subpart B, except §§273.10 and 273.18(b).

(b) If the universal waste small 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.

(c) If the universal waste small quantity handler handles electric lamps, then all of the following additional requirements apply:

(i) The lamps shall not be crushed or broken.

(ii) The lamps shall be managed in a manner that prevents breakage or the release of any universal waste or components of universal waste by containing unbroken lamps in structually sound packaging that is compatible with the contents of the lamps and will prevent breakage during normal handling conditions. The packaging shall remain closed and lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

(iii) All of the following shall be done with respect to a release of universal waste or components of a universal waste, including lamp fragments or residues, and all lamps that show evidence of breakage, leakage, or damage that could cause the release of mercury or other hazardous constituents to the environment:

(A) The release of universal waste or components of a universal waste, including lamp fragments or residues, and all lamps that show evidence of breakage, leakage, or damage that could cause the release of mercury or other hazardous constituents to the environment shall be immediately contained in packaging that is structurally sound and compatible with the contents of the lamps. The packaging shall remain closed once the material has been contained and shall lack evidence of leakage, spillage, or damage that could cause leakage or releases of mercury or other hazardous constituents to the environment under reasonably foreseeable conditions.

(B) A determination shall be made whether any of the materials resulting from the release or the lamps that show evidence of breakage, leakage, or damage that could cause the release of mercury or other hazardous constituents to the environment are hazardous waste, and if the released materials or lamps are hazardous waste, the released materials shall be managed in accordance with the applicable requirements of the act and these rules.

(iv) The lamps or packaging in which the lamps are contained shall be labelled with the words "universal waste electric lamps," "waste electric lamps," or "used electric lamps."

(d) If the universal waste small quantity handler handles mercury switches, mercury thermometers, or waste devices which contain only elemental mercury as the hazardous waste constituent, then the provisions of 40 C.F.R. §273.13© shall be applicable to the mercury switches, mercury thermometers, and waste devices which contain only elemental mercury as the hazardous waste constituent.

(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 C.F.R. 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 electric lamps, then all of the additional requirements of (4)(c) of this rule shall be complied with.
(e) If the universal waste large quantity handler handles mercury switches, mercury thermometers, or waste devices which contain only elemental mercury as the hazardous waste constituent, then the provisions of 40 C.F.R. §273.33(c) shall be applicable to the mercury switches, mercury thermometers, and waste devices which contain only elemental mercury as the hazardous waste constituent.
(6) A universal waste transporter shall comply with both of the following requirements:
(a) The requirements of 40 C.F.R. 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.
(b) The requirements of 40 C.F.R. §§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 the requirements of R 299.9206(1)(c).
(9) An owner or operator of a destination facility that stores electric lamps before recycling the electric lamps at the facility shall comply with the requirements of R 299.9206(5).
(10) A person who manages universal waste that is imported from a foreign country into 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 299.9312 if managing universal waste that is imported from an organization for economic cooperation and development country specified in 40 C.F.R. §262.58(a)(1). (11) The provisions of 40 C.F.R. 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 the adoption of these provisions, the term “department” shall replace the term “EPA,” except in 40 C.F.R. §§273.20(b) and (c), 273.32(a)(3), 273.40 (b) and (c), and 273.56, the term “director” shall replace the term “regional administrator,” the term “R 299.9212” shall replace the term “40 CFR part 261, subpart C,” the term “R 299.9306” shall replace the term “40 CFR 262.34,” the term “part 3 of these rules” shall replace the term “40 CFR part 262,” and the term “parts 2 to 8 of these rules” shall replace the term “40 CFR parts 260 through 272.”
History: 1996 MR 9, Eff. Oct. 16, 1996; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9229
Source: 1996 AACS.

R 299.9230 Comparable and syngas fuels exclusion.
Rule 230. (1) Wastes that meet the following comparable or syngas fuel requirements are not considered

wastes for the purposes of the act and these rules:
(a) For comparable fuels, all of the following comparable fuel specifications:
(i) The waste has a heating value of at least 5,000 BTU per pound.
(ii) The waste has a maximum viscosity of 50 CS, as fired.
(iii) For compounds listed in table 1 of 40 C.F.R. §261.38, the specification levels and minimum required detection limits specified in 40 C.F.R. §261.38.
(b) For synthesis gas fuel that is generated from a hazardous waste, all of the following syngas fuel specifications:
(i) The waste has a minimum BTU value of 100 BTU per standard cubic foot.
(ii) The waste contains less than 1 part per million by volume of total halogens.
(iii) The waste contains less than 300 parts per million by volume of total nitrogen other than diatomic nitrogen (N_2).
(iv) The waste contains less than 200 parts per million by volume of hydrogen sulfide.
(v) The waste contains less than 1 part per million by volume of each hazardous constituent in the target list 40 C.F.R. part 261, appendix VIII.
(2) Wastes that meet comparable fuel or syngas fuel specifications provided in subrule (1) of this rule are excluded from the definition of waste provided that all of the requirements of 40 C.F.R. §261.38(c) are met.
(3) The provisions of 40 C.F.R. §261.38, except for 40 C.F.R.§261.38(a) and (b), are adopted by reference in R 299.11003. For the purposes of this adoption, the word "waste" shall replace the words "solid waste," the word "director" shall replace the words "state RCRA director," "state CAA director," and "regional director," the words "part 6 of these rules" shall replace the words "subpart O of parts 264 or 265 of this chapter," the reference "R 299.9306" shall replace the reference "§262.34," and the reference "R 299.9206(1)" shall replace the reference "§261.6(c)."
History: 2000 MR 14, Eff. Sept. 11, 2000.

PART 3. GENERATORS OF HAZARDOUS WASTE

R 299.9301 Applicability.

Rule 301. (1) This part establishes requirements for generators of hazardous waste.
(2) The provisions of R 299.9205(5) shall be used 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 all of the following requirements with respect to that waste:
(a) The provisions of R 299.9302, R 299.9303, R 299.9306, R 299.9307(1) and (5), and R 299.9308(4).
(b) The applicable requirements of parts 5, 6, 7, and 8 of these rules for the treatment, storage, and disposal.
(c) The provisions of R 299.9204(3)(b), if applicable.
(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 shall comply with the generator standards established in this part.
(6) In addition to complying with the provisions of 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 federal hazardous waste subject to the manifesting requirements of part 3 of these rules or subject to the universal waste provisions of R 299.9228, to or from the countries listed in 40 C.F.R. §262.58(a)(1) for the purpose of recovery shall comply with the provisions of R 299.9312.
(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.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9302

Source: 1994 AACS.

R 299.9303 United States EPA identification numbers.

Rule 303. (1) A generator shall not treat or store, dispose of, or transport or offer for transportation, hazardous waste without having received an EPA identification number from the regional administrator or the regional administrator's designee.

(2) A generator who has not received an EPA 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 an EPA identification number to the generator.

(3) A generator shall not offer his or her hazardous waste to transporters or to treatment, storage, or disposal facilities that have not received an EPA identification number.

(4) Applications for EPA identification numbers shall be made on state form EQP5150 and signed in accordance with the provisions of 40 C.F.R. SS270.11(a)(1)-(3).

History: 1985 MR 12, Eff. Dec. 28, 1985; 1996 MR 9, Eff. Oct. 16, 1996; 1998 MR 9, Eff. Sep. 21, 1998.

R 299.9304 Manifest requirements.

Rule 304. (1) A hazardous waste generator who transports, or offers for transportation, a hazardous waste for off-site treatment, storage, or disposal shall do all of the following:

(a) Prepare a manifest before transporting the waste off-site.

(b) Designate on the manifest 1 facility that is licensed to handle the waste described on the manifest. A generator may also designate on the manifest 1 alternate facility that is licensed to handle his or her waste if an emergency prevents delivery of the waste to the primary designated facility.

(c) Use a transporter or be a transporter, if a generator transports his or her own hazardous waste, who is registered and permitted in accordance with act 138 pursuant to the requirements of part 4 of these rules.

(d) If the transporter is unable to deliver the hazardous waste to the designated facility, the generator shall either designate another facility or instruct the transporter to return the waste. For a total or partial rejected shipment, the generator shall comply with the subrule (7) of this rule.

(2) Except as otherwise provided by subrule (3) of this rule, the generator shall use a manifest form which is approved by the director and which contains all of the following information:

(a) A manifest document number.

(b) The generator's name, mailing address, telephone number, and EPA identification number.

(c) The name and EPA identification number of each transporter.

(d) The name, address, and EPA identification number of the designated facility and an alternate facility, if any.

(e) The description of the waste required by regulations of the DOT in the provisions of 49 C.F.R. §§172.101, 172.202, and 172.203, which are adopted by reference in R 299.11004.

(f) The total quantity of each hazardous waste by units of weight or volume, and the type and number of containers as loaded into or onto the transport vehicle.

(g) The hazardous waste number describing the waste.

(h) The following certification: "I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations."

(i) Other certification statements required by the director based on requirements under title II of the solid waste disposal act.

(3) If a generator manifests a shipment of hazardous waste out-of-state, and if the state to which the shipment is manifested requires the use of another manifest, then the generator shall use that manifest.

(4) The generator shall do all of the following with respect to the manifest:

(a) Sign the manifest certification by hand.

(b) Obtain the handwritten signature of the initial transporter and the date of acceptance on the manifest.

(c) Retain 1 copy in accordance with R 299.9307(3).

(d) Submit 1 copy to the director or his or her designee, which shall be postmarked not later than 10 days after the month in which shipment was made.

(e) Give the remaining copies to the transporter.

(f) For all out-of-state shipments, submit 1 copy of the second generator copy of the manifest which is returned to the generator by the facility, to the director or his or her designee. The second generator copy of the manifest shall be submitted to the dirctor or his or her designee within 10 days after the month in which the copy was received by the generator as specified in R 299.9308.
(g) For shipments of hazardous waste within the United States solely by water (bulk shipments only), send 3 copies of the manifest that are dated and signed in accordance with the provisions of this rule to the owner or operator of the designated facility or the last water (bulk shipment) transporter to handle the waste in the United States, if exported by water.
(h) For rail shipments of hazardous waste within the United States that originate at the site of generation, the generator shall send not less than 3 copies of the manifest, dated and signed in accordance with the provisions of this rule, to 1 of the following, as appropriate:
(i) The next nonrail transporter, if any.
(ii) The designated facility, if transported solely by rail.
(iii) The last rail transporter to handle the waste in the United States, if exported by rail.
(i) For shipments of hazardous waste that is regulated pursuant to the provisions of 40 C.F.R. part 261, subpart C or D, to a designated facility in an authorized state that has not yet obtained authorization from the EPA to regulate that particular waste as hazardous, assure that the owner or operator of the designated facility agrees to sign and return the manifest to the generator, and that any out-of-state transporter signs and forwards the manifest to the designated facility.
(5) The requirements of this rule do not apply to hazardous waste that is produced by a generator of more than 100 kilograms, but less than 1,000 kilograms, in a calendar month if both of the following requirements are met:
(a) The waste is reclaimed under a contractual agreement pursuant to which the type of waste and frequency of shipments are specified in the agreement 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.
(6) A hazardous waste generator who authorizes a transporter to commingle his or her hazardous waste in accordance with the requirements of R 299.9405(2) or (3) shall add the term "com-same," as specified in R 299.9405(2)(f), or "com-diff," as specified in R 299.9405(3)(f), to the manifest.
(7) A generator whose manifested shipment results in a significant manifest discrepancy, as specified in R 299.9608, and a total or partial rejected shipment, shall do all of the following:
(a) For a total rejected shipment which is returned to the generator:
(i) Indicate on the original manifest, acknowledgement of receipt, by signing and dating the returned portion of the original manifest.
(ii) Return the transporter copy of the original manifest to the transporter.
(iii) Submit 1 copy of the original manifest to the department.
(iv) Indicate on the new manifest, the original manifest number and the date the subject shipment was rejected.
(b) For a total rejected shipment which is to be sent to an alternative designated facility, grant permission to the transporter to alter the manifest to designate the new facility.
(c) For a partial rejected shipment, grant permission to the facility to receive the portion of the original shipment which is not being rejected.
(d) For a partial rejected shipment which is returned to the generator:
(i) Indicate on the original manifest, acknowledgement of receipt, by signing and dating the returned portion of the transporter copy of the orginal manifest.
(ii) Retain a copy of the signed original manifest as a record of the wastes returned.
(iii) Return the transporter copy of the original manifest to the transporter.
(iv) Before shipping the rejected portion of the original shipment to an alternate facility:
(A) Prepare a new manifest and comply with the requirements of this rule.
(B) Indicate on the new manifest, the original manifest number and the date of rejection.
(8) The requirements of this rule and R 299.9305(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 such 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 set forth in R 299.9410 in the event of a discharge of hazardous waste on a public or private right-of-way.

History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9305

Source: 1985 AACS.

R 299.9306 Accumulation time.

Rule 306. (1) Except as provided in subrules (4), (5), and (6) of this rule, a generator may accumulate hazardous waste on-site for 90 days or less without an operating license if he or she complies with all of the following requirements:

(a) The waste is managed in accordance with 1 or more of the following methods:

(i) The waste is placed in containers, the generator complies with the provisions of 40 C.F.R. part 265, subparts I, AA, BB, and CC, the generator complies with the containment requirements of 40 C.F.R. §264.175, and the generator documents the inspections required pursuant to the provisions of 40 C.F.R. §265.174. The generator shall maintain the inspection records on-site for a period of not less than 3 years from the date of the inspection. The period of retention shall be extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the director.

(ii) The waste is placed in tanks, the generator complies with the provisions of 40 C.F.R. part 265, subparts J, AA, BB, and CC, except for the provisions of §§265.197© and 265.200, and the generator complies with the provisions of R 299.9615, except for R 299.9615(1). For the purposes of this rule, the references in R 299.9615 to 40 C.F.R. part 264 shall be replaced by references to 40 C.F.R. part 265.

(iii) The waste is placed on drip pads, the generator complies with the provisions of 40 C.F.R. part 265, subpart W, and the generator maintains the following records at the facility:

(A) A description of the procedures that shall be followed to ensure that all wastes are removed from the drip pad and associated collection system at least once every 90 days.

(B) Documentation of each waste removal, including the quantity of waste that is removed from the drip pad and the sump or collection system and the date and time of removal.

(b) The date upon which each period of accumulation begins and the hazardous waste number of the waste are clearly marked and visible for inspection on each container.

(c) While being accumulated on-site, each container and tank is labeled with the words “Hazardous Waste.”

(d) The generator complies with the requirements for owners or operators in the provisions of 40 C.F.R. part 265, subparts C and D, and 40 C.F.R. §265.16 and 40 C.F.R. §268.7(a)(5). 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 generator has knowledge that a spill has reached surface water or groundwater, then the generator shall immediately notify the department’s pollution emergency alerting system - telephone number 800-292-4706. The notification shall 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 EPA identification number of the 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.

(e) The area where waste is accumulated is protected, as appropriate for the type of waste being stored, from weather, fire, physical damage, and vandals.

(f) Hazardous waste accumulation 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 the provisions of part 55 of the act.
(g) The closure standards of 40 C.F.R. §§265.111 and 265.114.
(2) A generator may, without a license issued pursuant to part 111 of the act and without complying with the provisions of subrule (1) of this rule, accumulate as much as 55 gallons of hazardous waste or 1 quart of an acute hazardous waste that is identified in table 203a, 204a, 204b, or 205a, or a severely toxic hazardous waste that is identified in table 202 in containers at or near any point of generation where wastes initially accumulate and which is under the control of the operator of the process that generates the waste if he or she complies with the provisions of 40 C.F.R. §§265.171, 265.172, and 265.173 and marks his or her containers with the hazardous waste number of the waste and the words "Hazardous Waste." A generator may substitute the chemical name for the hazardous waste number of the waste on his or her containers at or near the point of generation to comply with this subrule. A generator who accumulates hazardous waste, an acute hazardous waste that is listed in table 203a, 204a, 204b, or 205a, or a severely toxic hazardous waste that is listed in table 202 in excess of the amounts listed in this subrule at or near any point of generation shall, with respect to that amount of excess waste, comply, within 3 days, with the requirements of this subrule or other applicable provisions of this part. During the 3-day period, the generator shall continue to comply with the requirements of this rule. The generator shall mark the container that holds the excess accumulation of hazardous waste with the date that the excess amount began accumulating and the hazardous waste number of the waste.
(3) A 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, 6, and 7 of these rules, unless the generator has been granted an extension of the time period or except as provided in subrules (4), (5), and (6) of this rule. An extension of up to 30 days may be granted by the director, or his or her designee, if hazardous wastes must remain on-site for more than 90 days due to unforeseen, temporary, and uncontrollable circumstances.
(4) A generator who generates more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste in a calendar month and who does not generate or accumulate acute hazardous waste or severely toxic hazardous waste that exceeds the volumes specified in the provisions of R 299.9205(1)(b) or (c) may accumulate hazardous waste on-site for 180 days or less without an operating license or without being an existing facility pursuant to the provisions of R 299.9502 if all of the following provisions are complied with:
(a) The quantity of waste accumulated on-site does not exceed 6,000 kilograms.
(b) The generator does either of the following:
(i) Places the waste in containers and complies with the provisions of 40 C.F.R. part 265, subpart I, except for the provisions of §§265.176 and 265.178, and, if the quantity of waste accumulated on-site exceeds 1,000 kilograms, complies with the containment requirements of 40 C.F.R. §264.175.
(ii) Places the waste in tanks and complies with the provisions of 40 C.F.R. §265.201 and, if the quantity of waste accumulated on-site exceeds 1,000 kilograms, complies with the containment requirements of 40 C.F.R. §§265.191, 265.192, 265.193, and 265.196.
(iii) Places the waste on a drip pad and complies with the provisions of 40 C.F.R. part 265, subpart W, and maintains the following records on-site:
(A) A description of the procedures that will be followed to ensure that all of the wastes are removed from the drip pad and associated collection system at least once every 90 days.
(B) Documentation of each waste removal, including the quantity of waste that is removed from the drip pad and the sump or collection system and the date and time of removal.
(c) The generator ensures that the date upon which each period of accumulation begins and the hazardous waste number of the waste are clearly marked and visible for inspection on each container.
(d) The generator on each container ensures that while being accumulated on-site, each container and tank is marked clearly with the words "Hazardous Waste."
(e) The generator complies with the provisions of 40 C.F.R. part 265, subpart C, and the requirements of 40 C.F.R. §268.7(a)(5).
(f) The generator ensures that, at all times, there is at least one employee either on the premises or on call who is responsible for coordinating all emergency response measures specified in subdivision (i) of this subrule. The employee is the emergency coordinator and, if on call, shall be available to respond to an emergency by reaching the facility within a short period of time.
(g) The generator posts, next to the telephone, the name and 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 facility has a direct alarm.

(h) The generator ensures that all employees are thoroughly familiar with proper waste handling and emergency procedures relevant to their responsibilities during normal facility operations and emergencies.

(i) The emergency coordinator or his or her designee responds to any emergencies that arise. An emergency coordinator shall respond as follows:

(i) If there is a fire, call the fire department or attempt to extinguish the fire using a fire extinguisher.

(ii) If there is 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 soils.

(iii) 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 generator has knowledge that a spill has reached surface water or groundwater, then the generator shall immediately notify the department's pollution emergency alerting system - telephone number 800-292-4706. For releases that could threaten human health outside the individual site of generation and spills that have reached surface waters, the generator shall also immediately notify the national response center at its 24-hour, toll-free number - 800-424-8802. The notifications 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 EPA identification number of the 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.

(j) The generator ensures that the area where the waste is accumulated is protected from weather, fire, physical damage, and vandals.

(k) The 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 the provisions of part 55 of the act.

(5) A generator who generates more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste in a calendar month and who must transport his or her waste, or offer his or her 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 pursuant to the provisions of R 299.9502, if he or she complies with the requirements of subrule (4) of this rule.

(6) A generator who generates more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste in a calendar month and who accumulates hazardous waste in quantities of more than 6,000 kilograms or accumulates hazardous waste for more than 180 days, or for more than 270 days if he or she must transport the waste, or offer the waste for transportation, over a distance of 200 miles or more, is an operator of a storage facility and is subject to the requirements of parts 5 and 6 of these rules, unless he or she 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 waste must remain on-site for more 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.

(7) The provisions of 40 C.F.R. §§264.175 and 265.16 and part 265, subparts C, D, I, and J, are adopted by reference in R 299.11003. For purposes of the adoption of 40 C.F.R. §265.56(j), the word "director" shall replace the words "regional administrator."

History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9307 Generator recordkeeping.

Rule 307. (1) A generator shall keep records of any test results, waste analyses, or other determinations made in accordance with 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.
(2) A generator who is requested by the director to submit evaluation results shall provide the required information within 30 days after receipt of the request.
The records shall 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 of the waste and the anticipated fluctuations in its chemical composition.
(c) If tests were conducted in the evaluation, all of the following information shall be included:
(i) The sampling procedure and the reasons for determining that the sample is representative of the waste.
(ii) The results of all tests conducted.
(iii) The accuracy and precision of any tests conducted.
(3) A generator shall keep a copy of each manifest signed in accordance with R 299.9304(4) for 3 years or until he or she receives a signed copy from the designated facility which received the waste. This signed copy shall be retained as a record for not less than 3 years from the date the waste was accepted by the initial transporter.
(4) A generator shall keep a copy of each biennial report, 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) A generator shall keep the documentation required pursuant to the provisions of R 299.9503(1)(i)(ix) for not less than 3 years from the date that the waste was treated.
(6) The periods of retention referred to in this rule are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the director.
(7) A generator who generates more than 100 kilograms but less than
1,000 kilograms of hazardous waste in a calendar month is exempt from the recordkeeping requirements of subrules (2) and (4) of this rule.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1996 MR 9, Eff. Oct. 16, 1996; 1998 MR 9, Eff. Sep. 21, 1998.

R 299.9308 Generator reporting.

Rule 308. (1) A generator of more than 1,000 kilograms who ships any hazardous waste off-site to a treatment, storage, or disposal facility within the United States shall prepare and submit a single copy of a biennial report to the director or the director's designee by March 1 of each even numbered year. The biennial report shall be submitted on a form and in a format specified by the director or the director's designee. The report shall cover generator activities during the previous calendar year and shall include all of the information specified in 40 C.F.R. §262.41(a)(1) to (8).
(2) Any generator of more than 1,000 kilograms who treats, stores, or disposes of hazardous waste on-site shall submit a biennial report covering those wastes in accordance with parts 5 and 6 of these rules. Reporting for exports of hazardous waste is not required on the biennial report form. A separate annual report requirement is set forth in the provisions of 40 C.F.R. §262.56.
(3) A generator of more than 1,000 kilograms of hazardous waste in a calendar month who does not receive a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 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 received a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 45 days of the date the waste was accepted by the initial transporter, 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 shall 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.
(4) 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 his or her designee.
(5) A generator of more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste in a calendar

month who does not receive a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 60 days of the date the waste was accepted by the initial transporter shall submit a legible copy of the manifest, with some indication that the generator has not received confirmation of delivery, to the director or his or her designee and the regional administrator for the region in which the generator is located.

(6) A generator of more than 100 kilograms, but less than 1,000 kilograms, of hazardous waste in a calendar month is subject to the following requirements:

(a) The provisions of 40 C.F.R. §262.40(a), (c), and (d).

(b) Additional reporting requirements pursuant to the provisions of 40 C.F.R. §262.43.

History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1991 MR 10, Eff. Nov. 14, 1991; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9309

Source: 1988 AACS.

R 299.9310

Source: 1994 AACS.

R 299.9311 Land disposal restrictions.

Rule 311. (1) Generators of hazardous waste shall comply with the applicable requirements and restrictions of 40 C.F.R. part 268.

(2) The provisions of 40 C.F.R. part 268 are adopted by reference in R 299.11003. For purposes of this adoption, the word "director" shall replace the words "administrator" and "assistant administrator," except in the provisions of 40 C.F.R. §§268.5, 268.6, 268.40(b), 268.42(b), and 268.44(a) to (g) and (i) to (o).

History: 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9312 Transfrontier shipments of hazardous waste for recovery within the Organization for Economic Cooperation and Development.

Rule 312. (1) Persons who import or export wastes that are considered hazardous under the U.S. national procedures and that are destined for recovery operations in a country listed pursuant to the provisions of 40 C.F.R. §262.58(a)(1) shall comply with the provisions of 40 C.F.R. part 262, subpart H, except §262.80. A waste shall be considered hazardous under the U.S. national procedures if it meets the federal definition of hazardous waste in 40 C.F.R. §261.3 and it is subject to either the manifesting requirements of part 3 of these rules or the universal waste provisions of R 299.9228.

(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 C.F.R. part 262, subpart H.

(3) The provisions of 40 C.F.R. part 262, subpart H, except §262.80, are adopted by reference in R 299.11003.

History: 1998 MR 9, Eff. Sep. 21, 1998.

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 the provisions of R 299.9304(5).

(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 299.9307(4) and R 299.9308(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 U.S. 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 the requirements of parts 5, 6, and 7 of these rules if the wastes from the lab packs are mixed.
(5) A transporter shall not transport hazardous waste without having received an EPA identification number from the regional administrator or the regional administrator's designee.
(6) A transporter of federal hazardous waste subject to the manifesting requirements of part 3 of these rules or subject to the universal waste provisions of R 299.9228 that is being imported from or exported to any of the countries listed in 40 C.F.R. §262.58(a)(1) for the purpose of recovery shall comply with the provisions of R 299.9312.
(7) This part does not apply to transportation during an explosives or munitions emergency response which is conducted in accordance with R 299.9503(2).
History: 1985 MR 12, Eff. Dec. 28, 1985; 1996 MR 9, Eff. Oct. 16, 1996; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9402
Source: 1985 AACS.

R 299.9403
Source: 1996 AACS.

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 C.F.R. S173.24 (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 C.F.R. 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 shall not be routed to the same transfer facility more than once during the course of 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.
(2) A transporter who off-loads hazardous wastes during the course of transportation for the purpose of storage off of the vehicle or conveyance of waste in accordance with the provisions of R 299.9503(1)(k) shall comply with all of the following requirements.
(a) The requirements of R 299.9404(1).
(b) For new activity, prior to the activity beginning, provide notification to the department. Within 30 days of changes to information included in the notification a subsequent notification is required. The notification shall include all of the following information:
(i) The transporter name and EPA 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 C.F.R. parts 130 and 172 to 180, and 40 C.F.R. S263.31 concerning the use and management of containers.
(e) Secondary containment shall 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 C.F.R. SS172.602, 172.702, 172.704, and 177.848 and 29 C.F.R. 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, shall 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 the course of 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 C.F.R. ?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 one vehicle to another vehicle.
(3) Transfer facility operations shall not occur at treatment, storage, and disposal facilities designated to receive the manifested hazardous wastes.
(4) The provisions of 49 C.F.R. parts 107, 130, and 171 to 180, and 29
C.F.R. part 1910, subpart L, and SS1910.120(q) and ??1910.132 to 1910.138 are adopted by reference in R 299.11004.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1989 MR 1, Eff. Feb. 15, 1989; 1996 MR 9, Eff. Oct. 16, 1996; 1998 MR 9, Eff. Sep. 21, 1998.

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 where the DOT hazard class and DOT packing group remain the same shall comply with all of the following requirements:
(a) The provisions of 49 C.F.R. part 173, as applicable.
(b) Conduct commingling, unless performed at the generator location at the time 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 299.9304(6) and enters the term “com-same” in the special handling instructions and additional information section of the manifest, 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 the provisions of R 299.9304(4)(f) and (g) 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 shall 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 shall 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, prior to 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 shall include all of the following information:
(i) The transporter name and EPA 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, describe the commingled load in the special handling instructions and additional information section of the manifest by entering the term "com-dif" and noting the original generator manifest number or numbers.
(e) Ensure that the transporter-initiated manifest and the generator manifests accompany the shipment to the designated facility. The transporter-initiated manifest shall satisfy DOT shipping paper requirements and be segregated from the generator manifests. All generator and transporter manifests shall be signed by an authorized representative of the designated facility upon receipt of the waste.
(f) Ensure that the generator enters the term "com-dif" and the new manifest document number from the manifest, prepared as required in subrule (c) of this subrule, in the special handling instructions and additional information section of the manifests.
(g) Comply with part 3 of these rules relating to the wastes, except for R 299.9307(4) and R 299.9308(1) and (2) and the accumulation time limits specified in R 299.9404(1)(b).
(h) 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.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1996 MR 9, Eff. Oct. 16, 1996; 1998 MR 9, Eff. Sep. 21, 1998.

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.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1989 MR 1, Eff. Feb. 15, 1989; 1996

MR 9, Eff. Oct. 16, 1996; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Eff. Sept. 11, 2000.

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.

History: 1985 MR 12, Eff. Dec. 28, 1985; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9408 Transporter vehicle inspections.

Rule 408. (1) The department may inspect a vehicle to determine compliance with this part of these rules.

History: 1985 MR 12, Eff. Dec. 28, 1985; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9409 Transporter manifest and recordkeeping requirements.

Rule 409. (1) Hazardous waste transporters transporting hazardous wastes manifested to a facility in Michigan, or generated in Michigan, shall transport using a manifest form approved by the department unless the hazardous waste is generated in Michigan, but manifested to a facility in another state and that state requires use of its own manifest. Hazardous waste transporters transporting hazardous waste neither generated in the state, nor manifested to a facility in the state, shall transport using a manifest form equivalent to EPA form 8700-22. A hazardous waste transporter who removes a hazardous waste from the site of a generator or who transports hazardous wastes into the state shall comply with the provisions of 40 C.F.R. part 263, subpart B, regarding the manifest system, compliance with the manifest, and recordkeeping.

(2) If the hazardous waste cannot be delivered in accordance with the manifest and the provisions of 40 C.F.R. §263.21(a), and if the transporter revises the manifest in accordance with the provisions of 40 C.F.R. §263.21(b), the transporter shall legibly print in the comments section of 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 significant manifest discrepancy, as specified in R 299.9608, and a total or partial rejected shipment shall do all of the following:

(a) Indicate on the original manifest acknowledgement of receipt by signing and dating the manifest before leaving the designated facility.

(b) For a total rejected shipment which is returned to the generator, a transporter shall do both of the following:

(i) Obtain acknowledgement of receipt by having the generator sign and date the original manifest.

(ii) Retain the transporter copy of the original manifest.

(c) For a total rejected shipment to be sent to an alternate facility, obtain permission from the generator to alter the original manifest to designate the alternate facility and document as specified in subrule (2) of this rule.

(d) For a partial rejected shipment which is returned to the generator, a transport shall do both of the following:

(i) Obtain acknowledgement of receipt by having the generator sign and date the original manifest.
(ii) Retain the transporter copy of the original manifest.
(e) Before accepting for transportation the rejected portion of the original shipment, confirm that the generator has prepared a new manifest in accordance with part 3 of these rules.
(4) A transporter shall retain all records, logs, or documents required pursuant to this part for a period of 3 years. The retention period shall be extended during the course of any unresolved enforcement action regarding the regulated activity or as otherwise required by the department.
(5) The provisions of 40 C.F.R. part 263, subpart B, are adopted by reference in R 299.11003.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

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 EPA 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 the provisions of 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 the provisions of 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 the provisions of 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.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9411 Rescinded.

History: 1985 MR 12, Eff. Dec. 28, 1985; 1996 MR 9, Eff. Oct. 16, 1996; rescinded 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9412 Rescinded.

History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1998 MR 9, Eff. Sep. 21, 1998; rescinded 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9413 Land disposal restrictions.

Rule 413. (1) Transporters of hazardous waste shall comply with the applicable requirements and restrictions of 40 C.F.R. part 268.

(2) The provisions of 40 C.F.R. part 268 are adopted by reference in R299.11003. For purposes of this adoption, the word "director" shall replace the words “administrator" and "asssistant administrator," except in the provisions of 40 C.F.R. §§268.5, 268.6, 268.40(b), 268.42(b), and 268.44(a) to (g) and (i) to (o).

History: 1994 MR 6, Eff. June 21, 1994; 2000 MR 14, Eff. Sept. 11, 2000.

PART 5. CONSTRUCTION PERMITS AND OPERATING LICENSES

R 299.9501 Construction permits; 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 a construction permit 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 construction permit. 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 R299.9502(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 construction permit. Either or both of the following may be authorized under a construction permit 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 construction permit requirements of part 111 of the act and these rules. 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, which includes 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

construction permit requirements of part 111 of the act and these rules, 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.

History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1989 MR 1, Eff. Feb. 15, 1989; 1991 MR 10, Eff. Nov. 14, 1991; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9502 Operating licenses; 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 for trial burns or operations as provided in R 299.9628, 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 the provisions of 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 the provisions of 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 the provisions of 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 the provisions of 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 the provisions of 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 the provisions of 40 C.F.R. §270.70 and which is in compliance with all of the following provisions:
(A) Has filed a part A application in accordance with the provisions of 40 C.F.R. §270.10(e).
Has amended the part A application, as necessary, in accordance with the provisions of
40 C.F.R. §270.10(g).
(C) Has not had interim status terminated pursuant to the provisions of 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, in accordance with the provisions of R 299.9503(4)(c).
(ii) A facility which is permitted pursuant to the provisions of 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 which is in existence on March 30, 1983, and which is subject to the licensing requirements of part 111 of the act solely due to the 1982 amendments to the 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 the provisions of 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 which 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 the provisions of 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 the provisions of 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 the provisions of 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 the provisions of 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 the provisions of 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 the provisions of 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 in accordance with 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 are authorized to 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 regulations 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 which imposes the requirements of 40 C.F.R. §265.121.

(13) The provisions of 40 C.F.R. §§264.96, 264.117, 265.111, 265.114, 265.121, 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."

History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1991 MR 10, Eff. Nov. 14, 1991; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9503 Construction permits and operating licenses; exemptions.

Rule 503. (1) The following persons do not require a construction permit or operating license pursuant to the provisions of part 111 of the act:

(a) Persons who own or operate a facility that treats, stores, or disposes of hazardous waste in compliance with the provisions of parts 31, 55, and 115 of the act, if the only hazardous wastes the facility treats, stores, or disposes of are conditionally exempt small quantities that are exempted from regulation pursuant to the provisions of R 299.9205.

(b) Generators who accumulate hazardous waste on site for less than the time periods provided in R 299.9306.

(c) Farmers who dispose of waste pesticides from their own use in compliance with the provisions of 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 complied with:

(i) The units are subject to regulation pursuant to the provisions of section 402 or 307(b) of the federal clean water act.

(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 C.F.R. §268.40, or D003 waste, to remove the hazardous characteristic before land disposal, the owner or operator complies with the requirements of 40 C.F.R. §§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 at the time 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 C.F.R. §§264.17(b), 264.171, and 264.172 are complied with.

(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 complied with:

(A) The requirements of 40 C.F.R. part 265, subpart I, except 40 C.F.R. §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 C.F.R. §264.175.

(E) The generator documents the inspections required pursuant to the provisions of 40 C.F.R. §265.174.

(iii) If the treatment occurs in tanks, the requirements of 40 C.F.R. part 265, subpart J, except for the provisions of 40 C.F.R. §§265.197(c) and 265.200.

(iv) The requirements of 40 C.F.R. 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.
(vii) The closure standards of 40 C.F.R. §§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 which 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) 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 the provisions of 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 pursuant to the provisions of 40 C.F.R. 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, construction permit, 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 which, 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 construction permit and operating license requirements of part 111 of the act 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 shall be deemed to have an operating license and shall not be subject to the construction permit requirements of part 111 of the act and these rules, 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 the provisions of 40 C.F.R. parts 124, 144, 145, 146, and 147, subpart X.
(ii) Complies with the conditions of the permit and the requirements of the provisions of 40 C.F.R. §144.14.
(iii) Has a permit for underground injection that is issued pursuant to the provisions of 40 C.F.R. 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) The provisions of R 299.9629, Corrective action.
(B) Where the underground injection well is the only unit at a facility that requires a permit, complies with the provisions of 40 C.F.R. §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) The provisions of 40 C.F.R. §264.11, identification number.
(ii) The provisions of R 299.9608, Use of manifest system.
(iii) The provisions of R 299.9609, Operating record; availability, retention and disposition of records.
(iv) The provisions of R 299.9610, Reporting.
(v) For NPDES permits issued after November 8, 1984, the provisions of R 299.9629, Corrective action.
(4) The director shall exempt persons who conduct the following activities from the construction permit and operating license requirements of part 111 of the act and these rules, but only if the exemption does not constitute a less stringent permitting requirement than is required pursuant to the provisions of 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 the provisions of 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, pursuant to the provisions of part 31, 111, 201, or 213 of the act, 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) The provisions of 40 C.F.R. parts 124, 144, 145, 146, 147, and 265, subparts I and J, except §§265.197(c) and 265.200, and §§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.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1989 MR 1, Eff. Feb. 15, 1989; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9504 Construction permit application; content.

Rule 504. (1) In addition to the information that may be required by subrule (18) of this rule, all applications for a construction permit shall include all of the following items:
(a) A construction permit application fee or deposit as calculated pursuant to R 299.9507.
(b) General information that is required by 40 C.F.R. §270.13.
(c) General information that is required by 40 C.F.R. §270.14(b) and (d).
(d) A hydrogeological report that contains the information required by the provisions of 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 the requirements of 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.
(2) Applicants proposing to store containers of hazardous waste shall submit the information required by the provisions of 40 C.F.R. §270.15(a) to (e) in a construction permit application.
(3) Applicants proposing to store or treat hazardous waste in tanks shall submit the information required by the provisions of 40 C.F.R. §270.16(a) to (k) in a construction permit application.
(4) Applicants proposing to incinerate or thermally treat hazardous waste shall submit either of the following in a construction permit application unless 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) in which case the director may apply the provisions of this subrule, on a case-by-case basis, for the purposes of collecting information in accordance with subrule (18) of this rule and R 299.9521(3)(b):
(a) A trial burn plan containing the information listed in the provisions of 40 C.F.R. §270.62(b)(2) 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 the provisions of 40 C.F.R. §264.345.
(b) In place of a trial burn plan, the information specified in the provisions of 40 C.F.R. §270.19©. 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 R 299.9623 will be met by the incinerator.
(5) Applicants proposing to treat hazardous waste shall submit all of the following information in a construction permit application:
(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) Whether 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) Whether the hazardous waste contains any constituents or contaminants that might interfere with the

intended treatment process or decrease the effectiveness of the treatment and, if so, how the interferences will be controlled.
(e) Whether the hazardous waste contains constituents or contaminants that might cause the release of toxic gases or fumes during the intended treatment and, if so, how they will be controlled.
(f) Whether the hazardous waste contains constituents or contaminants that might 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 a construction permit application:
(a) The information required for surface impoundments in the provisions of 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 a construction permit application:
(a) The information required for waste piles in the provisions of 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 a construction permit application:
(a) The information required for landfills in the provisions of 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 in accordance with the provisions of R 299.9619.
(9) Applicants proposing to dispose of hazardous wastes by land treatment shall submit the information required by the provisions of 40 C.F.R. §270.20 in a construction permit application.
(10) Applicants proposing facilities that treat, store, or dispose of hazardous waste in miscellaneous units shall submit the information required by the provisions of 40 C.F.R. §270.23 in a construction permit application.
(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 a construction permit application:
(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 the provisions of 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 the provisions of R 299.9630 apply shall submit the information required by the provisions of 40 C.F.R. §270.24 in a construction permit application.
(13) Applicants proposing hazardous waste treatment, storage, or disposal facilities that have equipment to which the provisions of R 299.9631 apply shall submit the information required by the provisions of 40 C.F.R. §270.25 in a construction permit application.
(14) Applicants proposing treatment, storage, or disposal facilities that collect, store, or treat hazardous waste on drip pads shall submit the information required by the provisions of 40 C.F.R. §270.26 in a construction permit application.
(15) Applicants proposing to burn hazardous waste in a boiler or industrial furnace shall submit the information required by the provisions of 40 C.F.R. §270.22.
(16) Applicants proposing hazardous waste treatment, storage, or disposal facilities that have tanks, surface impoundments, or containers to which the provisions of R 299.9634 apply shall submit the information required by the provisions of 40 C.F.R. §270.27 in a construction permit application.
(17) Construction permit applications shall be signed and certified in accordance with the provisions of 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 the provisions of 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 permit or license conditions pursuant to the provisions of 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) The provisions of 40 C.F.R. §§264.343, 264.345, 266.102(e), 266.104 to 266.107, 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(b)(2), and 270.66 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."
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1991 MR 10, Eff. Nov. 14, 1991; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9505
Source: 1988 AACS.

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 D423-66 and ASTM standard D424-59, which are adopted by reference in R 299.11001.
(C) Classification pursuant to the unified soil classification system, according to ASTM standard D2487-69,

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 standard D422-63, which is 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 D1586-67, 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 D092-90 and D5299-92, or a plan approved by the director. (vi) All elevations shall be corrected to United States geological survey (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 United States geological survey (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 D5092-90 and D5299-92, 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 D2487-69, 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 permit or 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 and that has been established pursuant to the provisions of part 201 of the act.

(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 D423-66 and ASTM standard D424-5, which are adopted by reference in R 299.11001.
(iii) Classification pursuant to the unified soil classification system according to ASTM standard D2487-69, 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 standard D422-63, which is 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.

History: 1985 MR 12, Eff. Dec. 28, 1985; 1994 MR 6, Eff. June 21, 1994; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9507
Source: 1988 AACS.

R 299.9508 Operating license application contents.

Rule 508. (1) An application for an operating license 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 a construction permit application pursuant to R 299.9504.

(c) For a treatment, storage, or disposal facility which has a construction permit under part 111 of the act, any revisions to the cost estimates for closure and for postclosure maintenance and monitoring submitted with the construction permit application, and a written certification of construction pursuant to section 23(3) 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 section 23(3) 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) A license 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 runon 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 are required to 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 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.

History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1996 MR 9, Eff. Oct. 16, 1996; 2000

MR 14, Eff. Sept. 11, 2000.

R 299.9509 Submittal and processing of construction permit applications.

Rule 509. (1) Any person who requires a construction permit under part 111 of the act shall complete, sign, and submit, to the director, an application for each construction permit required under R 299.9501 as described in this rule. All applicants for construction permits shall provide the information set forth in R 299.9504 to the director on the application form provided by the director.

(2) The director shall not begin processing a construction permit application until it is complete. An application for a construction permit is complete when the director receives an application which includes all the information required by section 18(3) of part 111 of the act and R 299.9504. The completeness of any application for a construction permit shall be judged independently of the status of any other permit or permit application for the same facility. The statutory timetable of section 19(2) of part 111 of the act and the timetable of subrule (4) of this rule shall begin upon receipt of a complete construction permit application.

(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 a construction permit, 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 a construction permit application. 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 construction permit status within 75 days after the complete construction permit application is received.

(6) The director shall recommend approval or shall deny a construction permit application within 120 days after the director receives a complete construction permit application.

(7) If the director intends to deny the construction permit application, the director, or his or her designee, shall commence a public participation process in accordance with R 299.9511.

(8) As directed by the site review board, the director shall either prepare a draft construction permit or deny the construction permit. Upon being directed to do so, 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 construction permit applications 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.

History: 1985 MR 12, Eff. Dec. 28, 1985; 1998 MR 9, Eff. Sep. 21, 1998.

R 299.9510 Submittal and processing of operating license applications.

Rule 510. (1) Any person who requires an operating license 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 shall provide the information set forth 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 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 a license, 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 within 140 days after the director receives a complete application.
(7) Before making a final decision on an operating license, 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 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.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1998 MR 9, Eff. Sep. 21, 1998.

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 a construction permit or operating license under the act or these rules. Applicants shall comply with all of the following requirements:
(a) Prior to submission of an application, the applicant shall hold at least 1 public meeting in order 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 shall comply with the following requirements:
(i) The notice shall 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 or 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 shall 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 shall 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 C.F.R. S124.10 (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 which does not propose any significant changes in facility operations. For the purposes of this subdivision, "significant changes" shall mean any changes that would

qualify as a major modification under the provisions of R 299.9519.
(b) An operating license application which is submitted solely to address postclosure requirements or postclosure and corrective action requirements.
(c) An operating license modification submitted in accordance with the provisions of R 299.9519.
(d) A construction permit or 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 a construction permit or operating license application pursuant to 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 the provisions of 40 C.F.R. S124.10(c)(1)(x) that the application has been submitted to the department and is available for review. The notice shall 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 which is submitted solely to address postclosure requirements or postclosure and corrective action requirements.
(b) A minor operating license modification as specified in the provisions of R 299.9519(5) and (9).
(5) The director shall comply with all of the following requirements upon receipt of a construction permit or operating license application pursuant to 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 shall establish and maintain an information repository in compliance with the following requirements:
(i) The information repository shall include all documents, reports, data, and information deemed necessary by the director to fulfill the purposes for which the repository is established. The director shall have the discretion to limit the contents of the information repository.
(ii) The information repository shall 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 shall 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 the provisions of 40 C.F.R. ?124.10©(1)(x) announcing the following:
(a) The scheduled commencement and completion dates for the trial burn.
The notice shall be mailed within a reasonable time period before the scheduled trial burn. An additional notice is not required if the trial burn is delayed due to circumstances beyond the control of the facility or the department. The notice, which shall be issued before the applicant may commence the trial burn, shall 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 C.F.R. SS270.62(b)(6) and 270.66(d)(3) as applicable. The notice shall 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 prior to 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 permit modification or major license modification, construction permit application, or operating license application, the director or his or her designee shall, when authorized pursuant to the provisions of 40 C.F.R. part 271, do the following:
(a) Prepare either a draft major permit modification or major license modification, construction permit, operating license, or a notice of intent to deny.
(b) For major facilities, prepare a fact sheet pursuant to the provisions of R 299.9512 that briefly sets forth the significant factual, methodological, and policy questions considered in preparing the draft major permit modification or major license modification, construction permit, 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 construction permit, 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 permit modification or 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 the provisions of 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 permit modification or major license modification, construction permit, operating license, or notice of intent to deny, which shall do all of the following:
(i) Specify which provisions of the draft major permit modification or major license modification, construction permit, 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 or, in the case of a construction permit application, whether the site review board is to be reconvened.
(iv) For notices of intent to deny, the reasons for denial.
(8) If the director decides to prepare a draft construction permit or operating license, he or she shall prepare a draft permit or license that contains the information specified in the provisions of R 299.9521.
(9) Draft major permit modifications or major license modifications, permits, and licenses that are prepared by the director pursuant to the provisions of this rule shall be accompanied by a fact sheet pursuant to the

provisions of R 299.9512, publicly noticed pursuant to the provisions of R 299.9513, and made available for public comment. The director shall give notice of the opportunity for a public hearing pursuant to the provisions ofR 299.9514, issue a final decision, and respond to comments pursuant to the provisions of R 299.9515.

History: 1985 MR 12, Eff. Dec. 28, 1985; 1994 MR 6, Eff. June 21, 1994; 1998 MR 9, Eff. Sep. 21, 1998.

R 299.9512 Fact sheets.

Rule 512. A fact sheet on a draft construction permit, 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.

History: 1985 MR 12, Eff. Dec. 28, 1985; 1998 MR 9, Eff. Sep. 21, 1998.

R 299.9513 Public notices.

Rule 513. (1) Public notices of draft construction permits, operating licenses, notices of intent to deny, and public hearings shall be given by the following methods after the director is authorized under the provisions of 40 C.F.R. part 271 to enforce and administer part 111 of the act and these rules in lieu of the federal program:

(a) By mailing a copy of the notice, fact sheet, construction permit or operating license application, and draft construction permit or operating license to all of the following entities:

(i) The applicant.

(ii) Any other agency which 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 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 such 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.

(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 shall contain all of the following information:

(a) Name and address of the office processing the construction permit or 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 permit or 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 construction permit or 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 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 in the public press and in such publications as regional and state-funded newsletters.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1998 MR 9, Eff. Sep. 21, 1998.

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 construction permit, 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 when 1 of the following occurs:
(a) The director finds, on the basis of responses, a significant degree of interest in a draft construction permit, operating license, or notice of intent to deny.
(b) The director determines that a hearing might clarify 1 or more issues involved in the final decision on a construction permit or operating license.
(c) The director receives written notice of opposition to a draft construction permit, operating license, or notice of intent to deny within 45 days of the notice required by 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 construction permit, 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 a draft construction permit, 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.
(7) The provisions of act 306 governing a contested case shall apply to all hearings under this rule.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1998 MR 9, Eff. Sep. 21, 1998.

R 299.9515

Source: 1988 AACS.

R 299.9516
Source: 1996 AACS.

R 299.9517 Construction permit denial.

Rule 517. (1) The director shall deny an application for a construction permit 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 construction permit 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.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1998 MR 9, Eff. Sep. 21, 1998.

R 299.9518 Operating license denial.

Rule 518. (1) The director shall deny an application for an operating license 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 if any of the following occur:
(a) Notwithstanding the receipt of the certification of construction required by section 23(3) 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 construction permit.
(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 act 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.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 1998 MR 9, Eff. Sep. 21, 1998.

R 299.9519 Modification, revocation, and suspension of construction permits and operating licenses during their terms.

Rule 519. (1) An owner or operator shall construct, operate, and maintain a facility in accordance with the provisions of part 111 of the act, these rules, and the construction permit or operating license issued to the facility pursuant to the provisions of part 111 of the act. Any deviation from the conditions of a permit or license or from approved plans shall require prior approval by the director, unless otherwise specified in this rule, and, if necessary, modification of the permit or license.

(2) If the director receives any information during the term of a construction permit or 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 the provisions of act 306 to modify or revoke a construction permit or operating license accordingly, subject to the limitation of subrule (4) of this rule, and may request an updated application pursuant to the provisions of R 299.9520, if necessary. If an operating license is modified, then only the conditions subject to modification are reopened. If a construction permit or 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 pursuant to the provisions of 40 C.F.R. part 271, then the license may be modified in accordance with the requirements of subrule (6) of this rule. Otherwise, a draft license shall be prepared and other procedures specified in R 299.9511 followed.

(3) Any of the following are causes for modification of a construction permit or operating license:

(a) The causes listed in the provisions of 40 C.F.R. §270.41(a), except 40 C.F.R. §270.41(a)(3).

(b) If the standards or regulations on which the permit or license was based have been changed by statute, through promulgation of new or amended standards or regulations, or by judicial decision after the permit or license was issued.

(c) To modify a monitoring program pursuant to the provisions of R 299.9611 or R 299.9612.

(d) Cause exists for modification pursuant to the provisions of subrule (5) of this rule and the director determines that modification is appropriate.

(e) The director has received notification pursuant to the provisions of R 299.9521 of a proposed transfer of ownership or operation.

(4) The director shall not consider suitability of the facility location at the time of construction permit or operating license modification, suspension, or revocation unless new information or standards indicate that a threat to human health or the environment exists which was unknown at the time of license issuance. In addition, the director shall not modify a construction permit beyond what is authorized in the construction permit by the site review board.

(5) The permittee or licensee may put into effect the following minor permit modifications or minor license modifications without following the procedures specified in R 299.9511, if the permittee or licensee complies with the provisions of subrule (6) of this rule:

(a) Any of the following general permit or 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 permit or license to allow earlier permit or 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 or construction permit 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.

(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 shall 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 permit or 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 permit or 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 permit or license, or both.
(h) The replacement of a waste pile unit with another waste pile unit of the same design and capacity and which is in compliance with all the waste pile conditions in the permit or license, or both.

(i) Any of the following land treatment modification:
(i) A decreased rate of waste application.
(ii) A change in any condition specified in the permit or 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 permit or 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 permit or 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 permit or license if the prior written approval of the director is obtained.
(v) Technology changes necessary to meet the standards under 40 C.F.R. part 63, subpart EEE if the owner or operator complies with the notification of intent to comply requirements of 40 C.F.R. §63.1211 before requesting a modification under this rule, and if prior written approval is obtained from the director.
(6) For minor permit modifications or minor license modifications, the permittee or 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 shall 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 shall be in compliance 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 permit or license conditions or supporting documents referenced by the permit or license.
(iii) Identify that the modification is a minor modification.
(iv) Explain why the modification is necessary.
(v) Provide the applicable information required by the provisions of 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 in accordance with the provisions of 40 C.F.R. §124.10(c)(viii) and the appropriate units of state and local government in accordance with the provisions of 40 C.F.R. §124.10(c)(ix). The notification shall 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 shall be made within 90 calendar days after the director approves the minor modification request.
(7) Any person may request that the director review any minor permit modification or minor license modification. The director may reject for cause. The director shall inform the permittee or licensee by certified mail that a minor permit modification or minor license modification has been rejected and explain the reasons for the rejection. If a minor permit modification or minor license modification is rejected, the permittee or licensee shall comply with the existing permit or license conditions.
(8) For minor permit modifications or minor license modifications, the permittee or licensee may elect to follow the procedures specified in R 299.9511 instead of the minor permit modification or minor license modification procedures. The permittee or 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 shall be considered a major permit modification or major license modification and shall be subject to the requirements of R 299.9511 and R 299.9520, unless all of the following conditions are met:

(a) The licensee or permittee demonstrates, to the director's satisfaction, that a modification is in compliance with 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 permit or license current with routine changes to the facility or its operation. These changes do not substantially alter the permit or 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 pursuant to the provisions of RCRA.
(10) For major permit modifications or major license modifications, the permittee or licensee shall submit a major modification request to the director by certified mail or by other means that establish proof of delivery. The request shall be made before the change is put into effect. The request shall be in compliance with all of the following provisions:
(a) Describe the exact change or changes to be made to the permit or license conditions or supporting documents referenced by the permit or license.
(b) Identify that the modification is a major modification.
(c) Explain why the modification is necessary.
(d) Provide the applicable information required by the provisions of R 299.9504 and R 299.9508, as appropriate.
(11) A construction permit or operating license may be revoked for any of the following reasons:
(a) Noncompliance by the permittee or licensee with part 111 of the act, these rules, or any condition of the construction permit or 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 construction permit or operating license issuance process to disclose fully all relevant facts or at any time misrepresents any relevant facts.
(12) Requests for construction permit or operating license modification by a permittee or licensee and updated applications requested by the director pursuant to the provisions of subrule (2) of this rule shall be made on forms provided by the director.
(13) An operating license may be suspended pursuant to the provisions of act 306.
(14) The provisions of 40 C.F.R. §270.41(a), except 40 C.F.R. §270.41(a)(3), are adopted by reference in R 299.11003.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9520 Procedures for modification or revocation of construction permits and 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 a construction permit or 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 a construction permit or operating license under R 299.9519(2), he or she shall prepare a draft construction permit or operating license incorporating the proposed changes. The director may request submission of an updated permit or license application. During any modification proceeding, the permittee or licensee shall comply with all conditions of the existing permit or license until the permit or license is modified.
(3) If the director decides to commence proceedings under act 306 to revoke a construction permit or 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 a construction permit or 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 permitting or licensure under part 111 of the act, except those necessary for closure.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1998 MR 9, Eff. Sep. 21, 1998.

R 299.9521
Source: 1996 AACS.

R 299.9522 Transfer of ownership or operation.

Rule 522. (1) A permit or license may be transferred by the permittee or licensee to a new owner or operator only if the permit or license has been modified pursuant to the provisions ofR 299.9519(3) or a minor modification made pursuant to the provisions of R 299.9519(5) to identify the new licensee or permittee 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, construction permits, 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.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 1998 MR 9, Eff. Sep. 21, 1998.

R 299.9523
Source: 1988 AACS.

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 a construction permit or 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 permitted or licensed under these rules may obtain approval of a remedial action plan for managing hazardous remediation waste at the facility by modifying the existing permit or 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 permit or license. Requests to modify the permit or license shall include the information specified in 40 C.F.R. §270.110. Once incorporated into the permit or license, the remedial action plan is subject to the requirements for permit or 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."
History: 2000 MR 14, Eff. Sept. 11, 2000.

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 act 103 of the public acts of 1937, as amended, being §565.201 et seq. of the Michigan Compiled Laws.

(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 not later than 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.

History: 2000 MR 14, Eff. Sept. 11, 2000.

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 which are authorized to operate pursuant to the provisions of these rules and which have not been issued or reissued an operating license after the effective date of these rules shall be in compliance 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 299.9608 Use of manifest system.

(d) R 299.9609 Operating record; retention and disposition of records.

(e) R 299.9610 Reporting.

(f) R 299.9613(2) to (5) Closure and postclosure.

(g) R 299.9614 Use and management of containers.

(h) R 299.9615 Tank systems.

(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.

(n) R 299.9638 Staging pile requirements.

(3) In addition to the requirements specified in subrule (2) of this rule, the following persons shall comply with the interim status standards of 40 C.F.R. part 265, except subparts D, E, H, I, J, and DD, and 40 C.F.R. §§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 pursuant to the provisions of section 3005(e) of RCRA and the provisions of 40 C.F.R. §270.10, until final administrative disposition of the owner's or operator's permit application pursuant to the provisions of 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 or these rules that render it subject to the licensing requirements of part 111 of the act, who has failed to provide timely notification as required by section 3010(a) of RCRA or failed to file part A of the permit application as required by the provisions of 40 C.F.R. §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 the provisions of 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 the provisions of 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, the provisions of part 6 of the rules do not apply to owners and operators of hazarous waste incinerator facilities identified in subrules (2) and (3) of this rule if the owner or operator demonstrates compliance with the maximum acheivable control technology standards of 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. The maximum acheivable control technology standards of 40 C.F.R. part 63, subpart EEE do not supercede the requirements of R 299.9608 to R 299.9610 and part 7 of these rules, and 40 C.F.R. 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 48 of part 111 of the act.
(9) The provisions of 40 C.F.R. §270.10 and the provisions of 40 C.F.R. 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. Where provisions of 40 C.F.R. parts 264, 265, and 270 are referenced in this part, the word “director” shall replace the term “regional administrator” and the words “operating license” shall replace the word “permit.” For the purposes of this adoption, the word “R 299.9629” shall replace the word “40 C.F.R. §264.101(a),” the words “part 5 of these rules” shall replace the word “40 C.F.R. §270.1©(7),” and the words “R 299.9703(8) and R 299.9710(17)” shall replace the word “40 C.F.R. §265.140(d),” and the words “R 299.9612 and R 299.9629” shall replace the words “40 C.F.R. §§264.91 through 264.100.”
History: 1985 MR 12, Eff. Dec. 28, 1985; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Eff. Sept. 11, 2000.

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.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1998 MR 9, Eff. Sep. 21, 1998.

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 a construction permit or 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 x 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.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1998 MR 9, Eff. Sep. 21, 1998.

R 299.9604 Facility design and operating standards.

Rule 604. (1) 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.
(2) The director shall grant an exemption from the provisions of subrule (1)(a) and (b) of this rule for facilities other than landfills, surface impoundments, waste piles, and land treatment which are physically in existence at the time of initial licensing or permitting under part 111 of the act.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1998 MR 9, Eff. Sep. 21, 1998.

R 299.9605

Source: 1994 AACS.

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."
History: 1985 MR 12, Eff. Dec. 28, 1985; 2000 MR 14, Eff. Sept. 11, 2000.

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 all of the provisions of 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 EPA 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 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).
(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 of 40 C.F.R. §264.56(j) and §264.1(j)(1) to (13), the word "director" shall replace the words "regional administrator" and the word "§264.101" shall replace the word "R 299.9629," respectivley.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1994 MR 6, Eff. June 21, 1994; 2000 MR 14, Eff. Sept. 11, 2000.

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 do all of the following:
(a) Sign and date each copy of the manifest to certify that the hazardous waste covered by the manifest was received.
(b) Note any significant discrepancies in the manifest on each copy of the manifest.
(c) Immediately give the transporter at least 1 copy of the signed manifest.
(d) Within 30 days after the delivery, send a copy of the manifest to the generator.
(e) Retain, at the facility, a copy of each manifest for not less than 3 years from the date of delivery.
(f) Return a 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.
(2) If a facility receives a bulk shipment of hazardous waste from a rail or water transporter which is accompanied by a shipping paper containing all the information required on the manifest, excluding the EPA identification numbers, generator's certification, and signatures, then the owner or operator, or the owner or operator's agent, shall do all of the following:

(a) Sign and date each copy of the manifest or shipping paper to certify that the hazardous waste covered by the manifest or shipping paper was received.
(b) Note any significant discrepancies in the manifest or shipping paper on each copy of the manifest and shipping paper.
(c) Immediately give the rail or water (bulk shipment) transporter at least 1 copy of the manifest or shipping paper.
(d) Within 30 days after the delivery, send a copy of the signed and dated manifest to the generator; or, if the manifest has not been received within 30 days after delivery, send a copy of the shipping paper signed and dated to the generator.
(e) Retain, at the facility, a copy of the manifest and shipping paper, for not less than 3 years from the date of delivery.
(f) Return a 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.
(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) Upon discovering a significant manifest discrepancy, the owner or operator shall attempt to reconcile the discrepancy with the waste generator or transporter through telephone conversations or otherwise. If the discrepancy is not resolved within 15 days after receiving the waste, then the owner or operator shall immediately submit, to the director and regional administrator, a letter describing the discrepancy and attempts to reconcile it and a copy of the manifest or shipping paper at issue. Significant manifest discrepancies are differences between the quantity or type of hazardous waste designated on the manifest or shipping paper and the quantity or type of hazardous waste a facility actually receives, as follows:
(a) For bulk waste, significant discrepancies are variations of more than 10% in weight.
(b) For batch waste, a significant discrepancy is any variation in piece count, such as a discrepancy of 1 drum in a truckload.
(c) Significant discrepancies in type are obvious differences which can be discovered by inspection or waste analysis, such as waste solvent substituted for waste acid or toxic constituents not reported on the manifest or shipping paper.
(5) A significant manifest discrepancy, as specified in this rule, which results in a total or partial rejected shipment requires all of the following:
(a) For a total rejected shipment, the owner or operator shall comply with all of the following requirements:
(i) Indicate on the original manifest, the reason for the rejection and the date of rejection and signature.
(ii) Leave the facility owner or operator certification of receipt portion of the original manifest unsigned and undated.
(iii) Retain the facility copy of the original manifest.
(iv) Obtain acknowledgement of receipt by having the transporter sign and date the original manifest.
(v) Return the remaining copies of the original manifest to the transporter.
(b) For a partial rejected shipment, the owner or operator shall comply with all of the following requirements:
(i) Obtain permission from the generator to receive a portion of the original shipment.
(ii) Indicate on the original manifest, the reason for the rejection, the quantity of waste rejected, and the name of the generator contact authorizing the receipt of a portion of the original shipment.
(iii) Line out the total quantity of waste information on the original manifest and note the new quantity of waste that is being accepted at the facility.
(iv) Obtain acknowledgement of receipt by having the transporter sign and date the original manifest.
(v) Complete the facility owner or operator certification of receipt portion of the orginal manifest.
(vi) Distribute copies of the manifest in accordance with subrules (1) and (2) of this rule.
(6) Within 3 working days of the receipt of a shipment subject to the provisions of R 299.9312, the owner or operator shall provide a copy of the tracking document bearing all required signatures to the notifier, to the Office of Enforcement and Compliance Assurance, Office of Compliance, Enforcement Planning, and Targeting and Data Division (2222A), U.S. Environmental Protection Agency, 401 M Street, SW, Washington DC 20460, and to competent authorities of all other concerned countries. The owner or operator shall maintain the original copy of the tracking document at the facility for not less than 3 years from the

date of signature.
(7) 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.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9609
Source: 1991 AACS.

R 299.9610 Reporting.
Rule 610. (1) The owner or operator shall prepare and submit one copy of a biennial report to the director or the director's designee by March 1 of each even numbered year. The owner or operator shall submit the biennial report on a form and in a format specified by the director or the director's designee. The report shall cover facility activities during the previous calendar year and shall include all of the information specified in the provisions of 40 C.F.R. §264.75(a) to (j).
(2) If a facility accepts for treatment, storage, or disposal any hazardous waste from an off-site source without an accompanying manifest, and if the waste is not excluded from the manifest requirement by R 299.9205, then the owner or operator shall prepare and submit a single copy of a report to the director or his or her designee within 15 days after receiving the waste. The unmanifested waste report shall be submitted on a form approved by the director. The report shall be designated "Unmanifested Waste Report" and shall include all of the following information:
(a) The EPA identification number, name, and address of the facility.
(b) The date the facility received the waste.
(c) The EPA 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 a monthly 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 shall be submitted to the director within 10 days after the end of each month.
(4) All reports shall be signed and certified in accordance with the provisions of 40 C.F.R. §270.11, which is adopted by reference in R 299.11003.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9611
Source: 1996 AACS.

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 C.F.R. part 264, subpart F, excluding the provisions of §§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 the provisions of 40 C.F.R. 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 when such sampling will provide an earlier warning of failure from a hazardous waste management unit. All wells installed to monitor or evaluate groundwater shall be constructed and abandoned in accordance with the well installation and well decommissioning procedures in ASTM standards D5092-90 and D5299-92, 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) Sample for both primary and secondary monitoring parameters, taking not less than 4 replicate measurements on each sample at each well.

(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 pursuant to the provisions of 40 C.F.R. §264.94(a) shall not exceed the background level of that constituent in groundwater, unless a concentration limit which is not less stringent than that allowed pursuant to the provisions of RCRA has been established pursuant to the provisions of part 31 of the act or part 201 of the act.

(e) To determine whether background values or concentration limits have been exceeded pursuant to the provisions of 40 C.F.R. §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 pursuant to the provisions of 40 C.F.R. §264.99, R 299.9629, part 31 of the act, and part 201 of the act to be conducted pursuant to a consent agreement or other legally binding agreement rather than pursuant to an operating license.

(g) Nothing in the provisions of 40 C.F.R. part 264, subpart F, or this rule shall restrict the director from taking action pursuant to the provisions of section 48 or 51 of part 111 of the act.

(h) The owner or operator has been granted a waiver by the director pursuant to the provisions of R 299.9611(3).

(2) The provisions of 40 C.F.R. part 264, subpart F and 40 C.F.R. part 264, appendix IX, excluding the provisions of 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 this adoption, the word "director" shall replace the term "regional administrator" or "administrator," the word "department" shall replace the word "agency," the words "part 1 of these rules" shall replace the word "40 C.F.R. §270.1(c)(7)," and the words "R 299.9612 and R 299.9629" shall replace the words "40 C.F.R. §§264.91 through 264.100."

History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1991 MR 10, Eff. Nov. 14, 1991; 1994 MR 6, Eff. June 21, 1994; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Eff. Sept. 11, 2000.

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 more 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).
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9614
Source: 1985 AACS.

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. S264.193(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. S264.193(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 insure 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, 1989, or which are upgraded pursuant to the

provisions of 40 C.F.R. S264.193 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 29.4101 to R 29.4504 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, with the following exceptions:
(a) The word "director" shall replace the words "regional administrator" and "administrator."
(b) For purposes of 40 C.F.R. SS264.191 and 265.191, the date "January 12, 1989" shall replace the date "January 12, 1988."
(c) For purposes of 40 C.F.R. SS264.193 and 265.193, the date "January 12, 1988" shall replace the date "January 12, 1987."
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 1998 MR 9, Eff. Sep. 21, 1998.

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. SS264.221(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. S264.228 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 a construction permit for a facility alteration.
(4) The provisions of 40 C.F.R. part 264, subpart K, except 40 C.F.R. S264.221(f), are adopted by reference in R 299.11003.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1996 MR 9, Eff. Oct. 16, 1996; 1998 MR 9, Eff. Sep. 21, 1998.

R 299.9617
Source: 1996 AACS.

R 299.9618
Source: 1985 AACS.

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 in accordance with the provisions of R 299.9622, unless the landfill is exempted pursuant to the provisions of 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 1×10^{-2} cm/second or greater, as determined by ASTM standard no. D2434-68, or a layer of geosynthetic drainage materials with a transmissivity of $3 \times 10\text{-}5$ m^2/second or greater covered by a minimum of 30 centimeters of a protective layer of granular material with a permeability of 1×10^{-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 not 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 the provisions of 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 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 D2487-69 (reapproved 1975).
(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 D1557-91, or 95% of the maximum dry density, as determined by the standard proctor test described in the provisions of ASTM standard D698-91, 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.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1989 MR 1, Eff. Feb. 15, 1989; 1991 MR 10, Eff. Nov. 14, 1991; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

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, grain size distribution (sieve and hydrometer) as determined by ASTM standards D421 and D422-63, classification by the unified soil classification system as determined by ASTM standard D2487-69

(reapproved in 1979), and Atterburg limits of the soil as determined by ASTM standard D4318-94 at varying depths every 100 feet, and the permeability of an undisturbed sample every 200 feet as determined by ASTM standard D5084-90.

(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 D2922-78 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 D421 and D422-63, Atterburg limits according to ASTM standard D4318-94, and natural moisture content according to ASTM standard D2216 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 D1557-91, 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 D5084-90, 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 D421, D2216, D2487-69, D1557-91, D422-63, D2434-68, D4318-94, and D5084-90 are adopted by reference in R 299.11001.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

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.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9623 Incinerator applicability and performance standard.

Rule 623. (1) The provisions of R 299.9624, R 299.9625, R 299.9626, and this rule apply to owners and operators of facilities that incinerate hazardous waste, except as R 299.9601 and 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, the provisions of part 6 of the rules do not apply to owners and operators of facilities that incinerate hazardous waste if the owner or operator demonstrates compliance with the maximum achievable control technology standards of 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 maximum achievable control technology standards of 40 C.F.R. part 63, subpart EEE do not supersede the requirements of R 299.9601, R 299.9605 to R 299.9610, R 299.9612, R 299.9613, R 299.9625(5), R 299.9630, R 299.9631, and part 7 of these rules.
(3) An incinerator burning hazardous waste shall be designed, constructed, and maintained so that it will comply with the provisions of part 55 of the act.
(4) Principal organic hazardous constituents (POHCs) in the waste feed shall be treated to the extent required by the performance standards of 40 C.F.R. §264.343. The director shall specify one or more POHCs in the facility's operating license from the list of hazardous constituents in the provisions of 40 C.F.R. part 261, appendix VIII, pursuant to the provisions of 40 C.F.R. §264.342(b)(1). The director may, in addition, specify one or more POHCs from the lists of hazardous waste or hazardous constituents contained in tables 201 to 206 of these rules.
(5) The provisions of 40 C.F.R. part 63, subpart EEE and §§264.342(b)(1), 264.343, and 261, appendix VIII, are adopted by reference in R 299.11003.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1998 MR 9, Eff. Sep. 21, 1998; 2000

MR 14, Eff. Sept. 11, 2000.

R 299.9624
Source: 1988 AACS.

R 299.9625
Source: 1985 AACS.

R 299.9626 Incinerator trial burn; trial operation.

Rule 626. (1) If the owner or operator of a new hazardous waste incinerator conducts a trial burn before application for an operating license, the construction permit for the hazardous waste 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 the standards of 40 C.F.R. §264.344(c)(1) and (2) for the period before and during the trial burn.

(2) The director may require trial operation of an incinerator and the submittal of a trial operations plan containing the information specified in the provisions of 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.

(3) The director shall approve a trial burn plan or trial operations plan if he or she finds all of the following:

(a) The trial burn or trial operation is likely to determine if the incinerator performance standard required by R 299.9623 can be met.

(b) The trial burn or trial operation itself will not present an imminent hazard to human health or the environment.

(c) The trial burn or trial operation will help the director determine future operating license requirements.

(d) The information sought by subdivisions (a) and (c) of this subrule cannot reasonably be developed through other means.

(4) During each approved trial burn or trial operation, the applicant shall make those determinations identified in the provisions of 40 C.F.R. §270.62(b)(7) and any other determinations required by the director.

(5) An applicant for a new operating license shall submit all trial burn data and a certification that the trial burn was carried out in accordance with the approved trial burn plan to the director with the operating license application. For trial operations, the owner or operator shall submit, to the director, all trial operation data and certification that the trial operation was carried out in accordance with the approved trial operations plan within 90 days of completion of the trial operation or later if approved by the director. All submissions required by this rule shall be certified on behalf of the applicant or owner or operator by the signature of a person authorized to sign an application or report under the provisions of 40 C.F.R. §270.11.

(6) The operating license for a hazardous waste 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 this part and the provisions of 40 C.F.R. §264.345. The operating requirements shall be those demonstrated, in a trial burn, trial operation, or by alternative data specified in the provisions of 40 C.F.R. §270.19(c), to be sufficient to ensure compliance with the performance standards of 40 C.F.R. §264.343. Modifications to an operating license made as a result of a trial operation shall proceed as a minor modification according to R 299.9519(5).

(7) The requirements of this rule do not apply if the owner or operator of a facility that incinerates hazardous waste demonstrates compliance with the air emission standards and limitations of 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). Nevertheless, the director may apply the provisions of this rule, on a case-by-case basis, for the purposes of information collection in accordance

with R 299.9504(18) and R 299.9521(3)(b).
(8) The provisions of 40 C.F.R. §§264.343, 264.344(c)(1) and (2), 264.345, 270.11, and 270.62(b)(2) and (7) are adopted by reference in R 299.11003.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Eff. Sept. 11, 2000.

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 the provisions of 40 C.F.R. part 268.
(2) The provisions of 40 C.F.R. part 268 are adopted by reference in R 299.11003. For purposes of this adoption, the word "director" shall replace the words "administrator" and "assistant administrator," except in the provisions of 40 C.F.R. §§268.5, 268.6, 268.40(b), 268.42(b), and 268.44(a) to (g) and (i) to (o).
History: 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9628
Source: 1991 AACS.

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 in accordance with 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 the provisions of 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) Owner or operators of facilities that are not included in the provisions of 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 the provisions of 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 a permit, operating license, postclosure operating license, consent order, or other order, in accordance with 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 the provisions of 40 C.F.R. §264.93.
(ii) The groundwater protection standards which are expressed as concentration limits that are established pursuant to the provisions of R 299.9612(1)(d) or as concentration limits established pursuant to the

provisions of part 31 or part 201 of the act if the limits are not less stringent than allowed pursuant to the provisions of RCRA.

(iii) The environmental protection standards which are necessary for the cleanup and protection of soil, surface water, sediments, and ambient air that are established pursuant to the provisions of part 201 of the act if the limits are not less stringent than allowed pursuant to the provisions of 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 the provisions of 40 C.F.R. §264.95.

(v) The compliance period, which for groundwater is specified pursuant to the provisions of 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, in accordance with 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 the provisions of part 31 or part 201 of the act if the limits are not less stringent than allowed pursuant to the provisions of RCRA.

(iii) The environmental protection standards which are necessary for the cleanup and protection of soil, surface water, sediments, and ambient air that are established pursuant to the provisions of part 201 of the act if the limits are not less stringent than allowed pursuant to the provisions of 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 a permit, 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 permit, operating license, postclosure operating license, consent order, or other order. If a permit, 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 permit, 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 (7) 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 D5092-90 and D5299-92, or a plan approved by the director.

(7) 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 the provisions of subrule (3)(a)(iv) and (b)(iv) of this rule and the downgradient property boundary and beyond the facility boundary in accordance with the provisions of subrule (2) of this rule.
(b) Corrective action measures that are undertaken pursuant to the provisions of 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 the provisions of this rule may be terminated once the environmental protection standards specified by the director in the facility permit, operating license, postclosure operating license, consent order, or other order have been achieved for the required period.
(8) 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 be continued 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.
(9) 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 permit, operating license, postclosure operating license, consent order, or other order, but not less than semiannually.
(10) If an owner or operator determines that the corrective action program does not satisfy the requirements of these rules, he or she shall, in accordance with the permit, operating license, postclosure operating license, consent order, or other order, submit an application for a permit or license modification or request a modification or termination of appropriate sections of any consent order or other order.
(11) The requirements of this rule do not apply to remediation waste management sites unless they are part of a facility 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.
History: 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9630
Source: 1994 AACS.

R 299.9631
Source: 1994 AACS.

R 299.9632
Source: 1994 AACS.

R 299.9633
Source: 1996 AACS.

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."
History: 1998 MR 9, Eff. Sep. 21, 1998.

R 299.9635 Corrective action management unit requirements.

Rule 635. (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 in a license or enforceable document an area at a facility as a corrective action management unit. 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. 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 remediaton 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.

(2) 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.

(3) 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.

(4) The owner or operator shall provide the director with sufficient information to enable the director to designate a corrective action management unit in accordance with the criteria specified in subrule (1) of this rule.

(5) The director shall document the rationale for designating an area as a corrective action management unit and make such documentation available to the public.

(6) 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) The requirements for remediation waste management, including the specification of applicable design,

operation, and closure requirements.
(c) The requirements for groundwater monitoring as necessary to provide for both 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.
(d) 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) For areas in which wastes will remain in place after closure of the corrective action management unit, the requirements for capping these areas. The final cover shall include a flexible membrane liner component with a minimum thickness of 40 mils, depending on the type of material selected.
(iii) The requirements for removal and decontamination of equipment, devices, and structures used in remediaton waste management activities within the corrective action management unit.
(e) 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.
(7) The incorporation of a corrective action management unit into an existing license shall be approved by the director in accordance with R 299.9519 and R 299.9520.
(8) The placement of remediation 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.
(9) The consolidation or placement of remediation 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.
(10) 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.
History: 2000 MR 14, Eff. Sept. 11, 2000.

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."
History: 2000 Mr 14, Eff. Sept. 11, 2000.

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."
HIstory: 2000 MR 14, Eff. Sept. 11, 2000.

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.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1989 MR 1, Eff. Feb. 15, 1989; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9702
Source: 1988 AACS.

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 EPA 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(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) and 264.110(d) are adopted by reference in R 299.11003.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9704
Source: 1988 AACS.

R 299.9705
Source: 1985 AACS.

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 EPA 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 in accordance with 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, in accordance with the closure and postclosure plans and other permit 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 in accordance with R 299.9703(5).
History: 1985 MR 12, Eff. Dec. 28, 1985; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9707
Source: 1985 AACS.

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 license 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 permit is terminated or revoked or a new permit 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).
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Sept. 11, 2000.

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.

History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1989 MR 1, Eff. Feb. 15, 1989; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Eff. Sept. 11, 2000.

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(d).
(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.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1991 MR 10, Eff. Nov. 14, 1991; 1994 MR 6, Eff. June 21, 1994; 2000 MR 14, Eff. Sept. 11, 2000.

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 six 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.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1989 MR 1, Eff. Feb. 15, 1989; 1994 MR 6, Eff. June 21, 1994; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Eff. Sept. 11, 2000.

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.
History: 1994 MR 6, Eff. June 21, 1994; 1998 MR 9, Eff. Sep. 21, 1998.

R 299.9713
Source: 1996 AACS.

PART 8. MANAGEMENT OF SPECIFIC HAZARDOUS WASTES, SPECIFIC TYPES OF HAZARDOUS WASTE MANAGEMENT FACILITIES, AND USED OIL

R 299.9801
Source: 1996 AACS.

R 299.9802
Source: 1997 AACS.

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 299.9303 and manifest requirements of R 299.9304.
(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 299.9312 and 40 C.F.R. §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 299.9309 and R 299.9310.
(3) Persons who store recyclable materials that are regulated under this rule shall keep all of the following records to document that such 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 which are regulated under this rule and which 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 shall become final within 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 shall 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 shall specify the reasons for the director's determination. The question of whether the director's decision was proper shall remain open for consideration during all public comment periods and hearings.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Eff. Sept. 11, 2000.

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 which will be reclaimed through regeneration are not subject to parts 3 to 7 of these rules except for the requirements of R 299.9302. 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. These persons shall also comply with the requirements of part 2 of these rules and 40 C.F.R. part 268.
(4) Persons who store spent lead acid batteries which 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. These persons shall also comply with the requirements of part 2 of these rules and 40 C.F.R. part 268.
(5) Persons who store spent lead acid batteries which 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 and parts 2, 5, 6, and 7 of these rules, except for the manifest requirements of R 299.9608.
(6) Persons who store spent lead acid batteries which 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. These persons shall also comply with the requirements of part 2 of these rules and 40 C.F.R. part 268.
(7) 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.
(8) The provisions of 40 C.F.R. part 268 are adopted by reference in R 299.11003.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9805
Source: 1997 AACS.

R 299.9806
Source: 1997 AACS.

R 299.9807
Source: 1997 AACS.

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 regulation under 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 the provisions of 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 pursuant to the provisions of R 299.9204 and R 299.9206(3)(c) to (f), and hazardous wastes that are subject to the special requirements for conditionally exempt small quantity generators under the provisions of R 299.9205.
(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 C.F.R. §266.100(c)(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 C.F.R. §266.100(f)(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 pursuant to the small quantity provisions of 40 C.F.R. §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 the provisions of 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 the provisions of 40 C.F.R. §266.108 are met.
(4) Except as noted in this subrule, the provisions of part 8 of these rules do not apply if the affected source demonstrates compliance with the maximum achievable control technology standards of 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, 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 maximum achievable control technology standards of 40 C.F.R. part 63, subpart EEE do not supersede the requirements of R 299.9601, R 299.9605 to R 299.9610, R 299.9612, R 299.9613, R 299.9625(5), R 299.9630, R 299.9631, R 299.9808(7) and part 7 of these rules and 40 C.F.R. 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.
(5) A generator and a transporter of hazardous waste that is burned in a boiler or industrial furnace shall comply with the requirements of parts 3 and 4 of these rules, respectively.
(6) 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 shall apply to the storage by the burner and to storage facilities operated by intermediaries, including processors, blenders, distributors, between the generator and the burner.
(7) 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 C.F.R. 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.
(8) 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 the provisions of R 299.9204(2)(d), (h), and (j), 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 shall 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 the provisions of R 299.9204(2)(h), it shall process not less than 50%, by weight, normal, nonhazardous raw materials.
(iii) If the device is a cement kiln, it shall 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 C.F.R. §266.112(b)(1) and (2).
(c) Records sufficient to document compliance with the provisions of this subrule shall be retained until closure of the boiler or industrial furnace unit. At a minimum, the following information shall be included in the records, as applicable:
(i) The levels of constituents in 40 C.F.R. 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 shall be documented in the records:
(A) The levels of constituents in 40 C.F.R. 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.
(9) The provisions of 40 C.F.R. parts 265, subparts A to D, F, G, BB, and CC and 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 are adopted by reference in R 299.11003. For the purposes of 40 C.F.R. part 266, subpart H and §270.66, the word "director" shall replace the words "regional administrator."
History: 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9809 Used oil regulation; applicability.

Rule 809. (1) Used oil and the following materials are subject to regulation as used oil pursuant to the provisions of 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 generated by a conditionally exempt small quantity generator who is regulated pursuant to the provisions of R 299.9205.
(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 which is produced from used oil and which 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 and 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. Such used oil may also be subject to 40 C.F.R. part 761, including 40 C.F.R. §§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 C.F.R. §761.20(e)

(2) The following materials are not subject to regulation as used oil under the provisions of R 299.9810 to R 299.9816, but may be subject to regulation as a hazardous waste under part 111 of the act 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 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 arrangement as specified in 40 C.F.R. §279.24© 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 which 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 are 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 pursuant to the provisions of 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 the provisions of either section 402 or section 307(b) of the federal clean water act, including wastewater at facilities that have eliminated the discharge of wastewater, that is contaminated with de minimis quantities of used oil. For the purposes of 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 pursuant to the provisions of 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 pursuant to the provisions of 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 pursuant to the provisions of subrule (1)(f) of this rule. Before insertion into the petroleum refining facility process, the used oil is regulated pursuant to the provisions of 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 pursuant to the provisions of 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 pursuant to the provisions of 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 C.F.R. §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 pursuant to the provisions of 40 C.F.R. part 761.
(3) The provisions of 40 C.F.R. part 761 are adopted by reference in R 299.11003.
History: 1996 MR 9, Eff. Oct. 16, 1996; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9810
Source: 1996 AACS.

R 299.9811
Source: 1996 AACS.

R 299.9812
Source: 1996 AACS.

R 299.9813
Source: 1996 AACS.

R 299.9814
Source: 1996 AACS.

R 299.9815
Source: 1996 AACS.

R 299.9816
Source: 1996 AACS.

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.
History: 2000 MR 14, Eff. Sept. 11, 2000.

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."
History: 2000 MR 14, Eff. Sept. 11, 2000.

R 299.9819 Military munitions; emergency response standards.

Rule 819. Explosives and munitions emergencies involving military munitions or explosives shall comply with the requirements of R 299.9301(8), R 299.9401(7), R 299.9501(3), and R 299.9503(2).
History: 2000 MR 14, Eff. Sept. 11, 2000.

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."
History: 2000 MR 14, Eff. Sept. 11, 2000.

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 permitting, licensing, procedural, and technical requirements of these rules.
History: 2000 MR 14, Eff. Sept. 11, 2000.

PART 9. HAZARDOUS WASTE SERVICE FUND

R 299.9901
Source: 1988 AACS.

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 3(3) of part 111 of the act.
(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.
(c) The use of the hazardous waste service fund is needed to initiate or complete the corrective action.
(2) If a hazardous waste emergency is declared, it shall be declared ended by the director, or his or her designee, when the threat to the environment has ended.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1998 MR 9, Eff. Sep. 21, 1998.

R 299.9903
Source: 1988 AACS.

R 299.9904
Source: 1988 AACS.

R 299.9905
Source: 1988 AACS.

R 299.9906
Source: 1988 AACS.

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) D93-79 ($35).
(b) D93-80 ($35).
(c) D147-70 ($30).
(d) D168-88 (25).
(e) D421 ($25).
(f) D422-63 ($30)
(g) D698-91 ($30).
(h) D1557-91 ($30).
(i) D1586-67 ($30).
(j) D1946-82 ($30).
(k) D2216. ($25)
(l) D2267-88 ($30).
(m) D2382-83 ($30).
(n) D2434-68 (30).
(o) D2487-69 (reapproved 1979) ($35).
(p) D2879-92 ($30).
(q) D2922-78 ($30).
(r) D3278-78 ($30).
(s) D4318-94 ($35).
(t) D5084-90 ($30).
(u) D5092-90 ($25).
(v) D5299-92 ($35).
(w) E168-88 ($35).
(x) E169-87 ($30).
(y) E260-85 ($35).
(z) E926-88, Test Method C ($30).
(2) The standards listed in subrule (1) of this rule are available from the American Society for Testing and

Materials, Sales Services, 100 Barr Harbor Drive, West Conshoshocken, Pennsylvania 19428-2959, for the costs identified in subrule (1), or from the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at cost. The costs identified in subrule (1) reflect the costs at the time these rules were promulgated. The standards adopted in subrule (1) of this rule are available for inspection at the Lansing office of the department and the Office of the Federal Register, 800 North Capital Street, N.W., Washington, DC 20408.

(3) The publication entitled "APTI Course 415: Control of Gaseous Emissions," EPA Publication EPA-450/2-81-005, 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, for $70, the cost at the time these rules were promulgated, or from the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at cost. The publication adopted in this subrule is available for inspection at the Lansing office of the department.

(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, is adopted by reference in these rules. The publication is available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161, for $34, the cost at the time these rules were promulgated, or from the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at cost. The publication adopted in this subrule is available for inspection 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, is adopted by reference in these rules. The publication is available from the American Petroleum Institute, 1220 L Street, N.W., Washington DC, 20005, for $80, the cost at the time these rules were promulgated, or from the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at cost. The publication adopted in this subrule is available for inspection 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. The publication is available from the National Technical Information Service 5285 Port Royal Road, Springfield VA 22161, for $25.50, the cost at the time these rules were promulgated, or from the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at cost. The publication adopted in this subrule is available for inspection at the Lansing office of the department.

History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.11002 NFPA standard; adoption by reference.

Rule 1002. (1) The NFPA standard no. 704 (1977 or 1981) is adopted by reference in these rules.

(2) The standard listed in subrule (1) of this rule is available from the National Fire Protection Association, Library, 1 Batterymarch Drive, Quincy, Massachusetts 02269-9101, for $14, the cost at the time these rules were promulgated, or from the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at cost. The standard adopted in this rule is available for inspection at the Lansing office of the department.

History: 1985 MR 12, Eff. Dec. 28, 1985; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.11003 Adoption by reference of federal regulations.

Rule 1003. (1) The following federal regulations in 40 C.F.R. are adopted by reference in these rules:

(a) 40 C.F.R. part 60, appendices A and B.

(b) 40 C.F.R.part 63, subparts EEE and LLL.

(c) 40 C.F.R. part 124.

(d) 40 C.F.R. part 144.

(e) 40 C.F.R. part 145.

(f) 40 C.F.R. part 146.

(g) 40 C.F.R. part 147.

(h) 40 C.F.R. §§260.20, 260.21, 260.22, 260.31, 260.32, and 260.33.
(i) 40 C.F.R. §§261.10, 261.11, and 261.38, except 261.38(a) and (b).
(j) 40 C.F.R. part 261, appendix I, appendix II, appendix III, appendix VII, and appendix VIII.
(k) 40 C.F.R. §§262.40(a), (c), and (d), 262.41(a)(1)-(8), and 262.43, and 40 C.F.R. part 262, subparts E and H, except 40 C.F.R. §§262.54, 262.55, and 262.80.
(l) 40 C.F.R. part 263, subpart B.
(m) 40 C.F.R. 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 X, subpart W, subpart AA, subpart BB, subpart CC, subpart EE, except 40 C.F.R. §§264.94(a)(2) and (3), 264.94(b) and (c), 264.100, 264.101, 264.112(d)(1), 264.115, 264.120, 264.221(f), 264.251(f), 264.301(f), and 264.1200.
(n) 40 C.F.R. §§264.1(j)(1) to (13), 264.73, 264.75(a)-(j), 264.94(a)(2), table 1, 264.141, 264.142, 264.144, 264.147(c), (d), and (f), 264.151(g), 264.341, 264.342(b)(1), 264.343, 264.344(c)(1) and (c)(2), 264.345, 264.347, and 264.554, except 264.554(l).
(o) 40 C.F.R. part 264, appendix I and appendix IX.
(p) 40 C.F.R. part 265, except subparts E, H, and DD and 40 C.F.R. §§265.112(d)(1), 265.115, and 265.120.
(q) 40 C.F.R. part 265, appendices I and VI.
(r) 40 C.F.R. part 266, subpart H, except §§266.100(a) and (b), 266.101,266.102(a), and 266.112(a) and (c).
(s) 40 C.F.R. §§266.203 and 266.205(a), (b), (d), and (e).
(t) 40 C.F.R. part 266, appendices I through XIII.
(u) 40 C.F.R. part 268, including appendices II through XI. (v) 40 C.F.R. §§270.10(e), (g), and (k); 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 §270.30(l)(1) and (8); 270.31; 270.32; 270.33; 270.41(a), except §270.41(a)(3); 270.62(b)(2) and (b)(7); 270.64; 270.66; 270.70; 270.71; 270.73; 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.
(w) 40 C.F.R. part 273, subpart B, subpart C, subpart D, and subpart E, except §§273.10, 273.18(b), 273.30, 273.38(b), 273.50, 273.53, and 273.60.
(x) 40 C.F.R. §§279.22, except §279.22(a); 279.23, 279.24, 279.33, 279.41 to 279.43, 279.45, except §279.45(b); 279.46, 279.51, 279.52, 279.54, except §279.54(a); 279.55 to 279.58, 279.61, 279.62, 279.64, except §279.64(a); 279.65, 279.66, 279.73, and 279.75.
(y) 40 C.F.R. part 280.
(z) 40 C.F.R. part 761.
(2) Federal hazardous waste regulations are contained in 40 C.F.R. part 60, 40 C.F.R. part 63, 40 C.F.R. parts 87 to 135, 40 C.F.R. 136 to 149, 40 C.F.R. parts 260 to 265, 40 C.F.R. parts 266 to 299, and 40 C.F.R. part 700 to 789, July 1, 1999 editions. These editions are available from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, for $59, $94, $53, $40, $32, $33, and $42, respectively, the costs at the time these rules were promulgated, or from the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at cost. The provisions of 40 C.F.R. part 60 were amended in the Federal Register on September 30, 1999. The provisions of 40 C.F.R. part 63 were amended in the Federal Register on September 30, 1999 and November 19, 1999. The provisions of 40 C.F.R. part 261 were amended in the Federal Register on September 30, 1999, November 19, 1999, and March 17, 2000. The provisions of 40 C.F.R. part 265 were amended in the Federal Register on July 6, 1999. The provisions of 40 C.F.R. part 266 were amended in the Federal Register on September 30, 1999 and November 19, 1999. The provisions of 40 C.F.R. part 268 were amended in the Federal Register on July 6, 1999, October 20, 1999, and March 17, 2000. The provisions of 40 C.F.R. part 270 were amended in the Federal Register on September 30, 1999. The provisions of 40 C.F.R. part 273 were amended in the Federal Register on July 6, 1999. Reprints of these federal registers are available from Solid Waste Information, United States EPA, 26 West St. Clair Street, Cincinnati, Ohio 45268, at no cost, or from the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at cost. The sections adopted by reference in this rule are available for inspection at the Lansing office of the department.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1988 MR 4, Eff. Apr. 20, 1988; 1989 MR 1, Eff. Feb. 15, 1989; 1991 MR 10, Eff. Nov. 14, 1991; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 1998 MR 9, Eff. Sep. 21, 1998; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.11004 Federal regulations in 29 C.F.R., 33 C.F.R., and 49 C.F.R.; adoption by reference.

Rule 1004. (1) The federal regulations in 29 C.F.R. §§1910.120(q) and 1910.132 to 1910.138 and part 1910, subpart L, are adopted by reference in these rules.

(2) The federal regulations in 33 C.F.R. §153.203 are adopted by reference in these rules.

(3) The following federal regulations in 49 C.F.R. are adopted by reference in these rules:

(a) 49 C.F.R. part 107.

(b) 49 C.F.R. part 130.

(c) 49 C.F.R. part 171.

(d) 49 C.F.R. part 172.

(e) 49 C.F.R. part 173.

(f) 49 C.F.R. part 174.

(g) 49 C.F.R. part 175.

(h) 49 C.F.R. part 176.

(i) 49 C.F.R. part 177.

(j) 49 C.F.R. part 178.

(k) 49 C.F.R. part 179.

(l) 49 C.F.R. part 180.

(m) 49 C.F.R. §390.21.

(4) Federal labor regulations are contained in 29 C.F.R. parts 1900 to 1910, 1999 edition. Federal navigation regulations are contained in 33 C.F.R. parts 125 to 199, 1999 edition. Federal transportation regulations are contained in 49 C.F.R. parts 100 to 185 and 49 C.F.R. parts 200 to 399, 1999 editions. The 1999 editions are available from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, for $46, $41, $53, and $53, respectively, the costs at the time these rules were promulgated, or from the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at cost. The sections adopted in this rule are available for inspection at the Lansing office of the department.

History: 1985 MR 12, Eff. Dec. 28, 1985; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

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) and IIA (August 1993), IIB (January 1995), III (December 1996), and IIIA (April 1998) are adopted by reference in these rules.

(2) The documents listed in subrule (1) of this rule are available from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, (202)512-1800, Document Number 955-001-00000-1, for $367, the total cost at the time these rules were promulgated. The documents listed in subrule (1) of this rule are available from the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia, 22161, (703)605-6000 or (800)553-6847, for $211, $123, $101, $21.50, $150, and $25.50, respectively, the costs at the time these rules were promulgated. The documents listed in subrule (1) of this rule are available from the Michigan Department of Environmental Quality, Waste Management Division, P.O. Box 30241, Lansing, Michigan 48909, at cost. Update IIIA is available through the United States EPA'S Methods Information Communication Exchange Service at (703)676-4690 and the United States EPA, Office of Solid Waste (5307W), OSW Methods Team, 401 M Street, SW, Washington, DC 20460 at no cost. The documents adopted in this rule are available for inspection 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.

History: 1985 MR 12, Eff. Dec. 28, 1985; 1994 MR 6, Eff. June 21, 1994; 1996 MR 9, Eff. Oct. 16, 1996; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.11006

Source: 1996 AACS.

R 299.11007
Source: 1996 AACS.

R 299.11008
Source: 1996 AACS.

PART 11. CERTIFIED LOCAL HEALTH DEPARTMENTS

R 299.11101 Certification eligibility.

Rule 1101. The director shall consider an application for certification from any local health department which shall agree to perform, at a minimum, those services specified in R 299.11104(1) and (2) and which demonstrates, to the director's satisfaction, that the services to be provided by the local health department under part 111 of the act warrant the assignment of at least a full-time equivalent position of professional staff.

History: 1985 MR 12, Eff. Dec. 28, 1985; 1998 MR 9, Eff. Sep. 21, 1998.

R 299.11102
Source: 1985 AACS.

R 299.11103 Certification rescinding procedures.

Rule 1103. Certification may be rescinded by the director as provided in section 45(1) of part 111 of the act.

History: 1985 MR 12, Eff. Dec. 28, 1985; 2000 MR 14, Eff. Sept. 11, 2000.

R 299.11104 Performance requirements.

Rule 1104. (1) A health department certified under the provisions of these rules shall protect the public health and the natural resources of the state by assisting the director in the administration of part 111 of the act. The certified health department shall provide professional environmental health services to evaluate compliance with the technical and administrative provisions of part 111 of the act and these rules.

(2) A certified health department shall carry out 1 or more of the following hazardous waste investigative and surveillance activities:

(a) Conduct inspections of treatment, storage, or disposal facilities and file written reports as required by section 44 of part 111 of the act. \

(b) When investigating waste management practices, review and inspect manifests and records carried by hazardous waste transporters or maintained by generators and treatment, storage, or disposal facility owner or operators.

(c) Provide surveillance of generator waste accumulation sites.

(d) Investigate complaints of violations of part 111 of the act and these rules and report findings to the director.

(e) Assist in the review of hazardous waste transporter business license applications and participate in inspections of stationary facilities and methods of operation under R 299.9407.

(f) Provide information to the director and the Michigan department of public health to assist in evaluating the existence of an imminent or substantial hazard to the public health or natural resources and in issuing orders for immediate corrective action.

(g) Perform surveillance and investigative activities to evaluate compliance with part 111 of the act and these rules and participate in enforcement actions by the director.

(3) A certified health department may be authorized to provide any of the following additional services:

(a) Encourage methods of hazardous waste management which are environmentally sound, which maximize the use of valuable resources, and which encourage resource conservation, including source separation and waste reduction.

(b) Provide input on the development and implementation of the hazardous waste management plan through the county representative on the state hazardous waste management planning committee.

(c) Assist the director in the development of rules to implement the hazardous waste management plan.
(d) Provide assistance to the site review board in carrying out its responsibilities as provided in section 17(6) of part 111 of the act.
(e) Upon receipt of a construction permit application, assist the director, as needed, to obtain information for the proper notification of all parties required by section 19(1)(a) of part 111 of the act.
(f) Provide a location where the complete construction permit application may be reviewed by the public.
(g) Participate in public hearings relative to an application for a construction permit.
(h) Review applications for construction permits and prepare a written report and recommendation to the director.
(i) Monitor construction of disposal facilities to ascertain conformity to the construction permit.
(j) Assist in review of applications for operating licenses, review engineering certifications, and make recommendations, in writing, to the director for or against the granting of operating licenses.
(k) Oversee closure and postclosure monitoring and surveillance activities.
(1) Conduct investigations to determine if hazardous wastes are managed according to the act and these rules.
(m) Provide services designated by the director at treatment, storage, or disposal facilities.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1998 MR 9, Eff. Sep. 21, 1998.

R 299.11105
Source: 1985 AACS.

R 299.11106 Funding priority.

Rule 1106. (1) Health departments applying for funding during the first year after promulgation of these rules shall be ranked, for purposes of funding priority, in order according to the following formula:
R = (100F) + G + T+(P - 10,000)
F = Number of treatment, storage, or disposal facilities located within the jurisdiction of the local health department which have received, or are required to obtain, construction permits or operating licenses under part 111 of the act.
G = Number of generators of hazardous waste whose amount exceeds 100 kilograms per month.
T = Number of transporters located within the jurisdiction of the local health department which have received transporter business licenses under part 111 of the act.
P = Population of the certified health department jurisdiction.
(2) The priority listing for funding in subsequent years shall be prepared in the same manner as for the first year. Changes in local health department jurisdictions applying, the number of treatment, storage, and disposal facilities located within the jurisdictions, and populations might result in changes to the priority list. However, continuation of funding to previously certified health departments which have performed satisfactorily shall take precedence over the priority list if conflicts arise.
History: 1985 MR 12, Eff. Dec. 28, 1985; 1998 MR 9, Eff. Sep. 21, 1998.

R 299.11107
Source: 1985 AACS.

SOLID WASTE ALTERNATIVES PROGRAM

PART 1. GENERAL PROVISIONS

R 299.12101
Source: 1989 AACS.

PART 2. ELIGIBILITY

R 299.12201
Source: 1989 AACS.

R 299.12202
Source: 1989 AACS.

R 299.12203
Source: 1989 AACS.

R 299.12204
Source: 1989 AACS.

R 299.12205
Source: 1989 AACS.

R 299.12206
Source: 1989 AACS.

R 299.12207
Source: 1989 AACS.

R 299.12208
Source: 1989 AACS.

R 299.12209
Source: 1989 AACS.

R 299.12210
Source: 1989 AACS.

R 299.12211
Source: 1989 AACS.

R 299.12212
Source: 1989 AACS.

R 299.12213
Source: 1989 AACS.

R 299.12214
Source: 1989 AACS.

R 299.12215
Source: 1989 AACS.

PART 3. APPLICATIONS

R 299.12301
Source: 1989 AACS.

R 299.12302
Source: 1989 AACS.

PART 4. WASTE REDUCTION AND RECOVERY PROJECT CATEGORIES

R 299.12401
Source: 1989 AACS.

R 299.12402
Source: 1989 AACS.

R 299.12403

Source: 1989 AACS.

R 299.12404
Source: 1989 AACS.

R 299.12405
Source: 1989 AACS.

R 299.12406
Source: 1989 AACS.

R 299.12407
Source: 1989 AACS.

R 299.12408
Source: 1989 AACS.

R 299.12409
Source: 1989 AACS.

PART 5. CLOSURE AND TRANSFER STATIONS

R 299.12501
Source: 1989 AACS.

R 299.12502
Source: 1989 AACS.

R 299.12503
Source: 1989 AACS.

R 299.12504
Source: 1989 AACS.

R 299.12505
Source: 1989 AACS.

R 299.12506
Source: 1989 AACS.

R 299.12507
Source: 1989 AACS.

R 299.12508
Source: 1989 AACS.

R 299.12509
Source: 1989 AACS.

R 299.12510
Source: 1989 AACS.

R 299.12511
Source: 1989 AACS.

R 299.12512
Source: 1989 AACS.

R 299.12513
Source: 1989 AACS.

R 299.12514
Source: 1989 AACS.

R 299.12515
Source: 1989 AACS.

PART 6. SOLID WASTE PROGRAM ADMINISTRATION

R 299.12601
Source: 1989 AACS.

R 299.12602
Source: 1989 AACS.

R 299.12603
Source: 1989 AACS.

R 299.12604
Source: 1989 AACS.

R 299.12605
Source: 1989 AACS.

R 299.12606
Source: 1989 AACS.

R 299.12607
Source: 1989 AACS.

R 299.12608
Source: 1989 AACS.

R 299.12609
Source: 1989 AACS.

R 299.12610
Source: 1989 AACS.

R 299.12611
Source: 1989 AACS.

R 299.12612
Source: 1989 AACS.

R 299.12613
Source: 1989 AACS.

R 299.12614
Source: 1989 AACS.

R 299.12615
Source: 1989 AACS.

R 299.12616
Source: 1989 AACS.

R 299.12617
Source: 1989 AACS.

R 299.12618
Source: 1989 AACS.

R 299.12619
Source: 1989 AACS.

R 299.12620
Source: 1989 AACS.

R 299.12621
Source: 1989 AACS.

PART 7. STATE SOLID WASTE PROJECTS

R 299.12701
Source: 1989 AACS.

DEPARTMENT OF ENVIRONMENTAL QUALITY

ENVIRONMENTAL RESPONSE DIVISION

ENVIRONMENTAL CONTAMINATION RESPONSE ACTIVITY

PART 10. COMPLIANCE WITH SECTION 20107a OF ACT

R 299.51001 Definitions.

Rule 1001. As used in this part:

(a) "Act" means Act No. 451 of the Public Acts of 1994, as amended, being S324.101 et seq. of the Michigan Compiled Laws.

(b) "All appropriate inquiry" means the inquiry necessary to determine what response activity is needed to comply with section 20107a of the act.

(c) "Belowground" means buried under soil or debris. "Belowground," when used to describe containers, does not include containers that are in basements or vaults or are otherwise under the ground surface in structures that allow visual inspection of the container.

(d) "Container" means a barrel, drum, tank, vessel, surface impoundment, pipeline, or other receptacle, regardless of size, that contains a hazardous substances.

(e) "Mitigate" means to reduce exposure to the degree that the exposure is no longer unacceptable, consistent with R 299.51013. With respect to fire and explosion hazards, "mitigate" means to eliminate the threat of fire and explosion.

(f) "Property", means the real property owned or operated by a person who is subject to section 20107a of the act.

History: 1999 MR 2, Eff. Mar. 11, 1999.

R 299.51003 Applicability; compliance with section 20107a of act generally; documentation of compliance.

Rule 1003. (1) The requirements of this part apply to a person who is subject to section 20107a of the act and to conditions about which he or she has knowledge, based upon all appropriate inquiry.

(2) A person who is subject to section 20107a of the act shall, except as provided in R 299.51019, undertake response activity as necessary to comply with section 20107a of the act on the property that he or she owns or operates and provide notice as described in these R 299.51017 with respect to contamination that he or she has knowledge is emanating from, or has emanated from, and extends to or beyond, the boundary of the property that he or she owns or operates.

(3) The requirements of section 20107a of the act to apply all of the following:

(a) Discarded or abandoned containers that contain a quantity of hazardous substance which is or may become injurious to the public health, safety, or welfare or to the environment.

(b) A threat of release of a quantity of hazardous substance that is or may become injurious to the public health, safety, or welfare or to the environment.

(c) Hazardous substances that have otherwise been released at the property. The requirements do not apply to hazardous substances being used in operations at the property or being properly stored at the property.
(4) A person who is subject to section 20107a of the act shall maintain documentation of compliance with section 20107a of the act and shall provide the documentation to the department upon request. All of the following provisions apply to the documentation of compliance:
(a) With regard to section 20107a(1)(b) of the act, required documentation shall consist all of the following:
(i) Identification of exposure pathways that are complete, or are likely to become complete, in light of the intended use of the property and the features of the property, including potential exposure barriers such as structures or pavement.
(ii) Information about the concentrations of hazardous substances to which persons may be exposed in each pathway identified through the analysis described in paragraph (i) of this subdivision, unless a reasonable evaluation of the conditions at the property supports the conclusion that quantification of hazardous substance exposures is not necessary to determine that there is no unacceptable exposure under R 299.51013.
(iii) A description of the response activity or other measures, such as work schedule adjustments or personal protective equipment, if any, that are or may be required to mitigate any unacceptable exposures in compliance with R 299.51013.
(iv) Records about the implementation of any response activity or other measures not evident through inspection.
(b) If compliance with section 20107a of the act is accomplished by measures that are evident as the result of inspection, such as fences, pavement, or the presence of buildings, ongoing documentation, beyond the initial analysis of the measures, is not required.
(c) If a department-approved remedial action plan has been implemented at a facility, then additional documentation of compliance with section 20107a(1)(b) of the act is not required if conditions that determine exposures to hazardous substances at the property remain unchanged.
(5) The documentation required by subrule (4) of this rule shall, for a person who became the owner or operator of a facility before the effective date of this rule, be available to the department upon request not later than 12 months after the effective date of this rule. For a person who became the owner or operator of a facility on or after the effective date of this rule, the required documentation shall be available to the department upon request not later than 8 months after the effective date of this rule. The time frames specified in this subrule do not alter the continuing obligation of a person who is subject to section 20107a of the act to be in compliance with the law and these rules.
History: 1999 MR 2, Eff. Mar. 11, 1999.

R. 299.51005 Compliance with other laws and regulations.

Rule 1005. (1) The obligation of a property owner or operator to comply with all laws and regulations applicable to hazardous substances is unaffected by part 201 of the act and these rules, except as provided in sections 20129a(5) and 20142 of the act.
(2) Other laws and regulations that may be relevant to the management of hazardous substances include, but are not limited to, the following:
(a) Part 55 of the act (air pollution control).
(b) Part 111 of the act (hazardous waste management).
(c) Part 115 of the act (solid waste management).
(d) Part 211 of the act (underground storage tank regulation).
(e) Part 213 of the act (leaking underground storage tanks).
(f) Part 615 of the act (supervisor of wells).
(g) Act No. 207 of the Public Acts of 1941, as amended, being S29.1 et seq. of the Michigan Compiled Laws, and known as the fire protection code.
(h) The toxic substances control act, 15 U.S.C. S2601 et seq.
(i) The resource conservation and recovery act, 42 U.S.C. S6901 et seq.
(j) Rules and regulations promulgated under the laws listed in subdivisions
(a) to (i) of this subrule.
History: 1999 MR 2, Eff. Mar. 11, 1999.

R 299.51007 Compliance with section 20107a(1)(a) of act.

Rule 1007. (1) The result of an activity undertaken by the owner or operator of a property is not exacerbation through an increase in response activity costs if the activity satisfies both of the following conditions:

(a) Any resulting increase in response activity cost is small in relation to the total cost of response activity that would be required to satisfy the relevant land use-based cleanup criteria and other requirements of sections 20120a and 20120b of the act or section 21301a of the act, as appropriate to the facility, at the time the activities are undertaken. Examples of such response activity include, but are not limited to, the placement of pavement or landscaping cover that constitutes a barrier to direct contact.

(b) The activity undertaken provides environmental or public health benefits.

(2) There may also be other circumstances that an owner or operator can demonstrate are not a change in facility conditions which increase response activity costs.

(3) Notwithstanding subrules (1) and (2) of this rule, if a determination is made under section 20107a(2) of the act that an action constitutes exacerbation, then the determination of the amount owed as increased response activity costs shall be reduced based on consideration of the public health or environmental benefits, or both, provided by the action.

(4) This rule shall not modify the burden of proof set forth in section 20107a(2) of the act.

History: 1999 MR 2, Eff. Mar. 11, 1999.

R 299.51009 Compliance with section 20107a(1)(b) of act; discarded or abandoned aboveground containers.

Rule 1009. (1) To be in compliance with section 20107a(1)(b) of the act with respect to a container at the property that is on or above the ground surface, and with respect to the portion of a container that is partially on or above the ground surface, an owner or operator shall manage the container in a manner that can be reasonably expected to prevent a release from the container in a quantity which is or may become injurious to the public health, safety, or welfare or to the environment. However, if the container is too large to allow it to be moved practically to inspect the integrity of the entire container, then the owner or operator shall prevent a release in a quantity that is or may become injurious to the public health, safety, or welfare or to the environment that would be evident from inspection of the visible portions of the container and the surrounding surface.

(2) If containers are located inside a structure that, upon reasonable inquiry, is determined to be deteriorating, then the owner or operator shall take reasonable and prudent measures to assure that deterioration of the structure does not lead to damage to the containers which may result in a release.

(3) If a release occurs from a container as a result of a failure to comply with subrule (1) or (2) of this rule, then the owner or operator shall stop the release and take all other steps necessary to comply with requirements applicable to a new release.

(4) The requirements of this rule shall be in addition to the requirements of other applicable laws and regulations to which the owner or operator is subject, except as provided in sections 20129a(5) and 20142 of the act.

History: 1999 MR 2, Eff. Mar. 11, 1999.

R 299.51011 Compliance with section 20107a(1)(b) of act; belowground containers.

Rule 1011. (1) To be in compliance with section 20107a(1)(b) of the act with respect to belowground containers at the property, an owner or operator shall prevent or eliminate any unacceptable exposure to hazardous substances in, or released from, a belowground container and shall eliminate any fire and explosion hazard resulting from hazardous substances in, or released from, a belowground container.

(2) Compliance with section 20107a of the act does not require that belowground containers be emptied, unless a container must be emptied to satisfy a performance standard under this rule. Other requirements to which the owner or operator is subject may require belowground containers, such as underground storage tanks, to be emptied. R 299.51005 identifies some other potentially applicable laws and rules.

History: 1999 MR 2, Eff. Mar. 11, 1999.

R 299.51013 Unacceptable exposure; mitigation.

Rule 1013. (1) Except as provided in subrule (6) of this rule, the requirements of section 20107a(1)(b) of the act and these rules to mitigate unacceptable exposure shall be satisfied by eliminating the exposure or reducing the exposure to the degree that it is no longer unacceptable as that term is described in subrules (3), (4), and (5) of this rule.

(2) In evaluating compliance with section 20107a(1)(b) of the act, exposure pathways shall be considered pertinent only if they are or may be complete in light of the intended use of the property and the features of the property, including potential exposure barriers such as structures or pavement.

(3) Except as provided in subrules (4) and (5) of this rule, exposure to hazardous substances is an unacceptable exposure for the purposes of section 20107a(1)(b) of the act if concentrations of hazardous substances to which persons may be exposed exceed the relevant criteria developed by the department under to section 20120a(1)(a) to (e) of the act.

(4) A site-specific evaluation may be conducted to document that conditions at a property do not result in an unacceptable exposure. In these cases, comparison of exposure concentrations to criteria developed by the department under section 20120a(1)(a) to (e) of the act is not required. Except as provided in subrule (5) of this rule, an evaluation relied upon under this subrule shall be consistent with the risk management objectives set forth in section 20120a of the act and risk assessment methods acceptable to the department.

(5) As described in this subrule, a site-specific evaluation to document that conditions at the property do not result in an unacceptable exposure through inhalation of indoor air may be based on a demonstration of compliance with Act No. 174 of the Public Acts of 1974, as amended, being S408.1001 et seq. of the Michigan Compiled Laws, and the rules promulgated under Act No. 174 of the Public Acts of 1974. This subrule shall apply only when all of following conditions are satisfied:

(a) The risk being evaluated results from inhalation by workers of hazardous substances in indoor air within an active commercial or industrial workplace that is regulated by Act No. 174 of the Public Acts of 1974, as amended, being S408.1001 et seq. of the Michigan Compiled Laws, and known as the occupational safety and health act, and the rules promulgated under Act No. 174 of the Public Acts of 1974.

(b) The exposure to hazardous substances from environmental contamination is a portion of the exposure to which workers are otherwise subject from process-related sources of the same hazardous substance.

(c) The risk to the non-worker population, if any, from inhalation of indoor air at the property has been evaluated according to the requirements of subrule (3) of this rule or a site-specific evaluation has been conducted for the non-worker population according to risk assessment methods acceptable to the department, and the risk is not unacceptable on the basis of the risk management objectives set forth in section 20120a of the act.

(6) If the hazardous substances present at the property may present an unacceptable exposure to utility workers or other persons conducting activities at the property in an easement, under the terms of a utility franchise, or pursuant to severed subsurface mineral rights or severed subsurface formations, then the owner or operator may satisfy his or her obligation to mitigate unacceptable exposures to the utility workers or other persons by providing written notice, by a method that provides proof of delivery, of the general nature and extent of contamination and potential unacceptable exposures to all of the following:

(a) Easement holders of record.

(b) Utility franchise holders of record.

(c) The owner or operator of all public utilities that serve the property.

(d) Owners or lessees of severed subsurface mineral rights or subsurface formations. If the person described in subdivisions (a) to (d) of this subrule is not an individual, then the notice shall be provided to the chief executive officer of the organization.

(7) Upon request of a person to whom information is provided under subrule (6) of this rule, the owner or operator of property who provided notice under subrule (6) of this subrule shall provide all available information about conditions at the property that he or she owns or operates which are relevant to the activities of the person who received notice under subrule (6) of this rule. The owner or operator of a property who is subject to section 20107a of the act shall also provide, to other persons conducting activities at the property with the knowledge or permission of the owner or operator, information about conditions at the property that are relevant to the person's activities at the property.

History: 1999 MR 2, Eff. Mar. 11, 1999.

R 299.51015 Notice to department of discarded or abandoned containers.

Rule 1015. (1) Except as provided in subrules (2), (3), and (4) of this rule and in R 299.51021, an owner or operator who is subject to section 20107a of the act shall notify the department, in writing, of the presence of discarded or abandoned containers at the property that contain a quantity of hazardous substance which is or may become injurious to the public health, safety, or welfare or of the environment. The owner or operator shall provide the required notice provided within 6 months of the effective date of this rule, within 45 days of becoming the owner or operator, or within 45 days of acquiring knowledge of the discarded or abandoned containers, whichever is later. The notice required by this rule shall include all information known to the owner or operator about the number, type, size, and contents of the discarded or abandoned containers.

(2) The notification requirement of subrule (1) of this rule does not apply to an owner or operator who disposes of discarded or abandoned containers and their contents according to all applicable laws and regulations within 45 days of the effective date of this rule, within 45 days of becoming the owner or operator, or within 45 days of acquiring knowledge of the discarded or abandoned containers, whichever is later. If the response activity is not complete within 45 days, then an owner or operator shall give notice that would otherwise have been required by subrule (1) of this rule to the department within 14 days after the end of the 45-day period provided in this subrule to complete the response activity.

(3) In place of the notice required by subrule (1) of this rule, a person who owns or operates an underground storage tank that is subject to notice or registration requirements, or both, under other state or federal requirements shall comply with the notice or registration requirements.

(4) If an owner or operator discloses a baseline environmental assessment under section 20126(1)(c)(ii) of the act, and the baseline environmental assessment includes identification of discarded or abandoned containers at the property on a form provided by the department for that purpose, then separate notice under subrule (1) of this rule is not required. Identification of an underground storage tank in a baseline environmental assessment does not eliminate or modify the obligation of an owner or operator to comply with any notice or registration requirements applicable to the underground storage tank under other state or federal requirements.

History: 1999 MR 2, Eff. Mar. 11, 1999.

R 299.51017 Notice to department of contamination migrating beyond boundaries of property owned or operated by person subject to section 20107a of act; response activity required of persons liable under section 20126 of act.

Rule 1017. (1) A person who is subject to section 20107a of the act shall notify the department if he or she has knowledge that a hazardous substance is emanating from, has emanated from, or is likely to be emanating from, the property and migrating beyond the boundaries of the property that he or she owns or operates. The notice shall be based on all appropriate inquiry and on reasonable inferences that can be made from existing information about conditions at the property.

(2) A person shall provide the notice required by subrule (1) of this rule to the department, in writing, within the following time frames:

(a) With regard to conditions that were not known to the owner or operator before the effective date of these rules, notice shall be provided within 45 days after the owner or operator has knowledge that hazardous substances have migrated, or are likely to have migrated, to or beyond the property boundary at concentrations that could pose an unacceptable risk as described in R 299.51013(3).

(b) Except as provided in R 299.51021, with regard to conditions that were known to the owner or operator before the effective date of these rules, notice shall be provided within 90 days after the effective date of these rules.

(3) The department may prescribe a form to be used for reports made under this rule. All of the following information shall be included in a report provided under this rule:

(a) The location of the property.

(b) The name, address, and telephone number of the property owner or operator who is submitting the notice.

(c) The name, address, and telephone number of a contact person familiar with the content of the notice.

(d) The name, chemical abstract service number, and maximum measured concentration of the hazardous substance or substances that have migrated, or are likely to have migrated, up to or beyond the property boundary.
(4) A person who is liable under section 20126 of the act for a release that results in hazardous substances migrating beyond the boundary of the property that he or she owns or operates, and who has affirmative obligations under section 20114 of the act, shall, under section 20114 of the act, undertake response activity as necessary to mitigate unacceptable exposures to hazardous substances everywhere within the facility and to comply with all other applicable laws and regulations.
History: 1999 MR 2, Eff. Mar. 11, 1999.

R 299.51019 Mitigating fire and explosion hazards; action and notice required.

Rule 1019. (1) An owner or operator who is obligated to mitigate a fire or explosion hazard under section 20107a(1)(b) of the act shall provide immediately notify the local fire department of the hazard and shall take such other steps as are reasonable and prudent under the circumstances to mitigate or eliminate the hazard.
(2) If initial action does not permanently abate the fire and explosion hazard, then, within 7 days after notice is provided under subrule (1) of this rule, the owner or operator shall provide written notice to the department. The notice shall include all of the following information:
(a) A description of the conditions that resulted in a fire or explosion hazard.
(b) The date and time that notice was provided to the local fire department.
(c) A description of the response provided by the local fire department.
(d) A description of conditions which remain that may require additional action to mitigate fire or explosion hazards due to hazardous substances at the property.
History: 1999 MR 2, Eff. Mar. 11, 1999.

R 299.51021 Applicability of rules to persons who have received affirmative determinations of compliance with section 20107a of act under section 20129a of act.

Rule 1021. If, before the effective date of these rules, a person received a determination from the department under section 20129a of the act that the person's proposed use of a facility satisfies the person's obligations under section 20107a of the act, then these rules shall not be applied retroactively to impose additional obligations upon the person or alter the department's determination with regard to the compliance analysis that was submitted. If the department's affirmative determination was conditioned on the implementation of response activity, then this rule shall apply to the owner or operator only if the response activity was implemented in a timely manner.
History: 1999 MR 2, Eff. Mar. 11, 1999.