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Printing Schedule for Agencies

Issue Number	*Submission deadline for Executive Orders, Adopted Rules and **Proposed Rules	*Submission deadline for State Contract Notices and other **Official Notices	Issue Date
SCHEDULE FOR VOLUME 6			
50	Monday May 31	Monday June 7	Monday June 14
51	Monday June 7	Monday June 14	Monday June 21
52	Monday June 14	Monday June 21	Monday June 28
SCHEDULE FOR VOLUME 7			
1	Monday June 21	Monday June 28	Monday July 5

*Deadline extensions may be possible at the editor's discretion; however, none will be made beyond the second Wednesday (12 calendar days) preceding the issue date for rules, proposed rules and executive orders, or beyond the Wednesday (5 calendar days) preceding the issue date for official notices. Requests for deadline extensions should be made only in valid emergency situations.

**Notices of public hearings on proposed rules and notices of intent to adopt rules without a public hearing are published in the Proposed Rules section and must be submitted two weeks prior to the issue date.

Instructions for submission of documents may be obtained from the Office of the State Register, 506 Rice Street, St. Paul, Minnesota 55103, (612) 296-0930.

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The *State Register* is the official publication of the State of Minnesota, containing executive orders of the governor, proposed and adopted rules of state agencies, and official notices to the public. Judicial notice shall be taken of material published in the *State Register*.

Albert H. Quie
Governor

Carol Anderson Porter
Editor

David Zunker
Information Officer

James J. Hiniker, Jr.
Commissioner
Department of Administration

Paul Hoffman, Robin PanLener, Roy Schmidtke, Jean Walburg
Editorial Staff

Stephen A. Ordahl
Director
State Register and
Public Documents Division

Debbie Kobold
Circulation Manager

Margaret Connelly
State Register Index Editor

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How to Follow State Agency Rulemaking Action in the *State Register*

State agencies must publish notice of their rulemaking action in the *State Register*. If an agency seeks outside opinion before promulgating new rules or rule amendments, it must publish a **NOTICE OF INTENT TO SOLICIT OUTSIDE OPINION**. Such notices are published in the **OFFICIAL NOTICES** section. Proposed rules and adopted rules are published in separate sections of the magazine.

The **PROPOSED RULES** section contains:

- Calendar of Public Hearings on Proposed Rules.
- Proposed new rules (including Notice of Hearing and/or Notice of Intent to Adopt Rules without A Hearing).
- Proposed amendments to rules already in existence in the Minnesota Code of Agency Rules (MCAR).
- Proposed temporary rules.

The **ADOPTED RULES** section contains:

- Notice of adoption of new rules and rule amendments (those which were adopted without change from the proposed version previously published).
- Adopted amendments to new rules or rule amendments (changes made since the proposed version was published).
- Notice of adoption of temporary rules.
- Adopted amendments to temporary rules (changes made since the proposed version was published).

All **ADOPTED RULES** and **ADOPTED AMENDMENTS TO EXISTING RULES** published in the *State Register* will be published in the Minnesota Code of Agency Rules (MCAR). Proposed and adopted **TEMPORARY RULES** appear in the *State Register* but are not published in the MCAR due to the short-term nature of their legal effectiveness.

The *State Register* publishes partial and cumulative listings of rule action in the **MCAR AMENDMENTS AND ADDITIONS** list on the following schedule:

Issues 1-13, inclusive	Issue 39, cumulative for 1-39
Issues 14-25, inclusive	Issues 40-51, inclusive
Issue 26, cumulative for 1-26	Issue 52, cumulative for 1-52
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EXECUTIVE ORDERS

Executive Order No. 82-8

Providing for the Establishment of a Governor's Task Force to Reduce State Government Mandates on Local Governments

I, ALBERT H. QUIE, Governor of the State of Minnesota, by virtue of the authority vested in me by the Constitution and applicable statutes, including but not limited to, Minnesota Statutes, Sections 4.035 and 15.0593 (1981), do hereby issue this Executive Order:

WHEREAS, the State of Minnesota has determined there is an inordinate and excessive amount of state government mandates placed on local governments; and

WHEREAS, the State of Minnesota is committed to lessening paperwork, unnecessary restrictions on local government activities, and financial burdens on all governments; and

WHEREAS, state and local units of government can successfully work together to resolve mutual problems.

NOW, THEREFORE, I Order:

1. The establishment of the Governor's Task Force to Reduce State Government Mandates on Local Governments pursuant to Minnesota Statutes, § 15.0593 (1981) and other applicable statutes. The Task Force shall consist of fifteen members appointed by the Governor, consisting of:

a. One representative from each of the following state agencies: Department of Administration, Department of Education, Department of Energy, Planning, and Development, Department of Natural Resources, Department of Public Welfare, and Department of Transportation.

b. Representatives from local units of government including counties, townships, municipalities, and cities.

2. The Governor shall appoint a chairman to the Task Force.

3. The Task Force shall examine existing mandates impacting local units of government and examine areas where mandates can be modified or eliminated.

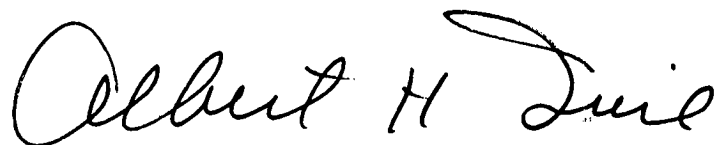
4. The Task Force shall submit a report containing detailed recommendations to the Governor by November 15, 1982.

5. The Department of Administration shall provide staff for the Task Force.

6. The terms of the Task Force members shall coincide with the terms of the Executive Order.

Pursuant to Minnesota Statutes, § 4.035 (1981), this Order shall be effective fifteen (15) days after its publication in the *State Register* and filing with the Secretary of State and shall remain in effect until it is rescinded by proper authority or expires in accordance with the provisions of § 4.035, subdivision 3.

IN TESTIMONY WHEREOF, I hereunto set my hand on this 13th day of May, 1982.



PROPOSED RULES

Pursuant to Minn. Laws of 1980, § 15.0412, subd. 4h, an agency may propose to adopt, amend, suspend or repeal rules without first holding a public hearing, as long as the agency determines that the rules will be noncontroversial in nature. The agency must first publish a notice of intent to adopt rules without a public hearing, together with the proposed rules, in the *State Register*. The notice must advise the public:

1. that they have 30 days in which to submit comment on the proposed rules;
 2. that no public hearing will be held unless seven or more persons make a written request for a hearing within the 30-day comment period;
 3. of the manner in which persons shall request a hearing on the proposed rules;
- and
4. that the rule may be modified if modifications are supported by the data and views submitted.

If, during the 30-day comment period, seven or more persons submit to the agency a written request for a hearing of the proposed rules, the agency must proceed under the provisions of § 15.0412, subds. 4 through 4g, which state that if an agency decides to hold a public hearing, it must publish in the *State Register* a notice of its intent to do so. This notice must appear at least 30 days prior to the date set for the hearing, along with the full text of the proposed rules. (If the agency has followed the provisions of subd. 4h and has already published the proposed rules, a citation to the prior publication may be substituted for republication.)

Pursuant to Minn. Stat. § 15.0412, subd. 5, when a statute, federal law or court order to adopt, suspend or repeal a rule does not allow time for the usual rulemaking process, temporary rules may be proposed. Proposed temporary rules are published in the *State Register*, and for at least 20 days thereafter, interested persons may submit data and views in writing to the proposing agency.

Minnesota Pollution Control Agency Solid and Hazardous Waste Division

Proposed Rules Governing the Management of Hazardous Waste (6 MCAR §§ 4.9001-4.9005 and 4.9008-4.9010, Renumbered as 6 MCAR §§ 4.9100-4.9560)

Notice of Intent to Adopt Rules without a Public Hearing

Notice is hereby given that the Minnesota Pollution Control Agency (hereinafter "agency") proposes to adopt amendments to the rules governing the management of hazardous waste without a public hearing. The agency has determined that the proposed amendment of these rules will be noncontroversial in nature and has elected to follow the procedure set forth in Minn. Stat. § 15.0412, subd. 4h (1981 Supp.).

Persons interested in these rules shall have until July 7, 1982, to submit comments on the proposed rules. The proposed rules may be modified if the modifications are supported by the data and views submitted to the agency and do not result in a substantial change in the proposed language.

Unless seven or more persons submit written requests for a public hearing on the proposed amendments by July 7, 1982, a public hearing will not be held. In the event a public hearing is required, the agency will proceed according to the provisions of Minn. Stat. § 15.0412, subds. 4-4g. The agency asks that requests for a public hearing identify the particular objection and suggest appropriate modifications to the proposed rules and the reasons or data relied on to support the suggested modifications.

Persons who wish to submit comments or a written request for a public hearing should submit such comments or request to:

Larry Christensen
Division of Solid and Hazardous Waste
Minnesota Pollution Control Agency
1935 West County Road B2
Roseville, MN 55113
Telephone: (612) 297-3365

Authority for adoption of these rules is contained in Minn. Stat. § 116.07, subds. 4 and 4b. Additionally, a statement of need and reasonableness that describes the need for and reasonableness of each provision of the proposed amendments and that identifies the data and information relied upon to support the proposed amendments, has been prepared and is available upon request. It is also available for review in the Minnesota Pollution Control Agency Office in Roseville and in each of the Minnesota Pollution Control Agency Regional Offices:

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." **ADOPTED RULES SECTION** — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

PROPOSED RULES

Duluth Regional Office
314 West Superior St.
1015 Torrey Bldg.
Telephone: (218) 723-4660

Detroit Lakes Regional Office
116 East Front St.
Telephone: (218) 847-2164

Rochester Regional Office
1200 South Broadway

Suite 140
Telephone: (507) 285-7343

Brainerd Regional Office
304 East River Rd.
Suite 3
Telephone: (218) 828-2492

Marshall Regional Office
Box 286
1104 East College Drive
Telephone: (507) 537-7146

Upon adoption of the final rules without a public hearing, the proposed rules, this notice, the statement of need and reasonableness, all written comments received and the final rules as adopted will be delivered to the Attorney General for review as to form and legality, including the issue of substantial change. Persons who wish to be advised of the submission of this material to the Attorney General or who wish to receive a copy of the final rules should submit a written statement of such request to Mr. Christensen.

The amendments proposed for adoption relate to the management, identification, labeling, classification, storage, treatment, transportation, processing and disposal of hazardous waste, the location and operation of hazardous waste facilities, and the operation of county hazardous waste programs. The revised rules have been divided into nine chapters.

Rules 6 MCAR §§ 4.9100-4.9103, Chapter One, address the general provisions of the rules. These provisions include the definitions applicable to the hazardous waste rules, procedural matters relating to petitions to delist a waste or to utilize an alternative testing method, and methods of obtaining material referenced in the rules.

Chapter Two, 6 MCAR §§ 4.9128-4.9137, establishes the criteria for determining whether a waste is hazardous and identifies specific wastes and waste streams which are hazardous. The existing criteria for classifying wastes due to characteristics have been modified to include provisions from the U.S. Environmental Protection Agency's (EPA) characteristics. The lists of hazardous waste in the existing hazardous waste rules have been replaced by the lists of hazardous waste found in the EPA regulations. These rules also set forth standards for the management of mixtures of hazardous and nonhazardous wastes and for the management of wastes which are to be beneficially used, reused, recycled or reclaimed.

The standards applicable to generators of hazardous waste are contained in Chapter Three, 6 MCAR §§ 4.9200-4.9222. Pursuant to these provisions a generator is required to evaluate his wastes to determine if they are hazardous, file a disclosure and management plan with the agency for each hazardous waste produced, and obtain an identification number. These rules also provide the requirements applicable to generators with regard to the use of manifests, accumulation of hazardous waste and record keeping. The special requirements applicable to small quantity generators are also set forth in this chapter.

Rules 6 MCAR §§ 4.9250-4.9259, Chapter Four, set forth the standards applicable to transporters of hazardous waste. The provisions of this chapter are substantially the same as the transporter provisions of the existing hazardous waste rules.

The standards governing the operation of hazardous waste facilities are set forth in Chapters Five, Six, Seven and Eight. Chapter Seven, 6 MCAR §§ 4.9480 and 4.9481, provide operational standards for elementary neutralization units, pretreatment units, wastewater treatment units and combustion waste facilities. Chapter Eight, 6 MCAR §§ 4.9500-4.9507, provides interim standards for new hazardous waste land disposal facilities. All other hazardous waste facilities are governed by Chapters Five and Six.

Rules 6 MCAR §§ 4.9280-4.9316, Chapter Five, establish permanent requirements applicable to owners and operators of facilities which treat, store, or dispose of hazardous waste. These rules set forth requirements relating to the location of hazardous waste facilities, emergency procedures including personnel training and contingency plans, record keeping requirements, closure requirements, and financial requirements as well as operational requirements for various types of facilities. Rules 6 MCAR §§ 4.9380-4.9422, Chapter Six, establish interim status standards for hazardous waste facilities which cover the same general areas as the permanent requirements. The interim status standards apply to existing facilities until final disposition of the owner or operator's permit application is made.

Chapter Nine, 6 MCAR §§ 4.9559-4.9560, establishes procedures for the agency's overview of county hazardous waste programs.

Copies of this notice and the proposed rules are available for review in the Minnesota Pollution Control Agency Office in Roseville and each of the Minnesota Pollution Control Agency Regional Offices and may be obtained by contacting Mr. Christensen.

May 14, 1982

Louis J. Breimhurst
Executive Director

Rules as ProposedChapter One: Definitions, References,
Petitions, and Other Standards

6 MCAR § 4.9100 Definitions.
6 MCAR § 4.9101 Availability of references.
6 MCAR § 4.9102 Other standards.
6 MCAR § 4.9103 Petitions.

Chapter One: Definitions, References,
Petitions, and Other Standards

~~6 MCAR § 4.9001 General applicability, definitions, abbreviations, incorporations, severability, and variances.~~

~~A. General applicability. The provisions of these rules govern the identification, classification, storage, labeling, transportation, treatment, processing and disposal of hazardous waste by any person and the issuance of permits for the construction, operation and closure of a hazardous waste facility for the protection of the environment.~~

~~B. 6 MCAR § 4.9100 Definitions. As used in these hazardous waste rules 6 MCAR §§ 4.9100-4.9560 the following words shall have the meanings defined herein: given them.~~

A. Act. "Act" means the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended through June 30, 1982, United States Code, title 42, sections 3259 and 6901-6986, as amended through June 30, 1982.

B. Active portion. "Action portion" means that portion of a facility, other than a closed portion, where treatment, storage, or disposal operations are being or have been conducted after the effective date of 6 MCAR §§ 4.9100-4.9560.

~~C. Agency. "Agency" means the Minnesota Pollution Control Agency.~~

D. Aquifer. "Aquifer" means a geologic formation, group of formations, or part of a formation capable of yielding a significant amount of ground water to wells or springs.

E. Authorized representative. "Authorized representative" means the person responsible for the overall operation of a facility or an operational unit which is part of a facility, such as the plant manager, superintendent, or a person of equivalent responsibility.

F. Cased injection well. "Cased injection well" means a well which is cased within the surficial aquifer to prevent the escape of fluids from the well into the surficial aquifer.

~~2. G. Chemical composition. "Chemical composition" means any of the following:~~

~~a. 1. a standard chemical nomenclature such as those adopted by the International Union of Pure and Applied Chemistry or the Chemical Abstracts' Service;~~

~~b. 2. common chemical name when it is documented to the director that the number of isomers, related compounds of similar chemical structure and property, etc., make chemical analysis or delineation impractical; or~~

~~c. 3. common chemical name of a mixture of components with similar properties, but not including a trade name.~~

~~3. Components of the waste: chemical elements, chemical compounds and ions that constitute the waste and those that may form during the management of the waste from chemical reactions among the components or as biological products of microbial action.~~

H. Closed portion. "Closed portion" means that portion of a facility which an owner or operator has closed in accordance with the approved facility closure plan and all applicable closure requirements.

I. Confined aquifer. "Confined aquifer" means an aquifer bounded above and below by impermeable beds or by beds of distinctly lower permeability than that of the aquifer itself; an aquifer containing confined ground water.

J. Constituent. "Constituent" or "hazardous waste constituent" means a component which causes the waste to be listed in 6 MCAR § 4.9134 or a component listed in Exhibit 6 MCAR § 4.9132 G.-1.

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4. K. Container. "Container:" means any ~~packaging or containment units, excluding portable tanks and storage tanks~~ portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.

5. Corrosive material: a material that has any one of the following properties:

- a. a pH that is greater than 12 or less than 3 for an aqueous material;
- b. the ability to cause a visible destruction or irreversible alteration of skin tissues at the site of contact following an exposure period of four hours or less when tested by the technique described in 16 C.F.R. § 1500.41 (1977);
- c. a corrosion rate of 0.250 inch per year or more on Society of Automotive Engineers' 1020 Steel when tested in accordance with the minimum requirements described in the National Association of Corrosive Engineers' Standard TM-01-69, at a test temperature of 130 degrees F (54.4 degrees C).

L. Contingency plan. "Contingency plan" means a document setting out an organized, planned, and coordinated course of action to be followed in case of a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

M. Control equipment. "Control equipment" means an "air containment treatment facility" or a "treatment facility" as defined in Minn. Stat. § 116.06, subd. 6.

N. Decomposition by-product. "Decomposition by-product" means a by-product of hazardous waste derived from the waste by physical, chemical, or biological reactions.

6. O. Demolition debris. "Demolition debris:" means concrete, blacktop, bricks, stone facing, concrete block, stucco, glass, structural metal, and wood from demolished structures.

P. Designated facility. "Designated facility" means a hazardous waste treatment, storage, or disposal facility which:

1. has received an agency permit, or if located outside Minnesota, has either received an Environmental Protection Agency permit or a permit from an authorized state, or has interim status; and

2. has been designated on the manifest by the generator pursuant to 6 MCAR § 4.9212.

Q. Dike. "Dike" means an embankment or ridge of either natural or man-made materials used to prevent the movement of liquids, sludges, solids, or other materials.

7. R. Director. "Director-" means the Executive Director of the Minnesota Pollution Control Agency or his designee.

S. Discarded. "Discarded" means any material which has served its original intended use.

T. Disposal. "Disposal" means the discharge, deposit, injection, dumping, spilling, leaking, or placing of waste into or on any land or water so that the waste or any constituent, thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters.

U. Disposal facility. "Disposal facility" means a waste facility permitted by the agency that is designed or operated for the purpose of disposing of waste on or in the land.

V. Elementary neutralization unit. "Elementary neutralization unit" means a device which:

1. Is used for neutralizing wastes which are hazardous wastes only because they exhibit the corrosivity characteristic defined in 6 MCAR § 4.9132 D., or are listed in 6 MCAR § 4.9134 only for this reason; and

2. Meets the definition of tank, container, transport vehicle, or vessel.

W. Equivalent method. "Equivalent method" means any testing or analytical method approved by the director under 6 MCAR § 4.9103.

8. X. Explosive materials. "Explosive ~~material:~~ materials" means a material that has the property either to evolve large volumes of gas that are dissipated in a shock wave or to heat the surrounding air so as to cause a high pressure gas that is dissipated in a shock wave. Explosive materials include, but are not limited to, explosives as defined in 49 C.F.R. § Code of Federal Regulations, title 49, section 173.50 (1976), as amended through June 30, 1982, and compressed gases as defined in 49 C.F.R. § 173.300 (1976) Code of Federal Regulations, title 49, section 173.30, as amended through June 30, 1982.

Y. Facility. "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 one or more landfills, surface impoundments, or combinations thereof.

9. Facility operator: any person who owns, leases, operates, controls, supervises, closes, or abandons a hazardous waste facility.

10. Flammable material: any material that:

a. has a flash point below 200 degrees F (93.3 degrees C), except the following:

(1) a material comprised of miscible components having one or more components with a flash point of 200 degrees F (93.3 degrees C), or higher, that make up at least 99% of the total volume of the mixture;

(2) a material that has a flash point greater than 100 degrees F (37.8 degrees C) and that when heated to 200 degrees F (93.3 degrees C) will not support combustion beyond the flash;

(3) an explosive material; or

b. may ignite without application of a flame or spark including, but not limited to, nitro cellulose, certain metal hydrides, alkali metals, some oily fabrics, some processed meals and acidic anhydrides.

c. is capable of spontaneously producing temperatures in excess of 200 degrees F (93.3 degrees C).

11. Z. Flash point. "Flash point:" means the minimum temperature at which a material gives off vapor ~~within a test vessel~~ in sufficient concentration to form an ignitable mixture with air near the surface of the material when in contact with a spark or flame.

12. AA. Floodplain. "Floodplain: as defined" has the meaning given in Minn. Stat., § 104.02, subd. 3.

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

CC. Formation. "Formation" means a body of rock characterized by a degree of lithologic homogeneity which is prevailing, but not necessarily tabular, and is mappable on the earth's surface or traceable in the subsurface.

DD. Formation fluid. "Formation fluid" means fluid present in a formation under natural conditions as opposed to introduced fluids, such as drilling mud.

EE. Freeboard. "Freeboard" means the vertical distance between the top of a tank or surface impoundment dike, and the surface of the waste contained therein.

FF. Free liquids. "Free liquids" means liquids which readily separate from the solid portion of a waste under ambient temperature and pressure.

13. GG. Garbage. "Garbage:" means discarded material resulting from the handling, processing, storage, preparation, serving, and consumption of food.

14. HH. Generator. "Generator: a" means any person who, by site, whose act or process produces a hazardous waste within the State of Minnesota or a person who produces a hazardous waste outside the State of Minnesota that is transported to a hazardous waste facility within the State of Minnesota identified or listed in 6 MCAR §§ 4.9128-4.9137, or whose act first causes a hazardous waste to become subject to regulation.

15. II. Ground water. "Ground water: ~~the water contained below the surface of the earth in the saturated zone including, without limitation, all waters whether under confined, unconfined or perched conditions, in near surface unconsolidated sediment or regolith, or in rock formations deeper underground. The term groundwater shall be synonymous with underground water~~" or "underground water" has the meaning given in 6 MCAR § 4.8022.

16. Hazardous property: any property of a waste that requires the waste to be classified as a hazardous waste.

17. JJ. Hazardous waste. "Hazardous waste: as defined in Minn. Stat., § 116.06 subd. 13" means any refuse or discarded material or combinations of refuse or discarded materials in solid, semi-solid, liquid, or gaseous form which cannot be handled by routine waste management techniques because they pose a substantial present or potential hazard to human health or other living organisms because of their chemical, biological, or physical properties. Categories of hazardous waste materials include, but are not limited to: explosives, flammables, oxidizers, poisons, irritants, and corrosives. "Hazardous waste" does

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not include sewage sludge and source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954, United States Code, title 42, sections 2011-2284, as amended through June 30, 1982.

18. Hazardous waste facility: real or personal property that is used or is constructed to be used for the management of hazardous waste including, but not limited to the following:

a. Hazardous waste containerized storage facility: a hazardous waste facility that is designed or operated for the on-site storage of hazardous waste that is in containers, portable tanks or storage tanks.

b. Hazardous waste nonecontainerized storage facility: a hazardous waste facility that is designed or operated for the storage of hazardous waste in lagoons, basins, ponds, vaults or similar bulk storage other than containers or tanks.

c. Hazardous waste transfer station: a hazardous waste facility that receives wastes from one or more generators and is designed or operated for the purpose of intermediate storage of wastes prior to transportation of the waste to another hazardous waste facility.

d. Hazardous waste processing facility: a hazardous waste facility that is designed and operated to modify the chemical composition or chemical, physical, or biological properties of a hazardous waste by means such as incineration, reclamation, distillation, precipitation or other similar processes.

e. Hazardous waste land disposal facility: a hazardous waste facility that is designed or operated for the purpose of disposing of, or storing for a period greater than one year, hazardous waste in the subsurface of the land.

f. Hazardous waste land treatment facility: a hazardous waste facility that is designed or operated for the purpose of utilizing the surface of the land as the medium by which biological, physical or chemical processes can provide treatment of hazardous waste.

KK. Hazardous waste incinerator. "Hazardous waste incinerator" means an enclosed device using controlled flame combustion, a purpose of which is to thermally break down hazardous waste. Examples of incinerators are rotary kiln, fluidized bed, and liquid injection incinerators.

19. LL. Hazardous waste management. "Hazardous waste management" means the total system for the identification, storage, collection and removal of hazardous waste from public or private property, the transportation of the waste to a hazardous waste facility, and the ultimate processing or disposal of the waste by approved methods in accordance with these regulations 6 MCAR §§ 4.9100-4.9560. Any reference to hazardous waste being managed shall refer to the foregoing.

MM. Hazardous waste number. "Hazardous waste number" means the number assigned to each hazardous waste listed in 6 MCAR § 4.9134 and to each characteristic identified in 6 MCAR § 4.9132.

NN. Identification number. "Identification number" means the number assigned to each generator, transporter, and treatment, storage, or disposal facility.

OO. In operation. "In operation" means a facility which is treating, storing, or disposing of hazardous waste.

PP. Inactive portion. "Inactive portion" means that portion of a facility which is not operated after the effective date of 6 MCAR §§ 4.9100-4.9560.

20. QQ. Incompatible wastes. "Incompatible wastes: wastes that when in contact with each other pose a threat to human health and safety that does not exist when they are separate, including, but not limited to, wastes that pursuant to 49 C.F.R. § 177.848 (1976) cannot be stored or transported together." means a hazardous waste which is unsuitable for:

1. placement in a particular device or facility because it may cause corrosion or decay of containment materials such as the container inner liners or tank walls; or

2. commingling with another waste or material under uncontrolled conditions because the commingling might produce heat or pressure, fire or explosion, violent reactions, toxic dusts, mists, fumes, or gases, or flammable fumes or gases.

RR. Independent registered engineer. "Independent registered engineer" means a registered engineer who is not a regular employee of the owner or operator of the facility, but rather is consulted on an intermittent basis.

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

TT. Injection well. "Injection well" means a well into which fluids are injected.

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UU. Injection zone. "Injection zone" means a geological formation, group of formations, or part of a formation receiving fluids through a well.

VV. Inner liner. "Inner liner" means a continuous layer of material placed inside a tank or container which protects the construction materials of the tank or container from the contained waste or reagents used to treat the waste.

WW. Interim status. "Interim status" has the meaning given in 6 MCAR § 4.9381.

XX. International shipment. "International shipment" means the transportation of hazardous waste into or out of the jurisdiction of the United States.

21. Irritative material: a noncorrosive material which has the property to cause a local reversible injury to a biological membrane at the site of contact as determined by either of the following:

a. Practical experience with the waste where short term exposures have caused first degree burns and where long term exposure may cause second degree burns;

b. Skin irritation of an empirical score of five or more as determined pursuant to 16 C.F.R. § 1500.41 (1977).

YY. Land disposal facility. "Land disposal facility" means a disposal facility or part of a disposal facility at which leachate or other hazardous waste will or may discharge into ground water.

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

AAA. Landfill. "Landfill" means a disposal facility or part of a facility where hazardous waste is placed in or on land and which is not a land treatment facility, a surface impoundment, or an injection well or seepage facility.

BBB. Landfill cell. "Landfill cell" means a discrete volume of a hazardous waste landfill which provides the isolation of wastes from adjacent cells or wastes, utilizing liners, dikes, or similar methods.

22. CCC. Leachate. "Leachate" means any liquid that is released from, or including any suspended components in the liquid, that has percolated through, a waste as a result of conditions that arise during storage, land disposal, or land treatment or drained from hazardous waste.

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

23. EEE. Manifest. "Manifest" means the shipping papers used in transporting hazardous waste document originated and signed by the generator which contains the information required by 6 MCAR § 4.9212.

FFF. Manifest document number. "Manifest document number" means the serially increasing number assigned to the manifest by the generator for recording and reporting purposes.

24. GGG. Median lethal concentration. "Median lethal concentration (LC 50):" means the calculated concentration at which a material kills 50% percent of a group of test animals within a specified time.

a. Aquatic LC 50: the LC 50 determined by a test in which the specified time is 96 hours, the test animals are at least 10 fathead minnows, and the route of administration follows accepted static or flow through bioassay techniques.

b. Inhalation LC 50: the LC 50 determined by a test in which the specified time is 14 days, the group of the test animals is at least ten white laboratory rats of 200 to 300 grams each, half of which are male and half of which are female, and the route of administration is continuous respiratory exposure for a period of one hour.

25. HHH. Median lethal dose. "Median lethal dose (LD 50):" means the calculated dose at which a material kills 50% percent of a group of test animals within a specified time.

a. Oral LD 50: the LD 50 determined by a test in which the specified time is 14 days, the group of test animals is at least ten white laboratory rats of 200 to 300 grams each, half of which are male and half of which are female, and the route of administration is a single oral dose.

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b. ~~Dermal LD 50: the LD 50 determined by a test in which the specified time is 14 days, the group of test animals is ten or more white rabbits, half of which are male and half of which are female, and the route of administration is a 24 hour exposure with continuous contact on bare skin.~~

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

JJJ. On-site. "On-site" means the same or geographically contiguous property which may be divided by public or private right-of-way, provided the entrance and exit between the properties is at a cross-roads intersection, and access is by crossing as opposed to going along, the right-of-way. Non-contiguous properties owned by the same person but connected by a right-of-way which he controls and to which the public does not have access, is also considered on-site property.

~~26. On-site management: the handling of a hazardous waste after generation without transporting such hazardous waste by public thoroughfare.~~

~~27. KKK. Open burning. "Open burning" means the burning of any matter whereby the resultant combustion products are emitted directly to the atmosphere without passing through an adequate stack, duct or chimney.~~ combustion of any material without the following characteristics:

1. control of combustion air to maintain adequate temperature for efficient combustion;
2. containment of the combustion-reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion; or
3. control of emission of the gaseous combustion products.

LLL. Operator. "Operator" means the person responsible for the overall operation of a facility.

MMM. Owner. "Owner" means the person who owns a facility or part of a facility.

~~28. Oxidative material: any material with the property to readily supply oxygen to a reaction in the absence of air. Oxidative materials include, but are not limited to, oxides, organic and inorganic peroxides, permanganates, perhenates, chlorates, perchlorates, persulfates, nitric acid, organic and inorganic nitrates, iodates, periodates, bromates, perselenates, perbromates, chromates, dichromates, ozone and perborates. Bromine, chlorine, fluorine and iodine react similarly to oxygen under some conditions and are therefore also oxidative materials.~~

NNN. Partial closure. "Partial closure" means the closure of a discrete part of a facility in accordance with the applicable closure requirements of 6 MCAR §§ 4.9280-4.9316 or 6 MCAR §§ 4.9380-4.9426. For example, partial closure may include the closure of a trench, a unit operation, a landfill cell, or a pit, while other parts of the same facility continue in operation or will be placed in operation in the future.

~~29. OOO. Person. "Person: as defined" has the meaning given in Minn. Stat. § 116.06, subd. 8.~~

PPP. Personnel. "Personnel" or "facility personnel" means all persons who work at or oversee the operation of a hazardous waste facility, and whose actions or failure to act may result in noncompliance with the requirements of 6 MCAR §§ 4.9100-4.9560.

~~30. QQQ. Pesticide. "Pesticide" means any substance or mixture of substances intended for preventing, destroying, repelling or mitigating any pest, and any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant.~~

~~31. Petroleum waste: an oily waste generated by petroleum storage, petroleum refining and petroleum refinery products storage.~~

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

SSS. Plugging. "Plugging" means the act or process of stopping the flow of water, oil, or gas in formation penetrated by a bore hole or well.

TTT. Point source. "Point source" has the meaning given in Minn. Stat. § 115.03, subd. 15, but does not include irrigation return flows.

UUU. Pretreatment unit. "Pretreatment unit" means a device which:

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1. is part of a wastewater treatment facility which is subject to regulation under the Federal Water Pollution Control Act Amendments of 1972, United States Code, title 33, section 1317(b), as amended through June 30, 1982;

2. receives and treats or stores an influent wastewater which is a hazardous waste as defined in 6 MCAR §§ 4.9128-4.9137; or generates and accumulates a wastewater treatment sludge which is a hazardous waste as defined in 6 MCAR §§ 4.9128-4.9137; or treats or stores a wastewater treatment sludge which is a hazardous waste as defined in 6 MCAR §§ 4.9128-4.9137; and

3. meets the definition of "tank" as defined in QQQQ.

VVV. Publicly owned treatment works. "Publicly owned treatment works" means any device or system used in the treatment of municipal sewage or industrial wastes of a liquid nature, including recycling and reclamation, which is owned by a state or municipality as defined in the Federal Water Pollution Control Act Amendments of 1972, United States Code, title 33, section 1362(4), as amended through June 30, 1982. This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a publicly owned treatment works providing treatment.

WWW. Reaction by-product. "Reaction by-product" means a substance resulting from physical, chemical, or biological reactions involving a hazardous waste or decomposition by-product with any other substance including by-products derived from each material which reacts with hazardous waste or decomposition by-products.

XXX. Refuse. "Refuse" means putrescible and nonputrescible substances which have served their original intended purpose and which are discarded or sometimes discarded.

YYY. Representative sample. "Representative sample" means a sample of a universe or whole, such as a waste pile, lagoon, or ground water which can be expected to exhibit the average properties of the universe or whole.

~~32-~~ ZZZ. Resource recovery. "Resource recovery: as defined" has the meaning given in Minn. Stat. § ~~473.121 subd. 31e~~ § 115A.03, subd. 27.

~~33-~~ AAAA. Routine waste management. "Routine waste management:" means the total system for the handling of a waste by one of the following methods:

~~a-~~ 1. storage, collection, and removal of waste from public or private property, its transportation to intermediate or final disposal facilities, and ~~its ultimate~~ the treatment or disposal of waste at a sanitary landfill solid waste facility permitted by the agency;

~~b-~~ Discharge into a sewer system and subsequent treatment at a wastewater treatment works operated pursuant to a National Pollutant Discharge Elimination System Permit or State Disposal Permit.

~~c-~~ 2. discharge into the atmosphere as an air contaminant or emission emitted pursuant to an emission facility operating permit; or

~~d-~~ 3. a wastewater discharge pursuant to a National Pollutant Discharge Elimination System Permit or a State Disposal System Permit.

34. BBBB. Rubbish. "Rubbish:" means discarded paper, cardboard, scrap metal, yard clippings, crop residues, brush, wood, glass, bedding, crockery, or litter.

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

DDDD. Run-on. "Run-on" means any rainwater, leachate, or other liquid that drains over land onto any part of a facility.

~~35-~~ EEEE. Sanitary landfill. "Sanitary landfill:" means a land disposal site employing an engineered method of disposing of solid waste on land in a manner that minimizes environmental hazards by spreading the solid waste in thin layers, compacting the solid waste to the smallest practical volume, and applying cover material at the end of each operating day, or at intervals as may be required by the agency.

36. FFFF. Saturated zone. "Saturated zone:" or "zone of saturation" means that part of the earth's crust in which all the voids, ~~large and small,~~ are ideally filled with water under pressure greater than atmospheric.

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GGGG. Seepage facility. "Seepage facility" means any land disposal facility which is used to emplace liquids into the land or the ground water which is not a cased injection well, a landfill, a surface impoundment, or a land treatment facility.

~~37. HHHH. Sewage. "Sewage as defined" has the meaning given in Minn. Stat. § 115.01, subd. 2.~~

~~38. IIII. Sewer system. "Sewer system as defined" has the meaning given in Minn. Stat. § 115.01, subd. 6.~~

~~39. JJJJ. Shoreland. "Shoreland as defined" has the meaning given in Minn. Stat. § 105.485, subd. 2 and rules adopted pursuant to that section.~~

KKKK. Sludge. "Sludge" means any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant.

LLLL. Spill. "Spill" means the accidental or intentional spilling, leaking, pumping, pouring, emitting, or dumping of hazardous wastes or materials which, when spilled, become hazardous wastes into or on any land or water.

MMMM. State. "State" means the state of Minnesota.

NNNN. Storage. "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.

OOOO. Surface impoundment. "Surface impoundment" or "impoundment" means a facility or part of a facility which is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials which is designed to hold an accumulation of liquid wastes or wastes containing free liquids and which is not an injection well or seepage facility. Examples of surface impoundments are holding, storage, settling, and aeration pits, ponds, and lagoons. Impoundments may be lined with man-made materials.

PPPP. Surficial aquifer. "Surficial aquifer" means the upper most aquifer with an upper boundary defined by a water table which is naturally recharged from the ground surface or from the unsaturated zone and in addition includes formations which are saturated with water intermittently, seasonally, or which develop a perched water table within the unsaturated zone.

~~40. QQQQ. Tank. "Tank: any packaging or containment unit having a capacity of 100 gallons or greater that is used to confine and hold a material. Tanks that are anchored, fixed or attached to one location are storage tanks, and those that are not are portable tanks" means a stationary device designed to contain an accumulation of hazardous waste which is constructed primarily of non-earthen materials, such as wood, concrete, steel, and plastic, which provide structural support.~~

RRRR. Thermal treatment. "Thermal treatment" means the treatment of hazardous waste in a device which uses elevated temperatures as the primary means to change the chemical, physical, or biological character or composition of the hazardous waste. "Thermal treatment" includes processes of incineration, molten salt, pyrolysis, calcination, wet air oxidation, and microwave discharge.

SSSS. Totally enclosed treatment facility. "Totally enclosed treatment facility" means a facility for the treatment of hazardous waste which is directly connected to an industrial production process and which is constructed and operated in a manner which prevents the release of any hazardous waste or any constituent thereof into the environment during treatment. An example is a pipe in which waste acid is neutralized.

~~41. Toxic material: a material with any one of the following properties:~~

- ~~a. An oral LD 50 less than 500 milligrams of material per kilogram of body weight of test animal.~~
- ~~b. A dermal LD 50 less than 1000 milligrams of material per kilogram of body weight of test animal.~~
- ~~c. An inhalation LC 50 (when the material or a component is in a form that may be inhaled) less than:
 - ~~(1) 2000 milligrams of material as dust or mist per cubic meter of air, or~~
 - ~~(2) 1000 parts per million of material as gas or vapor.~~~~
- ~~d. An aquatic LC 50 less than 100 milligrams of material per liter of water.~~

TTTT. Transfer facility. "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.

UUUU. Transportation. "Transportation" means the movement of hazardous waste by air, rail, highway, or water.

VVVV. Transport vehicle. "Transport vehicle" means a motor vehicle or rail car 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.

WWW. Transporter. "Transporter" means a person engaged in the off-site transportation of hazardous waste by air, rail, highway, or water.

XXXX. Treatment. "Treatment" means any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize the waste, or so as to recover energy or material resources from the waste, or so as to render the waste nonhazardous, or less hazardous, safer to transport, store, or dispose of, or amenable for recovery, amenable for storage, or reduce in volume.

YYYY. Underground seepage. "Underground seepage" means the underground emplacement of fluids at atmospheric pressure through an uncased well, a dug hole, or a disposal facility constructed in a dug hole or an earth material fill.

ZZZZ. Unsaturated zone. "Unsaturated zone" or "zone of aeration" means the zone between the land surface and the water table.

AAAAA. Vessel. "Vessel" means every description of watercraft, used or capable of being used as a means of transportation on the water.

42. BBBB. Waste. "Waste" means any discarded material including, but not limited to, solids, semisolids, sludges, liquids, gases, and their vapors, mists, or dusts.

CCCCC. Wastewater treatment unit. "Wastewater treatment unit" means a device which:

1. is part of a wastewater treatment facility which is subject to regulation under the Federal Water Pollution Control Act Amendments of 1972, United States Code, title 33, sections 1317(b) and 1342, as amended through June 30, 1982;

2. receives and treats or stores an influent wastewater which is a hazardous waste as defined in 6 MCAR §§ 4.9128-4.9137; or generates and accumulates a wastewater treatment sludge which is a hazardous waste as defined in 6 MCAR §§ 4.9128-4.9137; or treats or stores a wastewater treatment sludge which is a hazardous waste as defined in 6 MCAR §§ 4.9128-4.9137; and

3. meets the definition of "tank" as defined in QQQQ.

DDDDD. Water bulk shipment. "Water bulk shipment" means the bulk transportation of hazardous waste which is loaded or carried on board a vessel without containers or labels.

43. EEEEE. Waters of the state. "Waters of the state: as defined" has the meaning given in Minn. Stat. § 155.01, subd. 9.

44. FFFFF. Water table. "Water table" means the surface of the ground water at which the pressure is atmospheric. Generally, this is the top of the saturated zone.

GGGGG. Well. "Well" means any shaft or pit dug or bored into the earth, generally of a cylindrical form, and often walled with bricks or tubing to prevent the earth from caving in.

45. HHHHH. Wetland. "Wetland: a natural marsh where water stands near, at or above the soil surface during a significant portion of most years, and which is eligible for classification as an inland fresh water wetland type 3, 4, or 5 under U.S. Department of Interior classifications" has the meaning given to "wetlands" in Minn. Stat. § 105.37, subd. 15.

IIIII. Zone of containment. "Zone of containment" means the volume of earth materials defined by a permit applicant beyond which the permit applicant asserts his discharge will not cause effects in the ground water or in earth materials.

C. Abbreviations. The abbreviations used in these hazardous waste regulations have the following meanings:

1. A.S.T.M.: American Society for Testing and Materials.
2. C.F.R.: Code of Federal Regulations.
3. EPA: U.S. Environmental Protection Agency.
4. LC 50: median lethal concentration.

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5. LD 50: median lethal dose.

6. NPDES: National Pollutant Discharge Elimination System.

D. Incorporations. The following are contained in the indicated appendices at the end of this rule and are hereby incorporated and made a part of these rules and shall apply as indicated within these rules:

1. ASTM D3243-76 (Appendix A).
2. ASTM D56-70 (Appendix B).
3. ASTM D3278-73 (Appendix C).
4. ASTM D93-73 (Appendix D).
5. ASTM D2487-69 (Appendix E).
6. ASTM D2488-69 (Appendix F).
7. National Association of Corrosion Engineers' Standard TM-01-69 (Appendix G).
8. 10 C.F.R. § 20.301 (1977) (Appendix H).
9. 16 C.F.R. § 1500.41 (1977) (Appendix I).
10. 49 C.F.R. § 173.50, 173.300, 177.824 and 177.848 (1976) (Appendix J).
11. United States Department of Interior inland fresh water wetland types 3, 4, and 5 (Appendix K).
12. EP Toxicity Text (Appendix L).
13. 49 C.F.R. §§ 172.202 and 172.203 (1979) (Appendix M).

E. Severability. If any provision of these rules or the application thereof to any person or circumstance is held to be invalid, such invalidity shall not affect other provisions of these rules that can be given effect without the invalid provision or application. To this end, the provision of all rules and the various applications thereof are declared to be severable.

F. Variances. Any person may apply for a variance from any requirement of these hazardous waste rules. Such variance shall be applied for and acted upon by the agency in accordance with Minn. Stat. § 116.07 subd. 5 and other applicable statutes and rules.

6 MCAR § 4.9101 Availability of references. The documents referred to in 6 MCAR §§ 4.9100-4.9560 may be obtained by contacting the appropriate offices as listed in A.-H.

A. Standards of the American Society for Testing and Materials, in the "Annual Book of ASTM Standards," 1916 Race Street, Philadelphia, Pennsylvania 19103, available at the Wilson Library of the University of Minnesota;

B. "Flammable and Combustible Liquids Code" in the 'National Fire Codes, 1981,' issued by the National Fire Protection Association, Batterymarch Park, Quincy, Massachusetts 02269, available at the Engineering Library of the University of Minnesota;

C. "Implicit Price Deflator for Gross National Product" in the 'Survey of Current Business,' Bureau of Economic Analysis, United States Department of Commerce, 110 4th Street South, Minneapolis, Minnesota 55401, available at the St. Paul Public Library;

D. 'The Manual on Disposal of Refinery Wastes,' volume 1, issued by the American Petroleum Institute, (Washington, D.C., 1969), available at the State of Minnesota Law Library;

E. "Methods for Chemical Analysis of Water and Wastes," publication number 600/4-79-020, March 1979 issued by the Office of Solid Waste, United States Environmental Protection Agency, 401 M Street S.W., Washington, D.C. 20460, available at the State of Minnesota Law Library;

F. Standard TM-01-69 of the National Association of Corrosion Engineers, P.M. Box 986, Katy, Texas 77450, available at the State of Minnesota Law Library;

G. "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods," publication number SW 846, 1980 of the Office of Solid Waste, United States Environmental Protection Agency, 401 M Street S.W., Washington, D.C. 20460, available at the State of Minnesota Law Library; and

H. "Uniform Customs and Practice for Documentary Credits (Publication 290)," 1975: International Chamber of Commerce Publishing Corporation, Incorporated, 801 2nd Avenue, Suite 1209, New York, New York 10017.

6 MCAR § 4.9102 Other Standards. Nothing in ~~these hazardous waste rules~~ 6 MCAR §§ 4.9100-4.9560 shall relieve any person from any obligations or duties imposed by any other laws, statutes, rules, standards or ordinances of the federal, state or local governments or any agency thereof now in effect or which become effective in the future. In the event ~~these hazardous waste rules~~ 6 MCAR §§ 4.9100-4.9560 conflict with any such laws, statutes, rules, standards, or ordinances, the more stringent shall apply. Nothing in ~~these rules~~ 6 MCAR §§ 4.9100-4.9560 shall be construed to require any person to comply with any portion of ~~these rules~~ 6 MCAR §§ 4.9100-4.9560 if that portion should at any time be preempted by federal law.

6 MCAR § 4.9103 Petitions.

A. Petitions for equivalent testing or analytical methods. Any person seeking to use a testing or analytical method other than those described in 6 MCAR §§ 4.9128-4.9137, 6 MCAR §§ 4.9280-4.9316 or 6 MCAR §§ 4.9380-4.9422 may petition under these provisions. The person must demonstrate to the satisfaction of the director that the proposed method is equal to or superior to the corresponding method prescribed in 6 MCAR §§ 4.9128-4.9137, 6 MCAR §§ 4.9280-4.9316 or 6 MCAR §§ 4.9380-4.9422 in terms of its sensitivity, accuracy, precision, and reproducibility. Each petition must include:

1. a full description of the proposed method, including all procedural steps and equipment used in the method;
2. a description of the types of wastes or waste matrices for which the proposed method may be used;
3. comparative results obtained from using the proposed method with those obtained from using the relevant or corresponding methods prescribed in 6 MCAR §§ 4.9128-4.9137, 6 MCAR §§ 4.9280-4.9316 or 6 MCAR §§ 4.9380-4.9422;
4. an assessment of any factors which may interfere with, or limit the use of, the proposed method; and
5. a description of the quality control procedures necessary to ensure the sensitivity, accuracy, and precision of the proposed method.

After receiving a petition for an equivalent testing or analytical method, the director may request any additional information on the proposed method which he may reasonably require to evaluate the method.

B. Petitions to exclude a waste produced at a particular facility.

1. Any person seeking to exclude a waste at a particular generating facility from regulation under 6 MCAR §§ 4.9100-4.9560 may petition under these provisions. The petitioner must demonstrate to the satisfaction of the agency that the waste produced by a particular generating facility does not meet any of the criteria under which the waste was listed as a hazardous waste and, in the case of an acutely hazardous waste listed under 6 MCAR § 4.9131 A.2., that it also does not meet the criterion of 6 MCAR § 4.9131 A.3. A waste which is so excluded may still, however, be a hazardous waste by operation of 6 MCAR § 4.9132.

2. These procedures may also be used to petition the agency to exclude from 6 MCAR § 4.9205 C.2. or 6 MCAR § 4.9205 D. a waste which is described in those rules and is either a waste listed in 6 MCAR § 4.9134, contains a waste listed in 6 MCAR § 4.9134, or is derived from a waste listed in 6 MCAR § 4.9134. This exclusion may only be issued for a particular generating, storage, treatment, or disposal facility. The petitioner must make the same demonstration as required by 1., except that where the waste is a mixture of solid waste and one or more listed hazardous wastes or is derived from one or more hazardous wastes, this demonstration may be made with respect to each constituent listed waste or the waste mixture as a whole. A waste which is so excluded may still be a hazardous waste by operation of 6 MCAR § 4.9132.

3. Demonstration samples must consist of enough representative samples, but in no case less than four samples, taken over a period of time sufficient to represent the variability or the uniformity of the waste.

4. If the waste is listed with codes "I", "C", "R", or "E" in 6 MCAR § 4.9134, the petitioner must show that demonstration samples of the waste do not exhibit a relevant characteristic defined in 6 MCAR § 4.9132 using any applicable test methods prescribed in 6 MCAR § 4.9132.

5. If the waste is listed with code "T" in 6 MCAR § 4.9134, the petitioner must demonstrate that:

a. demonstration samples of the waste do not contain the constituent that caused the agency to list the waste, using the appropriate test methods prescribed in Code of Federal Regulations, title 40, part 261, appendix III (1981); or

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b. the waste does not meet the criterion of 6 MCAR § 4.9131 A.3. when considering the factors in 6 MCAR § 4.9131 A.3.a.-k.

6. If the waste is listed with the code "H" in 6 MCAR § 4.9134, the petitioner must demonstrate that the waste does not meet the criterion of 6 MCAR § 4.9131 A.2. and that the waste does not meet the criterion of 6 MCAR § 4.9131 A. when considering the factors listed in 6 MCAR § 4.9131 A.3.a.-k.

7. Each petition must include in addition to the information required by 2.:

a. the name and address of the laboratory facility performing the sampling or tests of the waste;

b. the names and qualifications of the persons sampling and testing the waste;

c. the dates of sampling and testing;

d. the location of the generating facility;

e. a description of the manufacturing processes or other operations and feed materials producing the waste and an assessment of whether such processes, operations, or feed materials can or might produce a waste that is not covered by the demonstration;

f. a description of the waste and an estimate of the average and maximum monthly and annual quantities of waste covered by the demonstration;

g. pertinent data on and discussion of the factors delineated in the respective criterion for listing a hazardous waste, when the demonstration is based on the factors in 6 MCAR § 4.9131 A.3.;

h. a description of the methodologies and equipment used to obtain the representative samples;

i. a description of the sample handling and preparation techniques, including techniques used for extraction, containerization, and preservation of the samples;

j. a description of the tests performed, including results;

k. the names and model numbers of the instruments used in performing the tests; and

l. the following statement signed by the generator of the waste or his authorized representative:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this demonstration and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

8. After receiving a petition for an exclusion, the agency may request any additional information which it may reasonably require to evaluate the petition. An exclusion will only apply to the waste generated at the individual facility covered by the demonstration and will not apply to waste from any other facility. The agency may exclude only part of the waste for which the demonstration is submitted when it has reason to believe that variability of the waste justifies a partial exclusion. The agency may grant a temporary exclusion before making a final decision whenever it finds that there is a substantial likelihood that an exclusion will be finally granted.

Rules as Proposed

Chapter Two: Identification and Listing of Hazardous Waste

6 MCAR § 4.9128 Classification of waste.

6 MCAR § 4.9129 Management of waste by use, reuse, recycling, and reclamation.

6 MCAR § 4.9130 Residues of hazardous waste in empty containers and empty liners.

6 MCAR § 4.9131 Criteria for listing hazardous waste.

6 MCAR § 4.9132 Characteristics of hazardous waste.

6 MCAR § 4.9133 Exemption from listing due to toxicity.

6 MCAR § 4.9134 Lists of hazardous wastes.

6 MCAR § 4.9135 Small amounts of unrelated chemicals.

6 MCAR § 4.9136 Basis for listing hazardous waste.

6 MCAR § 4.9137 Hazardous constituents.

Chapter Two: Identification and
Listing of Hazardous Waste

~~6 MCAR § 4.9002~~ 6 MCAR § 4.9128 Classification, evaluation and certification of waste.

A. Applicability. This rule establishes the criteria for determining whether a waste is a hazardous waste and identifies wastes that are hazardous wastes.

B. Hazardous wastes. The following wastes are hazardous wastes:

1. A waste that contains a component specified in List 1 is a hazardous waste if the concentration of that component in the waste exceeds the concentration listed:

Component	Concentration (ppm)
2-Acetylaminofluorene (2-AAF)	1000
4-Aminodiphenyl (4-ADP)	100
Arsenic and its Compounds	500
Benzene	100
Benzidine	100
Beryllium and its Compounds	20
Cadmium and its Compounds	500
Carbon Tetrachloride	100
Chloroform	100
bis-(Chloromethyl) ether (BCME)	100
Chloromethyl methyl ether (CMME)	100
Chromium and its Compounds (VI)	1000
3,3-Dichlorobenzidine (DCB)	1000
4-Dimethylaminoazobenzene (DAB)	1000
Ethyleneimine (EI)	1000
Lead and its Compounds	600
4,4-Methylene-bis-2-Chloroaniline (MOCA)	100
a-Naphthylamine (1-NA)	1000
b-Naphthylamine (2-NA)	100
Nickel and its Compounds	10,000
4-Nitrobiphenyl (4-NBP)	100
n-Nitrosodimethylamine (DNM)	1000
Polychlorinated biphenyl (PCB)	500
b-Propiolactone (BPL)	1000
Vinyl Chloride (VCM)	100

2. A waste which contains a component specified in List 2 is a hazardous waste unless leachate from that waste does not contain that component at a concentration in excess of that specified in List 2:

Component	Concentration (ppm)
Aldrin	0.03
Arsenic and its Compounds	5.0
Cadmium and its Compounds	1.0
Chlordane	0.1

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Chromium and its Compounds	5.0
DDT	0.01
Endrin	0.02
Heptachlor	0.01
Lead and its Compounds	3.0
Mercury and its Compounds	0.2
Methoxychlor	0.3
Mirex	0.01
Polychlorinated biphenyl (PCB)	0.01
Toxaphene	0.05

3. Any of the following wastes:

- a. An explosive material.
- b. A flammable material.
- c. An irritative material.
- d. A corrosive material.
- e. An oxidative material.
- f. A toxic material.
- g. Used crankcase oil.
- h. Petroleum waste.

4. A waste that is a mixture of small amounts of unrelated chemicals such that the description of any sample or set of samples is not representative of the total waste. Examples are discarded chemicals from a chemistry laboratory, wastes from pilot plant chemical reactions and discarded prescription drugs.

5. Any other waste that is not a hazardous waste under any provision in 6 MCAR § 4.9002 B.1. 4., but that the agency determines pursuant to 6 MCAR § 4.9002 H.2. cannot be handled by routine waste management techniques because it poses a substantial present or potential hazard to human health or other living organisms. Mixtures of hazardous and nonhazardous waste.

1. A mixture is a hazardous waste if it is a mixture of nonhazardous waste and any waste which is hazardous solely because it exhibits the characteristic of ignitability, corrosivity, or reactivity as described in 6 MCAR § 4.9132, unless the resulting mixture no longer exhibits any of the characteristics of ignitability, corrosivity, or reactivity.

2. A mixture is a hazardous waste if it is a mixture of nonhazardous waste and any waste listed in 6 MCAR § 4.9134 solely because of ignitability, corrosivity, or reactivity, unless the resulting mixture either no longer exhibits any of the characteristics of ignitability, corrosivity, and reactivity, or has been excluded from regulation pursuant to 6 MCAR § 4.9103 B.

3. A mixture is a hazardous waste if it is a nonsewered mixture of nonhazardous waste and any waste listed in 6 MCAR § 4.9134 (other than wastes listed solely because of ignitability, corrosivity, or reactivity) or any waste which is hazardous because it exhibits the characteristics of Extraction Procedure toxicity or toxicity as identified in 6 MCAR § 4.9132 unless:

a. the resulting mixture has been excluded from regulation pursuant to 6 MCAR § 4.9103 B.; or

b. the generator submits to the agency an evaluation of the mixing practice utilized for the wastes which demonstrates that only wastes generated on-site are mixed and that the mixing practice results in actual treatment of the hazardous waste yielding a nonhazardous waste. For the purpose of this provision, simple dilution shall not be considered treatment. The mixing practice must comply with the provisions of 6 MCAR § 4.9481 and must be approved by the agency.

4. A mixture is a hazardous waste if it is a sewered mixture of nonhazardous waste and any waste which is hazardous because it exhibits the characteristics of Extraction Procedure (EP) toxicity or toxicity as defined in 6 MCAR § 4.9132 or any waste listed in 6 MCAR § 4.9134 (other than wastes listed solely because of ignitability, corrosivity, or reactivity) unless the resulting mixture no longer exhibits the characteristics of Extraction Procedure (EP) toxicity or toxicity and the sewerage of the mixture has been approved by the agency pursuant to 6 MCAR § 4.9211. This provision does not apply to those mixtures defined as nonhazardous pursuant to 5.

5. Except as otherwise provided in 1., 2., or 4., the following sewered mixtures of nonhazardous waste and any hazardous waste listed in 6 MCAR § 4.9134 are not hazardous wastes if the generator can demonstrate that the mixture consists of wastewater, the discharge of which is subject to regulation under the Federal Water Pollution Control Act Amendments of

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1972, United States Code, title 33, section 1317(b) or 1342, as amended through June 30, 1982, including wastewater at facilities which have eliminated the discharge of wastewater; and

a. one or more of the following spent solvents listed in 6 MCAR § 4.9134: carbon tetrachloride, tetrachloroethylene, trichloroethylene; provided that the solvents are discharged into the wastewater stream as a result of normal manufacturing operations and provided further that the maximum total weekly usage of these solvents, or than the amounts that can be demonstrated not to be discharged to wastewater, divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pretreatment system does not exceed one part per million; or

b. one or more of the following spent solvents listed in 6 MCAR § 4.9134: methylene chloride, 1,1,1-trichloroethane, chlorobenzene, o-dichloro-benzene, cresols, cresylic acid, nitrobenzene, toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, spent chlorofluorocarbon solvents; provided that the solvents are discharged into the wastewater stream as a result of normal manufacturing operations and provided further that the maximum total weekly usage of these solvents, other than the amounts that can be demonstrated not to be discharged to wastewater, divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pretreatment system does not exceed 25 parts per million; or

c. heat exchanger bundle cleaning sludge from the petroleum refining industry, Hazardous Waste No. K050 as listed in 6 MCAR § 4.9136; or

d. a discarded commercial chemical product, or chemical intermediate listed in 6 MCAR § 4.9134 arising from de minimis losses of these materials from manufacturing operations in which these materials are used as raw materials or are produced in the manufacturing process. De minimis losses include those from normal material handling operations such as spills from the unloading or transfer of materials from bins or other containers; leaks from pipes, valves or other devices used to transfer materials; minor leaks of process equipment, storage tanks or containers; leaks from well-maintained pump packings and seals; sample purgings; relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; and rinsing from empty containers or from containers that are rendered empty by that rinsing; or

e. wastewater resulting from laboratory operations containing toxic wastes listed in 6 MCAR § 4.9134, provided that the annualized average flow of laboratory wastewater does not exceed one percent of total wastewater flow into the headworks of the facility's wastewater treatment or pretreatment system, or provided the wastes, combining annualized average concentration does not exceed one part per million in the headworks of the facility's wastewater treatment or pretreatment facility. Toxic wastes used in laboratories that are demonstrated not to be discharged to wastewater are not to be included in this calculation.

6. For the purpose of B., headworks refers to the influent plumbing of a privately owned National Pollutant Discharge Elimination System, State Disposal System, or pretreatment facility or to the facility's point of discharge to a municipal collection system when the treatment facility is a publicly owned wastewater treatment facility.

C. Exempt wastes. The following wastes may be stored, labeled, transported, treated, processed and disposed of without complying with the requirements of ~~these rules~~ 6 MCAR §§ 4.9100-4.9560:

1. normal refuse from households including garbage, trash, and sanitary wastes in septic tanks. Households include single and multiple residences, hotels, and motels;

2. sewage- and any mixture of untreated sanitary sewage and other wastes that is formed by the combination of untreated sanitary sewage and one or more other wastes discharged into a sewage system, except that this exemption does not include any of the individual wastes which form the composite wastewater;

3. garbage, rubbish and demolition debris from nonhousehold sources-;

4. asbestos in taconite wastes-;

5. ~~Septic tank sludge from households-~~ mining overburden returned to the mine site;

6. an air contaminant or emission emitted pursuant to an Emission Facility Operating Permit-;

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7. Any composite wastewater that is formed in a sewer system by the combination of two or more individual wastes that have been discharged into the sewer system. This exemption does not include any of the individual wastes which form the composite wastewater: fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste generated from the combustion of fuel which is at least 51 percent coal or other fossil fuels and the balance of the fuel does not contain hazardous waste;

8. wastes discharged pursuant to an NPDES a National Pollutant Discharge Elimination System Permit or a State Disposal System Permit -;

9. Municipal sewage sludge, drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil, natural gas, or geothermal energy;

10. Radioactive waste that is produced pursuant to a permit issued under 40 C.F.R. Parts 30, 40 and 70 (1976) and that is disposed of in compliance with 40 C.F.R. Section 20.301 (1976); solid waste from the extraction, beneficiation, and processing of ores and minerals, including coal, and including phosphate rock and overburden from the mining of uranium ore;

11. A waste pesticide that is not in List 1 or List 2 or an unrinsed pesticide container that contained a pesticide that is not in List 1 or List 2.

12. The director shall exempt wastes resulting from spills from all or any provision of these rules if the exemption is necessary to expedite the proper management of the spilled material and to prevent, abate or control pollution; and the director, at his option, has granted an exemption from any or all of the provisions of 6 MCAR §§ 4.9100-4.9560;

12. a waste which contains chromium and which is not hazardous because of another component or because of a hazardous characteristic if it is shown by a generator that:

a. the chromium in the waste is exclusively or nearly exclusively trivalent chromium;

b. the waste is generated from an industrial process which used trivalent chromium exclusively or nearly exclusively and the process does not generate hexavalent chromium; and

c. the waste is typically and frequently managed in non-oxidizing environments;

13. a hazardous waste which is generated in a product or raw material storage tank, a product or raw material transport vehicle or vessel, a product or raw material pipeline, or in a manufacturing process unit or an associated nonwaste-treatment-manufacturing unit until it exists the unit in which it was generated, unless the unit is a surface impoundment, or unless the hazardous waste remains in the unit more than 90 days after the unit ceases to be operated for manufacturing or for storage or transportation of product or raw materials; or

14. petroleum-derived waste oils which do not contain waste listed in 6 MCAR § 4.9134 and which are to be beneficially used, reused, recycled, or reclaimed, except that this exemption expires six months after the effective date of these rules.

6 MCAR § 4.9129 Management of waste by use, reuse, recycling and reclamation.

A. Applicability. This rule regulates hazardous waste which is to be beneficially used, reused, recycled or reclaimed.

B. Exemptions. A hazardous waste which is not a sludge, and neither is nor contains a waste listed in 6 MCAR § 4.9134, and neither is nor contains a waste which is toxic pursuant to 6 MCAR § 4.9133, is exempt from 6 MCAR §§ 4.9200-4.9422 except for the following provisions:

1. 6 MCAR §§ 4.9205-4.9208;

2. 6 MCAR § 4.9211;

3. 6 MCAR § 4.9216 A.5.; and

4. 6 MCAR § 4.9218.

C. Sludges; listed waste; toxic wastes requirements.

1. A hazardous waste which is a sludge, or is or contains a waste listed in 6 MCAR § 4.9134, for reasons other than ignitability only, or is or contains a waste which is toxic pursuant to 6 MCAR § 4.9132, and is transported or stored prior to beneficial use, reuse, recycling or reclamation by methods other than burning for heat recovery; or a waste which is listed for ignitability only pursuant to 6 MCAR § 4.9134 and is transported or stored prior to beneficial use, reuse, recycling or

reclamation by methods which may include burning for heat recovery; is subject to the requirements of 6 MCAR §§ 4.9100-4.9560 and the agency's permitting procedures for storage facilities, except for the following requirements:

- a. 6 MCAR §§ 4.9297-4.9316; and
- b. 6 MCAR §§ 4.9297-4.9316 and 6 MCAR §§ 4.9418-4.9422.

2. A hazardous waste which is a sludge, or is or contains a waste listed in 6 MCAR § 4.9134, for reasons other than ignitability, or is or contains a waste which is toxic pursuant to 6 MCAR § 4.9132 and is transported or stored prior to beneficial use, reuse, recycling or reclamation by a method involving burning for heat recovery, is subject to the requirements of 1. and:

- a. 6 MCAR § 4.9316 except D.3.;
- b. 6 MCAR § 4.9421; and
- c. must apply for or have an Air Quality permit.

D. Out-of-state wastes. An out-of-state generator of hazardous wastes whose waste is to be sent directly to a firm located in the state of Minnesota where it is to be beneficially used, reused, recycled or reclaimed by methods other than burning, is exempt from the requirements of 6 MCAR §§ 4.9200-4.9560.

6 MCAR § 4.9130 Residues in empty containers and empty inner liners.

A. Applicability. Any hazardous waste remaining in an empty container or empty inner liner, as defined in B.-E. is not subject to regulation under 6 MCAR §§ 4.9200-4.9560 or a Hazardous Waste Facility Permit. Any hazardous waste in a container or inner liner that is not empty, as defined in B.-E., is subject to regulation under 6 MCAR §§ 4.9200-4.9507 and the agency's permitting procedures.

B. Definition of empty containers or inner liners. A container or inner liner that has held any hazardous waste, except a waste that is a compressed gas or that is identified in 6 MCAR § 4.9134 D.3., is empty if all wastes have been removed that can be removed by draining and no more than 2.5 centimeters (one inch) of residue remain on the bottom of the container or inner liner.

C. Other empty containers or inner liners. A container or inner liner that has held a hazardous waste identified in 6 MCAR § 4.9134 D.3. is empty if:

- 1. the container or inner liner has been triple rinsed using a solvent capable of removing the commercial chemical product or manufacturing chemical intermediate;
- 2. the container or inner liner has been cleaned by another method that has been shown in the scientific literature, or by tests conducted by the generator, to achieve equivalent removal; or
- 3. in the case of a container, the inner liner that prevented contact of the commercial chemical product or manufacturing chemical intermediate with the container, has been removed.

D. Empty compressed gas containers. A container that has held a hazardous waste that is a compressed gas is empty when the pressure in the container approaches atmospheric pressure.

E. Transport vehicles. Transport vehicles are exempt from the requirements of B.

D. Evaluation of wastes.

1. Any person who produces any waste within the State of Minnesota or any person who produces a waste outside the State of Minnesota that is managed within the State of Minnesota, and which waste is not an exempt waste under subsection C, shall evaluate the waste to determine if it is hazardous. The person evaluating the waste shall compare the properties of the waste with the criteria for a hazardous waste in subsection B and determine whether the waste is hazardous, in accordance with the procedures set forth in this rule.

2. The person shall reevaluate the waste whenever the person has reason to believe that the composition of the waste is altered so that the results of the previous evaluation are no longer representative of the waste.

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3. This evaluation shall be of the individual waste prior to any mingling or combining with other wastes. If wastes are subsequently mingled or combined, except for wastes that are mingled or combined in a sewer system, the generator shall also evaluate the waste resulting from the mingling or combining.

4. A person who produces two or more wastes that are similar or are from similar processes such that one waste is representative of the other wastes may use one evaluation for all such wastes.

E. Comparison of properties.

1. General. Any person evaluating a waste shall obtain such data as are necessary to determine whether the waste has any hazardous properties at any time during its management. The data may be obtained from the literature, from experience with the waste or from other sources, but if data are not available, then actual tests of a sample of the waste shall be conducted.

2. List 1 and List 2 components. Whenever the person evaluating a waste knows or suspects that any of the components in List 1 or List 2 is in the waste, the person shall conduct a quantitative analysis to determine the concentration of each component in List 1 that is known or suspected to be in the waste and the EP Toxicity Test for each component in List 2 that is known or suspected to be in the waste with the following exceptions:

a. A waste known to contain a component of List 1 in excess of the concentration listed in List 1 need not be analyzed for that component.

b. A waste which is a hazardous waste because it contains a component of List 1 in excess of the concentration listed in List 1 need not be tested for that component in a List 2 test.

3. Other hazardous properties.

following modification to the LC50 and LD50 test procedures if the actual LC50 or LD50 is unknown: whether the waste is a hazardous waste. The results of the tests, analyses, and evaluations shall be made available, upon

a. A person evaluating a waste shall determine whether the waste has any of the properties of an explosive material, a flammable material, an irritative material, a corrosive material, an oxidative material, and a toxic material. However, once the person determines that a waste has one of the properties of one of the classes of hazardous wastes described above, the person need not determine whether it has any of the other properties of the same class. For example, if a waste is a hazardous waste because of its oral LD50, the dermal LD50 need not be determined, but the waste must be evaluated to determine whether it is also explosive, flammable, irritative, corrosive or oxidative.

b. Generators of wastes comprised of small amounts of unrelated chemicals such that a description of any sample or set of samples is not representative of the total waste, generators of petroleum waste and generators of used crankcase oil need not evaluate such wastes to determine whether they have any of the properties of an explosive material, a flammable material, an irritative material, a corrosive material, an oxidative material and a toxic material. Such generators are also not required for such wastes to conduct a quantitative analysis to determine the concentration of each component in List 1 that is known or suspected to be in the waste nor a leachate test for each component in List 2 that is known or suspected to be in the waste.

4. Testing for flammable properties. Whenever the flash point of a waste is to be determined, one of the following test procedures shall be used. The test chosen shall be appropriate for the characteristics of the waste that is tested.

a. Standard Method of Test for Flash Point by Tag Closed Tester (ASTM D56-70).

b. Standard Method of Test for Flash Point of Aviation Turbine Fuels by Setaflash Closed Tester (ASTM D3243-76).

c. Standard Methods of Test for Flash Point of Liquids by Setaflash Closed Tester (ASTM D3278-73).

d. Standard Method of Test for Flash Point by Pensky-Martens Closed Tester (ASTM D93-73) or alternate tests authorized in this standard.

For any waste containing components with different volatilities and flash points and having a flash point higher than 200F (93.3C) according to the test procedure employed, a second test shall be conducted on a sample of the liquid portion of the material that remains after evaporation in an open beaker (or similar container), under ambient pressure and temperature (20 to 25 C) conditions, to 90 percent of original volume or for a period of four hours, whichever occurs first, with the lower flash point of the two tests being the flash point of the material.

5. Testing for toxic properties. Any person who is determining whether a waste is a toxic material may elect to use the following modification to the LC50 and LD50 test procedures if the actual LC50 or LD50 is unknown:

a. A single dosage or exposure level equivalent to the maximum dosage or exposure level in 6 MCAR § 4.9001 B.40, which establishes that a material is a toxic material shall be administered to a test population of ten animals. The animals shall be the kind specified in the LC50 and LD50 test procedures. The animals are then observed for a period of 14 days or 96 hours whichever is applicable. If five or more of the test animals die, the waste shall be classified as a toxic

material. If three or four of the test animals die, then either the waste shall be classified as a toxic material or additional dosage or exposure levels shall be tested and the actual LD50 or LC50 determined. If less than three of the ten test animals die, then the waste shall not be classified as a toxic material.

6. Testing for corrosive properties. Any person testing for corrosive properties may elect to use the following procedure for a nonaqueous waste: the person may prepare an aqueous solution that contains equal parts of the waste and water and test it for pH. If the pH of the solution is greater than 12 or less than 3, the person may classify the waste as a corrosive waste in lieu of evaluating the waste for the criteria indicated by 6 MCAR § 4.0001 B.5. If the person elects not to classify the nonaqueous waste as a corrosive waste or if the pH of the solution is not greater than 12 or less than 3, additional evaluation to determine corrosivity must be performed.

7. Sample collection. In the event the person evaluating the waste must conduct tests to determine the properties of the waste, the person shall collect a representative sample of the waste. In an attempt to collect a sample at the time when the properties being measured pose the greatest hazard, the person shall consider the following variations in the waste composition and their causes in collecting a sample for evaluation:

- a. Variations in the process by which the waste is produced.
- b. Variations in chemical composition and physical state.
- c. Any other variations indicated by past experience with the waste or similar wastes.

F. Results of evaluation. If the person evaluating the waste determines that the waste has any properties of a hazardous waste, the person shall file a disclosure with the agency and manage the waste in accordance with the requirements of these rules.

G. Submission of evaluation results.

1. The director may request at any time that a person producing a waste submit the results of the evaluation of the waste to the agency. Upon such request by the director, setting forth the reasons therefore, the person shall submit 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. The concentration of each component in List 1 that is known or suspected to be in the waste and the concentration in the leachate of each component in List 2 that is known or suspected to be in the waste. If the component is not detected in the waste or in the leachate, the level of detectability of the testing method used shall be reported.
- d. The results of the evaluation to determine whether the waste has any of the properties of an explosive material, a flammable material, an irritative material, a corrosive material, an oxidative material, and a toxic material and the source of the data or information relied upon.
- e. In the event any tests were conducted to evaluate the waste, the person shall submit the following:
 - (1) The sampling procedure and the reasons for determining that the sample is representative of the waste.
 - (2) The results of all tests conducted.
 - (3) A discussion of the accuracy and precision of any tests conducted.

2. If the person who is requested by the director to submit the results of an evaluation of a waste fails to submit the required information within thirty (30) days after the request, the waste shall be managed as a hazardous waste and the person who produces the waste shall be considered a generator until the agency has determined whether the waste is hazardous or not.

3. If the director determines that the results of the evaluation are not adequate to determine whether or not the waste is hazardous, the director may require the person to conduct an additional evaluation. The director shall notify the person in writing of such determination, the reasons therefor, and the additional tests that must be run or additional data that must be obtained. If the results of the additional evaluation are not reported to the agency within thirty (30) days of the request, the waste shall be managed as a hazardous waste and the person who produces the waste shall be considered a generator until the agency has determined whether the waste is hazardous or not. The director may grant up to an additional ninety (90) days where the person demonstrates such extension to be necessary.

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H. Agency determination that a waste is hazardous.

1. The agency or any member, employee, or agent thereof, when authorized by it, may enter upon the property of the person who produces any waste to take samples of the waste and may conduct tests, analyses and evaluations to determine whether the waste is a hazardous waste. The results of the tests, analyses, and evaluations shall be made available, upon request, to the person.

2. The director may recommend to the agency that a waste be classified as a hazardous waste because it has one or more of the properties of a hazardous waste or because the waste cannot be handled by routine waste management techniques because it poses a substantial or potential hazard to human health or other living organisms. The director shall notify the person producing the waste in writing of the recommendation and the person shall have at least thirty (30) days to submit any additional material or written comments to the agency before the agency makes a determination. The agency shall notify the person in writing of its decision. The agency shall hold a contested case hearing pursuant to Minn. Stat. §§ 15.0418 et seq. upon request of the person producing the waste.

3. In the event the director recommends that a waste be classified as a hazardous waste, the waste shall be managed as a hazardous waste and the person who produces the waste shall be considered a generator until the agency has determined whether the waste is hazardous or until six months after the date of the director's recommendation, whichever occurs first, provided, however, that the person shall not be required to obtain a Hazardous Waste Facility Permit for storage of the waste on-site during this time. Any such recommendation by the director shall be considered by the agency on an expeditious basis.

Rules as Proposed (all new material)

6 MCAR § 4.9131 Criteria for listing hazardous waste.

A. Criteria used by the agency for listing hazardous waste. The agency shall list a waste as hazardous if:

1. the waste exhibits any of the characteristics of hazardous waste in 6 MCAR § 4.9132;
2. the waste has been found to be fatal to humans in low doses or, in the absence of data on human toxicity, it has been shown in studies to have an oral median lethal dose toxicity (rat) of less than 50 milligrams per kilogram, an inhalation median lethal concentration toxicity (rat) of less than 2 milligrams per liter, or a dermal median lethal dose toxicity (rabbit) of less than 200 milligrams per kilogram, or is otherwise capable of causing or significantly contributing to an increase in serious irreversible, or incapacitating reversible, illness; or
3. the waste contains any of the toxic constituents listed in 6 MCAR § 4.9137 unless the agency concludes that the waste is not capable of posing a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed, or otherwise managed. The agency shall consider the following factors when it makes this decision:
 - a. the nature of the toxicity presented by the constituent;
 - b. the concentration of the constituent in the waste;
 - c. the potential of the constituent or any toxic degradation product of the constituent to migrate from the waste into the environment under the types of improper management considered in g.;
 - d. the persistence of the constituent or any toxic degradation product of the constituent;
 - e. the potential for the constituent or any toxic degradation product of the constituent to degrade into nonharmful constituents and the rate of degradation;
 - f. the degree to which the constituent or any degradation product of the constituent bioaccumulates in ecosystems;
 - g. the plausible types of improper management to which the waste could be subjected;
 - h. the quantities of the waste generated at individual generation sites or on a regional or national basis;
 - i. the nature and severity of the human health and environmental damage that has occurred as a result of the improper management of wastes containing the constituent;
 - j. action taken by other governmental agencies or regulatory programs based on the health or environmental hazard posed by the waste or waste constituent; and
 - k. other factors as may be appropriate.

B. Classes of wastes. The agency may list classes or types of waste as hazardous waste if there is reason to believe that individual wastes, within the class or type of waste, typically or frequently are hazardous under the definition of hazardous waste in 6 MCAR § 4.9100.

C. Acute and toxic wastes. Waste listed in accordance with the criteria of A.2. shall be designated acute hazardous waste. Waste listed in accordance with the criteria of A.3. or which exhibits the characteristic of toxicity under A.1. shall be designated as toxic waste. Substances shall be listed in 6 MCAR § 4.9137 only if they have been shown in scientific studies to have toxic, carcinogenic, mutagenic, or teratogenic effects on humans or other life forms.

D. Director's recommendation. The director may recommend to the agency that a specific generator's waste be classified as a hazardous waste because it meets one or more of the criteria in 6 MCAR § 4.9132 A., or because the waste cannot be handled by routine waste management techniques because it poses a substantial or potential hazard to human health or other living organisms. If the director makes such a recommendation, the procedures in 6 MCAR § 4.9209 shall be followed.

6 MCAR § 4.9132 Characteristics of hazardous waste.

A. In general. A waste which is not excluded from regulation as a hazardous waste under 6 MCAR § 4.9128 C. is a hazardous waste if it exhibits ignitability, oxidativity, corrosivity, reactivity, toxicity, or Extraction Procedure (EP) toxicity.

B. Ignitability.

1. A waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties:

a. It is a liquid, other than an aqueous solution containing less than 24 percent alcohol by volume, and has a flash point less than 60 degrees Celsius (140 degrees Fahrenheit), as determined by a Pensky-Martens Closed Cup Tester using the test method specified in Standard D-93-79 or D-93-80 in the 'Annual Book of ASTM Standards,' issued by the American Society for Testing and Materials (Philadelphia, 1982), a Tag Closed Cup Tester using the test method specified in Standard D-56-70 in the 'Annual Book of ASTM Standards,' issued by the American Society for Testing and Materials (Philadelphia, 1982), or a Setaflash Closed Cup Tester using the test method specified in Standard D-3278-78 in the 'Annual Book of ASTM Standards,' issued by the American Society for Testing and Materials (Philadelphia, 1982), or as determined by an equivalent test method approved by the director under the procedures set forth in 6 MCAR § 4.9103 A.;

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; or

c. It is an ignitable compressed gas as defined in Code of Federal Regulations, title 49, section 173.300 (1981) and as determined by the test methods described in that regulation or equivalent test methods approved by the director under 6 MCAR § 4.9103 A.

2. A waste that exhibits the characteristic of ignitability, but is not listed as a hazardous waste in 6 MCAR § 4.9134, has the hazardous waste number of D001.

C. Oxidizers.

1. A waste exhibits the characteristics of an oxidizer if a representative sample of the waste has the following properties:

a. It is an oxidizer as defined in Code of Federal Regulations, title 49, section 173.151 (1981); or

b. It readily supplies oxygen to a reaction in the absence of air. Oxidative materials include, but are not limited to, oxides, organic and inorganic peroxides, permanganates, perhenates, chlorates, perchlorates, persulfates, nitric acid, organic and inorganic nitrates, iodates, periodates, bromates, perselenates, perbromates, chromates, dichromates, ozone and perborates. Bromine, chlorine, fluorine and iodine react similarly to oxygen under some conditions and are therefore also oxidative materials.

2. A waste that exhibits the characteristics of an oxidizer, but is not listed as a hazardous waste in 6 MCAR § 4.9134, has the hazardous waste number of D001.

D. Corrosivity.

1. A waste exhibits the characteristic of corrosivity if a representative sample of the waste has any of the following properties:

a. It is aqueous and has a pH less than or equal to 3 or greater than or equal to 12.5, as determined by a pH meter using either the test method in the "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods" issued by the

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United States Environmental Protection Agency, publication number SW 846 (1980) (also described in "Methods for Chemical Analysis of Water and Waste" issued by the United States Environmental Protection Agency, publication number 600/7-79-020 (March 1979), or an equivalent test method approved by the agency under the procedures set forth in 6 MCAR § 4.9131 A.; or

b. It is liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 55 degrees Celsius (130 degrees Fahrenheit) as determined by the test method specified in National Association of Corrosion Engineers Standard TM-01-69 as standardized in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods," issued by the United States Environmental Protection Agency, publication number SW 846 (1980) or an equivalent test method approved by the director under the procedures set forth in 6 MCAR § 4.9103 A.

2. A generator may use the optional tests in a.-c. to evaluate a potentially corrosive waste.

a. A generator having an aqueous waste with a pH of 12.5 or greater may choose to conduct the irritation test described in 3. if he believes that the waste will have little potential for damage. If the waste is not hazardous by the irritation test, the waste is exempt unless it has some other hazardous property.

b. A generator with an aqueous waste with a pH between 2 and 3 may choose to conduct the irritation test described in 4. if he believes the waste will have little potential for damage. If the waste is not hazardous according to that irritation test and is not hazardous according to the corrosion test in 1.b., the waste is exempt unless it has other hazardous properties.

c. A generator with a nonaqueous waste may elect to use the following procedure. The person may prepare an aqueous solution that contains equal parts of the waste and water and test it for pH. If the pH of the solution is greater than or equal to 12.5 or less than or equal to 3, the person may classify the waste as a corrosive waste in lieu of evaluating the waste for the criteria by the procedure in D. If the person elects not to classify the nonaqueous waste as a corrosive waste or if the pH of the solution is less than or equal to 12.5 or greater than or equal to 3, additional evaluation to determine corrosivity must be performed.

3. A waste which has a pH of between 2 and 3 or greater than 12.5 may be determined to be nonhazardous if it does not exhibit skin irritation of an empirical score of five or more as determined pursuant to Code of Federal Regulations, title 16, section 1500.41 (1981).

4. A waste that exhibits the characteristic of corrosivity, but is not listed as a hazardous waste in 6 MCAR § 4.9134, has the hazardous waste number of D002.

E. Reactivity.

1. A waste exhibits the characteristic of reactivity 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 which, when exposed to pH conditions between 2 and 12.5 can generate toxic gases, vapors, or fumes in a quantity sufficient to present a danger to human health or the environment;
- 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; or
- h. It is a forbidden explosive as defined in Code of Federal Regulations, title 49, section 173.51 (1981), a Class A explosive as defined in Code of Federal Regulations, title 49, section 173.53 (1981), or a Class B explosive as defined in Code of Federal Regulations, title 49, Section 173.88 (1981).

2. A waste that exhibits the characteristic of reactivity, but is not listed as a hazardous waste in 6 MCAR § 4.9134, has the hazardous waste number of D003.

F. Toxicity.

1. A waste exhibits the characteristic of toxicity as determined in 2., if a representative sample of the waste has any one of the following properties:

- a. an oral median lethal dose less than 500 milligrams of material per kilogram of body weight of test animal;
- b. a dermal median lethal dose less than 1,000 milligrams of material per kilogram of body weight of test animal;

c. an inhalation median lethal concentration of less than 2,000 milligrams of material per cubic meter of air, if the material or a component is in a form that may be inhaled as a dust or mist; or

d. an inhalation median lethal concentration of less than 1,000 parts per million of material per million parts of air, if the material or component may be inhaled as gas or vapor.

2. Toxicity shall be determined by applying knowledge of materials and processes used, including reasonably available information on the toxicity of the components of the waste. If available information and knowledge are insufficient to reasonably determine toxicity, the generator must notify the director. The director may order additional evaluation as specified in 6 MCAR § 4.9208. Additional evaluation may include testing according to the specifications of 3.

3. Toxicity shall be determined as described in a.-c. .

a. Oral median lethal dose shall be determined by a test in which the specified time is 14 days, the group of test animals is at least ten white laboratory rats of 200 to 300 grams each, half of which are male and half of which are female, and the route of administration is a single oral dose.

b. Dermal median lethal dose shall be determined by a test in which the specified time is 14 days and the group of test animals is ten or more white rabbits.

c. Inhalation median lethal concentration shall be determined by a test in which the specified time is 14 days, the group of the test animals is at least ten white laboratory rats of 200 to 300 grams each, half of which are male and half of which are female, and the route of administration is continuous respiratory exposure for a period of one hour.

4. A waste that exhibits the characteristics of toxicity, but is not listed as a hazardous waste in 6 MCAR § 4.9134, has the hazardous waste number M001.

G. Extraction procedure (EP) toxicity.

1. A waste exhibits the characteristic of extraction procedure (EP) toxicity if, using the test methods described in Code of Federal Regulations, title 40, part 261, appendix II (1981), or equivalent methods approved by the director under the procedures set forth in 6 MCAR § 4.9103 A., the extract from a representative sample of the waste contains any of the contaminants listed in Exhibit 6 MCAR § 4.9132 G.3.-1 at a concentration equal to or greater than the respective value given in that table. Where the waste contains less than 0.5 percent filterable solids, the waste itself, after filtering, is considered to be the extract.

2. A waste that exhibits the characteristic of extraction procedure (EP) toxicity, but is not listed as a hazardous waste in 6 MCAR § 4.9134, has the hazardous waste number specified in Exhibit 6 MCAR § 4.9132 G.3.-1 which corresponds to the toxic contaminant causing it to be hazardous.

3. If the concentration of a constituent in a waste is known and that constituent is listed in Exhibit 6 MCAR § 4.9132 G.3.-1., the maximum possible concentration in the extract can be calculated on the assumption that 100 percent of the constituent will be extracted. If the calculated maximum possible concentration in the extract is less than the limit listed in Exhibit 6 MCAR § 4.9132 G.3.-1, the waste is not a hazardous waste because of the subject constituent.

Exhibit 6 MCAR § 4.9132 G.3.-1

**Maximum Concentration of Contaminants for
Characteristic of Extraction Procedure (EP) Toxicity**

Hazardous waste number	Contaminant	Maximum concentration (milligrams per liter)
D004	Arsenic	5.0
D005	Barium	100.0
D006	Cadmium	1.0
D007	Chromium VI	5.0
D008	Lead	5.0
D009	Mercury	0.2

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D010	Selenium	1.0
D011	Silver	5.0
D012	Endrin (1,2,3,4,10,10-hexachloro-1,7-epoxy 1,4,4a,5,6,7,8,8a-octahydro-1,4-endo, endo 5,8-dimethano naphthalene)	0.02
D013	Lindane (1,2,3,4,5,6-hexachlorocyclohexane, gamma isomer)	0.4
D014	Methoxychlor (1,1,1-Trichloro-2,2-bis [p-methoxyphenyl] ethane)	10.0
D015	Toxaphene (C -H -Cl, Technical chlorinated camphene, 67-69 percent chlorine)	0.5
D016	2,4-D (2,4-Dichlorophenoxyacetic acid)	10.0
D017	2,4,5-TP Silvex (2,4,5- Trichlorophenoxypropionic acid)	1.0

5 MCAR § 4.9133 Exemption from listing due to toxicity.

A. In general. A specific generator's waste that meets any of the toxicity characteristics as described in 6 MCAR § 4.9132 F.1. and F.2. may be exempted from regulation under 6 MCAR §§ 4.9128-4.9137 if the generator can demonstrate to the satisfaction of the agency that the waste is not capable of posing a present or potential hazard to human health and the environment if the waste were to be improperly treated, transported, stored, disposed, or managed under routine waste management methods.

B. Factors to be considered. In demonstrating that a waste should be exempt from regulation under 6 MCAR §§ 4.9200-4.9560, the generator must present information related to the following factors:

1. the nature of the toxicity displayed by the waste;
2. the median lethal dose or median lethal concentration of the entire waste and each of the toxic constituents within the waste;
3. the toxic constituent or constituents present in the waste and the respective concentrations;
4. the quantity of the waste produced by the generator on an annual basis;
5. the types of improper or routine waste management to which the waste could be subjected;
6. based upon the improper or routine waste management methods considered in 5., the following factors:
 - a. the potential of the toxic constituent or constituents or any toxic degradation product or products to migrate from the waste into the environment;
 - b. the persistence of the toxic constituent or constituents or any toxic degradation product or products;
 - c. the degree to which the toxic constituent or constituents or any toxic degradation product or products may bioaccumulate in the environment;
 - d. the potential for the toxic constituents or constituents of any toxic degradation product or products to degrade into nonhazardous constituents and the rate of degradation; and
 - e. the potential nature and severity of the human health and environmental damage which may result; and
7. other factors required by the agency.

6 MCAR § 4.9134 Lists of hazardous wastes.

A. General.

1. A waste is a hazardous waste if it is listed under B.-E. unless it has been excluded from the list under 6 MCAR § 4.9103 B.
2. The basis for listing the classes or types of wastes listed in B.-E. is indicated by employing one or more of the following Hazard Codes:
 - a. Ignitable Waste, (I);
 - b. Corrosive Waste, (C);
 - c. Reactive Waste, (R);
 - d. EP Toxic Waste, (E);
 - e. Acute Hazardous Waste, (H); and
 - f. Toxic Waste, (T).

The Constituent which caused the agency to list the waste as an EP Toxic Waste (E) or Toxic Waste (T) in B. and C. is identified in 6 MCAR § 4.9136.

3. Each listed hazardous waste is assigned a hazardous waste number which precedes the name of the waste. This number must be used in complying with the disclosure requirements of 6 MCAR §§ 4.9200-4.9222 and certain record keeping and reporting requirements under 6 MCAR §§ 4.9200-4.9560 and the agency's permitting procedures.

4. Some of the hazardous wastes listed in B. or C. have exclusion limits that refer to 6 MCAR § 4.9210 A.3.

B. Hazardous wastes from nonspecific sources. Hazardous wastes from nonspecific sources are listed in Exhibit 6 MCAR § 4.9134 B.-1.

Exhibit 6 MCAR § 4.9134 B.-1

Hazardous Wastes From Nonspecific Sources

Hazardous Waste No.	Hazardous Waste	Hazard Code
Generic:		
F001	The following spent halogenated solvents used in degreasing: tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons, and sludges from the recovery of these solvents in degreasing operations	(T)
F002	The following spent halogenated solvents: tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, orthodichlorobenzene, and trichlorofluoromethane, and the still bottoms from the recovery of these solvents	(T)
F003	The following spent non-halogenated solvents: xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and the still bottoms from the recovery of these solvents	(I)
F004	The following spent nonhalogenated solvents: cresols and cresylic acid, and nitrobenzene, and the still bottoms from the recovery of these solvents	(T)
F005	The following spent nonhalogenated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol, and pyridine, and the still bottoms from the recovery of these solvents	(I,T)
F006	Wastewater treatment sludges from electroplating operations except from the following processes: (1) sulfuric acid anodizing of aluminum, (2) tin plating on carbon steel, (3) zinc plating (segregated basis) on carbon steel, (4) aluminum or zinc-aluminum plating on carbon steel, (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel, and (6) chemical etching and milling of aluminum	(T)
F019	Wastewater treatment sludges from the chemical conversion coating of aluminum	(T)
F007	Spent cyanide plating bath solutions from electroplating operations, except for precious metals electroplating spent cyanide plating bath solutions	(R,T)

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F008	Plating bath sludges from the bottom of plating baths from electroplating operations where cyanides are used in the process, except for precious metals electroplating plating bath sludges	(R,T)
F009	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process, except for precious metals electroplating spent stripping and cleaning bath solutions	(R,T)
F010	Quenching bath sludge from oil baths from metal heat-treating operations where cyanides are used in the process, except for precious metals heat-treating quenching bath sludges	(R,T)
F011	Spent cyanide solutions from salt bath pot cleaning from metal heat-treating operations, except for precious metals heat-treating spent cyanide solutions from salt bath pot cleaning	(R,T)
F012	Quenching wastewater treatment sludges from metal heat-treating operations where cyanides are used in the process, except for precious metals heat-treating quenching wastewater treatment sludges	(T)

C. Hazardous waste from specific sources. Hazardous wastes from specific sources are listed in Exhibit 6 MCAR § 4.9134 C.-2.

Exhibit 6 MCAR § 4.9134 C.-2 Hazardous Wastes From Specific Sources

Industry and Hazardous Waste No.	Hazardous Waste	Hazard Code
Wood Preservation:		
K001	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote or pentachlorophenol	(T)
Inorganic Pigments:		
K002	Wastewater treatment sludge from the production of chrome yellow and orange pigments	(T)
K003	Wastewater treatment sludge from the production of molybdate orange pigments	(T)
K004	Wastewater treatment sludge from the production of zinc yellow pigments	(T)
K005	Wastewater treatment sludge from the production of chrome green pigments	(T)
K006	Wastewater treatment sludge from the production of chrome oxide green pigments, anhydrous and hydrated	(T)
K007	Wastewater treatment sludge from the 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 acetaldehyde from ethylene	(T)

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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 (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/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)

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PROPOSED RULES

K096.....	Heavy ends from the heavy ends columns 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/aniline production	(T)
K085.....	Distillation or 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)
Inorganic Chemicals:		
K071.....	Brine purification muds from the mercury cell process in chlorine production, when separately prepurified brine is not used	(T)
K073.....	Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphic 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 monosodium methanearsonate (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)

PROPOSED RULES

K042.....	Heavy ends or 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)
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/red water from operations involving 2,4,6 trinitrotoluene (TNT)	(R)
Petroleum Refining:		
K048.....	Dissolved air flotation (DAF) float from the petroleum refining industry	(T)
K049.....	Stop oil emulsion solids from the petroleum refining industry	(T)
K050.....	Heat exchanger bundle cleaning sludge from the petroleum refining industry	(T)
K051.....	American Petroleum Institute separator sludge from the petroleum refining industry as specified in 'The Manual on Disposal of Refinery Wastes,' volume 1, issued by the American Petroleum Institute, (Washington, D.C., 1969), available at the State of Minnesota Law Library	(T)
K052.....	Tank bottoms (lead) from the petroleum refinery industry	(T)
Iron and Steel:		
K061.....	Emission control dust or sludge from the primary production of steel in electric furnaces	(T)
K062.....	Spent pickle liquor from steel finishing operations	(C,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 or 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	(T)

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PROPOSED RULES

in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds

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)

Coke:

K060..... Ammonia still lime sludge from coking operations (T)

K087..... Decanter tank tar sludge from coking operations (T)

D. Discarded commercial chemical products, off-specification species, containers, and spill residues. The following materials or items are hazardous wastes if and when they are discarded or intended to be discarded:

1. any commercial chemical product, or manufacturing chemical intermediate having the generic name listed in 5. or 6.;
2. any off-specification commercial chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in 5. or 6.;
3. any residue remaining in a container or inner liner removed from a container that has held any commercial chemical product or manufacturing chemical intermediate having the generic names listed in 5., unless the container or inner liner is empty as defined in 6 MCAR § 4.9130 C.; and
4. any residue or contaminated soil, water, or other debris resulting from the cleanup of a spill, into or on any land or water, of any commercial chemical product or manufacturing chemical intermediate having the generic name listed in 5. or 6.
5. the commercial chemical products or manufacturing chemical intermediates, or off-specification commercial chemical products or manufacturing chemical intermediates referred to in 1.-4. are identified as acute hazardous wastes (H) and are subject to the small quantity exclusion defined in 6 MCAR § 4.9210. The primary hazardous properties of these materials have been indicated by the letters T (Toxicity), and R (Reactivity). Absence of a letter indicates that the compound only is listed for acute toxicity. These wastes and their corresponding Hazardous Waste Numbers are listed in Exhibit 6 MCAR § 4.9134 D.5.-3.

Exhibit 6 MCAR § 4.9134 D.5.-3

Hazardous Wastes from Commercial Chemical Products

Hazardous Waste No.	Substance	Hazard Code
P023	Acetaldehyde, chloro-	
P002	Acetamide, N-(aminothioxomethyl)-	
P057	Acetamide, 2-fluoro-	
P058	Acetic acid, fluoro-, sodium salt	
P066	Acetimide acid, N-[(methylcarbamoyl)oxy] thio-, methyl ester	
P001	3-(alpha-Acetylbenzyl)-4-hydroxycoumarin and salts	
P002	1-Acetyl-2-thiourea	
P003	Acrolein	
P070	Aldicarb	
P004	Aldrin	
P005	Allyl alcohol	
P006	Aluminum phosphide	(R,T)
P007	5-(Aminomethyl)-3-isoxazolol	
P008	4-Aminopyridine	
P009	Ammonium picrate	(R)
P119	Ammonium vanadate	
P010	Arsenic acid	

P012	Arsenic (III) oxide
P011	Arsenic (V) oxide
P011	Arsenic pentoxide
P012	Arsenic trioxide
P038	Arsine, diethyl-
P054	Aziridine
P013	Barium cyanide
P024	Benzenamine, 4-chloro-
P077	Benzenamine, 4-nitro-
P028	Benzene, (chloromethyl)-
P042	1,2-Benzenediol, 4-[1-hydroxy-2-(methyl-amino)ethyl]-
P014	Benzenethiol
P028	Benzyl chloride
P015	Beryllium dust
P016	Bis(chloromethyl) ether
P017	Bromoacetone
P018	Brucine
P021	Calcium cyanide
P123	Camphene, octachloro-
P103	Carbamimidoseleonic acid
P022	Carbon bisulfide
P022	Carbon disulfide
P095	Carbonyl chloride
P033	Chlorine cyanide
P023	Chloroacetaldehyde
P024	p-Chloroaniline
P026	1-(o-Chlorophenyl)thiourea
P027	3-Chloropropionitrile
P029	Copper cyanides
P030	Cyanides (soluble cyanide salts), not elsewhere specified
P031	Cyanogen
P033	Cyanogen chloride
P036	Dichlorophenylarsine
P037	Dieldrin
P038	Diethylarsine
P039	0,0-Diethyl S-[2-(ethylthio)ethyl] phosphorodithioate
P041	Diethyl-p-nitrophenyl phosphate

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PROPOSED RULES

P040	0,0-Diethyl 0-pyrazinyl phosphorothioate	
P043	Diisopropyl fluorophosphate	
P044	Dimethoate	
P045	3,3-Dimethyl-1-(methylthio)-2-butanone, 0-[(methylamino)carbonyl] oxime	
P071	0,0-Dimethyl 0-p-nitrophenyl phosphorothioate	
P082	Dimethylnitrosamine	
P046	alpha, alpha-Dimethylphenethylamine	
P047	4,6-Dinitro-o-cresol and salts	
P034	4,6-Dinitro-o-cyclohexylphenol	
P048	2,4-Dinitrophenol	
P020	Dinoseb	
P085	Diphosphoramidate, octamethyl-	
P039	Disulfoton	
P049	2,4-Dithiobiuret	
P109	Dithiopyrophosphoric acid, tetraethyl ester	
P050	Endosulfan	
P088	Endothall	
P051	Endrin	
P042	Epinephrine	
P046	Ethanamine, 1,1-dimethyl-2-phenyl-	
P084	Ethenamine, N-methyl-N-nitroso-	
P101	Ethyl cyanide	
P054	Ethylenimine	
P097	Famphur	
P056	Fluorine	
P057	Fluoroacetamide	
P058	Fluoroacetic acid, sodium salt	
P065	Fulminic acid, mercury(I) salt	(R,T)
P059	Heptachlor	
P051	1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a- octahydro-endo,endo-1,4,5,8-dimethanonaphthalene	
P037	1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a- octahydro-endo,exo-1,4,5,8-dimethanonaphthalene	
P060	1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4,5,8- endo, endo-dimethano-naphthalene	
P004	1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4,5,8- endo, exo-dimethanonaphthalene	
P060	Hexachlorohexahydro-endo,endo-dimethanonaphthalene	
P062	Hexaethyl tetraphosphate	
P116	Hydrazinecarbothioamide	
P068	Hydrazine, methyl-	
P063	Hydrocyanic acid	

P063	Hydrogen cyanide	
P096	Hydrogen phosphide	
P064	Isocyanic acid,methyl ester	
P007	3(2H)-Isoxazolone,5-(aminomethyl)-	
P092	Mercury, (acetato-0)phenyl-	
P065	Mercury fulminate	(R,T)
P016	Methane, oxybis(chloro-	
P112	Methane, tetranitro-	(R)
P118	Methanethiol, trichloro-	
P059	4, 7-Methano-1H-indene, 1,4,5,6,7,8,8-hep-tachloro-3a,4,7,7a-tetrahydro-	
P066	Methomyl	
P067	2-Methylaziridine	
P068	Methyl hydrazine	
P064	Methyl isocyanate	
P069	2-Methylactonitrile	
P071	Methyl parathion	
P072	alpha-Naphthylthiourea	
P073	Nickel carbonyl	
P074	Nickel cyanide	
P074	Nickel(II) cyanide	
P073	Nickel tetracarbonyl	
P075	Nicotine and salts	
P076	Nitric oxide	
P077	p-Nitroaniline	
P078	Nitrogen dioxide	
P076	Nitrogen(II) oxide	
P078	Nitrogen (IV) oxide	
P081	Nitroglycerine	(R)
P082	N-Nitrosodimethylamine	
P084	N-Nitrosomethylvinylamine	
P050	5-Norbornene-2,3-dimethanol, 1,4,5,6,7,7-hexachloro, cyclic sulfite	
P085	Octamethylpyrophosphoramide	
P087	Osmium oxide	
P087	Osmium tetroxide	
P088	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid	
P089	Parathion	

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PROPOSED RULES

P034	Phenol, 2-cyclohexyl-4,6-dinitro-	
P048	Phenol, 2,4-dinitro-	
P047	Phenol, 2,4-dinitro-6-methyl-, and salts	
P020	Phenol, 2,4-dinitro-6-(1-methylpropyl)-	
P009	Phenol, 2,4,6-trinitro-ammonium salt	(R)
P036	Phenyl dichloroarsine	
P092	Phenylmercuric acetate	
P093	N-Phenylthiourea	
P094	Phorate	
P095	Phosgene	
P096	Phosphine	
P041	Phosphoric acid, diethyl p-nitrophenyl ester	
P044	Phosphorodithioic acid, 0,0-dimethyl S-[2-(methylamino)-2-oxoethyl]ester	
P043	Phosphorofluoridic acid, bis(1-methylethyl)-ester	
P094	Phosphorothioic acid, 0,0-diethyl S-(ethylthio)methyl ester	
P089	Phosphorothioic acid, 0,0-diethyl 0-(p-nitrophenyl) ester	
P040	Phosphorothioic acid, 0,0-diethyl 0-pyrazinyl ester	
P097	Phosphorothioic acid, 0,0-dimethyl 0-[p-((dimethylamino)-sulfonyl)phenyl]ester	
P110	Plumbane, tetraethyl-	
P098	Potassium cyanide	
P099	Potassium silver cyanide	
P070	Propanal, 2-methyl-2-(methylthio), 0- [(methylamino)carbonyl]oxime	
P101	Propanenitrile	
P027	Propanenitrile, 3-chloro-	
P069	Propanenitrile, 2-hydroxy-2-methyl-	
P081	1,2,3-Propanetriol, trinitrato-	(R)
P017	2-Propanone, 1-bromo	
P102	Propargyl alcohol	
P003	2-Propenal	
P005	2-Propen-1-ol	
P067	1,2-Propylenimine	
P102	2-Propyn-1-ol	
P008	4-Pyridinamine	
P075	Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)-, and salts	
P111	Pyrophosphoric acid, tetraethyl ester	
P103	Selenourea	
P104	Silver cyanide	
P105	Sodium azide	
P106	Sodium cyanide	
P107	Strontium sulfide	

P108	Strychnidin-10-one, and salts	
P018	Strychnidin-10-one, 2,3-dimethoxy-	
P108	Strychnine and salts	
P115	Sulfuric acid, thallium(I) salt	
P109	Tetraethyldithiopyrophosphate	
P110	Tetraethyl lead	
P111	Tetraethylpyrophosphate	
P112	Tetranitromethane	(R)
P062	Tetraphosphoric acid, hexaethyl ester	
P113	Thallic oxide	
P113	Thallium (III) oxide	
P114	Thallium (I) selenide	
P115	Thallium (I) sulfate	
P045	Thiofanox	
P049	Thioimidodicarbonic diamide	
P014	Thiophenol	
P116	Thiosemicarbazide	
P026	Thiourea, (2-chlorophenyl)-	
P072	Thiourea, 1-naphthalenyl-	
P093	Thiourea, phenyl-	
P123	Toxaphene	
P118	Trichloromethanethiol	
P119	Vanadic acid, ammonium salt	
P120	Vanadium pentoxide	
P120	Vanadium(V) oxide	
P001	Warfarin	
P121	Zinc cyanide	
P122	Zinc phosphide	(R,T)

6. The commercial chemical products or manufacturing chemical intermediates, or off-specification commercial chemical products referred to in 1., 2., and 4., are identified as toxic wastes (T) unless otherwise designated and are subject to the small quantity exclusion defined in 6 MCAR § 4.9210. The primary hazardous properties of these materials have been indicated by the letters T (Toxicity), R (Reactivity), I (Ignitability), and C (Corrosivity). Absence of a letter indicates that the compound is only listed for toxicity. These wastes and their corresponding Hazardous Waste Numbers are listed in Exhibit 6 MCAR § 4.9134 D.6.-4.

Exhibit 6 MCAR § 4.9134 D.6.-4

Hazardous Wastes from Commercial Chemical Products

Hazardous Waste No.	Substance	Hazard Code
U001	Acetaldehyde	(I)
U034	Acetaldehyde, trichloro-	

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PROPOSED RULES

U187.....	Acetamide, N-(4-ethoxyphenyl)-	
U005.....	Acetamide, N-9H-fluoren-2-yl	
U112.....	Acetic acid, ethyl ester	(I)
U144.....	Acetic acid, lead salt	
U214.....	Acetic acid, thallium(I) salt	
U002.....	Acetone	(I)
U003.....	Acetonitrile	(I,T)
U004.....	Acetophenone	
U006.....	Acetyl chloride	(C,R,T)
U005.....	2-Acetylaminofluorene	
U007.....	Acrylamide	
U008.....	Acrylic acid	(I)
U009.....	Acrylonitrile	
U150.....	Alanine, 3-[p-bis(2-chloroethyl) amino] phenyl-, L-	
U011.....	Amitrole	
U012.....	Aniline	(I,T)
U014.....	Auramine	
U015.....	Azaserine	
U010.....	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-,	
U018.....	Benz[a]anthracene	
U016.....	Benz[c]acridine	
U157.....	Benz[j]aceanthrylene, 1,2-dihydro -3-methyl	
U016.....	3,4-Benzacridine	
U017.....	Benzal chloride	
U018.....	1,2-Benzanthracene	
U094.....	1,2-Benzanthracene, 7, 12-dimethyl-	
U012.....	Benzenamine	(I,T)
U093.....	Benzenamine, N,N'-dimethyl-4- (phenylazo)-	
U181.....	Benzenamine, 2-methyl-5-nitro	
U222.....	Benzenamine, 2-methyl-, hydrochloride	
U014.....	Benzenamine, 4,4'-carbonimidoylbis (N,N-dimethyl-	
U158.....	Benzenamine, 4,4'-methylenebis (2-chloro-	
U049.....	Benzenamine, 4-chloro-2-methyl-	
U019.....	Benzene	(I,T)
U017.....	Benzene, (dichloromethyl)-	
U023.....	Benzene, (trichloromethyl)-	(C,R,T)
U055.....	Benzene, (1-methylethyl)-	(I)
U037.....	Benzene, chloro-	
U239.....	Benzene, dimethyl-	(I,T)
U127.....	Benzene, hexachloro-	
U056.....	Benzene, hexahydro-	(I)

PROPOSED RULES

U188.....	Benzene, hydroxy-	
U220.....	Benzene, methyl-	
U169.....	Benzene, nitro-	(I,T)
U183.....	Benzene, pentachloro-	
U185.....	Benzene, pentachloronitro-	
U207.....	Benzene, 1,2,4,5-tetrachloro-	
U070.....	Benzene, 1,2-dichloro-	
U090.....	Benzene, 1,2-methylenedioxy-4-propyl-	
U141.....	Benzene, 1,2-methylenedioxy-4-propenyl-	
U203.....	Benzene, 1,2-methylenedioxy-4-allyl-	
U234.....	Benzene, 1,3,5-trinitro-	(R,T)
U071.....	Benzene, 1,3-dichloro-	
U223.....	Benzene, 1,3-diisocyanatomethyl-	(R,T)
U072.....	Benzene, 1,4-dichloro	
U030.....	Benzene, 1-bromo-4-phenoxy-	
U105.....	Benzene, 1-methyl-1-2,4-dinitro-	
U106.....	Benzene, 1-methyl-2,6-dinitro-	
U038.....	Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)- alpha-hydroxy, ethyl ester	
U028.....	1,2-Benzenedicarboxylic acid, [bis(2-ethyl-hexyl)) ester	
U069.....	1,2-Benzenedicarboxylic acid, dibutyl ester	
U088.....	1,2-Benzenedicarboxylic acid, diethyl ester	
U102.....	1,2-Benzenedicarboxylic acid, dimethyl ester	
U107.....	1,2-Benzenedicarboxylic acid, di-n-octyl	
U190.....	1,2-Benzenedicarboxylic acid anhydride	
U201.....	1,3-Benzenediol	
U020.....	Benzenesulfonic acid chloride	(C,R)
U020.....	Benzenesulfonyl chloride	(C,R)
U085.....	2,2'Bioxirane	(I,T)
U021.....	Benzidine	
U202.....	1,2-Benzisothiazolin-3-one, 1,1-dioxide and salts	
U022.....	Benzo[a]pyrene	
U120.....	Benzo[j,k]fluorene	
U022.....	3,4-Benzopyrene	
U197.....	p-Benzoquinone	
U023.....	Benzotrichloride	(C,R,T)
U050.....	1,2-Benzphenanthrene	
U021.....	(1,1'-Biphenyl)-4,4'-diamine	

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PROPOSED RULES

U073.....	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-	
U091.....	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimeth-oxy-	
U095.....	1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethyl-	
U024.....	Bis(2-chloroethoxy) methane	
U027.....	Bis(2-chloroisopropyl) ether	
U244.....	Bis(dimethylthiocarbamoyl) disulfide	
U028.....	Bis(2-ethylhexyl) phthalate	
U246.....	Bromine cyanide	
U225.....	Bromoform	
U030.....	4-Bromophenyl phenyl ether	
U128.....	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	
U172.....	1-Butanamine, N-butyl-N-nitroso-	
U035.....	Butanoic acid, 4-[bis(2-chloroethyl) amino] benzene-	
U030.....	1-Butanol	(I)
U159.....	1-Butanone	(I,T)
U160.....	2-Butanone peroxide	(R,T)
U053.....	2-Butenal	
U074.....	2-Butene, 1,4-dichloro-	(I,T)
U031.....	n-Butyl alcohol	(I)
U136.....	Cacodylic acid	
U032.....	Calcium chromate	
U178.....	Carbamic acid, methylnitroso-, ethyl ester	
U238.....	Carbamic acid, ethyl ester	
U176.....	Carbamide, N-ethyl-N-nitroso-	
U177.....	Carbamide, N-methyl-N-nitroso-	
U219.....	Carbamide, thio-	
U097.....	Carbamoyl chloride, dimethyl-	
U188.....	Carbolic acid	
U033.....	Carbon oxyfluoride	(R,T)
U211.....	Carbon tetrachloride	
U215.....	Carbonic acid, dithallium(I) salt	
U156.....	Carbonochloridic acid, methyl ester	(I,T)
U033.....	Carbonyl fluoride	(R,T)
U026.....	Chlornaphazine	
U034.....	Chloral	
U035.....	Chlorambucil	
U036.....	Chlordane, technical	
U039.....	4-Chloro-m-cresol	
U049.....	4-Chloro-o-toluidine, hydrochloride	
U041.....	1-Chloro-2,3-epoxypropane	
U037.....	Chlorobenzene	
U038.....	Chlorobenzilate	

PROPOSED RULES

U043.....	Chloroethene	
U024.....	Bis(2-chloroethoxy) methane	
U042.....	2-Chloroethyl vinyl ether	
U026.....	N,N-Bis(2-chloroethyl)-2-naphthylamine	
U044.....	Chloroform	
U027.....	Bis(2-chloroisopropyl) ether	
U045.....	Chloromethane	
U046.....	Chloromethyl methy ether	
U047.....	beta-Chloronaphthalene	
U048.....	o-Chlorophenol	
U032.....	Chromic acid, calcium salt	
U050.....	Chrysene	
U051.....	Creosote	
U052.....	Cresols	
U052.....	Cresylic acid	
U053.....	Crotonaldehyde	
U055.....	Cumene	(I)
U246.....	Cyanogen bromide	
U197.....	1,4-Cyclohexadienedione	
U056.....	Cyclohexane	(I)
U057.....	Cyclohexanone	(I)
U130.....	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexa-chloro-	
U058.....	Cyclophosphamide	
U240.....	2,4-D, salts and esters	
U059.....	Daunomycin	
U060.....	(DDD) 1,1-(2,2-dichloroethylidene)-bis-4-chlorobenzene	
U061.....	(DDT) 1,1'-(2,2,2-trichloroethylidene)-bis-4-chlorobenzene	
U142.....	Decachlorooctahydro-1,3,4-metheno-2H-cyclobuta [c,d]-pentalen-2-one	
U062.....	Diallate	
U133.....	Diamine	(R,T)
U221.....	Diaminotoluene	
U063.....	Dibenz[a,h]anthracene	
U064.....	Dibenz[a,i]pyrene	
U063.....	1,2:5,6-Dibenzanthracene	
U064.....	Dibenzo[a,i]pyrene	
U064.....	1,2:7,8-Dibenzopyrene	
U066.....	1,2-Dibromo-3-chloropropane	

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PROPOSED RULES

U067.....	1,2-Dibromoethane	
U235.....	Tris (2,3-dibromopropyl) phosphate	
U069.....	Dibutyl phthalate	
U060.....	Dichloro diphenyl dichloroethane	
U061.....	Dichloro diphenyl trichloroethane	
U192.....	3,5-Dichloro-N- (1,1-dimethyl-2-propynyl) benzamide	
U074.....	1,4-Dichloro-2-butene	(I,T)
U062.....	S-(2,3-Dichloroallyl) diisopropylthiocarbamate	
U070.....	o-Dichlorobenzene	
U070.....	1,2-Dichlorobenzene	
U071.....	m-Dichlorobenzene	
U072.....	p-Dichlorobenzene	
U072.....	1,4-Dichlorobenzene	
U073.....	3,3'-Dichlorobenzidine	
U075.....	Dichlorodifluoromethane	
U076.....	1,1-Dichloroethane	
U077.....	1,2-Dichloroethane	
U025.....	Dichloroethyl ether	
U078.....	1,1-Dichloroethylene	
U079.....	1,2-Dichloroethylene	
U079.....	1,2-trans-dichloroethylene	
U080.....	Dichloromethane	
U017.....	Dichloromethylbenzene	
U081.....	2,4-Dichlorophenol	
U082.....	2,6-Dichlorophenol	
U240.....	2,4-Dichlorophenoxyacetic acid, salts and esters	
U083.....	1,2-Dichloropropane	
U084.....	1,3-Dichloropropene	
U085.....	1,2:3,4-Diepoxybutane	(I,T)
U088.....	Diethyl phthalate	
U087.....	0,0-Diethyl-S-methyl-dithiophosphate	
U108.....	1,4-Diethylene dioxide	
U086.....	N-N-Diethylhydrazine	
U086.....	1,2-Diethylhydrazine	
U089.....	Diethylstilbestrol	
U148.....	1,2-Dihydro-3,6-pyridazinedione	
U090.....	Dihydrosafrole	
U091.....	3,3'-Dimethoxybenzidine	
U102.....	Dimethyl phthalate	
U103.....	Dimethyl sulfate	
U092.....	Dimethylamine	(I)
U093.....	Dimethylaminoazobenzene	

U094.....	7,12-Dimethylbenz[a]anthracene	
U095.....	3,3'-Dimethylbenzidine	
U096.....	alpha, alpha-Dimethylbenzylhydroperoxide	(R)
U097.....	Dimethylcarbamoyl chloride	
U098.....	1,1-Dimethylhydrazine	
U099.....	1,2-Dimethylhydrazine	
U101.....	2,4-Dimethylphenol	
U244.....	Bis(dimethylthiocarbamoyl) disulfide	
U105.....	2,4-Dinitrotoluene	
U106.....	2,6-Dinitrotoluene	
U108.....	1,4-Dioxane	
U109.....	1,2-Diphenylhydrazine	
U110.....	Dipropylamine	(I)
U213.....	1,4-Epoxybutane	
U001.....	Ethanal	(I)
U174.....	Ethanamine, N-ethyl-N-nitroso-	
U184.....	Ethane, pentachloro-	
U131.....	Ethane, 1,1,1,2,2,2-hexachloro-	
U208.....	Ethane, 1,1,1,2-tetrachloro-	
U247.....	Ethane, 1,1,1-trichloro-2,2-bis (p-methoxy phenyl)	
U209.....	Ethane, 1,1,2,2-tetrachloro	
U227.....	Ethane, 1,1,2-trichloro	
U076.....	Ethane, 1,1-dichloro-	
U025.....	Ethane, 1,1'-oxybis[2-chloro-	
U024.....	Ethane, 1,1'[methylenebis(oxy)]bis [2-chloro-	
U067.....	Ethane, 1,2-dibromo-	
U077.....	Ethane, 1,2-dichloro-	
U117.....	Ethane, 1,1'-oxybis-	(I)
U114.....	1,2-Ethanedithiolbiscarbamodithioic acid	
U003.....	Ethanenitrile	(I,T)
U218.....	Ethanethioamide	
U173.....	Ethanol, 2,2'-(nitrosoimino)bis-	
U004.....	Ethanone, 1-phenyl-	
U006.....	Ethanoyl chloride	(C,R,T)
U043.....	Ethene, chloro-	
U079.....	Ethene, trans-1,2-dichloro-	
U210.....	Ethene, 1,1,2,2-tetrachloro-	
U078.....	Ethene, 1,1-dichloro-	

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PROPOSED RULES

U042.....	Ethene, 2-chloroethoxy-	
U112.....	Ethyl acetate	(I)
U113.....	Ethyl acrylate	(I)
U238.....	Ethyl carbamate (urethan)	
U117.....	Ethyl ether	(I)
U118.....	Ethyl methacrylate	
U119.....	Ethyl methanesulfonate	
U038.....	Ethyl 4,4'-dichlorobenzilate	
U067.....	Ethylene dibromide	
U077.....	Ethylene dichloride	
U115.....	Ethylene oxide	(I,T)
U116.....	Ethylene thiourea	
U114.....	Ethylenebis (dithiocarbamic acid), salts and esters	
U028.....	Bis(2-ethylhexyl) phthalate	
U076.....	Ethylidene dichloride	
U003.....	Ethylnitrite	
U139.....	Ferric dextran	
U120.....	Fluoranthene	
U122.....	Formaldehyde	
U123.....	Formic acid	(C,T)
U124.....	Furan	(I)
U213.....	Furan, tetrahydro-	(I)
U125.....	2-Furancarboxaldehyde	(I)
U147.....	2,5-Furandione	
U125.....	Furfural	(I)
U124.....	Furfuran	(I)
U206.....	D-Glucopyranose, 2-deoxy-2(3-methyl-3-nitroso-ureido)	
U126.....	Glycidylaldehyde	
U163.....	Guanidine, N-nitroso-N-methyl-N'-nitro-	
U127.....	Hexachlorobenzene	
U128.....	Hexachlorobutadiene	
U129.....	Hexachlorocyclohexane (gamma isomer)	
U130.....	Hexachlorocyclopentadiene	
U131.....	Hexachloroethane	
U132.....	Hexachlorophene	
U243.....	Hexachloropropene	
U133.....	Hydrazine	(R,T)
U098.....	Hydrazine, 1,1-dimethyl-	
U086.....	Hydrazine, 1,2-diethyl-	
U099.....	Hydrazine, 1,2-dimethyl-	
U109.....	Hydrazine, 1,2-diphenyl-	
U134.....	Hydrofluoric acid	(C,T)

PROPOSED RULES

U134.....	Hydrogene fluoride	(C,T)
U135.....	Hydrogen sulfide	
U136.....	Hydroxydimethylarsine oxide	
U116.....	2-Imidazolidinethione	
U137.....	Indeno[1,2,3-cd]pyrene	
U138.....	Iodomethane	
U139.....	Iron dextran	
U140.....	Isobutyl alcohol	(I,T)
U141.....	Isosafrole	
U142.....	Kepone	
U143.....	Lasiocarpine	
U144.....	Lead acetate	
U145.....	Lead phosphate	
U146.....	Lead subacetate	
U129.....	Lindane	
U147.....	Maleic anhydride	
U148.....	Maleic hydrazide	
U149.....	Malononitrile	
U150.....	Melphalan	
U151.....	Mercury	
U152.....	Methacrylonitrile	(I,T)
U092.....	Methanamine, N-methyl-	(I)
U029.....	Methane, bromo-	
U045.....	Methane, chloro-	(I,T)
U046.....	Methane, chloromethoxy-	
U068.....	Methane, dibromo-	
U075.....	Methane, dichlorodifluoro-	
U080.....	Methane, dichloro-	
U138.....	Methane, iodo-	
U211.....	Methane, tetrachloro-	
U225.....	Methane, tribromo-	
U044.....	Methane, trichloro-	
U121.....	Methane, trichlorofluoro-	
U119.....	Methanesulfonic acid, ethyl ester	
U153.....	Methanethiol	(I,T)
U123.....	Methanoic acid	(C,T)
U036.....	4,7-Methanoindan, 1,2,4,5,6,7,8,8-octa-chloro-3a,4,7,7a-tetrahydro-	

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PROPOSED RULES

U154.....	Methanol	(I)
U155.....	Methapyrilene	
U247.....	Methoxychlor	
U154.....	Methyl alcohol	(I)
U029.....	Methyl bromide	
U045.....	Methyl chloride	(I,T)
U156.....	Methyl chlorocarbonate	(I,T)
U156.....	Methyl chloroformate	
U226.....	Methyl chloroform	
U159.....	Methyl ethyl ketone	(I,T)
U160.....	Methyl ethyl ketone peroxide	(R,T)
U138.....	Methyl iodide	
U161.....	Methyl isobutyl ketone	(I)
U162.....	Methyl methacrylate	(I,T)
U163.....	N-Methyl-N'-nitro-N'-nitrosoguanidine	
U161.....	4-Methyl-2-pentanone	(I)
U186.....	1-Methylbutadiene	(I)
U157.....	3-Methylcholanthrene	
U068.....	Methylene bromide	
U080.....	Methylene chloride	
U122.....	Methylene oxide	
U158.....	4,4'-Methylenebis(2-chloroaniline)	
U132.....	2,2'-Methylenebis(3,4,6-trichlorophenol)	
U164.....	Methylthiouracil	
U010.....	Mitomycin C	
U059.....	5,12-Naphthacenedione, (8S-cis)-8-acetyl-10- [(3-amino-2,3,6-trideoxy-alpha-L-lyxo- hexopyranosyl)oxyl]-7, 8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-	
U165.....	Naphthalene	
U047.....	Naphthalene, 2-chloro-	
U166.....	1,4-Naphthalenedione	
U236.....	2,7-Naphthalenedisulfonic acid, 3,3'-[3,3'-dimethyl-(1,1'-biphenyl)-4, (azo)bis(5-amino-4-hydroxy)-, tetrasodium salt	
U166.....	1,4-Naphthoquinone	
U167.....	1-Naphthylamine	
U167.....	alpha-Naphthylamine	
U168.....	2-Naphthylamine	
U168.....	beta-Naphthylamine	
U026.....	2-Naphthylamine, N,N-bis(2-chloro-ethyl)-	
U181.....	5-Nitro-o-toluidine	
U169.....	Nitrobenzene	(I,T)

PROPOSED RULES

U170.....	p-Nitrophenol	
U171.....	2-Nitropropane	(I)
U176.....	N-Nitroso-N-ethylurea	
U177.....	N-Nitroso-N-methylurea	
U178.....	N-Nitroso-N-methylurethane	
U111.....	N-Nitrosodi-n-propylamine	
U172.....	N-Nitrosodi-n-butylamine	
U173.....	N-Nitrosodiethanolamine	
U174.....	N-Nitrosodiethylamine	
U179.....	N-Nitrosopiperidine	
U180.....	N-Nitrosopyrrolidine	
U107.....	Di-n-octyl phthalate	
U193.....	1,2-Oxathiolane, 2,2-dioxide	
U058.....	2H-1,3,2-Oxazaphosphorine, 2 [bis(2-chloroethyl)amino]-tetrahydro-, 2-oxide	
U115.....	Oxirane	(I,T)
U041.....	Oxirane, 2-(chloromethyl)	
U182.....	Paraldehyde	
U183.....	Pentachlorobenzene	
U184.....	Pentachloroethane	
U185.....	Pentachloronitrobenzene	
U242.....	Pentachlorophenol	
U186.....	1,3-Pentadiene	(I)
U210.....	Perchloroethylene	
U187.....	Phenacetin	
U188.....	Phenol	
U242.....	Phenol, pentachloro-	
U212.....	Phenol, 2,3,4,6-tetrachloro-	
U230.....	Phenol, 2,4,5-trichloro-	
U231.....	Phenol, 2,4,6-trichloro-	
U081.....	Phenol, 2,4-dichloro-	
U101.....	Phenol, 2,4-dimethyl-	
U082.....	Phenol, 2,6-dichloro-	
U048.....	Phenol, 2-chloro-	
U039.....	Phenol, 4-chloro-3-methyl-	
U170.....	Phenol, 4-nitro-	
U137.....	1,10-(1,2-Phenylene)pyrene	
U145.....	Phosphoric acid, lead salt	

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PROPOSED RULES

U087.....	Phosphorodithioic acid, O-O-diethyl S-methyl ester	
U189.....	Phosphorus sulfide	(R)
U190.....	Phthalic anhydride	
U191.....	2-Picoline	
U192.....	Pronamide	
U194.....	1-Propanamine	(I,T)
U110.....	1-Propanamine, N-propyl-	(I)
U193.....	1,3-Propane sultone	
U066.....	Propane, 1,2-dibromo-3-chloro-	
U027.....	Propane, 2,2'-oxybis[2-chloro-	
U171.....	Propane, 2-nitro-	(I)
U149.....	Propanedinitrile	
U235.....	1-Propanol, 2,3-dibromo-, phosphate (3:1)	
U126.....	1-Propanol, 2,3-epoxy-	
U140.....	1-Propanol, 2-methyl-	(I,T)
U002.....	2-Propanone	(I)
U007.....	2-Propenamide	
U243.....	1-Propene, 1,1,2,3,3,3-hexachloro-	
U084.....	Propene, 1,3-dichloro-	
U009.....	2-Propenenitrile	
U152.....	2-Propenenitrile, 2-methyl-	(I,T)
U008.....	2-Propenoic acid	(I)
U113.....	2-Propenoic acid, ethyl ester	(I)
U118.....	2-Propenoic acid, 2-methyl-, ethyl ester	
U162.....	2-Propenoic acid, 2-methyl-, methyl ester	
U233.....	Propionic acid, 2-(2,4,5-trichlorophenoxy)-	
U194.....	n-Propylamine	(I,T)
U083.....	Propylene dichloride	
U111.....	Di-n-propylnitrosamine	
U196.....	Pyridine	
U179.....	Pyridine, hexahydro-N-nitroso-	
U155.....	Pyridine, 2- [(2-dimethylamino) ethyl] -2-thenylamino-	
U191.....	Pyridine, 2-methyl-	
U164.....	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo	
U180.....	Pyrrole, tetrahydro-N-nitroso-	
U200.....	Reserpine	
U201.....	Resorcinol	
U202.....	Saccharin and salts	
U203.....	Safrole	
U204.....	Selenious acid	
U204.....	Selenium dioxide	
U205.....	Selenium disulfide	(R,T)

PROPOSED RULES

U015.....	L-Serine, diazoacetate (ester)	
U233.....	Silvex	
U089.....	4,4'-Stilbenediol, alpha, alpha'-diethyl-	
U206.....	Streptozotocin	
U135.....	Sulfur hydride	
U189.....	Sulfur phosphide	(R)
U205.....	Sulfur selenide	(R,T)
U103.....	Sulfuric acid, dimethyl ester	
U232.....	2,4,5-T	
U207.....	1,2,4,5-Tetrachlorobenzene	
U208.....	1,1,1,2-Tetrachloroethane	
U209.....	1,1,2,2-Tetrachloroethane	
U210.....	Tetrachloroethene	
U210.....	Tetrachloroethylene	
U212.....	2,3,4,6-Tetrachlorophenol	
U213.....	Tetrahydrofuran	(I)
U214.....	Thallium(I) acetate	
U215.....	Thallium(I) carbonate	
U216.....	Thallium(I) chloride	
U217.....	Thallium(I) nitrate	
U218.....	Thioacetamide	
U153.....	Thiomethanol	(I,T)
U219.....	Thiourea	
U244.....	Thiram	
U220.....	Toluene	
U223.....	Toluene diisocyanate	(R,T)
U221.....	Toluenediamine	
U222.....	o-Toluidine hydrochloride	
U011.....	1H-1,2,4-Triazol-3-amine	
U225.....	Tribromomethane	
U226.....	1,1,1-Trichloroethane	
U227.....	1,1,2-Trichloroethane	
U228.....	Trichloroethene	
U228.....	Trichloroethylene	
U121.....	Trichloromonofluoromethane	
U230.....	2,4,5-Trichlorophenol	
U231.....	2,4,6-Trichlorophenol	

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PROPOSED RULES

U232.....	2,4,5-Trichlorophenoxyacetic acid	
U234.....	sym-Trinitrobenzene	(R,T)
U182.....	1,3,5-Trioxane, 2,4,6-trimethyl-	
U236.....	Trypan blue	
U237.....	Uracil mustard	
U237.....	Uracil, 5[bis(2-chloroethyl)amino]-	
U238.....	Urethane	
U043.....	Vinyl chloride	
U078.....	Vinylidene chloride	
U239.....	Xylene	(I)
U200.....	Yohimban-16-carboxylic acid, 11, 17-di-methoxy-18- [(3,4,5-trimethoxy-benzoyl)oxyl]-, methyl ester,	

E. PCB wastes.

1. Definitions. For the purposes of this rule, the following terms have the meanings given them.

a. "PCB" means the class of organic compounds known as polychlorinated biphenyls and includes any of several compounds produced by replacing one or more hydrogen atoms on the biphenyl molecule with chlorine. "PCB" does not include chlorinated biphenyl compounds that have functional groups attached other than chlorine.

b. "PCB wastes" are wastes which contain 50 parts per million or more PCB and include products, items, or materials which contain PCB. The concentration of PCB in a waste shall be determined in accordance with Code of Federal Regulations, title 40, section 761.1(b) (1981).

c. "Contaminated spill and clean-up material" includes any soil or clean-up material associated with the clean-up of spill liquids which contained 50 parts per million or more PCB.

2. Interaction with certificate of exemption program.

a. If the owner of PCB wastes has a certificate of exemption in accordance with 6 MCAR § 4.8038, and stores his PCB wastes on his own premises, he is exempt from the hazardous waste facility permit requirements of 6 MCAR §§ 4.9280-4.9422 for that storage.

b. A commercial storage facility, such as a waste transfer station, which handles PCB waste is a hazardous waste facility and must meet the requirements of 6 MCAR §§ 4.9280-4.9422 in addition to obtaining a certificate of exemption.

c. When PCB wastes and PCB contaminated spill and clean-up material are shipped for final disposal, they become hazardous waste in accordance with 6 MCAR § 4.9132 A.2. and must meet the requirements of 6 MCAR § 4.9100-4.9560 in addition to any requirements under the generator's PCB certificate of exemption.

d. Copies of the manifest which are required under 6 MCAR § 4.9212 H., 6 MCAR § 4.9292 A., and 6 MCAR § 4.9392 A.4. also satisfy requirements of "evidence of disposal" currently required under 6 MCAR § 4.8038 C.7.a.(5).

3. Transportation. PCB and PCB contaminated spill and clean-up materials may be transported without a hazardous waste manifest if transportation is via the owner's own vehicle and if that transportation is between the owner's facilities or premises.

4. Disposal.

a. Disposal of PCB waste shall be in accordance with a management plan approved by the director. This management plan must be submitted as part of a disclosure in accordance with 6 MCAR § 4.9211 C.8.

b. PCB waste must be disposed in accordance with Code of Federal Regulations, title 40, section 761.10 (1981).

c. Boilers, not otherwise subject to facility permitting standards which are to be used for disposal of mineral oil dielectric fluid containing 50 to 500 ppm PCB, are exempt from 6 MCAR §§ 4.9280-4.9422.

5. Hazardous waste number. PCB wastes have the Hazardous Waste Number of M003.

6 MCAR § 4.9135 Small amounts of unrelated chemicals.

A collection of small amounts of unrelated chemicals as described in 6 MCAR § 4.9212 D. has the Hazardous Waste Number of M002.

6 MCAR § 4.9136 Basis for listing hazardous wastes. Exhibit 6 MCAR § 4.9136-1 lists the constituents which caused the agency to

list wastes as hazardous in 6 MCAR § 4.9134 B. and C. The notation "N.A." indicates the waste is hazardous because it fails the test for the characteristics of ignitability, corrosivity, reactivity, or toxicity, and the listing of a chemical name is not applicable.

Exhibit 6 MCAR § 4.9136-1
Basis for Listing Hazardous Wastes

Hazardous Waste No.	Hazardous Constituents For Which Listed
F001	Tetrachloroethylene, methylene chloride trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chlorinated fluorocarbons
F002	Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, o-dichlorobenzene, trichlorofluoromethane
F003	N.A.
F004	Cresols and cresylic acid, nitrobenzene.
F005	Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine
F006	Cadmium, hexavalent chromium, nickel, cyanide (complexed)
F007	Cyanide (salts)
F008	Cyanide (salts)
F009	Cyanide (salts)
F010	Cyanide (salts)
F011	Cyanide (salts)
F012	Cyanide (complexed)
F014	Cyanide (complexed)
F015	Cyanide (salts)
F019	Hexavalent chromium, cyanide (complexed)
K001	Pentachlorophenol, phenol, 2-chlorophenol, p-chloro-m-cresol, 2,4-dimethylphenyl, 2,4-dinitrophenol, trichlorophenols, tetrachlorophenols, 2,4-dinitrophenol, cresosote, chrysene, naphthalene, fluoranthene, benzo(b)fluoranthene, benzo(a)pyrene, indeno (1,2,3-cd)pyrene, benz(a)anthracene, dibenz(a)anthracene, acenaphthalene
K002	Hexavalent chromium, lead
K003	Hexavalent chromium, lead
K004	Hexavalent chromium
K005	Hexavalent chromium, lead
K006	Hexavalent chromium
K007	Cyanide (complexed), hexavalent chromium
K008	Hexavalent chromium
K009	Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid

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PROPOSED RULES

K010.....	Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid, chloroacetaldehyde
K011.....	Acrylonitrile, acetonitrile, hydrocyanic acid
K013.....	Hydrocyanic acid, acrylonitrile, acetonitrile
K014.....	Acetonitrile, acrylamide
K015.....	Benzyl chloride, chlorobenzene, toluene, benzotrichloride
K016.....	Hexachlorobenzene, hexachlorobutadiene, carbon tetrachloride, hexachloroethane, perchloroethylene
K017.....	Epichlorohydrin, chloroethers [bis (chloromethyl) ether and bis (2-chloroethyl) ethers], trichloropropane, dichloropropanols
K018.....	1,2-dichloroethane, trichloroethylene, hexachlorobutadiene, hexachlorobenzene
K019.....	Ethylene dichloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, tetrachloroethanes (1,1,2,2-tetrachloroethane and 1,1,1,2-tetrachloroethane), trichloroethylene, tetrachloroethylene, carbon tetrachloride, chloroform, vinyl chloride, vinylidene chloride
K020.....	Ethylene dichloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, tetrachloroethanes (1,1,2,2-tetrachloroethane and 1,1,1,2-tetrachloroethylene, carbon tetrachloride, chloroform, vinyl chloride, vinylidene chloride)
K021.....	Antimony, carbon tetrachloride, chloroform
K022.....	Phenol, tars (polycyclic aromatic hydrocarbons)
K023.....	Phthalic anhydride, maleic anhydride
K024.....	Phthalic anhydride, 1,4-naphthoquinone
K025.....	Meta-dinitrobenzene, 2,4-dinitrotoluene
K026.....	Paraldehyde, pyridines, 2-picoline
K027.....	Toluene diisocyanate, toluene-2, 4-diamine
K028.....	1,1,1-trichloroethane, vinyl chloride
K029.....	1,2-dichloroethane, 1,1,1-trichloroethane, vinyl chloride, vinylidene chloride, chloroform
K030.....	Hexachlorobenzene, hexachlorobutadiene, hexachloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, ethylene dichloride
K031.....	Arsenic
K032.....	Hexachlorocyclopentadiene
K033.....	Hexachlorocyclopentadiene
K034.....	Hexachlorocyclopentadiene
K035.....	Creosote, chrysene, naphthalene, fluoranthene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benzo(a)anthracene, dibenzo(a)anthracene, acenaphthalene
K036.....	Toluene, phosphorodithioic and phosphorothioic acid esters
K037.....	Toluene, phosphorodithioic and phosphorothioic acid esters
K038.....	Phorate, formaldehyde, phosphorodithioic and phosphorothioic acid esters

K039.....	Phosphorodithioic and phosphorothioic acid esters
K040.....	Phorate, formaldehyde, phosphorodithioic and phosphorothioic acid esters
K041.....	Toxaphene
K042.....	Hexachlorobenzene, ortho-dichlorobenzene
K043.....	2,4-dichlorophenol, 2,6-dichlorophenol, 2,4,6-trichlorophenol
K044.....	N.A.
K045.....	N.A.
K046.....	Lead
K047.....	N.A.
K048.....	Hexavalent chromium, lead
K049.....	Hexavalent chromium, lead
K050.....	Hexavalent chromium
K051.....	Hexavalent chromium, lead
K052.....	Lead
K060.....	Cyanide, naphthalene, pphenolic compounds, arsenic
K061.....	Hexavalent chromium, lead, cadmium
K062.....	Hexavalent chromium, lead
K069.....	Hexavalent chromium, lead, cadmium
K071.....	Mercury
K073.....	Chloroform, carbon tetrachloride, hexachloroethane, trichloroethane, tetrachloroethylene, dichloroethylene, 1,1,2,2-tetrachloroethane
K083.....	Aniline, diphenylamine, nitrobenzene, phenylenediamine
K084.....	Arsenic
K085.....	Benzene, dichlorobenzenes, trichlorobenzenes, tetrachlorobenzenes, pentachlorobenzene, hexachlorobenzene, benzyl chloride
K086.....	Lead, hexavalent chromium
K087.....	Phenol, naphthalene
K093.....	Phthalic anhydride, maleic anhydride
K094.....	Phthalic anhydride
K095.....	1,1,2-trichloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane
K096.....	1,2-dichloroethane, 1,1,1-trichloroethane, 1,1,2-trichloroethane
K097.....	Chlordane, heptachlor
K098.....	Toxaphene
K099.....	2,4-dichlorophenol, 2,4,6-trichlorophenol

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PROPOSED RULES

K100.....	Hexavalent chromium, lead, cadmium
K101.....	Arsenic
K102.....	Arsenic
K103.....	Aniline, nitrobenzene, phenylenediamine
K104.....	Aniline, benzene, diphenylamine, nitrobenzene, phenylenediamine
K105.....	Benzene, monochlorobenzene, dichlorobenzenes, 2,4,6-trichlorophenol
K106.....	Mercury

6 MCAR § 4.9137 Hazardous constituents. Exhibit 6 MCAR § 4.9137-1 lists hazardous constituents.

Exhibit 6 MCAR § 4.9137-1 Hazardous Constituents

Acetonitrile
3-(alpha-Acetylbenzyl)-4-hydroxycoumarin and salts
Acetophenone
2-Acetylaminofluorene
Acetyl chloride
1-Acetyl-2-thiourea
Acrolein
Acrylamide
Acrylonitrile
Aflatoxins
Aldrin
Allyl alcohol
Alumium phosphide
4-Aminobiphenyl
6-Amino-1,1a,2,8,8a,8b-hexahydro-8-(hydroxymethyl)-8a-methoxy-5-methylcarbamate azirino(2',3':3,4)
pyrrolo(1,2-a)indole-4,7-dione(ester) (Mitomycin C)
5-(Aminomethyl)-3-isoxazolol
4-Aminopyridine (4-Pyridinamine)
Amitrole
Aniline
Antimony and compounds not otherwise specified in this list
Aramite
Arsenic and compounds not otherwise specified in this list
Arsenic acid
Arsenic pentoxide
Arsenic trioxide
Auramine
Azaserine
Barium and compounds not otherwise specified in this list
Barium cyanide
Benz[c]acridine
Benz[a]anthracene
Benzene
Benzeneearsonic acid
Benzene, (dichloromethyl)-
Benzenethiol
Benzidine
Benzo[b]fluoranthene
Benzo[j]fluoranthene
Benzo[a]pyrene
p-Benzoquinone
Benzotrichloride

Benzyl chloride (alpha chlorotoluene)
Beryllium and compounds not otherwise specified in this list
Bis(2-chloroethoxy)methane
Bis(2-chloroethyl) ether
N,N-Bis(2-chloroethyl)-2-naphthylamine
Bis(2-chloroisopropyl) ether
Bis(chloromethyl) ether
Bis(2-ethylhexyl) phthalate
Bromoacetone
Bromomethane
4-Bromophenyl phenyl ether
Brucine
2-Butanone peroxide
Butyl benzyl phthalate
2-sec-Butyl-4,6-dinitrophenol (DNBP)
Cadmium and compounds not otherwise specified in this list
Calcium chromate
Calcium cyanide
Carbon disulfide
Carbon oxyfluoride
Chloral
Chlorambucil
Chlordane (alpha and gamma isomers)
Chlorinated benzenes not otherwise specified in this list
Chlorinated ethane not otherwise specified in this list
Chlorinated fluorocarbons not otherwise specified in this list
Chlorinated naphthalene not otherwise specified in this list
Chlorinated phenol not otherwise specified in this list
Chloroacetaldehyde
Chloroalkyl ethers not otherwise specified in this list
p-Chloroaniline
Chlorobenzene
Chlorobenzilate
1-(p-Chlorobenzoyl)-5-methoxy-2-methylindole-3-acetic acid
p-Chloro-m-cresol
1-Chloro-2,3-epoxybutane
2-Chloroethyl vinyl ether
Chloroform
Chloromethane
Chloromethyl methyl ether
2-Chloronaphthalene
2-Chlorophenol
1-(o-Chlorophenyl)thiourea
3-Chloropropionitrile
alpha-Chlorotoluene
Chromium and compounds not otherwise specified in this list
Chrysene
Citrus red No. 2
Coal Tars
Copper cyanide
Creosote

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PROPOSED RULES

Cresol
Cresylic acid
Crotonaldehyde
Cyanides (soluble salts and complexes) not otherwise specified in this list
Cyanogen
Cyanogen bromide
Cyanogen chloride
Cycasin
2-Cyclohexyl-4,6-dinitrophenol
Cyclophosphamide
Daunomycin
DDD
DDE
DDT
Diallate
Dibenz[a,h]acridine
Dibenz[a,j]acridine
Dibenz[a,h]anthracene(Dibenzo[a,h]anthracene)
7H-Dibenzo[c,g]carazole
Dibenzo[a,e]pyrene
Dibenzo[a,h]pyrene
Dibenzo[a,i]pyrene
1,2-Dibromo-3-chloropropane
1,2-Dibromoethane
Dibromomethane
Di-n-butyl phthalate
Dichlorobenzene not otherwise specified in this list
o-Dichlorobenzene
m-Dichlorobenzene
p-Dichlorobenzene
3,3'-Dichlorobenzidine
1,4-Dichloro-2-butene
1,1-Dichloroethane
1,2-Dichloroethane
trans-1,2-Dichloroethane
Dichloroethylene not otherwise specified in this list
1,1-Dichloroethylene
Dichloromethane
Dichlorodifluoromethane
2,4-Dichlorophenol
2,6-Dichlorophenol
2,4-Dichlorophenoxyacetic acid, salts and esters (2,4-D)
Dichloropropane not otherwise specified in this list
Dichlorophenylarsine
1,2-Dichloropropane
Dichloropropanol not otherwise specified in this list
Dichloropropene not otherwise specified in this list
1,3-Dichloropropane
Dieldrin
1,2:3,4-Diepoxybutane
Diethylarsine
O,O-Diethyl-S-(2-ethylthio)ethyl ester of phosphorodithioic acid
N,N-Diethylhydrazine
O,O-Diethyl-S-methyl ester of phosphorodithioic acid
O,O-Diethylphosphoric acid, O-p-nitrophenyl ester
Diethyl phthalate
O,O-Diethyl-O-(2-pyrazinyl)phosphorothioate

Diethylstilbestrol
Dihydrosafrole
3,4-Dihydroxy-alpha-(methylamino)methyl benzyl alcohol
Di-isopropylfluorophosphate (DFP)
Dimethoate
3,3'-Dimethoxybenzidine
p-Dimethylaminoazobenzene
7,12-Dimethylbenz[a]anthracene
3,3'-Dimethylbenzidine
Dimethylcarbamoyl chloride
1,1-Dimethylhydrazine
1,2-Dimethylhydrazine
3,3-Dimethyl-1-(methylthio)-2-butanone-O-[(methylamino) carbonyl] oxime
Dimethylnitrosoamine
alpha, alpha-Dimethylphenethylamine
2,4-Dimethylphenol
Dimethyl phthalate
Dimethyl sulfate
Dinitrobenzene not otherwise specified in this list
4,6-Dinitro-o-cresol and salts
2,4-Dinitrophenol
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Di-n-octyl phthalate
1,4-Dioxane
Diphenylamine
1,2-Diphenylhydrazine
Di-n-propylnitrosamine
Disulfoton
2,4-Dithiobiuret
Endosulfan
Endrin and metabolites
Epichlorohydrin
Ethyl carbamate (urethan)
Ethyl cyanide
Ethyl methacrylate
Ethylenebisdithiocarbamic acid, salts and esters
Ethyleneimine
Ethylene oxide
Ethylenethiourea
Ethyl methalesulfonate
Fluoranthene
Fluorine
2-Fluorocetamide
Fluoroacetic acid, sodium salt
Formaldehyde
Formic acid
Glycidylaldehyde
Halomethane not otherwise specified in this list
Heptachlor
Heptachlor epoxide (alpha, beta, and gamma isomers)

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PROPOSED RULES

Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclohexane (all isomers)
Hexachlorocyclopentadiene
Hexachloroethane
1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-endo, endo-dimethanonaphthalene
Hexachlorophene
Hexachloropropene
Hexaethyl tetraphosphate
Hydrazine
Hydrocyanic acid
Hydrofluoric acid
Hydrogen sulfide
Hydroxydimethylarsine oxide
Indeno(1,2,3-cd)pyrene
Iodomethane
Isocyanic acid, methyl ester
Iron Dextran
Isobutyl alcohol
Isosafrole
Kepone
Lasiocarpine
Lead and compounds not otherwise specified in this list
Lead acetate
Lead phosphate
Lead subacetate
Maleic anhydride
Maleic hydrazide
Malononitrile
Melphalan
Mercury and compounds not otherwise specified in this list
Mercury fulminate
Methacrylonitrile
Methanethiol
Methapyrilene
Methomyl
Methoxychlor
2-Methylaziridine
3-Methylcholanthrene
4,4'-Methylene-bis-(2-chloroaniline)
Methyl ethyl ketone (MEK)
Methyl hydrazine
2-Methylactonitrile
Methyl methacrylate
Methyl methanesulfonate
2-Methyl-2-(methylthio)propionaldehyde-o-(methylcarbonyl) oxime
N-Methyl-N'-nitro-N-nitrosoguanidine
Methyl parathion
Methylthiouracil
Mustard gas
Naphthalene
1,4-Naphthoquinone
1-Naphthylamine
2-Naphthylamine
1-Naphthyl-2-thiourea
Nickel and compounds not otherwise specified in this list
Nickel carbonyl

Nickel cyanide
Nicotine and salts
Nitric oxide
p-Nitroaniline
Nitrobenzene
Nitrogen dioxide
Nitrogen mustard and hydrochloride salt
Nitrogen mustard N-oxide and hydrochloride salt
Nitrogen peroxide
Nitrogen tetroxide
Nitroglycerine
4-Nitrophenol
4-Nitroquinoline-1-oxide
Nitrosamine not otherwise specified in this list
N-Nitrosodi-N-butylamine
N-Nitrosodiethanolamine
N-Nitrosodiethylamine
N-Nitrosodimethylamine
N-Nitrosodi-N-propylamine
N-Nitroso-N-ethylurea
N-Nitrosomethylethylamine
N-Nitroso-N-methylurea
N-Nitroso-N-methylurethane
N-Nitrosomethylvinylamine
N-Nitrosomorpholine
N-Nitrosornicotine
N-Nitrosopiperidine
N-Nitrosopyrrolidine
N-Nitrososarcosine
5-Nitro-o-toluidine
Octamethylpyrophosphoramidate
Osmium tetroxide
7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid
Paraldehyde
Parathion
Pentachlorobenzene
Pentachloroethane
Pentachloro-*o*-nitrobenzene (PCNB)
Pentachlorophenol
Phenacetin
Phenol
Phenylenediamine
Phenylmercury acetate
N-Phenylthiourea
2-Picoline
Phosgene
Phosphine
Phosphorodithioic acid, O,O-diethyl-S-[(ethylthio)methyl]ester (Phorate)
Phosphorothioic acid, O,O-(dimethyl O-[p-(dimethyl amino) sulfonyl]phenyl) ester
Phthalic acid esters not otherwise specified in this list
Phthalic anhydride

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PROPOSED RULES

Polychlorinated biphenyl not otherwise specified in this list
Potassium cyanide
Potassium silver cyanide
Pronamide
1,3-Propane sultone
Propionitrile
n-Propylamine
Propylthiouracil
2-Propyn-1-ol
Pryidine
Reserpine
Recorcinol
Saccharin and salts
Safrole
Selenious acid
Selenium and compounds not otherwise specified in this list
Selenium sulfide
Selenourea
Silver and compounds not otherwise specified in this list
Silver cyanide
Sodium cyanide
Streptozotocin
Strontium sulfide
Strychnine and salts
1,2,4,5-Tetrachlorobenzene
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
Tetrachloroethane not otherwise specified in this list
1,1,1,2-Tetrachloroethane
1,1,2,2-Tetrachloroethane
Tetrachloro ethylene (Ethene, 1,1,2,2 tetrachloro-)
Tetrachloromethane
2,3,4,6-Tetrachlorophenol
Tetraethyldithiopyrophosphate
Tetraethyl lead
Tetraethylpyrophosphate
Tetranitromethane
Thallium and compounds not otherwise specified in this list
Thallic oxide
Thallium (I) acetate
Thallium (I) carbonate
Thallium (I) chloride
Thallium (I) nitrate
Thallium selenite
Thallium (I) sulfate
Thioacetamide
Thiosemicarbazide
Thiourea
Thiuram
Toluene
Toluenediamine
o-Toluidine hydrochloride
Tolylene diisocyanate
Toxaphene
Tribromomethane
1,2,4-Trichlorobenzene
1,1,1-Trichloroethane
1,1,2-Trichloroethane

Trichloroethene (Trichloroethylene)
Trichloromethanethiol
Trichloromonofluoromethane
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
2,4,5-Trichlorophenoxyacetic acid (2,4,5-T)
2,4,5-Trichlorophenoxypropionic acid (2,4,5-TP) (Silvex)
Trichloropropane not otherwise specified in this list
1,2,3-Trichloropropane
O,O,O-Triethyl phosphorothioate
sym-Trinitrobenzene
Tris(1-aziridinyl)phosphine sulfide
Tris(s,3-dibromopropyl) phosphate
Trypan blue
Uracil mustard
Vanadic acid, ammonium salt
Vanadium pentoxide
Vinyl chloride
Vinylidene chloride
Zinc cyanide
Zinc phosphide

Rules as Proposed

Chapter Three: Standards Applicable to Generators of Hazardous Waste

- 6 MCAR § 4.9200 Financial responsibility of hazardous waste generators.
- 6 MCAR § 4.9201 Requirements for generators with on-site facilities.
- 6 MCAR § 4.9202 Importers of hazardous waste.
- 6 MCAR § 4.9203 Farmers; pesticides.
- 6 MCAR § 4.9204 Applicability to owners or operators of facilities.
- 6 MCAR § 4.9205 Evaluation of wastes.
- 6 MCAR § 4.9206 Timing of waste evaluation.
- 6 MCAR § 4.9207 Evaluation reports to the director.
- 6 MCAR § 4.9208 Additional evaluations ordered by the director.
- 6 MCAR § 4.9209 Classification of wastes as hazardous by the agency.
- 6 MCAR § 4.9210 Special requirements for small quantity generators of hazardous waste.
- 6 MCAR § 4.9211 Disclosure preparation and generator identification numbers.
- 6 MCAR § 4.9212 Manifest document; general requirements.
- 6 MCAR § 4.9213 Use of the manifest.
- 6 MCAR § 4.9214 Pretransport requirements.
- 6 MCAR § 4.9215 Proper hazardous waste management.

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6 MCAR § 4.9216 Accumulation of hazardous waste.

6 MCAR § 4.9217 Record keeping.

6 MCAR § 4.9218 Annual reporting.

6 MCAR § 4.9219 Exception reporting.

6 MCAR § 4.9220 Additional reporting.

6 MCAR § 4.9221 International shipments; special conditions.

6 MCAR § 4.9222 Farmers; special conditions.

Chapter Three: Standards Applicable to Generators of Hazardous Waste

~~6 MCAR § 4.9003 Generation of hazardous waste.~~

~~A. Applicability. This rule prescribes the duties of a generator.~~

~~B. Production of a hazardous waste.~~ 6 MCAR § 4.9200 Financial responsibility of hazardous waste generators. No person shall produce a hazardous waste within the state of Minnesota or produce a hazardous waste outside the state of Minnesota that is transported to a hazardous waste facility within the state of Minnesota unless that person has adequate financial resources to insure that the hazardous waste is disposed of, treated or processed at a hazardous waste facility permitted to manage such waste. Nothing in this provision is intended to restrict or enlarge or affect in any way, any liability the generator may have to correct the mismanagement of the hazardous waste or pay for damages or alleviate any pollution caused by the mismanagement of the hazardous waste.

6 MCAR § 4.9201 Requirements for generators with on-site facilities.

A. Waste procedures. A generator who treats, stores, or disposes of hazardous wastes on-site which have been produced on-site must only comply with the following rules with respect to that waste:

1. 6 MCAR §§ 4.9205-4.9208 for determining whether he has a hazardous waste;
2. 6 MCAR § 4.9211 for obtaining an identification number;
3. 6 MCAR § 4.9211 for submitting a disclosure;
4. 6 MCAR § 4.9217 C. and E. for record keeping;
5. 6 MCAR § 4.9220 for additional reporting; and
6. If applicable, 6 MCAR § 4.9222 for farmers.

B. Facility standards. A generator who operates an on-site treatment, storage, or disposal facility must comply with the applicable standards and permit requirements set forth in 6 MCAR §§ 4.9280-4.9560 and the agency's permitting procedures.

6 MCAR § 4.9202 Importers of hazardous waste. Any person who imports hazardous waste into the state of Minnesota from a source outside the United States must comply with the standards applicable to generators established in 6 MCAR §§ 4.9200-4.9222.

6 MCAR § 4.9203 Farmers; pesticides. A farmer who generates waste pesticides which are hazardous waste and who complies with all of the requirements of 6 MCAR § 4.9222 is not required to comply with other standards in 6 MCAR §§ 4.9200-4.9222 with respect to those pesticides, or to comply with 6 MCAR §§ 4.9280-4.9560, or to obtain a Hazardous Waste Facility Permit.

6 MCAR § 4.9204 Applicability to owners or operators of facilities. An owner or operator of a treatment, storage, or disposal facility who initiates a shipment of hazardous waste must comply with the generator standards established in 6 MCAR §§ 4.9200-4.9222.

6 MCAR § 4.9205 Evaluation of wastes.

A. General requirement. Any person who produces a waste within the state of Minnesota or any person who produces a

PROPOSED RULES

waste outside the state of Minnesota that is managed within the state of Minnesota, and the waste is not exempt under 6 MCAR § 4.9128 C. or 6 MCAR § 4.9103, must evaluate the waste to determine if it is hazardous.

B. Method for evaluation. The person evaluating the waste must determine if the waste meets any of the following criteria for a hazardous waste:

1. the waste is listed in 6 MCAR § 4.9134; or

2. the waste exhibits any of the characteristics of hazardous waste in 6 MCAR § 4.9132 by either:

a. testing the waste according to the methods set forth in 6 MCAR § 4.9132 or according to an equivalent method approved by the director pursuant to 6 MCAR § 4.9103 A.; or

b. applying knowledge of the hazard characteristics of the waste in light of the materials or the processes used.

C. Wastes generated by treatment, storage, or disposal. Any waste generated from the treatment, storage, or disposal of hazardous waste, including any sludge, spill residue, ash, emission control dust or leachate, but not including precipitation run-off, is a hazardous waste if it meets the criteria of B.

6 MCAR § 4.9206 Timing of waste evaluation.

A. Individual wastes; combined wastes. Waste evaluation must be of the individual waste prior to any mingling or combining with other wastes. If wastes are subsequently mingled or combined, except for wastes that are mingled or combined in a sewer system, the generator must also evaluate the waste resulting from the mingling or combining.

B. Reevaluations. The person must reevaluate the waste whenever the person has reason to believe that the composition of the waste is altered so that the results of the previous evaluation are no longer representative of the waste.

C. Representative evaluations. A person who produces two or more wastes that are similar or are from similar processes, such that one waste is representative of the other wastes, may use one evaluation for all such wastes.

6 MCAR § 4.9207 Evaluation reports to the director.

A. Necessary information. The director may request at any time that a person producing a waste submit the results of the evaluation of the waste. The person must submit the following information as requested by the director:

1. the type of waste and the source or process from which it was produced;

2. the chemical composition of the waste and the anticipated fluctuations in its chemical composition;

3. the concentration of each component listed in Exhibit 6 MCAR § 4.9132 G.-I found in the leachate or that is known or suspected to be in the waste;

4. the results of the evaluation to determine whether the waste has any characteristics listed in 6 MCAR § 4.9132; and

5. if any tests were conducted to evaluate the waste, the person must submit the results of all tests conducted.

B. Consequences of failure to report. If the person who is requested by the director to submit the results of an evaluation of a waste fails to submit the required information within 30 days after the request, the waste must be managed as a hazardous waste, and the person who produces the waste must be considered a generator until the director has determined whether the waste is hazardous or not.

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6 MCAR § 4.9208 Additional evaluations ordered by the director. If the director determines that the results of the evaluation are not adequate to determine whether or not the waste is hazardous, the director may require the person to conduct an additional evaluation. The director shall notify the person in writing of such determination, the reasons therefore, and the additional tests that must be run or additional data that must be obtained. If the results of the additional evaluation are not reported to the director within 30 days of the request, the waste must be managed as a hazardous waste and the person who produces the waste must be considered a generator until the director has determined whether the waste is hazardous or not. The director may grant additional time for evaluation when the person demonstrates that an extension is necessary.

6 MCAR § 4.9209 Classification of wastes as hazardous by the agency. If the director recommends to the agency that a specific generator's waste be classified as a hazardous waste pursuant to 6 MCAR § 4.9131 D., the director shall notify the person producing the waste in writing of the recommendation and the person shall have at least 30 days to submit any additional material or written comments to the agency before the agency makes a determination. The agency shall notify the person in writing of its decision. The agency shall hold a contested case hearing pursuant to Minn. Stat. §§ 15.0418-15.0426 upon request of the person producing the waste. The waste must be managed as a hazardous waste and the person who produces the waste must be considered a hazardous waste generator until the agency has determined whether the waste is hazardous or until six months after the date of the director's recommendation whichever occurs first; provided, however, that the person shall not be required to obtain a Hazardous Waste Facility Permit for storage of the waste on-site during this time. Any recommendation by the director shall be considered on an expeditious basis.

6 MCAR § 4.9210 Special requirements for small quantity generators of hazardous waste.

A. Applicability; quantities. A generator is a small quantity generator subject to the requirements of B.-G. if, in a calendar month, he generates less than:

1. a total of 1,000 kilograms of hazardous waste not listed in 6 MCAR § 4.9134 D.5.; and
2. a total of one kilogram of commercial chemical products and manufacturing chemical intermediates having the generic names listed in 6 MCAR § 4.9134 D.5. and off-specification commercial chemical products and manufacturing chemical intermediates which, if they met specification, would have the generic names listed in 6 MCAR § 4.9134 D.5.; and
3. a total of 100 kilograms of any residue or contaminated soil, water or other debris resulting from the cleanup of a spill, into or on any land or water, of any commercial chemical products or manufacturing chemical intermediates having the generic names listed in 6 MCAR § 4.9134 D.5., or any residue or contaminated soil, water or other debris resulting from the cleanup of a spill, into or on any land or water, of any off-specification commercial chemical products or manufacturing chemical intermediates which, if they met specification would have the generic names listed in 6 MCAR § 4.9134 D.5.

B. Exemption. A small quantity generator's hazardous wastes are not subject to the requirements of 6 MCAR §§ 4.9200-4.9222 and a Hazardous Waste Facility Permit if the generator complies with the requirements of F.

C. Excessive generation. If the quantity of hazardous waste generated in any calendar month exceeds the quantities listed in A., the small quantity generator becomes a generator and thereafter is subject to the requirements of 6 MCAR §§ 4.9100-4.9560.

D. Accumulation on-site. A small quantity generator may accumulate hazardous waste on-site. If the quantity of hazardous waste accumulated in any calendar month exceeds the quantities listed in A., the small quantity generator must manage all of the accumulated waste according to the requirements of 6 MCAR §§ 4.9100-4.9560 but does not lose the small quantity generator status.

E. Disclosure; annual report. A small quantity generator must obtain an identification number pursuant to 6 MCAR § 4.9211 and must submit a disclosure pursuant to 6 MCAR § 4.9211, except that 6 MCAR § 4.9211 C.7. does not apply. A small quantity generator must also file an annual report pursuant to 6 MCAR § 4.9218.

F. Disposal requirements. In order for hazardous waste generated by a small quantity generator to be excluded from full regulation under 6 MCAR §§ 4.9200-4.9222, the generator must:

1. comply with 6 MCAR §§ 4.9205-4.9208;
2. store the waste in compliance with the requirements of D. if the generator stores his hazardous waste on-site; and

3. either treat or dispose his hazardous waste in an on-site facility or ensure delivery to an off-site storage, treatment, or disposal facility. The facility used must be:

a. permitted to accept hazardous waste under the agency's permitting procedures; or

b. in interim status under 6 MCAR §§ 4.9380-4.9422; or

c. authorized to manage hazardous waste by the Environmental Protection Agency or by a state with a hazardous waste management program authorized by the Environmental Protection Agency; or

d. a facility which in accordance with 6 MCAR § 4.9129 beneficially uses, reuses, recycles or reclaims his waste or treats his waste prior to beneficial use, reuse, recycling or reclamation; or

e. another site belonging to the same owner for consolidation of shipments providing the receiving site complies 6 MCAR §§ 4.9200-4.9222 and the waste is ultimately managed according to a.-d.

G. Mixtures. A small quantity generator's hazardous waste subject to the reduced requirements of this rule may be mixed with nonhazardous waste pursuant to 6 MCAR § 4.9128 B. and remain subject to these reduced requirements even though the resultant mixture exceeds the quantity limitations identified in this rule unless the resultant mixture is hazardous pursuant to 6 MCAR § 4.9128 B.

6 MCAR § 4.9211. ~~C. Preparation of a~~ Disclosure preparation and generator identification numbers.

A. Disclosure; management plan. Each generator shall prepare disclosure for each hazardous waste that he produces or transports, ~~except used crankcase oil that is collected by a transporter registered pursuant to 6 MCAR Section 4.9005 C. on the forms provided by the director.~~ This disclosure must contain a management plan for each hazardous waste produced.

B. Identification number. Prior to transportation, treatment, storage or disposal of any hazardous waste a generator must obtain a generator identification number on forms provided by the director.

~~D. Contents~~ C. Content of a the disclosure.

~~1.~~ Each generator in his disclosure shall must include the following information:

~~a. The type of waste~~ 1. a list of all hazardous wastes generated, their corresponding hazardous waste numbers from 6 MCAR § 4.9132 and 6 MCAR § 4.9134 and the source or process from which the disclosed wastes are generated;

2. a list of all nonexempt wastes of the generator that have been determined by the generator to be nonhazardous wastes. The list must include the type of waste and the source or process from which the waste was produced;

~~b. 3. the chemical composition of the each waste which is hazardous due to one of the characteristics identified in 6 MCAR § 4.9132 and the anticipated fluctuations in the chemical composition that will occur during normal operations;~~

~~c. 4. the concentration of each component in List 1 Exhibit 6 MCAR § 4.9132 G.-1 that is known or suspected to be in the waste and the concentration in the leachate of each component in List 2 that is known or suspected to be in of the waste. If the component is not detected in the waste or in the leachate, the level of detectability of the testing method used shall be reported.~~ following the extraction procedure toxicity test. If a component listed in that exhibit is known or suspected to be in the waste, the results from the extraction procedure toxicity test for that component must be included unless alternative data approved by the director is submitted;

~~d. 5. the hazardous properties of the waste and the source of the data or information used to identify the hazardous properties;~~

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e- 6. in the event any tests were conducted to evaluate the waste, the following information shall be included in the disclosure:

- (1) The sampling procedure and the reasons for determining that the sample is representative of the waste.
- (2) the results of all tests conducted;
- (3) A discussion of the accuracy and precision of any tests conducted.

f. A list of special handling procedures, labels and safety equipment necessary for safe handling and storage of the hazardous waste.

g. The name, address, telephone numbers and title of the individual at the generator's facility responsible for arranging for the management of the hazardous waste.

h- 7. a copy of procedures for personnel to follow in the case of spills of the hazardous waste; the contingency plan prepared pursuant to 6 MCAR § 4.9216 and a certification stating that the contingency plan is being maintained for currency of information on-site and is available for staff review;

i. A summary of the following relating to the management of the hazardous waste for the year preceding the filing of the disclosure or for the period since the last disclosure was filed if that filing was more than one year ago:

- (1) The amount of the hazardous waste produced.
- (2) The names and identification numbers of the transporters utilized.
- (3) The names of the hazardous waste facilities utilized, and, as applicable:

(a) The numbers of the Hazardous Waste Facility Permits issued by the agency for those facilities located in the State of Minnesota.

(b) The addresses of those facilities located outside the State of Minnesota.

(c) The name of the waste water treatment works to which a sewer hazardous waste was discharged.

(d) The NPDES or State Disposal Permit number for discharges to sewers other than a municipal sewer system.

(4) A summary taken from the shipping papers and other records of the generator of the amounts spilled, amounts recovered and any resultant environmental or health damages from spills of the hazardous waste.

j- 8. A prediction of the following relating to the management of the hazardous waste for the year immediately following the filing of the disclosure the following information relating to the management of the hazardous waste:

- (1) a. the estimated amounts to be produced in a one year period;
- (2) b. the names and identification numbers of the transporters to be used;
- (3) c. the frequency with which the hazardous waste is expected to be transported or discharged;
d. the name of the wastewater treatment works to which a sewer hazardous waste is being discharged;

e. the National Pollutant Discharge Elimination System or State Disposal Permit number for discharges to sewers and waters of the state;

(4) f. the names of the hazardous waste facilities to be involved in the management of the hazardous waste and, as applicable;

(a) the number of the Hazardous Waste Facility Permits issued by the agency for those facilities located in the state of Minnesota; or

(b) the addresses and identification numbers of those facilities located outside the state of Minnesota; and

9. any other information that the generator deems important.

k. A list of all nonexempt wastes of the generator that have been determined by the generator to be nonhazardous wastes. The list shall include the type of waste and the sources or process from which the waste was produced. Examples of the information required are (1) salt solution from water softening, and (2) wash water from potato processing.

l. Any other information that the generator deems important.

2. Generators of wastes that are comprised of small amounts of unrelated chemicals such that a description of any sample or set of samples is not representative of the total waste, generators of petroleum waste and generators of used

erankase oil are not required to include in the disclosures for those wastes the items listed in subparts b, c, d and e above, but those generators shall identify those components in List 1 or List 2 in 6 MCAR § 4.9002 B. that the generator knows or suspects are in the waste.

D. Laboratory wastes. A person who produces a waste from a laboratory or pilot plant that is a mixture of small amounts of unrelated but compatible chemicals such that the description of any sample or set of samples is not representative of the total waste may declare the waste a hazardous waste and need not test the mixture. The generator of such waste is exempt from C.3., C.4. and C.6. but must disclose that waste according to United States Department of Transportation classifications in Code of Federal Regulations, title 49, section 172.101 (1981).

3. E. Prohibition. No person shall make a false statement in a disclosure. The disclosure shall be submitted under oath.

~~E. F.~~ Submission of a disclosure to the ~~agency~~ director;

4. existing hazardous waste. Each generator who is producing a hazardous waste in the state of Minnesota or who is producing a hazardous waste outside the state of Minnesota that is being transported to a hazardous waste facility within the state of Minnesota on the day these hazardous waste ~~regulations~~ rules take effect shall submit a disclosure to the ~~agency~~ director within ~~one year~~ 90 days after the effective date of these ~~regulations~~ 6 MCAR §§ 4.9200-4.9222. ~~A generator who has produced a hazardous waste in the past and who anticipates producing that hazardous waste in the future may elect to file a disclosure on that hazardous waste under this provision. In such event, the generator shall not be required to file a disclosure under 6 MCAR Section 4.9003 E.2. for that waste.~~ If a generator has a disclosure on file with the director, then the generator shall submit all necessary amendments to the disclosure within 90 days of the effective date of these rules. A hazardous waste shall not be treated, disposed, or change possession until at least 30 days after the disclosure or necessary amendments are submitted to the director. An out-of-state generator transporting hazardous waste through Minnesota to an out-of-state treatment, storage, or disposal facility is exempt from this requirement.

2. G. New hazardous wastes Submission of a disclosure to the director; new hazardous waste.

a. ~~Any~~ 1. A generator who produces a hazardous waste in the state of Minnesota that is not being produced on the day these hazardous waste ~~regulations~~ rules take effect shall submit a disclosure to the ~~agency~~ director within ~~ninety (90)~~ 75 days after first producing the hazardous waste if a disclosure is not on file with the director. The hazardous waste shall not be treated, disposed of or change possession until at least ~~thirty (30)~~ 15 days after the disclosure is ~~filed with~~ submitted to the ~~agency~~ director.

b. Any generator who produces a hazardous waste outside the State of Minnesota that is not being transported to a hazardous waste facility within the State of Minnesota on the day these regulations take effect 2. If a generator outside the state of Minnesota wishes to transport hazardous waste to a hazardous waste facility located within the state of Minnesota, the generator shall ~~file~~ submit a disclosure ~~with to the agency before the hazardous waste is transported to a hazardous waste facility within the State of Minnesota~~ director. The hazardous waste shall not be transported to a hazardous waste facility within the state of Minnesota until at least ~~thirty (30)~~ 15 days after the disclosure is ~~filed with~~ submitted to the ~~agency~~ director.

3. Annual resubmission of a disclosure.

a. After submitting its first disclosure, each generator who is required to submit a disclosure pursuant to subparagraph 1 shall submit a subsequent disclosure according to the following schedule if any hazardous waste has been produced or managed since the first disclosure.

MONTH OF SUBMISSION

(The disclosure shall be made the first time the indicated month occurs after the regulations have been in effect for a period of two years.)

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FIRST LETTER IN NAME OF GENERATOR

L-N	January
A-C	March
D-C	May
T-Z	July
O-S	September
H-K	November

Each such generator shall submit a new disclosure within ten (10) days of the anniversary date of the second disclosure if any hazardous waste has been produced or managed in the preceding year.

b. Any generator who is required to file a disclosure pursuant to subparagraph 2, shall submit a new disclosure within ten (10) days of the anniversary date of the first disclosure.

c. In submitting a new disclosure for a hazardous waste, the generator need not repeat any information required in a disclosure that has not changed from the previous disclosure, but may merely indicate that the information is the same.

d. Any generator who does not submit a disclosure because the hazardous waste was not produced or transported during the preceding period or year shall inform the agency of such fact and shall comply with the requirements for submitting a disclosure for a new hazardous waste in the event a hazardous waste is again produced or transported.

F. Identification number. Prior to transportation or disposal of any hazardous waste a generator shall obtain a generator identification number from EPA.

G. Preparation of hazardous waste shipping papers. Each generator shall prepare hazardous waste shipping papers for each hazardous waste in accordance with 6 MCAR § 4.9008.

H. Approval of disclosures. After receiving the disclosure, the director shall conduct a review of the submitted information and shall:

1. issue an approval of the disclosure and management plan or plans;
2. require the submission of additional information or management plans or both to make the disclosure complete and approvable; or
3. require changes in the management of the disclosed hazardous waste or wastes to make the disclosure approvable.

I. Management changes. A generator who changes management of his hazardous waste following submission of the disclosure must report the change in the next annual report.

J. One-time disposal requirements. A person having hazardous waste subject to regulation under these rules who is only a hazardous waste generator for the one-time disposal of hazardous waste which is not currently being produced, must comply with 6 MCAR §§ 4.9100-4.9560 except 6 MCAR § 4.9201, 6 MCAR § 4.9202, 6 MCAR § 4.9204, 6 MCAR § 4.9216, and 6 MCAR § 4.9218. This kind of hazardous waste generator is exempt from 6 MCAR § 4.9211 except that a management plan must be submitted to the director for approval on the forms provided.

6 MCAR § 4.9212 Manifest document; general requirements.

A. When required. A generator who transports or offers for transportation hazardous waste for off-site treatment, storage, or disposal must prepare a manifest before transporting the waste off-site unless exempt from regulation pursuant to 6 MCAR § 4.9210 and 6 MCAR § 4.9129.

B. Designation of facility. A generator must designate on the manifest one facility which is permitted to handle the waste described on the manifest.

C. Alternate facility. A generator may also designate on the manifest one alternate facility which is permitted to handle the waste in the event an emergency prevents delivery of the waste to the primary designated facility.

D. Permitted facilities. The facilities shall be permitted by:

1. the agency if the hazardous waste facility is located in Minnesota; or
2. the state agency with a hazardous waste program authorized by the Environmental Protection Agency pursuant to Code of Federal Regulations, title 40, part 123; or

3. the Environmental Protection Agency.

E. Specific Minnesota hazardous wastes. If a generator located in the state of Minnesota produces a waste classified as hazardous in Minnesota which is not classified as hazardous in the state where the receiving facility is located, the generator must ensure that the facility is permitted to accept and manage the waste by the appropriate state agency.

F. Manifest information. The hazardous waste manifest must include the following information:

1. the names, addresses, telephone numbers, and identification numbers of the generator, the designated hazardous waste facility, and an alternate facility, if any, to which the waste is being transported;

2. the name and identification number of each transporter;

3. a manifest document number, assigned by the generator in sequential order for each waste shipment;

4. 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;

5. the description of waste or wastes by the proper shipping name, required by regulations of the United States Department of Transportation in Code of Federal Regulations, title 49, sections 172.101, 172.202, and 172.203 (1980) if applicable; otherwise the description of the waste or wastes as listed on the Minnesota hazardous waste disclosure; and

6. signature and date blocks for the generator, the transporter, and the facility operator.

G. Certification. The following certification must appear on the manifest: "This is to certify that the above named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the United States Department of Transportation and the EPA."

H. Number of copies. The manifest must consist of at least the number of copies which will provide the generator, each transporter, and the owner or operator of the designated facility with one copy each for their records, another copy to be returned to the generator by the facility, and the required copies to be returned to the director, pursuant to 6 MCAR § 4.9213, 6 MCAR § 4.9292 B.4 and 6 MCAR § 4.9392 B.4.

6 MCAR § 4.9213 Use of the manifest.

A. General requirements. The generator must:

1. sign the manifest certification by hand;

2. obtain the handwritten signature of the initial transporter and the date of acceptance on the manifest;

3. retain one copy, in accordance with 6 MCAR § 4.9217 A;

4. send one copy to the director within five working days of the initial transporter's acceptance of the hazardous waste shipment; and

5. give the transporter the remaining copies of the manifest except as provided in B. and C.

B. Shipments by water. For bulk shipments of hazardous waste within the United States solely by water the generator must:

1. send three copies of the manifest dated and signed in accordance with A. to the owner or operator of the designated facility, or the last bulk shipment water transporter to handle the waste in the United States if exported by water; and

2. send one copy to the director within five working days of the initial transporter's acceptance of the hazardous waste shipment.

C. Shipments by rail. For a rail shipment of hazardous waste within the United States which originates at the site of generation, the generator must:

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1. send at least three copies of the manifest dated and signed in accordance with A. to:

- a. the next non-rail transporter, if any; or
- b. the designated facility if transported solely by rail; or
- c. the last rail transporter to handle the waste in the United States if exported by rail; and

2. send one copy to the director within five working days of the initial transporter's acceptance of the hazardous waste shipment.

D. Out-of-state shipments. When a shipment of hazardous waste is to be delivered to a hazardous waste facility located outside the state of Minnesota, the generator must ensure that the copy of the hazardous waste manifest signed by the facility operator is sent to the director within 40 days of the acceptance of the hazardous waste by the hazardous waste facility.

E. Director's request for manifest. Upon the request of the director any generator must submit the original or a copy of the hazardous waste manifest at the time and in the manner specified by the director. If the request requires the generator to inform all transporters and facility operators managing the hazardous waste of the request, the generator must so inform the transporters and facility operators, and the generator, transporters and facility operators shall comply with the director's request.

F. Applicability to county ordinances. If a county ordinance is approved pursuant to 6 MCAR § 4.9559 and 6 MCAR § 4.9560, the generator, transporter and facility operator of a waste generated within that county or transported to a hazardous waste facility within that county must sign and submit hazardous waste manifests as required by that ordinance.

~~H. 6 MCAR § 4.9214 Preparation of hazardous waste labels~~ Pretransport requirements.

A. Packaging. Before transporting hazardous waste or offering a hazardous waste for transportation off-site, a generator must package the waste in accordance with the applicable United States Department of Transportation regulations on packaging under Code of Federal Regulations, title 49, parts 173, 178, and 179 (1980).

B. Labeling. Before transporting or offering hazardous waste for transportation off-site, a generator must label each package in accordance with the applicable United States Department of Transportation regulations on hazardous materials under Code of Federal Regulations, title 49, part 172 (1980).

C. Marking. Before transporting or offering hazardous waste for transportation off-site, a generator must:

1. mark each package of hazardous waste in accordance with the applicable United States Department of Transportation regulations on hazardous materials under Code of Federal Regulations, title 49, part 172 (1980); and

2. ~~Each generator shall attach a "Hazardous Waste" label to each container and portable tank containing hazardous waste in accordance with the applicable U.S. Department of Transportation regulations on hazardous materials under 49 C.F.R. Part 172 (1979). In addition, with the following words and information shall be displayed:~~

a. HAZARDOUS WASTE—Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency.

b. Generator Name and Address

c. Manifest Document Number.....

d. EPA Identification Number.....

e. Accumulation start date.....

2. ~~The container or portable tank shall be labeled and marked in a manner that is suitable for interstate commerce.~~

3. Any generator or other person who maintains a storage tank containing hazardous waste shall display the words "Hazardous Waste" on the storage tank in a legible and conspicuous manner. The words "Hazardous Waste" shall be plainly visible and legible to any person who may operate any outlet valve.

~~1. Containers and tanks. Each generator shall put hazardous waste only into containers or tanks that comply with the requirements of 6 MCAR § 4.9004 for storage of hazardous waste in containers and tanks at hazardous waste facilities.~~

D. Placarding. Before transporting hazardous waste or offering hazardous waste for transportation off-site, a generator must placard or offer the initial transporter the appropriate placards according to United States Department of Transportation regulations for hazardous materials under Code of Federal Regulations, title 49, part 172, subpart F (1980).

E. Loading of hazardous waste. A generator who is responsible for loading hazardous waste on a transport vehicle in lieu of the transporter must comply with the provisions of 6 MCAR § 4.9254 A.

6 MCAR § 4.9215 Proper hazardous waste management.

A. Relinquishing control. A generator must not relinquish control of a hazardous waste if a transporter, or treatment, storage, or disposal facility not exempt under 6 MCAR §§ 4.9100-4.9560 has not:

1. received an identification number by a state with a hazardous waste program authorized by the Environmental Protection Agency pursuant to Code of Federal Regulations, title 40, part 123 (1980); or

2. received an identification number by the Environmental Protection Agency if located in a state not authorized pursuant to Code of Federal Regulations, title 40, part 123 (1980).

~~J. Proper~~ **B. Improper hazardous waste management.** No generator shall relinquish control of a hazardous waste when the generator has reason to believe that the hazardous waste is not being properly managed.

C. Effect on liability. Nothing in ~~this rule~~ **B.** is intended to restrict or enlarge or ~~affect~~ effect in any way, any liability the generator may have to correct the mismanagement of the hazardous waste or pay for damages or alleviate any pollution caused by the mismanagement of the hazardous waste.

6 MCAR § 4.9216 Accumulation of hazardous waste.

A. When allowed without a permit. A generator may accumulate hazardous waste on-site without a permit or without having interim status if:

1. all accumulated hazardous waste is, within 90 days of the accumulation start date, shipped off-site to a designated facility or placed in an on-site facility either of which has interim status under 6 MCAR §§ 4.9380-4.9422 or has a Hazardous Waste Facility Permit issued by the agency; or has a Hazardous Waste Facility Permit issued by a state with a hazardous waste program authorized by the Environmental Protection Agency pursuant to Code of Federal Regulations, title 40, part 123 (1980); or has a Hazardous Waste Facility Permit issued by the Environmental Protection Agency; and

2. the waste is placed in containers which meet the standards of 6 MCAR § 4.9214 A. and are managed in accordance with 6 MCAR § 4.9414 D.-F.; or in tanks provided the generator complies with the requirements of 6 MCAR § 4.9415 except 6 MCAR § 4.9415 C.; and

3. the date upon which each period of accumulation begins is clearly marked and visible for inspection on each container or the generator maintains a record of the accumulation starting date for each tank used for storage; and

4. each container is properly labeled and marked according to 6 MCAR § 4.9214 B. and C.;

5. outdoor storage areas are distinctly fenced to restrict access;

6. all containers in outdoor storage areas which hold free liquids are placed on a curbed surface which is impermeable to the wastes stored;

7. hazardous wastes displaying the characteristic of ignitability are shaded from direct sunlight in outdoor storage areas; and

8. the requirements of 6 MCAR § 4.9383 and 6 MCAR §§ 4.9386-4.9390 are fulfilled regarding personnel training, preparedness, prevention, and contingency planning.

B. Starting date. A generator's accumulation starting date begins when the generator initiates accumulation in a container or tank.

C. Accumulation requiring a permit. 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 6 MCAR §§ 4.9280-4.9422 and the agency's permitting procedures.

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6 MCAR § 4.9217 Record keeping.

A. Manifests. A generator must keep a copy of each manifest signed in accordance with 6 MCAR § 4.9213 A. for three years or until he receives a signed copy from the designated facility which received the waste. This signed copy must be retained as a record for at least three years from the date the waste was accepted by the initial transporter.

B. Reports. A generator must keep a copy of each annual report and each exception report for a period of at least three years from the due date of the report.

C. Test results. A generator must keep records of any test results, waste analyses, or other determinations made in accordance with 6 MCAR §§ 4.9205-4.9208 for at least three years from the date that the waste was last sent to on-site or off-site treatment, storage, or disposal.

D. Extension of retention period. The periods of retention referred to in A.-C. are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the director.

6 MCAR § 4.9218 Annual reporting.

A. Generators who ship wastes. A generator who ships hazardous waste off-site must submit annual reports to the director on the forms provided no later than March 1 for the preceding calendar year.

B. Required information. The annual report must contain the following information related to the hazardous waste or wastes produced during the preceding calendar year:

1. the generator's identification number;
2. the name of the hazardous waste or wastes and the hazardous waste number or numbers;
3. the amount of each hazardous waste produced;
4. the names and identification numbers of the transporters utilized; and
5. the names and addresses of the hazardous waste facilities utilized, their identification numbers, and, as applicable:
 - a. the numbers of the hazardous waste facility permits issued by the agency for those facilities located in the state of Minnesota;
 - b the addresses of those facilities located outside the state of Minnesota;
 - c. the name of the wastewater treatment works to which a sewered hazardous waste was discharged; and
 - d. the National Pollution Discharge Elimination System or State Disposal Permit number for discharge to land and waters of the state.

C. Generators who do not ship wastes. Any generator who treats, stores, or disposes of hazardous waste on-site must submit an annual report covering those wastes in accordance with the provisions of 6 MCAR §§ 4.9280-4.9422.

D. Approval of annual reports. Annual reports shall be subject to the director's procedures and approval as described in 6 MCAR § 4.9211 H.

6 MCAR § 4.9219 Exception reporting.

A. When applicable. A generator who does not receive a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 35 days of the date the waste was accepted by the initial transporter must contact the transporter and the owner or operator of the designated facility to determine the status of the hazardous waste. A generator must submit an exception report to the director if he has not received a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 45 days of the date the waste was accepted by the initial transporter.

B. Content of report. The exception report must include:

1. a legible copy of the manifest for which the generator does not have confirmation of delivery; and
2. a cover letter signed by the generator or his authorized representative explaining the efforts taken to locate the hazardous waste and the results of those efforts.

6 MCAR § 4.9220 Additional reporting. The director, as he deems necessary, may require generators to furnish additional reports concerning the quantities and disposition of wastes identified or listed in 6 MCAR §§ 4.9128-4.9137.

6 MCAR § 4.9221 International shipments; special conditions.

A. General requirement. Any person who exports hazardous waste to a foreign country from Minnesota or imports hazardous waste from a foreign country into Minnesota must comply with the special requirements of B.-D.

B. Procedures. When shipping hazardous waste outside the state of Minnesota to a foreign country the generator must:

1. notify the administrator of the Environmental Protection Agency and the director four weeks before the initial shipment of hazardous waste to each country in each calendar year. The waste must be identified by its hazardous waste identification number and its United States Department of Transportation shipping description and the name and address of the foreign consignee must be included in this notice. These notices must be sent to: Hazardous Waste Export, Division for Oceans and Regulatory Affairs (A-107), United States Environmental Protection Agency, Washington, D.C. 20460; and Minnesota Pollution Control Agency, Division of Solid and Hazardous Waste, 1935 West County Road B2, Roseville, Minnesota 55113;

2. require that the foreign consignee confirm the delivery of the waste in the foreign country. A copy of the manifest signed by the foreign consignee may be used for this purpose; and

3. meet the requirements under 6 MCAR § 4.9212 and 6 MCAR § 4.9213 for the manifest except that:

a. in place of the name, address, and identification number of the designated facility, the name and address of the foreign consignee must be used; and

b. the generator must identify the point of departure from the United States through which the waste must travel before entering a foreign country.

C. Exception report. A generator must file an exception report to the addresses listed in B.1. if:

1. he has not received a copy of the manifest signed by the transporter stating the date and place of departure from Minnesota within 45 days from the date it was accepted by the initial transporter; or

2. within 90 days from the date the waste was accepted by the initial transporter, the generator has not received written confirmation from the foreign consignee that the hazardous waste was received.

D. Manifest. When importing hazardous waste, a person must meet all requirements of 6 MCAR § 4.9212 and 6 MCAR § 4.9213 for the manifest except that:

1. in place of the generator's name, address, and identification number, the name and address of the foreign generator and the importer's name, address, and identification number must be used; and

2. in place of the generator's signature on the certification statement, the United States importer or his agent must sign and date the certification and obtain the signature of the initial transporter.

6 MCAR § 4.9222 Farmers; special conditions. A farmer disposing of waste pesticides from his own use which are hazardous wastes is not required to comply with the standards of 6 MCAR §§ 4.9100-4.9560 or a Hazardous Waste Facility Permit for those wastes if he triple rinses each emptied pesticide container in accordance with 6 MCAR § 4.9130 C. and disposes of the pesticide residues on his own farm in a manner consistent with the disposal instructions on the pesticide label.

Rules as Proposed**Chapter Four:****Standards Applicable to Transporters of Hazardous Waste**

6 MCAR § 4.9250 Applicability and exemptions.

6 MCAR § 4.9251 Applicability to generator requirements.

6 MCAR § 4.9252 Identification numbers.

6 MCAR § 4.9253 Transfer facility requirements.

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6 MCAR § 4.9254 Transportation of hazardous waste.

6 MCAR § 4.9255 The manifest system; general requirements.

6 MCAR § 4.9256 Use of the manifest.

6 MCAR § 4.9257 Compliance with the manifest.

6 MCAR § 4.9258 Record keeping.

6 MCAR § 4.9259 Hazardous waste discharges.

Chapter Four:

Standards Applicable to Transporters of Hazardous Waste

6 MCAR § 4.9250 Applicability and exemptions.

A. Applicability. The provisions of 6 MCAR §§ 4.9251-4.9259 establish standards which apply to persons transporting hazardous waste which originates or terminates within the state of Minnesota if the transportation requires a manifest under 6 MCAR §§ 4.9200-4.9222.

B. Exemptions. The provisions of 6 MCAR §§ 4.9251-4.9259 do not apply to:

1. the on-site transportation of hazardous waste by generators or by owners or operators of permitted hazardous waste management facilities; or

2. hazardous waste which is sewered on-site and flows directly to a wastewater treatment facility operated according to a National Pollutant Discharge Elimination System or a State Disposal Permit.

6 MCAR § 4.9251 Applicability to generator requirements. A transporter of hazardous waste must comply with standards applicable to generators of hazardous waste if he transports hazardous waste into Minnesota from a foreign country or mixes hazardous waste of different United States Department of Transportation shipping descriptions, as described in Code of Federal Regulations, title 49, section 172.101 (1981), by placing them into a single container.

6 MCAR § 4.9252 Identification numbers. Any person who transports hazardous waste that originates or terminates in Minnesota must obtain an identification number from the Environmental Protection Agency on forms provided by the agency before transporting the hazardous waste.

6 MCAR § 4.9253 Transfer facility requirements. A transporter who stores manifested shipments of hazardous waste in containers meeting the requirements of 6 MCAR § 4.9214 A. at a transfer facility for a period of ten days or fewer is not subject to regulation under 6 MCAR §§ 4.9280-4.9422 and a Hazardous Waste Facility Permit with respect to the storage of those wastes.

6 MCAR § 4.9005 4.9254 Transportation of hazardous waste.

A. Applicability. ~~This rule establishes criteria for the loading and transportation of hazardous waste by any person to insure that hazardous wastes are loaded and transported in a manner which minimizes risks to human health and the environment.~~

~~B.~~ Loading of hazardous wastes. No person shall load or unload hazardous waste onto or from any motor vehicle, railroad car, barge, airplane or other vehicle except in accordance with the following requirements:

1. all containers of hazardous waste shall be loaded so that they are reasonably secured against movement within the vehicle by which the hazardous waste is being transported-;

2. tank vehicles shall ~~not be left unattended~~ be attended during the loading or unloading of a hazardous waste- as described in Code of Federal Regulations, title 49, section 117.834(i) (1980);

3. no tools or equipment likely to damage the effectiveness of the closure of any container or adversely affect the ability of a container to contain a hazardous waste shall be used for loading or unloading hazardous waste-;

4. ~~Hazardous waste and food or fiber intended for human or animal consumption or use shall not be loaded in the same vehicle-~~ a transporter may not transport a container of hazardous waste in the same transport vehicle with material that is marked as or known to be foodstuff, feed, or any other edible material intended for consumption or use by humans or animals;

5. hazardous waste shall not be loaded in the same vehicle with incompatible wastes or other materials with which it is incompatible- in accordance with Code of Federal Regulations, title 49, section 177.848 (1980);

6. broken or leaking containers of hazardous waste ~~or containers with an outside surface that is contaminated with hazardous waste~~ shall not be loaded or offered for transportation-;

7. no container or tank containing hazardous waste shall be loaded on a vehicle unless the container or tank is properly labeled and marked as required by 6 MCAR § ~~4-9003~~ 4.9214;

8. no cargo tank or cargo tank compartment shall be loaded with hazardous waste unless it has been tested, inspected and maintained in accordance with Code of Federal Regulations, title 49, section 177.824 (1980) to insure that there is no unintentional release or leakage of waste during transportation ~~and unless it fulfills the applicable requirements set forth in 49 C.F.R. § 177.824 (1976).~~ The person loading the tank or compartment shall be considered to have complied with this provision if the person owning or leasing the cargo tank certifies that all requirements of this provision have been met;

9. no hazardous waste of a type or volume that is beyond the capability of the cargo tank shall be loaded in beyond the rated capacity of the cargo tank; and

10. no cargo tank shall be loaded unless it is properly ~~labeled~~ placarded as required by 6 MCAR § ~~4-9003~~ 4.9214.

~~11. The hazardous wastes of two or more generators shall not be commingled unless such commingling is indicated on the shipping papers of all of the generators.~~

~~12. The hazardous waste shall be given to a transporter as soon as possible after loading.~~

~~C. Transportation of hazardous waste:~~

~~1. The operator of a vehicle transporting hazardous waste shall maintain possession of the hazardous waste shipping papers during transportation as follows:~~

~~a. When the vehicle is a motor vehicle and the driver is at the vehicle's controls the shipping papers shall be either:~~

~~(1) Within his immediate reach while he is restrained by the lap belt; or~~

~~(2) Readily visible to a person entering the driver's compartment or in a folder that is mounted to the inside of the door on the driver's side of the vehicle.~~

~~b. When the vehicle is a motor vehicle and the driver is not at the vehicle's controls, the shipping papers shall be displayed as follows:~~

~~(1) In a holder that is mounted to the inside of the door on the driver's side of the vehicle; or~~

~~(2) On the driver's seat in the vehicle.~~

~~c. When the vehicle is a train, a member of the crew shall maintain the shipping papers in the caboose.~~

~~d. When the vehicle is other than a motor vehicle or train, the operator of the vehicle shall maintain the shipping papers in an accessible location determined by the operator.~~

~~e. If, pursuant to the provisions of 6 MCAR § 4-9008 C., a vehicle operator does not have a copy of the shipping papers in his possession, as required by this section, then the transporter shall maintain the spill information given to him by the generator pursuant to 6 MCAR § 4-9008 C. in such a manner that the information will be available to the vehicle operator as soon as he requests it, or in such other manner that is approved in writing by the agency.~~

B. General provisions.

~~2. 1. The transporter shall comply with all applicable requirements of 6 MCAR §§ ~~4-9008~~ 4.9255-4.9259 relating to shipping papers manifests.~~

~~3. 2. The transporter shall replace any labels required by 6 MCAR § ~~4-9003~~ 4.9214 if they are destroyed, lost or detached.~~

~~D. Time in transit:~~

~~4. 3. Any person who transports hazardous waste shall deliver the hazardous waste to its final destination as soon as possible without undue delay after loading of the hazardous waste.~~

~~5. 2. In the event that a shipment of hazardous waste is not accepted by the facility operator within 48 hours after arrival at the destination or in the event the facility operator does not sign the hazardous waste shipping papers, the transporter shall~~

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immediately return the shipment of hazardous waste to the generator and the generator shall accept it and pay for the return transportation. If the wastes of two or more generators have been commingled as provided in 6 MCAR § 4.9005 B.11., each generator shall accept a portion of the hazardous waste equal to the generator's contribution to the total volume of waste.

E. Spills in transit. These provisions shall apply to all spills of hazardous wastes while in transit within the State of Minnesota.

1. Any transporter who has a spill or leak of hazardous waste during transit shall comply with the provisions of 6 MCAR § 4.9010.

2. In the case of a spill or leakage of hazardous waste during transit, the amount spilled, the amount recovered, the location of the spill site and the disposition of the spilled wastes and any contaminated material shall be noted on or attached to the hazardous waste shipping papers by the transporter.

3. The transporter shall notify the generator as soon as possible of any spill or leak during transit.

4. The generator shall maintain a written summary of all spills and leaks that occur during transit for a period of five years.

5. If during the course of transportation, a container is discovered to be broken or leaking, the transporter shall remove the container to the nearest safe location and isolate it pending proper disposition in the safest and most expeditious manner possible. The generator shall render all reasonable assistance to the transporter in repackaging, packing and cleaning up the waste so that the trip may be resumed. "All reasonable assistance" means providing the transporter with all necessary information about the waste and about procedures for repackaging, packing and cleaning up the waste and in addition providing any physical assistance that the generator is uniquely suited to provide and that the transporter is willing to bear the costs of. Nothing in this provision is, however, intended to restrict or enlarge or affect in any way any liability the generator may have to repack, pack and clean up the waste.

6 MCAR § 4.9255 The manifest system; general requirements.

A. Acceptance of shipment. A transporter may not accept hazardous waste from a generator unless it is accompanied by a manifest signed by the generator in accordance with the provisions of 6 MCAR §§ 4.9200-4.9222 unless the generator is exempt from the manifest requirements pursuant to 6 MCAR § 4.9210 or 6 MCAR § 4.9129.

B. Prior to acceptance of shipment. Before transporting the hazardous waste, the transporter must:

1. prepare a supplemental cover sheet if he commingles or consolidates more than one shipment of hazardous waste. The supplemental cover sheet must provide procedures for handling spills, fires and other emergencies and must accompany the hazardous waste manifest for each individual shipment of hazardous waste until ultimate disposition; and

2. sign and date the manifest acknowledging acceptance of the hazardous waste from the generator. The transporter must return a signed copy to the generator before leaving the generator's property.

C. Manifest with shipment. The transporter must ensure that the manifest accompanies the hazardous waste shipment and is maintained in an accessible location during transportation if required by 6 MCAR § 4.9256.

6 MCAR § 4.9256 Use of the manifest.

A. Delivery of shipment. A transporter who delivers a hazardous waste to another transporter or to the designated facility must:

1. obtain the date of delivery and the handwritten signature of that transporter or of the owner or operator of the designated facility on the manifest;

2. retain one copy of the manifest in accordance with 6 MCAR § 4.9258; and

3. give the remaining copies of the manifest to the accepting transporter or designated facility.

B. Delivery of bulk shipments by water. The requirements of A. do not apply to bulk shipments by water if:

1. the bulk shipment of hazardous waste is delivered by water to the designated facility;

2. a shipping paper containing all the information required on the manifest, excluding the identification numbers, generator certification and signatures, accompanies the hazardous waste;

3. the delivering transporter obtains the date of delivery and handwritten signature of the owner or operator of the designated facility on either the manifest or the shipping paper;

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4. the person delivering the hazardous waste to the initial bulk shipment water transporter obtains the date of delivery and signature of the bulk shipment water transporter on the manifest and forwards it to the designated facility; and

5. a copy of the shipping paper or manifest is retained by each bulk shipment water transporter in accordance with 6 MCAR § 4.9258.

C. Delivery of shipments by rail. The requirements of A. and B. do not apply to shipments by rail and the requirements of 1.-6. do apply.

1. When accepting hazardous waste from a non-rail transporter, the initial rail transporter must:

- a. sign and date the manifest acknowledging acceptance of the hazardous waste;
- b. return a signed copy of the manifest to the non-rail transporter;
- c. forward at least three copies of the manifest to the next non-rail transporter, if any, or the designated facility, if the shipment is delivered to that facility by rail, or the last rail transporter designated to handle the waste in the United States; and
- d. retain one copy of the manifest and rail shipping paper in accordance with 6 MCAR § 4.9258.

2. Rail transporters must ensure that a shipping paper containing all the information required on the manifest excluding the identification numbers, generator certification, and signatures accompanies the hazardous waste at all times.

3. Intermediate rail transporters are not required to sign either the manifest or shipping paper.

4. When delivering hazardous waste to the designated facility, a rail transporter must:

- a. obtain the date of delivery and handwritten signature of the owner or operator of the designated facility on the manifest or the shipping paper, if the manifest has not been received by the facility; and
- b. retain a copy of the manifest or signed shipping paper in accordance with 6 MCAR § 4.9258.

5. When delivering hazardous waste to a non-rail transporter, a rail transporter must:

- a. obtain the date of delivery and the handwritten signature of the next non-rail transporter on the manifest; and
- b. retain a copy of the manifest in accordance with 6 MCAR § 4.9258.

6. Before accepting hazardous waste from a rail transporter, a non-rail transporter must sign and date the manifest and provide a copy to the rail transporter.

D. Transportation to a foreign country from Minnesota. Transporters who transport hazardous waste to a foreign country from Minnesota must:

- 1. indicate on the manifest the date the hazardous waste left the United States;
- 2. sign the manifest and retain one copy in accordance with 6 MCAR § 4.9258; and
- 3. return a signed copy of the manifest to the generator.

6 MCAR § 4.9257 Compliance with the manifest.

A. Acceptable destinations for shipments. The transporter must deliver the entire quantity of hazardous waste which he has accepted from a generator or a transporter to:

- 1. the designated facility listed on the manifest or the alternate designated facility;
- 2. the next designated transporter; or
- 3. the place outside the United States designated by the generator.

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B. Return of shipment to the generator. If the hazardous waste cannot be delivered according to A., or if a shipment or partial shipment of hazardous waste is not accepted by the facility operator after arrival at the destination or if the facility operator does not sign the hazardous waste manifest, the transporter must immediately contact the generator for further instructions and must revise the manifest according to the generator's instructions.

6 MCAR § 4.9258 Record keeping.

A. Manifest. A transporter of hazardous waste must keep a copy of the manifest signed by the generator, himself, and the next designated transporter or the owner or operator of the designated facility for a period of three years from the date the hazardous waste was accepted by the initial transporter.

B. Manifest; bulk shipments by water. For bulk shipments delivered by water to the designated facility, each bulk shipment water transporter must retain a copy of the shipping paper containing all the information required in 6 MCAR § 4.9256 B. for a period of three years from the date the hazardous waste was accepted by the initial transporter.

C. Manifest; shipments by rail. The provisions of 1.-3. apply to shipments of hazardous waste by rail within the United States.

1. The initial rail transporter must keep a copy of the manifest and shipping paper with all the information required in 6 MCAR § 4.9256 C.2. for a period of three years from the date the hazardous waste was accepted by the initial transporter.

2. Intermediate rail transporters are not required to keep records pursuant to this rule.

3. The final rail transporter must keep a copy of the signed manifest or the shipping paper, if signed by the designated facility in lieu of the manifest, for a period of three years from the date the hazardous waste was accepted by the initial transporter.

D. Manifest; transportation out of the United States. A transporter who transports hazardous waste out of the United States must keep a copy of the manifest indicating that the hazardous waste left the United States for a period of three years from the date the hazardous waste was accepted by the initial transporter.

E. Extension of retention period. The periods of retention referred to in A.-D. are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the director.

6 MCAR § 4.9259 Hazardous waste discharges.

A. Immediate action. If during the course of transportation, a container is discovered to be broken or leaking, or a discharge of hazardous waste occurs, the transporter must take appropriate immediate action to protect human health and the environment including the notification of local authorities and the generator and the diking of the discharge area. The generator shall render all reasonable assistance to the transporter in repackaging, packing, and cleaning up the waste so that the trip may be resumed. "All reasonable assistance" means providing the transporter with all necessary information about the waste and about procedures for repackaging, packing, and cleaning up the waste and, in addition, providing any physical assistance that the generator is uniquely suited to provide and for which the transporter is willing to bear the costs. Nothing in this provision, however, is intended to restrict or enlarge or affect in any way liability the generator may have to repack, pack, and clean up the waste.

B. Removal without a manifest. If a discharge of hazardous waste occurs during transportation and an official of a state or local government or a federal agency acting within the scope of his official responsibilities determines that immediate removal of the waste is necessary to protect human health or the environment, that official may authorize the removal of the waste by transporters who do not have identification numbers and without the preparation of a manifest.

C. Notification. An air, rail, highway or water transporter who has discharged hazardous waste must:

1. immediately notify the agency if the hazardous waste may cause pollution of the air, land or waters or the state. The person shall use the agency's 24-hour telephone notification service (612-296-7373);

2. give notice, if required by Code of Federal Regulations, title 49, section 171.15 (1980), to the National Response Center (800-424-8802 or 202-426-2675);

3. immediately notify the generator of any spill or leak during transit; and

4. give the same notice as required by Code of Federal Regulations, title 33, section 153.203 (1980), for oil and hazardous substances if the transporter is a water transporter of bulk shipments.

D. Duty to recover. Any transporter who owns, has possession of, or otherwise has control of a hazardous waste that spills, leaks or otherwise escapes from a container, vehicle tank, storage tank, portable tank or other containment system, including its associated piping, must recover the hazardous waste as rapidly and as thoroughly as possible and shall immediately take such other action as may be reasonably possible to protect human life and health and minimize or abate pollution of the water, air or land resources of the state caused thereby.

E. Reporting. Any air, rail, highway or water transporter who has discharged hazardous waste must:

1. report in writing as required by Code of Federal Regulations, title 49, section 171.16 (1980), to the Director, Office of Hazardous Materials Regulations, Materials Transportation Bureau, Department of Transportation, Washington, D.C. 20590;

2. submit a copy or photocopy of the report required in 1. within 15 days of the incident to the director; and

3. in the case of a spill or leakage of hazardous waste during transit, the amount spilled, the location of the spill site, and the name of the state or federal agency responsible for overseeing the clean-up of the site shall be noted on or attached to the hazardous waste manifest by the transporter.

F. Delivery of hazardous waste. No person shall deliver hazardous waste to a hazardous waste facility or give hazardous waste to a transporter for shipment to a hazardous waste facility located in the state of Minnesota, if the facility operator has not obtained a hazardous waste facility permit from the agency unless the facility is specifically exempt from a Hazardous Waste Facility Permit pursuant to 6 MCAR §§ 4.9100-4.9560. Nothing in this provision is intended to require the transporter to undertake any evaluation of a waste to determine whether it is hazardous.

G. Registration of hazardous waste transporters. Any person who transports hazardous waste that originates or terminates in Minnesota shall obtain an identification number from EPA prior to transporting the hazardous waste.

H. Transportation of used crankcase oil. A transporter of used crankcase oil shall maintain a log that shows the source and disposition of all used crankcase oil. Upon the written request of the director, the transporter shall submit any information from the log that the director requests. The transporter shall retain all information for a period of two years.

Rules as Proposed (all new material)

Chapter Five: Facility Standards

6 MCAR § 4.9280 Facilities governed by facility standards.

6 MCAR § 4.9281 General facility standards.

6 MCAR § 4.9282 Personnel training.

6 MCAR § 4.9283 General requirements for ignitable, reactive, or incompatible waste.

6 MCAR § 4.9284 Waste analysis requirements.

6 MCAR § 4.9285 Location standards.

6 MCAR § 4.9286 Preparedness and prevention.

6 MCAR § 4.9287 Arrangements with local authorities for emergencies.

6 MCAR § 4.9288 Contingency plan.

6 MCAR § 4.9289 Emergency procedures.

6 MCAR § 4.9290 Post-emergency requirements.

6 MCAR § 4.9291 Facility shipping requirements.

6 MCAR § 4.9292 Manifest system.

6 MCAR § 4.9293 Manifest discrepancies.

6 MCAR § 4.9294 Operating record.

6 MCAR § 4.9295 Retention and disposition of records.

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- 6 MCAR § 4.9296 Required reports.
- 6 MCAR § 4.9297 Closure.
- 6 MCAR § 4.9298 Closure activities.
- 6 MCAR § 4.9299 Post-closure.
- 6 MCAR § 4.9300 Post-closure care and use of property.
- 6 MCAR § 4.9301 Notice to local land authority.
- 6 MCAR § 4.9302 Notice in deed to property.
- 6 MCAR § 4.9303 Financial requirements.
- 6 MCAR § 4.9304 Cost estimate for facility closure.
- 6 MCAR § 4.9305 Financial assurance for facility closure.
- 6 MCAR § 4.9306 Cost estimate for post-closure monitoring and maintenance.
- 6 MCAR § 4.9307 Financial assurance for post-closure monitoring and maintenance.
- 6 MCAR § 4.9308 Use of a mechanism for financial assurance of both closure and post-closure care.
- 6 MCAR § 4.9309 Liability requirements.
- 6 MCAR § 4.9310 Incapacity of institutions issuing letters of credit, surety bonds, or insurance policies.
- 6 MCAR § 4.9311 Wording of the instruments.
- 6 MCAR § 4.9312 Use and management of containers.
- 6 MCAR § 4.9313 Tanks.
- 6 MCAR § 4.9314 Surface impoundments.
- 6 MCAR § 4.9315 Waste piles.
- 6 MCAR § 4.9316 Thermal treatment.

Chapter Five: Facility Standards

6 MCAR § 4.9280 Facilities governed by facility standards.

A. General requirements. The standards in 6 MCAR §§ 4.9280-4.9316 apply to owners and operators of all facilities which treat, store, or dispose of hazardous waste except as specifically provided otherwise in this rule or in 6 MCAR §§ 4.9128-4.9222.

1. The requirements of 6 MCAR §§ 4.9280-4.9316 apply to the owners or operators of publicly owned treatment works which treat, store, or dispose of hazardous waste only to the extent they are included in a permit-by-rule granted under the agency's permitting procedures.

2. The requirements of 6 MCAR §§ 4.9280-4.9316 apply to a person disposing of hazardous waste by means of ocean disposal subject to a permit issued under the Marine Protection, Research, and Sanctuaries Act of 1972, United States Code, title 16, sections 1431-1434 and United States Code, title 33, section 1401 only to the extent they are included in a permit-by-rule granted under the agency's permitting procedures. Rules 6 MCAR §§ 4.9280-4.9316 do apply to the treatment or storage of hazardous waste before it is loaded onto an ocean vessel for incineration or disposal at sea.

3. The requirements of 6 MCAR §§ 4.9303-4.9311 are effective 90 days after the effective date of this chapter.

B. Relationship to interim status standards. A facility owner or operator who has fully complied with the requirements for interim status under 6 MCAR § 4.9381 must comply with 6 MCAR §§ 4.9380-4.9422 in lieu of the rules in 6 MCAR §§ 4.9280-4.9316 until final administrative disposition of his permit application is made. The treatment, storage, or disposal of hazardous waste is prohibited except in accordance with a permit and except for the extent to which 6 MCAR §§ 4.9380-4.9422 provide for the continued operation of an existing facility which meets certain conditions until final administrative disposition of the owner's or operator's permit application is made.

C. Exemptions. The requirements of 6 MCAR §§ 4.9280-4.9316 do not apply to the following:

1. the owner or operator of a facility which treats or stores hazardous waste if the treatment or storage meets the criteria in 6 MCAR § 4.9129 B. except to the extent that 6 MCAR § 4.9129 C. provides otherwise and 6 MCAR § 4.9216 A.5. is complied with;
2. a generator accumulating waste on-site in compliance with 6 MCAR § 4.9216;

3. a farmer disposing of waste pesticides from his own use in compliance with 6 MCAR § 4.9222;
4. the owner or operator of a totally enclosed treatment facility;
5. the owner or operator of an elementary neutralization unit, pretreatment unit, or a wastewater treatment unit, but only if the unit does not receive hazardous waste from generators other than the owner or operator of the unit;
6. the owner or operator of a publicly owned treatment works with respect to the treatment or storage of hazardous waste which is delivered to the treatment works by a transport vehicle or vessel or through a pipe, unless the requirements of 6 MCAR §§ 4.9280-4.9316 are included in a permit-by-rule;
7. the owner or operator of a facility which manages hazardous waste produced in conjunction with the combustion of fossil fuels provided that the wastes:
 - a. are generated on-site;
 - b. traditionally have been and actually are mixed with and codisposed or cotreated with fly ash, bottom ash, boiler slag, or flue gas emission control wastes from coal combustion; and
 - c. are necessarily associated with the production of energy; such as boiler cleaning solutions, boiler blowdown, demineralizer regenerant, pyrites, and cooling tower blowdown;
8. a transporter storing manifested shipments of hazardous waste in containers meeting the requirements of 6 MCAR § 4.9214 A. at a transfer facility for a period of ten days or less; or
9. persons with respect to those activities which are carried out to immediately contain or treat a spill of hazardous waste or material which, when spilled, becomes a hazardous waste, except that with respect to such activities the appropriate requirements of 6 MCAR § 4.9259, 6 MCAR § 4.9282, and 6 MCAR §§ 4.9286-4.9290 are applicable to owners and operators of treatment, storage, and disposal facilities otherwise subject to 6 MCAR §§ 4.9280-4.9316. This exemption applies only to activities taken in immediate response to a spill. After the immediate response activities are completed, the applicable provisions of 6 MCAR §§ 4.9100-4.9560 apply fully to the management of any spill residue or debris which is a hazardous waste under 6 MCAR §§ 4.9128-4.9137.

6 MCAR § 4.9281 General facility standards.

A. Applicability. The requirements of B.-E. apply to owners and operators of all hazardous waste facilities except as provided by 6 MCAR § 4.9280 C.

B. Identification number. Every facility owner or operator must apply for an identification number in accordance with the agency's procedures.

C. Required notices.

1. The owner or operator of a facility that has arranged to receive hazardous waste from a foreign source must notify the director as well as the Environmental Protection Agency's Region V administrator in writing at least four weeks in advance of the date the waste is expected to arrive at the facility. Notice of subsequent shipments of the same waste from the same foreign source is not required.

2. No facility owner or operator shall accept a shipment of hazardous waste which he is not allowed to manage under his hazardous waste facility permit. The owner or operator must notify the director immediately upon receiving such hazardous wastes.

3. Except when the owner or operator is also the generator, the owner or operator of a facility that receives hazardous waste from an off-site source must inform the generator in writing that he has the appropriate permit or permits for, and will accept, the waste the generator is shipping. The owner or operator must keep a copy of this written notice as part of the operating record.

4. Before transferring ownership or operation of a facility during its operating life, or of a disposal facility during the post-closure care period, the owner or operator must notify the new owner or operator in writing of the requirements of 6 MCAR §§ 4.9280-4.9316 and all permit requirements. An owner's or operator's failure to notify the new owner or operator of these requirements does not relieve the new owner or operator of the obligation to comply with all applicable requirements.

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D. Security.

1. The owner or operator must prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portion of his facility, unless he can demonstrate to the director in his permit application that:

a. physical contact with the waste, structures, or equipment within the active portion of the facility will not injure unknowing or unauthorized persons or livestock which could enter the active portion of a facility; and

b. disturbance of the waste or equipment by the unknowing or unauthorized entry of persons or livestock onto the active portion of a facility will not cause a violation of 6 MCAR §§ 4.9280-4.9316.

2. Unless the owner or operator has made a successful demonstration approved by the director under 1., a facility must have:

a. a 24-hour surveillance system which continuously monitors and controls entry onto the active portion of the facility; or

b. an artificial or natural barrier which completely surrounds the active portion of the facility and a means to control entry at all times through the gates or other entrances to the active portion of the facility.

3. Unless the owner or operator has made a successful demonstration approved by the director under 1., a sign with the legend, "Danger—Unauthorized Personnel Keep Out," must be posted at each entrance to the active portion of a facility and at other locations in sufficient numbers to be seen from any approach to the active portion. The legend must be written in English and in any other language predominant in the area surrounding the facility and must be legible from a distance of at least 25 feet. Existing signs with a legend other than "Danger—Unauthorized Personnel Keep Out" may be used if the legend on the sign indicates that only authorized personnel are allowed to enter the active portion and that entry onto the active portion can be dangerous.

E. General inspection requirements.

1. The owner or operator must inspect the facility for malfunctions and deterioration, operator errors, and discharges which may be causing or may lead to the release of hazardous waste constituents to the environment or a threat to human health. The owner or operator must conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.

2. The owner or operator must develop and follow a written schedule for inspecting monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment that are important to preventing, detecting, or responding to environmental or human health hazards. He must keep this schedule at the facility. The schedule must identify the types of problems which are to be looked for during the inspection such as inoperative sump pumps, leaking fittings, and eroding dikes.

3. The frequency of inspection may vary for the items on the schedule. However, it must be based on the rate of possible deterioration of the equipment and the probability of an environmental or human health incident if the deterioration or malfunctions or any operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, must be inspected daily when in use. The inspection schedule must include the terms and frequencies called for in 6 MCAR § 4.9312 E., 6 MCAR § 4.9313 D., 6 MCAR § 4.9314 E., 6 MCAR § 4.9315 E., and 6 MCAR § 4.9316 G., where applicable. The inspection schedule must be submitted with the permit application. The director shall evaluate the schedule along with the rest of the application to ensure that it adequately protects human health and the environment. As part of this review, the director may modify or amend the schedule as necessary.

4. The owner or operator must remedy any deterioration or malfunction of equipment or structures which the inspection reveals on a schedule which ensures that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action must be taken immediately.

5. The owner or operator must record inspections in an inspection log or summary. He must keep these records for at least three years from the date of inspection. These records must include the date and time of the inspection, the name of the inspector, a notation of the observation made, and the date and nature of any repairs or other remedial actions.

6 MCAR § 4.9282 Personnel training.

A. General. Hazardous waste facility personnel directly involved with the handling of hazardous waste must successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of 6 MCAR §§ 4.9100-4.9560. The owner or operator must ensure that this program includes all the elements described in the document required by F.3.

B. Program director. This program must be directed by a person trained in hazardous waste management procedures.

C. Minimum program requirements. The training program must include instruction which teaches facility personnel hazardous waste management procedures relevant to the positions in which they are employed, including contingency plan implementation procedures. The training program must be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems, including, where applicable:

1. procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment;
2. key parameters for automatic waste feed cutoff systems;
3. communications or alarm systems;
4. procedures for response to fires or explosions;
5. procedures for response to ground water contamination incidents; and
6. procedures for shutdown of operations.

D. Effective date. Facility personnel must successfully complete the program required in C. within six months after the effective date of this rule or six months after the date of their employment or assignment to a facility or assignment to a new position at a facility, whichever is later. Employees hired after the effective date of this rule must not work in unsupervised positions until they have completed the training requirements of A.-C.

E. Training review. Facility personnel must take part in an annual review of the initial training required in A.-C.

F. Personnel records. The following documents and records must be maintained at the facility:

1. the job title for each position at the facility related to hazardous waste management and the name of the employee filling each job;
2. a written job description for each position at the facility related to hazardous waste. This description may be consistent in its degree of specificity with descriptions for other similar positions in the same company location or bargaining unit, but must include the requisite skill, education, or other qualifications, and duties of employees assigned to each position;
3. a written description of the type and amount of both introductory and continuing training that will be given to each person filling a position described in 1.; and
4. records that document that the training or job experience required under A.-D. has been given to, and completed by, facility personnel.

G. Record retention. Training records on current personnel must be kept until closure of the facility. Training records on former employees must be kept for at least three years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the same company.

6 MCAR § 4.9283 General requirements for ignitable, reactive, or incompatible waste.

A. Required notices. The owner or operator must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste must be separated and protected from sources of ignition or reaction, including but not limited to open flames, smoking, cutting and welding, hot surfaces, frictional heat, static sparks, electrical sparks, mechanical sparks, spontaneous ignition, and radiant heat. While ignitable or reactive waste is being handled, the owner or operator must confine smoking and open flame to specially designated locations. "No Smoking" signs must be conspicuously placed wherever there is a hazard from ignitable or reactive waste.

B. Required precautions. When specifically required by other rules in 6 MCAR §§ 4.9100-4.9560, the owner or operator of a facility that treats, stores, or disposes ignitable or reactive waste or mixes incompatible waste or incompatible wastes and other materials, must take precautions to prevent reactions which:

1. generate extreme heat, pressure, fire, explosions, or violent reactions unless the process has a permit to handle these types of reactions;
2. produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;
3. produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;

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4. damage the structural integrity of the device or facility; or
5. through other like means threaten human health or the environment.

C. Documentation of compliance. When required to comply with A. or B., the owner or operator must document that compliance. This documentation may be based on reference to published scientific or engineering literature, data from trial tests, waste analyses, or the results of the treatment of similar wastes by similar treatment processes and under similar operating conditions.

6 MCAR § 4.9284 Waste analysis requirements.

A. Waste analysis.

1. Before an owner or operator treats, stores, or disposes of any hazardous waste, he must obtain a detailed chemical and physical analysis of a representative sample of the waste. This analysis must contain all the information which must be known in order to treat, store, or dispose of the waste in accordance with the requirements of 6 MCAR §§ 4.9280-4.9316 or with the conditions of a permit issued under the agency's permitting procedures.

2. The analysis may include data developed under 6 MCAR §§ 4.9128-4.9137 and existing published or documented data on the hazardous waste or on hazardous waste generated from similar processes, including data obtained from the generator.

3. The analysis must be repeated as necessary to ensure that it is accurate and up-to-date. The analysis must be repeated at the following times:

- a. when the owner or operator is notified, or has reason to believe, that the process or operation generating the hazardous waste has changed; and
- b. for off-site facilities, when the results of the inspection required in 4. indicate that the hazardous waste received at the facility does not match the waste designated on the accompanying manifest or shipping paper.

4. The owner or operator of an off-site facility must inspect and, if necessary, analyze each hazardous waste shipment received at the facility to determine whether it matches the identity of the waste specified on the accompanying manifest or shipping paper.

B. Waste analysis plan. The owner or operator must develop and follow a written waste analysis plan which describes the procedures which he will carry out to comply with A. He must keep this plan at the facility. The plan must specify:

1. the parameters for which each hazardous waste will be analyzed and the rationale for the selection of these parameters;
2. the test methods which will be used to test for these parameters;
3. the sampling method which will be used to obtain a representative sample of the waste to be analyzed. A representative sample may be obtained using either:
 - a. one of the sampling methods described in Code of Federal Regulations, title 40, part 261, appendix I (1980); or
 - b. an equivalent sampling method as approved by the director;
4. the frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up-to-date;
5. for off-site facilities, the waste analyses that hazardous waste generators have agreed to supply;
6. where applicable, the methods which will be used to meet the additional waste analysis requirements for specific waste management methods as specified in 6 MCAR § 4.9283 and 6 MCAR § 4.9316 B.; and
7. for off-site facilities, the waste analysis plan must also specify the procedures which will be used to inspect and, if necessary, analyze each shipment of hazardous waste received at the facility to ensure that it matches the identity of the waste designated on the accompanying manifest or shipping paper. The plan must describe:
 - a. the procedures which will be used to determine the identity of each shipment of waste managed at the facility; and
 - b. the sampling method which will be used to obtain a representative sample of the waste to be identified, if the identification method includes sampling. The waste analysis plan must be submitted with the permit application.

6 MCAR § 4.9285 Location standards.

A. Floodplains. A facility located in a 100-year floodplain must be designed, constructed, operated, and maintained to prevent washout of any hazardous waste by a 100-year flood unless the owner or operator can demonstrate to the director that procedures are in effect which will cause the waste to be removed safely before flood waters can reach the facility to a location where the wastes will not be vulnerable to floodwaters. The location to which wastes are moved must be a facility which is

either permitted by this agency, the Environmental Protection Agency, or by a state with a hazardous waste management program authorized by the Environmental Protection Agency, or which has interim status.

As used in the preceding paragraph, "100-year floodplain" means any land area which is subject to a one percent or greater chance of flooding in any given year from any source; "washout" means the flow of hazardous waste or facility buildings or equipment from the active portion of the facility as a result of flooding; and "100-year flood" means a flood that has a one percent chance of being equalled or exceeded in any given year.

B. Other location standards.

1. No facility shall be established or constructed in a wetland or within a shoreland.

2. No facility shall be established or constructed in a location where the topography, geology, hydrology, or soil is unsuitable for the protection of the ground water and the surface water. Factors to be used in determining unsuitability of a site include:

- a. proximity to lakes, streams, or ponds;
- b. proximity to and type of bedrock;
- c. presence of natural aquicludes to protect ground water;
- d. value of the ground water as a water supply; and

e. ground water flow patterns, particularly if the site is located in a zone of recharge to aquifers useable as sources of drinking water.

3. No facility shall be established or constructed in a location where facility activity would result in emissions of air contaminants causing the violation of the ambient air quality standards established in 6 MCAR § 4.0001.

6 MCAR § 4.9286 Preparedness and prevention.

A. Applicability. The provisions of B.-F. apply to owners and operators of all hazardous waste facilities except as otherwise provided in 6 MCAR § 4.9280.

B. Design and operation of facility. Facilities must be designed, constructed, maintained, and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or nonsudden release to air, land, or water of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

C. Required equipment. All facilities must be equipped with the following, unless it can be demonstrated to the director that none of the hazards posed by waste handled at the facility could require the particular equipment specified below:

1. an internal communications or alarm system capable of providing immediate emergency instruction by voice or signal to facility personnel;
2. a device, such as a telephone or a hand-held two-way radio, which is immediately available at the scene of operations and which is capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams;
3. portable fire extinguishers, spill control equipment, decontamination equipment, and fire control equipment, including special extinguishing devices such as those using foam, inert gas, or dry chemicals; and
4. water at adequate volume and pressure to supply water hose streams, foam producing equipment, automatic sprinklers, or water spray systems.

D. Testing and maintenance of equipment. All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to ensure proper operation in time of emergency.

E. Access to communications or alarm system.

1. Whenever hazardous waste is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless the director has ruled that such a device is not required under C.

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2. If at any time only one employee is on the premises while the facility is operating, that employee must have immediate access to a device, such as a telephone or a hand-held, two-way radio, which is immediately available at the scene of operation and which is capable of summoning external emergency assistance unless the director has ruled that such a device is not required under C.

F. Required aisle space. The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency unless it can be demonstrated to the director that aisle space is not needed for any of these purposes.

6 MCAR § 4.9287 Arrangements with local authorities for emergencies.

A. Arrangements required. The owner or operator must attempt to make the following arrangements, as appropriate for the type of waste handled at the facility and the potential need for the services of these organizations:

1. arrangements to familiarize the police, fire departments, and emergency response teams with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes;

2. if more than one police and fire department might respond to an emergency, agreements designating primary emergency authority to a specific police and a specific fire department, and agreements with any others to provide support to the primary emergency authority;

3. agreements with state emergency response teams, emergency response contractors, and equipment suppliers; and

4. arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.

B. Refusal by authorities. If state or local authorities decline to enter into arrangements required under A., the owner or operator must document the refusal in the operating record.

6 MCAR § 4.9288 Contingency plan.

A. Applicability. The provisions of B.-F., 6 MCAR § 4.9287, 6 MCAR § 4.9289, and 6 MCAR § 4.9290 apply to owners and operators of all hazardous waste facilities except as otherwise provided in 6 MCAR § 4.9280.

B. General requirements. Each owner or operator must have a contingency plan for his facility. The contingency plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or nonsudden release of hazardous waste or hazardous waste constituents to air, land, or water.

C. Implementation of plan. The provisions of the plan must be carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

D. Content of contingency plan.

1. The contingency plan must describe the actions facility personnel directly involved with the handling of hazardous wastes must take to comply with B. and C., and 6 MCAR § 4.9289.

2. If the owner or operator has already prepared a Spill Prevention, Control, and Countermeasures Plan in accordance with Code of Federal Regulations, title 40, sections 112 and 1510 (1980), or another emergency or contingency plan, that plan must only be amended to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of 6 MCAR §§ 4.9100-4.9560.

3. The plan must describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and state and local emergency response teams to coordinate emergency services pursuant to 6 MCAR § 4.9287.

4. The plan must list names, addresses, and office and home telephone numbers of all persons qualified to act as emergency coordinator, and this list must be kept up-to-date. If more than one person is listed, one must be named as primary emergency coordinator and others must be listed in the order in which they will assume responsibility as alternates. For new facilities, this information must be supplied to the director at the time of certification rather than at the time of permit application.

5. The plan must include a list of all emergency equipment at the facility such as fire extinguishing systems, spill control equipment, internal and external communications and alarm systems, and decontamination equipment, where this equipment is required. This list must be kept up-to-date. In addition, the plan must include the location and a physical description of each item on the list and a brief outline of its capabilities.

6. The plan must include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe the signal or signals to be used to begin evacuation, evacuation routes, and alternate evacuation routes in case where the primary routes could be blocked by the release of hazardous waste or fire.

E. Copies of contingency plan. A copy of the contingency plan and all revisions to the plan must be:

1. maintained at the facility;
2. submitted to all local police departments, fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services; and
3. submitted to the director with the permit application and, after modification or approval, will become a condition of any permit issued.

F. Amendment of contingency plan. The contingency plan must be reviewed, and immediately amended if necessary, whenever:

1. the facility permit is revised;
2. the plan fails in an emergency;
3. the facility changes in its design, construction, operation, maintenance, or other circumstances in a way that materially increases the potential for fires, explosions, or the release of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;
4. the list of emergency coordinators changes; or
5. the list of emergency equipment changes.

6 MCAR § 4.9289 Emergency procedures.

A. Emergency coordinator. At all times, there must be at least one employee either on the facility premises or on call with the responsibility for coordinating all emergency response measures. This emergency coordinator must be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. This person must also have the authority to commit the resources needed to carry out the contingency plan. Applicable responsibilities for the emergency coordinator vary, depending on factors such as type and variety of waste handled by the facility and type and complexity of the facility.

B. Notification of emergency. Whenever there is an imminent or actual emergency situation, the emergency coordinator or designee when the emergency coordinator is on call, must immediately activate internal facility alarms or communication systems, where applicable, to notify all facility personnel and notify appropriate state or local agencies with designated response roles with at least the information listed in C. and D.

C. Identification of released material. Whenever there is a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount, and areal extent of any released materials. He may do this by observation or review of facility records or manifests, and, if necessary, by chemical analysis.

D. Assessment of hazards. Concurrently, the emergency coordinator must assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion; the effects of any toxic, irritating, or asphyxiating gases that are generated; and the effects of any hazardous surface water run-off from water or chemical agents used to control fire and heat-induced explosions.

E. Report on released material. If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health or the environment outside the facility, the findings must be reported as provided in 1. and 2.

1. If the assessment indicates that evacuation of local areas may be advisable, the appropriate local authorities must be immediately notified, and the emergency coordinator must be available to help appropriate officials decide whether local areas should be evacuated.

2. The agency's emergency response unit must be immediately notified at the 24-hour telephone number, 612-296-7373, and notification must also be given to either the governmental official designated as the on-scene coordinator for that geographical area in the applicable regional contingency plan under Code of Federal Regulations, title 40, part 1510 (1980) or to the National Response Center using their 24-hour toll free number, 800-424-8802. The report must include:

- a. name and telephone number of reporter;
- b. name and address of facility;

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- c. time and type of incident;
- d. name and quantity of material involved, to the extent known;
- e. the extent of injuries, if any; and
- f. the possible hazards to human health or the environment outside the facility.

F. Containment measures. During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing released waste, and removing or isolating containers.

G. Facility monitoring. If the facility stops operations in response to a fire, explosion, or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

6 MCAR § 4.9290 Post-emergency requirements.

A. Cleanup. Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil or water, or any other material that results from a release, fire, or explosion at the facility in a manner approved by the director. Unless the owner or operator can demonstrate that the recovered material is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of 6 MCAR §§ 4.9128-4.9259. The emergency coordinator must ensure that in the affected area or areas of the facility no waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed, and all emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

B. Notice before resuming operations. The owner or operator must notify the Regional Administrator, the director, and other appropriate state and local authorities that the facility is in compliance with A. before operations are resumed in the affected area or areas of the facility.

C. Report to agency. The owner or operator must note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within 15 days after the incident, he must submit a written report on the incident to the director. The report must include:

1. name, address, and telephone number of the owner or operator;
2. name, address, and telephone number of the facility;
3. date, time, and type of incident;
4. name and quantity of material involved;
5. the extent of injuries, if any;
6. an assessment of actual or potential hazards to human health or the environment, where this is applicable; and
7. estimated quantity and disposition of recovered material that resulted from the incident.

6 MCAR § 4.9291 Facility shipping requirements. When a shipment of hazardous waste is initiated from a facility, the owner or operator of that facility must comply with the requirements of 6 MCAR §§ 4.9200-4.9222. The provisions of 6 MCAR § 4.9216 are applicable to the on-site accumulation of hazardous wastes by generators. Provisions of 6 MCAR § 4.9216 B. only apply to owners or operators who are shipping hazardous waste which they generated at that facility.

6 MCAR § 4.9292 Manifest system.

A. Applicability. The requirements of this rule apply to owners and operators of both on-site and off-site facilities, except as 6 MCAR § 4.9280 C. provides otherwise. The provisions of B. do not apply to owners and operators of on-site facilities that do not receive any hazardous waste from off-site sources.

B. General manifest requirements. If a facility receives hazardous waste accompanied by a manifest, the owner or operator, or his agent, must:

1. sign and date each copy of the manifest to certify that the hazardous waste covered by the manifest was received;
2. note any discrepancies in the manifest on each copy of the manifest. The owner or operator of a facility whose procedures under 6 MCAR § 4.9284 B.2. include waste analysis need not perform that analysis before signing the manifest and giving it to the transporter. However, 6 MCAR § 4.9293 requires reporting any discrepancy discovered during later analysis;
3. immediately give the transporter at least one copy of the signed manifest;

4. within ten days after the delivery, send a copy of the manifest to the generator and the director; and
5. retain at the facility a copy of each manifest for at least three years from the date of delivery.

C. Rail and water shipment requirements. If a facility receives hazardous waste from a rail or water bulk shipment transporter and the waste is accompanied by a shipping paper containing all the information required on the manifest, excluding the identification numbers, generator's certification, and signatures, the owner or operator, or his agent, must:

1. sign and date each copy of the manifest or shipping paper, if the manifest has not been received, to certify that the hazardous waste covered by the manifest or shipping paper was received;
2. note any discrepancies in the manifest, or in the shipping paper if the manifest has not been received, on each copy of the manifest or shipping paper. The owner or operator of a facility whose procedures under 6 MCAR § 4.9284 B.7. include waste analysis need not perform that analysis before signing the shipping paper and giving it to the transporter. However, 6 MCAR § 4.9293 requires reporting any discrepancy discovered during later analysis;
3. immediately give the rail or water bulk shipment transporter at least one copy of the signed manifest, or shipping paper if the manifest has not been received;
4. within ten days after the delivery, send a copy of the signed and dated manifest to the generator; however, if the manifest has not been received within ten days after delivery, the owner or operator, or his agent must send a copy of the shipping paper signed and dated to the generator. The generator is required under 6 MCAR § 4.9213 to send three copies of the manifest to the facility when hazardous waste is sent by rail or water bulk shipment; and
5. retain at the facility a copy of the manifest or shipping paper if signed in lieu of the manifest at the time of delivery, for at least three years from the date of delivery.

6 MCAR § 4.9293 Manifest discrepancies.

A. Applicability. The requirements of this rule apply to owners and operators of both on-site and off-site facilities, except as 6 MCAR § 4.9280 C. provides otherwise. This rule does not apply to owners or operators of on-site facilities that do not receive any hazardous waste from off-site sources.

B. Definition of a discrepancy. Manifest discrepancies are defined as significant or minor. Significant discrepancies include 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. Significant discrepancies in quantity are weight differences for bulk wastes greater than ten percent and any variation in piece count for batch waste, such as a difference of one drum in a truck load. Significant discrepancies in types of waste are obvious differences which can be discovered by inspection or waste analysis, such as waste solvent for waste acid, or toxic constituents not reported on the manifest or shipping paper. Minor discrepancies include incomplete manifests or shipping papers, manifests or shipping papers which are inconsistent, and a container or portable tank containing hazardous waste which is not properly labeled.

C. Handling of discrepancies. Upon discovering a significant or minor discrepancy, the owner or operator of a treatment, storage, or disposal facility must take action as described in 1., 2. or 3., as applicable.

1. Upon discovering a significant discrepancy, the owner or operator must attempt to reconcile the discrepancy with the waste generator and the transporter. If the discrepancy is not resolved in ten days, the owner or operator must immediately submit to the director a letter describing the discrepancy, attempts made to reconcile it, and a copy of the manifest or shipping paper. The type of discrepancy must be noted on the manifest.
2. Upon discovering a minor discrepancy, the owner or operator must attempt to reconcile the discrepancy with the waste generator and the transporter. The owner or operator must indicate the type of discrepancy and its resolution on the manifest. If the discrepancy cannot be reconciled, the owner or operator must note this on the manifest with a brief explanation.
3. If a shipment of hazardous waste is delivered to a facility not allowed to manage the waste under the facility's hazardous waste permit, the owner or operator must notify the director immediately.

6 MCAR § 4.9294 Operating record.

A. Applicability. The requirements of this rule apply to owners and operators of both on-site and off-site facilities, except as 6 MCAR § 4.9280 C. provides otherwise.

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B. Record requirement. The owner or operator must keep a written operating record at his facility.

C. Record information. The following must be recorded, as it becomes available, and maintained in the operating record until closure of the facility:

1. the names of the generators of the hazardous waste and their identification numbers;
2. the date of arrival of each shipment along with the transporter's name and identification numbers;
3. a description and the quantity of each hazardous waste received, and the method and date of treatment, storage, or disposal at the facility;
4. the location of each hazardous waste within the facility and the quantity at each location. For disposal facilities, the location and quantity of the hazardous waste must be recorded on a map or diagram of each cell or disposal area. For all facilities, this information must include cross-references to specific manifest document numbers if the waste was accompanied by a manifest;
5. records and results of waste analysis performed as specified in 6 MCAR § 4.9283, 6 MCAR § 4.9284, and 6 MCAR § 4.9316 B.;
6. summary reports and details of all incidents that require implementing the contingency plan as specified in 6 MCAR § 4.9290;
7. records and results of inspections as required by 6 MCAR § 4.9281 E.;
8. monitoring, testing, or analytical data where required by 6 MCAR § 4.9316 G.;
9. for off-site facilities, notices to generators as specified in 6 MCAR § 4.9281 C.2.; and
10. all closure cost estimates under 6 MCAR § 4.9304 and, for disposal facilities, all post-closure cost estimates under 6 MCAR § 4.9306.

6 MCAR § 4.9295 Retention and disposition of records.

A. Applicability. The requirements of this rule apply to owners and operators of both on-site and off-site facilities, except as 6 MCAR § 4.9280 C. provides otherwise.

B. Retention of records. The retention period for all records required under 6 MCAR §§ 4.9280-4.9316 is three years and is extended automatically during the course of any unresolved enforcement action regarding the facility or as requested by the agency.

C. Disposition of records. A copy of records of waste disposal locations and quantities under 6 MCAR § 4.9294 C. must be submitted to the director and the local land authority upon closure of the facility.

6 MCAR § 4.9296 Required reports.

A. Applicability. The requirements of this rule apply to owners and operators of both on-site and off-site facilities, except as 6 MCAR § 4.9280 C. provides otherwise. The requirements of C. do not apply to owners or operators of on-site facilities that do not receive any hazardous waste from off-site sources.

B. Annual report. The owner or operator must prepare and submit a single copy of an annual report to the director no later than March 1 for the preceding calendar year. The report form and instructions to be used may be obtained from the director. The annual report must cover facility activities during the previous calendar year and must include the following information:

1. the identification number, name, and address of the facility;
2. the year covered by the report;
3. for off-site facilities, the identification number of each hazardous waste generator for whom the facility treated, disposed, or stored a hazardous waste during the year and for imported shipments, the report must give the name and address of the foreign generator;
4. a description and the quantity of each hazardous waste the facility treated, disposed, or stored during the year. For off-site facilities, this information must be listed by identification number;
5. the method of treatment, storage, or disposal for each hazardous waste;
6. the most recent closure cost estimate under 6 MCAR § 4.9304 and, for disposal facilities the most recent post-closure cost estimates under 6 MCAR § 4.9306; and
7. the certification signed by the owner or operator of the facility or his authorized representative.

C. Unmanifested waste report. If a shipment of hazardous waste is delivered to a hazardous waste facility from an off-site source without an accompanying manifest or without an accompanying shipping paper and if the waste is not excluded from the

manifest requirement by 6 MCAR § 4.9210, the facility operator shall attempt to reconcile the discrepancy with the waste generator or transporter. If the discrepancy cannot be resolved, the owner or operator shall notify the director prior to acceptance of the waste. Within ten days, a follow-up report shall be mailed to the director. The report must include:

1. the identification number, name, and address of the facility;
2. the date the facility received the waste;
3. the transporter's name, vehicle license, address and identification number, if available;
4. the generator's name, address, and identification number, if available;
5. a description and the quantity of each unmanifested hazardous waste the facility received;
6. the method of treatment, storage, or disposal for each hazardous waste;
7. a brief explanation of why the waste was unmanifested, if known. When a facility receives unmanifested hazardous waste, the owner or operator must obtain from each generator a certification that the waste qualifies for exclusion. Otherwise, the owner or operator must file an unmanifested waste report for the hazardous waste shipment; and
8. the certification signed by the owner or operator of the facility or his authorized representative.

D. Additional reports. In addition to submitting the manifest discrepancy report, the annual reports and the unmanifested waste reports described in B. and C., the owner or operator must also report to the director:

1. releases, fires, and explosions as specified in 6 MCAR § 4.9289; and
2. facility closure as specified in 6 MCAR § 4.9298 D.

6 MCAR § 4.9297 Closure.

A. Applicability. The provisions of B.-E. and 6 MCAR § 4.9298 apply to the owner or operator of a hazardous waste facility and the provisions of 6 MCAR §§ 4.9299-4.9302 apply to the owner or operator of a hazardous waste disposal facility, except as 6 MCAR § 4.9280 provides otherwise.

B. Closure performance standard. The owner or operator must close the facility in a manner minimizing the need for further maintenance. Closure procedures must result in controlling, minimizing, or eliminating, to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous waste constituents, leachate, contaminated rainfall, or waste decomposition products to the ground or surface waters or to the atmosphere.

C. Submittal of closure plan.

1. The owner or operator of a hazardous waste facility must submit a closure plan with the permit application, and the closure plan must be approved by the agency as part of the permit issuance procedure. The approved closure plan shall become a condition of any permit. The agency's approval must ensure that the approved closure plan is consistent with B., D., and E., and 6 MCAR § 4.9298, and the applicable closure requirements of 6 MCAR §§ 4.9312-4.9316.

2. A copy of the approved closure plan and all revisions to the plan must be kept at the facility until closure is completed and certified. The plan must identify steps necessary to completely or partially close the facility at any point during its intended operating life and to completely close the facility at the end of its intended operating life. The closure plan must include, at least:

- a. a description of how and when the facility will be partially closed, if applicable, and finally closed. The description must identify the maximum extent of the operation which will be unclosed during the life of the facility and how the requirements of B., E., 6 MCAR § 4.9298, and the applicable closure requirements of 6 MCAR §§ 4.9312-4.9316 will be met;
- b. an estimate of the maximum inventory of wastes in storage and in treatment at any time during the life of the facility;
- c. a description of the steps needed to decontaminate facility equipment during closure; and
- d. an estimate of the expected year of closure and a schedule for final closure. The schedule must include the total time required for intervening closure activities which will allow tracking of the progress of closure.

D. Amendment of plan. The owner or operator may amend the closure plan at any time during the active life of the facility. The active life of the facility is that period during which wastes are periodically received. The owner or operator must amend the

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plan whenever changes in operating plans or facility design affect the closure plan and whenever there is a change in the expected year of closure. When the owner or operator requests a permit modification to authorize a change in operating plans or facility design, he must request a modification of the closure plan at the same time. If a permit modification is not needed to authorize the change in operating plans or facility design, the request for modification of the closure plan must be made within 60 days after the change.

E. Notification of closure. The owner or operator must notify the director at least 180 days prior to the date he expects to begin closure. The date when he expects to begin closure must be within 30 days after the date on which he expects to receive the final volume of waste. If the facility's permit or interim status is terminated, or if the facility is otherwise ordered by judicial decree or compliance order to cease receiving waste or to close, then this requirement does not apply. However, the owner or operator must close the facility in accordance with established deadlines.

6 MCAR § 4.9298 Closure activities.

A. Time allowance to begin closure activities. Within 90 days after receiving the final volume of hazardous waste, the owner or operator must treat, remove from the site, or dispose on-site all hazardous waste in accordance with the approved closure plan. The agency may approve a longer period if the owner or operator demonstrates that he has taken and will continue to take all steps to prevent threats to human health and the environment and:

1. the activities required to comply with the approved closure plan will, of necessity, take longer than 90 days to complete; or
2. the facility has the capacity to receive additional waste, there is a reasonable likelihood that a person other than the owner or operator will recommence operation of the site, and closure of the facility would be incompatible with continued operation of the site.

B. Time extension for closure activities. The owner or operator must complete closure activities in accordance with the approved closure plan and within 180 days after receiving the final volume of waste. The agency may approve a longer closure period if the owner or operator demonstrates he has taken and will continue to take all steps to prevent threats to human health and the environment and:

1. the closure activities will, of necessity, take longer than 180 days to complete; or
2. the facility has capacity to receive additional waste, there is a reasonable likelihood that a person other than the owner or operator will recommence operation of the site, and closure of the facility would be incompatible with continued operation of the site.

If operation of the site is recommended, the agency may defer completion of closure activities until the new operation is terminated.

C. Disposal or decontamination of equipment. When closure is completed, all facility equipment and structures must have been properly disposed of or decontaminated by removing all hazardous wastes and residues.

D. Certification of closure. When closure is completed, the owner or operator must submit to the director certification by the owner or operator and by an independent registered professional engineer that the facility has been closed in accordance with the specifications in the approved closure plan.

6 MCAR § 4.9299 Post-closure.

A. Applicability. The provisions of B., C., and 6 MCAR §§ 4.9300-4.9302 apply to the owner or operator of a hazardous waste disposal facility except as otherwise provided in 6 MCAR § 4.9280.

B. Submittal of post-closure plan. The owner or operator of a disposal facility must have a written post-closure plan. The owner or operator of a disposal facility must submit the plan with his permit application and the plan must be approved by the agency as part of the permit issuance procedure. The approved post-closure plan will become a condition of any permit issued.

C. Post-closure plan; amendment of plan.

1. A copy of the approved plan and all revisions to the plan must be kept at the facility until the post-closure care period begins. This plan must identify the activities which will be carried on after closure and the frequency of these activities, and it must include at least:

- a. a description of the planned ground water monitoring activities and frequencies at which they will be performed;
- b. a description of the planned maintenance activities and frequencies at which they will be performed to ensure the integrity of the cap and final cover or other containment structures, where applicable, and the function of the facility monitoring equipment; and
- c. the name, address, and telephone number of the person or office to contact about the disposal facility during the post-closure period. This person or office must keep an updated post-closure plan during the post-closure period.

2. The owner or operator may amend the post-closure plan at any time during the active life of the disposal facility or during the post-closure period. The owner or operator must amend his plan whenever changes in operating plans, or facility design, or events which occur during the active life of the facility or during the post-closure period affect the post-closure plan. He must also amend the plan whenever there is a change in the expected year of closure.

3. When a permit modification is requested during the active life of the facility to authorize a change in operating plans or facility design, modification of the post-closure plan must be requested at the same time. In all other cases, the request for modification of the post-closure plan must be made within 60 days after the changes in operating plans or facility design, or the events which affect the post-closure plan occur.

6 MCAR § 4.9300 Post-closure care and use of property.

A. Post-closure care requirements.

1. Post-closure care must continue for 30 years after the date of completing closure and must consist of at least ground water monitoring and reporting and the maintenance of monitoring and waste containment systems, as applicable.

2. During the 180-day period preceding closure or at any time thereafter, the agency may reduce the post-closure care period to less than 30 years if it is found that the reduced period is sufficient to protect human health and the environment. This determination shall be based on leachate or ground water monitoring results, waste characteristics, application of advanced technology, or alternative disposal, treatment, or reuse techniques indicating the facility is secure.

3. Prior to the time that the post-closure care period is due to expire, the agency may extend the post-closure care period if it is found that the extended period is necessary to protect human health and the environment based on the parameters indicated in 2.

4. All post-closure care activities must be in accordance with the provisions of the approved post-closure plan.

B. Continuation of security requirements. The agency may require, at closure, continuation of any of the security requirements during part of or all of the post-closure period after the date of completing closure when wastes may remain exposed after completion of closure or when access by the public or domestic livestock may pose a hazard to human health.

C. Post-closure use of property. Post-closure use of property on or in which hazardous wastes remain after closure shall never be allowed by the owner or operator to disturb the integrity of the final cover, liners, or any other components of any containment system or the function of the facility's monitoring system, unless the owner or operator can demonstrate to the agency either in the post-closure plan or by protection that the disturbance:

1. is necessary to the proposed use of the property, and will not increase the potential hazard to human health or the environment; or

2. is necessary to reduce a threat to human health or the environment.

6 MCAR § 4.9301 Notice to local land authority. Within 90 days after closure is completed, the owner or operator of a disposal facility must submit to the local zoning authority or the authority with jurisdiction over local land use and the director a survey plat indicating the location and dimensions of landfill cells or other disposal areas with respect to permanently surveyed bench marks. This plat must be prepared and certified by a professional land surveyor. The plat filed with the local zoning authority or authority with jurisdiction over local land use must contain a prominently displayed note which states the owner's or operator's obligation to restrict disturbance of the site as specified. In addition, the owner or operator must submit to the local zoning authority or the authority with jurisdiction over local land use and to the director a record of the type, location, and quantity of hazardous waste disposed of within each cell or area of the facility. For waste disposed of before the effective date of 6 MCAR §§ 4.9280-4.9316 the owner or operator must identify the type, location, and quantity of the waste to the best of his knowledge and in accordance with any records he has kept. Any changes in the type, location, or quantity of hazardous waste disposed within each cell or area of the facility that occur after the survey plat and record of waste have been filed must be reported to the local zoning authority or the authority with jurisdiction over local land use and to the director.

6 MCAR § 4.9302 Notice in deed to property.

A. Deed notation. The owner of the property on which a disposal facility is located must record, in accordance with state law, a notation on the deed to the facility property, or on some other instrument which is normally examined during title search, that will in perpetuity notify any potential purchaser of the property that:

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1. the land has been used to manage hazardous waste;
2. the land use is restricted; and

3. the survey plat and record of the type, location, and quantity of hazardous waste disposed of within each cell or area of the facility required have been filed with the local zoning authority or the authority with jurisdiction over local land use and with the director.

B. Changes to the deed. If at any time the owner or operator or any subsequent owner of the land upon which a hazardous waste facility was located removes the waste and waste residues, the liner, if any, and all contaminated underlying and surrounding soil, he may remove the notation on the deed to the facility property or other instrument normally examined during title search, or he may add a notation to the deed or instrument indicating the removal of the waste. Upon removing the waste and waste residue, the liner, if any, and the contaminated soil, the owner or operator, unless he can demonstrate that any waste removed is not a hazardous waste, becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of 6 MCAR §§ 4.9100-4.9560.

6 MCAR § 4.9303 Financial requirements.

A. Applicability.

1. The requirements of 6 MCAR § 4.9304, 6 MCAR § 4.9305, and 6 MCAR §§ 4.9308-4.9311 apply to owners and operators of all hazardous waste facilities, except as provided otherwise in this rule or in 6 MCAR § 4.9280 C.

2. The requirements of 6 MCAR § 4.9306 and 6 MCAR § 4.9307 apply only to owners and operators of disposal facilities.

3. The state and the federal government are exempt from the requirements of 6 MCAR §§ 4.9303-4.9311.

B. Definitions.

1. When used in 6 MCAR §§ 4.9303-4.9311, the following terms have the meanings given.

a. "Compliance procedure" means any proceeding instituted pursuant to state rules which seeks to require compliance or which is in the nature of an enforcement action or an action to cure a violation. A compliance procedure includes a compliance order, notice of intention to terminate a permit, or an application in court for appropriate relief. A compliance procedure is considered to be pending from the time an order or notice of intent to terminate is issued or judicial proceedings are begun until the agency notifies the owner or operator in writing that the violation has been corrected or that the procedure has been withdrawn or discontinued.

b. "Standby trust fund" means a trust fund which must be established by an owner or operator who obtains a letter of credit or surety bond as specified in 6 MCAR §§ 4.9303-4.9311. The institution issuing the letter of credit or surety bond shall deposit into the standby trust fund any drawings by the agency on the credit or bond.

2. The following terms are used in the liability requirements. The definitions suggest what this agency believes are the common meanings of the terms as they are generally used in the insurance industry. The definitions are not intended to limit the meanings in any way that conflicts with general usage.

a. "Claims-made policy" means an insurance policy that provides coverage for an occurrence if a claim is filed during the term of the policy.

b. "Legal defense costs" means any expenses that an insurer incurs in defending against claims of third parties brought under the terms and conditions of an insurance policy.

c. "Nonsudden accident" means an unforeseen and unexpected occurrence which takes place over time and involves continuous or repeated exposure.

d. "Occurrence" means an accident, including continuous or repeated exposure to conditions, which results in bodily injury or property damage which the owner or operator neither expected nor intended to occur.

e. "Sudden accident" means an unforeseen and unexpected occurrence which is not continuous or repeated in nature.

6 MCAR § 4.9304 Cost estimate for facility closure.

A. Cost estimate requirements. The owner or operator must have a written estimate of the cost of closing the facility in accordance with the requirements in 6 MCAR § 4.9297 and 6 MCAR § 4.9298, and applicable closure requirements in 6 MCAR § 4.9312 I., 6 MCAR § 4.9313 G., 6 MCAR § 4.9314 G., 6 MCAR § 4.9315 I., and 6 MCAR § 4.9316 H. The owner or operator must keep this estimate, and all subsequent estimates required in this rule, at the facility. The estimate must equal the cost of closure at the point in the facility's operating life when the extent and manner of its operation would make closure the most expensive, as indicated by its closure plan.

B. Cost estimate revisions. The owner or operator must prepare a new closure cost estimate whenever a change in the closure plan affects the cost of closure.

C. Yearly update of cost estimate. On each anniversary of the date on which the first estimate was prepared as specified in A., the owner or operator must adjust the latest closure cost estimate using an inflation factor derived from the annual Implicit Price Deflator for Gross National Product as found in the 'Survey of Current Business,' issued by the United States Department of Commerce. The inflation factor must be calculated by Current Business. The inflation factor must be calculated by dividing the latest published annual Deflator by the Deflator for the previous year. The result is the inflation factor. The adjusted closure cost estimate must equal the latest closure cost estimate times the inflation factor.

6 MCAR § 4.9305 Financial assurance for facility closure. An owner or operator of each facility must establish financial assurance for closure of the facility. He must choose from among the options outlined in A.-G.

A. Closure trust fund.

1. An owner or operator may satisfy the requirements of this rule by establishing a closure trust fund which conforms to the requirements of A. and by sending an originally signed duplicate of the trust agreement to the director by certified mail. An owner or operator of a new facility must send the originally signed duplicate of the trust agreement to the director by certified mail at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. The trustee must be a bank or other financial institution which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

2. The wording of the trust agreement must be identical to the wording specified in Exhibit 6 MCAR § 4.9311 A.-1 and the trust agreement must be accompanied by a formal certification of acknowledgment as shown in Exhibit 6 MCAR § 4.9311 A.-2.

3. Payments to the trust fund must be made annually by the owner or operator over the term of the initial permit. The payments to the closure trust fund must be made as described in a. and b.

a. For a new facility the first payment must be made when the trust fund is established. The first payment must be at least equal to the closure cost estimate, except as provided in E., divided by the number of years in the term of the permit. Subsequent payments must be made no later than 30 days after each anniversary date of the first payment. The amount of each subsequent payment must be determined by performing the following calculation:

$$\text{Next payment} = (\text{ACE} - \text{CV})/\text{Y}$$

where ACE is the adjusted closure cost estimate, CV is the current value of the trust fund, and Y is the number of years remaining in the term of the permit.

b. If an owner or operator established a trust fund as specified in 6 MCAR §§ 4.9405-4.9413 and the value of the trust fund does not equal the adjusted closure cost estimate when a permit is awarded for the facility, the amount of the adjusted closure cost estimate still to be paid into the trust fund must be paid in over the term of the permit. Payments must continue to be made no later than 30 days after each anniversary date of the first payment made pursuant to 6 MCAR §§ 4.9405-4.9413. The amount of each payment must be determined by performing the following calculation:

$$\text{Next payment} = (\text{ACE} - \text{CV})/\text{Y}$$

where ACE is the adjusted closure cost estimate, CV is the current value of the trust fund, and Y is the number of years remaining in the term of the permit.

4. The owner or operator may accelerate payments into the trust fund or he may deposit the full amount of the closure cost estimate at the time the fund is established. However, he must maintain the value of the fund at no less than the value the fund would have if annual payments were made as specified in 1. and 3.

5. If the owner or operator establishes a closure trust fund after having initially used one or more alternate mechanisms specified in this rule, his first payment must be at least the amount that the fund would have contained if the trust fund were established and annual payments made as specified in 1. and 3.

6. After the term of the initial permit is completed, whenever the adjusted closure cost estimate changes, the owner or operator must compare the new estimate with the trustee's most recent annual valuation of the trust fund as described in Section 10 of the trust agreement. If the value of the fund is less than the amount of the new estimate, the owner or operator

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must within 60 days of the change in the cost estimate deposit a sufficient amount into the fund so that its value after payment at least equals the amount of the new estimate, or obtain other financial assurance as specified in this rule to cover the difference.

7. If the value of the trust fund is greater than the total amount of the adjusted closure cost estimate, the owner or operator may submit a written request to the agency for release of the amount in excess of the adjusted closure cost estimate.

8. If an owner or operator substitutes other financial assurance as specified in this rule for all or part of the trust fund, he may submit a written request to the agency for release of the amount in the trust fund which is greater than the amount required as a result of the substitution.

9. Within 60 days after receiving a request from the owner or operator for release of funds as specified in 7. or 8., the agency shall instruct the trustee to release to the owner or operator the funds specified by the agency in writing.

10. After beginning final closure, an owner or operator or any other person authorized to conduct closure may request reimbursement for closure expenditures by submitting itemized bills to the agency. Within 60 days after receiving bills for closure activities, the agency shall instruct the trustee to make reimbursements in those amounts as the agency specifies in writing if the agency determines that the closure expenditures are in accordance with the closure plan or otherwise justified.

11. The agency shall agree to termination of the trust when:

- a. the owner or operator substitutes alternate financial assurance for closure as specified in this rule; or
- b. the agency notifies the owner or operator in accordance with G. that he is no longer required by this rule to maintain financial assurance for closure of the facility.

B. Surety bond guaranteeing payment into a closure trust fund.

1. An owner or operator may satisfy the requirements of this rule by obtaining a surety bond which conforms to the requirements of B. and by having the bond delivered to the director by certified mail. An owner or operator of a new facility must have the surety bond delivered to the director by certified mail at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. The surety bond must be effective before initially receiving hazardous waste. The surety company issuing the bond must be among those listed as acceptable sureties on federal bonds in Circular 570, issued by the United States Department of the Treasury, as published in the 'Federal Register' on July 1 annually.

2. The wording of the surety bond must be identical to the wording specified in Exhibit 6 MCAR § 4.9311 B.-3.

3. The owner or operator who uses a surety bond to satisfy the requirements of this rule must also establish a standby trust fund by the time the bond is obtained. Under the terms of the surety bond, all payments made thereunder shall be deposited directly into the standby trust fund. This trust fund must meet the requirements specified in A., except that:

- a. an originally signed duplicate of the trust agreement must be delivered to the director with the surety bond; and
- b. after a nominal initial payment agreed upon between the trustee and the owner or operator, payments as specified in A. are not required until the standby trust fund is funded pursuant to the requirements of B.

4. The bond must guarantee that the owner or operator will:

- a. fund the standby trust fund in an amount equal to the penal sum of the bond at least 60 days prior to the expected date of the beginning of final closure of the facility;
- b. fund the standby trust fund in an amount equal to the penal sum within 15 days after an order to begin closure in accordance with 6 MCAR §§ 4.9297-4.9302 is issued by the agency or by a district court, or within 15 days after issuance of a notice of termination of the permit; or
- c. provide alternate financial assurance as specified in this rule within 30 days after the agency receives a notice of cancellation of the bond from the surety.

5. The surety becomes liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.

6. The penal sum of the bond must be in an amount at least equal to the amount of the adjusted closure cost estimate, except as provided in E.

7. Whenever the adjusted closure cost estimate increases to an amount greater than the amount of the penal sum of the bond, the owner or operator must, within 60 days after the increase, cause the penal sum of the bond to be increased to an amount at least equal to the new estimate or obtain other financial assurance, as specified in this rule, to cover the increase. Whenever the adjusted closure cost estimate decreases, the penal sum may be reduced to the amount of the new estimate following written approval by the agency. Notice of an increase or decrease in the penal sum must be sent to the director by certified mail within 60 days after the change.

8. The bond shall remain in force unless the surety sends written notice of cancellation by certified mail to the owner or operator and to the agency. Cancellation cannot occur, however:

a. during the 90 days beginning on the date the agency receives the notice of cancellation as shown on the signed return receipt; or

b. while a compliance procedure is pending, as defined in 6 MCAR § 4.9303 B.

9. The surety bond no longer satisfies the requirements of 1.-11. after the agency receives a notice of cancellation of the surety bond. Upon receiving the notice the agency shall issue a compliance order, unless the owner or operator has demonstrated alternate financial assurance as specified in this rule. If the owner or operator does not correct the violation by demonstrating alternative financial assurance within 30 days after issuance of the compliance order, the agency may direct the surety to place the penal sum of the bond in the standby trust fund.

10. The owner or operator may cancel the bond if the agency has given prior written consent based on receiving evidence of alternate financial assurance as specified in this rule.

11. The agency shall notify the surety when the owner or operator funds the standby trust fund in the amount guaranteed by the surety bond or if he provides alternate financial assurance as specified in this rule.

C. Surety bond guaranteeing performance of closure.

1. An owner or operator may satisfy the requirements of this rule by obtaining a surety bond which conforms to the requirements of 1.-13. and by having the bond delivered to the director by certified mail. An owner or operator of a new facility must have the surety bond delivered to the director by certified mail at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. The surety bond must be effective before this initial receipt of hazardous waste. The surety company issuing the bond must be among those listed as acceptable sureties on federal bonds in Circular 570, issued by the United States Department of the Treasury, as published in the 'Federal Register' on July 1 annually.

2. The wording of the surety bond must be identical to the wording specified in Exhibit 6 MCAR § 4.9311 C.-4.

3. The owner or operator who uses a surety bond to satisfy the requirements of this rule must also establish a standby trust fund by the time the bond is obtained. Under the terms of the surety bond, all payments made thereunder shall be deposited directly into the standby trust fund. This trust must meet the requirements specified in A. except that:

a. an originally signed duplicate of the trust agreement must be delivered to the director with the surety bond; and
b. after a nominal initial payment agreed upon between the trustee and the owner or operator, payments as specified in A. are not required unless the standby trust fund is funded pursuant to the requirements of this rule.

4. The bond must guarantee that the owner or operator will:

a. perform final closure in accordance with the closure plan and other requirements in the permit for the facility; or
b. perform final closure in accordance with 6 MCAR §§ 4.9297-4.9302 following an order to begin closure issued by the agency or by a district court, or following issuance of a notice of termination of the permit; or
c. provide alternate financial assurance as specified in this rule within 30 days after the agency receives a notice of cancellation of the bond from the surety.

5. The surety becomes liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.

6. The penal sum of the bond must be in an amount at least equal to the amount of the adjusted closure cost estimate.

7. Whenever the adjusted closure cost estimate increases to an amount greater than the amount of the penal sum of the bond, the owner or operator must, within 60 days after the increase, cause the penal sum of the bond to be increased to an amount at least equal to the new estimate or obtain other financial assurance, as specified in this rule, to cover the increase. Whenever the adjusted closure cost estimate decreases, the penal sum may be reduced to the amount of the adjusted closure cost estimate following written approval by the agency. Notice of an increase or decrease in the penal sum must be sent to the director by certified mail within 60 days after the change.

8. The bond shall remain in force unless the surety sends written notice of cancellation by certified mail to the owner or operator and to the agency. Cancellation cannot occur, however:

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a. during the 90 days beginning on the date the notice of cancellation is received by the agency as shown on the signed return receipt; or

b. while a compliance procedure is pending, as defined in 6 MCAR § 4.9303 B.

9. Following a determination that the owner or operator has failed to perform final closure in accordance with the closure plan and other permit requirements when required to do so, under the terms of the bond the surety will perform final closure in accordance with the closure plan and other permit requirements or closure order. As an alternative the surety may deposit the amount of the penal sum into the standby trust fund.

10. The surety bond no longer satisfies the requirements of 1.-13. after the agency receives a notice of cancellation of the surety bond. Upon receiving the notice the agency shall issue a compliance order, unless the owner or operator has demonstrated alternate financial assurance as specified in this rule. If the owner or operator does not correct the violation by demonstrating such alternate financial assurance within 30 days after issuance of the compliance order, the agency may direct the surety to place the penal sum of the bond in the standby trust fund.

11. The owner or operator may cancel the bond if the agency has given prior written consent based on receiving evidence of alternate financial assurance as specified in this rule.

12. The agency shall notify the surety if the owner or operator provides alternate financial assurance as specified in this rule.

13. The surety is not liable for deficiencies in the performance of closure by the owner or operator after the owner or operator has been notified by the agency in accordance with G. that he is no longer required by this rule to maintain financial assurance for closure of the facility.

D. Closure letter of credit.

1. An owner or operator may satisfy the requirements of this rule by obtaining an irrevocable standby letter of credit which conforms to the requirements of 1.-9. and by having it delivered to the director by certified mail. An owner or operator of a new facility must have the letter of credit delivered to the director by certified mail at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. The letter of credit must be effective before the initial receipt of hazardous waste. The issuing institution must be a bank or other 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 wording of the letter of credit must be identical to the wording specified in Exhibit 6 MCAR § 4.9311 F.-7.

3. An owner or operator who uses a letter of credit to satisfy the requirements of this rule must also establish a standby trust fund by the time the letter of credit is obtained. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the agency must be deposited promptly and directly by the issuing institution into the standby trust fund. The standby trust fund must meet the requirements of the trust fund specified in A. except that:

a. an originally signed duplicate of the trust agreement must be delivered to the director with the letter of credit; and

b. after a nominal initial payment agreed upon between the trustee and the owner or operator, payments as specified in A. are not required unless the standby trust fund is funded pursuant to the requirements of this rule.

4. The letter of credit must be irrevocable and issued for a period of at least one year. The letter of credit must provide that the expiration date will be automatically extended for a period of at least one year. If the issuing institution decides not to extend the letter of credit beyond the then current expiration date it must, at least 90 days before that date, notify both the owner or operator and the agency by certified mail of that decision. The 90-day period begins on the date the agency receives notification as shown on the signed return receipt. Expiration cannot occur, however, while a compliance procedure is pending as defined in 6 MCAR § 4.9303 B.

5. The letter of credit must be issued for at least the amount of the adjusted closure cost estimate, except as provided in E.

6. Whenever the adjusted closure estimate increases to an amount greater than the amount of the credit, the owner or operator must, within 60 days of the increase, cause the amount of the credit to be increased to an amount at least equal to the new estimate or obtain other financial assurance as specified in this rule to cover the increase. Whenever the adjusted closure cost estimate decreases, the letter of credit may be reduced to the amount of the new estimate following written approval by the agency. Notice of an increase or decrease in the amount of the credit must be sent to the director by certified mail within 60 days of the change.

7. The agency may draw on the letter of credit after a determination that the owner or operator, when required, has failed to perform closure in accordance with the closure plan or other permit requirements.

8. The letter of credit no longer satisfies the requirements of 1.-9. after the agency receives a notice from the issuing

institution that it has decided not to extend the letter of credit beyond the then current expiration date. Upon receiving the notice, the agency shall issue a compliance order, unless the owner or operator has demonstrated alternate financial assurance as specified in this rule. If the owner or operator does not correct the violation by demonstrating the alternate financial assurance within 30 days of issuance of the compliance order, the agency may draw on the letter of credit.

9. The agency shall return the original letter of credit to the issuing institution for termination when:

- a. the owner or operator substitutes alternate financial assurance for closure as specified in this rule; or
- b. the agency notifies the owner or operator in accordance with G. that he is no longer required by this rule to maintain financial assurance for closure of the facility.

E. Use of multiple financial mechanisms. An owner or operator may satisfy the requirements of this rule by establishing more than one financial mechanism. These mechanisms are limited to trust funds, surety bonds guaranteeing payment into a closure trust fund, and letters of credit. The mechanisms must be as specified in A., B., and D., except that it is the combination of mechanisms, rather than each single mechanism, which must provide financial assurance for an amount at least equal to the adjusted closure cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or letter of credit, he may use the trust fund as the standby trust fund for the bond or letter of credit. If the multiple mechanisms include only surety bonds and letters of credit, a single standby trust may be established for all these mechanisms. The agency may invoke use of any or all of the mechanisms, in accordance with the requirements of A., B., and D. to provide for closure of the facility.

F. Use of a financial mechanism for multiple facilities. An owner or operator may use a financial assurance mechanism specified in this rule to meet the requirements of this rule for more than one facility of which he is owner or operator. Evidence of financial assurance submitted to the director must include a list showing, for each facility, the identification number, name, address, and the amount of funds for closure assured by the mechanisms. If the list is changed by addition or subtraction of a facility or by an increase or decrease in the amount of funds assured for closure of one or more facilities, a corrected list must be sent to the director within 60 days of such change. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility.

G. Release of the owner or operator from the requirements of this rule. Within 60 days after receiving certification from the owner or operator and an independent registered professional engineer that closure has been accomplished in accordance with the closure plan, the agency shall notify the owner or operator in writing that he is no longer required by this rule to maintain financial assurance for closure of the particular facility, unless the agency has reason to believe that closure has not been in accordance with the closure plan.

6 MCAR § 4.9306 Cost estimate for post-closure monitoring and maintenance.

A. Cost estimate requirement. The owner or operator of a disposal facility must have a written estimate of the annual cost of post-closure monitoring and maintenance of the facility in accordance with the applicable post-closure rules 6 MCAR §§ 4.9299-4.9302. The owner or operator must keep this estimate and all subsequent estimates required in this rule at the facility.

B. Cost estimate revisions. The owner or operator must prepare a new annual post-closure cost estimate whenever a change in the post-closure plan affects the cost of post-closure care. The latest post-closure cost estimate is calculated by multiplying the latest annual post-closure cost estimate by the number of years of post-closure care required in the latest post-closure plan approved for the facility by the agency.

C. Yearly update of cost estimate. On each anniversary of the date on which the first estimate was prepared as specified in A. during the operating life of the facility, the owner or operator must adjust the latest post-closure cost estimate using the inflation factor calculated in accordance with 6 MCAR § 4.9304 C. The adjusted post-closure cost estimate must equal the latest post-closure cost estimate times the inflation factor.

6 MCAR § 4.9307 Financial assurance for post-closure monitoring and maintenance. An owner or operator of each disposal facility must establish financial assurance for post-closure care in accordance with the approved post-closure plan for the facility. He must choose from among the options outlined in A.-G.

A. Post-closure trust fund.

1. An owner or operator may satisfy the requirements of this rule by establishing a post-closure trust fund which

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conforms to the requirements of A. and by sending an originally signed duplicate of the trust agreement to the director by certified mail. An owner or operator of a new facility must send the originally signed duplicate of the trust agreement to the director by certified mail at least 60 days before the date on which hazardous waste is first received for disposal. The trustee must be a bank or other financial institution which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

2. The wording of the trust agreement must be identical to the wording specified in Exhibit 6 MCAR § 4.9311 A.-1 and the trust agreement must be accompanied by a formal certification of acknowledgment as shown in Exhibit 6 MCAR § 4.9311 A.-2.

3. Payments to the trust fund must be made annually by the owner or operator over the term of the initial permit. The payments to the post-closure trust fund must be made as described in a. and b.

a. For a new facility the first payment must be made when the trust fund is established. The first payment must be at least equal to the post-closure cost estimate, except as provided in E., divided by the number of years in the term of the permit. Subsequent payments must be made no later than 30 days after each anniversary date of the first payment. The amount of each subsequent payment must be determined by performing the following calculation:

$$\text{Next payment} = (\text{ACE} - \text{CV})/Y$$

where ACE is the adjusted post-closure cost estimate, CV is the current value of the trust fund, and Y is the number of years remaining in the term of the permit.

b. If an owner or operator established a trust fund as specified in 6 MCAR §§ 4.9405-4.9413 and the value of the fund does not equal the adjusted post-closure cost estimate when a permit is awarded for the facility, the amount of the adjusted post-closure cost estimate still to be paid into the fund must be paid in over the term of the permit. Payments must continue to be made no later than 30 days after each anniversary date of the first payment made pursuant to 6 MCAR §§ 4.9405-4.9413. The amount of each payment must be determined by performing the following calculation:

$$\text{Next payment} = (\text{ACE} - \text{CV})/Y$$

where ACE is the adjusted post-closure cost estimate, CV is the current value of the trust fund, and Y is the number of years remaining in the term of the permit.

4. The owner or operator may accelerate payments into the trust fund or he may deposit the full amount of the post-closure cost estimate at the time the fund is established. However, he must maintain the value of the fund at no less than the value the fund would have if annual payments were made as specified in 1. and 3.

5. If the owner or operator establishes a post-closure trust fund after having initially used one or more alternate mechanisms specified in this rule, his first payment must be at least the amount that the fund would have contained if the trust fund were established and annual payments made as specified in 1. and 3.

6. After the term of the initial permit is completed, whenever the adjusted post-closure cost estimate changes during the operating life of the facility, the owner or operator must compare the new estimate with the trustee's most recent annual valuation of the trust fund as described in Section 10 of the trust agreement. If the value of the fund is less than the amount of the new estimate, the owner or operator must within 60 days of the change in the cost estimate deposit a sufficient amount into the fund so that its value after payment at least equals the amount of the new estimate, or obtain other financial assurance as specified in this rule to cover the difference.

7. If the value of the trust fund is greater than the total amount of the adjusted post-closure cost estimate, the owner or operator may submit a written request to the agency for release of the amount in excess of the adjusted post-closure cost estimate.

8. If an owner or operator substitutes other financial assurance as specified in this rule for all or part of the trust fund, he may submit a written request to the agency for release of the amount in the trust fund which is greater than the amount required as a result of such substitution.

9. Within 60 days after receiving a request from the owner or operator for release of funds as specified in 7. or 8., the agency shall instruct the trustee to release to the owner or operator such funds as the agency specifies in writing.

10. An owner or operator or any other person authorized to conduct post-closure may request reimbursement for post-closure expenditures by submitting itemized bills to the agency. Within 60 days after receiving bills for post-closure activities, the agency shall instruct the trustee to make reimbursements in those amounts as the agency specifies in writing, if the agency determines that the post-closure expenditures are in accordance with the post-closure plan or are otherwise justified.

11. The agency shall agree to termination of the trust when:

a. the owner or operator substitutes alternate financial assurance for post-closure as specified in this rule;

b. the agency notifies the owner or operator, in accordance with G., that he is no longer required by this rule to maintain financial assurance for post-closure care of the facility.

B. Surety bond guaranteeing payment into a post-closure trust fund.

1. An owner or operator may satisfy the requirements of this rule by obtaining a surety bond which conforms to the requirements of 1.-11. and by having the bond delivered to the director by certified mail. An owner or operator of a new facility must have the surety bond delivered to the director by certified mail at least 60 days before the date on which hazardous waste is first received for disposal. The surety bond must be effective before initially receiving hazardous waste. The surety company issuing the bond must be among those listed as acceptable sureties on federal bonds in Circular 570, issued by the United States Department of the Treasury, as published in the 'Federal Register' on July 1 annually.

2. The wording of the surety bond must be identical to the wording specified in Exhibit 6 MCAR § 4.9311 D.-5.

3. The owner or operator who uses a surety bond to satisfy the requirements of this rule must also establish a standby trust fund by the time the bond is obtained. Under the terms of the surety bond, all payments made thereunder will be deposited directly into the standby trust fund. This trust fund must meet the requirements specified in A. except that:

a. An originally signed duplicate of the trust agreement must be delivered to the director with the surety bond; and

b. After a nominal initial payment agreed upon between the trustee and the owner or operator, payments as specified in A. are not required until the standby trust fund is funded pursuant to the requirements of B.

4. The bond must guarantee that the owner or operator will:

a. fund the standby trust fund in an amount equal to the penal sum of the bond by the beginning of final closure of the facility; or

b. fund the standby trust fund in an amount equal to the penal sum within 15 days after an order to begin closure in accordance with 6 MCAR §§ 4.9297-4.9302 is issued by the agency or by a district court, or within 15 days after issuance of a notice of termination of the permit; or

c. provide alternate financial assurance as specified in this rule within 30 days after the agency receives a notice of cancellation of the bond from the surety.

5. The surety becomes liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.

6. The penal sum of the bond must be in an amount at least equal to the amount of the adjusted post-closure cost estimate, except as provided in E.

7. Whenever the adjusted post-closure cost estimate increases to an amount greater than the penal sum of the bond, the owner or operator must, within 60 days after the increase cause the penal sum of the bond to be increased to an amount at least equal to the new estimate or obtain other financial assurance, as specified in this rule to cover the increase. Whenever the adjusted post-closure cost estimate decreases, the penal sum may be reduced to the amount of the new cost estimate following written approval by the agency. Notice of an increase or decrease in the penal sum must be sent to the director by certified mail within 60 days after the change.

8. The bond shall remain in force unless the surety sends written notice of cancellation by certified mail to the owner or operator and to the agency. Cancellation cannot occur, however:

a. during the 90 days beginning on the date the agency receives the notice of cancellation as shown on the signed return receipt; or

b. while a compliance procedure is pending, as defined in 6 MCAR § 4.9303 B.

9. The surety bond no longer satisfies the requirements of 1.-11. after the agency receives a notice of cancellation of the surety bond. Upon receiving the notice the agency shall issue a compliance order, unless the owner or operator has demonstrated alternate financial assurance as specified in this rule. If the owner or operator does not correct the violation by demonstrating such alternate financial assurance within 30 days after issuance of the compliance order, the agency may direct the surety to place the penal sum of the bond in the standby trust fund.

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PROPOSED RULES

10. The owner or operator may cancel the bond if the agency has given prior written consent based on receiving evidence of alternate financial assurance as specified in this rule.

11. The agency shall notify the surety when the owner or operator funds the standby trust fund in the amount guaranteed by the surety bond or if he provides alternate financial assurance as specified in this rule.

C. Surety bond guaranteeing performance of post-closure care.

1. An owner or operator may satisfy the requirements of this rule by obtaining a surety bond which conforms to the requirements of 1.-14. and by having the bond delivered to the director by certified mail. An owner or operator of a new facility must have the surety bond delivered to the director by certified mail at least 60 days before the date on which hazardous waste is first received for disposal. The surety bond must be effective before initially receiving hazardous waste. The surety company issuing the bond must be among those listed as acceptable sureties on federal bonds in Circular 570, issued by the United States Department of the Treasury, as published in the 'Federal Register' on July 1 annually.

2. The wording of the surety bond must be identical to the wording specified in Exhibit 6 MCAR § 4.9311 E.-6.

3. The owner or operator who uses a surety bond to satisfy the requirements of this rule must also establish a standby trust fund by the time the bond is obtained. Under the terms of the surety bond, all payments made thereunder must be deposited into the standby trust fund. This trust fund must meet the requirements specified in A. except that:

- a. an originally signed duplicate of the trust agreement must be delivered to the director with the surety bond; and
- b. after a nominal initial payment agreed upon between the trustee and the owner or operator, payments as specified in A. are not required unless the standby trust fund is funded pursuant to the requirements of 1.-14.

4. The bond must guarantee that the owner or operator will:

- a. perform post-closure care in accordance with the post-closure plan and other requirements of the permit; or
- b. provide alternate financial assurance within 30 days of when the agency receives a notice of cancellation of the bond from the surety.

5. The surety becomes liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.

6. The penal sum of the bond must be in an amount at least equal to the adjusted post-closure cost estimate.

7. Whenever the adjusted post-closure cost estimate increases to an amount greater than the penal sum of the bond during the operating life of the facility, the owner or operator must, within 60 days after the increase in the estimate, cause the penal sum of the bond to be increased to an amount at least equal to the new estimate or obtain other financial assurance as specified in this rule to cover the increase. Whenever the adjusted post-closure cost estimate decreases during the operating life of the facility, the penal sum may be reduced to the amount of the new estimate following written approval by the agency. Notice of an increase or decrease in the penal sum must be sent to the agency by certified mail within 60 days after the change.

8. During the period of post-closure care, the agency may approve a decrease in the penal sum of the surety bond if the owner or operator demonstrates to the agency that the amount exceeds the remaining cost of post-closure care.

9. The bond shall remain in force unless the surety sends written notice of cancellation by certified mail to the owner or operator and to the agency. Cancellation cannot occur, however:

- a. during the 90 days beginning on the date the agency receives the notice of cancellation as shown on the signed return receipt; or
- b. while a compliance procedure is pending, as defined in 6 MCAR § 4.9303 B.

10. Following a determination that the owner or operator has failed to perform post-closure care in accordance with the post-closure plan and other permit requirements, under the terms of the bond the surety will perform post-closure care in accordance with the post-closure plan and other permit requirements or deposit the amount of the penal sum into the standby trust fund.

11. The surety bond no longer satisfies the requirements of 1.-14. after the agency receives a notice of cancellation of the surety bond. Upon receiving the notice the agency shall issue a compliance order, unless the owner or operator has demonstrated alternate financial assurance as specified in this rule. If the owner or operator does not correct the violation by demonstrating alternate financial assurance within 30 days after issuance of the compliance order, the agency may direct the surety to place the penal sum of the bond in the standby trust fund.

12. The owner or operator may cancel the bond if the agency has given prior written consent, based on receiving evidence of alternate financial assurance as specified in this rule.

13. The agency shall notify the surety if the owner or operator provides alternate financial assurance as specified in this rule.

14. The surety is not liable for deficiencies in the performance of post-closure care by the owner or operator after the owner or operator has been notified by the agency in accordance with G. that he is no longer required by this rule to maintain financial assurance for post-closure care of the facility.

D. Post-closure letter of credit.

1. An owner or operator may satisfy the requirements of this rule by obtaining an irrevocable standby letter of credit which conforms to the requirements of 1.-10. and by having it delivered to the director by certified mail. An owner or operator of a new facility must have the letter of credit delivered to the director by certified mail at least 60 days before the date on which hazardous waste is first received for disposal. The letter of credit must be effective before initially receiving hazardous waste. The issuing institution must be a bank or other 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 wording of the letter of credit must be identical to the wording specified in Exhibit 6 MCAR § 4.9311 F.-7.

3. An owner or operator who uses a letter of credit to satisfy the requirements of this rule must also establish a standby trust fund by the time the letter of credit is obtained. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the agency shall be deposited promptly and directly by the issuing institution into the standby trust fund. The standby trust fund must meet the requirements of the trust fund specified in A. except that:

- a. an originally signed duplicate of the trust agreement must be delivered to the director with the letter of credit; and
- b. after a nominal initial payment agreed upon between the trustee and the owner or operator, payments as specified in A. are not required unless the standby trust fund is funded pursuant to the requirements of 1.-10.

4. The letter of credit must be irrevocable and issued for a period of at least one year. The letter of credit must provide that the expiration date will be automatically extended for a period of at least one year. If the issuing institution decides not to extend the letter of credit beyond the then current expiration date it must, at least 90 days before that date, notify both the owner or operator and the agency by certified mail of that decision. The 90-day period begins on the date the agency receives the notification as shown on the signed return receipt. Expiration cannot occur, however, while a compliance procedure is pending as defined in 6 MCAR § 4.9303 B.

5. The letter of credit must be issued for at least the amount of the adjusted post-closure cost estimate, except as provided in E.

6. Whenever the adjusted post-closure cost estimate increases to an amount greater than the amount of the credit during the operating life of the facility, the owner or operator must, within 60 days of the increase, cause the amount of the credit to be increased to an amount at least equal to the new estimate or obtain other financial assurance as specified in this rule to cover the increase. Whenever the adjusted post-closure cost estimate decreases during the operating life of the facility, the letter of credit may be reduced to the amount of the new estimate following written approval by the agency. Notice of an increase or decrease in the amount of the credit must be sent to the director by certified mail within 60 days of the change.

7. During the period of post-closure care, the agency shall approve a decrease in the amount of the letter of credit if the owner or operator demonstrates to the agency that the amount exceeds the remaining cost of post-closure care.

8. The agency may draw on the letter of credit after a determination that the owner or operator, when required, has failed to perform post-closure in accordance with the post-closure plan or other permit requirements.

9. The letter of credit no longer satisfies the requirements of 1.-10. after the agency receives a notice from the issuing institution that it has decided not to extend the letter of credit beyond the then current expiration date. Upon receiving the notice, the agency shall issue a compliance order unless the owner or operator has demonstrated alternate financial assurance, as specified in this rule. If the owner or operator does not correct the violation by demonstrating the alternate financial assurance within 30 days of issuance of the compliance order, the agency may draw on the letter of credit.

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10. The agency shall return the original letter of credit to the issuing institution for termination when:

- a. the owner or operator substitutes alternate financial assurance for post-closure care as specified in this rule; or
- b. the agency notifies the owner or operator in accordance with G. that he is no longer required by this rule to maintain financial assurance for post-closure of the facility.

E. Use of multiple financial mechanisms. An owner or operator may satisfy the requirements of this rule by establishing more than one financial mechanism. These mechanisms are limited to trust funds, surety bonds guaranteeing payment into a post-closure trust fund, and letters of credit. The mechanisms must be as specified in A., B., and D. except that it is the combination of mechanisms, rather than each single mechanism, which must provide financial assurance for an amount at least equal to the adjusted post-closure cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or letter of credit, he may use the trust fund as the standby trust fund for the bond or letter of credit. If the multiple mechanisms include only surety bonds and letters of credit, a single standby trust fund may be established for all these mechanisms. The agency may invoke use of any or all of the mechanisms, in accordance with the requirements of A., B., and D. to provide for post-closure care of the facility.

F. Use of a financial mechanism for multiple facilities. An owner or operator may use a financial assurance mechanism specified in this rule to meet the requirements of this rule for more than one facility of which he is the owner or operator. Evidence of financial assurance submitted to the director must include a list showing for each facility, the identification number, name, address, and the amount of funds for post-closure care assured by the mechanism. If the list is changed by addition or subtraction of a facility or by an increase or decrease in the amount of funds assured for post-closure care of one or more facilities, a corrected list must be sent to the director within 60 days of the change. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility.

G. Release of the owner or operator from the requirements of this rule. When an owner or operator has completed, to the satisfaction of the agency, all post-closure care requirements for the period of post-closure care specified in the permit for the facility or the period specified by the agency after closure, whichever period is shorter, the agency shall, at the request of the owner or operator, notify him in writing that he is no longer required by this rule to maintain financial assurance for post-closure care of the particular facility.

6 MCAR § 4.9308 Use of a mechanism for financial assurance of both closure and post-closure care. An owner or operator may provide financial assurance for both closure and post-closure care of one or more facilities of which he is the owner or operator either by a trust fund that meets the specifications of both 6 MCAR § 4.9305 A. and 6 MCAR § 4.9307 A., or a letter of credit that meets the specifications of both 6 MCAR § 4.9305 D. and 6 MCAR § 4.9307 D. The amount of funds available under the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for financial assurance of closure and of post-closure care of each facility.

6 MCAR § 4.9309 Liability requirements.

A. General insurance requirements. An owner or operator of a hazardous waste treatment, storage, or disposal facility, or a group of such facilities, must demonstrate financial responsibility for claims arising from the operations of each facility or group of facilities from sudden and accidental occurrences that cause injury to persons or property. An owner or operator must have and maintain liability insurance for sudden occurrences in the amount of at least \$1 million per occurrence with an annual aggregate of at least \$2 million, exclusive of legal defense costs. As evidence of this liability insurance, an owner or operator must deliver an originally signed duplicate of the insurance policy to the director by certified mail. An owner or operator of a new facility must send the originally signed duplicate of the insurance policy to the director by certified mail at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. The insurance must be effective before initially receiving hazardous waste. Each policy must be for limits of liability not less than the minimum amounts required by this paragraph.

B. Variance from insurance requirements. If an owner or operator demonstrates to the satisfaction of the agency that the level of financial responsibility required by A. is not consistent with the degree and duration of risks associated with the treatment, storage, or disposal at each facility or group of facilities, the owner or operator may obtain a variance from the agency. The request for a variance must be submitted to the agency as part of the permit application for a facility that does not have a permit, or pursuant to the procedures for permit modification for a facility that has a permit. The variance must take the form of an adjusted level or required liability coverage, such level to be based on the assessment of the degree and duration of risks associated with the ownership or operation of each facility or group of facilities. An owner or operator who requests a variance must provide such technical and engineering information as is deemed necessary by the agency to determine a level of financial responsibility other than that required by A. Any request for a variance for a permitted facility shall be treated as a request for a permit modification.

C. Agency adjustment of insurance requirements. If the agency determines that the level of financial responsibility required by A. is not consistent with the degree and duration of risks associated with treatment, storage, or disposal at any facility or group of facilities, the agency may adjust the level of financial responsibility required under A. as may be necessary to protect human health and the environment. The adjusted level shall be based on the agency's assessment of the degree and duration of risks associated with the ownership or operation of each facility or group of such facilities. Any adjustment of the level of required coverages for a facility that has a permit shall be treated as a permit modification.

6 MCAR § 4.9310 Incapacity of institutions issuing letters of credit, surety bonds, or insurance policies. An owner or operator who fulfills the requirements of 6 MCAR § 4.9305, 6 MCAR § 4.9307, or 6 MCAR § 4.9309 by obtaining a letter of credit, surety bond, or insurance policy will be deemed to be without the required financial assurance or liability coverage in the event of bankruptcy, insolvency, or a suspension or revocation of the license or charter of the issuing institution. The owner or operator must establish other financial assurance or liability coverage within 60 days of these events.

6 MCAR § 4.9311 Wording of the instruments.

A. Trust agreement for a trust fund.

1. A trust agreement for a trust fund as specified in 6 MCAR § 4.9305 A. or 6 MCAR § 4.9307 A. must be worded as specified in Exhibit 6 MCAR § 4.9311 A.1.-1, except that instructions in brackets must be replaced with the relevant information and the brackets deleted.

**Exhibit 6 MCAR § 4.9311 A.1.-1
TRUST AGREEMENT**

Trust agreement, the "Agreement," entered into as of [date] by and between [name of the owner or operator], a [state] [corporation, partnership, association, proprietorship], the "Grantor," and [name of corporate trustee], a [state corporation] [national bank], the "Trustee."

Whereas, the Minnesota Pollution Control Agency (Agency), an agency of the State of Minnesota has established certain rules applicable to the Grantor, requiring that the owner or operator of a hazardous waste facility must provide assurance that funds will be available when needed for closure and/or post-closure care of the facility.

Whereas, the Grantor has elected to establish a trust to provide such financial assurance for the facilities identified herein.

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this Agreement, and the Trustee is willing to act as trustee.

Now, therefor, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

a. the term "fiduciary" means any person who exercises any power of control, management, or disposition or renders investment advice for a fee or other compensation, direct or indirect, with respect to any moneys or other property of this trust fund, or has any authority or responsibility to do so, or who has any authority or responsibility in the administration of this trust fund;

b. the term "Grantor" means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor; and

c. the term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.

Section 2. Identification of Facilities and Cost Estimates. This Agreement pertains to [for each facility insert the identification number, name, and address, and the adjusted closure and/or post-closure cost estimates, or portions thereof, for which financial assurance is demonstrated by this Agreement].

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a trust fund, the "Fund" for the benefit of the Agency. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule A attached hereto. Such property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund will be held by the Trustee. IN TRUST, as hereinafter provided. The Trustee undertakes no responsibility for the amount or

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PROPOSED RULES

adequacy of, nor any duty to collect from the Grantor, any payments to discharge any liabilities of the Grantor established by the Agency.

Section 4. Payment for Closure and Post-Closure Care. The Trustee will make such payments from the Fund as the Agency will direct, in writing, to provide for the payment of the costs of closure and/or post-closure care of the facilities covered by this Agreement. The Trustee will reimburse the Grantor or other persons as specified by the Agency from the Fund for closure and post-closure expenditures in such amounts as the Agency will direct, in writing. The Trustee will notify the Agency when 20 percent of the amount allocated for closure of the facility remains in the Fund, and will not make further reimbursements for closure expenditures unless the Agency identifies reimbursements that may be made out of the remaining 20 percent. In addition, the Trustee will refund to the Grantor such amounts as the Agency specifies in writing. Upon refund, such funds will no longer constitute part of the Fund as defined herein.

Section 5. Payments Comprising the Fund. Payments made to the Trustee for the Fund will consist of cash or securities acceptable to the Trustee.

Section 6. Trustee Management. The Trustee will invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with investment guidelines and objectives communicated in writing to the Trustee from time to time by the Grantor, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee or any other fiduciary will discharge his duties with respect to the trust fund solely in the interest of the participants and beneficiaries and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity, and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

a. securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in United States Code, title 15, section 80a-2(a), will not be acquired or held, unless they are securities or other obligations of the federal or a state government;

b. the Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the federal or state government; and

c. the Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

a. to transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein. To the extent of the equitable share of the Fund in any such commingled trust, such commingled trust will be part of the Fund;

b. to purchase shares in any investment company registered under the Investment Company Act of 1940, United States Code, title 15, sections 80a and 80b or one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

a. to sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by private contract or at public auction. No person dealing with the Trustee will be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

b. to make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

c. to register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a federal reserve bank, but the books and records of the Trustee will at all times show that all such securities are part of the Fund;

d. to deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the federal or state government; and

e. to compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund will be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee will be paid from the Fund.

Section 10. Annual Valuation. The Trustee will annually, at the end of the month coincident with or preceding the anniversary date of establishment of the Fund, furnish to the Grantor and to the Agency a statement confirming the value of the Trust. Any securities in the Fund will be valued at market value as of no more than 30 days prior to the date of the statement. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the Agency will constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee will be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation. The Trustee will be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 13. Successor Trustee. Upon the written agreement of the Grantor, the Trustee, and the Agency, the Trustee may resign or the Grantor may replace the Trustee. In either event, the Grantor will appoint a successor Trustee who will have the same powers and duties as those conferred upon the Trustee hereunder. Upon acceptance of the appointment by the successor trustee, the Trustee will assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee and the date on which he assumes administration of the trust will be specified in writing and sent to the Grantor, the Agency, and the present and successor trustees by certified mail ten days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this section will be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee will be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendment to Exhibit A. The Trustee will be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the Agency to the Trustee will be in writing, signed by the Agency, and the Trustee will act and will be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee will have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or the Agency hereunder has occurred. The Trustee will have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the Agency except as provided for herein.

Section 15. Notice of Nonpayment. The Trustee will notify the Grantor and the Agency by certified mail within ten days following the expiration of the 30-day period after the anniversary of the establishment of the Trust, if no payment is received from the Grantor during that period. After the pay-in period is completed the Trustee is not required to send a notice of nonpayment.

Section 16. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the Agency, or by the Trustee and the Agency if the Grantor ceases to exist.

Section 17. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 16, this Trust will be irrevocable and will continue until terminated at the written agreement of the Grantor, the Trustee, and the Agency, or by the Trustee and the Agency if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, will be delivered to the Grantor.

Section 18. Immunity and Indemnification. The Trustee will not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any direction by the Grantor or the

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." **ADOPTED RULES SECTION** — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

PROPOSED RULES

Agency issued in accordance with this Agreement. The Trustee will be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section. 19. Choice of Law. This Agreement will be administered construed and enforced according to the laws of the state of Minnesota.

Section 20. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this agreement will not affect the interpretation or the legal efficacy of this Agreement.

In witness whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in Exhibit 6 MCAR § 4.9311 A.1-1.

[Signature of Grantor]

By [Title]

Attest:

[Title]

[Seal]

[Signature of Trustee]

By

Attest:

[Title]

[Seal]

2. Exhibit 6 MCAR § 4.9311 A.2.-2 is an example of the certification of acknowledgement, which must accompany the trust agreement for a trust fund as specified in 6 MCAR § 4.9305 A. and 6 MCAR § 4.9307 A.

Exhibit 6 MCAR § 4.9311 A.2.-2

CERTIFICATION OF ACKNOWLEDGMENT

State of

County of

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that she/he signed her/his name thereto by like order.

[Signature of Notary Public]

B. Surety bond guaranteeing payment into a closure trust fund. A surety bond guaranteeing payment into a closure trust fund, as specified in 6 MCAR § 4.9305 B., must be worded as described in Exhibit 6 MCAR § 4.9311 B.-3, except that instructions in brackets must be replaced with the relevant information and the brackets deleted.

Exhibit 6 MCAR § 4.9311 B.-3

FINANCIAL GUARANTEE BOND FOR CLOSURE

Date bond executed:

Effective date:

Principal: [legal name and business address]

Type of organization: [insert "individual," "joint venture," "partnership," or "corporation"]

State of incorporation:

Surety(ies): [name(s) and business address(es)]

Identification number, name, and address of each facility and if more than one facility is covered by this bond, the amount of the penal sum for each facility:

Total penal sum of bond: \$

Know all men by these presents, that we, the Principal and Surety(ies) hereto are firmly bound to the Minnesota Pollution Control Agency (Agency) in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas, said Principal is required to have a permit or permits, or interim status, in order to own or operate the hazardous waste management facility(ies) identified above, and

Whereas, said Principal is required to provide financial assurance for closure of the facility(ies) as a condition of the permit(s) or interim status, and

Whereas, said Principal shall establish a standby trust fund as specified by 6 MCAR § 4.9305 or 6 MCAR § 4.9407,

Now, therefore, the conditions of the obligations are such that if the Principal shall faithfully, for the facility(ies) identified above, at least 60 days before the beginning of final closure, fund the standby trust fund in an amount equal to the penal sum,

Or, if the Principal shall fund the standby trust fund in such an amount within 15 days after an order to begin closure in accordance with 6 MCAR §§ 4.9297-4.9302 is issued by the Agency or by a district court, or within 15 days after a notice of termination of the permit(s) or interim status,

Or, if the Principal shall provide alternate financial assurance as specified in 6 MCAR § 4.9305 or 6 MCAR § 4.9407 within 30 days after the date notice of cancellation is received by the Agency, then this obligation will be null and void; otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by the Agency that the Principal has failed to perform as guaranteed by this bond, the Surety(ies) shall place funds in the amount of the penal sum into the standby trust fund as directed by the Agency.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending written notice of cancellation to the owner or operator and to the Agency, provided however, that cancellation cannot occur: (1) during the 90 days beginning on the date the notice of cancellation is received by the Agency as shown on the signed return receipt(s); or (2) while a compliance procedure is pending, as defined in 6 MCAR § 4.9303 B. or 6 MCAR § 4.9405 B.

The Principal may terminate this bond by sending written notice to the Surety(ies), provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond by the Agency.

[The following paragraph is an optional rider that may be included but is not required.]

Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it equals the adjusted closure cost estimate(s), provided that the amount of the cost estimate(s) does(do) not increase by more than 20 percent in any one year, and no decrease in the penal sum takes place without the written permission of the Agency.

In witness whereof, the Principal and Surety(ies) have executed this Financial Guarantee Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in Exhibit 6 MCAR § 4.9311 B.-3.

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." **ADOPTED RULES SECTION** — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

PROPOSED RULES

Principal

Signature(s): _____

Name(s) and title(s) [typed] _____

Corporate seal: _____

Corporate Surety(ies)

Name and address: _____

State of incorporation: _____

Liability limit: \$ _____

Signature(s): _____

Name(s) and title(s) [typed] _____

Corporate seal: _____

[For every co-surety, provided signature(s), corporate seal, and other information in the same manner as for Surety above.]

Bond premium: \$ _____

C. Surety bond guaranteeing performance of closure. A Surety bond guaranteeing performance of closure, as specified in 6 MCAR § 4.9305 C., must be worded as specified in Exhibit 6 MCAR § 4.9311 C.-4 except that the instructions in brackets must be replaced with the relevant information and the brackets deleted.

Exhibit 6 MCAR § 4.9311 C.-4 PERFORMANCE BOND FOR CLOSURE

Date bond executed _____

Effective date _____

Principal: [legal name and business address]

Type of organization: [insert "individual," "joint venture," "partnership," or "corporation"] _____

State of incorporation: _____

Surety(ies) [name(s) and business address(es)] _____

Identification number, name, address, and adjusted closure cost estimate for each facility: _____

Total penal sum of bond: \$ _____

Know all men by these presents, that we, the Principal and Surety(ies) hereto are firmly bound to the Minnesota Pollution Control Agency (Agency) in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas, said Principal is required to have a permit or permits from the Agency in order to own or operate the hazardous waste facility(ies), identified above, and

Whereas, said Principal is required to provide financial assurance for closure of the facility(ies) as a condition of the permit(s), and

Whereas, said Principal shall establish a standby trust fund as specified by 6 MCAR § 4.9305,

Now, therefore, the conditions of this obligation are such that if the Principal shall faithfully perform closure of the facility(ies) identified above in accordance with the closure plan(s) submitted to receive said permit(s) and other requirements of said permit(s) as such plan(s) and permit(s) may be amended, pursuant to all applicable laws, statutes, rules, and regulations, as such laws, statutes, rules, and regulations may be amended,

Or, if the Principal faithfully performs closure in accordance with 6 MCAR §§ 4.9297-4.9302 following an order to begin closure issued by the Agency or by a court, or following a notice of termination of the permit,

Or, if the Principal shall provide alternate financial assurance as specified in 6 MCAR § 4.9305 within 30 days of the date notice of cancellation is received by the Agency, then this obligation will be null and void, otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by the Agency that the Principal has been found in violation of 6 MCAR § 4.9305, the

Surety(ies) must place funds in the amount of the adjusted closure cost estimate(s) into the standby trust fund as directed by the Agency. Upon notification by the Agency that the Principal has been found in violation of the closure requirements of 6 MCAR §§ 4.9280-4.9316, the Surety(ies) must either perform closure in accordance with the closure plan(s) and other permit requirements or place the amount of the adjusted closure cost estimate(s) in the standby trust fund. Upon notification by the Agency that the Principal has been found in violation of an order to begin closure, the Surety(ies) must either perform closure in accordance with the closure order or place the amount of the adjusted closure cost estimate(s) in the standby trust fund.

The Surety(ies) hereby waives notification of amendments to the closure plan(s), permit(s), applicable laws, statutes, rules, and regulations and agrees that no such amendment(s) shall in any way alleviate its (their) obligation on this bond.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending written notice of cancellation to the owner or operator and to the Agency, provided, however, that cancellation cannot occur during the 90 days beginning on the date the Agency receives the notice of cancellation as shown on the signed return receipt(s); or while a compliance procedure is pending, as defined in 6 MCAR § 4.9303 B.

The Principal may terminate this bond by sending written notice to the Surety(ies), provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond by the Agency.

[The following paragraph is an optional rider that may be included but is not required.]

Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it equals the adjusted closure cost estimate(s), provided that the amount of the cost estimate(s) does (do) not increase by more than 20 percent in any one year, and no decrease in the penal sum takes place without the written permission of the Agency.

In witness whereof, the Principal and Surety(ies) have executed this Performance Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in Exhibit 6 MCAR § 4.9311 C.-4.

Principal

Signature(s): _____
Name(s) and title(s) [typed]: _____
Corporate seal: _____

Corporate Surety(ies)

Name and address: _____
State of incorporation: _____
Liability limit: \$ _____
Signature(s): _____
Name(s) and title(s) [typed]: _____
Corporate seal: _____

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]

Bond premium: \$ _____

D. Surety bond guaranteeing payment into a post-closure trust fund. A surety bond guaranteeing payment into a post-closure trust fund, as specified in 6 MCAR § 4.9307 B., must be worded as specified in Exhibit 6 MCAR § 4.9311 D.-5, except that instructions in brackets must be replaced by the relevant information and the brackets deleted.

Exhibit 6 MCAR § 4.9311 D.-5

FINANCIAL GUARANTEE BOND FOR POST-CLOSURE CARE

Date bond executed: _____

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." **ADOPTED RULES SECTION** — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

PROPOSED RULES

Effective date: _____

Principal: [legal name and business address] _____

Type of organization: [insert "individual," "joint venture," "partnership," or "corporation"] _____

State of incorporation: _____

Surety(ies): [name(s) and business address(es)] _____

Identification number, name, and address of each facility and, if more than one facility is covered by this bond, the amount of the penal sum for each facility: _____

Total penal sum of bond: \$ _____

Know all men by these presents, that we, the Principal and Surety(ies) hereto are firmly bound to the Minnesota Pollution Control Agency (Agency) in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas, said Principal is required to have a permit or permits, or interim status, in order to own or operate the hazardous waste facility(ies) identified above, and

Whereas, said Principal is required to provide financial assurance for post-closure care of the facility(ies) as a condition of the permit(s) or interim status, and

Whereas, said Principal shall establish a standby trust fund as specified by 6 MCAR § 4.9307 or 6 MCAR § 4.9409,

Now, therefore, the conditions of the obligation are such that if the Principal shall faithfully, for the facility(ies) identified above, by the beginning of final closure, fund the standby trust fund in an amount equal to the penal sum,

Or, if the Principal shall fund the standby trust fund in such an amount within 15 days after an order to begin closure in accordance with 6 MCAR §§ 4.9297-4.9302 is issued by the Agency or a court, or within 15 days after a notice of termination of the permit(s) of interim status,

Or, if the Principal shall provide alternate financial assurance as specified in 6 MCAR § 4.9307 or 6 MCAR § 4.9409 within 30 days after the date notice of cancellation is received by the Agency then this obligation will be null and void, otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by the Agency that the Principal has failed to perform as guaranteed by this bond, the Surety(ies) must place funds in the amount of the penal sum into the standby trust fund as directed by the Agency.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending written notice of cancellation to the owner or operator and to the Agency, provided, however, that cancellation cannot occur: (1) during the 90 days beginning on the date of the receipt of the notice of cancellation by the Agency as shown on the signed return receipt(s); or (2) while a compliance procedure is pending, as defined in 6 MCAR § 4.9303 B. or 6 MCAR § 4.9405 B.

The Principal may terminate this bond by sending written notice to the Surety(ies), provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond by the Agency.

[The following paragraph is an optional rider that may be included but is not required.]

Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it equals the adjusted post-closure cost estimate(s), provided that the amount of the cost estimate(s) does (do) not increase by more than 20 percent in any one year, and no decrease in the penal sum takes place without the written permission of the Agency.

In witness whereof, the Principal and Surety(ies) have executed this Financial Guarantee Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in Exhibit 6 MCAR § 4.9311 D.-5.

Principal

Signature(s):
 Name(s) and title(s) [typed]:
 Corporate Seal:

Corporate Surety(ies)

Name and address:
 State of incorporation:
 Liability limit: \$
 Name(s) and title(s) [typed]:
 Corporate Seal:

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]

Bond premium: \$

E. Surety bond guaranteeing performance of post-closure care. A surety bond guaranteeing performance of post-closure care, as specified in 6 MCAR § 4.9307 C. must be worded as specified in Exhibit 6 MCAR § 4.9311 E.-6 except that the instructions in brackets must be replaced with the relevant information and the brackets deleted.

**Exhibit 6 MCAR § 4.9311 E.-6
 PERFORMANCE BOND FOR POST-CLOSURE CARE**

Date bond executed:
 Effective date:
 Principal: [legal name and business address]
 Type of organization: [insert "individual," "joint venture," "partnership," or "corporation"]
 State of incorporation:
 Surety(ies): [name(s) and business address(es)]
 Identification number, name, address and adjusted post-closure cost estimate for each facility:
 Total penal sum of bond: \$

Know all men by these presents, that we, the Principal and Surety(ies) hereto are firmly bound to the Minnesota Pollution Control Agency (Agency) in the above penal sum for the payment of which we bond ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas, said Principal is required to have a permit or permits from the Agency in order to own or operate the hazardous waste facility(ies) identified above, and

Whereas, said Principal is required to provide financial assurance for post-closure care of the facility(ies) as a condition of the permit(s), and

Whereas, said Principal shall establish a standby trust fund as specified by 6 MCAR § 4.9307,

Now, therefore, the conditions of this obligation are such that if the Principal shall faithfully perform post-closure care of the facility(ies) identified above in accordance with the post-closure plan(s) and other requirements of the permit(s), as such post-closure plan(s) and permit(s) may be amended, pursuant to all applicable laws, statutes, rules, and regulations, as such laws, statutes, rules, and regulations may be amended,

Or, if the Principal shall provide alternate financial assurance as specified in 6 MCAR § 4.9307 within 30 days of the date notice of cancellation is received by the Agency then this obligation will be null and void, otherwise it is to remain in full force and effect.

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The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by the Agency that the Principal has been found in violation of 6 MCAR § 4.9307, the Surety(ies) must place funds in the amount of the adjusted post-closure cost estimate(s) into the standby trust fund as directed by the Agency. Upon notification by the Agency that the Principal has been found in violation of the post-closure requirements of 6 MCAR §§ 4.9280-4.9316, the Surety(ies) must perform post-closure care in accordance with the post-closure plan and other requirements of the permit or place the amount of the adjusted post-closure cost estimate(s) into the standby trust fund.

The Surety(ies) hereby waives notification of amendments to closure plan(s), permit(s), applicable laws, statutes, rules, and regulations and agrees that no such amendment(s) shall in any way alleviate its (their) obligation on this bond.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the Surety's(ies)' obligation hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending written notice of cancellation to the owner or operator and to the Agency; provided, however, that cancellation cannot occur during the 90 days beginning on the date of receipt of the notice of cancellation by the Agency as shown on the signed return receipt(s); or while a compliance procedure is pending, as defined in 6 MCAR § 4.9303 B.

[The following paragraph is an optional rider that may be included but is not required.]

Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it equals the adjusted post-closure cost estimate(s), provided that the amount of the cost estimate(s) does not increase by more than 20 percent in any one year, and no decrease in the penal sum takes place without the written permission of the Agency.

In witness whereof, the Principal and Surety(ies) have executed this Performance Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in Exhibit 6 MCAR § 4.9311 E.-6.

Principal

Signature(s):
Name(s) and title(s) [typed]:
Corporate seal:

Corporate Surety(ies)

Name(s) and address(es):
State of incorporation:
Liability limit: \$
Signature(s):
Name(s) and title(s) [typed]:
Corporate seal:

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]

Bond premium: \$

F. Letter of credit. A letter of credit as specified in 6 MCAR § 4.9305 D. and 6 MCAR § 4.9307 D., must be worded as specified in Exhibit 6 MCAR § 4.9311 F.-7, except that instructions in brackets must be replaced with the relevant information and the brackets deleted.

Exhibit 6 MCAR § 4.9311 F.-7
IRREVOCABLE STANDBY LETTER OF CREDIT

[Agency Board Chairperson]

Dear Sir or Madam: We hereby establish our Irrevocable Standby Letter of Credit No. in favor of the Minnesota Pollution Control Agency (Agency) at the request and for the account of [owner's or operator's name and address] up to the aggregate amount of [in words] U.S. dollars \$, available upon presentation of:

- 1. your sight draft, bearing reference to this letter of credit No., together with;
- 2. your signed statement declaring that the amount of the draft is payable pursuant to the state of Minnesota's Hazardous Waste Rules.

The following amounts are included in the amount of this letter of credit: [for each facility, insert the facility identification

number, name, and address, and the adjusted closure and/or post-closure cost estimates, or portions thereof, for which financial assurance is demonstrated by this letter of credit].

This letter of credit is effective as of [date] and will expire on [date at least one year later], but such expiration date will be automatically extended for one period of [at least one year] on [date] and on each successive expiration date, unless, at least 90 days before the current expiration date, we notify you and [owner's or operator's name] by certified mail that we decide not to extend the Letter of Credit beyond the current expiration date. In the event you are so notified, any unused portion of the credit will be available upon presentation of your sight draft for 90 days after the date of receipt by you as shown on the signed return receipt or while a compliance procedure is pending as defined in 6 MCAR § 4.9303 B., whichever is later.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we will duly honor such draft upon presentation to us, and we will deposit the amount of the draft promptly and directly into the standby trust fund of [owner's or operator's name] held in trust by [name and address of corporate trustee].

I hereby certify that I am authorized to execute this letter of credit on behalf of [issuing institution] and that the wording of this letter of credit is identical to the wording specified in Exhibit 6 MCAR § 4.9311 F.-7.

Attest:

[Signature and title of official of issuing institution]

[Date]

This credit is subject to [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published by the International Chamber of Commerce," or "the Uniform Commercial Code published in Minn. Stat. ch. 336"].

6 MCAR § 4.9312 Use and management of containers.

A. Applicability. This rule applies to owners and operators of all hazardous waste facilities that store containers of hazardous waste, except as 6 MCAR § 4.9280 C. provides otherwise. Under 6 MCAR § 4.9130 and 6 MCAR § 4.9134 D.3., if a hazardous waste is emptied from a container, the residue remaining in the container is not considered a hazardous waste if the container is empty, as defined in 6 MCAR § 4.9130. In that event, management of the container is exempt from the requirements of this rule.

B. Condition of containers.

1. Containers used to store hazardous waste must meet the following requirements:

a. be of sturdy, leak-proof construction, adequate wall thickness, adequate weld, hinge, and seam strength and sufficient strength to withstand side and bottom shock, while filled, without impairment of the ability of the container to fully contain the hazardous waste; and

b. have lids, caps, hinges, or other closure devices of sufficient strength and construction so that when closed they will withstand dropping, overturning, or other shock without impairment of the container's ability to fully contain the hazardous waste.

2. If a container holding hazardous waste does not meet the requirements of 1. or if it begins to leak, the owner or operator must transfer the hazardous waste from this container to a container that does meet the requirements of 1. or manage the waste in some other way that complies with the requirements of this rule.

C. Compatibility of waste with container. The owner or operator must use a container made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored and other substances that the container may foreseeably contact, so that the ability of the container to contain the waste is not impaired.

D. Management of containers.

1. A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste.

2. A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak. Reuse of containers is governed by the United States Department of Transportation regulations, including those set forth in Code of Federal Regulations, title 49, section 173.28 (1980).

3. If exposure of the containers to moisture or direct sunlight may create a hazardous condition or adversely affect the

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container's ability to contain the hazardous waste, the owner or operator must store the containers in an area with overhead roofing or other covering that does not obstruct the visibility of the labels.

E. Inspections. At least weekly, the owner or operator must inspect areas where containers are stored, looking for leaking containers and for deterioration of containers and the containment system caused by corrosion or other factors. The owner or operator must comply with 6 MCAR § 4.9281 D.3. and 6 MCAR § 4.9312 B. if remedial action is required because deterioration or leaks are detected.

F. Containment.

1. Container storage areas must have a containment system that is capable of collecting and holding spills, leaks, and precipitation. The containment system must:

a. have a base underlying the containers which is free of cracks or gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed;

b. be designed for efficient drainage so that standing liquid does not remain on the base longer than one hour after a leakage or precipitation event, unless the containers are elevated or in some other manner are protected from contact with accumulated liquids; and

c. have sufficient capacity to contain ten percent of the volume of containers or the volume of the largest container, whichever is greater. Containers that do not contain free liquids need not be considered in this determination.

2. Run-on into the containment system must be prevented, unless the agency waives this requirement in the permit after determining that the collection system has sufficient excess capacity in addition to that required in 1.c. to accommodate any run-on which might enter the system.

3. Spilled or leaked waste and accumulated precipitation must be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system. If the collected material is a hazardous waste as defined in 6 MCAR §§ 4.9128-4.9137, it must be managed as a hazardous waste in accordance with all applicable requirements of 6 MCAR §§ 4.9200-4.9560. If the collected material is discharged through a point source to waters of the United States, it is subject to the requirements of the Federal Water Pollution Control Act Amendments of 1972, United States Code, title 33, section 1342, as amended.

4. Storage areas that store containers holding only wastes that do not contain free liquids need not have a containment system defined by 1. if:

a. the storage area is sloped or is otherwise designed and operated to drain and remove liquid resulting from precipitation; or

b. the containers are elevated or are otherwise protected from contact with accumulated liquid.

G. Special requirements for ignitable or reactive waste. Containers holding ignitable or reactive waste must be located at least 15 meters (50 feet) from the facility's property line.

H. Special requirements for incompatible wastes.

1. Incompatible wastes or incompatible wastes and material must not be placed in the same container, unless compliance with 6 MCAR § 4.9283 B. is achieved.

2. Hazardous waste must not be placed in an unwashed container that previously held an incompatible waste or material. As required by 6 MCAR § 4.9284, the waste analysis plan must include analyses needed to comply with 1.-3. Rule 6 MCAR § 4.9283 C. also requires waste analyses, trial tests, or other documentation to ensure compliance with 6 MCAR § 4.9283 B. As required by 6 MCAR § 4.9294, the owner or operator must place the results of each waste analysis, trial test, and any other documented information in the operating record of the facility.

3. A storage container holding a hazardous waste that is incompatible with any waste or other materials stored nearby in other containers, piles, open tanks, or surface impoundments, must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.

I. Closure. At closure, all hazardous waste and hazardous waste residues must be removed from the containment system. Remaining containers, liners, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues must be decontaminated or removed. At closure and throughout the operating period, unless the owner or operator can demonstrate that the waste removed from the containment system is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of 6 MCAR §§ 4.9200-4.9560.

6 MCAR § 4.9313 Tanks.

A. Applicability. This rule applies to owners and operators of facilities that use tanks to treat or store hazardous waste, except as 6 MCAR § 4.9280 provides otherwise.

B. Design of tanks.

1. Tanks must have sufficient shell strength and, for closed tanks, pressure controls to ensure that they do not collapse or rupture. The director shall review the design of the tanks, including the foundation, structural support, seams, and pressure controls. A minimum shell thickness must be maintained at all times to ensure sufficient shell strength. Factors to be considered in establishing minimum thickness include the width, height, and materials of construction of the tank, and the specific gravity of the waste which will be placed in the tank. In reviewing the design of the tank and establishing a minimum thickness, the director shall rely upon appropriate industrial design standards and other available information.

2. Tanks and their closures must be constructed of materials, or protected by a liner that will not undergo chemical reaction with the contained hazardous waste or other substances that the tank may foreseeably contact if such a reaction may impair the tank's ability to contain the waste. Gasketed closures must be fitted with gaskets of material that is sufficient to prevent leakage and that will not be deteriorated by the contents.

3. The owner or operator must design and construct underground tanks to meet the general design requirements of 1. and 2. for all tanks and must allow for the inspection of the interior and exterior of the tank according to D. or:

- a. provide for corrosion protection by use of protective coatings or cathodic protection;
- b. provide for the detection of any leakage through the use of sensing devices or other equivalent methods;
- c. perform hydrostatic testing on all tanks with the initial test being performed within three years of the effective date of this rule and at least every three years thereafter; and
- d. keep a weekly inventory for each tank. Inventories must be based upon the actual daily measurement of tank liquid level. The written record must include a computation of gain or loss for the period. Inventory records must be maintained for at least three years at the facility. Upon discovery of loss of ten percent of the waste volume, the owner or operator must notify the director and implement the procedures outlined in the owner's or operator's contingency plan for that occurrence.

C. General operating requirements.

1. Wastes and other materials that are incompatible with the material of the construction of the tank must not be placed in the tank, unless the tank is protected from accelerated corrosion, erosion, or abrasion through the use of:

- a. an inner liner or coating which is compatible with the waste or material and which is free of leaks, cracks, holes, or other deterioration; or
- b. alternate means of protection such as cathodic protection, or corrosion inhibitors.

2. The owner or operator must use appropriate controls and practices to prevent overfilling. These must include:

- a. controls to prevent overfilling such as waste feed cutoff systems or by-pass systems to a standby tank; and
- b. for uncovered tanks, maintenance of sufficient freeboard to prevent overtopping by wave or wind action or by precipitation.

D. Inspections.

1. The owner or operator must inspect:

- a. overfilling control equipment, including waste feed cut off systems and by-pass systems, at least once each operating day to ensure that it is in good working order;
- b. data gathered from monitoring equipment, where present, at least once each operating day to ensure that the tank is being operated according to its design;
- c. for uncovered tanks, the level of waste in the tank at least once each operating day to ensure compliance with C.2.b.;
- d. the construction materials of the tank, at least weekly to detect corrosion or erosion and leaking of fixtures and seams; and

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e. the area immediately surrounding the tank and the containment system, at least weekly to detect obvious signs of leakage and deterioration of the containment system caused by corrosion, erosion, or other factors.

2. As part of the inspection schedule required in 6 MCAR § 4.9281 and in addition to the specific requirements of 1., the owner or operator must develop a schedule and procedure for assessing the condition of the tank. The schedule and procedure must be adequate to detect cracks, leaks, corrosion, or erosion which may lead to cracks or leaks, or wall thinning to less than the thickness required under B. Procedures for emptying a tank to allow entry and inspection of the interior must be established when necessary to detect corrosion or erosion of the tank sides and bottom. The frequency of these assessments must be based on the material of construction of the tank, type of corrosion or erosion protection used, rate of corrosion or erosion observed during previous inspections, and the characteristics of the waste being treated or stored.

3. As part of the contingency plan required under 6 MCAR §§ 4.9287-4.9290, the owner or operator must specify the procedures he intends to use to respond to tank spills or leakage, including procedures and timing for expeditious removal of leaked or spilled waste and repair of the tank. As required in 6 MCAR § 4.9281 D.3., the owner or operator must remedy any leak, crack, or wall thinning in violation of B., or equipment or process malfunction in violation of C., which he discovers during inspection.

E. Containment.

1. Storage or treatment tank areas must have a containment system that is capable of collecting and holding spills, leaks, and precipitation. The containment system must:

a. have a base underlying the tanks which is free of cracks or gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed;

b. be designed for efficient drainage so that standing liquid does not remain on the base longer than one hour after a leakage or precipitation event, unless the tank is protected from contact with accumulated liquids;

c. have sufficient capacity to contain ten percent of the volume of tanks, or the volume of the largest tank, whichever is greater, plus ten centimeters (4 inches) of freeboard; and

d. be constructed so that the interface between the dike or sidewall and the underlying base is sealed to contain leaks, spills, and accumulated liquids.

2. Run-on into the containment system must be prevented, unless the agency waives this requirement in the permit after determining that the collection system has sufficient excess capacity in addition to that required in 1.c. to accommodate any run-on which might enter the system.

3. Spilled or leaked waste and accumulated precipitation must be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system. If the collected material is a hazardous waste as defined in 6 MCAR §§ 4.9128-4.9137, it must be managed as a hazardous waste in accordance with all applicable requirements of 6 MCAR §§ 4.9200-4.9560. If the collected material is discharged through a point source to waters of the United States, it is subject to the requirements of the Federal Water Pollution Control Act Amendments of 1972, United States Code, title 33, section 1342, as amended.

F. Closure. At closure, all hazardous waste and hazardous residues must be removed from tanks, discharge control equipment, discharge confinement structures, and the containment system. Remaining liners, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues must be decontaminated or removed. At closure, as throughout the operating period, unless the owner or operator can demonstrate that the waste removed from his tank or containment system is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of 6 MCAR §§ 4.9200-4.9560.

G. Special requirements for ignitable or reactive waste.

1. Ignitable or reactive waste must not be placed in a tank unless:

a. the waste is treated, rendered, or mixed before or immediately after placement in the tank so that the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under 6 MCAR § 4.9132 B. and E., and compliance with 6 MCAR § 4.9283 B. is maintained; or

b. the waste is stored or treated in such a way that it is protected from any materials or conditions which may cause the waste to ignite or react; or

c. the tank is used solely for emergencies.

2. The owner or operator of a facility which treats or stores ignitable or reactive waste in covered tanks must comply with National Fire Protection Association's buffer zone requirements for tanks contained in Tables 2-1 through 2-6 of the "Flammable and Combustible Liquids Code" in the 'National Fire Codes, 1981' issued by the National Fire Protection

Association (Quincy, Massachusetts, 1981). As required by 6 MCAR § 4.9284, the waste analysis plan must include analyses needed to comply with 1.-2. Additional requirements for ignitable and reactive wastes are contained in 6 MCAR § 4.9283 A. Rule 6 MCAR § 4.9283 C. also requires waste analysis, trial tests, or other documentation to ensure compliance with 6 MCAR § 4.9283 B. As required by 6 MCAR § 4.9294, the owner or operator must place the results of each waste analysis and trial test, and any documented information, in the operating record of the facility.

H. Special requirements for incompatible wastes.

1. Incompatible wastes or incompatible wastes and materials, must not be placed in the same tank, unless compliance with 6 MCAR § 4.9283 B. is maintained.

2. Hazardous waste must not be placed in an unwashed tank which previously held an incompatible waste or material, unless compliance with 6 MCAR § 4.9283 B. is maintained. As required by 6 MCAR § 4.9284, the waste analysis plan must include analyses needed to comply with 1. and 2. Rule 6 MCAR § 4.9283 C. also requires waste analyses, trial tests, or other documentation to ensure compliance with 6 MCAR § 4.9283 B. As required by 6 MCAR § 4.9294, the owner or operator must place the results of each waste analysis and trial test, and any documented information, in the operating record of the facility.

6 MCAR § 4.9314 Surface impoundments.

A. Applicability. This rule applies to owners and operators of facilities that use surface impoundments to treat or store hazardous waste, except as 6 MCAR § 4.9280 provides otherwise. This rule applies only to surface impoundments that are used for storage or treatment of hazardous waste and are designed and operated to prevent discharge into the land and ground water, and the surface water except discharges authorized by a National Pollutant Discharge Elimination System permit issued pursuant to the Federal Water Pollution Control Act Amendments of 1972, United States Code, title 33, section 1342, as amended through June 30, 1982.

B. General design requirements.

1. A surface impoundment must be designed to provide:

a. at least 60 centimeters (2 feet) of freeboard or an amount of freeboard other than 60 centimeters as approved by the director in a permit based on documentation that the specified amount of freeboard will prevent or be needed to prevent overtopping;

b. a 50-foot buffer zone around the impoundment; and

c. a liner and dike system having a permeability rate no greater than 1×10^{-7} centimeters per second when being subjected to a head of one foot of water and of a composition that will not increase in permeability as a result of contact with the hazardous waste for those constructed of earthen materials and all other types must be similarly impervious.

2. A surface impoundment must be designed so that any flow of waste into the impoundment can be immediately shut off in the event of overtopping or liner failure.

3. A surface impoundment must be designed to prevent discharge into the land and ground water, and to surface water, except discharges authorized by a National Pollutant Discharge Elimination System permit during the life of the impoundment by use of a containment system which complies with C. The design of the containment system must be included as a term and condition of the permit.

4. Dikes must be designed with sufficient structural integrity to prevent massive failure without dependence on any liner system included in the surface impoundment design.

5. The interface between the dike and underlying liner must provide a seal against movement of hazardous waste or solutions thereof.

6. A leachate detection, collection, and removal system must be designed so that liquid will flow freely from the collection system to prevent the creation of a pressure head within the collection system in excess of that necessary to cause the liquid to flow freely.

C. General operating requirements.

1. A surface impoundment must be operated to prevent any overtopping due to wind and wave action, overfilling, precipitation, or any combination thereof.

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2. A surface impoundment must be operated to maintain at least the amount of freeboard specified by the director in the permit.

3. A leachate detection, collection, and removal system installed to comply with D.2. must be operated so that leachate flows freely from the collection system and is removed as it accumulates or with sufficient frequency to prevent backwater within the collection system.

4. Earthen dikes must be kept free of perennial woody plants with root systems which could displace the earthen materials upon which the structural integrity of the dike is dependent and must be kept free of burrowing animals which could remove earthen materials upon which the structural integrity is dependent or create leaks through burrows in the dike.

5. Run-on must be diverted away from a surface impoundment.

D. Containment systems.

1. Earthen dikes must have a protective cover, such as grass, shale, or rock, to minimize wind or water erosion and to preserve the structural integrity of the dike.

2. A liner system designed to prevent discharge into the land during the life of the surface impoundment must be constructed with a highly impermeable liner system in contact with the waste which will prevent discharge of the waste or leachate through the liner or liners during the life of the surface impoundment based on the liner or liners thickness, the saturated permeability of the liner or liners, and the pressure head or waste or leachate to which the liner or liners will be exposed. The liner system in contact with the waste includes any protective cover over the liner or liners.

3. A leachate detection, collection, and removal system must be constructed beneath the liner or liners in contact with the waste to detect, contain, collect, and remove any discharge from the liner system in contact with the waste. A highly impermeable liner beneath the drainage layer is a requirement of any leachate detection, collection, and removal system.

4. A liner system must be constructed above the water table to ensure the detection of any discharge of waste or leachate through the liner system in contact with the waste; to prevent the discharge of ground water to the leachate detection, collection, and removal system; and to protect the structural integrity of the liner or liners. The ground water table may be controlled to comply with this requirement.

5. A containment system must have a containment life equal to or greater than the life of the surface impoundment.

6. Liner systems must be constructed of materials which have appropriate chemical properties and strength and of sufficient thickness to prevent failure due to pressure head, physical contact with the waste or leachate to which they are exposed, climatic conditions, and the stress of installation. The systems must be on a foundation capable of providing support to the liner or liners and resistance to pressure head above the liner or liners to prevent failure of the liner or liners due to settlement or compression.

E. Inspections and testing.

1. During construction or installation, liner systems must be inspected for uniformity, damage, and imperfections such as holes, cracks, thin spots, and foreign materials. Earth material liner systems must be tested for compaction density, moisture content, and permeability after placement. Manufactured liner materials must be inspected to ensure tight seams and joints and the absence of tears or blisters.

The liner system must be certified by a registered engineer against any failure which might cause the impoundment to leak prior to issuance or reissuance of a permit or, if the impoundment is not in service, prior to being placed in service and after construction or prior to being returned to service.

2. The owner or operator must inspect a surface impoundment including dikes, berms, and vegetation surrounding the dike at least once a week and after storms to detect any evidence of or potential for leaks from the impoundment, erosion of dikes, and to ensure compliance with C.4. As required by 6 MCAR § 4.9281 D.3., the owner or operator must remedy any deterioration or malfunction found.

The owner or operator must inspect a surface impoundment which contains free liquids at least once each operating day to ensure compliance with C.1.-3., and to detect any leaks or other failures of the impoundment.

3. The structural integrity of any dike, including that portion of any dike which provides freeboard, must be certified against massive failure by a registered engineer prior to the issuance or reissuance of a permit or, if the impoundment is not in service, prior to being placed in service and after construction or prior to being returned to service.

4. In certifying the structural integrity of the dike it must be established that the dike will withstand:

- a. the stress of the pressure head of liquids placed into the impoundment;

b. the weakening effect of earth materials being scoured due to leakage from the impoundment through and under the dike without relying on any liner system; and

c. the weakening effect of earth materials being scoured due to leakage from the impoundment through and under the dike, assuming leaks develop in the liner system.

F. Containment system repairs; contingency plans.

1. Whenever there is any indication of a possible failure of the containment system, that system must be inspected in accordance with the provisions of the containment system evaluation and repair plan required by 4. Indications of possible failure of the containment system include at least an unplanned or nonsudden drop in liquid level in the impoundment, liquid detected in the leachate detection system, evidence of leakage or the potential for leakage in the dike, erosion of the dike, apparent or potential deterioration of the liner or liners based on observation or test samples of the liner materials, any mishandling of wastes placed in the impoundment, and foreign objects in the impoundment.

2. Whenever there is a positive indication of a failure of the containment system, the impoundment must be removed from service. Indications of positive failure of the containment system include an unplanned sudden drop in liquid level in the impoundment, waste detected in the leachate detection system, active leakage through the dike, or a breach in the liner system.

3. If the surface impoundment must be removed from service as required by 2., the owner or operator must:

- a. immediately shut off the flow of or stop the addition of wastes into the impoundment;
- b. immediately contain any leakage which has occurred or is occurring;
- c. immediately cause the leak to be stopped; and
- d. if the leak cannot be stopped by any other means, empty the impoundment.

4. As part of the contingency plan required by 6 MCAR §§ 4.9287-4.9290, the owner or operator must specify:

- a. a procedure for complying with the requirements of 3.; and
- b. a containment system evaluation and repair plan describing testing and monitoring techniques, procedures to be followed to evaluate the integrity of the containment system in the event of a possible failure, a schedule of actions to be taken in the event of a possible failure, and a description of the repair techniques to be used in the event of leakage due to containment system failure or deterioration which does not require the impoundment to be removed from service.

5. No surface impoundment that has been removed from service in accordance with 2. may be restored to service unless the containment system has been repaired and the containment system has been certified by a registered engineer as meeting the design specifications approved in the permit.

6. A surface impoundment that has been removed from service in accordance with 2. and that is not being repaired must be closed in accordance with G. All wastes removed from the impoundment must be managed as a hazardous waste in compliance with all applicable requirements of 6 MCAR §§ 4.9200-4.9560. Any point source discharge to waters of the United States is subject to the requirements of the Federal Water Pollution Control Act Amendments of 1972, United States Code, title 33, section 1342, as amended through June 30, 1982. Spills may be subject to the Federal Water Pollution Control Act Amendments of 1972, United States Code, title 33, section 1321, as amended through June 30, 1982.

G. Closure. At closure, all hazardous waste and hazardous waste residues must be removed from the impoundment. Any component of the containment system or any appurtenant structures or equipment containing or contaminated with hazardous waste or hazardous waste residues must be decontaminated or removed. At closure, as throughout the operating period, unless the owner or operator can demonstrate in accordance with 6 MCAR §§ 4.9128-4.9137 that the waste removed from the surface impoundment is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of 6 MCAR §§ 4.9200-4.9560.

H. Special requirements for ignitable or reactive waste. Ignitable or reactive waste must not be placed in a surface impoundment, unless:

1. the waste is treated, rendered, or mixed before or immediately after placement in the impoundment so that the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under 6 MCAR § 4.9132 B. and E. and so that 6 MCAR § 4.9283 B. is followed; or

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2. the waste is managed in such a way that is protected from any material or conditions which may cause it to ignite or react; or

3. the surface impoundment is used solely for emergencies. As required by 6 MCAR § 4.9284, the waste analysis plan must include analyses needed to comply with 1.-3. Rule 6 MCAR § 4.9283 C. also requires waste analyses, trial tests, or other documentation to assure compliance with 6 MCAR § 4.9283 B. As required by 6 MCAR § 4.9294, the owner or operator must place the results of each waste analysis and trial test, and any documented information, in the operating record of the facility.

1. Special requirements for incompatible wastes. Incompatible wastes, or incompatible wastes and materials must not be placed in the same surface impoundment, unless 6 MCAR § 4.9283 B. is followed. As required by 6 MCAR § 4.9294, the owner or operator must place the results of each waste analysis and trial test, and any documented information, in the operating record of the facility.

6 MCAR § 4.9315 Waste piles.

A. Applicability. This rule applies to owners and operators of facilities that store or treat hazardous waste in piles, except as 6 MCAR § 4.9280 provides otherwise. This rule applies only to waste piles that are used for storage or treatment of hazardous waste and are designed and operated to prevent discharge into the land, surface water, and ground water.

B. General design requirements.

1. A waste pile must be designed to control dispersal of the waste by wind, when necessary, or by water erosion. A waste pile must be designed to prevent discharge into the land, surface water, or ground water during the life of the pile by use of a containment system which complies with D.

2. Owners and operators of waste piles used to store or treat only hazardous wastes that do not contain free liquids are not subject to regulation under 1. and C.-F., with respect to those piles if:

- a. liquids or materials containing free liquids are not placed in the pile;
- b. the pile is inside or under a structure that provides protection from precipitation so that neither run-off nor leachate is generated;
- c. the pile is protected from surface water run-on by the structure or in some other manner;
- d. the pile is designed and operated to control dispersal of the waste by wind, where necessary, by means other than wetting; and
- e. the pile will not generate leachate through decomposition or other reactions.

C. General operating requirements. The director shall specify control practices where necessary to ensure that wind dispersal of hazardous waste from piles is controlled. Run-on must be diverted away from a waste pile. Leachate and run-off from a waste pile must be collected and controlled. If the collected leachate or run-off is a hazardous waste under 6 MCAR §§ 4.9128-4.9137, it must be managed as a hazardous waste in accordance with applicable requirements of 6 MCAR §§ 4.9200-4.9560. If collected leachate or run-off is discharged through a point source to waters of the United States, it is subject to the requirements of the Federal Water Pollution Control Act Amendments of 1972, United States Code, title 33, section 1342, as amended through June 30, 1982.

D. Containment systems.

1. A containment system must be designed, constructed, maintained, and operated to prevent discharge into the land, surface water, or ground water during the life of the waste pile. The system must contain a leachate and run-off collection and control system, and either:

a. a base underlying and in contact with the waste pile that is made of a liner or liners which will prevent discharge into the land, surface water, or ground water during the life of the pile based on the thickness of the liner or liners, the permeability of the liner or liners, and the characteristics of the waste or leachate to which the liner or liners will be exposed. The liner or liners must be of sufficient strength and thickness to prevent failure due to puncture, cracking, tearing, or other physical damage from equipment used to place waste in or on the pile, or to clean and expose the liner surface for inspection; or

b. a base as in a., except that the liner or liners need not be of sufficient strength and thickness to prevent failure due to physical damage from equipment used to clean and expose the liner surface for inspection, and a leachate detection, collection, and removal system beneath the base to detect, contain, collect, and remove any discharge from the base. The leachate detection, collection, and removal system must be placed above the water table to ensure the detection of any discharge through the base; to prevent the discharge of ground water into the leachate detection, collection, and removal system; and to protect the structural integrity of the base. A highly impermeable liner beneath the drainage layer is a necessary part of a leachate detection, collection, and removal system. The ground water table may be controlled to comply with this requirement.

2. A waste pile base must be constructed of materials that have appropriate chemical properties and strength and of sufficient thickness to prevent failure due to pressure and physical contact with the waste to which they are exposed, climatic conditions, and the stress of installation.

The waste pile base must be on a foundation capable of providing support to the liner or liners and to loads placed or moving above the liner or liners to prevent failure of the liner or liners due to settlement or compression.

3. A containment system must be protected from plant growth which could puncture any component of the system.
4. A containment system must have a containment life equal to or greater than the life of the pile.

E. Inspections and testings. During construction or installation of the waste pile base, liner systems must be inspected for uniformity, damage, and imperfections, and manufactured liner materials must be inspected to ensure tight seams and joints and the absence of tears or blisters.

F. Containment system repairs; contingency plans.

1. Whenever there is any indication of a possible failure of the containment system, that system must be inspected in accordance with the provisions of the containment system evaluation and repair plan required by 4. Indications of possible failure of the containment system include liquid detected in the leachate detection system, where applicable, evidence of leakage in the base, erosion of the base, or apparent or potential deterioration of the liner or liners based on observation or test samples of the liner materials.

2. Whenever there is a positive indication of a failure of the containment system, the waste pile must be removed from service. Indications of positive failure of the containment system include waste detected in the leachate detection system, where applicable, or a breach in the base.

3. If the waste pile must be removed from service as required by 2., the owner or operator must:

- a. immediately stop adding waste to the pile;
- b. immediately contain any leakage which has or is occurring;
- c. immediately cause the leak to be stopped; and
- d. if the leak cannot be stopped by an other means, remove the waste from the base.

4. As part of the contingency plan required in 6 MCAR §§ 4.9297-4.9302, the owner or operator must specify:

- a. a procedure for complying with the requirements of 3.; and
- b. a containment system evaluation and repair plan describing testing and monitoring techniques, procedures to be followed to evaluate the integrity of the containment system in the event of a possible failure, a schedule of actions to be taken in the event of a possible failure, and a description of the repair techniques to be used in the event of leakage due to containment system failure or deterioration which does not require the waste pile to be removed from service.

5. No waste pile that has been removed from service in accordance with 2. may be restored to service unless the containment system has been repaired and the containment system has been certified by a registered engineer as meeting the design specifications approved in the permit.

6. A waste pile that has been removed from service in accordance with 2. and that is not being repaired must be closed in accordance with 1. All wastes removed from the waste pile must be managed as a hazardous waste in compliance with all applicable requirements of 6 MCAR §§ 4.9200-4.9560. Any point source discharge to waters of the United States is subject to the requirements of the Federal Water Pollution Control Act Amendments of 1972, United States Code, title 33, section 1342, as amended through June 30, 1982.

G. Special requirements for ignitable or reactive waste. Ignitable or reactive waste must not be placed in a pile unless:

1. addition of the waste to an existing pile results in the waste or mixture no longer meeting the definition of ignitable or reactive waste under 6 MCAR § 4.9132 B. and E. and complies with 6 MCAR § 4.9283 B.; or
2. the waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react.

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As required by 6 MCAR § 4.9284, the waste analysis plan must include analyses needed to comply with 1.-2. Rule 6 MCAR § 4.9283 C. also requires waste analyses, trial tests, or other documentation to assure compliance with 6 MCAR § 4.9283 B. As required by 6 MCAR § 4.9294, the owner or operator must place the results of each waste analysis and trial test, and any documented information, in the operating record of the facility.

H. Special requirements for incompatible wastes.

1. Incompatible wastes, or incompatible wastes and materials must not be placed in the same pile, unless 6 MCAR § 4.9283 B. is followed.

2. A pile of hazardous waste that is incompatible with any waste or other material stored nearby in other containers, piles, open tanks, or surface impoundments must be separated from the other materials, or protected from them by means of a dike, berm, wall, or other device. The purpose is to prevent fires, explosions, gaseous emissions, leaching, or other discharge which could result from the contact or mixing of incompatible wastes or materials.

3. Hazardous waste must not be piled on the same base where incompatible wastes or materials were previously piled, unless the base has been decontaminated sufficiently to ensure compliance with 6 MCAR § 4.9283 B. As required by 6 MCAR § 4.9284, the waste analysis plan must include analyses needed to comply with 1.-3. Rule 6 MCAR § 4.9283 C. also requires waste analyses, trial tests, or other documentation are required to assure compliance with 6 MCAR § 4.9283 B. As required by 6 MCAR § 4.9294, the owner or operator must place the results of each waste analysis and trial test, and any documented information, in the operating record of the facility.

1. Closure. At closure, all hazardous waste and hazardous waste residues must be removed from the pile. Any component of the containment system containing or contaminated with hazardous waste or hazardous waste residues must be decontaminated or removed. At closure, as throughout the operating period, unless the owner or operator can demonstrate in accordance with 6 MCAR §§ 4.9128-4.9137 that the waste removed from the waste pile is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of 6 MCAR §§ 4.9200-4.9560.

6 MCAR § 4.9316 Thermal treatment.

A. Applicability.

1. The provisions in this rule apply to owners or operators of facilities that thermally treat hazardous waste, except as 2. and 3., 6 MCAR § 4.9280 and 6 MCAR § 4.9129 provide otherwise.

2. For owners or operators of thermal treatment facilities, the director may, in establishing the permit conditions, exempt the applicant from all requirements of this rule except B. and H., if after examination of the waste analysis included with the applicant's permit application the director finds that the waste to be burned:

a. is either listed as a hazardous waste in 6 MCAR § 4.9134 only because it is ignitable or, that the waste has been tested against the characteristics of hazardous waste under 6 MCAR § 4.9132, and that it meets only the ignitability characteristics; and

b. that the waste analysis included with the permit application includes none of the hazardous constituents listed in 6 MCAR § 4.9137.

3. For owners or operators of thermal treatment facilities whose primary purpose is the production of energy, the director may, after review of the request for exemption, exempt the owner or operator from any requirements of this rule except B. and H. The owner or operator shall submit to the director a request for exemption which shall include the following information:

a. waste analysis results for each waste to be treated;

b. a complete description of the thermal treatment unit, including air pollution control equipment;

c. a description of the operating procedures; and

d. an evaluation of the suitability of the thermal treatment process for the wastes to be treated.

4. The director shall approve the request for exemption if the director finds that:

a. the primary purpose of the thermal treatment facility is the production of energy;

b. the thermal treatment process is suitable for the wastes to be treated; and

c. the thermal treatment facility will not endanger human health or the environment, if the exemption is approved.

5. The owner or operator of a thermal treatment facility may conduct trial burns, subject only to the requirements of a trial burn approval as issued under the agency's permitting procedures.

B. Waste analysis.

1. As a portion of a trial burn plan or with his permit application, the owner or operator must have included an analysis of his waste feed sufficient to provide all information required by the agency's permitting procedures.

2. Throughout normal operation the owner or operator must conduct sufficient waste analysis to verify that waste feed to the thermal treatment process is within the physical and chemical composition limits specified in his permit.

C. Principal organic hazardous constituents.

1. Principal organic hazardous constituents in the waste feed must be treated to the extent required by the performance standard of D.

2. One or more principal organic hazardous constituent will be specified in the facility's permit, from among those constituents listed in 6 MCAR § 4.9137, for each waste feed to be treated. This specification will be based on the degree of difficulty of thermal treatment of the organic constituents in the waste and on their concentration or mass in the waste feed, considering the results of waste analyses and trial burns or alternative data submitted with the facility's permit application. Organic constituents which represent the greatest degree of difficulty of thermal treatment will be those most likely to be designated as a principal organic hazardous constituent. Constituents are more likely to be designated as principal organic hazardous constituent if they are present in large quantities or concentrations in the waste.

Trial principal organic hazardous constituents will be designated for performance of trial burns in accordance with the procedure specified for obtaining trial burn approval.

D. Performance standards. A thermal treatment facility thermally treating hazardous waste must be designed, constructed, and maintained so that, when operated in accordance with operating requirements specified under F, it will meet the performance standards of 1., 2., 3., and 4., whichever are applicable.

1. A thermal treatment facility thermally treating hazardous waste must achieve a destruction and removal efficiency of 99.99 percent for each principal organic hazardous constituent designated in its permit for each waste feed. The destruction and removal efficiency (DRE) is determined for each principal organic hazardous constituent from the following equation:

$$\text{DRE} = \frac{(\text{Win} - \text{Wout})}{\text{Win}} \times 100\%$$

Where:

Win = Mass feed rate of one principal organic hazardous constituent in the waste stream feeding the thermal treatment process, and

Wout = Mass emission rate of the same principal organic hazardous constituent present in exhaust emissions prior to release to the atmosphere.

2. A thermal treatment facility thermally treating hazardous waste containing more than 0.5 percent chlorine must remove 99 percent of the hydrogen chloride from the exhaust gas.

3. A thermal treatment facility thermally treating hazardous waste must not emit particulate matter exceeding 180 milligrams per dry standard cubic meter (0.08 grains per dry standard cubic foot) when corrected for 12 percent carbon dioxide, using the procedures presented in 6 MCAR § 4.0005.

4. For purposes of permit enforcement, compliance with the operating requirements specified in the permit will be regarded as compliance with this rule. However, evidence that compliance with these permit conditions is insufficient to ensure compliance with the performance requirements of this rule may be information justifying modification, revocation, or reissuance of a permit.

E. New wastes, trial burns, or permit modifications.

1. The owner or operator of a hazardous waste thermal treatment facility may thermally treat only wastes specified in his permit and only under operating conditions specified for these wastes under F., except for the following cases:

- a. in approved trial burns under the agency's permitting procedures; or
- b. under exemptions created by B.

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2. Other hazardous wastes may be thermally treated only after operating conditions have been specified in a new permit, or a permit modification as applicable. Operating requirements for new wastes may be based on either trial burn results or alternative data included with a permit application.

F. Operating requirements.

1. A thermal treatment facility must be operated in accordance with operating requirements specified in the permit. These will be specified on a case-by-case basis as those demonstrated in the trial burn or in alternative data as specified in E.2. and included with the facility's permit application to be sufficient to comply with a facility's permit application to be sufficient to comply with the performance standards of D.

2. Each set of operating requirements will specify the composition of the waste feed including acceptable variations in the physical or chemical properties of the waste feed which will not effect compliance with the performance requirement of D. which the operating requirements apply. For each waste feed, the permit shall specify acceptable operating limits, including the following conditions:

- a. carbon monoxide level in the stack exhaust gas;
- b. waste feed rate;
- c. treatment process temperature;
- d. air feed rate to the treatment system;
- e. allowable variations in treatment system design or operating procedures; and
- f. other operating requirements that are necessary to ensure that the performance standards of D. are met.

3. During start-up and shut-down of a thermal treatment process, hazardous waste, except ignitable waste exempted in accordance with B., must not be fed into the thermal treatment process unless the treatment process is operating within the conditions of operation specified in the permit.

4. Fugitive emissions from the thermal treatment zone must be controlled by:

- a. keeping the thermal treatment zone totally sealed against fugitive emissions; or
- b. maintaining a thermal treatment zone pressure lower than atmospheric pressure; or
- c. an alternate means of control demonstrated with the permit application to provide fugitive emissions control equivalent to maintenance of thermal treatment zone pressure lower than atmospheric pressure.

5. A thermal treatment facility must be operated with a functioning system to automatically cut off waste feed to the treatment process when operating conditions deviate from limits established under 1.

6. A thermal treatment facility must cease operation when changes in waste feed, treatment process design, or operating conditions exceed limits designated in its permit.

G. Monitoring and inspections.

1. The owner or operator must conduct monitoring while thermally treating hazardous waste. Treatment temperature, waste feed rate, and air feed rate must be monitored on a continuous basis. Carbon monoxide must be monitored on a continuous basis at a point in the treatment facility downstream of the thermal treatment zone and prior to release to the atmosphere. Upon request by the director, sampling and analysis of the waste and exhaust emissions must be conducted to verify that the operating requirements established in the permit achieve the performance standards of D.

2. The thermal treatment process and associated equipment must be completely inspected at least daily for leaks, spills, and fugitive emissions. All emergency waste feed cut-off controls and systems alarms must be checked daily to verify proper operation.

3. This monitoring and inspection data must be recorded and the records must be placed in the operating log required by 6 MCAR § 4.9294.

H. Closure. At closure the owner or operator must remove all hazardous waste and hazardous waste residues including, but not limited to, ash, scrubber waters, and scrubber sludges from the thermal treatment facility site. At closure, as throughout the operating period, unless the owner or operator can demonstrate that any waste removed from the thermal treatment process or equipment is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with the requirements of 6 MCAR §§ 4.9200-4.9560.

I. Open burning; waste explosives. Open burning of hazardous waste is prohibited except for the open burning and detonation of waste explosives. Waste explosives include waste which has the potential to detonate, and bulk military propellants which cannot safely be disposed through other modes of treatment. Detonation is an explosion in which chemical

transformation passes through the material faster than the speed of sound (0.33 kilometers/second at sea level). Owners or operators choosing to open burn or detonate waste explosives must do so in accordance with Exhibit 6 MCAR § 4.9136 I.-1 and in a manner that does not threaten human health or the environment.

Exhibit 6 MCAR § 4.9316 I.-1

Property Line Separation

Pounds of waste explosives or propellants	Minimum distance from open burning or detonation to the property of others
0 to 100	204 meters (670 feet)
101 to 1,000	380 meters (1,250)
1,001 to 10,000	530 meters (1,730)
10,001 to 30,000	690 meters (2,260)

Rules as Proposed (all new material)

Chapter Six: Interim Status Standards

- 6 MCAR § 4.9380 Facilities governed by interim status.
- 6 MCAR § 4.9381 Qualifications for obtaining interim status.
- 6 MCAR § 4.9382 General facility standards.
- 6 MCAR § 4.9383 Personnel training.
- 6 MCAR § 4.9384 General requirements for ignitable, reactive, or incompatible waste.
- 6 MCAR § 4.9385 Waste analysis requirements.
- 6 MCAR § 4.9386 Preparedness and prevention.
- 6 MCAR § 4.9387 Arrangements with local authorities for emergencies.
- 6 MCAR § 4.9388 Contingency plan.
- 6 MCAR § 4.9389 Emergency procedures.
- 6 MCAR § 4.9390 Post-emergency requirements.
- 6 MCAR § 4.9391 Facility shipment requirements.
- 6 MCAR § 4.9392 Manifest system.
- 6 MCAR § 4.9393 Manifest discrepancies.
- 6 MCAR § 4.9394 Operating record.
- 6 MCAR § 4.9395 Retention and disposition of records.
- 6 MCAR § 4.9396 Required reports.
- 6 MCAR § 4.9397 Ground water monitoring.
- 6 MCAR § 4.9398 Ground Water quality assessment program.
- 6 MCAR § 4.9399 Closure.
- 6 MCAR § 4.9400 Closure activities.
- 6 MCAR § 4.9401 Post-closure.
- 6 MCAR § 4.9402 Post-closure care and use of property.
- 6 MCAR § 4.9403 Notice to local land authority.
- 6 MCAR § 4.9404 Notice in deed to property.
- 6 MCAR § 4.9405 Financial requirements.

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- 6 MCAR § 4.9406 Cost estimate for facility closure.
- 6 MCAR § 4.9407 Financial assurance for facility closure.
- 6 MCAR § 4.9408 Cost estimate for post-closure monitoring and maintenance.
- 6 MCAR § 4.9409 Financial assurance for post-closure monitoring and maintenance.
- 6 MCAR § 4.9410 Use of a mechanism for financial assurance of both closure and post-closure care.
- 6 MCAR § 4.9411 Liability requirements.
- 6 MCAR § 4.9412 Incapacity of institutions issuing letters of credit, surety bonds, or insurance policies.
- 6 MCAR § 4.9413 Wording of the instruments.
- 6 MCAR § 4.9414 Use and management of containers.
- 6 MCAR § 4.9415 Tanks.
- 6 MCAR § 4.9416 Surface impoundments.
- 6 MCAR § 4.9417 Waste piles.
- 6 MCAR § 4.9418 Land treatment facilities.
- 6 MCAR § 4.9419 Additional requirements for land treatment facilities growing food chain crops.
- 6 MCAR § 4.9420 Landfills.
- 6 MCAR § 4.9421 Thermal treatment facilities.
- 6 MCAR § 4.9422 Chemical, physical, and biological treatment facilities.

Chapter Six: Interim Status Standards

- 6 MCAR § 4.9480 Facilities governed by interim status.

A. General requirement.

1. The provisions of 6 MCAR §§ 4.9380-4.9422 establish minimum standards for the management of hazardous waste during the period of interim status. These standards provide for the continued operation of an existing facility which fully complies with the requirements for state or federal interim status until final disposition of the owner's or operator's permit application is made. These standards apply to all treatment, storage, or disposal of hazardous waste at these facilities after the effective date of 6 MCAR §§ 4.9100-4.9560, except as specifically provided otherwise.

2. The requirements of 6 MCAR §§ 4.9405-4.9413 become effective 90 days after the effective date of 6 MCAR §§ 4.9380-4.9422.

3. For existing facilities which were not required to obtain federal interim status under the Resource Conservation and Recovery Act, United States Code, title 42, sections 6901-6986, but are required to obtain state interim status, the requirements of 6 MCAR § 4.9397, 6 MCAR § 4.9398, 6 MCAR § 4.9417 D.1. and D.2.a., 6 MCAR § 4.9418 B.2. and B.3., 6 MCAR § 4.9420 B.1. and B.2., G., and H. become effective 12 months after the effective date of 6 MCAR §§ 4.9380-4.9422.

B. Existing hazardous waste facilities. An "existing hazardous waste facility" or "existing facility" means a facility which was in operation on or before the effective date of 6 MCAR §§ 4.9100-4.9560, or for which construction commenced on or before the effective date of 6 MCAR §§ 4.9100-4.9560. A facility has commenced construction if the owner or operator has obtained the federal, state, and local approvals or permits necessary to begin physical construction and either:

1. A continuous on-site, physical construction program has begun; or

2. The owner or operator has entered into contractual obligations, which cannot be cancelled or modified without substantial loss, for physical construction of the facility to be completed within a reasonable time.

C. Exemptions. The requirements of 6 MCAR §§ 4.9380-4.9422 do not apply to:

1. the owner or operator of a publicly owned treatment works which treats, stores, or disposes of hazardous waste. The owner or operator of a publicly owned treatment works is subject to the requirements of 6 MCAR §§ 4.9280-4.9316 to the extent they are included in a permit-by-rule granted to such a person, under the agency permitting procedures;

2. the owner or operator of a facility which treats or stores hazardous waste if the treatment or storage meets the criteria in 6 MCAR § 4.9130, except to the extent that 6 MCAR § 4.9130 provides otherwise and 6 MCAR § 4.9216 A.5. is complied with;

3. a generator accumulating waste on-site in compliance with 6 MCAR § 4.9216, except to the extent the requirements are included in 6 MCAR § 4.9216;

4. a farmer disposing of waste pesticides from his own use in compliance with 6 MCAR § 4.9222;
5. the owner or operator of a totally enclosed treatment facility;
6. the owner or operator of an elementary neutralization unit, pretreatment unit, or wastewater treatment unit, provided that the unit does not receive hazardous waste from generators other than the owner or operator of the unit;
7. the owner or operator of a facility which manages hazardous wastes produced in conjunction with the combustion of fossil fuels provided that the wastes:
 - a. are generated on-site;
 - b. traditionally have been and actually are mixed with and co-disposed or co-treated with fly ash, bottom ash, boiler slag, or flue gas emission control wastes from coal combustion; and
 - c. are necessarily associated with the production of energy; such as boiler cleaning solutions, boiler blowdown, demineralizer regenerant, pyrites, and cooling tower blowdown;
8. a transporter storing manifested shipments of hazardous waste in containers meeting the requirements of 6 MCAR § 4.9214 A. at a transfer facility for a period of ten days or less; and
9. persons with respect to those activities which are carried out to immediately contain or treat a spill of hazardous waste or material which, when spilled, becomes a hazardous waste, except that, with respect to such activities, the appropriate requirements of 6 MCAR § 4.9259, 6 MCAR § 4.9383, and 6 MCAR §§ 4.9386-4.9390 are applicable to owners and operators of treatment, storage and disposal facilities otherwise subject to 6 MCAR §§ 4.9380-4.9422. This exemption applies only to activities taken in immediate response to a spill. After the immediate response activities are completed, the provisions of 6 MCAR §§ 4.9100-4.9560 apply fully to the management of any spill residue or debris which is a hazardous waste under 6 MCAR §§ 4.9128-4.9137.

6 MCAR § 4.9381 Qualifications for obtaining interim status.

A. Qualifications for obtaining state interim status. Any person who owns or operates an existing facility, has filed a Part A of the permit application for the type of facility owned or operated with this agency within 90 days after the effective date of 6 MCAR §§ 4.9380-4.9422 or to Environmental Protection Agency Region V, and has not received federal interim status shall be treated as having state interim status and a permit until such time as final disposition of the permit application is made.

B. Qualification for obtaining federal interim status. Owners or operators of existing facilities having fully complied with the requirements for interim status under the Resource Conservation and Recovery Act of 1976, United States Code, title 42, sections 6901-6986, as amended through June 30, 1982, before the effective date of 6 MCAR §§ 4.9380-4.9422 shall be considered to have federal interim status and shall not be required to obtain state interim status.

6 MCAR § 4.9382 General facility standards.

A. Applicability. The requirements of this rule apply to owners and operators of all hazardous waste facilities except as provided by 6 MCAR § 4.9380 C.

B. Identification number. Every facility owner or operator must apply for an identification number in accordance with agency procedures.

C. Required notices.

1. The owner or operator of a facility that has arranged to receive hazardous waste from a foreign source must notify the director as well as the Environmental Protection Agency Region V Administrator in writing at least four weeks in advance of the date the waste is expected to arrive at the facility. Notice of subsequent shipments of the same waste from the same foreign source is not required.

2. No facility owner or operator shall accept a shipment of hazardous waste which he is not allowed to manage under interim status. The owner or operator must notify the director immediately upon receiving such hazardous wastes.

3. Before transferring ownership or operation of a facility during its operating life, or of a disposal facility during the post-closure care period, the owner or operator must notify the new owner or operator in writing of the requirements of 6 MCAR §§ 4.9380-4.9422. An owner's or operator's failure to notify the new owner or operator of these requirements does not relieve the new owner or operator of his obligation to comply with all applicable requirements.

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D. Security.

1. The owner or operator must prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portion of his facility, unless:

a. physical contact with the waste, structures, or equipment with the active portion of the facility will not injure unknowing or unauthorized persons or livestock which could enter the active portion of a facility; and

b. disturbance of the waste or equipment, by the unknowing or unauthorized entry of persons or livestock onto the active portion of a facility, will not cause a violation of the requirements of 6 MCAR §§ 4.9380-4.9422.

2. Unless exempt under 1., a facility must have:

a. a 24-hour surveillance system which continuously monitors and controls entry onto the active portion of the facility; or

b. an artificial or natural barrier which completely surrounds the active portion of the facility and a means to control entry at all times through the gates or other entrances to the active portion of the facility.

3. Unless exempt under 1., a sign with the legend, "Danger-Unauthorized Personnel Keep Out," must be posted at each entrance to the active portion of a facility and at other locations in sufficient numbers to be seen from any approach to the active portion. The legend must be written in English and in any other language predominant in the area surrounding the facility and must be legible from a distance of at least 25 feet. Existing signs with a legend other than "Danger-Unauthorized Personnel Keep Out" may be used if the legend on the sign indicates that only authorized personnel are allowed to enter the active portion and that entry onto the active portion can be dangerous.

E. General inspection requirements.

1. The owner or operator must inspect the facility for malfunctions and deterioration, operator errors, and discharges which may be causing or may lead to the release of hazardous waste constituents to the environment or a threat to human health. The owner or operator must conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.

2. The owner or operator must develop and follow a written schedule for inspecting monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment that are important to preventing, detecting, or responding to environmental or human health hazards. He must keep this schedule at the facility. The schedule must identify the types of problems which are to be looked for during the inspection.

3. The frequency of inspection may vary for the items on the schedule. However, it must be based on the rate of possible deterioration of the equipment and the probability of an environmental or human health incident if the deterioration or malfunction or any operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, must be inspected daily when in use. The inspection schedule must include the items and frequencies called for in 6 MCAR § 4.9414 E., 6 MCAR § 4.9415 D., 6 MCAR § 4.9416 E., 6 MCAR § 4.9421 D., and 6 MCAR § 4.9422 D.

4. The owner or operator must remedy any deterioration or malfunction of equipment or structures which the inspection reveals on a schedule which ensures that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action must be taken immediately.

5. The owner or operator must record inspections in an inspection log or summary. He must keep these records for at least three years from the date of inspection. These records must include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions.

F. Location in floodplains.

1. A facility located in a 100-year floodplain must be designed, constructed, operated and maintained to prevent washout of any hazardous waste by a 100-year flood.

2. As used in 1.:

a. "100-year floodplain" means any land area which is subject to a one percent or greater chance of flooding in any given year from any source;

b. "washout" means the flow of hazardous waste from the active portion of the facility, the buildings or equipment as a result of flooding; and

c. "100-year flood" means a flood that has a one percent chance of being equalled or exceeded in any given year.

6 MCAR § 4.9383 Personnel training.

A. General. Hazardous waste facility personnel directly involved with the handling of hazardous waste must successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that

ensures the facility's compliance with the requirements of 6 MCAR §§ 4.9100-4.9560. The owner or operator must ensure that this program includes all the elements described in the document required by F.3.

B. Program director. This program must be directed by a person trained in hazardous waste management procedures.

C. Minimum program requirements. The training program must include instruction which teaches facility personnel hazardous waste management procedures relevant to the positions in which they are employed, including contingency plan implementation procedures. The training program must be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems, including, where applicable:

1. procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment;
2. key parameters for automatic waste feed cutoff systems;
3. communications or alarm systems;
4. procedures for response to fires or explosions;
5. procedures for response to ground water contamination incidents; and
6. procedures for shutdown of operations.

D. Effective date. Facility personnel must successfully complete the program required in C. within six months after the effective date of this rule or six months after the date of their employment or assignment to a facility or to a new position at a facility, whichever is later. Employees hired after the effective date of this rule must not work in unsupervised positions until they have completed the training requirements of A.-C.

E. Training review. Facility personnel must take part in an annual review of the initial training required in A.-C.

F. Personnel records. The following documents and records must be maintained at the facility:

1. the job title for each position at the facility related to hazardous waste management and the name of the employee filling each job;
2. a written job description for each position at the facility related to hazardous waste. This description may be consistent in its degree of specificity with descriptions for other similar positions in the same company location or bargaining unit, but must include the requisite skill, education, or other qualifications, and duties of employees assigned to each position;
3. a written description of the type and amount of both introductory and continuing training that will be given to each person filling a position described in 1.; and
4. records that document that the training or job experience required under A.-D. has been given to, and completed by, facility personnel.

G. Record retention. Training records on current personnel must be kept until closure of the facility. Training records on former employees must be kept for at least three years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the same company.

6 MCAR § 4.9384 General requirements for ignitable, reactive, or incompatible waste.

A. Required notices. The owner or operator must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste must be separated and protected from sources of ignition or reaction, including but not limited to open flames, smoking, cutting and welding, hot surfaces, frictional heat, static sparks, electrical sparks, mechanical sparks, spontaneous ignition, and radiant heat. While ignitable or reactive waste is being handled, the owner or operator must confine smoking and open flame to specially designated locations. "No Smoking" signs must be conspicuously placed wherever there is a hazard from ignitable or reactive waste.

B. Required precautions. When specifically required by other rules in 6 MCAR §§ 4.9100-4.9560, the owner or operator of a facility that treats, stores, or disposes ignitable or reactive waste or mixes incompatible waste or incompatible wastes and other materials, must take precautions to prevent reactions which:

1. generate extreme heat, pressure, fire, explosions, or violent reactions unless the process is designed to handle these types of reactions;

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2. produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;

3. produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;

4. damage the structural integrity of the device or facility; or

5. through other like means threaten human health or the environment.

C. Documentation of compliance. When required to comply with A. or B., the owner or operator must document that compliance. This documentation may be based on reference to published scientific or engineering literature, data from trial tests, waste analyses, or the results of the treatment of similar wastes by similar treatment processes and under similar operating conditions.

6 MCAR § 4.9385 Waste analysis requirements.

A. Waste analysis.

1. Before an owner or operator treats, stores, or disposes of any hazardous waste, he must obtain a detailed chemical and physical analysis of a representative sample of the waste. This analysis must contain all the information which must be known in order to treat, store, or dispose of the waste in accordance with the requirements of 6 MCAR §§ 4.9380-4.9422.

2. The analysis may include data developed under 6 MCAR §§ 4.9128-4.9137, and existing published or documented data on the hazardous waste or on hazardous waste generated from similar processes, including data obtained from the generator.

3. The analysis must be repeated as necessary to ensure that it is accurate and up-to-date. The analysis must be repeated:

a. when the owner or operator is notified, or has reason to believe, that the process or operation generating the hazardous waste has changed; and

b. for off-site facilities, when the results of the inspection required in 4. indicate that the hazardous waste received at the facility does not match the waste designated on the accompanying manifest or shipping paper.

4. The owner or operator of an off-site facility must inspect and, if necessary, analyze each hazardous waste shipment received at the facility to determine whether it matches the identity of the waste specified on the accompanying manifest or shipping paper.

B. Waste analysis plan. The owner or operator must develop and follow a written waste analysis plan which describes the procedures which he will carry out to comply with A. He must keep this plan at the facility. The plan must specify:

1. the parameters for which each hazardous waste will be analyzed and the rationale for the selection of these parameters;

2. the test methods which will be used to test for these parameters;

3. the sampling method which will be used to obtain a representative sample of the waste to be analyzed. A representative sample may be obtained using either:

a. one of the sampling methods described in Code of Federal Regulations, title 40, part 261, appendix I (1980); or

b. an equivalent sampling method as approved by the director;

4. the frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up-to-date;

5. for off-site facilities, the waste analyses that hazardous waste generators have agreed to supply;

6. where applicable, the methods which will be used to meet the additional waste analysis requirements for specific waste management methods as specified in 6 MCAR § 4.9415 C., 6 MCAR § 4.9416 D., 6 MCAR § 4.9417 C., 6 MCAR § 4.9418 C., 6 MCAR § 4.9421 B., and 6 MCAR § 4.9422 C.; and

7. for off-site facilities, the waste analysis plan must also specify the procedures which will be used to inspect and, if necessary, analyze each shipment of hazardous waste received at the facility to ensure that it matches the identity of the waste designated on the accompanying manifest or shipping paper. The plan must describe:

a. the procedures which will be used to determine the identity of each shipment of waste managed at the facility; and

b. the sampling method which will be used to obtain a representative sample of the waste to be identified, if the identification method includes sampling.

6 MCAR § 4.9386 Preparedness and prevention.

A. Applicability. The provisions of B.-F. apply to owners and operators of all hazardous waste facilities, except as provided otherwise in 6 MCAR § 4.9380 C.

B. Operation of facility. Facilities must be maintained and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or nonsudden release to air, land, or water of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

C. Required equipment. All facilities must be equipped with the following, unless it can be demonstrated to the director that none of the hazards posed by waste handled at the facility could require the particular equipment specified below in 1.-4.:

1. an internal communications or alarm system capable of providing immediate emergency instruction to facility personnel;
2. a device, such as a telephone or a hand-held two-way radio, which is immediately available at the scene of operations and which is capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams;
3. portable fire extinguishers, spill control equipment, decontamination equipment, and fire control equipment, including special extinguishing devices such as those using foam, inert gas, or dry chemicals; and
4. water at adequate volume and pressure to supply water hose streams, foam producing equipment, automatic sprinklers, or water spray systems.

D. Testing and maintenance of equipment. All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to ensure proper operation in time of emergency.

E. Access to communications or alarm system.

1. Whenever hazardous waste is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless the director has ruled that such a device is not required under C.

2. If at any time only one employee is on the premises while the facility is operating, that employee must have immediate access to a device, such as a telephone or a hand-held, two-way radio, which is immediately available at the scene of operation and which is capable of summoning external emergency assistance unless the director has ruled that such a device is not required under C.

F. Required aisle space. The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency unless it can be demonstrated to the director that aisle space is not needed for any of these purposes.

6 MCAR § 4.9387 Arrangements with local authorities for emergencies.

A. Arrangements required. The owner or operator must attempt to make the following arrangements, as appropriate for the type of waste handled at the facility and the potential need for the services of these organizations:

1. arrangements to familiarize the police, fire departments, and emergency response teams with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes;
2. where more than one police and fire department might respond to an emergency, agreements designating primary emergency authority to a specific police and a specific fire department, and agreements with any others to provide support to the primary emergency authority;
3. agreements with state emergency response teams, emergency response contractors, and equipment suppliers; and
4. arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.

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B. Refusal by authorities. If state or local authorities decline to enter into such arrangements, the owner or operator must document the refusal in the operating record.

6 MCAR § 4.9388 Contingency plan.

A. Applicability. The provisions of B.-F., 6 MCAR § 4.9387, 6 MCAR § 4.9389, and 6 MCAR § 4.9390 apply to owners and operators of all hazardous waste facilities, except as provided otherwise in 6 MCAR § 4.9380 C.

B. General requirements. Each owner or operator must have a contingency plan for his facility. The contingency plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or nonsudden release of hazardous waste or hazardous waste constituents to air, land, or water.

C. Implementation of plan. The provisions of the plan must be carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

D. Content of contingency plan.

1. The contingency plan must describe the actions facility personnel directly involved with the handling of hazardous wastes must take to comply with B. and C., and 6 MCAR § 4.9389.

2. If the owner or operator has already prepared a Spill Prevention, Control, and Countermeasures Plan in accordance with Code of Federal Regulations, title 40, sections 112 and 1510 (1980), or some other emergency or contingency plan, that plan must only be amended to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of 6 MCAR §§ 4.9100-4.9560.

3. The plan must describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and state and local emergency response teams to coordinate emergency services pursuant to 6 MCAR § 4.9387.

4. The plan must list names, addresses, and office and home telephone numbers of all persons qualified to act as emergency coordinator, and this list must be kept up-to-date. If more than one person is listed, one must be named as primary emergency coordinator and others must be listed in the order in which they will assume responsibility as alternates.

5. The plan must include a list of all emergency equipment at the facility such as fire extinguishing systems, spill control equipment, internal and external communications and alarm systems, and decontamination equipment, where this equipment is required. This list must be kept up-to-date. In addition, the plan must include the location and a physical description of each item on the list and a brief outline of its capabilities.

6. The plan must include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe the signal or signals to be used to begin evacuation, evacuation routes, and alternate evacuation routes in cases where the primary routes could be blocked by the release of hazardous waste or fire.

E. Copies of contingency plan. A copy of the contingency plan and all revisions to the plan must be:

1. maintained at the facility; and
2. submitted to all local police departments, fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services.

F. Amendment of contingency plan. The contingency plan must be reviewed, and immediately amended if necessary, whenever:

1. the applicable rules are revised;
2. the plan fails in an emergency;
3. the facility changes in its design, construction, operation, maintenance, or other circumstances in a way that materially increases the potential for fires, explosions, or the release of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;
4. the list of emergency coordinators changes; or
5. the list of emergency equipment changes.

6 MCAR § 4.9389 Emergency procedures.

A. Emergency coordinator. At all times, there must be at least one employee either on the facility premises or on call with the responsibility for coordinating all emergency response measures. This emergency coordinator must be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. This person must also have the authority to commit the resources needed to carry out the contingency plan. Applicable responsibilities for the emergency coordinator vary, depending on factors such as type and variety of waste handled by the facility and type and complexity of the facility.

B. Notification of emergency. Whenever there is an imminent or actual emergency situation, the emergency coordinator or designee when the emergency coordinator is on call, must immediately activate internal facility alarms or communication systems, where applicable, to notify all facility personnel and notify appropriate state or local agencies with the designated response roles with at least the information listed in C. and D.

C. Identification of released material. Whenever there is a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount, and areal extent of any released materials. He may do this by observation or review of facility records or manifests, and, if necessary, by chemical analysis.

D. Assessment of hazards. Concurrently, the emergency coordinator must assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion; the effects of any toxic, irritating, or asphyxiating gases that are generated; and the effects of any hazardous surface water run-off from water or chemical agents used to control fire and heat-induced explosions.

E. Report on released material. If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health or the environment outside the facility, the findings must be reported as provided in 1. and 2.

1. If the assessment indicates that evacuation of local areas may be advisable, the appropriate local authorities must be immediately notified, and the emergency coordinator must be available to help appropriate officials decide whether local areas should be evacuated.

2. The agency's emergency response unit must be immediately notified at the 24-hour telephone number, 612-296-7373, and notification must also be given to either the governmental official designated as the on-scene coordinator for that geographical area in the applicable regional contingency plan under Code of Federal Regulations, title 40, part 1510 (1980) or to the National Response Center using their 24-hour toll free telephone number, 800-424-8802. The report must include:

- a. name and telephone number of reporter;
- b. name and address of facility;
- c. time and type of incident;
- d. name and quantity of material involved, to the extent known;
- e. the extent of injuries, if any; and
- f. the possible hazards to human health or the environment outside the facility.

F. Containment measures. During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing released waste, and removing or isolating containers.

G. Facility monitoring. If the facility stops operations in response to a fire, explosion, or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

6 MCAR § 4.9390 Post-emergency requirements.

A. Cleanup. Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil or water, or any other material that results from a release, fire, or explosion at the facility in a manner approved by the director. Unless the owner or operator can demonstrate that the recovered material is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of 6 MCAR §§ 4.9128-4.9259. The emergency coordinator must ensure that, in the affected area or areas of the facility, no waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed, and all emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

B. Notice before resuming operations. The owner or operator must notify the Regional Administrator, the director and other appropriate state and local authorities that the facility is in compliance with A. before operations are resumed in the affected area or areas of the facility.

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C. Reporting. The owner or operator must note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within 15 days after the incident, he must submit a written report on the incident to the director. The report must include:

1. name, address, and telephone number of the owner or operator;
2. name, address, and telephone number of the facility;
3. date, time, and type of incident;
4. name and quantity of material involved;
5. the extent of injuries, if any;
6. an assessment of actual or potential hazards to human health or the environment, where this is applicable; and
7. estimated quantity and disposition of recovered material that resulted from the incident.

6 MCAR § 4.9391 Facility shipment requirements. Whenever a shipment of hazardous waste is initiated from a facility, the owner or operator of that facility must comply with the requirements of 6 MCAR §§ 4.9200-4.9222. The provisions of 6 MCAR § 4.9216 are applicable to the on-site accumulation of hazardous wastes by generators. The provisions of 6 MCAR § 4.9216 only apply to owners or operators who are shipping hazardous waste which they generated at the facility.

6 MCAR § 4.9392 Manifest system.

A. Applicability. The requirements of this rule apply to owners and operators of both on-site and off-site facilities, except as 6 MCAR § 4.9380 C. provides otherwise. The provisions of B. do not apply to owners and operators of on-site facilities that do not receive any hazardous waste from off-site sources.

B. General manifest requirements. If a facility receives hazardous waste accompanied by a manifest, the owner or operator, or his agent, must:

1. sign and date each copy of the manifest to certify that the hazardous waste covered by the manifest was received;
2. note any discrepancies in the manifest on each copy of the manifest. The owner or operator of a facility whose procedures under 6 MCAR § 4.9385 B.7. include waste analysis need not perform that analysis before signing the manifest and giving it to the transporter. However, 6 MCAR § 4.9393 C. requires reporting any discrepancy discovered during later analysis;
3. immediately give the transporter at least one copy of the signed manifest;
4. within ten days after the delivery, send a copy of the manifest to the generator and the director; and
5. retain at the facility a copy of each manifest for at least three years from date of delivery.

C. Rail and water shipment requirements. If a facility receives from a rail or water bulk shipment transporter hazardous waste which is accompanied by a shipping paper containing all the information required on the manifest, the owner or operator, or his agent must:

1. sign and date each copy of the manifest or shipping paper, if the manifest has not been received, to certify that the hazardous waste covered by the manifest or shipping paper was received;
2. note any discrepancies in the manifest or shipping paper, if the manifest has not been received, on each copy of the manifest or shipping paper. The owner or operator of a facility whose procedures under 6 MCAR § 4.9385 B.7. include waste analysis need not perform that analysis before signing the shipping paper and giving it to the transporter. However, 6 MCAR § 4.9393 C., requires reporting any discrepancy discovered during later analysis;
3. immediately give the rail or water bulk shipment transporter at least one copy of the signed manifest or shipping paper, if the manifest has not been received;
4. within ten days after the delivery, send a copy of the signed and dated manifest to the generator; however, if the manifest has not been received within ten days after delivery, the owner or operator, or his agent must send a copy of the shipping paper signed and dated to the generator. The generator is required under 6 MCAR § 4.9213 to send three copies of the manifest to the facility when hazardous waste is sent by rail or water bulk shipment; and
5. retain at the facility a copy of the manifest or shipping paper if signed in lieu of the manifest at the time of delivery, for at least three years from the date of delivery.

6 MCAR § 4.9393 Manifest discrepancies.

A. Applicability. The requirements of this rule apply to owners and operators of both on-site and off-site facilities, except as 6 MCAR § 4.9380 C. provides otherwise. This rule does not apply to owners and operators of on-site facilities that do not receive any hazardous waste from off-site sources.

B. Definition of a discrepancy. Manifest discrepancies are defined as significant or minor.

1. Significant discrepancies include 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. Significant discrepancies in quantity are weight differences for bulk wastes greater than ten percent and variation in piece count for batch waste, such as a difference of one drum in a truckload. Significant discrepancies in types of waste are obvious differences which can be discovered by inspection or waste analysis, such as waste solvent for waste acid, or toxic constituents not reported on the manifest or shipping paper.

2. Minor discrepancies include incomplete manifests or shipping papers, manifests or shipping papers which are inconsistent, and a container or portable tank containing hazardous waste which is not properly labeled.

C. Handling of discrepancies. Upon discovery of a significant or minor discrepancy, the owner or operator of a treatment, storage or disposal facility must take action as described in 1., 2., or 3., as applicable.

1. Upon discovering a significant discrepancy, the owner or operator must attempt to reconcile the discrepancy with the waste generator and transporter. If the discrepancy is not resolved in ten days, the owner or operator must immediately submit to the director a letter describing the discrepancy, attempts made to reconcile it, and a copy of the manifest or shipping paper. The type of discrepancy must be noted on the manifest.

2. Upon discovering a minor discrepancy, the owner or operator must attempt to reconcile the discrepancy with the waste generator and transporter. The owner or operator must indicate the type of discrepancy and its resolution on the manifest. If the discrepancy cannot be reconciled, the owner or operator must note this on the manifest with a brief explanation.

3. If a shipment of hazardous waste is delivered to a facility not allowed to manage the waste under interim status, the owner or operator must notify the director immediately.

6 MCAR § 4.9394 Operating record.

A. Applicability. This rule applies to owners and operators of both on-site and off-site facilities, except as 6 MCAR § 4.9380 C. provides otherwise.

B. Record requirements. The owner or operator must keep a written operating record at his facility.

C. Record information. The following information must be recorded, as it becomes available, and maintained in the operating record until closure of the facility:

1. the names of the generators of the hazardous waste and their identification numbers;
2. the date of arrival of each shipment along with the transporter's name and identification numbers;
3. a description and the quantity of each hazardous waste received, and the method and date of treatment, storage, or disposal at the facility;
4. the location of each hazardous waste within the facility and the quantity at each location. For disposal facilities, the location and quantity of each hazardous waste must be recorded on a map or diagram of each cell or disposal area. For all facilities, this information must include cross references to specific manifest document numbers, if the waste was accompanied by a manifest;
5. records and results of waste analysis and trial tests performed as specified in 6 MCAR § 4.9385, 6 MCAR § 4.9415 C., 6 MCAR § 4.9416 D., 6 MCAR § 4.9417 C., 6 MCAR § 4.9418 C., 6 MCAR § 4.9421 B., and 6 MCAR § 4.9422 C.
6. summary reports and details of all incidents that require implementing the contingency plan as specified in 6 MCAR § 4.9388 C.
7. records and results of inspections as required by 6 MCAR § 4.9382 E.;
8. monitoring, testing, or analytical data where required by 6 MCAR § 4.9397 A., F., and G., 6 MCAR § 4.9398 A. and G., 6 MCAR § 4.9418 D. and F.4.a., 6 MCAR § 4.9419, and 6 MCAR § 4.9421 D. As required by 6 MCAR § 4.9397 F. and G., and 6 MCAR § 4.9398 G., monitoring data at disposal facilities must be kept throughout the post-closure period; and
9. all closure cost estimates under 6 MCAR § 4.9406 and, for disposal facilities, all post-closure estimates under 6 MCAR § 4.9408.

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6 MCAR § 4.9395 Retention and disposition of records.

A. Applicability. This rule applies to owners and operators of both on-site and off-site facilities, except as 6 MCAR § 4.9380 C. provides otherwise.

B. Retention of records. The retention period for all records required under 6 MCAR §§ 4.9380-4.9422 is three years and is extended automatically during the course of any unresolved enforcement action regarding the facility or as required by the director.

C. Disposition of records. A copy of records of waste disposal locations and quantities under 6 MCAR § 4.9394 C.4. must be submitted to the Environmental Protection Agency Region V Administrator, the director and local land authority upon closure of the facility.

6 MCAR § 4.9396 Required reports.

A. Applicability. The requirements of this rule apply to owners and operators of both on-site and off-site facilities, except as 6 MCAR § 4.9380 C. provides otherwise. The provisions of C. do not apply to owners or operators of on-site facilities that do not receive any hazardous waste from off-site sources.

B. Annual report. The owner or operator must prepare and submit a single copy of an annual report to the director, no later than March 1 for the preceding calendar year. The report form and instructions to be used may be obtained from the director. The annual report must cover facility activities during the previous calendar year and must include the following information:

1. the identification number, name, and address of the facility;
2. the year covered by the report;
3. for off-site facilities, the identification number of each hazardous waste generator for whom the facility treated, disposed, or stored a hazardous waste during the year, and for imported shipments, the report must give the name and address of the foreign generator;
4. a description and the quantity of each hazardous waste the facility treated, disposed, or stored during the year. For off-site facilities, this information must be listed by identification number of each generator;
5. the method of treatment, storage or disposal for each hazardous waste;
6. monitoring data under 6 MCAR § 4.9397 G.1.b. and G.2. where required;
7. the most recent closure cost estimate under 6 MCAR § 4.9406 and for disposal facilities, the most recent post-closure cost estimate under 6 MCAR § 4.9408, and
8. the certification signed by the owner or operator of the facility or his authorized representative.

C. Unmanifested waste report. If a shipment of hazardous waste is delivered to a hazardous waste facility from an off-site source without an accompanying manifest or without an accompanying shipping paper and if the waste is not excluded from the manifest requirement by 6 MCAR § 4.9210, the facility operator shall attempt to reconcile the discrepancy with the waste generator or transporter. If the discrepancy cannot be resolved, the owner or operator shall notify the director prior to acceptance of the waste. Within ten days, a follow-up report shall be mailed to the director. The report must include:

1. the identification number, name, and address of the facility;
2. the date the facility received the waste;
3. the transporter's name, vehicle license, address and identification number, if available;
4. the generator's name, address and identification number, if available;
5. a description and the quantity of each unmanifested hazardous waste the facility received;
6. the method of treatment, storage, or disposal for each hazardous waste;
7. a brief explanation of why the waste was unmanifested, if known. When a facility receives unmanifested hazardous waste, the owner or operator must obtain from each generator a certification that the waste qualifies for exclusion. Otherwise, the owner or operator must file an unmanifested waste report for the hazardous waste shipment; and
8. the certification signed by the owner or operator of the facility or his authorized representative.

D. Additional reports. In addition to submitting the manifest discrepancy report, the annual report and the unmanifested waste reports described in B. and C., the owner or operator must also report to the director and the Environmental Protection Agency Region V Administrator:

1. releases, fires, and explosions as specified in 6 MCAR § 4.9390 C.,

2. ground water contamination and monitoring data as specified in 6 MCAR § 4.9397 F. and G. and 6 MCAR § 4.9398 F.

3. facility closure as specified in 6 MCAR § 4.9399 D.

6 MCAR § 4.9397 Ground water monitoring.

A. General requirements.

1. The owner or operator of a surface impoundment, landfill, or land treatment facility which is used to manage hazardous waste must implement a ground water monitoring program capable of determining the facility's impact on the quality of ground water in the uppermost aquifer underlying the facility, except as B. and 6 MCAR § 4.9380 provide otherwise.

2. Except as B. and D. provide otherwise, the owner or operator must install, operate, and maintain a ground water monitoring system which meets the requirements of C. and D., and must comply with E., F., and G. and 6 MCAR § 4.9398. This ground water monitoring program must be carried out during the active life of the facility, and for disposal facilities, during the post-closure care period as well.

B. Waiving of ground water monitoring requirements. All or part of the ground water monitoring requirements of this rule may be waived if the owner or operator can demonstrate that there is a low potential for migration of hazardous waste or hazardous waste constituents from the facility via the uppermost aquifer to water supply wells including domestic, industrial, or agricultural or to surface water. This demonstration must be in writing, and must be kept at the facility. This demonstration must be certified by a qualified geologist or geotechnical engineer and must establish the following:

1. the potential for migration of hazardous waste or hazardous waste constituents from the facility to the uppermost aquifer, by an evaluation of:

a. a water balance of precipitation, evapotranspiration, run-off, and infiltration; and

b. unsaturated zone characteristics including geologic materials, physical properties, and depth to ground water; and

2. the potential for hazardous waste or hazardous waste constituents which enter the uppermost aquifer to migrate to a water supply well or surface water, by an evaluation of:

a. saturated zone characteristics including geologic materials, physical properties, and rate of ground water flow; and

b. the proximity of the facility to water supply wells or surface water.

C. Ground water monitoring system.

1. A ground water monitoring system must be capable of yielding ground water samples for analysis and must consist of:

a. at least one monitoring well installed hydraulically upgradient from the limit of the waste management area. Their number, construction, location, and depth must be sufficient to yield ground water samples that are representative of background ground water quality in the uppermost aquifer near the facility, and not affected by the facility; and

b. at least three monitoring wells installed hydraulically downgradient at the limits of the waste management area. Their number, locations, and depths must ensure that they immediately detect any statistically significant amounts of hazardous waste or hazardous waste constituents that migrate from the waste management area to the uppermost aquifer.

2. Separate monitoring systems for each waste management component of a facility are not required provided that provisions for sampling upgradient and downgradient water quality will detect any discharge from the waste management area.

a. In the case of a facility consisting of only one surface impoundment, landfill, or land treatment area, the waste management area is described by the waste boundary.

b. In the case of a facility consisting of more than one surface impoundment, landfill, or land treatment area, the waste management area is described by an imaginary boundary line which circumscribes the several waste management components.

3. All monitoring wells must be cased in a manner that maintains the integrity of the monitoring well bore hole. This casing must be screened or perforated, and packed with gravel or sand where necessary, to enable sample collection at depths where appropriate aquifer flows exist. The annular space, meaning the space between the bore hole and the well casing, above the sampling depth must be sealed with a suitable material, such as cement grout or bentonite slurry, to prevent contamination

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of samples and the ground water. All monitoring wells must be constructed in accordance with the Minnesota Water Well Construction Code in 7 MCAR §§ 1.210 to 1.224.

D. Alternate ground water monitoring systems. If an owner or operator assumes or knows that ground water monitoring of indicator parameters in accordance with 1.-4., C., and E. would show statistically significant increases, or decreases in the case of pH, when evaluated under 1., he may install, operate, and maintain an alternate ground water monitoring system other than the one described in C. and E. If the owner or operator decides to use an alternate ground water monitoring system he must:

1. within one year after the effective date of 6 MCAR §§ 4.9380-4.9422, submit to the director a specific plan, certified by a qualified geologist or geotechnical engineer, which satisfies the requirements of 6 MCAR § 4.9398 D.3. for an alternate ground water monitoring system;

2. not later than one year after the effective date of 6 MCAR §§ 4.9380-4.9422, initiate the determinations specified in 6 MCAR § 4.9398 D.4.;

3. prepare and submit a written report in accordance with 5.;

4. continue to make the determination specified in 6 MCAR § 4.9398 D.4. on a quarterly basis until final closure of the facility; and

5. comply with the record keeping and reporting requirements in F.2.

E. Sampling and analysis.

1. The owner or operator must obtain and analyze samples from the installed ground water monitoring system. The owner or operator must develop and follow a ground water sampling and analysis plan. He must keep this plan at the facility. The plan must include procedures and techniques for:

- a. sample collection;

- b. sample preservation and shipment;

- c. analytical procedures; and

- d. chain of custody control.

2. The owner or operator must determine the concentration or value of the following parameters in ground water samples in accordance with 3. and 4.

- a. Parameters characterizing the suitability of the ground water as a drinking water supply, as specified in Code of Federal Regulations, title 40, part 265, appendix III (1980).

- b. Parameters establishing ground water quality include chloride, iron, manganese, phenols, sodium, and sulfate. These parameters are to be used as a basis for comparison in the event a ground water quality assessment is required under 6 MCAR § 4.9398.

- c. Parameters used as indicators of ground water contamination are pH, specific conductance, total organic carbon and total organic halogen.

- d. Waste-specific parameters where not covered in 1. and a.-c. determined by the director as appropriate to the waste managed at the facility.

3. a. For all monitoring wells, the owner or operator must establish initial background concentrations or values of all parameters specified in 2. quarterly for one year.

- b. For each of the indicator parameters specified in 2.c. and determined pursuant to 2.d., at least four replicate measurements must be obtained for each sample and the initial background arithmetic mean and variance must be determined by pooling the replicate measurements for the respective parameter concentrations or values in samples obtained from upgradient wells during the first year.

4. After the first year, all monitoring wells must be sampled and the samples analyzed with the following frequencies:

- a. samples collected to establish ground water quality must be obtained and analyzed for the parameters specified in 2.b. at least annually; and

- b. samples collected to indicate ground water contamination must be obtained and analyzed for the parameters specified in 2.c. and determined pursuant to 2.d. at least quarterly.

5. Elevation of the ground water surface at each monitoring well must be determined each time a sample is obtained.

F. Record keeping.

1. Unless the ground water is monitored to satisfy the requirements of 6 MCAR § 4.9398 D.4., the owner or operator

must keep records of the analyses required in E.3. and E.4., the associated ground water surface elevations required in E.5., and the evaluations required in 6 MCAR § 4.9398 B. throughout the active life of the facility, and, for disposal facilities, throughout the post-closure care period as well.

2. If the ground water is monitored to satisfy the requirements of 6 MCAR § 4.9398 D.4., the owner or operator must keep records of the analyses and evaluations specified in the plan, which satisfies the requirements of 6 MCAR § 4.9398 D.3., throughout the active life of the facility, and for disposal facilities, throughout the post-closure care period as well.

G. Reporting.

1. Unless the ground water is monitored to satisfy the requirements of 6 MCAR § 4.9398 D.4., the owner or operator must report the following ground water monitoring information to the director.

a. During the first year when initial background concentrations are being established for the facility, the owner or operator must report concentrations or values of the parameters listed in E.2.a. for each ground water monitoring well within 15 days after completing each quarterly analysis. The owner or operator must separately identify for each monitoring well any parameters whose concentration or value has been found to exceed the maximum contaminant levels listed in Code of Federal Regulations, title 40, part 265, appendix III (1980).

b. The owner or operator must annually report concentrations or values of the parameters listed in E.2.c. or E.2.d. for each ground water monitoring well, along with the required evaluations for these parameters under 6 MCAR § 4.9398 B. The owner or operator must separately identify any significant differences from initial background found in the upgradient wells, in accordance with 6 MCAR § 4.9398 C. During the active life of the facility this information must be submitted as part of the annual report required under 6 MCAR § 4.9396 B.

c. As a part of the annual report required under 6 MCAR § 4.9396 B. the owner or operator must report results of the evaluation of ground water surface elevations under 6 MCAR § 4.9398 F. and a description of the response to that evaluation, where applicable.

2. If the ground water is monitored to satisfy the requirements of 6 MCAR § 4.9398 D.4., the owner or operator must annually, until final closure of the facility, submit to the director a report containing the results of his ground water quality assessment program which includes, but is not limited to, the calculated or measured rate of migration of hazardous waste or hazardous waste constituents in the ground water during the reporting period. This report must be submitted as part of the annual report required under 6 MCAR § 4.9396 B.

6 MCAR § 4.9398 Ground water quality assessment program.

A. Program outline. The owner or operator must prepare an outline of a ground water quality assessment program. The outline must describe a more comprehensive ground water monitoring program than that described in 6 MCAR § 4.9397 C., D. and E. The program must be capable of determining:

1. whether hazardous waste or hazardous waste constituents have entered the ground water;
2. the rate and extent of migration of hazardous waste or hazardous waste constituents in the ground water; and
3. the concentrations of hazardous waste or hazardous waste constituents in the ground water.

B. Comparison of analysis results. For each indicator parameter specified in 6 MCAR § 4.9397 E.2.c. and determined pursuant to 6 MCAR § 4.9397 E.2.d., the owner or operator must calculate the arithmetic mean and variance, based on at least four replicate measurements on each sample, for each well monitored in accordance with 6 MCAR § 4.9397 E.4., and compare these results with its initial background arithmetic mean. The comparison must consider individually each of the wells in the monitoring system, and must use the Student's t-test at the 0.01 level of significance as described in Code of Federal Regulations, title 40, part 265, appendix IV (1980) to determine statistically significant increases and decreases, in the case of pH, over initial background.

C. Additional sampling.

1. If the comparisons for the upgradient wells made under B. show a significant increase or pH decrease, the owner or operator must submit this information in accordance with 6 MCAR § 4.9397 G.1.b.

2. If the comparisons for downgradient wells made under B. show a significant increase or pH decrease, the owner or

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operator must then immediately obtain additional ground water samples from those downgradient wells where a significant difference was detected, split the samples in two, and obtain analyses of all additional samples to determine whether the significant difference was a result of laboratory error.

D. Notification.

1. If the analyses performed under C.2. confirm the significant increase or pH decrease, the owner or operator must provide written notice to the director, within seven days of the date of such confirmation, that the facility may be affecting ground water quality.

2. Within 15 days after the notification under 1., the owner or operator must develop and submit to the director a specific plan, based on the outline required under A. and certified by a qualified geologist or geotechnical engineer, for a ground water quality assessment program at the facility.

3. The plan to be submitted under 2. or 6 MCAR § 4.9397 D.1. must specify:

- a. the number, location, and depth of wells;
- b. sampling and analytical methods for those hazardous wastes or hazardous waste constituents in the facility;
- c. evaluation procedures, including any use of previously gathered ground water quality information; and
- d. a schedule of implementation.

4. The owner or operator must implement the ground water quality assessment plan which satisfies the requirements of 3. and determine:

- a. the rate and extent of migration of the hazardous waste or hazardous waste constituents in the ground water; and
- b. the concentrations of the hazardous waste or hazardous waste constituents in the ground water.

5. The owner or operator must make his first determination under 4. as soon as technically feasible, and, within 15 days after determination, submit to the director a written report containing an assessment of the ground water quality.

6. If the owner or operator determines, based on the results of the first determination under 4., that no hazardous waste or hazardous waste constituents from the facility have entered the ground water, then he may reinstate the indicator evaluation program described in 6 MCAR § 4.9397 E.2.a. and E.2.b. If the owner or operator reinstates the indicator evaluation program, he must so notify the director in the report submitted under 5.

7. If the owner or operator determines, based on the first determination under 4., that hazardous waste or hazardous waste constituents from the facility have entered the ground water, then he:

a. must continue to make the determinations required under 4., on a quarterly basis until final closure of the facility, if the ground water quality assessment plan was implemented prior to final closure of the facility; or

b. may cease to make the determinations required under 4., if the ground water quality assessment plan was implemented during the post-closure care period.

E. Completion requirement. Notwithstanding any other provision of this rule, any ground water quality assessment to satisfy the requirements of D.4., which is initiated prior to final closure of the facility must be completed and reported in accordance with D.5.

F. Annual evaluation. Unless the ground water is monitored to satisfy the requirements of D.4., the owner or operator must at least annually evaluate the data on ground water surface elevations obtained under 6 MCAR § 4.9397 E.5. to determine whether the requirements under 6 MCAR § 4.9397 C. for locating the monitoring wells continues to be satisfied. If the evaluation shows that 6 MCAR § 4.9397 C. is no longer satisfied, the owner or operator must immediately modify the number, location, or depth of the monitoring wells to bring the ground water monitoring system into compliance with this requirement.

G. Record keeping and reporting. If the ground water is monitored to satisfy the requirements of D.4., the owner or operator must:

1. keep records of the analyses and evaluations specified in the plan, which satisfies the requirements of D.3., throughout the active life of the facility, and for disposal facilities, throughout the post-closure care period as well; and

2. annually, until final closure of the facility, submit to the director a report containing the results of his ground water quality assessment program which includes, but is not limited to, the calculated or measured rate of migration of hazardous waste or hazardous waste constituents in the ground water during the reporting period. This report must be submitted as part of the annual report.

6 MCAR § 4.9399 Closure.

A. Applicability. Except as provided otherwise in 6 MCAR § 4.9380 C., the provisions of B.-E. and 6 MCAR § 4.9400 apply

to the owners and operators of all hazardous waste facilities, and the provisions of 6 MCAR §§ 4.9401-4.9404 apply to the owners and operators of all hazardous waste disposal facilities.

B. Closure performance standard. The owner or operator must close the facility in a manner minimizing the need for further maintenance. Closure procedures must result in controlling, minimizing, or eliminating, to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous waste constituents, leachate, contaminated rainfall, or waste decomposition products to the ground or surface waters or to the atmosphere.

C. Submittal of closure plan.

1. A copy of the written closure plan and all revisions to the plan must be kept at the facility until closure is completed and certified. The plan must identify steps necessary to completely or partially close the facility at any point during its intended operating life and to completely close the facility at the end of its intended operating life. The closure plan must include:

a. a description of how and when the facility will be partially closed, if applicable, and finally closed. The description must identify the maximum extent of the operation which will be unclosed during the life of the facility and how the requirements of B., 6 MCAR § 4.9400, and the applicable closure requirements of 6 MCAR § 4.9414 G., 6 MCAR § 4.9415 E., 6 MCAR § 4.9416 F., 6 MCAR § 4.9417 G., 6 MCAR § 4.9418 F., 6 MCAR § 4.9420 D., 6 MCAR § 4.9421 E., 6 MCAR § 4.9422 E., and 6 MCAR § 4.9481 F. will be met;

b. an estimate of the maximum inventory of wastes in storage and in treatment at any time during the life of the facility;

c. a description of the steps needed to decontaminate facility equipment during closure; and

d. an estimate of the expected year of closure and a schedule for final closure. The schedule must include the total time required for intervening closure activities which will allow tracking of the progress of closure.

2. The owner or operator may amend the closure plan at any time during the active life of the facility. The active life of the facility is that period during which wastes are periodically received. The owner or operator must amend the plan whenever changes in operating plans or facility design affect the closure plan and whenever there is a change in the expected year of closure. The plan must be amended within 60 days of the change.

3. The owner or operator of a hazardous waste facility having interim status must submit a closure plan to the director at least 180 days before the date he expects to begin closure. The owner or operator must submit the closure plan no later than 15 days after:

a. termination of interim status, except when a permit is issued simultaneously with termination of interim status; or

b. issuance of a judicial decree or compliance order to cease receiving wastes or close.

4. The agency shall provide the opportunity for submittal of written comments on a closure plan through a newspaper notice. Written comments will be accepted for 30 days after the date of the notice. The agency shall approve, modify, or disapprove closure plans for facilities having interim status. If the agency does not approve the plan, the owner or operator must submit a modified or new plan for approval within 30 days. The agency shall approve or modify this plan. If the agency modifies the plan, this modified plan becomes the approved closure plan. A copy of the modified plan shall be mailed to the owner or operator.

6 MCAR § 4.9400 Closure activities.

A. Time allowance to begin closure activities. Within 90 days after receiving the final volume of hazardous waste or within 90 days after approval of the closure plan, the owner or operator must treat, remove from the site, or dispose on-site all hazardous waste in accordance with the approved closure plan. The agency may approve a longer period if the owner or operator demonstrates that he has taken and will continue to take all steps to prevent threats to human health and the environment and:

1. the activities required to comply with the approved closure plan will, of necessity, take longer than 90 days to complete; or

2. the facility has the capacity to receive additional waste, there is a reasonable likelihood that a person other than the owner or operator will recommence operation of the site and closure of the facility would be incompatible with continued operation of the site.

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B. Time extension for closure activities. The owner or operator must complete closure activities in accordance with the approved closure plan and within 180 days after receiving the final volume of waste or 180 days after approval of the closure plan if that is later. The agency may approve a longer closure period if the owner or operator demonstrates he has taken and will continue to take all steps to prevent threats to human health and the environment and:

1. the closure activities will, of necessity, take longer than 180 days to complete; or
2. the facility has capacity to receive additional waste, there is a reasonable likelihood that a person other than the owner or operator will recommence operation of the site, and closure of the facility would be incompatible with continued operation of the site.

If operation of the site is recommended, the agency may defer completion of closure activities until the new operation is terminated.

C. Disposal or decontamination of equipment. When closure is completed, all facility equipment and structures must have been properly disposed of or decontaminated by removing all hazardous wastes and residues.

D. Certification of closure. When closure is completed, the owner or operator must submit to the director certification by the owner or operator and by an independent registered professional engineer that the facility has been closed in accordance with the specifications in the approved closure plan.

6 MCAR § 4.9401 Post-closure.

A. Applicability. The provisions of this rule and 6 MCAR §§ 4.9402-4.9404 apply to the owners and operators of all hazardous waste disposal facilities, except as provided otherwise in 6 MCAR § 4.9380 C.

B. Submittal of post-closure plan.

1. The owner or operator of a disposal facility must have a written post-closure plan. A copy of the plan and all revisions to the plan must be kept at the facility until the post-closure care period begins. This plan must identify the activities which will be carried on after closure and the frequency of these activities, and it must include:

- a. a description of the planned ground water monitoring activities and frequencies at which they will be performed;
- b. a description of the planned maintenance activities and frequencies at which they will be performed to ensure the integrity of the cap and final cover or other containment structures, where applicable, and the function of the facility monitoring equipment; and
- c. the name, address, and telephone number of the person or office to contact about the disposal facility during the post-closure period. This person or office must keep an updated post-closure plan during the post-closure period.

2. The owner or operator may amend his post-closure plan at any time during the active life of the disposal facility or during the post-closure period. The owner or operator must amend his plan whenever changes in operating plans or facility design, or events which occur during the active life of the facility or during the post-closure period affect his post-closure plan. He must also amend his plan whenever there is a change in the expected year of closure. The request for modification of the post-closure plan must be made within 60 days after the changes in operating plans or facility design, or the events which affect his post-closure plan occur.

3. The owner or operator of a facility must submit his post-closure plan to the director at least 180 days before the date he expects to begin closure. The date he expects to begin closure must begin immediately after the date on which he expects to receive the final volume of wastes. The owner or operator must submit his plan to the director no later than 15 days after:

- a. termination of interim status, except when a permit is issued to the facility simultaneously with termination of interim status; or
- b. issuance of a judicial decree or compliance order to cease receiving waste or close.

4. The agency shall provide the opportunity for submittal of written comments on a post-closure plan through a newspaper notice. Written comments will be accepted for 30 days after the date of the notice. The agency will approve, modify, or disapprove post-closure plans for facilities having interim status. If the agency does not approve the plan, the owner or operator must submit a modified or new plan for approval within 30 days. The agency will approve or modify this plan. If the agency modifies the plan, this modified plan becomes the approved post-closure plan. A copy of the modified plan will be mailed to the owner or operator.

C. Modification of post-closure period. The post-closure period may be modified during the post-closure care period as described in 1. and 2.

1. The owner or operator or any member of the public may petition the agency to extend or reduce the post-closure care period or alter the requirements based on cause.

a. The petition must include evidence demonstrating that the secure nature of the facility makes the post-closure care requirements unnecessary or supports reduction of the post-closure care period specified in the current post-closure plan. Areas which must be considered include leachate or ground water monitoring results, characteristics of the waste, application of advanced technology; or alternative disposal treatment, or reuse techniques that indicate the facility is secure and that the requested extension in the post-closure care period or alteration of post-closure care requirements is necessary to prevent threats to human health and the environment.

b. These petitions will be considered by the agency only when they present new and relevant information. Whenever the agency is considering a petition, it shall provide the owner or operator and the public, through a newspaper notice, the opportunity to submit written comments within 30 days of the date of the notice. A contested case hearing may also be requested in accordance with Minn. Stat. § 15.0418. After considering the comments, a final determination shall be issued. The criteria listed in a. shall serve as a basis for the final determination. If the agency denies the petition, it will send the petitioner a written response detailing the reason for denial.

2. The agency may decide to modify the post-closure plan if necessary to prevent threats to human health and the environment. Extension or reduction of the post-closure care period or alternation of requirements of the post-closure care period may be proposed based on cause.

a. The agency shall provide the owner or operator and the public, through a newspaper notice, the opportunity to submit written comments within 30 days of the date of the notice and the opportunity for a public hearing as outlined in Minn. Stat. § 15.0418. After considering the comments, a final determination shall be issued.

b. The agency shall base the final determination upon the criteria outlined in 1.a. A modification of the post-closure plan may include, when appropriate, the temporary suspension rather than permanent deletion of one or more post-closure care requirements. At the end of the specified period of suspension, the agency shall determine whether the requirements should be permanently discontinued or reinstated to prevent threats to human health and the environment.

6 MCAR § 4.9402 Post-closure care and use of property.

A. Post-closure care requirements.

1. Post-closure care must continue for 30 years after the date of completing closure and must consist of at least ground water monitoring and reporting and the maintenance of monitoring and waste containment systems, as applicable.

2. The agency may reduce the post-closure care period to less than 30 years if it is found that the reduced period is sufficient to protect human health and the environment. This determination shall be based on leachate or ground water monitoring results, waste characteristics, application of advanced technology, or alternative disposal, treatment, or reuse techniques indicating the facility is secure.

3. Prior to the time that the post-closure care period is due to expire, the agency may extend the post-closure care period if it is found that the extended period is necessary to protect human health and the environment based on the parameters indicated in 2.

4. All post-closure care activities must be in accordance with the provisions of the approved post-closure plan.

B. Continuation of security requirements. The agency may require, at closure, continuation of any of the security requirements during part of or all of the post-closure period after the date of completing closure when wastes may remain exposed after completion of closure or when access by the public or domestic livestock may pose a hazard to human health.

C. Post-closure use of property. Post-closure use of property on or in which hazardous wastes remain after closure shall never be allowed by the owner or operator to disturb the integrity of the final cover, liners, or any other components of any containment system or the function of the facility's monitoring system, unless the owner or operator can demonstrate to the agency either in the post-closure plan or by protection that the disturbance:

1. is necessary to the proposed use of the property, and will not increase the potential hazard to human health or the environment; or

2. is necessary to reduce a threat to human health or the environment.

6 MCAR § 4.9403 Notice to local land authority. Within 90 days after closure is completed, the owner or operator of a disposal facility must submit to the local zoning authority or the authority with jurisdiction over local land use and the director a survey

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plat indicating the location and dimensions of landfill cells or other disposal areas with respect to permanently surveyed bench marks. This plat must be prepared and certified by a professional land surveyor. The plat filed with the local zoning authority or authority with jurisdiction over local land use must contain a prominently displayed note which states the owner's or operator's obligation to restrict disturbance of the site as specified. In addition, the owner or operator must submit to the local zoning authority or the authority with jurisdiction over local land use and to the director a record of the type, location, and quantity of hazardous waste disposed of within each cell or area of the facility. For waste disposed of before the effective date of 6 MCAR §§ 4.9380-4.9422, the owner or operator must identify the type, location, and quantity of the waste to the best of his knowledge and in accordance with any records he has kept. Any changes in the type, location, or quantity of hazardous waste disposed within each cell or area of the facility that occur after the survey plat and record of waste have been filed must be reported to the local zoning authority or the authority with jurisdiction over local land use and to the director.

6 MCAR § 4.9404 Notice in deed to property.

A. Deed notation. The owner of the property on which a disposal facility is located must record, in accordance with state law, a notation on the deed to the facility property, or on another instrument which is normally examined during title search, that will in perpetuity notify any potential purchaser of the property that:

1. the land has been used to manage hazardous waste;
2. the land use is restricted; and
3. the survey plat and record of the type, location, and quantity of hazardous waste disposed of within each cell or area of the facility required in 6 MCAR § 4.9403 have been filed with the local zoning authority or the authority with jurisdiction over local land use and with the director.

B. Changes to the deed. If at any time the owner or operator or any subsequent owner of the land upon which a hazardous waste facility was located removes the waste and waste residues, the liner, if any, and all contaminated underlying and surrounding soil, he may remove the notation on the deed to the facility property or other instrument normally examined during title search, or he may add a notation to the deed or instrument indicating the removal of the waste. Upon removing the waste and waste residue, the liner, if any, and the contaminated soil, the owner or operator, unless he can demonstrate that any waste removed is not a hazardous waste, becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of 6 MCAR §§ 4.9100-4.9560.

6 MCAR § 4.9405 Financial requirements.

A. Applicability.

1. The requirements of 6 MCAR § 4.9406, 6 MCAR § 4.9407, and 6 MCAR §§ 4.9410-4.9413, apply to owners and operators of all hazardous waste facilities, except as provided otherwise in this rule or in 6 MCAR § 4.9380.
2. The requirements of 6 MCAR § 4.9408 and 6 MCAR § 4.9409 apply only to owners and operators of disposal facilities.
3. The state and federal government are exempt from the requirements of 6 MCAR §§ 4.9405-4.9413.

B. Definitions.

1. When used in 6 MCAR §§ 4.9405-4.9413, the following terms have the meanings given them.
 - a. "Compliance procedure" means any proceeding instituted pursuant to state rules which seeks to require compliance or which is in the nature of an enforcement action or an action to cure a violation. A compliance procedure includes a compliance order, or notice of intention to terminate a permit or interim status, or an application in court for appropriate relief. A compliance procedure is considered to be pending from the time an order or notice of intent to terminate is issued or judicial proceedings are begun until the agency notifies the owner or operator in writing that the violation has been corrected or that the procedure has been withdrawn or discontinued.
 - b. "Standby trust fund" means a trust fund which must be established by an owner or operator who obtains a letter of credit or surety bond as specified in 6 MCAR §§ 4.9405-4.9413. The institution issuing the letter of credit or surety bond shall deposit into the standby trust fund any drawings by the agency on the credit or bond.
2. The following terms are used in the liability requirements. The definitions suggest what the agency believes are the common meanings of the terms as they are generally used in the insurance industry. The definitions are not intended to limit the meanings in any way that conflicts with general usage.
 - a. "Claims-made policy" means an insurance policy that provides coverage for an occurrence if a claim is filed during the term of the policy.
 - b. "Legal defense costs" means any expenses that an insurer incurs in defending against claims of third parties brought under the terms and conditions of an insurance policy.

c. "Nonsudden accident" means an unforeseen and unexpected occurrence which takes place over time and involves continuous or repeated exposure.

d. "Occurrence" means an accident including continuous or repeated exposure to conditions, which results in bodily injury or property damage which the owner or operator neither expected nor intended to occur.

e. "Sudden accident" means an unforeseen and unexpected occurrence which is not continuous or repeated in nature.

6 MCAR § 4.9406 Cost estimate for facility closure.

A. Cost estimate requirements. Each facility owner or operator must have a written estimate of the costs of closing the facility in accordance with the requirements in 6 MCAR § 4.9399 B. and C., and 6 MCAR § 4.9400 A.-D., and applicable closure requirements in 6 MCAR § 4.9414 G., 6 MCAR § 4.9415 E., 6 MCAR § 4.9416 F., 6 MCAR § 4.9418 F., 6 MCAR § 4.9420 D., 6 MCAR § 4.9421 E., and 6 MCAR § 4.9422 E. The owner or operator must keep this estimate and all subsequent estimates required in this rule at the facility. The estimate must equal the cost of closure at the point in the facility's operating life when the extent and manner of its operation would make closure the most expensive, as indicated by its closure plan.

B. Cost estimate revision. The owner or operator must prepare a new closure cost estimate whenever a change in the closure plan affects the cost of closure.

C. Yearly update of cost estimate. On each anniversary of the date on which the first estimate was prepared as specified in A., the owner or operator must adjust the latest closure cost estimate using an inflation factor derived from the annual Implicit Price Deflator for Gross National Product as found in the 'Survey of Current Business,' issued by the United States Department of Commerce. The inflation factor must be calculated by dividing the latest published annual Deflator by the Deflator for the previous year. The result is the inflation factor. The adjusted closure cost estimate must equal the latest closure cost estimate times the inflation factor.

6 MCAR § 4.9407 Financial assurance for facility closure. By the effective date of 6 MCAR §§ 4.9405-4.9413, an owner or operator of each facility must establish financial assurance for closure of the facility. He must choose from among the options outlined in A.-F.

A. Closure trust fund.

1. An owner or operator may satisfy the requirements of this rule by establishing a closure trust fund which conforms to the requirements of I.-II. and by sending an originally signed duplicate of the trust agreement to the director by certified mail. The trustee must be a bank or other financial institution which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

2. The wording of the trust agreement must be identical to the wording specified in Exhibit 6 MCAR § 4.9413 A.1.-1 and the trust agreement must be accompanied by a formal certification of acknowledgement as shown in Exhibit 6 MCAR § 4.9413 A.2.-1.

3. Payments to the trust fund must be made annually by the owner or operator over the remaining operating life of the facility as estimated in the closure plan or over the 20 years beginning with the effective date of 6 MCAR §§ 4.9405-4.9413, whichever period is shorter; this period is hereafter referred to as the "pay-in period." The payments to the closure trust fund must be made as described in a. and b.

a. The first payment must be made by the effective date of 6 MCAR §§ 4.9405-4.9413, except as provided in 5. The first payment must be at least equal to the closure cost estimate, except as provided in D., divided by the number of years in the pay-in period.

b. Subsequent payments must be made no later than 30 days after each anniversary date of the first payment. The amount of each subsequent payment must be determined by performing the following calculation: $\text{Next payment} = (\text{ACE} - \text{CV}) / Y$ where ACE is the adjusted closure cost estimated, CV is the current value of the trust fund, and Y is the number of years remaining in the pay-in period.

4. The owner or operator may accelerate payments into the trust fund or he may deposit the full amount of the closure cost estimate at the time the fund is established. However, he must maintain the value of the fund at no less than the value the fund would have if annual payments were made as specified in 3.

5. If the owner or operator establishes a closure trust fund after having initially used one or more alternate mechanisms

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specified in this rule, his first payment must be at least the amount that the fund would have contained if the trust fund were established and annual payments made as specified in 3.

6. After the pay-in period is completed, whenever the adjusted closure cost estimate changes the owner or operator must compare the new estimate with the trustee's most recent annual valuation of the trust fund as described in Section 10 of the trust agreement. If the value of the fund is less than the amount of the new estimate, the owner or operator must within 60 days of the change in the cost estimate deposit a sufficient amount into the fund so that its value after payment at least equals the amount of the new estimate, or obtain other financial assurance as specified in this rule to cover the difference.

7. If the value of the trust fund is greater than the total amount of the adjusted closure cost estimate, the owner or operator may submit a written request to the agency for release of the amount in excess of the adjusted closure cost estimate.

8. If an owner or operator substitutes other financial assurance as specified in this rule for all or part of the trust fund, he may submit a written request to the agency for release of the amount in the trust fund which is greater than the amount required as a result of such substitution.

9. Within 60 days after receiving a request from the owner or operator for release of funds as specified in 7. or 8., the agency shall instruct the trustee to release to the owner or operator such funds as the agency specifies in writing.

10. After beginning final closure, an owner or operator or any other person authorized to perform closure may request reimbursement for closure expenditures by submitting itemized bills to the agency. Within 60 days after receiving bills for closure activities, the agency shall instruct the trustee to make reimbursement in those amounts as the agency specifies in writing, if the agency determines that the closure expenditures are in accordance with the closure plan or otherwise justified.

11. The agency shall agree to termination of the trust when:

- a. the owner or operator substitutes alternate financial assurance for closure as specified in this rule, or
- b. the agency notifies the owner or operator, in accordance with F. that he is no longer required by this rule to maintain financial assurance for closure of the facility.

B. Surety bond guaranteeing payment into a closure trust fund.

1. An owner or operator may satisfy the requirements of this rule by obtaining a surety bond which conforms to the requirements of 1.-11. and by having the bond delivered to the director by certified mail. The surety company issuing the bond must be among those listed as acceptable sureties on federal bonds in Circular 570, issued by the United States Department of the Treasury, as published in the 'Federal Register' on July 1, annually.

2. The wording of the surety bond must be identical to the wording specified in Exhibit 6 MCAR § 4.9413 B.-3.

3. The owner or operator who uses a surety bond to satisfy the requirements of this rule must also establish a standby trust fund by the time the bond is obtained. Under the terms of the surety bond, all payments made thereunder will be deposited directly into the standby trust fund. This trust fund must meet the requirements specified in A. except that:

- a. an originally signed duplicate of the trust agreement must be delivered to the director with the surety bond; and
- b. after a nominal initial payment agreed upon between the trustee and the owner or operator, payments as specified in A. are not required until the standby trust fund is funded pursuant to the requirements of 1.-11.

4. The bond must guarantee that the owner or operator will:

- a. fund the standby trust fund in an amount equal to the penal sum of the bond at least 60 days prior to the expected date of the beginning of final closure of the facility; or
- b. fund the standby trust fund in an amount equal to the penal sum within 15 days after an order to begin closure is issued by the agency or by a court, or within 15 days after issuance of a notice of termination of interim status; or
- c. provide alternate financial assurance as specified in this rule within 30 days after receipt by the agency of a notice of cancellation of the bond from the surety.

5. The surety becomes liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.

6. The penal sum of the bond must be in an amount at least equal to the amount of the adjusted closure cost estimate except as provided in D.

7. Whenever the adjusted closure cost estimate increases to an amount greater than the penal sum of the bond, the owner or operator must, within 60 days after the increase, cause the penal sum of the bond to be increased to an amount at least equal to the new estimate or obtain other financial assurance, as specified in this rule, to cover the increase. Whenever the adjusted closure cost estimate decreases, the penal sum may be reduced to the amount of the new estimate following written

approval by the agency. Notice of an increase or decrease in the penal sum must be sent to the director by certified mail within 60 days after the change.

8. The bond shall remain in force unless the surety sends written notice of cancellation by certified mail to the owner or operator and to the agency. Cancellation cannot occur, however:

a. during the 90 days beginning on the date the agency receives the notice of cancellation as shown on the signed return receipt; or

b. while a compliance procedure is pending, as defined in 6 MCAR § 4.9405 B.

9. The surety bond no longer satisfies the requirements of 1.-11. after the agency receives a notice of cancellation of the surety bond. Upon receiving such notice the agency shall issue a compliance order unless the owner or operator has demonstrated alternate financial assurance as specified in this rule. If the owner or operator does not correct the violation by demonstrating such alternate financial assurance within 30 days after issuance of the compliance order, the agency may direct the surety to place the penal sum of the bond in the standby trust fund.

10. The owner or operator may cancel the bond if the agency has given prior written consent based on receiving evidence of alternate financial assurance as specified in this rule.

11. The agency shall notify the surety when the owner or operator funds the standby trust fund in the amount guaranteed by the surety bond or if he provides alternate financial assurance as specified in this rule.

C. Closure letter of credit.

1. An owner or operator may satisfy the requirements of this rule by obtaining an irrevocable standby letter of credit which conforms to the requirements of 1.-9. and by having it delivered to the director by certified mail. The issuing institution must be a bank or other 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 wording of the letter of credit must be identical to the wording specified in Exhibit 6 MCAR § 4.9413 D.-5.

3. An owner or operator who uses a letter of credit to satisfy the requirements of this rule must also establish a standby trust fund by the time the letter of credit is obtained. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the agency shall be deposited promptly and directly by the issuing institution into the standby trust fund. The standby trust fund must meet the requirements of the trust fund specified in A., except that:

a. an originally signed duplicate of the trust agreement must be delivered to the director with the letter of credit; and

b. after a nominal initial payment agreed upon between the trustee and owner or operator, payments as specified in A. are not required unless the standby trust fund is funded pursuant to the requirements of 1.-9.

4. The letter of credit must be irrevocable and issued for a period of at least one year. The letter of credit must provide that the expiration date will be automatically extended for a period of at least one year. If the issuing institution decides not to extend the letter of credit beyond the then current expiration date it must, at least 90 days before that date, notify both the owner or operator and the agency by certified mail of that decision. The 90-day period begins on the date the agency receives notification as shown on the signed return receipt. Expiration cannot occur, however, while a compliance procedure is pending as defined in 6 MCAR § 4.9405 B.

5. The letter of credit must be issued for at least the amount of the adjusted closure cost estimate, except as provided in D.

6. Whenever the adjusted closure cost estimate increases to an amount greater than the amount of the credit the owner or operator must, within 60 days of the increase, cause the amount of the credit to be increased to an amount at least equal to the new estimate or obtain other financial assurance as specified in this rule to cover the increase. Whenever the adjusted closure cost estimate decreases the letter of credit may be reduced to the amount of the new estimate following written approval by the agency. Notice of an increase or decrease in the amount of the credit must be sent to the director by certified mail within 60 days of the change.

7. Following a determination that the owner or operator when required has failed to perform closure in accordance with the closure plan or other interim status requirements, the agency may draw on the letter of credit.

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8. The letter of credit no longer satisfies the requirements of 1.-9. after the agency receives a notice from the issuing institution that it has decided not to extend the letter of credit beyond the then current expiration date. Upon receiving that notice, the agency shall issue a compliance order unless the owner or operator has demonstrated alternate financial assurance as specified in this rule. If the owner or operator does not correct the violation by demonstrating alternate financial assurance within 30 days of issuance of the compliance order, the agency may draw on the letter of credit.

9. The agency shall return the original letter of credit to the issuing institution for termination when:

- a. The owner or operator substitutes alternate financial assurance for closure care as specified in this rule; or
- b. The agency notifies the owner or operator, in accordance with F., that he is no longer required by this rule to maintain financial assurance for closure of the facility.

D. Use of multiple financial mechanisms. An owner or operator may satisfy the requirements of this rule by establishing more than one financial mechanism. The mechanisms are limited to trust funds, surety bonds, and letters of credit. These mechanisms must be as specified in A., B., and C. except that it is the combination of mechanisms, rather than each single mechanism, which must provide financial assurance for an amount at least equal to the adjusted closure cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or letter of credit, he may use the trust fund as the standby trust fund for the bond or letter of credit. If the multiple mechanisms include only surety bonds and letters of credit, a single standby trust may be established for all these mechanisms. The agency may invoke use of any or all of the mechanisms, in accordance with the requirements of A., B., and C. to provide for closure of the facility.

E. Use of a financial mechanism for multiple facilities. An owner or operator may use a financial assurance mechanism specified in this rule to meet the requirements of this rule for more than one facility of which he is the owner or operator. Evidence of financial assurance submitted to the director must include a list showing for each facility the identification number, name, address, and the amount of funds for closure assured by the mechanism. If the list is changed by addition or subtraction of a facility or by an increase or decrease in the amount of funds assured for closure of one or more facilities, a corrected list must be sent to the director within 60 days of such change. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility.

F. Release of the owner or operator from the requirements of this rule. 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, the agency shall notify the owner or operator in writing that he is no longer required by this rule to maintain financial assurance for closure of the particular facility, unless the agency has reason to believe that closure has not been in accordance with the closure plan.

6 MCAR § 4.9408 Cost estimate for post-closure monitoring and maintenance.

A. Cost estimate requirements. Each facility owner or operator of a disposal facility must have a written estimate of the annual cost of post-closure monitoring and maintenance of the facility in accordance with the applicable post-closure requirements in 6 MCAR §§ 4.9401-4.9404, 6 MCAR § 4.9416 F., 6 MCAR § 4.9418 F., and 6 MCAR § 4.9420 D. The owner or operator must keep this estimate and all subsequent estimates required in this rule at the facility.

B. Cost estimate revisions. The owner or operator must prepare a new annual post-closure cost estimate whenever a change in the post-closure plan affects the cost of post-closure care, as described in 6 MCAR § 4.9401 C.2. The latest post-closure cost estimate is calculated by multiplying the latest annual post-closure cost estimate by 30.

C. Yearly update of cost estimate. On each anniversary of the date on which the first estimate was prepared as specified in A., during the operating life of the facility, the owner or operator must adjust the latest post-closure cost estimate using the inflation factor calculated in accordance with 6 MCAR § 4.9406 C. The adjusted post-closure cost estimate must equal the latest post-closure cost estimate times the inflation factor.

6 MCAR § 4.9409 Financial assurance for post-closure monitoring and maintenance. By the effective date of 6 MCAR §§ 4.9405-4.9413, an owner or operator of each disposal facility must establish financial assurance for 30 years of post-closure care of the facility. He must choose from among the options outlined in A.-F.

A. Post-closure trust fund.

1. An owner or operator may satisfy the requirements of this rule by establishing a post-closure trust fund which conforms to the requirements of 1.-11. and by sending an originally signed duplicate of the trust agreement to the director by certified mail. The trustee must be a bank or other financial institution which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

2. The wording of the trust agreement must be identical to the wording specified in Exhibit 6 MCAR § 4.9413 A.1.-1 and the trust agreement must be accompanied by a formal certification of acknowledgment, as shown in Exhibit 6 MCAR § 4.9413 A.2.-1.

3. Payments to the trust fund must be made annually by the owner or operator over the remaining operating life of the facility as estimated in the closure plan or over the 20 years beginning with the effective date of 6 MCAR §§ 4.9405-4.9413, whichever period is shorter; this period is hereafter referred to as the "pay-in period." The payments to the post-closure trust fund must be made as described in a. and b.

a. The first payment must be made by the effective date of 6 MCAR §§ 4.9405-4.9413, except as provided in 5. The first payment must be at least equal to the post-closure cost estimate, except as provided in D., divided by the number of years in the pay-in period.

b. Subsequent payments must be made no later than 30 days after each anniversary date of the first payment. The amount of each subsequent payment must be determined by performing the following calculation: $\text{Next payment} = (\text{ACE} - \text{CV}) / Y$ where ACE is the adjusted post-closure cost estimate, CV is the current value of the trust fund, and Y is the number of years remaining in the pay-in period.

4. The owner or operator may accelerate payments into the trust fund or he may deposit the full amount of the post-closure cost estimate at the time the fund is established. However, he must maintain the value of the fund at no less than the value the fund would have if annual payments were made as specified in 3.

5. If the owner or operator establishes a post-closure trust fund after having initially used one or more alternate mechanisms specified in this rule, his first payment must be at least the amount that the fund would have contained if the trust fund were established and annual payments made as specified in 3.

6. After the pay-in period is completed, whenever the adjusted post-closure cost estimate changes during the operating life of the facility, the owner or operator must compare the new estimate with the trust fund as described in Section 10 of the trust agreement. If the value of the fund is less than the amount of the new cost estimate, the owner or operator must within 60 days of the change in the cost estimate deposit a sufficient amount into the fund so that its value after payment at least equals the amount of the new estimate, or obtain other financial assurance as specified in this rule to cover the difference.

7. If the value of the trust fund is greater than the total amount of the adjusted post-closure cost estimate, the owner or operator may submit a written request to the agency for release of the amount in excess of the adjusted post-closure cost estimate.

8. If an owner or operator substitutes other financial assurance as specified in this rule for all or part of the trust fund, he may submit a written request to the agency for release of the amount in the trust fund which is greater than the amount required as a result of such substitution.

9. Within 60 days after receiving a request from the owner or operator for release of funds as specified in 7. or 8., the agency shall instruct the trustee to release to the owner or operator such funds as the agency specifies in writing.

10. An owner or operator or any other person authorized to conduct post-closure may request reimbursement for post-closure expenditures by submitting itemized bills to the agency. Within 60 days after receiving bills for post-closure activities, the agency shall instruct the trustee to make reimbursement in those amounts as the agency specifies in writing, if the agency determines that the post-closure expenditures are in accordance with the post-closure plan or otherwise justified.

11. The agency shall agree to termination of the trust when:

- a. the owner or operator substitutes alternate financial assurance for post-closure as specified in this rule; or
- b. the agency notifies the owner or operator, in accordance with F. that he is no longer required by this rule to maintain financial assurance for post-closure of the facility.

B. Surety bond guaranteeing payment into a post-closure trust fund.

1. An owner or operator may satisfy the requirements of this rule by obtaining a surety bond which conforms to the requirements of 1.-11. and by having the bond delivered to the director by certified mail. The surety company issuing the bond must be among those listed as acceptable sureties on federal bonds in Circular 570, issued by the United States Department of the Treasury, as published in the 'Federal Register' on July 1 annually.

2. The wording of the surety bond must be identical to the wording specified in Exhibit 6 MCAR § 4.9413 C.-4.

3. The owner or operator who uses a surety bond to satisfy the requirements of this rule must also establish a standby

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trust fund by the time the bond is obtained. Under the terms of the surety bond, all payments made thereunder must be deposited directly into the standby trust fund. This trust fund must meet the requirements specified in A. except that:

- a. an originally signed duplicate of the trust agreement must be delivered to the director with the surety bond; and
- b. after a nominal initial payment agreed upon between the trustee and the owner or operator, payments as specified in A. are not required until the standby trust fund is funded pursuant to the requirements of 1.-11.

4. The bond must guarantee that the owner or operator will:

- a. fund the standby trust fund in an amount equal to the penal sum of the bond by the expected date of the beginning of final closure of the facility; or

- b. fund the standby trust fund in an amount equal to the penal sum within 15 days after an order to begin closure in accordance with 6 MCAR §§ 4.9399-4.9404 is issued by the agency or by a court, or within 15 days after issuance of a notice of termination of interim status; or

- c. provide alternate financial assurance as specified in this rule within 30 days after the agency receives a notice of cancellation of the bond from the surety.

5. The surety becomes liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.

6. The penal sum of the bond must be in an amount at least equal to the amount of the adjusted post-closure cost estimate except as provided in D.

7. Whenever the adjusted post-closure cost estimate increases to an amount greater than the penal sum of the bond, the owner or operator must, within 60 days after the increase, cause the penal sum of the bond to be increased to an amount at least equal to the new estimate or obtain other financial assurance, as specified in this rule, to cover the increase. Whenever the adjusted post-closure cost estimate decreases, the penal sum may be reduced to the amount of the new estimate following written approval by the agency. Notice of an increase or decrease in the penal sum must be sent to the director by certified mail within 60 days after the change.

8. The bond shall remain in force unless the surety sends written notice of cancellation by certified mail to the owner or operator and to the agency. Cancellation cannot occur, however:

- a. during the 90 days beginning on the date the agency receives the notice of cancellation as shown on the signed return receipt; or

- b. while a compliance procedure is pending, as defined in 6 MCAR § 4.9405 B.

9. The surety bond no longer satisfies the requirements of 1.-11. after the agency receives a notice of cancellation of the surety bond. Upon receiving the notice the agency shall issue a compliance order unless the owner or operator has demonstrated alternate financial assurance as specified in this rule. In the event the owner or operator does not correct the violation by demonstrating such alternate financial assurance within 30 days after issuance of the compliance order, the agency may direct the surety to place the penal sum of the bond in the standby trust fund.

10. The owner or operator may cancel the bond if the agency has given prior written consent based on receiving evidence of alternate financial assurance as specified in this rule.

11. The agency shall notify the surety when the owner or operator funds the standby trust fund in the amount guaranteed by the surety bond or if he provides alternate financial assurance as specified in this rule.

C. Post-closure letter of credit.

1. An owner or operator may satisfy the requirements of this rule by obtaining an irrevocable standby letter of credit which conforms to the requirements of 1.-10. and having it delivered to the director by certified mail. The issuing institution must be a bank or other 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 wording of the letter of credit must be identical to the wording specified in Exhibit 6 MCAR § 4.9413 D.-5.

3. An owner or operator who uses a letter of credit to satisfy the requirements of this rule must also establish a standby trust fund by the time the letter of credit is obtained. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the agency shall be deposited promptly and directly by the issuing institution into the standby trust fund. The standby trust fund must meet the requirements of the trust fund specified in A., except that:

- a. an originally signed duplicate of the trust agreement must be delivered to the director with the letter of credit; and
- b. after a nominal initial payment agreed upon between the trustee and the owner or operator, payments as specified in A. are not required unless the standby trust fund is funded pursuant to the requirements of 1.-10.

4. The letter of credit must be irrevocable and issued for a period of at least one year. The letter of credit must provide that the expiration date will be automatically extended for a period of at least one year. If the issuing institution decides not to extend the letter of credit beyond the then current expiration date it must, at least 90 days before that date, notify both the owner or operator and the agency by certified mail of that decision. The 90-day period begins on the date the agency receives a notification as shown on the signed return receipt. Expiration cannot occur, however, while a compliance procedure is pending, as defined in 6 MCAR § 4.9405 B.

5. The letter of credit must be issued for at least the amount of the adjusted post-closure cost estimate, except as provided in D.

6. Whenever the adjusted post-closure cost estimate increases to an amount greater than the amount of the credit during the operating life of the facility, the owner or operator must, within 60 days of the increase, cause the amount of the credit to be increased to an amount at least equal to the new estimate or obtain other financial assurance as specified in this rule to cover the increase. Whenever the adjusted post-closure cost estimate decreases during the operating life of the facility, the letter of credit may be reduced to the amount of the new estimate following written approval by the agency. Notice of an increase or decrease in the amount of the credit must be sent to the director by certified mail within 60 days of the change.

7. During the period of post-closure care, the agency may approve a decrease in the amount of the letter of credit if the owner or operator demonstrates to the agency that the amount exceeds the remaining cost of post-closure care.

8. Following a determination that the owner or operator, when required, has failed to perform post-closure in accordance with the post-closure plan or other interim status requirements, the agency may draw on the letter of credit.

9. The letter of credit no longer satisfies the requirements of 1.-10. after the agency receives a notice from the issuing institution that it has decided not to extend the letter of credit beyond the then current expiration date. Upon receiving the notice, the agency shall issue a compliance order unless the owner or operator has demonstrated alternate financial assurance as specified in this rule. If the owner or operator does not correct the violation by demonstrating alternate financial assurance within 30 days of issuance of the compliance order, the agency may draw on the letter of credit.

10. The agency shall return the original letter of credit to the issuing institution for termination when:

- a. the owner or operator substitutes alternate financial assurance for post-closure care as specified in this rule; or
- b. the agency notifies the owner or operator in accordance with F. that he is no longer required by this rule to maintain financial assurance for post-closure care of the facility.

D. Use of multiple financial mechanisms. An owner or operator may satisfy the requirements of this rule by establishing more than one financial mechanism. The mechanisms are limited to trust funds, surety bonds, and letters of credit. These mechanisms must be as specified in A., B., and C. except that it is the combination of mechanisms, rather than each single mechanism, which must provide financial assurance for an amount at least equal to the adjusted post-closure cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or letter of credit, he may use the trust fund as the standby trust fund for the bond or letter of credit. If the multiple mechanisms include only surety bonds and letters of credit, a single standby trust may be established for all these mechanisms. The agency may invoke use of any or all of the mechanisms, in accordance with the requirements of A., B., and C. to provide for post-closure care of the facility.

E. Use of financial mechanism for multiple facilities. An owner or operator may use a financial assurance mechanism specified in this rule to meet the requirements of this rule for more than one facility of which he is the owner or operator. Evidence of financial assurance submitted to the director must include a list showing for each facility the identification number, name, address, and the amount of funds for post-closure care assured by the mechanism. If the list is changed by addition or subtraction of a facility or by an increase or decrease in the amount of funds assured for post-closure care of one or more facilities, a corrected list must be sent to the director within 60 days of such change. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility.

F. Release of the owner or operator from the requirements of this rule. When the owner or operator has completed, to the satisfaction of the agency, all post-closure care requirements for 30 years of post-closure care or the post-closure care period specified by the agency after closure, whichever period is shorter, the agency shall, at the request of the owner or operator,

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PROPOSED RULES

notify him in writing that he is no longer required by this rule to maintain financial assurance for post-closure care of that particular facility.

6 MCAR § 4.9410 Use of a mechanism for financial assurance of both closure and post-closure care. An owner or operator may provide financial assurance for both closure and post-closure care of one or more facilities of which he is the owner or operator by either a trust fund that meets the specifications of both 6 MCAR § 4.9407 A. and 6 MCAR § 4.9409 A.; or a letter of credit that meets the specifications of both 6 MCAR § 4.9407 C. and 6 MCAR § 4.9409 C. The amount of funds available under the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for financial assurance of closure and of post-closure care of each facility.

6 MCAR § 4.9411 Liability requirements.

A. General insurance requirements. An owner or operator of a hazardous waste treatment, storage, or disposal facility, or a group of these facilities, must demonstrate financial responsibility for claims arising from the operations of each facility or group of facilities from sudden and accidental occurrences that cause injury to persons or property. An owner or operator must have and maintain liability insurance for sudden occurrences in the amount of at least \$1 million per occurrence with an annual aggregate of at least \$2 million, exclusive of legal defense costs. As evidence of this liability insurance, an owner or operator must deliver an originally signed duplicate of the insurance policy to the director by certified mail. Each policy must be for limits of liability not less than the minimum amounts required by this paragraph.

B. Variance from insurance requirements. If an owner or operator can demonstrate to the satisfaction of the agency that the level of financial responsibility required by A. is not consistent with the degree and duration of risk associated with the treatment, storage, or disposal at each facility or group of facilities, the owner or operator may obtain a variance from the agency. The request for a variance must be submitted by certified mail to the agency. The variance shall take the form of an adjusted level of required liability coverage. The level shall be based on the agency's assessment of the degree and duration of risks associated with the ownership or operation of each facility or group of facilities. The agency may require an owner or operator who requests a variance to provide the technical and engineering information deemed necessary by the agency to determine a level of financial responsibility other than that required by A. The agency shall process a variance request as if it were a permit modification request and subject to the agency's permitting procedures. Notwithstanding any other provision of law or rule, the agency shall hold a public hearing at its discretion or whenever it finds, on the basis of requests for a public hearing, a significant degree of public interest in a tentative decision to grant a variance.

C. Adjustment of insurance requirements. If the agency determines that the level of financial responsibility required by A. is not consistent with the degree and duration of risks associated with treatment, storage, or disposal at any facility or group of facilities, the agency may adjust the level of required financial responsibility required under A. as may be necessary to protect human health and the environment. The adjusted level shall be based on the agency's assessment of the degree and duration of risks associated with the ownership or operation of each facility or group of such facilities. The owner or operator must furnish to the agency within a reasonable time, any information which the agency requests to determine whether cause exists for such adjustments of level. The agency shall process an adjustment of the level of required coverage as if it were a permit modification and subject to the agency's permitting procedures. Notwithstanding any other provision of law or rule, the agency shall hold a public hearing only at its discretion or whenever it finds, on the basis of requests for a public hearing, a significant degree of public interest in a tentative decision to adjust the level of required coverage.

6 MCAR § 4.9412 Incapacity of institutions issuing letters of credit, surety bonds, or insurance policies. An owner or operator who fulfills the requirements of 6 MCAR § 4.9407, 6 MCAR § 4.9409 or 6 MCAR § 4.9411, by obtaining a letter of credit, surety bond, or insurance policy shall be deemed to be without the required financial assurance or liability coverage in the event of bankruptcy, insolvency, or a suspension or revocation of the license or charter of the issuing institution. The owner or operator must establish other financial assurance or liability coverage within 60 days of these events.

6 MCAR § 4.9413 Wording of the instruments.

A. Trust agreement for a trust fund.

1. A trust agreement for a trust fund as specified in 6 MCAR § 4.9407 A. or 6 MCAR § 4.9409 A., must be worded as specified in Exhibit 6 MCAR § 4.9413 A.1.-1 except that instructions in brackets must be replaced with the relevant information and the brackets deleted.

Exhibit 6 MCAR § 4.9413 A.1.-1

Trust Agreement

Trust agreement, the "Agreement," entered into as of [date] by and between [name of the owner or operator], a [State] [corporation, partnership, association, proprietorship], the "Grantor," and [name of corporate trustee], a [State corporation] [national bank], the "Trustee."

Whereas, the Minnesota Pollution Control Agency (Agency), an agency of the State of Minnesota, has established certain rules applicable to the Grantor, requiring that the owner or operator of a hazardous waste facility must provide assurance that funds will be available when needed for closure and/or post-closure care of the facility.

Whereas, the Grantor has elected to establish a trust to provide such financial assurance for the facilities identified herein.

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the Trustee under this agreement, and the Trustee is willing to act as trustee.

Now, therefore, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

a. the term "fiduciary" means any person who exercises any power of control, management, or disposition or renders investment advice for a fee or other compensation, direct or indirect, with respect to any moneys or other property of this trust fund, or has any authority or responsibility to do so, or who has any authority or responsibility in the administration of this trust fund;

b. the term "Grantor" means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor; and

c. the term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.

Section 2. Identification of Facilities and Cost Estimates. This Agreement pertains to [for each facility insert the identification number, name, and address, and the adjusted closure and/or post-closure cost estimates, or portions thereof, for which financial assurance is demonstrated by this Agreement.]

Section 3. Establishment of Fund. The Grantor and the Trustee hereby establish a trust fund, the "Fund," for the benefit of the Agency. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule A attached hereto. Such property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund will be held by the Trustee, in trust, as hereinafter provided. The Trustee undertakes no responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments to discharge any liabilities of the Grantor established by the Agency.

Section 4. Payment for Closure and Post-Closure Care. The Trustee will make such payments from the Fund as the Agency will direct, in writing, to provide for the payment of the costs of closure and/or post-closure care of the facilities covered by this Agreement. The Trustee will reimburse the Grantor or other persons as specified by the Agency from the Fund for closure and post-closure expenditures in such amounts as the Agency will direct, in writing. The Trustee will notify the Agency when 20 percent of the amount allocated for closure of the facility remains in the Fund, and will not make further reimbursements for closure expenditures unless the Agency identifies reimbursements that may be made out of the remaining 20 percent. In addition, the Trustee will refund to the Grantor such amounts as the Agency specifies in writing. Upon refund, such funds will no longer constitute part of the Fund as defined herein.

Section 5. Payments Comprising the Fund. Payments made to the Trustee for the Fund will consist of cash or securities acceptable to the Trustee.

Section 6. Trustee Management. The Trustee will invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principle and income, in accordance with investment guidelines and objectives communicated in writing to the Trustee from time to time by the Grantor, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling and managing the Fund, the Trustee or any other fiduciary will discharge his duties with respect to the trust fund solely in the interest of the participants and beneficiaries and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

a. securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in United States Code, title 15, section 80a-2(a), will not be acquired or held, unless they are securities or other obligations of the Federal or a State government;

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b. the Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or a State government; and

c. the Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment. The Trustee is expressly authorized in its discretion:

a. to transfer from time to time any or all of the assets of the Fund to any common, commingled or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein. To the extent of the equitable share of the Fund in any such commingled trust, such commingled trust will be part of the Fund;

b. to purchase shares in any investment company registered under the Investment Company Act of 1940, United States Code, title 15, sections 80a and 80b, or one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such share in its discretion.

Section 8. Express Powers of Trustee. Without in any way limiting the powers and discretions conferred upon by the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

a. to sell, exchange, convey, transfer or otherwise dispose of any property held by it, by private contract or at public auction. No person dealing with the Trustee will be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

b. to make, execute, acknowledge and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

c. to register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee will at all times show that all securities are part of the Fund;

d. to deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and

e. to compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund will be paid from the Fund. All other expense incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee will be paid from the Fund.

Section 10. Annual Valuation. The Trustee will annually, at the end of the month coincident with or preceding the anniversary date of establishment of the Fund, furnish to the Grantor and to the Agency a statement confirming the value of the Trust. Any securities in the Fund will be valued at market value as of no more than 30 days prior to the date of the statement. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the Agency will constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

Section 11. Advice of Counsel. The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee will be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. Trustee Compensation. The Trustee will be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 13. Successor Trustee. Upon the written agreement of the Grantor, the Trustee, and the Agency, the Trustee may resign or the Grantor may replace the Trustee. In either event, the Grantor will appoint a successor Trustee who will have the same powers and duties as those conferred upon the Trustee hereunder. Upon acceptance of the appointment by the successor trustee, the Trustee will assign, transfer and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply

to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee and the date on which he assumes administration of the trust will be specified in writing and sent to the Grantor, the Agency and the present and successor trustees by certified mail ten days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section will be paid as provided in Section 9.

Section 14. Instructions to the Trustee. All orders, requests and instructions by the Grantor to the Trustee will be in writing, signed by such persons as are designated in the attached Exhibit A, or such other designees as the Grantor may designate by amendment to Exhibit A. The Trustee will be fully protected in acting without inquiry in accordance with the Grantor's orders, requests and instructions. All orders, requests, and instructions by the Agency to the Trustee will be in writing, signed by the Agency, and the Trustee will act and will be fully protected in acting in accordance with such order, requests and instructions. The Trustee will have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or the Agency hereunder has occurred. The Trustee will have no duty to act in the absence of such orders, requests and instructions from the Grantor and/or Agency except as provided for herein.

Section 15. Notice of Nonpayment. The Trustee will notify the Grantor and the Agency by certified mail within ten days following the expiration of the 30-day period after the anniversary of the establishment of the Trust, if no payment is received from the Grantor during that period. After the pay-in period is completed, the Trustee is not required to send a notice of nonpayment.

Section 16. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the Agency, or by the Trustee and the Agency if the Grantor ceases to exist.

Section 17. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 16, this Trust will be irrevocable and will continue until terminated at the written agreement of the Grantor, the Trustee, and the Agency or by the Trustee and the Agency if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, will be delivered to the Grantor.

Section 18. Immunity and Indemnification. The Trustee will not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the Agency issued in accordance with this Agreement. The Trustee will be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 19. Choice of Law. This Agreement will be administered, construed and enforced according to the laws of the State of Minnesota.

Section 20. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement will not affect the interpretation or the legal efficacy of this Agreement.

In witness whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in Exhibit 6 MCAR § 4.9413 A.1.-1.

[Signature of Grantor]

By [Title]

Attest:

[Title]

[Seal]

[Signature of Trustee]

By

Attest:

[Title]

[Seal]

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PROPOSED RULES

2. Exhibit 6 MCAR § 4.9413 A.2.-2 is an example of the certification of acknowledgement, which must accompany the trust agreement for a trust fund as specified in 6 MCAR § 4.9407 A. and 6 MCAR § 4.9409 A.

Exhibit 6 MCAR § 4.9413 A.2.-2 Certification of Acknowledgement

STATE OF MINNESOTA
COUNTY OF _____

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that she/he signed her/his name thereto by like order.

[Signature of Notary Public]

B. Surety bond guaranteeing payment into a closure trust fund. A surety bond guaranteeing payment into a closure trust fund, as specified in 6 MCAR § 4.9407 B., must be worded as described in Exhibit 6 MCAR § 4.9413 B.-3, except that instructions in brackets must be replaced with the relevant information and the brackets deleted.

Exhibit 6 MCAR § 4.9413 B.-3 Financial Guarantee Bond for Closure

Date bond executed: _____

Effective date: _____

Principal: [legal name and business address] _____

Type of organization: [insert "individual," "joint venture," "partnership," or "corporation"] _____

State of Incorporation: _____

Surety(ies): [name(s) and business address(es)] _____

Identification number, name, and address of each facility and, if more than one facility is covered by this bond, the amount of the penal sum for each facility: _____

Total penal sum of bond: \$ _____

Know all men by these presents, that we, the Principal and Surety(ies) hereto are firmly bound to the Minnesota Pollution Control Agency (Agency), in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas, said Principal is required to have a permit or permits, or interim status, in order to own or operate the hazardous waste facility(ies) identified above, and

Whereas, said Principal is required to provide financial assurance for closure of the facility(ies) as a condition of the permit(s) or interim status, and

Whereas said Principal shall establish a standby trust fund as specified by 6 MCAR § 4.9305 or 6 MCAR § 4.9407,

Now, therefore, the conditions of the obligation are such that if the Principal shall faithfully, for the facility(ies) identified above, at least 60 days before the beginning of final closure, fund the standby trust fund in an amount equal to the penal sum,

Or, if the Principal shall fund the standby trust fund in such an amount within 15 days after an order to begin closure in accordance with 6 MCAR §§ 4.9399-4.9404 is issued by the Agency, or by a court, or within 15 days after a notice of termination of the permit(s) or interim status,

Or, if the Principal shall provide alternate financial assurance as specified in 6 MCAR § 4.9305 or 6 MCAR § 4.9407 within 30 days after the date notice of cancellation is received by the Agency, then this obligation will be null and void, otherwise it is to remain in full force and effect.

PROPOSED RULES

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by the Agency that the Principal has failed to perform as guaranteed by this bond, the Surety(ies) shall place funds in the amount of the penal sum into the standby trust fund as directed by the Agency.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending written notice of cancellation to the owner or operator and to the Agency, provided, however, that cancellation cannot occur; (1) during the 90 days beginning on the date of receipt of the notice of cancellation by the Agency as shown on the signed return receipt(s); or (2) while compliance procedure is pending, as defined in 6 MCAR § 4.9303 B. or 6 MCAR § 4.9405 B.

The Principal may terminate this bond by sending written notice to the Surety(ies), provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond by the Agency.

[The following paragraph is an optional rider that may be included but is not required.]

Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it equals the adjusted closure cost estimate(s), provided that the amount of the cost estimate(s) does (do) not increase by more than 20 percent in any one year, and no decrease in the penal sum takes place without the written permission of the Agency.

In witness whereof, the Principal and Surety(ies) have executed this Financial Guarantee Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in Exhibit 6 MCAR § 4.9413 B.-3.

Principal

Signature(s): _____

Name(s) and title(s) [typed]: _____

Corporate seal: _____

Corporate Surety(ies)

Name and address: _____

State of incorporation: _____

Liability limit: \$ _____

Signature(s): _____

Name(s) and title(s) [typed]: _____

Corporate seal: _____

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]

Bond Premium: \$ _____

C. Surety bond guaranteeing payment into a post-closure trust fund. A surety bond guaranteeing payment into a post-closure trust fund, as specified in 6 MCAR § 4.9409 B., must be worded as described in Exhibit 6 MCAR § 4.9413 C.-4, except that instructions in brackets must be replaced by the relevant information and the brackets deleted.

Exhibit 6 MCAR § 4.9413 C.-4 Financial Guarantee Bond for Post-Closure Care

Date bond executed: _____

Effective date: _____

Principal: [legal name and business address] _____

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PROPOSED RULES

Type of organization: [insert "individual," "joint venture," "partnership," or "corporation"] _____

State of incorporation: _____

Surety(ies): [name(s) and business address(es)] _____

Identification number, name, and address of each facility and, if more than one facility is covered by this bond, the amount of the penal sum for each facility: _____

Total penal sum of bond: \$ _____

Know all men by these presents, that we, the Principal and Surety(ies) hereto are firmly bound to the Minnesota Pollution Control Agency (Agency) in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas, said Principal is required to have a permit or permits, or interim status, in order to own or operate the hazardous waste facility(ies) identified above, and

Whereas, said Principal is required to provide financial assurance for post-closure care of the facility(ies) as a condition of the permit(s) or interim status, and

Whereas, said Principal shall establish a standby trust fund as specified by 6 MCAR § 4.9307 or 6 MCAR § 4.9409.

Now, therefore, the conditions of the obligation are such that if the Principal shall faithfully, for the facility(ies) identified above, by the beginning of final closure, fund the standby trust fund in an amount equal to the penal sum,

Or, if the Principal shall fund the standby trust fund in such an amount within 15 days after an order to begin closure in accordance with 6 MCAR §§ 4.9399-4.9404 is issued by the Agency, or by a court, or within 15 days after a notice of termination of the permit(s) or interim status,

Or, if the Principal shall provide alternate financial assurance as specified in 6 MCAR § 4.9307 or 6 MCAR § 4.9409 within 30 days after the date notice of cancellation is received by the Agency, then this obligation will be null and void, otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by the Agency that the Principal has failed to perform as guaranteed by this bond, the Surety(ies) must place funds in the amount of the penal sum into the standby trust fund as directed by the Agency.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending written notice of cancellation to the owner or operator and to the Agency, provided, however, that cancellation cannot occur: (1) during the 90 days beginning on the date of receipt of the notice of cancellation by the Agency, as shown on the signed return receipt(s); or (2) while a compliance procedure is pending, as defined in 6 MCAR § 4.9303 B. or 6 MCAR § 4.9405 B.

The Principal may terminate this bond by sending written notice to the Surety(ies), provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond by the Agency.

[The following paragraph is an optional rider that may be included but is not required.]

Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it equals the adjusted post-closure cost estimate(s), provided that the amount of the cost estimate(s) does (do) not increase by more than 20 percent in any one year, and no decrease in the penal sum takes place without the written permission of the Agency.

In witness whereof, the Principal and Surety(ies) have executed this Financial Guarantee Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in Exhibit 6 MCAR § 4.9413 C.-4.

PROPOSED RULES

Principal

Signature(s): _____

Name(s) and title(s) [typed]: _____

Corporate seal: _____

Corporate Surety(ies)

Name and address: _____

State of incorporation: _____

Liability limit: \$ _____

Signature(s): _____

Name(s) and title(s) [typed]: _____

Corporate seal: _____

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]

Bond premium: \$ _____

D. Letter of Credit. A Letter of Credit as specified in 6 MCAR § 4.9407 C. and 6 MCAR § 4.9409 C. must be worded as described in Exhibit 6 MCAR § 4.9413 D.-5, except that instructions in brackets must be replaced with the relevant information and the brackets deleted.

Exhibit 6 MCAR § 4.9413 D.-5 Irrevocable Standby Letter of Credit

[Agency Board Chairperson]

Dear Sir or Madam: We hereby establish our Irrevocable Standby Letter of Credit No. _____ in favor of the Minnesota Pollution Control Agency (Agency), at the request and for the account of [owner's or operator's name and address] up to the aggregate amount of [in words] U.S. dollars \$ _____, available upon presentation of:

(1) your sight draft, bearing reference to this Letter of Credit No. _____, together with;

(2) your signed statement declaring that the amount of the draft is payable pursuant to the State of Minnesota's Hazardous Waste Rules.

The following amounts are included in the amount of this Letter of Credit: [For each facility, insert the facility identification number, name and address, and the adjusted closure and/or post-closure cost estimates, or portions thereof, for which financial assurance is demonstrated by this Letter of Credit.]

This Letter of Credit is effective as of [date] and will expire on [date at least one year later], but such expiration date will be automatically extended for a period of [at least one year] on [date] and on each successive expiration date, unless, at least 90 days before the current expiration date, we notify you and [owner or operator's name] by certified mail that we decided not to extend the Letter of Credit beyond the current expiration date. In the event you are so notified, any unused portion of the credit will be available upon presentation of your sight draft for 90 days after the date of receipt by you as shown on the signed return receipt or while a compliance procedure is pending as defined in 6 MCAR § 4.9405 B. whichever is later.

Whenever this Letter of Credit is drawn on, under and in compliance with the terms of this credit, we will duly honor such draft upon presentation to us, and we will deposit the amount of the draft promptly and directly into the standby trust fund of [owner's or operator's name] held in trust by [name and address of corporate trustee].

I hereby certify that I am authorized to execute this Letter of Credit on behalf of [issuing institution] and that the wording of this Letter of Credit is identical to the wording specified in Exhibit 6 MCAR § 4.9413 D.-5.

Attest:

[Signature and title of official of issuing institution]

[Date]

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This credit is subject to [insert "the most recent edition of the 'Uniform Customs and Practice for Documentary Credits,' published by the International Chamber of Commerce," or "the Uniform Commercial Code published in Minn. Stat. ch. 336"].

6 MCAR § 4.9414 Use and management of containers.

A. Applicability. The requirements in this rule apply to owners and operators of all hazardous waste facilities that store containers of hazardous waste, except as 6 MCAR § 4.9380 C. provides otherwise. Under 6 MCAR § 4.9130 C. and 6 MCAR § 4.9134 D.3., if a hazardous waste is emptied from a container, the residue remaining in the container is not considered a hazardous waste if the container is empty, as defined in 6 MCAR § 4.9130 C. In the event, management of the container is exempt from the requirements of this rule.

B. Condition of containers.

1. Containers used to store hazardous waste must meet the following requirements:

a. be of sturdy leak-proof construction, adequate wall thickness, adequate weld, hinge, and seam strength and sufficient strength to withstand side and bottom shock, while filled, without impairment of the ability of the container to fully contain the hazardous waste; and

b. have lids, caps, hinges or other closure devices of sufficient strength and construction so that when closed they will withstand dropping, overturning, or other shock without impairment of the container's ability to fully contain the hazardous waste.

2. If a container holding hazardous waste does not meet the requirements of 1. or if it begins to leak, the owner or operator must transfer the hazardous waste from this container to a container that does meet the requirements of 1., or manage the waste in some other way that complies with the requirements of this rule.

C. Compatibility of waste with containers. The owner or operator must use a container made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored and other substances that the container may foreseeably contact, so that the ability of the container to contain the waste is not impaired.

D. Management of containers.

1. A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste.

2. A container holding hazardous waste must not be opened, handled or stored in a manner which may rupture the container or cause it to leak. Reuse of containers is governed by United States Department of Transportation Regulations, including those set forth in Code of Federal Regulations, title 49, section 173.28 (1980).

3. The owner or operator must store containers which if exposed to moisture or direct sunlight may create a hazardous condition or adversely affect the container's ability to contain the hazardous waste, in an area with overhead roofing or other covering that does not obstruct the visibility of the labels.

E. Inspections. The owner or operator must inspect areas where containers are stored, at least weekly, looking for leaks and for deterioration caused by corrosion or other factors.

F. Special requirements for incompatible wastes.

1. Incompatible wastes or incompatible wastes and materials must not be placed in the same container, unless compliance with 6 MCAR § 4.9384 B. is maintained.

2. Hazardous waste must not be placed in an unwashed container that previously held an incompatible waste or material unless compliance with 6 MCAR § 4.9384 B. is maintained.

3. A storage container holding a hazardous waste that is incompatible with any waste or other materials stored nearby in other containers, piles, open tanks, or surface impoundments must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device. The purpose of this requirement is to prevent fires, explosions, gaseous emissions, leaching or other discharge of hazardous waste or hazardous waste constituents which could result from the mixing of incompatible wastes or materials if containers break or leak.

G. Closure. At closure, all hazardous waste and hazardous waste residues must be removed from the storage area. Remaining containers, liners, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues must be decontaminated or removed. At closure and throughout the operating period, unless the owner or operator can demonstrate that the waste removed from the storage area is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of 6 MCAR §§ 4.9200-4.9560.

6 MCAR § 4.9415 Tanks.

A. Applicability. The requirements in this rule apply to owners and operators of facilities that use tanks to treat or store hazardous waste, except as 6 MCAR § 4.9380 C. provides otherwise.

B. General operating requirements.

1. Treatment or storage of hazardous waste in tanks must comply with 6 MCAR § 4.9384 B.
2. Hazardous wastes or treatment reagents must not be placed in a tank if they could cause the tank, its closures, or its inner liner to rupture, leak, corrode or otherwise fail before the end of its intended life.
3. Uncovered tanks must be operated to ensure at least 60 centimeters (2 feet) of freeboard, unless the tank is equipped with a containment structure, a drainage control system, or a diversion structure with a capacity that equals or exceeds the volume of the top 60 centimeters (2 feet) of the tank.
4. When hazardous waste is continuously fed into a tank, the tank must be equipped with a means to stop this inflow. These systems are intended to be used in the event of a leak or overflow from the tank due to a system failure.

C. Waste analysis and trial tests. In addition to the waste analysis required by 6 MCAR § 4.9385, whenever a tank is to be used to chemically treat or store a hazardous waste which is substantially different from waste previously treated or stored in that tank, or chemically treat hazardous waste with a substantially different process than any previously used in that tank, the owner or operator must, before treating or storing the different waste or using the different process:

1. conduct waste analyses and trial treatment or storage tests; or
2. obtain written, documented information on similar storage or treatment of similar waste under similar operating conditions to show that this proposed treatment or storage will meet all applicable requirements of B.1. and B.2. As required by 6 MCAR § 4.9385, the waste analysis plan must include analyses needed to comply with F. and G. As required by 6 MCAR § 4.9395, the owner or operator must place the results from each waste analysis and trial test, or the documented information, in the operating record of the facility.

D. Inspection. The owner or operator of a tank must inspect, where present:

1. discharge control equipment, at least once each operating day, to ensure that it is in good working order;
2. data gathered from monitoring equipment, at least once each operating day, to ensure that the tank is being operated according to its design;
3. the level of waste in the tank, at least once each operating day, to ensure compliance with B.3.;
4. the construction materials of the tank, at least weekly, to detect corrosion or leaking of fixtures or seams; and
5. the construction materials of, and the area immediately surrounding, discharge confinement structures, at least weekly, to detect erosion or obvious signs of leakage. As required by 6 MCAR § 4.9382 E. the owner or operator must remedy any deterioration or malfunction he finds.

E. Closure. At closure, all hazardous waste and hazardous waste residues must be removed from tanks, discharge control equipment, and discharge confinement structures. At closure, as throughout the operating period, unless the owner or operator can demonstrate that any waste removed from this tank is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of 6 MCAR §§ 4.9200-4.9259 and 6 MCAR §§ 4.9380-4.9422.

F. Special requirements for ignitable or reactive waste.

1. Ignitable or reactive waste must not be placed in a tank unless:
 - a. the waste is treated, rendered, or mixed before or immediately after placement in the tank so that the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under 6 MCAR § 4.9132 B. or E., and compliance with 6 MCAR § 4.9384 B. is maintained; or
 - b. the waste is stored or treated in such a way that it is protected from any material or conditions which may cause the waste to ignite or react; or
 - c. the tank is used solely for emergencies.
2. The owner or operator of a facility which treats or stores ignitable or reactive waste in covered tanks must comply with the National Fire Protection Association's buffer zone requirements for tanks, contained in Tables 2-1 through 2-6 of the

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"Flammable and Combustible Code", in the 'National Fire Codes, 1981' issued by the National Fire Protection Association (Quincy, Massachusetts, 1981).

G. Special requirement for incompatible wastes.

1. Incompatible wastes, or incompatible wastes and materials must not be placed in the same tank, unless compliance with 6 MCAR § 4.9384 B. is maintained.

2. Hazardous waste must not be placed in an unwashed tank which previously held an incompatible waste or material, unless compliance with 6 MCAR § 4.9384 B. is maintained.

6 MCAR § 4.9416 Surface impoundments.

A. Applicability. The requirements in this rule apply to owners and operators of facilities that use surface impoundments to treat, store, or dispose hazardous waste, except as 6 MCAR § 4.9380 C. provides otherwise.

B. General operating requirements. A surface impoundment must maintain enough freeboard to prevent any overtopping of the dike by overfilling, wave action or a storm. There must be at least 60 centimeters (2 feet) of freeboard. Any point source discharge from a surface impoundment to waters of the United States is subject to the requirements of the Federal Water Pollution Control Act Amendments of 1972, United States Code, title 33, section 1342, as amended through June 30, 1982. Spills may be subject to the Federal Water Pollution Control Act Amendments of 1972, United States Code, title 33, section 1312, as amended through June 30, 1982.

C. Containment system. All earthen dikes must have a protective cover, such as grass, shale, or rock, to minimize wind and water erosion and to preserve their structural integrity.

D. Waste analysis and trial tests.

1. In addition to the waste analyses required by 6 MCAR § 4.9385, whenever a surface impoundment is to be used to chemically treat a hazardous waste which is substantially different from waste previously treated in that impoundment or to chemically treat hazardous waste with a substantially different process than any previously used in that impoundment, the owner or operator must, before treating the different waste or using the different process, conduct waste analyses and trial treatment tests to show that this treatment will comply with 6 MCAR § 4.9384 B. In the alternative, the owner or operator may obtain written, documented information on similar treatment of similar waste under similar operating conditions to show that this treatment will comply with 6 MCAR § 4.9384 B. As required by 6 MCAR § 4.9385, the waste analysis plan must include analyses needed to comply with G. and H. As required by 6 MCAR § 4.9394, the owner or operator must place the results from each waste analysis and trial test, or the documented information, in the operating record of the facility.

E. Inspections. The owner or operator must inspect:

1. The freeboard level at least once each operating day to ensure compliance with B.; and

2. The surface impoundment, including dikes and vegetation surrounding the dike, at least once a week to detect any leaks, deterioration, or failures in the impoundment. As required by 6 MCAR § 4.9382 E., the owner or operator must remedy any deterioration or malfunction he finds.

F. Closure and post-closure.

1. At closure, the owner or operator may elect to remove from the impoundment any standing liquids, waste and waste residues, the liner, if any, and underlying and surrounding contaminated soil.

2. If the owner or operator removes all the impoundment materials described in 1. or can demonstrate that none of the materials listed in 1. remaining at any stage of removal are hazardous waste, the impoundment is not further subject to the requirements of 6 MCAR §§ 4.9380-4.9422. At closure and throughout the operating period, unless the owner or operator can demonstrate that any waste removed from the surface impoundment is not a hazardous waste, he becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of 6 MCAR §§ 4.9200-4.9259 and 6 MCAR §§ 4.9380-4.9422. The surface impoundment may be subject to 6 MCAR §§ 4.9500-4.9507 even if it is not subject to the requirements of 6 MCAR §§ 4.9380-4.9422.

3. If the owner or operator does not remove all the impoundment materials described in 1., or does not make the demonstration described in 2., he must close the impoundment and provide post-closure care as for a landfill under 6 MCAR §§ 4.9309-4.9404 and 6 MCAR § 4.9420 D. If necessary to support the final cover specified in the approved closure plan, the owner or operator must treat remaining liquids, residues, and soils by removal of liquids, drying, or other means. The closure requirements under 6 MCAR § 4.9420 D., will vary with the amount and nature of the residues remaining, if any, and the degree of contamination of the underlying and surrounding soil. The agency may vary post-closure requirements, according to 6 MCAR § 4.9402 A.3..

G. Special requirements for ignitable or reactive wastes. Ignitable or reactive waste must not be placed in a surface impoundment unless:

1. The waste is treated, rendered, or mixed before or immediately after placement in the impoundment so that the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under 6 MCAR § 4.9132 B. or E., and 6 MCAR § 4.9384 B. is followed; or
2. The surface impoundment is used solely for emergencies.

H. Special requirements for incompatible wastes. Incompatible waste, or incompatible wastes and materials, must not be placed in the same surface impoundment unless 6 MCAR § 4.9384 B. is followed.

6 MCAR § 4.9417 Waste piles.

A. Applicability. The requirements in this rule apply to owners and operators of facilities that treat or store hazardous waste in piles, except as 6 MCAR § 4.9380 provides otherwise. Alternatively, a pile of hazardous waste may be managed as a landfill under 6 MCAR § 4.9420.

B. Protection from wind. The owner or operator of a pile containing hazardous waste which could be subject to dispersal by wind must cover or otherwise manage the pile so that wind dispersal is controlled.

C. Waste analysis. In addition to the waste analyses required by 6 MCAR § 4.9385, the owner or operator must analyze a representative sample of waste from each incoming shipment before adding the waste to any existing pile, unless:

1. The only wastes the facility receives which are amenable to piling are compatible with each other; or
2. The waste received is compatible with the waste in the pile to which it is to be added.

The analyses conducted must be capable of differentiating between the types of hazardous waste the owner or operator places in piles, so that mixing of incompatible waste does not inadvertently occur. The analysis must include a visual comparison of color and texture. As required by 6 MCAR § 4.9385, the waste analysis plan must include analyses needed to comply with E. and F. As required by 6 MCAR § 4.9394, the owner or operator must place the results of this analysis in the operating record of the facility.

D. Containment. If leachate or run-off from a pile is a hazardous waste, the requirements of 1. or 2. must be met.

1. The pile must be placed on an impermeable base that is compatible with the waste under the conditions of treatment or storage, run-on must be diverted away from the pile, and any leachate and run-off from the pile must be collected and managed as a hazardous waste.

2. The pile must be protected from precipitation and run-on by some other means, and no liquids or wastes containing free liquids may be placed in the pile. If collected leachate or run-off is discharged through a point source to waters of the United States, it is subject to the requirements of the Federal Water Pollution Control Act Amendments of 1972, United States Code, title 33, section 1342, as amended.

E. Special requirements for ignitable or reactive waste. Ignitable or reactive waste must not be placed in a pile unless:

1. addition of the waste to an existing pile results in the waste or mixture no longer meeting the definition of ignitable or reactive waste under 6 MCAR § 4.9132 B. or E., and the addition complies with 6 MCAR § 4.9384 B.; and
2. the waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react.

F. Special requirements for incompatible waste.

1. Incompatible wastes, or incompatible wastes and materials must not be placed in the same pile, unless 6 MCAR § 4.9384 B. is followed.

2. A pile of hazardous waste that is incompatible with any waste or other material stored nearby in other containers, piles, open tanks, or surface impoundments must be separated from the other materials, or protected from them by means of a dike, berm, wall, or other device. The purpose of this requirement is to prevent fires, explosions, gaseous emissions, leaching, or other discharge of hazardous waste or hazardous waste constituents which could result from the contact or mixing of incompatible wastes or materials.

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3. Hazardous wastes must not be piled on the same area where incompatible wastes or materials were previously piled, unless that area has been decontaminated sufficiently to ensure compliance with 6 MCAR § 4.9384 B.

G. Closure. At closure, all hazardous waste and hazardous waste residues must be removed from the storage area. Liners, and soil containing or contaminated with hazardous waste or hazardous waste residues must be decontaminated or removed. At closure and throughout the operating period, unless the owner or operator can demonstrate that the waste removed from the storage area is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of 6 MCAR §§ 4.9200-4.9560.

6 MCAR § 4.9418 Land treatment.

A. Applicability. The requirements in this rule apply to owners and operators of hazardous waste land treatment facilities, except as 6 MCAR § 4.9380 C. provides otherwise.

B. General operating requirements.

1. Hazardous waste must not be placed in or on a land treatment facility unless the waste can be made less hazardous or nonhazardous by biological degradation or chemical reactions occurring in or on the soil.

2. Run-on must be diverted away from the active portions of a land treatment facility.

3. Run-off from active portions of a land treatment facility must be collected. If the collected run-off is a hazardous waste under 6 MCAR §§ 4.9128-4.9137, it must be managed as a hazardous waste in accordance with all applicable requirements of 6 MCAR §§ 4.9200-4.9259 and 4.9380-4.9422. If the collected run-off is discharged through a point source to waters of the United States, it is subject to the requirements of the Federal Water Pollution Control Act Amendments of 1972, United States Code, title 33, section 1342, as amended.

C. Waste analysis. In addition to the waste analyses required by 6 MCAR § 4.9385 before placing a hazardous waste in or on a land treatment facility, the owner or operator must:

1. determine the concentrations in the waste of any substances which exceed the maximum concentrations contained in Exhibit 6 MCAR § 4.9132 G.-1 that cause a waste to exhibit the extraction procedure (EP) toxicity characteristic;

2. for any waste listed in 6 MCAR § 4.9134, determine the concentrations of any substances which caused the waste to be listed as a hazardous waste; and

3. if food chain crops are grown, determine the concentrations in the waste of each of the following constituents: arsenic, cadmium, lead, and mercury, unless the owner or operator has written, documented data that show that the constituent is not present.

4. Rules 6 MCAR §§ 4.9128-4.9137 specify the substances for which a waste is listed as a hazardous waste. As required by 6 MCAR § 4.9385, the waste analysis plan must include analyses needed to comply with G. and H. As required by 6 MCAR § 4.9394, the owner or operator must place the results from each waste analysis, or the documented information, in the operating record of the facility.

D. Unsaturated zone (zone of aeration) monitoring.

1. The owner or operator must have in writing, and must implement, an unsaturated zone monitoring plan which is designed to:

a. detect the vertical migration of hazardous waste and hazardous waste constituents under the active portion of the land treatment facility; and

b. provide information on the background concentrations of the hazardous waste and hazardous waste constituents in similar but untreated soils nearby. This background monitoring must be conducted before or in conjunction with the monitoring required to detect the vertical migration.

2. The unsaturated monitoring plan must include soil monitoring using soil cores, and soil-pore water monitoring using devices such as lysimeters.

3. To comply with 1.a., the owner or operator must demonstrate in his unsaturated zone monitoring plan that:

a. the depth at which soil and soil-pore water samples are to be taken is below the depth to which the waste is incorporated into the soil;

b. the number of soil and soil-pore water samples to be taken is based on the variability of the hazardous waste constituents as identified in C.1. and C.2. in the waste and in the soil and the soil types; and

c. the frequency and timing of soil and soil-pore water sampling is based on the frequency, time, and rate of waste application, proximity to ground water, and soil permeability.

4. The owner or operator must keep his unsaturated zone monitoring plan at the facility, and the rationale used in developing this plan.

5. The owner or operator must analyze the soil and soil-pore water samples for the hazardous waste constituents that were found in the waste during the waste analysis under C.1 and C.2. As required by 6 MCAR § 4.9394, all data and information developed by the owner or operator under this rule must be placed in the operating record of the facility.

E. Record keeping. The owner or operator of a land treatment facility must keep records of the application dates, application rates, quantities, and locations of each hazardous waste placed in the facility, in the operating record required in 6 MCAR § 4.9394.

F. Closure and post-closure.

1. In the closure plan under 6 MCAR § 4.9399 and the post-closure plan under 6 MCAR § 4.9401, the owner and operator must address the following objectives and indicate how they will be achieved:

a. control of the migration of hazardous waste and hazardous waste constituents from the treated area into the ground water;

b. control of the release of contaminated run-off from the facility into surface water;

c. control of the release of airborne particulate contaminants caused by wind erosion; and

d. compliance with 6 MCAR § 4.9419 concerning the growth of food chain crops.

2. The owner or operator must consider at least the following factors in addressing the closure and post-closure care objectives of 1.:

a. type and amount of hazardous waste and hazardous waste constituents applied to the land treatment facility;

b. the mobility and the expected rate of migration of the hazardous waste and hazardous waste constituents;

c. site location, topography, and surrounding land use, with respect to the potential effects of pollutant migration including at a minimum the proximity to ground water, surface water, and drinking water sources;

d. climate, including amount, frequency, and pH of precipitation;

e. geological and soil profiles and surface and subsurface hydrology of the site, and soil characteristics, including cation exchange capacity, total organic carbon and pH;

f. unsaturated zone monitoring information obtained under D.; and

g. type, concentration, and depth of migration of hazardous waste constituents in the soil as compared to their background concentrations.

3. The owner or operator must consider at least the following methods in addressing the closure and post-closure care objectives of 1.:

a. removal of contaminated soils;

b. placement of a final cover, considering the functions of the cover including infiltration control, erosion and run-off control and wind erosion control, and characteristics of the cover, including material, final surface contours, thickness, porosity and permeability, slope, length of run of slope, and type of vegetation on the cover;

c. collection and treatment of run-off;

d. diversion structures to prevent surface water run-on from entering the treated area; and

e. monitoring of soil, soil-pore water, and ground water.

4. In addition to the requirements of 6 MCAR § 4.9402, during the post-closure care period, the owner or operator of a land treatment facility must:

a. maintain any unsaturated zone monitoring system, and collect and analyze samples from this system in a manner and frequency specified in the post-closure plan;

b. restrict access to the facility as appropriate for its post-closure use; and

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c. assure that growth of food chain crops complies with 6 MCAR § 4.9419.

G. Special requirements for ignitable or reactive waste. Ignitable or reactive wastes must not be land treated, unless the waste is immediately incorporated into the soil so that the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under 6 MCAR § 4.9132 B. or E. and 6 MCAR § 4.9384 B. is complied with.

H. Special requirements for incompatible wastes. Incompatible wastes, or incompatible wastes and materials, must not be placed in the same land treatment area, unless 6 MCAR § 4.9384 B. is complied with.

6 MCAR § 4.9419 Additional requirements for land treatment facilities growing food chain crops.

A. Notification. An owner or operator of a hazardous waste land treatment facility on which food chain crops are being grown, or have been grown, and will be grown in the future, must notify the director within 60 days after the effective date of this rule. The growth of food chain crops at a facility which has never been used for this purpose constitutes a significant change under the permitting procedures. Owners or operators of such land treatment facilities who propose to grow food chain crops after the effective date of this rule must comply with the applicable permitting procedures.

B. Acceptability of the land treatment facility.

1. Food chain crops must not be grown on the treated area of a hazardous waste land treatment facility unless the owner or operator can demonstrate, based on field testing, that any arsenic, lead, mercury, or other constituents identified under 6 MCAR § 4.9418 C.2. and C.3.:

a. Will not be transferred to the food portion of the crop by plant uptake or direct contact, and will not otherwise be ingested by food chain animals; or

b. Will not occur in greater concentrations in the crops grown on the land treatment facility than in the same crops grown on untreated soils under similar conditions in the same region.

2. The information necessary to make the demonstration required by 1. must be kept at the facility and must:

a. be based on tests for the specific waste and application rates being used at the facility; and

b. include descriptions of crop and soil characteristics, sample selection criteria, sample size determination, analytical methods, and statistical procedures.

C. Cadmium limitations; human food crops. Food chain crops must not be grown on a land treatment facility receiving waste that contains cadmium unless:

1. the pH of the waste and soil mixture is 6.5 or greater at the time of each waste application, except for waste containing cadmium at concentrations of 2 milligrams per kilogram (dry weight) or less;

2. the annual application of cadmium from waste does not exceed 0.5 kilograms per hectare on land used for production of tobacco, leafy vegetables, or root crops grown for human consumption and for other food chain crops, the annual cadmium application rate does not exceed the levels specified in Exhibit 6 MCAR § 4.9419 C.3.-1; and

3. The cumulative application of cadmium from waste does not exceed the levels specified in Exhibit 6 MCAR § 4.9419 C.3.-2.

Exhibit 6 MCAR § 4.9419 C.3.-1 Annual Cadmium Application Rates

Time Period	Annual Cadmium application rate (kilograms per hectare)
Present to June 30, 1984	2.0
July 1, 1984 to Dec. 31, 1986	1.25
Beginning Jan. 1, 1987	0.5

Exhibit 6 MCAR § 4.9419 C.3.-2 Maximum Cadmium Cumulative Application (kilograms per hectare)

Soil cation exchange capacity (meq / 100g)	Background soil pH less than 6.5	Background soil pH greater than 6.5	Background soil pH less than 6.5 and waste/soil mixture pH greater than 6.5
Less than 5	5	5	5
5-15	5	10	10
Greater than 15	5	20	20

D. Cadmium Limitations; animal feed crops. Notwithstanding the provisions of C., food chain crops may be grown on a land treatment facility receiving waste that contains cadmium if:

1. The only food chain crop produced is animal feed;
2. The pH of the waste and soil mixture is 6.5 or greater at the time of waste application or at the time the crop is planted, whichever occurs later, and this pH level is maintained whenever food chain crops are grown;
3. There is a facility operating plan which demonstrates how the animal feed will be distributed to preclude ingestion by humans and the facility operating plan describes the measures to be taken to safeguard against possible health hazards from cadmium entering the food chain which may result from alternative land uses; and
- d. Future property owners are notified by a stipulation in the land record or property deed which states that the property has received waste at high cadmium application rates and that food chain crops should not be grown, due to a possible health hazard. As required by 6 MCAR § 4.9394, if an owner or operator grows food chain crops on his land treatment facility, he must place the information developed in this rule in the operating record of the facility.

6 MCAR § 4.9420 Landfills.

A. Applicability. The requirements in this rule apply to owners and operators of facilities that dispose of hazardous waste in landfills, except as 6 MCAR § 4.9380 provides otherwise. A waste pile used as a disposal facility is a landfill and is governed by this rule.

B. General operating requirements.

1. Run-on must be diverted away from the active portions of a landfill.
2. Run-off from active portions of a landfill must be collected. If the collected run-off is a hazardous waste under 6 MCAR §§ 4.9128-4.9137 it must be managed as a hazardous waste in accordance with all applicable requirements of 6 MCAR §§ 4.9200-4.9259 and 6 MCAR §§ 4.9380-4.9422. If the collected run-off is discharged through a point source to waters of the United States, it is subject to the requirements of the Federal Water Pollution Control Act Amendments of 1972, United States Code, title 33, section 1342, as amended through June 30, 1982.
3. The owner or operator of a landfill containing hazardous waste which is subject to dispersal by wind must cover or otherwise manage the landfill so that wind dispersal of the hazardous waste is controlled. As required by 6 MCAR § 4.9385, the waste analysis plan must include analyses needed to comply with E. and F. As required by 6 MCAR § 4.9394, the owner or operator must place the results of these analyses in the operating record of the facility.

C. Surveying and record keeping. The owner or operator of a landfill must maintain the following items in the operating record required in 6 MCAR § 4.9394:

1. a map detailing the exact location and dimensions, including depth, of each cell with respect to permanently surveyed benchmarks; and
2. the contents of each cell and the approximate location of each hazardous waste type within each cell.

D. Closure and post-closure.

1. The owner or operator must place a final cover over the landfill, and the closure plan under 6 MCAR § 4.9399 must specify the function and design of the cover. In the post-closure plan under 6 MCAR § 4.9401; the owner or operator must include the post-closure care requirements of 4.
2. In the closure and post-closure plans, the owner or operator must address the following objectives and indicate how they will be achieved:
 - a. control of pollutant migration from the facility via ground water, surface water, and air;
 - b. control of surface water infiltration, including prevention of pooling; and
 - c. prevention of erosion.
3. The owner or operator must consider at least the following factors in addressing the closure and post-closure care objectives of 2.:

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- a. type and amount of hazardous waste and hazardous waste constituents in the landfill;
- b. the mobility and the expected rate of migration of the hazardous waste and hazardous waste constituents;
- c. site location, topography, and surrounding land use, with respect to the potential effects of pollutant migration including at a minimum the proximity to ground water, surface water, and drinking water sources;
- d. climate, including amount, frequency, and pH of precipitation;
- e. characteristics of the cover including material, final surface contours, thickness, porosity and permeability, slope, length of run of slope, and type of vegetation on the cover; and
- f. geological and soil profiles and surface and subsurface hydrology of the site.

4. In addition to the requirements of 6 MCAR § 4.9402 during the post-closure care period, the owner or operator of a hazardous waste landfill must:

- a. maintain the function and integrity of the final cover as specified in the approved closure plan;
- b. maintain and monitor the leachate collection, removal, and treatment system to prevent excess accumulation of leachate in the system. If the collected leachate is a hazardous waste under 6 MCAR §§ 4.9128-4.9137, it must be managed as a hazardous waste in accordance with all applicable requirements of 6 MCAR §§ 4.9200-4.9259 and 6 MCAR §§ 4.9380-4.9422. If the collected leachate is discharged through a point source to waters of the United States, it is subject to the requirements of the Federal Water Pollution Control Act Amendments of 1972, United States Code, title 33, section 1342, as amended;
- c. maintain and monitor the gas collection and control system to control the vertical and horizontal escape of gases;
- d. protect and maintain surveyed benchmarks; and
- e. restrict access to the landfill as appropriate for its post-closure use.

E. Special requirements for ignitable or reactive waste.

1. Except as provided in 2., ignitable or reactive waste must not be placed in a landfill unless the waste is treated, rendered, or mixed before or immediately after placement in the landfill so that the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under 6 MCAR § 4.9132 B. or E. and 6 MCAR § 4.9384 B. is complied with.

2. Liquid ignitable wastes must be disposed in nonleaking containers which are carefully handled and placed so as to avoid heat, sparks, rupture or any other condition that might cause ignition of the wastes; must be covered with soil or other noncombustible material to minimize the potential for ignition of the wastes; and must not be disposed in cells that contain or will contain other wastes which may generate heat sufficient to cause temperatures equal to or exceeding the flash point of the wastes.

F. Special requirements for incompatible wastes. Incompatible wastes, or incompatible wastes and materials must not be placed in the same landfill cell unless 6 MCAR § 4.9384 B. is complied with.

G. Special requirements for liquid waste.

1. Bulk or non-containerized liquid waste or waste containing free liquids must not be placed in a landfill, unless:
 - a. the landfill has a liner which is chemically and physically resistant to the added liquid, and a functioning leachate collection and removal system with a capacity sufficient to remove all leachate produced; or
 - b. before disposal, the liquid waste or waste containing free liquids is treated or stabilized, chemically or physically, such as by mixing with an absorbent solid, so that free liquids are no longer present.
2. A container holding liquid waste or waste containing free liquids must not be placed in a landfill, unless:
 - a. the container is designed to hold liquids or free liquids for a use other than storage, such as a battery or capacitor;
 - b. the container is very small, such as an ampule.

H. Special requirements for containers. An empty container must be crushed flat, shredded, or similarly reduced in volume before it is buried beneath the surface of a landfill.

6 MCAR § 4.9421 Thermal treatment facilities.

A. Applicability.

1. The requirements in this rule apply to owners and operators of facilities that thermally treat hazardous waste, except as 2., 6 MCAR § 4.9380, and 6 MCAR § 4.9129 provide otherwise.
2. Owners and operators of thermal treatment facilities that thermally treat only wastes which:

a. meet only the ignitability characteristics under 6 MCAR § 4.9132 B., or

b. are listed in 6 MCAR § 4.9134 for ignitability only (Hazard Code I), are exempt from the requirements of this rule, except E., if the owner or operator can document that the waste feed would not reasonably be expected to contain constituents listed in 6 MCAR § 4.9137. This documentation must be in writing and must be kept at the facility.

B. Waste analysis. In addition to the waste analysis required by 6 MCAR § 4.9385, the owner or operator must sufficiently analyze any waste which he has not previously treated in his thermal process to enable him to establish steady state or other appropriate operating conditions for a noncontinuous process, including waste and auxiliary fuel feed and air flow and to determine the type of pollutants which might be emitted. The analysis must determine:

1. heating value of the waste;
2. halogen content and sulfur content in the waste; and

3. concentrations in the waste of lead and mercury, unless the owner or operator has written, documented data that show that the element is not present. As required by 6 MCAR § 4.9394, the owner or operator must place the results from each waste analysis, or the documented information, in the operating record of the facility.

C. General operating requirements. Before adding hazardous waste, the owner or operator must bring this thermal treatment process to steady state conditions of operation, including steady state operating temperature and air flow, using auxiliary fuel or other means, unless the process is a noncontinuous thermal treatment process which requires a complete thermal cycle to treat a discrete quantity of hazardous waste. For incinerators, this requirement applies during start-up and shut-down.

D. Monitoring and inspections. The owner or operator must conduct the following monitoring and inspections when thermally treating hazardous waste.

1. Existing instruments which relate to temperature, combustion and emission control, if an emission control device is present, must be monitored at least every 15 minutes. Appropriate corrections to maintain steady state or other appropriate thermal treatment conditions must be made immediately either automatically or by the operator. Instruments which relate to temperature, combustion and emission control would normally include those measuring waste feed, auxiliary fuel feed, air flow, treatment process temperature, scrubber flow, scrubber pH, and relevant process flow and level controls.

2. The stack plume must be observed visually at least hourly for normal appearance including color and opacity. The operator must immediately make any indicated operating corrections necessary to return any visible emissions to their normal appearance.

3. The complete thermal treatment process and associated equipment including pumps, valves, conveyors, and pipes must be inspected at least daily for leaks, spills, and fugitive emissions; and all emergency shut-down controls and system alarms must be checked to assure proper operation.

E. Closure. At closure, the owner or operator must remove all hazardous waste and hazardous waste residues, including, but not limited to, ash, scrubber waters, and scrubber sludges, from the thermal treatment process or equipment. At closure, as throughout the operating period, unless the owner or operator can demonstrate, that any waste removed from his thermal treatment process, or equipment is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of 6 MCAR §§ 4.9200-4.9560.

F. Open burning; waste explosives. Open burning of hazardous waste is prohibited except for the open burning and detonation of waste explosives. Waste explosives include waste which has the potential to detonate, and bulk military propellants which cannot safely be disposed through other modes of treatment. Detonation is an explosion in which chemical transformation passes through all material faster than the speed of sound, 0.33 kilometers per second at sea level. Owners or operators choosing to open burn or detonate waste explosives must do so in accordance with the distance limitations of Exhibit 6 MCAR § 4.9421 F.-1 and in a manner that does not threaten human health or the environment.

Exhibit 6 MCAR § 4.9421 F.-1

Property Line Separation

Pounds of waste explosives or propellants	Minimum distance from open burning or detonation to the property of others
0 to 100	204 meters (670 feet)

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101 to 1,000	380 meters (1250 feet)
1,001 to 10,000	530 meters (1730 feet)
10,001 to 30,000	690 meters (2260 feet)

6 MCAR § 4.9422 Chemical, physical, and biological treatment facilities.

A. Applicability. The requirements of this rule apply to owners and operators of facilities which treat hazardous waste by chemical, physical, or biological methods in other than tanks, surface impoundments, and land treatment facilities, except as 6 MCAR § 4.9380 provides otherwise. Chemical, physical, and biological treatment of hazardous waste in tanks, surface impoundments, and land treatment facilities must be conducted in accordance with 6 MCAR § 4.9415, 6 MCAR § 4.9416, and 6 MCAR § 4.9418, respectively.

B. General operating requirements.

1. Chemical, physical, or biological treatment of hazardous waste must comply with 6 MCAR § 4.9384 B.
2. Hazardous wastes or treatment reagents must not be placed in the treatment process or equipment if they could cause the treatment process or equipment to rupture, leak, corrode, or otherwise fail before the end of its intended life.
3. Where hazardous waste is continuously fed into a treatment process or equipment, the process or equipment must be equipped with a means to stop this inflow including such items as a waste feed cut-off system or by-pass system to a standby containment device.

C. Waste analysis and trial tests. Whenever a substantially different hazardous waste is to be treated in a treatment process or equipment at the facility or a substantially different process is to be used to chemically treat hazardous waste at the facility, the owner or operator must comply with the requirements of 1. or 2. before treating the different waste or using the different process or equipment:

1. conduct waste analyses and trial treatment tests.
2. obtain written, documented information on similar treatment of similar waste under similar operating conditions to show that this proposed treatment will meet all applicable requirements of B.1. and B.2.

As required by 6 MCAR § 4.9385, the waste analysis plan must include analyses needed to comply with F. and G. As required by 6 MCAR § 4.9394, the owner or operator must place the results from each waste analysis and trial test, or the documented information, in the operating record of the facility.

D. Inspections. The owner or operator of a treatment facility must inspect, where present:

1. discharge control and safety equipment at least once each operating day, to ensure that it is in good working order;
2. data gathered from monitoring equipment at least once each operating day, to ensure that the treatment process or equipment is being operated according to its design;
3. the construction materials of the treatment process or equipment, at least weekly, to detect corrosion or leaking of fixtures or seams; and
4. the construction materials of, and the area immediately surrounding, discharge confinement structures at least weekly, to detect erosion or obvious signs of leakage. As required by 6 MCAR § 4.9382 E., the owner or operator must remedy any deterioration or malfunction he finds.

E. Closure. At closure, all hazardous waste and hazardous waste residues must be removed from treatment processes or equipment, discharge control equipment, and discharge confinement structures. At closure, as throughout the operating period, unless the owner or operator can demonstrate that any waste removed from his treatment process or equipment is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of 6 MCAR §§ 4.9200-4.9560.

F. Special requirements for ignitable or reactive waste. Ignitable or reactive waste must not be placed in a treatment process or equipment unless the requirements of 1. or 2. are met.

1. The waste is treated, rendered, or mixed before or immediately after placement in the treatment process or equipment so that the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under 6 MCAR § 4.9132 B. or E., and 6 MCAR § 4.9384 B. is complied with.

2. The waste is treated in such a way that it is protected from any material or conditions which may cause the waste to ignite or react.

G. Special requirements for incompatible wastes.

1. Incompatible wastes, or incompatible wastes and materials must not be placed in the same treatment process or equipment unless 6 MCAR § 4.9384 B. is complied with.

2. Hazardous waste must not be placed in unwashed treatment equipment which previously held an incompatible waste or material unless 6 MCAR § 4.9384 B. is complied with.

Rules as Proposed (all new material)

Chapter Seven: Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities

6 MCAR § 4.9480 Facilities governed by facility standards.

6 MCAR § 4.9481 General facility standards.

Chapter Seven: Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities

6 MCAR § 4.9480 Facilities governed by facility standards.

A. General requirements. The requirements of 6 MCAR §§ 4.9480-4.9481 apply in lieu of the requirements of 6 MCAR §§ 4.9280-4.9422 to the owner or operator of the following types of units or facilities:

1. An elementary neutralization unit, if the unit does not receive hazardous waste from generators other than the owner or operator of the unit. For units which are transport vehicles, vessels, or containers used to transport the waste after neutralization, this neutralization must occur in these units while they remain stationary and before transport of the neutralized waste begins;

2. A pretreatment unit, if the unit does not receive hazardous waste from generators other than the owner or operator of the unit;

3. A wastewater treatment unit, if the unit does not receive hazardous waste from generators other than the owner or operator of the unit; and

4. A facility which manages wastes produced in conjunction with the combustion of fossil fuels if the wastes:

a. are generated on-site; and

b. traditionally have been and actually are mixed with and co-disposed or co-treated with fly ash, bottom ash, boiler slag, or flue gas emission control wastes from coal combustion; and

c. are necessarily associated with the production of energy, such as boiler cleaning solutions, boiler blowdown, demineralizer regenerant, pyrites, and cooling tower blowdown.

B. Exemptions. The requirements of 6 MCAR §§ 4.9480-4.9481 do not apply to the owner or operator of the following types of units:

1. An elementary neutralization unit, pretreatment unit, wastewater treatment unit, or combustion waste facility, which treats hazardous waste, if the treatment meets the criteria of 6 MCAR § 4.9129; or

2. An elementary neutralization unit, pretreatment unit, wastewater treatment unit, or combustion waste facility for which the director has terminated eligibility for a permit-by-rule.

6 MCAR § 4.9481 General facility standards.

A. Identification number.

1. The owner or operator must not treat or store a hazardous waste in an elementary neutralization unit, pretreatment unit, wastewater treatment unit, or combustion waste facility without having received an identification number.

2. An owner or operator who has not received an identification number may obtain one using agency forms.

B. Security. The owner or operator must prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock into or onto the elementary neutralization unit, pretreatment unit, wastewater treatment unit, or combustion waste facility unless:

1. Physical contact with the waste contained in the unit of facility will not injure unknowing or unauthorized persons or livestock which may enter the unit or facility; and

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2. Disturbance of the waste or equipment by the unknowing or unauthorized entry of persons or livestock into or onto the unit or facility will not cause a violation of the requirements of 6 MCAR §§ 4.9480-4.9481.

C. Inspection requirements.

1. The owner or operator must inspect the elementary neutralization unit, pretreatment unit, wastewater treatment unit or combustion waste facility for malfunctions and deterioration, operator errors, and discharges which may be causing or may lead to unauthorized release of hazardous waste to the environment or a threat to human health. The owner or operator must conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.

2. The owner or operator must develop and follow a written schedule for inspecting all monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment, such as tank walls and pumps, that are important to preventing environmental or human health hazards. He must keep this schedule at the facility. The schedule must identify the types of problems, such as malfunctions, or deterioration, which are to be looked for during the inspection, such as inoperative pump, leaking fitting, and heavy corrosion.

3. The frequency of inspection may vary for the items on the schedule. It should be based on the rate of possible deterioration of the equipment and the probability of an environmental or human health incident if any deterioration or malfunction or operator error goes undetected between inspections.

4. The owner or operator must remedy any deterioration or malfunction of equipment or structures detected in an inspection. This must be done on a schedule which ensures that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action must be taken immediately.

5. The owner or operator must record inspections in an inspection log. He must keep these records for at least three years from the date of inspection. These records must include the date and time of each inspection, the name of the inspector, a recording of the observations made, and the date and nature of any repair or other remedial actions taken as a result of inspection observations.

D. Operating requirements.

1. The owner or operator of an elementary neutralization unit, pretreatment unit, wastewater treatment unit, or combustion waste facility must ensure that the treatment process conducted in the unit or facility does not:

- a. generate extreme heat or pressure, fire or explosion, or violent reaction unless the process is permitted to handle these types of reactions;
- b. produce uncontrolled toxic mists, fumes, or gases in sufficient quantities to threaten human health;
- c. produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosion;
- d. damage the structural integrity of the tank or equipment containing the waste; or
- e. through like means threaten human health or the environment.

2. Hazardous wastes or treatment reagents must not be placed in an elementary neutralization unit, pretreatment unit, wastewater treatment unit, or combustion waste facility if they could cause the unit or facility or any of its equipment to rupture, abnormally corrode, or otherwise fail before the end of its intended life.

3. An elementary neutralization unit, pretreatment unit, or wastewater treatment unit must be constructed of sturdy leakproof material and must be designed, constructed, and operated so as to prevent hazardous waste from being spilled or leaked into or on any land or water during the operating life of the unit.

E. Manifest system, record keeping and reporting.

1. The owner or operator of an elementary neutralization unit, pretreatment unit, or wastewater treatment unit must comply with the following requirements with respect to hazardous wastes he receives from off-site sources:

- a. 6 MCAR § 4.9292, Manifest system;
- b. 6 MCAR § 4.9293, Manifest discrepancies;
- c. 6 MCAR § 4.9294 A. and B.1., Operating record; and
- d. 6 MCAR § 4.9296 A. and B., Required reports.

2. Within 15 days after any spill or leakage of hazardous waste from an elementary neutralization unit, pretreatment unit, wastewater treatment unit, or combustion waste facility, the owner or operator of the unit or facility must submit a written report to the director which contains the following information:

- a. name, address, and telephone number of the owner or operator;

- b. name, address, and telephone number of the facility;
- c. date, time, and nature of the incident;
- d. name and quantity of material involved;
- e. the extent of injuries, if any;
- f. an assessment of actual or potential hazards to human health or the environment, where this is applicable; and
- g. estimated quantity and disposition of recovered material that resulted from the incident.

F. Closure.

1. At closure, the owner or operator of an elementary neutralization unit, pretreatment unit, or wastewater treatment unit must remove all hazardous waste and hazardous waste residues from the unit.

2. At closure, the owner or operator of a combustion waste facility must analyze the waste present in the facility in accordance with 6 MCAR §§ 4.9128-4.9137 and must submit the waste analysis results and proposed closure methods to the director. Based on the waste analysis and proposed closure methods, the agency shall determine which closure standards from 6 MCAR §§ 4.9280-4.9316, if any, apply to the facility.

G. Treated wastes. Treated waste generated by an elementary neutralization unit, pretreatment unit, or wastewater treatment unit is subject to regulation under 6 MCAR §§ 4.9128-4.9222.

Rules as Proposed (all new material)

**Chapter Eight: Interim Standards for New
Hazardous Waste Land Disposal Facilities**

6 MCAR § 4.9500 Facilities governed by interim standards.

6 MCAR § 4.9501 Additional permit procedures.

6 MCAR § 4.9502 Environmental performance standard.

6 MCAR § 4.9503 General facility standards.

6 MCAR § 4.9504 Landfills.

6 MCAR § 4.9505 Surface impoundments.

6 MCAR § 4.9506 Land treatment.

6 MCAR § 4.9507 Ground water monitoring.

**Chapter Eight: Interim Standards for New
Hazardous Waste Land Disposal Facilities**

6 MCAR § 4.9500 Facilities governed by interim standards.

A. General requirement. The standards in 6 MCAR §§ 4.9500-4.9507 apply to owners and operators of new hazardous waste landfills, surface impoundments, and land treatment facilities and will serve as a basis for issuing permits until final standards for these facilities become effective under 6 MCAR §§ 4.9280-4.9316.

B. Eligibility time limit. Permits may be issued under the requirements of 6 MCAR §§ 4.9500-4.9507 only to those owners and operators of new hazardous waste landfills, surface impoundments, or land treatment facilities who have applied for a permit and for whom public notice of a permit and public notice of the preparation of a draft permit have been issued in accordance with agency procedures, before the date final standards for these facilities become effective under 6 MCAR §§ 4.9280-4.9316.

C. Ineligible owners and operators. Owners and operators of new hazardous waste landfills, surface impoundments, or land treatment facilities who have not met the requirements of B. before the effective date of final standards for those facilities are not eligible for issuance of a permit under the provisions of 6 MCAR §§ 4.9500-4.9507.

D. Exemptions. The requirements of 6 MCAR §§ 4.9500-4.9507 do not apply to:

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1. a person disposing of hazardous waste by means of ocean disposal subject to a permit-by-rule;
2. an owner or operator of a publicly owned treatment works subject to a permit-by-rule;
3. the owner or operator of a facility which treats or stores hazardous waste, if the treatment or storage meets the criteria in 6 MCAR § 4.9129 B., except to the extent that 6 MCAR § 4.9129 C. provides otherwise;
4. a generator accumulating waste on-site in compliance with 6 MCAR § 4.9216;
5. a farmer disposing of waste pesticides from his own use in compliance with 6 MCAR § 4.9222;
6. the owner or operator of a totally enclosed treatment facility;
7. the owner or operator of an elementary neutralization unit, pretreatment unit, or a wastewater treatment unit;
8. the owner or operator of a combustion waste facility subject to a permit-by-rule; and
9. persons with respect to those activities that are carried out to immediately contain or treat a spill of hazardous waste or material which, when spilled, becomes a hazardous waste.

6 MCAR § 4.9501 Additional permit procedures.

A. Permit application requirements. The provisions of the agency's permitting procedures apply to permits under 6 MCAR §§ 4.9500-4.9507. In addition to the information required for a hazardous waste facility permit application by the agency's permitting procedures, the applications for permits under 6 MCAR §§ 4.9500-4.9507 must include the information specified in 1., 2., and 3.:

1. for a landfill, sufficient information to demonstrate compliance with 6 MCAR § 4.9504 and 6 MCAR § 4.9507;
2. for a surface impoundment, sufficient information to demonstrate compliance with 6 MCAR § 4.9505 and 6 MCAR § 4.9507; and
3. for a land treatment facility, sufficient information to demonstrate compliance with 6 MCAR § 4.9506 and 6 MCAR § 4.9507.

B. Permitting requirements. The requirements for issuance, modification, revocation and reissuance, and revocation without reissuance of permits under 6 MCAR §§ 4.9500-4.9507 are set forth in the agency's permitting procedures. In addition, the following procedure applies to permits under 6 MCAR §§ 4.9500-4.9507. Any facility for which a draft permit is prepared pursuant to 6 MCAR §§ 4.9500-4.9507 is a major hazardous waste facility. A fact sheet must be prepared for each such facility in accordance with agency permitting procedures. Instead of including a brief summary of the basis for the draft permit conditions, the fact sheet must include a detailed discussion of the basis for the draft permit conditions. This must include a demonstration that relevant factors listed in 6 MCAR §§ 4.9504-4.9507 were considered and a showing of how the draft permit reflects these considerations.

6 MCAR § 4.9502 Environmental performance standard.

A. In general. All new landfills, surface impoundments, and land treatment facilities must be located, designed, constructed, operated, maintained, and closed in a manner that will ensure protection of human health and the environment.

B. Ground water quality. Actions or designs for prevention of adverse effects on ground water quality must be based on the following considerations:

1. the volume and physical and chemical characteristics of the waste in the facility, including its potential for migration through soil or through synthetic liner materials;
2. the hydrogeological characteristics of the facility and surrounding land;
3. the quantity, quality, and directions of ground water flow;
4. the proximity and withdrawal rates of ground water users;
5. the existing quality of ground water, including other sources of contamination and their cumulative impact on the ground water;
6. the potential for health risks caused by human exposure to waste constituents;
7. the potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and
8. the persistence and permanence of the potential adverse effects.

C. Surface water quality. Actions or designs for prevention of adverse effects on surface water quality must be based on the following considerations:

1. the volume and physical and chemical characteristics of the waste in the facility;
2. the hydrogeological characteristics of the facility and surrounding land, including the topography of the area around the facility;
3. the quantity, quality, and directions of ground water flow;
4. the patterns of rainfall in the region;
5. the proximity of the facility to surface waters;
6. the uses of nearby surface waters and any water quality standards established for those surface waters;
7. the existing quality of surface water, including other sources of contamination and their cumulative impact on surface water;
8. the potential for health risks caused by human exposure to waste constituents;
9. the potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and
10. the persistence and permanence of the potential adverse effects.

D. Air quality. Actions or designs for prevention of adverse effects on air quality must be based on the following considerations:

1. the volume and physical and chemical characteristics of the waste in the facility, including its potential for volatilization and wind dispersal;
2. the existing quality of the air, including other sources of contamination and their cumulative impact on the air;
3. the potential for health risks caused by human exposure to waste constituents;
4. the potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and
5. the persistence and permanence of the potential adverse effects.

E. Subsurface environmental quality. Actions or designs for prevention of adverse effects due to migration of waste constituents in the subsurface environment must be based on the following considerations:

1. the volume and physical and chemical characteristics of the waste in the facility, including its potential for migration through soil;
2. the geologic characteristics of the facility and surrounding land;
3. the patterns of land use in the region;
4. the potential for migration of waste constituents into subsurface physical structures;
5. the potential for migration of waste constituents into the root zone of food-chain crops and other vegetation;
6. the potential for health risks caused by human exposure to waste constituents;
7. the potential damage of wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and
8. the persistence and permanence of the potential adverse effects.

6 MCAR § 4.9503 General facility standards. In addition to the standards contained in 6 MCAR §§ 4.9500-4.9507, owners and operators of new hazardous waste landfills, surface impoundments, and land treatment facilities must comply with 6 MCAR §§ 4.9281-4.9311.

6 MCAR § 4.9504 Landfills.

A. Applicability. The requirements of B.-F. apply to owners and operators of new facilities that dispose of hazardous waste in landfills.

B. General design requirements.

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1. Each landfill must include a liner designed to comply with 6 MCAR § 4.9502. The design of the facility liner must reflect a consideration of:

- a. the physical and chemical characteristics of the waste in the facility;
- b. the pressure head of leachate on the liner;
- c. climatic conditions in the area;
- d. the permeability of the liner material, including compaction density and moisture content where earthen materials are present;
- e. the physical and chemical properties of the soil underlying the facility that supports any emplaced liner; and
- f. the potential for damage to the liner system that could occur during installation of any emplaced liner.

2. Each landfill must include a leachate and runoff control system designed to comply with 6 MCAR § 4.9502. The design of the facility leachate and runoff control system must reflect a consideration of:

- a. the physical and chemical characteristics of the waste in the facility;
- b. climatic conditions in the area;
- c. the volume of leachate or contaminated runoff that could be produced at the facility; and
- d. the available options for managing any leachate or contaminated runoff that is collected at the facility.

C. General operating requirements.

1. Incompatible wastes, or incompatible waste and materials, must not be placed in the same landfill unless the requirements of 6 MCAR § 4.9283 B. are met. The waste analysis plan required by 6 MCAR § 4.9284 must include the analysis needed to comply with this provision.

2. Any emplaced liner material must be installed in a manner that will protect the function and physical integrity of the liner.

3. The leachate and runoff control system must be operated and maintained in a manner that will comply with 6 MCAR § 4.9502. The procedures for operating the leachate and runoff control system must reflect a consideration of:

- a. the volume of leachate or contaminated runoff produced at the facility;
- b. the capacity of any leachate or runoff collection device at the facility;
- c. climatic conditions in the area; and
- d. the quality of the leachate or runoff produced and the available alternatives for managing any leachate or contaminated runoff produced at the facility.

4. The landfill must be inspected at a sufficient frequency to assure compliance with 6 MCAR § 4.9502.

D. Closure and post-closure.

1. A landfill must be closed in a manner that will comply with 6 MCAR § 4.9502. Closure must include placement of a final cover over the landfill, and the closure plan under 6 MCAR § 4.9297 C. and D. must specify the function and design of the cover. Proper closure of a landfill must reflect a consideration of:

- a. the type and amount of waste in the facility;
- b. the mobility and expected rate of migration of waste;
- c. site location, topography, and surrounding land use;
- d. climatic conditions in the area;
- e. characteristics of the cover including material, final surface contours, thickness, porosity and permeability, slope, length of run of slope, and type of vegetation on the cover; and
- f. geological and soil profiles, and surface and subsurface hydrology of the site.

2. A landfill must be maintained in a manner that complies with 6 MCAR § 4.9502 during the post-closure period. The post-closure plan under 6 MCAR § 4.9299 C. must specify the procedures that will be used to satisfy this provision. Proper maintenance of a landfill during the post-closure period must reflect a consideration of:

- a. the type and amount of waste in the facility;
- b. the mobility and expected rate of migration of the waste;
- c. site location, topography, and surrounding land use;

- d. climatic conditions in the area;
 - e. characteristics of the cover including material, final surface contours, thickness, porosity and permeability, slope, length of run of slope, and type of vegetation on the cover;
 - f. geological and soil profiles and surface and subsurface hydrology of the site; and
 - g. the maintenance of any ground water monitoring system or leachate and runoff control system at the facility.
- E. Treatment of waste. The agency may waive any of the requirements in B., C., or D., where necessary, to achieve treatment of hazardous waste in a landfill, if the waiver does not result in noncompliance with 6 MCAR § 4.9502.
- F. Additional requirements. The agency may place additional requirements on owners and operators of new landfills, besides those otherwise required by A.-E., where necessary, to comply with 6 MCAR § 4.9502.

6 MCAR § 4.9505 Surface impoundments.

A. Applicability. The requirements in B.-F. apply to owners and operators of new facilities that dispose of hazardous waste in surface impoundments.

B. General design requirements.

1. Each surface impoundment must include a liner designed to comply with 6 MCAR § 4.9502. The design of the facility liner must reflect a consideration of:
 - a. the physical and chemical characteristics of the waste in the facility;
 - b. the pressure head on the liner;
 - c. climatic conditions in the area;
 - d. the permeability of the liner material, including compaction density and moisture content where earthen materials are present;
 - e. the physical and chemical properties of the soil underlying the facility that supports any emplaced liner; and
 - f. the potential for damage to the liner system that could occur during installation of any emplaced liner.
2. Each surface impoundment must be designed so as to prevent overtopping due to wind and wave action, overfilling, precipitation or any combination thereof.
3. Where dikes are part of the surface impoundment, the dikes must be designed to comply with 6 MCAR § 4.9502. The design of any facility dikes must reflect a consideration of:
 - a. the structural integrity of the dike, including the effects of plants and burrowing animals on earthen dikes;
 - b. the potential for water erosion of the dike; and
 - c. the potential for wind erosion of the dike.

C. General operating requirements.

1. Incompatible wastes, or incompatible wastes and materials, must not be placed in the same surface impoundment, unless the requirements of 6 MCAR § 4.9283 B. are met. The waste analysis plan required by 6 MCAR § 4.9284 must include the analyses needed to comply with this provision.
2. Any emplaced liner material must be installed in a manner that will protect the function and physical integrity of the liner.
3. The surface impoundment must be operated so as to prevent overtopping due to wind and wave action, overfilling, precipitation, or any combination thereof.
4. The surface impoundment must be inspected at a sufficient frequency to ensure compliance with 6 MCAR § 4.9502.

D. Closure and post-closure.

1. A surface impoundment must be closed in a manner that will comply with 6 MCAR § 4.9502. Closure must include

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placement of a final cover over the surface impoundment, and the closure plan under 6 MCAR § 4.9297 C. and D. must specify the function and design of the cover. Proper closure of a surface impoundment must reflect a consideration of:

- a. the type and amount of waste in the facility, including the amount of free liquids;
- b. the mobility and expected rate of migration of the waste;
- c. site location, topography, and surrounding land use;
- d. climatic conditions in the area;
- e. characteristics of the cover including material, final surface contours, thickness, porosity and permeability, slope, length of run of slope, and type of vegetation on the cover;
- f. geological and soil profiles and surface and subsurface hydrology of the site; and
- g. the potential for eliminating free liquids from the facility.

2. A surface impoundment must be maintained in a manner that complies with 6 MCAR § 4.9502 during the post-closure period. The post-closure plan under 6 MCAR § 4.9299 C. must specify the procedures that will be used to satisfy this provision. Proper maintenance of a surface impoundment during post-closure period must reflect a consideration of:

- a. the type and amount of waste in the facility;
- b. the mobility and expected rate of migration of the waste;
- c. site location, topography, and surrounding land use;
- d. climatic conditions in the area;
- e. characteristics of the cover including material, final surface contours, thickness, porosity and permeability, slope, length of run of slope, and type of vegetation on the cover;
- f. geological and soil profiles and surface and subsurface hydrology of the site; and
- g. the maintenance of any ground water monitoring system at the facility.

E. Treatment of waste. The agency may waive any of the requirements of B., C., or D., where necessary, to achieve treatment of hazardous waste in a surface impoundment, provided that the waiver does not result in noncompliance with 6 MCAR § 4.9502.

F. Additional requirements. The agency may place additional requirements on owners and operators of new surface impoundments, besides those otherwise required by A.-E., where necessary, to comply with 6 MCAR § 4.9502.

6 MCAR § 4.9506 Land treatment.

A. Applicability. The requirements in B.-G. apply to owners and operators of new facilities that dispose of hazardous waste in land treatment facilities.

B. General design requirements. Each land treatment facility must include a runoff control system designed to comply with 6 MCAR § 4.9502. The design of the facility runoff control system must reflect a consideration of:

1. the physical, biological, and chemical characteristics of the waste in the facility;
2. climatic conditions in the area;
3. the volume of runoff that could be produced at the facility; and
4. the available options for managing any contaminated runoff that is collected at the facility.

C. General operating requirements.

1. Incompatible wastes, or incompatible wastes and materials, must not be placed in the same land treatment facility, unless the requirements of 6 MCAR § 4.9283 B. are met. The waste analysis plan required by 6 MCAR § 4.9284 must include the analyses needed to comply with this provision.

2. The runoff control system must be operated and maintained in a manner that will comply with 6 MCAR § 4.9502. The procedures for operating the runoff control system must reflect a consideration of:

- a. the volume of contaminated runoff produced at the facility;
- b. the capacity of any runoff collection device at the facility;
- c. climatic conditions in the area; and
- d. the quality of the runoff produced and the available options for managing any contaminated runoff from the facility.

3. The land treatment facility must be operated to treat the waste in the facility to the extent necessary to comply with 6 MCAR § 4.9502.

4. If food-chain crops are grown at the facility, the facility must be operated in a manner designed to protect the quality of those crops to the extent necessary to comply with 6 MCAR § 4.9502. Proper operation of a land treatment facility on which food-chain crops are grown must reflect a consideration of:

- a. the characteristics of the soil, including the pH;
- b. the volume and chemical, biological, and physical characteristics of the waste in the facility;
- c. the type of crop to be grown;
- d. the manner in which such crop is to be marketed, such as direct sale to consumers, use as an animal feed grain;
- e. the potential future uses of the facility;
- f. the potential for crop uptake of waste constituents; and
- g. the potential exposure of workers who handle the crop to waste constituents.

5. The treatment facility must be inspected at a sufficient frequency to ensure compliance with 6 MCAR § 4.9502.

D. Unsaturated zone monitoring. In addition to the ground water monitoring program required in 6 MCAR § 4.9507, a land treatment facility must have an unsaturated zone monitoring program which will ensure compliance with 6 MCAR § 4.9502. An unsaturated zone monitoring program must include an unsaturated zone monitoring system at the facility or at a representative test plot, as well as procedures for sampling, analysis, and evaluation of data. The unsaturated zone monitoring program must reflect a consideration of:

1. the placement and depth of sampling devices that is necessary to obtain a representative sample of the success of waste treatment in the facility;
2. soil characteristics, including its pH, its permeability, and the level of microbial activity in the soil;
3. climatic conditions in the area;
4. the potential for rapid migration of waste constituents through the soil; and
5. the accessibility of the monitoring system devices for maintenance and repair.

E. Closure and post-closure.

1. A land treatment facility must be closed in a manner that will comply with 6 MCAR § 4.9502. The closure plan under 6 MCAR § 4.9297 C. and D. must specify the measures which will be used to satisfy this provision. Proper closure of a land treatment facility must reflect a consideration of:

- a. the type and amount of waste applied to the facility;
- b. the mobility and expected rate of migration of the waste;
- c. site location, topography, and surrounding land use;
- d. climatic conditions in the area, including the amount, frequency, and pH of precipitation;
- e. geologic and soil profiles and surface and subsurface hydrology of the site, including cation exchange capacity, total organic carbon, and pH of the soil; and
- f. unsaturated zone monitoring information obtained under D.

2. A land treatment facility must be maintained in a manner that complies with 6 MCAR § 4.9502 during the post-closure period. The post-closure plan under 6 MCAR § 4.9299 C. must specify the procedures that will be used to satisfy this provision. Proper maintenance of a land treatment facility during the post-closure period must reflect a consideration of:

- a. the type and amount of waste applied to the facility;
- b. the mobility and expected rate of migration of the waste;
- c. site location, topography, and surrounding land use;

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- d. climatic conditions in the area, including the amount, frequency, and pH of precipitation;
- e. geologic and soil profiles and surface and subsurface hydrology of the site, including cation exchange capacity, total organic carbon, and pH of the soil;
- f. unsaturated zone monitoring information obtained under D.; and
- g. the maintenance of any ground water monitoring system at the facility.

F. Treatment of waste. The agency may waive any of the requirements in B., C., or E., where necessary, to achieve treatment of hazardous waste in a land treatment facility, provided that the waiver does not result in noncompliance with 6 MCAR § 4.9502.

G. Additional requirements. The agency may place additional requirements on owners or operators of new land treatment facilities in addition to those otherwise required by A.-F. where necessary to comply with 6 MCAR § 4.9502.

6 MCAR § 4.9507 Ground water monitoring.

A. Applicability. Each new hazardous waste landfill, surface impoundment, or land treatment facility must have a ground water monitoring program, which includes a ground water monitoring system, appropriate response procedures, and procedures for sampling, analysis and evaluation of ground water data.

B. Ground water monitoring system. The ground water system required by this rule must be capable of determining the facility's impact on ground water in the uppermost aquifer so as to ensure compliance with 6 MCAR § 4.9502. The design of the ground water monitoring system must reflect a consideration of:

1. the placement and depth of monitoring wells that is necessary to obtain a representative sample of constituents in the uppermost aquifer, including those present in the ground water upgradient from the facility;
2. measures, such as casing, which maintain the integrity of the monitoring well bore hole; and
3. measures which prevent contamination of ground water samples.

C. Ground water monitoring procedures.

1. The ground water monitoring procedures required by this rule must be capable of ensuring compliance with 6 MCAR § 4.9502. The procedures must reflect a consideration of:

- a. sample collection procedures;
- b. sample preservation and shipment procedures;
- c. analytical methods;
- d. chain of custody control; and
- e. evaluation procedures, including methods for determining the extent and rate of migration of waste constituents.

2. The ground water monitoring procedures required by this rule must include appropriate procedures for when the ground water monitoring program indicates that the facility is not in compliance with 6 MCAR § 4.9502. The response procedures must be contained in the contingency plan required by 6 MCAR § 4.9288.

D. Additional requirements. The agency may place additional ground water monitoring requirements on owners or operators of facilities subject to 6 MCAR §§ 4.9500-4.9507 in addition to those otherwise required by A.-C. where necessary to comply with 6 MCAR § 4.9502.

Rules as Proposed

Chapter Nine:

County Regulation of Hazardous Waste Management

6 MCAR § 4.9559 Purpose; applicability.

6 MCAR § 4.9560 Agency overview of county hazardous waste programs.

~~6 MCAR § 4.9609~~

Chapter Nine:

County Regulation of Hazardous Waste Management-

~~A. 6 MCAR § 4.9559 Purpose; applicability. This rule establishes procedures for submission of documents in the event the county ordinance is approved by the agency. Issuing, denying, modifying, imposing conditions upon, or revoking hazardous waste generator licenses or permits, and county hazardous waste rules, shall be subject to review, denial, suspension and reversal by the agency. The provisions of 6 MCAR § 4.9559 and 6 MCAR § 4.9560 establish procedures for the agency's~~

overview of county hazardous waste programs. The provisions of 6 MCAR § 4.9560 B.1. apply to counties which seek agency approval of a hazardous waste ordinance. All other portions of 6 MCAR § 4.9560 apply to counties having a hazardous waste ordinance approved by the agency.

6 MCAR § 4.9560 Agency overview of county hazardous waste programs.

A. Overview. The director shall overview actions taken by counties under hazardous waste programs approved by the agency. This overview shall consist of the review, approval, denial, suspension, modification, and reversal of county actions. County actions include adoption or amendment of regulations and ordinances, and the issuance, denial, suspension, modification, imposition of conditions upon, or revocation of county hazardous waste permits or licenses.

B. Review of County ordinances.

1. A county that seeks agency approval of a hazardous waste ordinance pursuant to Minn. Stat. § 400.161 or a metropolitan county which seeks agency approval of a hazardous waste ordinance pursuant to Minn. Stat. § 473.811, subd. 5b, shall submit a copy of the ordinance to the agency. The ~~agency~~ director shall, within 30 days of receiving the ordinance, advise the county in writing whether the ordinance is approved or suspended. If the director suspends a county ordinance, the director shall follow the procedure described in 2. The ~~agency~~ director shall approve a county ordinance that embodies and is consistent with the standards and requirements set forth in ~~these hazardous waste rules~~ 6 MCAR §§ 4.9100-4.9560.

2. If a metropolitan county submits a county hazardous waste ordinance to the agency for approval pursuant to Minn. Stat. § 473.811, subd. 5, the procedure established in subparagraph 1 of paragraph D for agency review of county hazardous waste licenses and permits shall be followed. Any action by the agency pursuant to such submission for agency review of the county ordinance shall not be deemed to be agency approval of such ordinance unless such approval is explicit and is in writing. The director may suspend any previously approved county ordinance if that ordinance has been modified and is determined by the director to be inconsistent with the state hazardous waste rules. Upon suspension by the director, the matter shall be placed on the agenda of the next month's regularly scheduled meeting of the agency board, which will be the fourth Tuesday of the month. The agency shall notify the county of its decision to approve, suspend, modify, or deny the ordinance.

3. For the purposes of this rule a metropolitan county is any one of the following counties: Anoka, Carver, ~~Dakota, Hennepin, Ramsey, Scott and Washington~~. Any county having a hazardous waste ordinance approved in writing by the agency, shall revise the county ordinance within 120 days of any agency revision to 6 MCAR §§ 4.9100-4.9560 or the agency's permitting procedures. The county revision must embody and be consistent with the agency's revisions to 6 MCAR §§ 4.9100-4.9560 and the agency's permitting procedures, and must be submitted to the agency for its review and approval according to the procedure in 1.

C. Effect of agency approval of county ordinance. ~~In the event that~~ If a county has adopted a hazardous waste ordinance that is approved in writing by the agency:

1. Each generator who produces a hazardous waste within the county shall ~~not be required to~~ submit a disclosure, annual reports, and exception reports to the ~~agency for that waste~~ county as required by the county ordinance in lieu of submission to the agency unless specifically requested in writing by the director to ~~do so~~ submit a copy of the disclosure, annual report, or exception report to the director;

2. Each generator shall submit the required copies of the hazardous waste ~~shipping papers~~ manifest to the county as required by the county ordinance for each shipment of hazardous waste that is ~~transported~~. requires a manifest pursuant to the county ordinance. The submission of manifest copies to the county shall be made in lieu of submission of copies to the agency unless the director specifically requests the generator in writing to submit a copy of the manifest to the director; and

3. All persons shall comply with all other requirements of ~~these regulations~~ 6 MCAR §§ 4.9100-4.9560, the agency's permitting procedures, and all requirements of the county ordinance.

D. ~~Duties of counties~~ County actions.

1. A county with a hazardous waste ordinance approved in writing by the agency shall submit to the agency a written notification of all hazardous waste ~~generator~~ licenses or permits approved ~~or reviewed~~ by the county during the previous

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month. The notification shall be submitted to the agency ~~on~~ by the fifteenth day of each month. Upon the request of the director, the county shall provide the agency with a copy of all the information that it considered in reaching its decision. ~~The agency shall place the matter on the agenda of the next regularly scheduled meeting of the agency, which will be on the fourth Tuesday of the month. The agency may amend, modify, suspend, or reverse the action of the county. The action of the agency in reviewing the county decision to grant the license or permit shall not affect the agency's consideration of a Hazardous Waste Facility Permit for the same facility under these rules.~~

2. The director shall within 15 days of receiving the notification, advise the county in writing of his decision to approve, suspend, or request additional information on the licenses or permits. The director may suspend any hazardous waste license or permit approved and issued by the county. Upon suspension, the procedure described in B.2. shall be followed.

3. A county shall submit to the director, upon request, a copy of any disclosure, manifest, annual report, exception report, or any other document that has been submitted to the county in lieu of submission to the agency pursuant to C.

~~3.~~ 4. A county with a hazardous waste ordinance approved by the agency shall submit to the agency a yearly summary of hazardous waste management in the county. The yearly summary shall be submitted by March 1 for the year that ended on the previous December 31. The summary shall contain:

- a. the name and identification numbers assigned by the county to each generator in the county;
- b. the total number of hazardous waste shipments;
- c. the total quantities shipped for each type of hazardous waste;
- d. the identification numbers ~~pursuant to 6 MCAR § 9.4005 C.~~ and names of the transporters used;
- e. facilities at which the waste was stored, processed, or disposed;
- f. number of spills and accidents; and
- g. any other information requested by the director.

Repealer. Rules 6 MCAR § 4.9004; 6 MCAR § 4.9006 I.; 6 MCAR § 4.9008; and 6 MCAR § 4.9010 are repealed. Appendices A, B, C, D, E, F, G, H, I, and J, as published in 2 State Register 549-615, September 19, 1977, are repealed.

State Board of Education (State Board for Vocational Education) Department of Education Vocational-Technical Division

Proposed Amendments to Rules Governing Adult Supplementary Licenses

Notice of Intent to Adopt Rules without a Public Hearing

Notice is hereby given that the State Board of Education (State Board for Vocational Education), proposes to adopt the above-entitled rules without a public hearing. The board has determined that the proposed adoption of these amendments to the rules will be noncontroversial in nature and has elected to follow the procedures set forth in Minn. Stat. § 15.0412, subd. 4h.

The purpose of these proposed amendments to the rules is to extend the time period from two to five years for initial adult supplementary licenses. Renewed adult supplementary licenses will be extended from three to five years. The adult supplementary license permits employment as a vocational teacher for a maximum of 500 hours per year. Extending the time period will make the license fee for adult supplementary teachers more equitable with other license fees.

Persons interested in these rules shall have 30 days to submit comments on the proposed rules. The proposed rules may be modified if the modifications are supported by the data and views submitted to the agency and do not result in a substantial change in the proposed language.

Unless seven or more persons submit written requests for a public hearing on the proposed rules within the 30 day comment period, a public hearing will not be held. In the event a public hearing is required, the agency will proceed according to the provision of Minn. Stat. § 15.0412, subd. 4-4f.

Persons who wish to submit such comments or a written request for a public hearing should submit such comments or requests to:

Sharon K. Grossbach
Division of Vocational-Technical Education
529 Capitol Square Building
550 Cedar Street
St. Paul, Minnesota 55101
(612) 296-6516

Authority for the adoption of these rules is contained in Minn. Stat. §§ 125.185, subd. 4 and 121.11, subd. 12. Additionally, a statement of need and reasonableness that describes the need for and reasonableness of each provision of the proposed rules and identifies the data and information related upon to support the proposed rules has been prepared and is available from Sharon Grossbach upon request.

Upon adoption of the final rules without a public hearing, the proposed rules, this notice, the statement of need and reasonableness, all written comments received, and the rules as adopted will be delivered to the Attorney General for review as to form and legality, including the issue of substantial change. Persons who wish to be advised of the submission of this material to the Attorney General, or who wish to receive a copy of the final rules as proposed for adoption, should submit a written statement of such request to Sharon Grossbach.

A copy of the proposed rules is attached to this notice.

Copies of this notice and the proposed rules are available and may be obtained by contacting Sharon Grossbach.

May 10, 1982

John J. Feda, Secretary

Rules as Proposed

5 MCAR § 1.0782 Procedure for licensure of vocational instructional and supportive personnel.

A. [Unchanged.]

B. Licensure procedure.

1. Initial entrance vocational license.

a. [Unchanged.]

b. Issuance. An applicant who meets the requirements of one of the initial entrance license options set forth in B.1.c. of this rule (below) shall be issued an initial one-year or two-year or five-year entrance license depending upon the specific area of licensure sought.

c. [Unchanged.]

2. and 3. [Unchanged.]

4. Renewed regular five-year vocational license.

a. and b. [Unchanged.]

The provisions of a. and b. do not apply to an adult supplementary license.

5. [Unchanged.]

C. [Unchanged.]

5 MCAR § 1.0786 Continuing education requirements for relicensure of vocational instructional and supportive personnel.

A.-D. [Unchanged.]

E. Nonapplicability. This rule does not apply to an adult supplementary license.

5 MCAR § 1.0791 Adult vocational instructional personnel.

A.-B. [Unchanged.]

C. Adult supplementary license.

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1.-2. [Unchanged.]

3. Adult supplementary license validity.

a. [Unchanged.]

b. Initial entrance and renewed adult supplementary license. ~~The~~ An initial entrance or a renewed adult supplementary license ~~shall remain~~ is valid for a ~~two-year period~~ five years.

Repealer. 5 MCAR § 1.0791 C.3.c. is repealed.

Department of Employee Relations

Proposed Repeal of Rules Regarding the State Personnel System

Notice of Intent to Repeal Rules without a Public Hearing

Notice is hereby given that the State Department of Employee Relations proposes to repeal the above entitled rules without a public hearing. The commissioner has determined that the proposed repeal of these rules is noncontroversial in nature and has elected to follow the procedures set forth in Minnesota Statutes § 15.0412, subdivision 4h (1980) for repeal of noncontroversial rules.

Persons interested in these rules shall have 30 days to submit comments on proposed repeal of these rules. The list of rules proposed for repeal may be modified if the modifications are supported by the data and views submitted to the agency and do not result in a substantial change.

Unless seven or more persons submit written requests for a public hearing on the repealer within the 30-day comment period, a public hearing will not be held. In the event a public hearing is required, the agency will proceed according to the provisions of Minnesota Statutes § 5.0412, subdivisions 4-4f.

Persons who wish to submit comments or a written request for a public hearing should submit such comments or request to:

Mark Sundquist
3rd Floor, Space Center Building
444 Lafayette Road
St. Paul, Minnesota 55101
Telephone No. 296-8933

The repeal of these rules is proposed because some of them duplicate statutory language contrary to the requirements of Minnesota Statutes § 15.0412, subdivision 1, section 5 (Supp. 1981). Other rules proposed for repeal are no longer subject to the rulemaking provisions of the administrative procedure act because they do not directly affect the rights of or processes available to the general public. The subject matter of these rules will be incorporated into collective bargaining agreements and plans established pursuant to Minnesota Statutes § 43A.18 (Supp. 1981) or administrative procedures provided for by Minnesota Statutes § 43A.04, subdivision 4 (Supp. 1981).

Additionally, a statement of need and reasonableness has been prepared and is available from Mark Sundquist upon request. That statement describes the need for and reasonableness of repealing these rules.

Upon repeal of the rules without a public hearing, this notice, the statement of need and reasonableness, all written comments received, and the final list of rules repealed will be delivered to the Attorney General for review as to form and legality. Persons who wish to be advised of the submission of this material to the Attorney General, or who wish to receive a copy of the final rules as proposed for adoption, should submit a written statement of such request to Mark Sundquist.

Copies of this notice and the rules proposed for repeal are available and may be obtained by contacting Mark Sundquist.

Rules as Proposed

Repealer. The following rules are repealed: 2 MCAR §§ 2.007; 2.008; 2.009; 2.012; 2.016; 2.017; 2.018; 2.019; 2.021; 2.024; 2.028; 2.031; 2.032; 2.033; 2.045; 2.047; 2.048; 2.051; 2.057; 2.058; 2.059; 2.060; 2.062; 2.063; 2.081; 2.082; 2.083; 2.086; 2.087; 2.097; 2.098; 2.099; 2.101; 2.106; 2.107; 2.108; 2.109; 2.110; 2.111; 2.116; 2.117; 2.119; 2.129; 2.130; 2.131; 2.132; 2.133; 2.134; 2.135; 2.136; 2.137; 1.138; 2.139; 2.140; 2.141; 2.142; 2.143; 1.144; 2.145; 2.146; 2.150; 2.151; 2.152; 2.153; 2.155; 2.160; 2.161; 2.162; 2.163; 2.164; 2.166; 2.167; 2.168; 2.170; 2.171; 2.172; 2.175; 2.176; 2.177; 2.178; 2.180; 2.181; 2.189; 2.190; 2.191; 2.192; 2.193; 2.194; 2.195; 2.196; 2.197; 2.203; 2.204; 2.206; 2.207; 2.209; 2.210; 2.211; 2.213; 2.214; 2.216; 2.217; 2.218; 2.219; 2.220; 2.221; 2.223; 2.226; 2.232; 2.234; 2.235; 2.238; 2.240; 2.241 governing original appointment, which was mistakenly renumbered 2 MCAR § 2.244, an already used number, when last filed with the Secretary of State; 2.242; 2.243; 2.244; 2.246; 2.247; 2.248; 2.250; 2.253; 2.254; 2.257; 2.265; 2.266; 2.267; 2.268; 2.269; 2.275; 2.276; 2.277; 2.278; 2.279; 2.280; 2.281; and 2.282.

ADOPTED RULES

The adoption of a rule becomes effective after the requirements of Minn. Stat. § 15.0412, subd. 4, have been met and five working days after the rule is published in the *State Register*, unless a later date is required by statutes or specified in the rule.

If an adopted rule is identical to its proposed form as previously published, a notice of adoption and a citation to its previous *State Register* publication will be printed.

If an adopted rule differs from its proposed form, language which has been deleted will be printed with strike outs and new language will be underlined, and the rule's previous *State Register* publication will be cited.

A temporary rule becomes effective upon the approval of the Attorney General as specified in Minn. Stat. § 15.0412, subd. 5. Notice of his decision will be published as soon as practicable, and the adopted temporary rule will be published in the manner provided for adopted rules under subd. 4.

State Board of Education (State Board for Vocational Education) Vocational-Technical Division

Adopted Rules Governing Criteria for Adult Vocational Program Funding (5 MCAR §§ 1.0111-1.0117)

The rules proposed and published at *State Register*, Volume 6, Number 22, pages 1050-1056, November 30, 1981 (6 S.R. 1050) are now adopted with the following amendments:

Rules as Adopted

5 MCAR § 1.0112 B. Instructor licensure. For the purpose of B., instructor includes a specialist, a guest lecturer and a resource person. An instructor shall hold a valid adult vocational-technical license in the area taught. An instructor who teaches more than 500 clock hours annually shall meet full-time adult licensure requirements or post-secondary licensure requirements in the area taught if full-time adult licensure requirements do not exist. An instructor who teaches six hours or less in three consecutive months in any individual program is not required to hold a license in order to teach in that program.

E. Evaluation. The district or center shall conduct an annual evaluation. The evaluation shall be based on the following concepts:

1. planning and development;
2. needs assessment;
3. diversity of offerings;
4. management; and
5. program operations.

5 MCAR § 1.0113 A.9. The course has been offered in the past and has been determined by the community to be successful in meeting occupational or public service needs. The term "public service" means courses which promote public health and safety.

A.10. The course provides specialized assistance for ~~disadvantaged~~ persons with special needs who are preparing for economic self-sufficiency when those persons are also enrolled or plan to become enrolled in vocational courses. The term "persons with special needs" includes but is not limited to persons who are disadvantaged, handicapped or have limited English proficiency.

D.4. Courses likely to improve the economy of the community, area or state by attracting or expanding business.

The foregoing are not listed in any particular order and each is of equal weight.

5 MCAR § 1.0114 A. Applicability. The requirements of B. and C. apply only to courses other than adult farm management and

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." **ADOPTED RULES SECTION** — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

ADOPTED RULES

small business management. The provisions of ~~D.-J.~~ D.-K. apply only to adult farm management and small business management. The provisions of L. apply to the variances available under C. and I.

C.1. The course is required by law; or

C.2. Fewer than ten people need specialized training to become employed; or

D. Full-time adult farm management instructor. A full-time adult farm management instructor shall have a minimum enrollment of 42 cooperators; 30 of whom representing not less than 42 farms, 30 farms of which shall be represented by cooperators who have been enrolled six years or fewer. If the minimum enrollment is not met, the district or center shall apply to the Commissioner of Education for a variance.

E. New adult farm management. When a district or center first offers instruction in adult farm management or when a new instructor is employed, the minimum enrollment of 42 cooperators representing 42 farms shall be reached within four years. After the first four years, the district or center shall apply to the Commissioner of Education for a variance if the minimum enrollment is not met.

J. Cooperator defined. For the purposes of D., E., F., I., the term "cooperator" means a farm family, consisting of any number of natural persons, responsible for the management of a farm business.

J. Reletter as K.

L. Procedures for obtaining a variance. Any school district or center which desires to obtain a variance pursuant to C. or I. shall make a request for such a variance in writing addressed to the Commissioner of Education. The request may be in the form of a letter and shall identify the specific rule and subsection under which the variance is requested and shall state the facts which support the request. The Commissioner of Education shall issue a response in the form of a letter addressed to the school district or center not more than 15 days after the receipt of the request from the school district or center. If the request is denied, the affected school district or center may request a review by the state board as set forth in 5 MCAR § 1.0115 H.

5 MCAR § 1.0115 D. Administrative staff. A district or center is eligible for aid for one full-time equivalent adult vocational licensed administrative staff member if either of the following conditions ~~are~~ is met.

H. Review by the state board. If the department disapproves a proposed adult vocational education course for purposes of being eligible for state aid pursuant to 5 MCAR § 1.0113, or if the Commissioner of Education denies a variance requested pursuant to 5 MCAR § 1.0114, the affected school district or center may, within 15 days of the date of the department's or commissioner's decision, as applicable, demand and shall be given an opportunity to present its position to the State Board of Education (State Board for Vocational Education) at the next regular meeting of the State Board of Education. For purposes of this section, the "next regular meeting of the State Board of Education" means the next regularly scheduled meeting of the State Board of Education occurring not less than 20 days after receipt by the department or commissioner of the school district or center's demand. The state board may place reasonable restrictions on the length of time for the district or center to present its position. The board may issue its decision at the meeting and shall, in any event, issue its decision no later than its next regularly scheduled board meeting.

5 MCAR § 1.0116 D. Senior citizens. ~~The district or center may charge full, partial or no tuition or fees for people 62 years old or older at the beginning of a course not offered for credit. Any charge made by the district or center of tuition or fees for people 62 years of age or older shall be consistent with Minn. Stat. §§ 136A.80-136A.81.~~

Effective Date. Rules 5 MCAR §§ 1.0111-1.0117 are effective for programs and courses approved after July 1, 1982.

Repealer. Rule 5 MCAR § 1.0112 G. is repealed. Rules 5 MCAR §§ 1.0113; 1.0114; 1.0115; and 1.0117, as they existed before the effective date of 5 MCAR §§ 1.0111-1.0117 above are repealed on the effective date of the new 5 MCAR §§ 1.0113; 1.0114; 1.0115; and 1.0117.

SUPREME COURT

Decisions Filed Friday, May 28, 1982

Compiled by John McCarthy, Clerk

81-944 Andrew Ellis, petitioner, Appellant, v. Minneapolis Commission on Civil Rights, and Raymond Smith. Hennepin County.
An adverse jury verdict in an unlawful detainer action collaterally estopped the Minneapolis Commission on Civil Rights from relitigating the identical issue of discriminatory eviction based on race.
Reversed and remanded. Otis, J.

81-1143/Sp. State of Minnesota v. Gary Allen Engler, Appellant. Chisago County.
Record on appeal fails to support defendant's claim that he was denied a fair trial by prosecutor's opening statement or by trial court's failure to remove a juror, and sentencing court correctly interpreted Minn. Stat. § 609.11 (1980), the mandatory minimum-term law, as applying to assault in the second degree, section 609.222.
Affirmed. Otis, J.

81-1065/Sp. Richard J. Saari, Deceased Employee, Relator, v. Norman W. McFarland, *et al.*, Wayne Hart, *etc.*, *et al.*, State Treasurer, Custodian of the Special Compensation Fund. Workers' Compensation Court of Appeals.

The order of the Workers' Compensation Court of Appeals determining the fee to be awarded an attorney pursuant to Minn. Stat. § 176.081 (1980 & Supp. 1981) does not demonstrate on the record before this court that the fee awarded is reasonable, as required by section 176.081, subd. 5(a), nor does the order comply with the requirements of section 176.081, subd. 5(e), (g), because of the absence of specific findings of fact concerning the application of the factors set forth in section 176.081, subd. 5(d).

The order is vacated and the matter remanded for reconsideration. Yetka, J.

81-315 Mark Gerdes, Appellant, v. State of Minnesota. Pipestone County.

Under a conviction for the possession of a short-barreled shotgun in violation of Minn. Stat. § 609.67, subd. 2 (1980), the operability of the weapon at the time of possession is immaterial.

By allowing the amendment of a criminal complaint by motion of the state, changing the date of possession of a short-barreled shotgun from "on or about the 25th day of August, 1978" to read "on or about the 15th day of July, 1978," the trial court did not abuse its discretion under Minn. R. Crim. P. 1705.

The court was presented with sufficient information from which to conclude that there was probable cause to believe that the items described in the search warrant would be found on the premises 30 days after they were originally observed there.

Affirmed. Scott, J.

81-857/Sp. Town of Grant v. Washington County, *et al.*, Davis and Davis, Inc., Appellant. Washington County.

Evidence presented to the Washington County Board of Adjustments and Appeals by appellant in support of its application for permits allowing construction of an on-site sewage disposal system of special design furnished sufficient support for the board's findings that the proposed system complies with the Washington County Development Code and does not present a danger to the public health, safety or welfare. The decision of the district court holding to the contrary and reversing the board's order is reversed.

Reversed. Scott, Dissenting, Wahl, J.

81-976 Jean Katherine Giesner, petitioner, v. Frederick Lawrence Giesner, Appellant. Ramsey County.

In determining whether a modification of a judgment for maintenance and support should be granted under Minn. Stat. § 518.64 (1980), the court should ascertain whether the party directed to pay has made a reasonable good-faith effort by means of his or her own selection to conform with the judgment within his or her inherent but unexercised capacities.

Reversed and remanded. Kelley, J.

Decision Filed Wednesday, May 19, 1982

82-12/Sp. State of Minnesota v. Daniel Anthony Martinez, Appellant. Ramsey County.

Particularly cruel way in which defendant committed offense of criminal sexual conduct in the first degree justified doubling the length of presumptive sentence established by Sentencing Guidelines Commission.

Affirmed as modified. Amdahl, C. J. Dissenting, Kelley, J., and Yetka, J.

STATE CONTRACTS

Pursuant to the provisions of Minn. Stat. § 16.098, subd. 3, an agency must make reasonable effort to publicize the availability of any consultant services contract or professional and technical services contract which has an estimated cost of over \$2,000.

Department of Administration procedures require that notice of any consultant services contract or professional and technical services contract which has an estimated cost of over \$10,000 be printed in the *State Register*. These procedures also require that the following information be included in the notice: name of contact person, agency name and address, description of project and tasks, cost estimate, and final submission date of completed contract proposal.

Department of Public Welfare Bureau of Social Services

Notice of Request for Proposals for Certain Adult Social Services

The Department of Public Welfare is seeking Proposals to: 1) provide adult protection training; 2) develop continuum for disabled/vulnerable adult living arrangements including special emphasis on adult foster care; 3) assess and develop models for home-based social services to adults to prevent institutionalization and to facilitate deinstitutionalization; and 4) facilitate development of adult day care programming.

The Division of Social Services, Minnesota Department of Public Welfare, is seeking individuals or organizations with knowledge and background in the Minnesota Social Services system and expertise in the given sub-area, to make proposals which address the above areas of endeavors. Competitors may bid on one, or more than one area.

The first contract is for assessing the need for, developing, and completing training modules directed at adult protection to county line workers and supervisors on a statewide basis. Roles and relationships to legal and police systems is vital, as well as family dysfunction and knowledge of the Vulnerable Adults Act as part of this proposal. Preference will be given to competitors who have successfully performed in this general area in the state within the past four years.

The second proposal calls for developing strategy models for a continuum of living arrangements to adults at high risk (disabled/aged). It necessitates an understanding of the roles and resources of state and county government, the role of public welfare in income maintenance and social services programs, and the roles and resources of the private sector. Special consideration will be given to the department's Rule 51 (Adult Foster Care) endeavors, its authority base and its utilization by county social services agencies.

The third proposal is to develop home-based social service models for adults. This proposal ranges from assessing needs, analyzing county social services delivery capability, providing technical assistance to counties, coordinating components within and with other departments, and recommending to the Division various avenues to follow with a critique of each.

The fourth proposal calls for the development of a plan for the development of day care directed toward physically disabled or elderly adults, exploring various models of day programming as a component of long term care, and providing technical assistance to county social services agencies in this program development area.

Estimated cost of Training Proposal:	\$30,000
Estimated cost of Living Arrangements Proposal:	\$40,000
Estimated cost of Home-Based Services Proposal:	\$40,000
Estimated cost of Day Care Proposal:	\$30,000

Responses must be received by July 15, 1982.

Detailed requests for proposals and formal submittals should be directed to:

Carol Watkins
Division of Social Services
Bureau of Social Services
Minnesota Department of Public Welfare
4th Floor, Centennial Office Building
Saint Paul, Minnesota 55155
(612) 297-2766

Department of Veterans Affairs

Notice of Contracts Available—Fiscal Year 1983

In accordance with Minn. Stat. § 16.0981, the Department of Veterans Affairs is publishing notice that the contracts listed below are available and will be awarded for Fiscal Year 1983 (July 1, 1982 to June 30, 1983) except as otherwise noted.

A. Minnesota Veterans Home—Minneapolis

1. The Veterans Home—Minneapolis intends to engage the services of licensed individuals (where applicable) to provide various medical and related services to the residents of the facility. The estimated amount of the individual contracts are outlined below:

a. Dental Services	\$25,000
b. Podiatry Services	\$ 6,500
c. Chaplain Services (Catholic)	\$ 6,000
d. Optical/related Svs.	\$ 6,500
e. Medical Services	\$48,000

2. The Veterans Home intends to engage services of licensed individuals (where applicable) to provide services to the residents of the Minneapolis and Hastings facilities. The estimated amounts of the contracts are as follows:

a. Dietician	\$12,000
b. Chiropractor (Contract to begin August 1, 1982)	\$ 1,000

3. Inquiries and formal expressions of interest in the proposed contracts outlined above should be submitted by June 30, 1982, to:

Marie Rossa, Accounting Supervisor, Sr.
Veterans Home—Minneapolis
51st Street and Minnehaha Avenue
Minneapolis, Minnesota 55417

B. Minnesota Veterans Home—Hastings

1. The Veterans Home—Hastings intends to engage the services of licensed individuals to provide various medical and related services to the residents of the facility. The estimated amount of the individual contracts are outlined below:

a. Medical/Physician Services	\$13,000
b. Dental Services	\$15,000
c. Optical/Related Services	\$ 6,000

2. Inquiries and formal expressions of interest in the proposed contracts outlined above should be submitted by June 30, 1982, to:

Frank Singer, Acting Superintendent
Veterans Home—Hastings
1200 East 18th Street
Hastings, Minnesota 55033

C. Department of Veterans Affairs—Central Office

1. The Department of Veterans Affairs intends to engage the services of a licensed physician to review medical information to determine the medical eligibility for the department's financial assistance program. The estimated amount of the contract is not expected to exceed \$8,000.

2. Inquiries and formal expressions of interest should be submitted by June 30, 1982, to:

R. J. Lavell, Deputy Commissioner
Department of Veterans Affairs
Veterans Service Building
St. Paul, Minnesota 55155

OFFICIAL NOTICES

Pursuant to the provisions of Minn. Stat. § 15.0412, subd. 6, an agency, in preparing proposed rules, may seek information or opinion from sources outside the agency. Notices of intent to solicit outside opinion must be published in the *State Register* and all interested persons afforded the opportunity to submit data or views on the subject, either orally or in writing.

The *State Register* also publishes other official notices of state agencies, notices of meetings, and matters of public interest.

Department of Transportation

Petition of Stearns County for a Variance from State Aid Standards for Design Speed

Notice is hereby given that the County Board of Stearns County has made a written request to the Commissioner of Transportation for a variance from minimum design speed standards for a special resurfacing project along CSAH 17 between CSAH 13 North of Melrose and the City of St. Rosa.

The request is for a variance from 14 MCAR § 1.5032 H.1.d., Rules for State Aid Operations under Minn. Statute, Chapters 161 and 152 (1978) as amended, so as to permit a design speed of 40 miles per hour instead of a required design speed of 45 miles per hour.

Any person may file a written objection to the variance request with the Commissioner of Transportation, Transportation Building, St. Paul, Minnesota 55155.

If a written objection is received within 20 days from the date of this notice in the *State Register*, the variance can be granted only after a contested case hearing has been held on the request.

Dated this 1st day of June, 1982.

Richard P. Braun
Commissioner of Transportation

Petition of the City of St. Louis Park for a Variance from State Aid Standards for Parking

Notice is hereby given that the City Council of the City of St. Louis Park has made a written request to the Commissioner of Transportation for a variance from minimum design standards for parking along Virginia Avenue South between CSAH 16 (Cedar Lake Road) and Burd Place.

The request is for a variance from 14 MCAR § 1.5032 H.1.c., Rules for State Aid Operations under Minnesota Statute, Chapter 161 and 162 (1978) as amended, so as to permit a minimum roadway width of 32 feet with parking permitted on one side of Virginia Avenue South during non-peak traffic hours instead of a minimum roadway width of 32 feet with no parking.

Any person may file a written objection to the variance request with the Commissioner of Transportation, Transportation Building, St. Paul, Minnesota 55155.

If a written objection is received within 20 days from the date of this notice in the *State Register*, the variance can be granted only after a contested case hearing has been held on the request.

Dated this 1st day of June, 1982.

Richard P. Braun
Commissioner of Transportation

Petition of the City of Minneapolis for a Variance from State Aid Standards for Parking

Notice is hereby given that the City Council of the City of Minneapolis has made a written request to the Commissioner of Transportation for a variance from minimum design standards for parallel parking along West Franklin Avenue between Dupont and Logan Avenues South.

The request is for a variance from 14 MCAR § 1.5032 H.1.c., Rules for State Aid Operations under Minnesota Statutes, Chapters 161 and 162 (1978) as amended, so as to permit a minimum roadway width of 32' with parallel parking permitted on one side of the street instead of a required roadway width of 32' with no parking permitted.

Any person may file a written objection to the variance request with the Commissioner of Transportation, Transportation Building, St. Paul, Minnesota 55155.

If a written objection is received within 20 days from the date of this notice in the *State Register*, the variance can be granted only after a contested case hearing has been held on the request.

Dated this 1st day of June, 1982.

Richard P. Braun
Commissioner of Transportation

Petition of the City of Minneapolis for a Variance from State Aid Standards for Street Width

Notice is hereby given that the City Council of the City of Minneapolis has made a written request to the Commissioner of Transportation for a variance from minimum design standards for street width on the Motley Bypass between Fulton Street and University Avenue.

The request is for a variance from 14 MCAR § 1.5032 H.I.c., Rules for State Aid Operations under Minnesota Statutes, Chapters 161 and 162 (1978) as amended, so as to permit a minimum street width of 44 feet with no parking allowed from Fulton Street to Delaware Avenue S.E. instead of a required street width of 52 feet and a minimum street width of 54 feet with parking allowed on one side from Delaware Avenue S.E. to University Avenue S.E. instead of a required street width of 62 feet.

Any person may file a written objection to the variance request with the Commissioner of Transportation, Transportation Building, St. Paul, Minnesota 55155.

If a written objection is received within 20 days from the date of this notice in the *State Register*, the variance can be granted only after a contested case hearing has been held on the request.

Dated this 1st day of June, 1982.

Richard P. Braun
Commissioner of Transportation

Petition of the City of Fairmont for a Variance from State Aid Standards for Street Width

Notice is hereby given that the City Council of the City of Fairmont has made a written request to the Commissioner of Transportation for a variance from minimum design standards for street width along Prairie Avenue (MSAS 106) from State Street to Blinkman Street.

The request is for a variance from 14 MCAR § 1.5032 H.I.c. Rules for State Aid Operations under Minnesota Statutes, Chapters 161 and 162 (1978) as amended, so as to permit a minimum street width of 44 feet with parallel parking permitted on both sides of the street instead of a required width of 46 feet.

Any person may file a written objection to the variance request with the Commissioner of Transportation, Transportation Building, St. Paul, Minnesota 55155.

If a written objection is received within 20 days from the date of this notice in the *State Register*, the variance can be granted only after a contested case hearing has been held on the request.

Dated this 1st day of June, 1982.

Richard P. Braun
Commissioner of Transportation

Petition of the City of Champlin for a Variance from State Aid Standards for Design Speed

Notice is hereby given that the City Council of the City of Champlin has made a written request to the Commissioner of Transportation for a variance from minimum design standards for design speed on 114th Avenue between Maryland Avenue and Jersey Avenue and on Maryland Avenue between 112th Avenue North and 114th Avenue North.

The request is for a variance from 14 MCAR § 1.5032 H.I.c., Rules for State Aid Operations under Minnesota Statutes, Chapters 161 and 162 (1978) as amended, so as to permit a design speed of 25 mph instead of a desirable design speed of 30 mph.

Any person may file a written objection to the variance request with the Commissioner of Transportation, Transportation Building, St. Paul, Minnesota 55155.

If a written objection is received within 20 days from the date of this notice in the *State Register*, the variance can be granted only after a contested case hearing has been held on the request.

Dated this 1st day of June, 1982.

Richard P. Braun
Commissioner of Transportation

OFFICIAL NOTICES

Department of Commerce Banking Division

Bulletin No. 2593: Maximum Lawful Rate of Interest for Mortgages and Contracts for Deed for the Month of June 1982

Notice is hereby given that pursuant to Minnesota Statutes, § 47.20, subd. 4a, (1980), the maximum lawful rate of interest for conventional home mortgages for the month of June 1982 is sixteen and one-half (16.50) percentage points. Further, pursuant to Minnesota Statutes, § 47.20, the maximum lawful rate of interest for contracts for deed for the month of June 1982 is sixteen and one-half (16.50) percentage points.

It is important to note that this maximum lawful interest rate does not apply to all real estate loans and contracts for deed. Under Minnesota's interest rate moratorium, which is identical to the Federal Usury Preemption, in most instances any rate may be charged on real estate mortgages and contracts for deed that constitute first liens.

This is based on the Federal National Mortgage Association (FNMA) May 24, 1982, auction results and an average yield for conventional mortgage commitments of 16.272%. Current rates regarding the monthly publication are available by telephoning the Banking Division's 24-hour information number, (612) 297-2751.

May 26, 1982

Michael J. Pint
Commissioner of Banks

Minnesota Pollution Control Agency Minnesota Waste Management Board

Joint Notice of Amendments to Procedures for Intrinsic Suitability and Hazardous Waste Disposal Facility Candidate Site Selection Hearings

The hearing procedures in the above-mentioned matter were published at 6 S.R. 1450-1452, Monday, February 15, 1982. Notice is hereby given that the procedures appearing at 6 S.R. 1452 are amended as follows:

9. Following the end of the hearing, members of the public will have ~~seven~~ 14 calendar days in which to submit additional documents and comments into the hearing record. To be considered, such material must be postmarked within the ~~seven~~ 14 day period. Copies of such documents and comments must be submitted to the hearing examiner, the MPCA staff and the WMB staff.

10. The MPCA and WMB staffs will have seven calendar days following receipt of the last comment postmarked within the seven day public comment period, in which to respond to both public testimony presented at the hearing and subsequent documents submitted into the hearing record. These responses will be submitted to the hearing examiner. The WMB staff will have 14 calendar days following receipt of the last comment postmarked within the 14 day public comment period in which to respond to both public testimony presented at the hearing and subsequent documents submitted into the hearing period. The WMB staff response will be submitted to the hearing examiner.

Following submission of the WMB staff response to the hearing examiner, the MPCA staff will have 7 calendar days in which to respond to both public testimony presented at the hearing and subsequent documents submitted to the hearing examiner. The MPCA staff response will be submitted to the hearing examiner.

PLEASE BE FURTHER ADVISED that, while persons may submit documents or other information at the hearing or up to ~~seven~~ 14 calendar days after the hearing, it would be very helpful to have such documents submitted to the MPCA and WMB staffs in advance of the hearing. Therefore, persons wishing to submit documents or other information are encouraged to do so at the earliest possible time so that the MPCA and WMB staffs have sufficient time to review such documents and information.

Minnesota Sentencing Guidelines Commission Notice of Public Hearing to Consider Modifications to Sentencing Guidelines

The Minnesota Sentencing Guidelines Commission will hold a public hearing on Thursday, July 8, 1982, at 6:30 p.m., in Room 22 of the State Office Building, St. Paul, Minnesota. The public hearing is to consider proposed modifications to the sentencing guidelines specifically as they relate to:

- a) computation of criminal history and decay factors,
- b) language dealing with departures, and
- c) severity ranking of new legislation

Copies of the above proposed modifications are available, free of charge, by contacting the Minnesota Sentencing Guidelines Commission at Suite 284, Metro Square Building, 7th and Robert Street, St. Paul, MN 55101, or by calling (612) 296-0144.

All interested persons are encouraged to attend the hearing and offer comments. Persons wishing to speak may register in advance by contacting the commission staff at the above address/phone number.

The commission will hold the record open for five days after the public hearing to accept additional written comment on the proposed modifications. On or about July 22, 1982, the commission will meet to formally adopt or reject the proposed modifications. If adopted, the modifications will become effective August 1, 1982, and will have the same force and effect as the language it is replacing.

Proposed Modifications

Section II.B. (Criminal History) is modified as follows:

1. Subject to the conditions listed below, the offender is assigned one point for every felony conviction for which a felony sentence was stayed or imposed; ~~and that occurred~~ before the current sentencing.

e. Prior felony sentences will not be used in computing the criminal history score ~~after~~ if a period of ten years has elapsed since the date of discharge from or expiration of the sentence to the date of offense of any subsequent misdemeanor, gross misdemeanor or felony provided that during the period the individual had not received a felony, gross misdemeanor, or misdemeanor sentence.

Section II.D. (Departures from the Guidelines) is rewritten as follows:

D. Departures from the Guidelines: The sentences provided in the Sentencing Guidelines Grid are presumed to be appropriate for every case. The judge shall utilize the presumptive sentence provided in the Sentencing Guidelines Grid unless the individual case involves substantial and compelling circumstances. When such circumstances are present, the judge may depart from the presumptive sentence and stay or impose any sentence authorized by law. When departing from the presumptive sentence, the court should pronounce a sentence which is proportional to the severity of the offense of conviction and the extent of the offender's prior criminal history, and should take into substantial consideration the statement of purpose and principles in Section I above. When departing from the presumptive sentence, a judge must provide written reasons which specify the substantial and compelling nature of the circumstances, and which demonstrate why the sentence selected in the departure is more appropriate, reasonable, or equitable than the presumptive sentence.

~~In making decisions about departing from the guidelines, judges should take into substantial consideration the statement of purpose and principles in section I above.~~

Section II.G. is modified to deal with the newly enacted Conspiracy to Commit a Controlled Substance offense.

G. Convictions for Attempts or Conspiracies: For persons convicted of attempted offenses or conspiracies to commit an offense, the presumptive sentence is determined by locating the Sentencing Guidelines Grid cell defined by the offender's criminal history score and the severity level of the completed offense, and dividing the duration contained therein by two, but such sentence shall not be less than one year and one day except ~~that~~ for Conspiracy to Commit a Controlled Substance offense as per Minn. Stat. 152.09, in which event the presumptive sentence shall be that for the completed offense. Further, the presumptive disposition for Conspiracy to Commit or Attempted First Degree Murder, Minn. Stat. 609.185, with 609.17 or 609.175 cited, shall be imprisonment for all cases. The presumptive durations shall be as follows:

SEVERITY LEVELS OF CONVICTION OFFENSE	CRIMINAL HISTORY SCORE						
	0	1	2	3	4	5	6 or more
<i>Conspiracy/Attempted Murder,</i>	70	84	97	122	146	170	194
<i>1st Degree</i>	67-73	80-88	92-103	115-128	139-153	162-179	185-203

The Offense Severity Reference Table is modified as follows:

- V Receiving Stolen Goods (\$1001-\$2500)—609.525; 609.53
- Bribery—609.42; 90.41; 609.86

OFFICIAL NOTICES

IV Receiving Stolen Goods (~~\$150-\$2500~~) (\$301-\$1000)—609.525; 609.53
Sale of Cocaine—152.15, subd. 1(1)

III ~~Sale of Cocaine—152.15, subd. 1(1)~~

I Obtaining or Retaining a Child—609.26

Sale of Simulated Controlled Substance, 152.095; 152.15, subd. 2(b)

The Theft Offense List is modified as follows:

Computer Damage

609.88

Computer Theft

609.89

Minnesota State Agricultural Society Minnesota State Fair

Meeting Notice

The board of managers of the Minnesota State Agricultural Society, governing body of the Minnesota State Fair, will conduct a business meeting at 10 a.m. Friday June 11 at the Administration Building on the fairgrounds, St. Paul. Preceding the general meeting will be a meeting of the board's space rental committee at 9 a.m.

STATE OF MINNESOTA
State Register and Public Documents Division
117 University Avenue
St. Paul, Minnesota 55155

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FOR LEGISLATIVE NEWS

Publications containing news and information from the Minnesota Senate and House of Representatives are available free to concerned citizens and the news media. To be placed on the mailing list, write or call the offices listed below:

Briefly/Preview—Senate news and committee calendar; published weekly during legislative sessions. Contact Senate Public Information Office, Room B29 State Capitol, St. Paul MN 55155, (612) 296-0504.

Perspectives—Publication about the Senate. Contact Senate Information Office.

Weekly Wrap-Up—House committees, committee assignments of individual representatives, news on committee meetings and action. House action and bill introductions. Contact House Information Office, Room 8 State Capitol, St. Paul, MN, (612) 296-2146.

This Week—weekly interim bulletin of the House. Contact House Information Office.

Legislative Reference Library
Room 111 Capitol

Interoffice