

1 Pollution Control Agency

2

3 Adopted Permanent Rules Relating to Land Disposal Restrictions

4 for Hazardous Wastes

5

6 Rules as Adopted

7 7001.0520 PERMIT REQUIREMENTS.

8 [For text of subps 1 to 6, see M.R.]

9 Subp. 7. Permit denial. The commissioner may deny the  
10 permit application, whether or not the application is complete,  
11 either in its entirety or as to the active life of a hazardous  
12 waste management facility or unit only. The denial does not  
13 affect the requirement to obtain a postclosure permit under this  
14 part.

15 7001.0650 INTERIM STATUS.

16 [For text of subps 1 to 4, see M.R.]

17 Subp. 5. Changes during interim status. Except as  
18 provided in item F, an owner or operator who has interim status  
19 may conduct the activities prescribed in items A to F.

20 [For text of item A, see M.R.]

21 B. The owner or operator may increase the design  
22 capacity of the facility if, before implementation of the  
23 increase, the owner or operator submits a revised Part A of the  
24 permit application and an explanation of the need for the  
25 change, and if the commissioner approves the increase in writing.  
26 The commissioner shall approve the change if the commissioner  
27 finds that:

28 (1) there is a lack of available treatment,  
29 storage, or disposal capacity at other permitted hazardous waste  
30 facilities; or

31 (2) the change is necessary to comply with a  
32 federal, state, or local requirement.

33 [For text of items C and D, see M.R.]

34 E. Changes may be made according to an interim status  
35 corrective action order issued by EPA under United States Code,

1 title 42, section 3008(h), or other federal authority, by the  
2 agency, or by a court in a judicial action brought by EPA or the  
3 agency. Changes under this item are limited to the treatment,  
4 storage, or disposal of solid waste from releases that originate  
5 within the boundary of the facility.

6 F. Except as specifically allowed under this item,  
7 changes listed under items A to E may not be made if they amount  
8 to reconstruction of the hazardous waste management facility.  
9 Reconstruction occurs when the capital investment in the changes  
10 to the facility exceeds 50 percent of the capital cost of a  
11 comparable entirely new hazardous waste management facility. If  
12 all other requirements are met, the following changes may be  
13 made even if they amount to reconstruction:

14 (1) changes made only for complying with parts  
15 7045.0528, subpart 4, and 7045.0628, subpart 4, for tanks and  
16 ancillary equipment;

17 (2) if necessary to comply with federal, state,  
18 or local requirements, changes to an existing unit, changes  
19 solely involving tanks or containers, or addition of replacement  
20 surface impoundments that satisfy the standards of RCRA section  
21 3004(o);

22 (3) changes that are necessary to allow owners or  
23 operators to continue handling newly listed or identified  
24 hazardous wastes that have been treated, stored, or disposed of  
25 at the facility before the effective date of the rule  
26 establishing the new listing or identification;

27 (4) changes during closure of a facility or of a  
28 unit within a facility made according to an approved closure  
29 plan;

30 (5) changes necessary to comply with an interim  
31 status corrective action order issued by EPA under RCRA section  
32 3008(h) or other federal authority, by an authorized state under  
33 comparable state authority, or by a court in judicial proceeding  
34 brought by EPA or an authorized state, provided that the changes  
35 are limited to the treatment, storage, or disposal of solid  
36 waste from releases that originate within the boundary of the

1 facility; and

2 (6) changes to treat or store, in tanks or  
3 containers, hazardous wastes subject to land disposal  
4 restrictions imposed by parts 7045.1300 to 7045.1380, provided  
5 that the changes are made solely for the purpose of complying  
6 with parts 7045.1300 to 7045.1380 or RCRA section 3004.

7 [For text of subp 6, see M.R.]

8 Subp. 7. **Termination of interim status.** Interim status  
9 terminates automatically when the agency has taken final  
10 administrative action on the permit application or when  
11 terminated by Code of Federal Regulations, title 40, section  
12 270.73(c) to (g). The following constitute justification for  
13 the commissioner to commence proceedings to terminate interim  
14 status:

15 [For text of items A and B, see M.R.]

16 7045.0020 DEFINITIONS.

17 [For text of subps 1 to 45, see M.R.]

18 Subp. 45a. **Inorganic solid debris.** "Inorganic solid  
19 debris" means nonfriable inorganic solids contaminated with  
20 D004-D011 hazardous wastes that are incapable of passing through  
21 a 9.5 millimeter standard sieve; that require cutting or  
22 crushing and grinding in mechanical sizing equipment prior to  
23 stabilization; and that are limited to the following inorganic  
24 or metal materials:

25 A. metal slags, either dross or scoria;

26 B. glassified slag;

27 C. glass;

28 D. concrete, excluding cementitious or pozzolanic  
29 stabilized hazardous wastes;

30 E. masonry and refractory bricks;

31 F. metal cans, containers, drums, or tanks;

32 G. metal nuts, bolts, pipes, pumps, valves;

33 appliances, or industrial equipment; and

34 H. scrap metal as defined in subpart 79a.

35 Subp. 45b. **Installation inspector.** "Installation

1 inspector" means a person who, by knowledge of the physical  
2 sciences and the principles of engineering, acquired by a  
3 professional education and related practical experience, is  
4 qualified to supervise the installation of tank systems.

5 [For text of subps 46 to 59a, see M.R.]

6 Subp. 59b. **Nonwastewater.** "Nonwastewater" means hazardous  
7 waste that is not wastewater as defined in subpart 102c.

8 Subp. 59c. **Off-specification used oil.** "Off-specification  
9 used oil" means a used oil fuel that exceeds any of the  
10 specification levels for the following constituents or has a  
11 flash point less than 100 degrees Fahrenheit.

12 Constituent	13 Allowable level
14 Arsenic, total	5 parts per million maximum
15 Cadmium, total	2 parts per million maximum
16 Chromium, total	10 parts per million maximum
17 Lead, total	100 parts per million maximum
18 Total Halogens	4,000 parts per million maximum

19  
20 Subp. 59d. **Onground tank.** "Onground tank" means a device  
21 meeting the definition of "tank" in subpart 90 and that is  
22 situated in such a way that the bottom of the tank is on the  
23 same level as the adjacent surrounding surface so that the  
24 external tank bottom cannot be visually inspected.

25 [For text of subps 60 to 73, see M.R.]

26 Subp. 73a. **RCRA or Resource Conservation and Recovery**  
27 **Act.** "RCRA" or "Resource Conservation and Recovery Act" means  
28 the Resource Conservation and Recovery Act.

29 Subp. 73b. **Receiving country.** "Receiving country" means a  
30 foreign country to which a hazardous waste is sent for the  
31 purpose of treatment, storage, or disposal, except short-term  
32 storage incidental to transportation.

33 Subp. 73c. **Reclamation.** "Reclamation" means the  
34 processing or regeneration of a waste to recover a usable  
35 product. Examples are the recovery of lead values from spent  
36 batteries and regeneration of spent solvents.

37 Subp. 73d. **Recycle.** "Recycle" means the reclamation,  
38 reuse, or use of a hazardous waste.

39 [For text of subps 74 to 102b, see M.R.]

40 Subp. 102c. **Wastewater.** "Wastewater" means waste that

1 contains less than one percent by weight total organic carbon  
2 (TOC) and less than one percent by weight total suspended solids  
3 (TSS), with the following exceptions:

4           A. F001, F002, F003, F004, or F005 wastewaters are  
5 solvent-water mixtures that contain less than one percent by  
6 weight total organic carbon or less than one percent by weight  
7 total F001, F002, F003, F004, or F005 solvent constituents  
8 listed in part 7045.1355;

9           B. K011, K013, or K014 wastewaters that contain less  
10 than five percent by weight total organic carbon and less than  
11 one percent by weight total suspended solids as generated; or

12           C. K0103 or K0104 wastewaters that contain less than  
13 four percent by weight total organic carbon and less than one  
14 percent by weight total suspended solids.

15                   [For text of subps 103 to 109, see M.R.]

16 7045.0075 PETITIONS.

17                   [For text of subps 1 to 8, see M.R.]

18           Subp. 9. Petitions to allow land disposal of a prohibited  
19 waste. A person seeking an exemption from a prohibition for the  
20 disposal of a restricted hazardous waste in a particular unit or  
21 units must submit a petition to the agency and to the EPA  
22 demonstrating, to a reasonable degree of certainty, that there  
23 will be no migration of hazardous constituents from the disposal  
24 unit or injection zone for as long as the wastes remain  
25 hazardous. The demonstration to the EPA must include the  
26 provisions in Code of Federal Regulations, title 40, section  
27 268.6. The demonstration to the agency must include an  
28 identification of the specific waste and the specific unit for  
29 which the demonstration will be made, a waste analysis to  
30 describe fully the chemical and physical characteristics of the  
31 subject waste, and a comprehensive characterization of the  
32 disposal unit site including an analysis of background air,  
33 soil, and water quality. The demonstration must also include a  
34 monitoring plan that detects migration at the earliest  
35 practicable time, and sufficient information to assure the

1 commissioner that the owner or operator of a land disposal unit  
2 receiving restricted wastes will comply with other applicable  
3 federal, state, and local laws. The person seeking the  
4 exemption must also comply with items A to L.

5 [For text of item A, see M.R.]

6 B. Each petition referred to in this subpart must  
7 include information described in subitems (1) to (5):

8 (1) A monitoring plan that describes the  
9 monitoring program installed at and around the unit to verify  
10 continued compliance with the conditions of the variance. This  
11 monitoring plan must provide information on the monitoring of  
12 the unit and the environment around the unit. The following  
13 specific information must be included in the plan:

14 (a) the media monitored in the cases where  
15 monitoring of the environment around the unit is required;

16 (b) the type of monitoring conducted at the  
17 unit, in the cases where monitoring of the unit is required;

18 (c) the location of the monitoring stations;

19 (d) the frequency of monitoring at each  
20 station;

21 (e) the specific hazardous constituents to  
22 be monitored;

23 (f) the implementation schedule for the  
24 monitoring program;

25 (g) the equipment used at the monitoring  
26 stations;

27 (h) the sampling and analytical techniques  
28 employed; and

29 (i) the data recording and reporting  
30 procedures.

31 (2) Where applicable, the monitoring program must  
32 be in place for a period of time specified by the commissioner,  
33 as part of the commissioner's approval of the petition, before  
34 receipt of prohibited waste at the unit.

35 (3) The monitoring data collected according to  
36 the monitoring plan must be sent to the commissioner according

1 to a format and schedule specified and approved in the  
2 monitoring plan.

3 (4) A copy of the monitoring data collected under  
4 the monitoring plan must be kept on-site at the facility in the  
5 operating record.

6 (5) The monitoring program in subitem (1) must  
7 meet the following criteria:

8 (a) all sampling, testing, and analytical  
9 data must be approved by the commissioner and must provide data  
10 that is accurate and reproducible;

11 (b) all estimation and monitoring techniques  
12 must be approved by the commissioner; and

13 (c) a quality assurance and quality control  
14 plan addressing all aspects of the monitoring program must be  
15 provided to and approved by the commissioner.

16 C. After a petition has been approved, the owner or  
17 operator must report any changes in conditions at the unit and  
18 the environment around the unit that significantly depart from  
19 the conditions described in the variance and affect the  
20 potential for migration of hazardous constituents from the units  
21 as follows:

22 (1) If the owner or operator plans to make  
23 changes to the unit design, construction, or operation, the  
24 change must be proposed, in writing, and the owner or operator  
25 must submit a demonstration to the commissioner at least 30 days  
26 before making the change. The commissioner shall determine  
27 whether the proposed change invalidates the terms of the  
28 petition and will determine the appropriate response. Any  
29 change must be approved by the commissioner before being made.

30 (2) If the owner or operator discovers that a  
31 condition at the site which was modeled or predicted in the  
32 petition does not occur as predicted, this change must be  
33 reported, in writing, to the commissioner within ten days of  
34 discovering the change. The commissioner shall determine  
35 whether the reported change from the terms of the petition  
36 requires further action, which may include termination of waste



1 acceptance and revocation of the petition, petition  
2 modifications, or other responses.

3           D. If the owner or operator determines that there is  
4 migration of hazardous constituents from the unit, the owner or  
5 operator must immediately suspend receipt of prohibited waste at  
6 the unit and notify the commissioner in writing within ten days  
7 of the determination that a release has occurred. Within 60  
8 days of receiving the notification, the commissioner shall  
9 determine whether the owner or operator can continue to receive  
10 prohibited waste in the unit and whether the variance is to be  
11 revoked. The commissioner shall also determine whether further  
12 examination of any migration is warranted under applicable  
13 provisions of parts 7045.0450 to 7045.0642.

14           E. Each petition must include the following statement  
15 signed by the petitioner or an authorized representative:

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

26           F. After receiving a petition, the commissioner may  
27 request additional information that reasonably may be required  
28 to evaluate the demonstration.

29           G. If approved, the petition will apply to land  
30 disposal of the specific restricted waste at the individual  
31 disposal unit described in the demonstration and will not apply  
32 to any other restricted waste at that disposal unit, or to that  
33 specific restricted waste at any other disposal unit.

34           H. The commissioner will give public notice in the  
35 State Register of the intent to approve or deny a petition and  
36 provide an opportunity for public comment. The final decision



1 on a petition will be published in the State Register.

2 I. The term of a petition granted under this part  
3 must be no longer than the term of the RCRA permit if the  
4 disposal unit is operating under an RCRA permit, or up to a  
5 maximum of five years from the date of approval provided under  
6 item G if the unit is operating under interim status. In either  
7 case, the term of the granted petition expires upon the  
8 termination or denial of an RCRA permit, or upon the termination  
9 of interim status or when the volume limit of waste to be land  
10 disposed during the term of petition is reached.

11 J. Before the agency's decision, the applicant must  
12 comply with all restrictions on land disposal under parts  
13 7045.1300 to 7045.1380 when the effective date for the waste has  
14 been reached.

15 K. The petition granted by the agency does not  
16 relieve the petitioner of responsibility for the management of  
17 hazardous waste under chapters 7001 and 7045.

18 L. Liquid hazardous wastes containing polychlorinated  
19 biphenyls at concentrations greater than or equal to 500 ppm are  
20 not eligible for an exemption under this subpart.

21 [For text of subps 10 to 12, see M.R.]

22 7045.0131 CHARACTERISTICS OF HAZARDOUS WASTE.

23 Subpart 1. In general. A waste which is not excluded from  
24 regulation as a hazardous waste under part 7045.0120 is a  
25 hazardous waste if it exhibits ignitability, corrosivity,  
26 reactivity, toxicity, lethality, or is an oxidizer, as described  
27 in subparts 2 to 7. A hazardous waste which is identified by a  
28 characteristic in this part is assigned every hazardous waste  
29 number that is applicable. This number must be used in  
30 complying with the notification requirements of section 3010 of  
31 the federal Resource Conservation and Recovery Act and all  
32 applicable record keeping and reporting requirements under parts  
33 7045.0205 to 7045.0642 and 7045.1300, and chapter 7001. For  
34 purposes of this part, the commissioner shall consider a sample  
35 obtained using any of the applicable sampling methods specified

1 in Code of Federal Regulations, title 40, part 260, Appendix I  
2 or part 261, Appendix II, to be a representative sample.

3 Subp. 2. **Ignitability.** A waste exhibits the  
4 characteristic of ignitability if a representative sample of the  
5 waste has any of the following properties:

6 [For text of items A and B, see M.R.]

7 C. it is an ignitable compressed gas as defined in  
8 Code of Federal Regulations, title 49, section 173.300 (1983)  
9 and as determined by the test methods described in that  
10 regulation or equivalent test methods approved by the  
11 commissioner under part 7045.0075, subpart 1.

12 A waste that exhibits the characteristic of ignitability  
13 has the hazardous waste number of D001.

14 Subp. 3. **Oxidizers.** A waste exhibits the characteristics  
15 of an oxidizer if a representative sample of the waste has the  
16 following properties:

17 [For text of item A, see M.R.]

18 B. it readily supplies oxygen to a reaction in the  
19 absence of air. Oxidative materials include, but are not  
20 limited to, oxides, organic and inorganic peroxides,  
21 permanganates, perrhenates, chlorates, perchlorates,  
22 persulfates, nitric acid, organic and inorganic nitrates,  
23 iodates, periodates, bromates, perselenates, perbromates,  
24 chromates, dichromates, ozone, and perborates. Bromine,  
25 chlorine, fluorine, and iodine react similarly to oxygen under  
26 some conditions and are therefore also oxidative materials.

27 A waste that exhibits the characteristics of an oxidizer  
28 has the hazardous waste number of D001.

29 Subp. 4. **Corrosivity.** A waste exhibits the characteristic  
30 of corrosivity if a representative sample of the waste has any  
31 of the following properties:

32 [For text of item A, see M.R.]

33 B. It is liquid and corrodes steel (SAE 1020) at a  
34 rate greater than 6.35 mm (0.250 inch) per year at a test  
35 temperature of 55 degrees Celsius (130 degrees Fahrenheit) as  
36 determined by the test method specified in National Association

1 of Corrosion Engineers Standard TM-01-69 as standardized in Test  
2 Methods for Evaluating Solid Waste, Physical/Chemical Methods,  
3 issued by the United States Environmental Protection Agency,  
4 publication number SW 846 (First Edition, 1980 as updated by  
5 Revisions A (August 1980), B (July 1981), and C (February 1982)  
6 or Second Edition, 1982) or an equivalent test method approved  
7 by the commissioner under the procedures set forth in part  
8 7045.0075, subpart 1.

9 A waste that exhibits the characteristic of corrosivity has  
10 the hazardous waste number of D002.

11 Subp. 5. **Reactivity.** A waste exhibits the characteristic  
12 of reactivity if a representative sample of the waste has any of  
13 the following properties:

14 [For text of items A to G, see M.R.]

15 H. it is a forbidden explosive as defined in Code of  
16 Federal Regulations, title 49, section 173.51 (1983), a Class A  
17 explosive as defined in Code of Federal Regulations, title 49,  
18 section 173.53 (1983), or a Class B explosive as defined in Code  
19 of Federal Regulations, title 49, Section 173.88 (1983).

20 A waste that exhibits the characteristic of reactivity has  
21 the hazardous waste number of D003.

22 Subp. 6. **Lethality.** Lethality is determined as follows:

23 A. A waste exhibits the characteristic of lethality  
24 as determined in item B, if a representative sample of the waste  
25 has any one of the following properties:

26 [For text of subitems (1) to (3), see M.R.]

27 (4) an inhalation median lethal concentration of  
28 less than 1,000 parts per million of material in air, if the  
29 material or component may be inhaled as gas or vapor.

30 [For text of items B and C, see M.R.]

31 D. A waste that exhibits the characteristics of  
32 lethality has the hazardous waste number MN01.

33 Subp. 7. **Toxicity.** Toxicity is determined as follows:

34 [For text of item A, see M.R.]

35 B. A waste that exhibits the characteristic of  
36 toxicity has the hazardous waste number specified in subpart 8

1 which corresponds to the toxic contaminant causing it to be  
2 hazardous.

3 [For text of item C, see M.R.]

4 [For text of subp 8, see M.R.]

5 7045.0135 LISTS OF HAZARDOUS WASTES.

6 [For text of subpart 1, see M.R.]

7 Subp. 2. Hazardous wastes from nonspecific sources.

8 Hazardous wastes from nonspecific sources are listed with the  
9 generic hazardous waste number and hazard code in items A to V.

10 [For text of items A to S, see M.R.]

11 T. F027, discarded unused formulations containing  
12 tri-, tetra-, or pentachlorophenol or discarded unused  
13 formulations containing compounds derived from these  
14 chlorophenols. This listing does not include formulations  
15 containing hexachlorophene synthesized from prepurified  
16 2,4,5-trichlorophenol as the sole component: (H);

17 U. F028, residues resulting from the incineration or  
18 thermal treatment of soil contaminated with hazardous waste Nos.  
19 F020, F021, F022, F023, F026, and F027: (T); and

20 V. F039, leachate resulting from the treatment,  
21 storage, or disposal of more than one restricted waste  
22 classified as hazardous under part 7045.0131 and this part.  
23 Leachate resulting from the management of one or more of the  
24 following EPA hazardous wastes and no other hazardous wastes  
25 retains its EPA hazardous waste numbers: F020, F021, F022,  
26 F023, F026, F027, or F028: (T).

27 [For text of subps 3 to 5, see M.R.]

28 7045.0139 BASIS FOR LISTING HAZARDOUS WASTES.

29 [For text of subpart 1, see M.R.]

30 Subp. 2. Constituents. The constituents which are the  
31 basis for listing the wastes identified in part 7045.0135,  
32 subparts 2 and 3 are listed in items A and B.

33 A. Constituents of wastes identified in part  
34 7045.0135, subpart 2 are listed in subitems (1) to (21).

35 [For text of subitems (1) to (19), see M.R.]

1 (20) F027: Tetra-, penta-, and  
2 hexachlorodibenzo-p-dioxins; tetra-, penta-, and  
3 hexachlorodibenzofurans; tri-, tetra-, and pentachlorophenols  
4 and their chlorophenoxy derivative acids, esters, ethers, amine,  
5 and other salts;

6 (21) F028: Tetra-, penta-, and  
7 hexachlorodibenzo-p-dioxins; tetra-, penta-, and  
8 hexachlorodibenzofurans; tri-, tetra-, and pentachlorophenols  
9 and their chlorophenoxy derivative acids, esters, ethers, amine,  
10 and other salts; and

11 (22) F039: Constituents for which treatment  
12 standards are specified for multisource leachate, wastewaters,  
13 and nonwastewaters under part 7045.1358.

14 [For text of item B, see M.R.]

15 7045.0214 EVALUATION OF WASTES.

16 [For text of subpart 1, see M.R.]

17 Subp. 2. **Method for evaluation.** The person evaluating the  
18 waste must determine if the waste meets any of the following  
19 criteria for a hazardous waste:

20 A. the waste is listed in part 7045.0135; or

21 B. if the waste is not listed in part 7045.0135, the  
22 person must then determine whether the waste is identified in  
23 part 7045.0131 by either:

24 (1) testing the waste according to the methods in  
25 part 7045.0131 or according to an equivalent method approved by  
26 the commissioner pursuant to part 7045.0075, subpart 1; or

27 (2) applying knowledge of the hazard  
28 characteristics of the waste in light of the materials or the  
29 processes used.

30 [For text of subp 3, see M.R.]

31 7045.0292 ACCUMULATION OF HAZARDOUS WASTE.

32 Subpart 1. **When allowed without a permit.** A generator may  
33 accumulate hazardous waste on-site without a permit or without  
34 having interim status if:

35 [For text of items A to G, see M.R.]

1 H. the requirements of parts 7045.0558, 7045.0566 to  
2 7045.0576, and 7045.1315, subpart 1, item D, are fulfilled  
3 regarding personnel training, preparedness, prevention, and  
4 contingency planning; and

5 [For text of item I, see M.R.]

6 [For text of supbs 2 to 4, see M.R.]

7 7045.0458 WASTE ANALYSIS REQUIREMENTS.

8 [For text of subpart 1, see M.R.]

9 Subp. 2. **Waste analysis plan.** The owner or operator shall  
10 develop and follow a written waste analysis plan which describes  
11 the procedures which he or she will carry out to comply with  
12 subpart 1. The owner or operator shall keep this plan at the  
13 facility. The plan must specify:

14 [For text of A to G, see M.R.]

15 H. for surface impoundments exempted from the land  
16 disposal restrictions under part 7045.1310, the procedures and  
17 schedules for:

18 (1) the sampling of impoundment contents;

19 (2) the analysis of test data; and

20 (3) the annual removal of residues which are not

21 delisted under part 7045.0075, subpart 2, or which exhibit a  
22 characteristic of hazardous waste under part 7045.0131, and  
23 either do not meet the treatment standards of parts 7045.1350 to  
24 7045.1360, or, where no treatment standards have been  
25 established, such residues are prohibited from land disposal  
26 under parts 7045.1320 to 7045.1333 or RCRA section 3004(d).

27 7045.0478 OPERATING RECORD.

28 [For text of subps 1 and 2, see M.R.]

29 Subp. 3. **Record information.** All of the following  
30 information must be recorded, as it becomes available, and  
31 maintained in the operating record until closure of the facility:

32 [For text of items A to L, see M.R.]

33 M. Records of the quantities and date of placement  
34 for each shipment of hazardous waste placed in land disposal  
35 units under an extension to the effective date of any land



1 disposal restriction granted under part 7045.0075, subpart 8, a  
2 petition under part 7045.0075, subpart 9, or a certification  
3 under ~~part-7045-1308~~ Code of Federal Regulations, title 40,  
4 section 268.8, and the applicable notice required of a generator  
5 under part 7045.1315, subpart 1.

6 N. For an off-site treatment facility, a copy of the  
7 notice, and the certification and demonstration, if applicable,  
8 required of the generator or the owner under Code of Federal  
9 Regulations, title 40, section 268.8, or part 7045.1315, subpart  
10 1, item A~~7-or-7045-1308~~.

11 O. For an on-site treatment facility, the information  
12 contained in the notice, except the manifest number, and the  
13 certification and demonstration, if applicable, required of the  
14 generator or owner or operator under Code of Federal  
15 Regulations, title 40, section 268.8, or part 7045.1315, subpart  
16 1, item A~~7-or-7045-1308~~.

17 P. For an off-site land disposal facility, a copy of  
18 the notice, and the certification and demonstration, if  
19 applicable, required of the generator or the owner or operator  
20 of a treatment facility under ~~parts~~ Code of Federal Regulations,  
21 title 40, section 268.8, and part 7045.1315 and-7045-1308,  
22 whichever is applicable.

23 Q. For an on-site land disposal facility, the  
24 information contained in the notice required of the generator or  
25 owner or operator of a treatment facility under part 7045.1315,  
26 except for the manifest number, and the certification and  
27 demonstration, if applicable, required under ~~part-7045-1308~~ Code  
28 of Federal Regulations, title 40, section 268.8, whichever is  
29 applicable.

30 R. For an off-site storage facility, a copy of the  
31 notice, and the certification and demonstration if applicable,  
32 required of the generator or the owner or operator under Code of  
33 Federal Regulations, title 40, section 268.8, or part ~~7045-1308~~  
34 ~~or~~ 7045.1315.

35 S. For an on-site storage facility, the information  
36 contained in the notice, except the manifest number, and the



1 certification and demonstration if applicable, required of the  
2 generator or the owner or operator under Code of Federal  
3 Regulations, title 40, section 268.8, or part ~~7045.1300~~-or  
4 7045.1315.

5 7045.0532 SURFACE IMPOUNDMENTS.

6 [For text of subps 1 to 7, see M.R.]

7 Subp. 8. **Special requirements for ignitable or reactive**  
8 **waste.** Ignitable or reactive waste must not be placed in a  
9 surface impoundment, unless the waste and impoundment satisfy  
10 all applicable requirements of parts 7045.1300 to 7045.1380, and:

11 [For text of items A to C, see M.R.]

12 [For text of subps 9 and 10, see M.R.]

13 7045.0534 WASTE PILES.

14 [For text of subps 1 to 7, see M.R.]

15 Subp. 8. **Special requirements for ignitable or reactive**  
16 **waste.** Ignitable or reactive waste must not be placed in a  
17 waste pile unless the waste and waste pile satisfy all  
18 applicable requirements of parts 7045.1300 to 7045.1380, and:

19 [For text of items A and B, see M.R.]

20 [For text of subps 9 and 10, see M.R.]

21 7045.0536 LAND TREATMENT.

22 [For text of subps 1 to 8, see M.R.]

23 Subp. 9. **Ignitable or reactive waste.** The owner or  
24 operator shall not apply ignitable or reactive waste to the  
25 treatment zone unless the waste and the treatment zone meet all  
26 applicable requirements of parts 7045.1300 to 7045.1380, and:

27 [For text of items A and B, see M.R.]

28 [For text of subps 10 and 11, see M.R.]

29 7045.0538 LANDFILLS.

30 [For text of subps 1 to 7, see M.R.]

31 Subp. 8. **Special requirements for ignitable or reactive**  
32 **waste.** Special requirements for ignitable or reactive waste are  
33 as follows:

34 A. Except as provided in item B and subpart 12,

1 ignitable or reactive waste must not be placed in a landfill,  
2 unless the waste and landfill meet all applicable requirements  
3 of parts 7045.1300 to 7045.1380, and the resulting waste,  
4 mixture, or dissolution of material no longer meets the  
5 definition of ignitable or reactive waste under part 7045.0131,  
6 subpart 2 or 5, and compliance with part 7045.0456, subpart 2 is  
7 maintained.

8           B. Except for prohibited wastes which remain subject  
9 to treatment standards in parts 7045.1350 to 7045.1360,  
10 ignitable wastes in containers may be landfilled without meeting  
11 the requirements of item A, provided that the wastes are  
12 disposed of in such a way that they are protected from any  
13 material or conditions which may cause them to ignite. At a  
14 minimum, ignitable wastes must be disposed of in nonleaking  
15 containers which are carefully handled and placed so as to avoid  
16 heat, sparks, rupture, or any other condition that might cause  
17 ignition of the wastes; must be covered daily with soil or other  
18 noncombustible material to minimize the potential for ignition  
19 of the wastes; and must not be disposed of in cells that contain  
20 or will contain other wastes which may generate heat sufficient  
21 to cause ignition of the waste.

22                           [For text of subps 9 to 11, see M.R.]

23           **Subp. 12. Disposal of small containers of hazardous waste**  
24 **in overpacked drums.** Small containers of hazardous waste in  
25 overpacked drums, or laboratory packs, may be placed in a  
26 landfill if the requirements of items A to F are met:

27                           [For text of items A to E, see M.R.]

28           F. The disposal is in compliance with parts 7045.1300  
29 to 7045.1380. Persons who incinerate lab packs according to  
30 part 7045.1360 may use fiber drums in place of metal outer  
31 containers. The fiber drums must meet United States Department  
32 of Transportation specifications in Code of Federal Regulations,  
33 title 49, section 173.12, and be overpacked according to the  
34 requirements in item B.

35                           [For text of subp 13, see M.R.]

## 1 7045.0552 FACILITIES GOVERNED BY INTERIM STATUS.

2 Subpart 1. General requirements. Parts 7045.0552 to  
3 7045.0642 establish minimum standards for the management of  
4 hazardous waste during the period of interim status and until  
5 certification of final closure or, if the facility is subject to  
6 postclosure requirements, until postclosure responsibilities are  
7 fulfilled. These standards apply to owners and operators of  
8 existing facilities who have fully complied with the  
9 requirements for state or federal interim status until a permit  
10 is issued or until applicable interim status closure and  
11 postclosure responsibilities are fulfilled, and those who have  
12 failed to achieve state or federal interim status. These  
13 standards apply to all treatment, storage, or disposal of  
14 hazardous waste at these facilities after July 16, 1984, except  
15 as specifically provided otherwise.

16 For existing facilities which were not required to obtain  
17 federal interim status under the Resource Conservation and  
18 Recovery Act, United States Code, title 42, sections 6901 to  
19 6986, as amended through June 30, 1983, but are required to  
20 obtain state interim status, the requirements of parts  
21 7045.0590; 7045.0592; 7045.0632, subpart 4, items A and B;  
22 7045.0634, subpart 2; 7045.0638, subparts 2, 7, and 8, become  
23 effective 12 months after July 16, 1984, and the requirements of  
24 parts 7045.0608 to 7045.0624 become effective 90 days after July  
25 16, 1984.

26 Parts 7045.0552 to 7045.0642 apply to the owners and  
27 operators of all facilities that treat, store, or dispose of  
28 hazardous waste referred to in parts 7045.1300 to 7045.1380,  
29 land disposal restrictions, and those restrictions are  
30 considered material conditions or requirements of parts  
31 7045.0552 to 7045.0642, interim status standards.

32 [For text of subps 1a to 4, see M.R.]

## 33 7045.0564 WASTE ANALYSIS REQUIREMENTS.

34 [For text of subpart 1, see M.R.]

35 Subp. 2. Waste analysis plan. The owner or operator shall

1 develop and follow a written waste analysis plan which describes  
2 the procedures the owner or operator will carry out to comply  
3 with subpart 1. The owner or operator shall keep this plan at  
4 the facility. The plan must specify:

5 [For text of items A to G, see M.R.]

6 H. For surface impoundments exempted from the land  
7 disposal restrictions under part 7045.1310, the procedures and  
8 schedule for:

9 (1) the sampling of impoundment contents;

10 (2) the analysis of test data; and

11 (3) the annual removal of residues which are not  
12 delisted under part 7045.0075, subpart 2, or which exhibit a  
13 characteristic of hazardous waste under part 7045.0131, and  
14 either do not meet applicable treatment standards of parts  
15 7045.1350 to 7045.1360, or, where no treatment standards have  
16 been established, such residues are prohibited from land  
17 disposal under parts 7045.1320 to 7045.1333 or RCRA section  
18 3004(d).

19 7045.0584 OPERATING RECORD.

20 [For text of subps 1 and 2, see M.R.]

21 Subp. 3. **Record information.** The following information  
22 must be recorded, as it becomes available, and maintained in the  
23 operating record until closure of the facility:

24 [For text of items A to I, see M.R.]

25 J. Records of the quantities and date of placement of  
26 each shipment of hazardous waste placed in land disposal units  
27 under an extension to the effective date of any land disposal  
28 restriction granted under part 7045.0075, subpart 8 or 9,  
29 monitoring data required pursuant to a petition under part  
30 7045.0075, subpart 9, or a certificate and demonstration under  
31 ~~part-7045-1308~~ Code of Federal Regulations, title 40, section  
32 268.8, and the notice required by a generator under part  
33 7045.1315, subpart 1, item C.

34 K. For an off-site treatment facility, the notice,  
35 and the certification and demonstration, if applicable, required

1 by a generator or the owner or operator under ~~parts-7045-1308~~  
2 Code of Federal Regulations, title 40, section 268.8, and part  
3 7045.1315, subpart 1, item A.

4 L. For an on-site treatment facility, the information  
5 contained in the notice and the certification and demonstration,  
6 if applicable, required by a generator or the owner or operator  
7 under ~~parts-7045-1308~~ Code of Federal Regulations, title 40,  
8 section 268.8, and part 7045.1315, subpart 1, item A, except for  
9 the manifest number required under part 7045.1315, subpart 1,  
10 item A, subitem (3).

11 M. For an off-site land disposal facility, the  
12 notice, certification and demonstration, if applicable, required  
13 by the generator, owner or operator of a treatment facility  
14 under Code of Federal Regulations, title 40, section 268.8, or  
15 ~~part 7045-1308-or~~ 7045.1315, subpart 2, items A and B, for the  
16 facility or part 7045.1315, subpart 1, item B, for the  
17 generator, whichever is applicable.

18 N. For an on-site land disposal facility, the  
19 information contained in the notice and the certification and  
20 demonstration, if applicable, required by a generator or the  
21 owner or operator under Code of Federal Regulations, title 40,  
22 section 268.8, or part ~~7045-1308-or~~ 7045.1315 except for the  
23 manifest number, whichever is applicable.

24 O. For an off-site storage facility, a copy of the  
25 notice, and the certification and demonstration if applicable,  
26 required by the generator or the owner or operator under Code of  
27 Federal Regulations, title 40, section 268.8, or part ~~7045-1308~~  
28 ~~or~~ 7045.1315.

29 P. For an on-site storage facility, the information  
30 contained in the notice, except the manifest number, and the  
31 certification and demonstration if applicable, required by the  
32 generator or the owner or operator of a treatment facility under  
33 Code of Federal Regulations, title 40, section 268.8, or part  
34 ~~7045-1308-or~~ 7045.1315.

35 7045.0630 SURFACE IMPOUNDMENTS.

1 [For text of subps 1 to 4, see M.R.]

2 Subp. 5. **Inspections.** The owner or operator shall inspect:

3 [For text of item A, see M.R.]

4 B. the surface impoundment, including dikes and  
5 vegetation surrounding the dike, at least once a week to detect  
6 any leaks, deterioration, or failures in the impoundment. As  
7 required by part 7045.0556, subpart 5, the owner or operator  
8 shall remedy any deterioration or malfunction found.

9 [For text of subp 6, see M.R.]

10 Subp. 7. **Special requirements for ignitable or reactive**  
11 **wastes.** Ignitable or reactive waste must not be placed in a  
12 surface impoundment unless the waste and the impoundment satisfy  
13 all applicable requirements of parts 7045.1300 to 7045.1380, and:

14 [For text of items A and B, see M.R.]

15 [For text of subp 8, see M.R.]

16 7045.0632 WASTE PILES.

17 [For text of subps 1 to 4a, see M.R.]

18 Subp. 5. **Special requirements for ignitable or reactive**  
19 **waste.** Ignitable or reactive waste must not be placed in a pile  
20 unless the waste and pile satisfy all applicable requirements of  
21 parts 7045.1300 to 7045.1380:

22 [For text of items A and B, see M.R.]

23 [For text of subps 6 and 7, see M.R.]

24 7045.0634 LAND TREATMENT.

25 [For text of subps 1 to 6, see M.R.]

26 Subp. 7. **Special requirements for ignitable or reactive**  
27 **waste.** Ignitable or reactive wastes must not be land treated,  
28 unless the waste and treatment zone meet all applicable  
29 requirements of parts 7045.1300 to 7045.1380, and the waste is  
30 immediately incorporated into the soil so that the resulting  
31 waste, mixture, or dissolution of material no longer meets the  
32 definition of ignitable or reactive waste under parts 7045.0131,  
33 subpart 2 or 5; and 7045.0562, subpart 2 is complied with.

34 [For text of subp 8, see M.R.]



1 7045.0638 LANDFILLS.

2 [For text of subps 1 to 4, see M.R.]

3 Subp. 5. **Special requirements for ignitable or reactive**  
4 **waste.** Special requirements for ignitable or reactive waste are  
5 as follows:

6 A. Except as provided in item B, and subparts 7 and  
7 9, ignitable or reactive waste must not be placed in a landfill  
8 unless the waste and landfill meet all applicable requirements  
9 of parts 7045.1300 to 7045.1380, and the resulting waste,  
10 mixture, or dissolution of material no longer meets the  
11 definition of ignitable or reactive waste under part 7045.0131,  
12 subpart 2 or 5, and compliance with part 7045.0562, subpart 2,  
13 is maintained.

14 B. Except for prohibited wastes which remain subject  
15 to treatment standards in parts 7045.1350 to 7045.1360,  
16 ignitable wastes in containers may be landfilled without meeting  
17 the requirements of item A if the wastes are disposed so that  
18 they are protected from any material or conditions which may  
19 cause them to ignite. Ignitable wastes must be disposed in  
20 nonleaking containers which are carefully handled and placed so  
21 as to avoid heat, sparks, rupture, or any other condition that  
22 might cause ignition of the wastes; must be covered daily with  
23 soil or other noncombustible material to minimize the potential  
24 for ignition of the wastes; and must not be disposed in cells  
25 that contain or will contain other wastes which may generate  
26 heat sufficient to cause ignition of the wastes.

27 [For text of subp 6 to 8, see M.R.]

28 Subp. 9. **Special requirements for disposal of laboratory**  
29 **packs.** Small containers of hazardous waste in overpacked drums,  
30 or laboratory packs, may be placed in a landfill if the  
31 requirements of items A to F are met:

32 [For text of items A to E, see M.R.]

33 F. The disposal complies with parts 7045.1300 to  
34 7045.1380. Persons who incinerate lab packs according to part  
35 7045.1360 may use fiber drums in place of metal outer  
36 containers. The fiber drums must meet the United States



1 Department of Transportation specifications in Code of Federal  
2 Regulation, title 49, section 173.12, and be overpacked  
3 according to item B.

4 7045.0665 USE CONSTITUTING DISPOSAL.

5 Subpart 1. Scope. Items A and B apply to hazardous wastes  
6 that are used in a manner constituting disposal.

7 A. For the purposes of this part, use constituting  
8 disposal means the application or placement of recyclable wastes  
9 in or on the land without mixing with other substances or after  
10 mixing or combining with any other substances.

11 B. Hazardous wastes are not used in a manner  
12 constituting disposal if:

13 (1) they are a product produced for the general  
14 public's use;

15 (2) they contain recyclable hazardous wastes; and  
16 if the recyclable hazardous wastes have undergone a chemical  
17 reaction in the course of producing the products so as to become  
18 inseparable by physical means; and

19 (3) the products meet the applicable treatment  
20 standards in parts 7045.1350 to 7045.1360 or applicable  
21 prohibition levels in part 7045.1330 or RCRA section 3004(d)  
22 where no treatment standards have been established, for each  
23 recyclable material that they contain.

24 Commercial fertilizers that are produced for the general  
25 public's use that contain recyclable materials also are not  
26 presently subject to regulation provided they meet the same  
27 treatment standards or prohibition levels for each recyclable  
28 material that they contain. However, zinc-containing  
29 fertilizers using hazardous waste K061 that are produced for the  
30 general public's use are not presently subject to regulation.

31 [For text of subps 1a to 4, see M.R.]

32 7045.1300 LAND DISPOSAL RESTRICTIONS; APPLICABILITY AND  
33 EXEMPTIONS.

34 Subpart 1. Applicability. This part identifies hazardous  
35 wastes that are restricted from land disposal and defines those

1 limited circumstances under which an otherwise prohibited waste  
2 may continue to be land disposed.

3 Except as specifically provided in subpart 2 or parts  
4 7045.0100 to ~~7045.0141~~ 7045.0143, the requirements of this part  
5 apply to persons who generate or transport hazardous waste and  
6 owners and operators of hazardous waste treatment, storage, and  
7 disposal facilities. For purposes of this part, a certification  
8 statement that complies with Code of Federal Regulations, title  
9 40, part 268, also complies with the certification statement  
10 requirements under this part.

11 Subp. 2. **Exemptions for restricted wastes.** Restricted  
12 wastes may continue to be land disposed under the following  
13 conditions:

14 A. if an extension has been granted from the  
15 effective date of a prohibition under part 7045.0075, subpart 8,  
16 with respect to those wastes covered by the extension; and

17 B. if an exemption has been granted from a  
18 prohibition as a result of a petition under part 7045.0075,  
19 subpart 9, with respect to those wastes and units covered by the  
20 petition.

21 Subp. 3. **Other exemptions.** The following hazardous wastes  
22 are not subject to parts 7045.1300 to 7045.1380:

23 A. waste generated by small quantity generators of  
24 less than 100 kilograms of nonacute hazardous waste per month,  
25 or less than one kilogram of acute hazardous waste per month, as  
26 defined in part 7045.0206;

27 B. waste pesticides that a farmer disposes of  
28 according to part 7045.0213; and

29 C. waste identified or listed as hazardous after  
30 November 8, 1984, for which no land disposal prohibitions or  
31 treatment standards have been adopted.

32 Subp. 4. **Waivers.** The requirements of this part shall not  
33 affect the availability of a waiver under section 121(d)(4) of  
34 the Comprehensive Environmental Response, Compensation, and  
35 Liability Act of 1980.

1 7045.1305 DILUTION PROHIBITED AS A SUBSTITUTE FOR TREATMENT.

2 A. Except as provided in item B, no generator,  
3 transporter, handler, or owner or operator of a treatment,  
4 storage, or disposal facility shall in any way dilute a  
5 restricted waste or the residual from treatment of a restricted  
6 waste as a substitute for adequate treatment to achieve  
7 compliance with parts 7045.1350 to 7045.1360, to circumvent the  
8 effective date or otherwise avoid a prohibition in parts  
9 7045.1320 to 7045.1330, or to circumvent a land disposal  
10 prohibition imposed by RCRA section 3004.

11 B. Dilution of wastes that are hazardous only because  
12 they exhibit a characteristic in a treatment system that treats  
13 wastes subsequently discharged to a water of the United States  
14 pursuant to a permit issued under section 402 of the Clean Water  
15 Act (CWA), or that treats wastes for purposes of pretreatment  
16 requirements under section 307 of the CWA is not impermissible  
17 dilution for purposes of this part unless a method has been  
18 specified as the treatment standard in part 7045.1360.

19 ~~7045.1308-LANDFILL-AND-SURFACE-IMPOUNDMENT-DISPOSAL-RESTRICTIONS.~~

20 ~~Subpart 1.--Generator requirements.--As of May 8, 1990,~~  
21 ~~this part is no longer in effect.--Before May 8, 1990, wastes~~  
22 ~~that are otherwise prohibited from land disposal under part~~  
23 ~~7045.1333, subpart 2, item C, may be disposed in a landfill or~~  
24 ~~surface impoundment in compliance with Code of Federal~~  
25 ~~Regulations, title 40, section 268.5(h)(2), provided that the~~  
26 ~~generator meets the requirements in items A to D.~~

27 ~~A.--Before disposal, the generator has made a good~~  
28 ~~faith effort to locate and contract with treatment and recovery~~  
29 ~~facilities practically available that provide the greatest~~  
30 ~~environmental benefit.~~

31 ~~B.--If a generator determines that there is no~~  
32 ~~practically available treatment for a waste, the generator must~~  
33 ~~fulfill the requirements in subitems (1) and (2):~~

34 ~~(1)--Before the initial shipment of waste, the~~  
35 ~~generator must submit a demonstration to the commissioner that~~

1 includes a list of facilities and facility officials contacted,  
 2 addresses, telephone numbers, and contact dates, as well as a  
 3 written discussion of why the generator was not able to obtain  
 4 treatment or recovery for that waste. The generator must also  
 5 provide the following certification:

6 "I certify under penalty of law that the requirements  
 7 of Minnesota Rules, part 7045.1300, subpart 1, item A,  
 8 have been met and that disposal in a landfill or  
 9 surface impoundment is the only practical alternative  
 10 to treatment currently available. I believe that the  
 11 information submitted is true, accurate, and  
 12 complete. I am aware that there are significant  
 13 penalties for submitting false information, including  
 14 the possibility of fine and imprisonment."

15 The generator does not need to wait for commissioner  
 16 approval of the demonstration or certification before shipment  
 17 of the waste. However, if the commissioner invalidates the  
 18 demonstration or certification for the reasons outlined in part  
 19 7045.1308, subpart 2, item B, the generator must immediately  
 20 cease further shipments of the waste, inform all facilities that  
 21 received the waste of the invalidation, and keep records of the  
 22 communication on site in the generator's files.

23 (2) With the initial shipment of waste, the  
 24 generator must submit a copy of the demonstration and the  
 25 certification in subitem (1) to the receiving facility. With  
 26 each subsequent waste shipment, only the certification is  
 27 required to be submitted, provided that the conditions being  
 28 certified remain unchanged. The generator must retain on site a  
 29 copy of the demonstration, if applicable, and certification  
 30 required for each waste shipment for at least five years from  
 31 the date that the waste that is the subject of the documentation  
 32 was last sent to on-site or off-site disposal. The five-year  
 33 record retention requirement is automatically extended during  
 34 the course of any unresolved enforcement action regarding the  
 35 regulated activity or as requested by the commissioner.

36 E. If a generator determines that there are

1 ~~practically-available-treatments-for-a-waste, the generator must~~  
2 ~~contract-to-use-the-practically-available-technology-that-yields~~  
3 ~~the-greatest-environmental-benefit.--The-generator-must-also~~  
4 ~~fulfill-the-requirements-in-subitems-(1)-and-(2):~~

5           ~~(1)-Before-the-initial-shipment-of-waste, the~~  
6 ~~generator-must-submit-a-demonstration-to-the-commissioner-that~~  
7 ~~includes-a-list-of-facilities-and-facility-officials-contacted,~~  
8 ~~addresses, telephone numbers, and contact dates, as well as a~~  
9 ~~written-discussion-explaining-why-the-treatment-or-recovery~~  
10 ~~technology-chosen-provides-the-greatest-environmental-benefit.~~  
11 ~~The-generator-must-also-provide-the-following-certification:~~

12           ~~"I-certify-under-penalty-of-law-that-the-requirements~~  
13 ~~of-Minnesota-Rules, part-7045.1308, subpart-1, item-A,~~  
14 ~~have-been-met-and-that-I-have-contracted-to-treat-my~~  
15 ~~waste, or otherwise provide treatment, by the~~  
16 ~~practically-available-technology-that-yields-the~~  
17 ~~greatest-environmental-benefit, as indicated in my~~  
18 ~~demonstration.--I-believe-that-the-information~~  
19 ~~submitted-is-true, accurate, and complete.--I-am-aware~~  
20 ~~that-there-are-significant-penalties-for-submitting~~  
21 ~~false-information, including-the-possibility-of-fine~~  
22 ~~and-imprisonment."~~

23           ~~The-generator-does-not-need-to-wait-for-commissioner~~  
24 ~~approval-of-the-demonstration-or-certification-before-shipment~~  
25 ~~of-the-waste.~~

26           ~~(2)-With-the-initial-shipment-of-waste, the~~  
27 ~~generator-must-submit-to-the-receiving-facility-a-copy-of-the~~  
28 ~~demonstration-and-the-certification-in-subitem-(1).--With-each~~  
29 ~~subsequent-waste-shipment, only-the-certification-is-required-to~~  
30 ~~be-submitted, provided-that-the-conditions-being-certified~~  
31 ~~remain-unchanged.--The-generator-must-retain-on-site-a-copy-of~~  
32 ~~the-demonstration, if-applicable, and-certification-required-for~~  
33 ~~each-waste-shipment-for-at-least-five-years-from-the-date-that~~  
34 ~~the-waste-that-is-the-subject-of-the-documentation-was-last-sent~~  
35 ~~to-on-site-or-off-site-disposal.--The-five-year-record-retention~~  
36 ~~requirement-is-automatically-extended-during-the-course-of-any~~

1 ~~unresolved-enforcement-action-regarding-the-regulated-activity~~  
2 ~~or-as-requested-by-the-commissioner.~~

3         ~~D.--When-the-generator-has-determined-that-there-is~~  
4 ~~practically-available-treatment-for-a-waste-before-disposal,~~  
5 ~~with-the-initial-shipment-of-waste,the-generator-must-submit-a~~  
6 ~~copy-of-the-demonstration-and-the-certification-required-in~~  
7 ~~subpart-1,item-B7-subitem-(2),to-the-receiving-facility.--With~~  
8 ~~each-subsequent-waste-shipment,only-the-certification-is~~  
9 ~~required-to-be-submitted,provided-that-the-conditions-being~~  
10 ~~certified-remain-unchanged.--The-generator-must-retain-on-site-a~~  
11 ~~copy-of-the-demonstration,if-applicable,and-certification~~  
12 ~~required-for-each-waste-shipment-for-at-least-five-years-from~~  
13 ~~the-date-that-the-waste-that-is-the-subject-of-the-documentation~~  
14 ~~was-last-sent-to-on-site-or-off-site-disposal.--The-five-year~~  
15 ~~record-retention-requirement-is-automatically-extended-during~~  
16 ~~the-course-of-any-unresolved-enforcement-action-regarding-the~~  
17 ~~regulated-activity-or-as-requested-by-the-commissioner.~~

18         ~~Subp.-2.--Certification-review:~~

19             ~~A.--After-receiving-the-demonstration-and~~  
20 ~~certification,the-commissioner-may-request-any-additional~~  
21 ~~information-which-the-commissioner-considers-necessary-to~~  
22 ~~evaluate-the-certification.~~

23             ~~B.--A-generator-who-has-submitted-a-certification~~  
24 ~~under-this-part-must-immediately-notify-the-commissioner-when~~  
25 ~~the-generator-has-knowledge-of-any-change-in-the-conditions-that~~  
26 ~~formed-the-basis-of-the-generator's-certification,and-submit-a~~  
27 ~~new-demonstration-and-certification-as-provided-in-part~~  
28 ~~7045.1308,subpart-1,to-the-receiving-facility.~~

29             ~~C.--If,after-review-of-the-certification,the~~  
30 ~~commissioner-determines-that-practically-available-treatment~~  
31 ~~exists-where-the-generator-has-certified-otherwise,or-that~~  
32 ~~there-exists-some-other-method-of-practically-available~~  
33 ~~treatment-yielding-greater-environmental-benefit-than-that-which~~  
34 ~~the-generator-has-certified,the-commissioner-may-invalidate-the~~  
35 ~~certification.~~

36             ~~D.--If-the-commissioner-invalidates-a-certification,~~



1 the generator must immediately cease further shipments of the  
2 waste, and inform all facilities that received the waste of the  
3 invalidation, and keep records of such communication on site in  
4 the generator's files.

5 Subp. 3. Facility requirements.

6 A. A treatment, recovery, or storage facility  
7 receiving wastes subject to a valid certification must keep  
8 copies of the generator's demonstration, if applicable, and  
9 certification in the facility's operating record.

10 B. The owner or operator of a treatment or recovery  
11 facility must certify that the facility has treated the waste  
12 according to the generator's demonstration. The following  
13 certification is required:

14 "I certify under penalty of law that I have personally  
15 examined and am familiar with the treatment,  
16 technology, and operation of the treatment process  
17 used to support this certification and that, based on  
18 my inquiry of those individuals immediately  
19 responsible for obtaining this information, I believe  
20 that the treatment process has been operated and  
21 maintained properly and complies with treatment as  
22 specified in the generator's demonstration. I am  
23 aware that there are significant penalties for  
24 submitting false information, including the  
25 possibility of fine and imprisonment."

26 C. The owner or operator of a treatment, recovery, or  
27 storage facility must, for each initial shipment of waste, send  
28 a copy of the generator's demonstration, if applicable, and  
29 certification under part 7045.1308, subpart 1, item B, subitem  
30 (1) or item C, subitem (1), and certification under subpart 3,  
31 item B, if applicable, to the facility receiving the waste or  
32 treatment residues. With each subsequent waste shipment, only  
33 the certification is required to be submitted, provided that the  
34 conditions being certified remain unchanged.

35 D. The owner or operator of a disposal facility must  
36 ensure that those wastes prohibited under part 7034.1333



~~1 subpart 2, item D, are subject to a certification according to  
2 the requirements of this part before disposal in a landfill or  
3 surface impoundment, and that the units receiving the wastes  
4 must meet the minimum technological requirements of Code of  
5 Federal Regulations, title 40, section 268.5(h)(2).~~

~~6 Subp. 4. Land disposal authorized. When the certification  
7 is received by the commissioner, and provided that the wastes  
8 have been treated by the treatment, if any, determined by the  
9 generator to yield the greatest environmental benefit  
10 practically available, the wastes or treatment residuals may be  
11 disposed in a landfill or surface impoundment unit meeting the  
12 requirements of Code of Federal Regulations, title 40, section  
13 268.5(h)(2), unless otherwise prohibited by the commissioner.~~

14 7045.1309 SPECIAL RULES REGARDING WASTES THAT EXHIBIT A  
15 CHARACTERISTIC.

16 Subpart 1. **Applicable treatment standards.** The initial  
17 generator of a solid waste must determine each EPA hazardous  
18 waste number applicable to the waste to determine the applicable  
19 treatment standards under parts 7045.1350 to 7045.1360. For  
20 purposes of parts 7045.1300 to 7045.1380, the waste will carry  
21 the waste code for any applicable listing under part 7045.0135  
22 and also one or more waste codes under part 7045.0131 where the  
23 waste exhibits a characteristic, except when the treatment  
24 standard for the waste code listed in part 7045.0135 operates in  
25 lieu of the standard for the waste code under part 7045.0131 as  
26 provided in subpart 2.

27 Subp. 2. **Conditions of meeting treatment standards.** When  
28 a prohibited waste is listed under part 7045.0135 and exhibits a  
29 characteristic under part 7045.0131, the treatment standard for  
30 the waste code listed in part 7045.0135 will operate in lieu of  
31 the standard for the waste code under part 7045.0131, provided  
32 that the treatment standard for the waste includes a treatment  
33 standard for the constituent that causes the waste to exhibit  
34 the characteristic. Otherwise, the waste must meet the  
35 treatment standards for all applicable listed and characteristic

1 waste codes.

2 Subp. 3. **Land disposal.** In addition to any applicable  
3 standards determined from the initial point of generation, no  
4 prohibited waste that exhibits a characteristic under part  
5 7045.0131 may be land disposed unless the waste complies with  
6 the treatment standards under parts 7045.1350 to 7045.1360.

7 Subp. 4. **Waste analysis.**

8 A. Wastes that exhibit a characteristic under part  
9 7045.0131 are also subject to the requirements of part  
10 7045.1315, except that when the waste is no longer hazardous,  
11 for each shipment of the wastes to a solid waste facility under  
12 chapter 7035, the initial generator or the treatment facility  
13 need not send a notification as required in part 7045.1315 to  
14 the facility. In those circumstances, a notification and  
15 certification must be sent to the commissioner.

16 B. The notification must include the following  
17 information:

18 (1) the name and address of the solid waste  
19 facility receiving the waste shipment under chapter 7035;

20 (2) a description of the waste as initially  
21 generated, including the applicable EPA hazardous waste numbers,  
22 the applicable wastewater or nonwastewater category as defined  
23 in part 7045.0020, and the subdivisions made within a waste code  
24 based on waste specific criteria; and

25 (3) the treatment standards applicable to the  
26 waste at the initial point of generation.

27 C. The certification must be signed by an authorized  
28 representative, and must use the following statement:

29 "I certify under penalty of law that I have personally  
30 examined and am familiar with the treatment technology  
31 and operation of the treatment process used to support  
32 this certification and that, based on my inquiry of  
33 those individuals immediately responsible for  
34 obtaining this information, I believe that the  
35 treatment process has been operated and maintained  
36 properly and complies with the performance levels in

1 parts 7045.1350 to 7045.1360 and all applicable  
2 prohibitions in part 7045.1330 or RCRA section 3004(d)  
3 without impermissible dilution of the prohibited  
4 waste. I am aware that there are significant  
5 penalties for submitting a false certification,  
6 including the possibility of fine and imprisonment."

7 7045.1310 TREATMENT SURFACE IMPOUNDMENT EXEMPTION.

8 Subpart 1. **Conditions.** Wastes that are otherwise  
9 prohibited from land disposal under parts 7045.1300 to 7045.1380  
10 may be treated in a surface impoundment or series of  
11 impoundments if:

12 A. treatment of the wastes occurs in the  
13 impoundments;

14 B. the following conditions are met:

15 (1) For wastes with treatment standards in parts  
16 7045.1350 to 7045.1360 or prohibition levels in parts 7045.1320  
17 to 7045.1350 or RCRA section 3004(d), the residues from  
18 treatment are analyzed, as specified in part 7045.1315 or  
19 7045.1330 to determine if they meet the applicable treatment  
20 standards, or, where no treatment standards have been  
21 established for the waste, the applicable prohibition levels.  
22 The sampling method, specified in the waste analysis plan under  
23 part 7045.0458 or 7045.0564 must be designed so the  
24 representative samples of the sludge and the supernatant are  
25 tested separately rather than mixed to form homogeneous samples.

26 (2) The following treatment residues, including  
27 any liquid waste, must be removed at least annually: residues  
28 that do not meet the treatment standards adopted under parts  
29 7045.1350 to 7045.1360; residues that do not meet the  
30 prohibition levels adopted under parts 7045.1320 to 7045.1350,  
31 or imposed by statute where no treatment standards have been  
32 established; residues that are from the treatment of wastes  
33 prohibited from land disposal under parts 7045.1320 to 7045.1350  
34 where no treatment standards have been established and no  
35 prohibition levels apply; or residues from managing listed

1 wastes that are not delisted under part 7045.0075, subpart 2.  
2 However, residues that are the subject of a valid certification  
3 under ~~part-7045-1308~~ Code of Federal Regulations, title 40,  
4 section 268.8, made no later than one year after placement of  
5 the wastes in an impoundment are not required to be removed  
6 annually. If the volume of liquid flowing through the  
7 impoundment or series of impoundments annually is greater than  
8 the volume of the impoundment or impoundments, the flow-through  
9 constitutes removal of the supernatant for the purpose of this  
10 requirement.

11 (3) Treatment residues may not be placed in any  
12 other surface impoundment for subsequent management unless the  
13 residues are the subject of a valid certification under ~~part~~  
14 ~~7045-1308~~ Code of Federal Regulations, title 40, section 268.8,  
15 that allows disposal in surface impoundments meeting the  
16 requirements of ~~part-7045-1308, subpart-1~~ Code of Federal  
17 Regulations, title 40, section 268.8.

18 (4) The procedures and schedule for the sampling  
19 of impoundment contents, the analysis of test data, and the  
20 annual removal of residues that do not meet the treatment  
21 standards, or, prohibition levels where no treatment standards  
22 have been established, or that are from the treatment of wastes  
23 prohibited from land disposal under parts 7045.1320 to 7045.1350  
24 where no treatment standards have been established and no  
25 prohibition levels apply, must be specified in the facility's  
26 waste analysis plan as required under parts 7045.0458 and  
27 7045.0564;

28 C. the impoundment meets the design requirements of  
29 Code of Federal Regulations, title 40, section 264.221(c) or  
30 265.221(a), and complies with applicable groundwater monitoring  
31 requirements of part 7045.0484 or 7045.0590;

32 D. the owner or operator submits to the commissioner  
33 a written certification that the requirements of item C<sub>7</sub> have  
34 been met and a copy of the waste analysis plan required under  
35 item B. The following certification is-required must be signed  
36 by an authorized representative, and must use the following

1 statement:

2 "I certify under penalty of law that the requirements  
3 of part 7045.1310, subpart 1, item C, have been met  
4 for all surface impoundments being used to treat  
5 restricted wastes. I believe that the information  
6 submitted is true, accurate, and complete. I am aware  
7 that there are significant penalties for submitting  
8 false information, including the possibility of fine  
9 and imprisonment."

10 [For text of subp 2, see M.R.]

11 7045.1315 WASTE ANALYSIS FOR RESTRICTED WASTES.

12 Subpart 1. **Applicability.** Except as provided in part  
13 7045.1330 or 7045.1358, if a waste is listed in part 7045.0135,  
14 the generator must test the waste, or test an extract using the  
15 test method described in Code of Federal Regulations, title 40,  
16 part 261, Appendix II, or use knowledge of the waste, to  
17 determine if the waste is restricted from land disposal. Except  
18 as specified in part 7045.1330, if a generator's waste exhibits  
19 one or more of the characteristics in part 7045.0131, the  
20 generator must test an extract using the test method in Code of  
21 Federal Regulations, title 40, part 268, Appendix IX, or use  
22 knowledge of the waste to determine if the waste is restricted  
23 from land disposal under this part.

24 A. If a generator is managing a restricted waste and  
25 the waste does not meet the applicable treatment standards or  
26 exceeds the applicable prohibition levels in part 7045.1330 or  
27 RCRA section 3004(d), with each shipment of waste the generator  
28 must notify the treatment or storage facility in writing of the  
29 appropriate treatment standards in parts 7045.1350 to 7045.1360  
30 and any applicable prohibition levels in part 7045.1330 or RCRA  
31 section 3004(d). The notice must include the following  
32 information:

- 33 (1) EPA Hazardous Waste Number;  
34 (2) the corresponding treatment standards for  
35 wastes F001-F005, F039, and wastes prohibited under part

1 7045.1330 or RCRA section 3004(d). Treatment standards for all  
2 other restricted wastes must either be included, or be  
3 referenced by including on the notification the applicable  
4 wastewater or nonwastewater category as defined in part  
5 7045.0020, the applicable subdivisions made within a waste code  
6 based on waste specific criteria, and Code of Federal  
7 Regulations sections and paragraphs where the applicable  
8 treatment standard appears. Where the applicable treatment  
9 standards are expressed as specified technologies in part  
10 7045.1360, the applicable five-letter treatment code in part  
11 7045.1360 (~~e.g., INEIN, WETEX~~) also must be listed on the  
12 notification;

13 (3) the manifest number associated with the  
14 shipment of waste; and

15 (4) waste analysis data, where available.

16 B. If a generator is managing a restricted waste and  
17 determines that the waste can be land disposed without further  
18 treatment, with each shipment of waste the generator must  
19 submit, to the treatment, storage, or land disposal facility, a  
20 notice and a certification stating that the waste meets the  
21 applicable treatment standards in parts 7045.1350 to 7045.1360  
22 and the applicable prohibitions in part 7045.1330 or RCRA  
23 section 3004(d).

24 (1) The notice must include the following  
25 information:

26 (a) EPA Hazardous Waste Number;

27 (b) the corresponding treatment standards  
28 for wastes F001-F005, F039, and wastes prohibited under part  
29 7045.1330 or RCRA section 3004(d). Treatment standards for all  
30 other restricted wastes must either be included, or be  
31 referenced by including on the notification the applicable  
32 wastewater or nonwastewater category as defined in part  
33 7045.0020, the applicable subdivisions made within a waste code  
34 based on waste specific criteria, and Code of Federal  
35 Regulations sections and paragraphs where the applicable  
36 treatment standard appears. Where the applicable treatment



1 standards are expressed as specified technologies in part  
2 7045.1360, the applicable five-letter treatment code in part  
3 7045.1360 also must be listed on the notification;

4 (c) the manifest number associated with the  
5 shipment of waste; and

6 (d) waste analysis data, where available.

7 (2) The certification must be signed by an  
8 authorized representative and must state the following:

9 "I certify under penalty of law that I personally have  
10 examined and am familiar with the waste through  
11 analysis and testing or through knowledge of the waste  
12 to support this certification that the waste complies  
13 with the treatment standards in parts 7045.1350 to  
14 7045.1360 and all applicable prohibitions in part  
15 7045.1330 or RCRA section 3004(d). I believe that the  
16 information submitted is true, accurate, and  
17 complete. I am aware that there are significant  
18 penalties for submitting a false certification,  
19 including the possibility of a fine and imprisonment."

20 C. If a generator's waste is subject to an exemption  
21 from a prohibition on the type of land disposal method used for  
22 the waste, including, but not limited to, a case-by-case  
23 extension under part 7045.0075, subpart 8, an exemption under  
24 part 7045.0075, subpart 9, or a nationwide capacity variance  
25 under Code of Federal Regulations, title 40, part 268, subpart  
26 C, with each shipment of wastes, the generator must submit a  
27 notice to the facility receiving the waste, stating that the  
28 waste is not prohibited from land disposal. The notice must  
29 include the following information:

30 (1) the EPA Hazardous Waste Number;

31 (2) the corresponding treatment standards for  
32 wastes F001-F005, F039, and wastes prohibited in part 7045.1330  
33 or RCRA section 3004(d). Treatment standards for all other  
34 restricted wastes must either be included, or be referenced by  
35 including on the notification the applicable wastewater or  
36 nonwastewater category as defined in part 7045.0020, the



1 applicable subdivisions made within a waste code based on waste  
2 specific criteria, and Code of Federal Regulations sections and  
3 paragraphs where the applicable treatment standard appears.  
4 Where the applicable treatment standards are expressed as  
5 specified technologies in part 7045.1360, the applicable  
6 five-letter treatment code in part 7045.1360 also must be listed  
7 on the notification;

8 (3) the manifest number associated with the  
9 shipment of waste;

10 (4) waste analysis data, where available; and

11 (5) the date the waste is subject to the  
12 prohibitions.

13 D. If a generator is managing a prohibited waste in  
14 tanks or containers under part 7045.0292, and is treating the  
15 waste in tanks or containers to meet applicable treatment  
16 standards under parts 7045.1350 to 7045.1360, the generator must  
17 develop and follow a written waste analysis plan that describes  
18 the procedures the generator will carry out to comply with the  
19 treatment standards. The plan must be kept on-site in the  
20 generator's records, and the following requirements must be met:

21 (1) the waste analysis plan must be based on a  
22 detailed chemical and physical analysis of a representative  
23 sample of the prohibited wastes being treated, and contain all  
24 information necessary to treat the wastes according to parts  
25 7045.1300 to 7045.1380, including the selected testing  
26 frequency;

27 (2) the plans must be filed with the commissioner  
28 at least 30 days before treatment activity, with delivery  
29 verified; and

30 (3) wastes shipped off-site must comply with the  
31 notification requirements of subpart 1.

32 E. If a generator determines that a waste is  
33 restricted based solely on the generator's knowledge of the  
34 waste, all supporting data used to make this determination must  
35 be retained on-site in the generator's files. If a generator  
36 determines that a waste is restricted based on testing the waste

1 or an extract developed using the test method described in Code  
2 of Federal Regulations, title 40, part 261, Appendix II, all  
3 waste analysis data must be retained on-site in the generator's  
4 files.

5           F. If a generator determines that the generator is  
6 managing a restricted waste that is excluded from the definition  
7 of hazardous or solid waste or exempt from hazardous waste  
8 regulation under Code of Federal Regulations, title 40, sections  
9 261.2 to 261.6, subsequent to the point of generation, the  
10 generator must place a one-time notice stating the generation,  
11 subsequent exclusion from the definition of hazardous or solid  
12 waste, or exemption from the hazardous waste regulation, and the  
13 disposition of the waste in the facility's file.

14           G. Generators must retain on-site a copy of all  
15 notices, certifications, demonstrations, waste analysis data,  
16 and other documentation produced under this part for at least  
17 five years from the date that the waste that is the subject of  
18 the documentation was last sent to on-site or off-site  
19 treatment, storage, or disposal. The five-year record retention  
20 period is automatically extended during the course of any  
21 unresolved enforcement action regarding the regulated activity  
22 or as requested by the commissioner. The requirements of this  
23 item apply to solid wastes even when the hazardous  
24 characteristic is removed before disposal or when the waste is  
25 excluded from the definition of hazardous or solid waste or  
26 exempted from hazardous waste regulation, subsequent to the  
27 point of generation.

28           H. If a generator is managing a lab pack that  
29 contains wastes identified under part 7045.1380 and wishes to  
30 use the alternative treatment standard under part 7045.1360,  
31 with each shipment of waste, the generator must submit a notice  
32 to the treatment facility according to this subpart. The  
33 generator must also submit the following certification, which  
34 must be signed by an authorized representative:

35           "I certify under penalty of law that I personally have  
36 examined and am familiar with the waste and that the

1 lab pack contains only the wastes specified in Code of  
2 Federal Regulations, title 40, part 268, Appendix IV,  
3 or solid wastes not subject to regulation under Code  
4 of Federal Regulations, title 40, part 261. I am  
5 aware that there are significant penalties for  
6 submitting a false certification, including the  
7 possibility of fine or imprisonment."

8 I. If a generator is managing a lab pack that  
9 contains organic wastes and wishes to use the alternate  
10 treatment standards in part 7045.1360, with each shipment of  
11 waste, the generator must submit a notice to the treatment  
12 facility according to this subpart. The generator also must  
13 submit the following certification, which must be signed by an  
14 authorized representative:

15 "I certify under penalty of law that I personally have  
16 examined and am familiar with the waste through  
17 analysis and testing or through knowledge of the waste  
18 and that the lab pack contains only organic waste  
19 specified in Code of Federal Regulations, title 40,  
20 part 268, Appendix V, or solid wastes not subject to  
21 regulation under Code of Federal Regulations, title  
22 40, part 261. I am aware that there are significant  
23 penalties for submitting a false certification,  
24 including the possibility of fine or imprisonment."

25 J. Small quantity generators with tolling agreements  
26 must comply with the applicable notification and certification  
27 requirements of this subpart for the initial shipment of the  
28 waste subject to the agreement. The generators must retain  
29 on-site a copy of the notification and certification, together  
30 with the tolling agreement, for at least three years after  
31 termination or expiration of the agreement. The three-year  
32 record retention period is automatically extended during the  
33 course of any unresolved enforcement action regarding the  
34 regulated activity or as requested by the commissioner.

35 Subp. 2. Testing of wastes. Treatment facilities must  
36 test their wastes according to the frequency specified in their

1 waste analysis plans under part 7045.0458 or 7045.0564. The  
2 testing must be performed as provided in items A to C.

3           A. For wastes with treatment standards expressed as  
4 concentrations in the waste extract in part 7045.1355, the owner  
5 or operator of the treatment facility must test the treatment  
6 residues or an extract of the residues developed using the test  
7 method described in Code of Federal Regulations, title 40, part  
8 261, Appendix II, to assure that the treatment residues or  
9 extract meet the applicable treatment standards.

10           B. For wastes prohibited under part 7045.1330 or RCRA  
11 section 3004(d) which are not subject to any treatment standards  
12 under parts 7045.1350 to 7045.1360, the owner or operator of the  
13 treatment facility must test the treatment residues according to  
14 the generator testing requirements in part 7045.1330 to assure  
15 that the treatment residues comply with the applicable  
16 prohibitions.

17           C. For wastes with treatment standards expressed as  
18 concentrations in the waste under part 7045.1358, the owner or  
19 operator of the treatment facility must test the treatment  
20 residues, not an extract of the residues, to assure that the  
21 treatment residues meet the applicable treatment standards.

22           D. A notice must be sent with each waste shipment to  
23 the land disposal facility that includes the following  
24 information:

25                   (1) the EPA Hazardous Waste Number;  
26                   (2) the corresponding treatment standards for  
27 wastes F001-F005, F039, and wastes prohibited under part  
28 7045.1330 or RCRA section 3004(d). Treatment standards for all  
29 other restricted wastes must either be included, or be  
30 referenced by including on the notification the applicable  
31 wastewater or nonwastewater category as defined in part  
32 7045.0020, the applicable subdivisions made within a waste code  
33 based on waste specific criteria, and Code of Federal  
34 Regulations sections and paragraphs where the applicable  
35 treatment standard appears. Where the applicable treatment  
36 standards are expressed as specified technologies in part

1 7045.1360, the applicable five-letter treatment code in part  
2 7045.1360 (~~e.g., 7-INCIN7-WET0X~~) also must be listed on the  
3 notification;

4 (3) the manifest number associated with the  
5 shipment of waste; and

6 (4) waste analysis data, where available.

7 E. The treatment facility must submit a certification  
8 with each shipment of waste or treatment residue of a restricted  
9 waste to the land disposal facility stating that the waste or  
10 treatment residue has been treated in compliance with the  
11 applicable performance standards in parts 7045.1350 to 7045.1360  
12 and the applicable prohibitions in part 7045.1330 or RCRA  
13 section 3004(d).

14 (1) For wastes with treatment standards expressed  
15 as concentrations in the waste extract or in the waste, under  
16 part 7045.1355 or 7045.1358, or for wastes prohibited under part  
17 7045.1330 or RCRA section 3004(d) that are not subject to any  
18 treatment standards under parts 7045.1350 to 7045.1360, the  
19 certification must be signed by an authorized representative and  
20 must state the following:

21 "I certify under penalty of law that I have personally  
22 examined and am familiar with the treatment technology  
23 and operations of the treatment process used to  
24 support this certification and that, based on my  
25 inquiry of those individuals immediately responsible  
26 for obtaining this information, I believe that the  
27 treatment process has been operated and maintained  
28 properly and complies with the performance levels in  
29 parts 7045.1350 to 7045.1360 and all applicable  
30 prohibitions in part 7045.1330 or RCRA section 3004(d)  
31 without impermissible dilution of the prohibited  
32 waste. I am aware that there are significant  
33 penalties for submitting a false certification,  
34 including the possibility of fine and imprisonment."

35 (2) For wastes with treatment standards expressed  
36 as technologies in part 7045.1360, the certification must be

1 signed by an authorized representative and must state the  
2 following:

3 "I certify under penalty of law that the waste has  
4 been treated according to part 7045.1360. I am aware  
5 that there are significant penalties for submitting a  
6 false certification, including the possibility of fine  
7 and imprisonment."

8 (3) For wastes with treatment standards expressed  
9 as concentrations in the waste under part 7045.1358, if  
10 compliance with the treatment standards in parts 7045.1350 to  
11 7045.1360 is based in whole or in part on the analytical  
12 detection limit alternative specified in part 7045.1358, the  
13 certification ~~also~~ must be signed by an authorized  
14 representative and must state the following:

15 "I certify under penalty of law that I have personally  
16 examined and am familiar with the treatment technology  
17 and operation of the treatment process used to support  
18 this certification and that, based on my inquiry of  
19 those individuals immediately responsible for  
20 obtaining this information, I believe that the  
21 nonwastewater organic constituents have been treated  
22 by incineration in units operated according to Code of  
23 Federal Regulations, title 40, part 264, subpart O, or  
24 part 265, subpart O, or by combustion in fuel  
25 substitution units operating according to applicable  
26 technical requirements, and I have been unable to  
27 detect the nonwastewater organic constituents despite  
28 having used my best good faith efforts to analyze for  
29 the constituents. I am aware that there are  
30 significant penalties for submitting a false  
31 certification, including the possibility of fine and  
32 imprisonment."

33 F. If the waste or treatment residue will be further  
34 managed at a different treatment or storage facility, the  
35 treatment, storage, or disposal facility sending the waste or  
36 treatment residue off-site must comply with the notice and



1 certification requirements applicable to generators under this  
2 part.

3           G. When the wastes are recyclable materials used in a  
4 manner constituting disposal subject to part 7045.0665, subpart  
5 1, item C, regarding treatment standards and prohibition levels,  
6 the owner or operator of a treatment facility~~,--the-recycler,~~ is  
7 not required to notify the receiving facility under item D.  
8 With each shipment of the wastes, the owner or operator of the  
9 recycling facility must submit the certification in item E, and  
10 a notice that includes the information in item D, except the  
11 manifest number, to the commissioner's delegated  
12 representative. The recycling facility also must keep records  
13 of the name and location of each entity receiving the hazardous  
14 waste-derived product.

15           Subp. 3. Facility requirements. Except when the owner or  
16 operator is disposing of waste that is a recyclable material  
17 used in a manner constituting disposal under part 7045.0665,  
18 subpart 1, the owner or operator of a land disposal facility  
19 disposing any waste subject to restrictions under parts  
20 7045.1300 to 7045.1380 must:

21           A. have copies of the notice and certifications  
22 specified in subpart 1 or 2 and the certification specified in  
23 ~~part-7045-1300~~ Code of Federal Regulations, title 40, section  
24 268.8, if applicable; and

25           B. test the waste, or an extract of the waste or  
26 treatment residue developed using the test method in Code of  
27 Federal Regulations, title 40, part 261, Appendix II, or using  
28 any methods required by generators under part 7045.1330, to  
29 assure that the wastes or treatment residues are in compliance  
30 with the applicable treatment standards in parts 7045.1350 to  
31 7045.1360 and all applicable prohibitions in part 7045.1330 or  
32 RCRA section 3004(d). The testing must be performed according  
33 to the frequency specified in the facility's waste analysis plan  
34 as required in part 7045.0458 or 7045.0564.

35 7045.1320 WASTE SPECIFIC PROHIBITIONS; SOLVENT WASTES.

1 Subpart 1. **Applicability.** Effective November 8, 1986, the  
2 spent solvent wastes specified in part 7045.0135 as Hazardous  
3 Waste Nos. F001, F002, F003, F004, and F005 are prohibited from  
4 land disposal unless one or more of the following conditions  
5 apply:

6 A. the generator of the solvent waste is a small  
7 quantity generator;

8 B. the solvent waste is generated from any response  
9 action taken under the Comprehensive Environmental Response,  
10 Compensation, and Liability Act of 1980 (CERCLA), or any  
11 corrective action taken under the Resource Conservation and  
12 Recovery Act (RCRA), except where the waste is contaminated soil  
13 or debris;

14 C. the initial generator's solvent waste is a  
15 solvent-water mixture, solvent-containing sludge or solid, or  
16 solvent-contaminated soil (non-CERCLA or RCRA corrective action)  
17 containing less than one percent total F001-F005 solvent  
18 constituents listed in part 7045.1355, subpart 3; or

19 D. the solvent waste is a residue from treating a  
20 waste described in items A to C; or the solvent waste is a  
21 residue from treating a waste not described in items A to C,  
22 provided the residue belongs to a different treatability group  
23 than the waste as initially generated and wastes belonging to  
24 the treatability group are described in item C.

25 Subp. 2. **Effective date.** Effective November 8, 1988, the  
26 F001-F005 solvent wastes listed in subpart 1, items A to D, are  
27 prohibited from land disposal. Effective November 8, 1990, the  
28 F001-F005 solvent wastes that are contaminated soil and debris  
29 resulting from a response action taken under section 104 or 106  
30 of the Comprehensive Environmental Response, Compensation, and  
31 Liability Act of 1980 or a corrective action required under  
32 RCRA, subtitle C, and the residues from treating these wastes  
33 are prohibited from land disposal. Between November 8, 1988,  
34 and November 8, 1990, these wastes may be disposed of in a  
35 landfill or surface impoundment only if the unit is in  
36 compliance with the requirements of ~~Code-of-Federal-Regulations~~

1 ~~title-40, section-268-5(h)(2)~~ part 7045.0532.

2 Subp. 3. **Exceptions.** The requirements of subparts 1 and 2  
3 do not apply if:

4 A. the wastes meet the standards of parts 7045.1350  
5 to 7045.1360;

6 B. persons have been granted an exemption from a  
7 prohibition pursuant to a petition under part 7045.0075, with  
8 respect to those wastes and units covered by the petition; or

9 C. persons have been granted an extension to the  
10 effective date of a prohibition under part 7045.0075, subpart 6,  
11 with respect to those wastes and units covered by the extension.

12 7045.1325 WASTE SPECIFIC PROHIBITION; DIOXIN-CONTAINING WASTES.

13 Subpart 1. **Applicability.** Effective November 8, 1988, the  
14 dioxin-containing wastes specified in part 7045.0135 as  
15 Hazardous Waste Nos. F020, F021, F022, F023, F026, F027, and  
16 F028 are prohibited from land disposal.

17 Subp. 2. **Exceptions.** The requirements of subpart 1 do not  
18 apply if:

19 A. the wastes meet the standards of parts 7045.1350  
20 to 7045.1360;

21 B. persons have been granted an exemption from a  
22 prohibition under part 7045.0075, subpart 9, with respect to  
23 those wastes or units covered by the petition;

24 C. persons have been granted an extension to the  
25 effective date of a prohibition under part 7045.0075, subpart 8,  
26 with respect to those wastes covered by the extension; or

27 D. the F020-F023 and F026-F028 dioxin-containing  
28 wastes are contaminated soil and debris resulting from a  
29 response action taken under section 104 or 106 of the  
30 Comprehensive Environmental Response, Compensation, and  
31 Liability Act of 1980, or a corrective action taken under RCRA,  
32 subtitle C.

33 Subp. 3. **Effective date.** Effective November 8, 1990, the  
34 F020-F023 and F026-F028 dioxin-containing wastes in subpart 2,  
35 item D, are prohibited from land disposal. Between November 8,

1 1988, and November 8, 1990, wastes included in subpart 2, item  
2 A, may be disposed of in a landfill or surface impoundment only  
3 if the unit is in compliance with the requirements of ~~Code of~~  
4 ~~Federal Regulations, title 40, part 268.5(h)(2)~~ part 7045.0532  
5 and all other applicable requirements of parts 7045.0450 to  
6 7045.0642.

7 7045.1330 WASTE SPECIFIC PROHIBITIONS; CALIFORNIA LIST WASTES.

8 Subpart 1. **Application.** Effective July 8, 1987, the  
9 following hazardous wastes are prohibited from land disposal:

10 A. liquid hazardous wastes having a pH less than or  
11 equal to two;

12 B. liquid hazardous wastes containing polychlorinated  
13 biphenyls (PCB's) at concentrations greater than or equal to 50  
14 ppm;

15 C. liquid hazardous wastes that are primarily water  
16 and contain halogenated organic compounds (HOC's) in total  
17 concentration greater than or equal to 1,000 mg/l and less than  
18 10,000 mg/l HOC's;

19 D. liquid hazardous wastes that contain HOC's in  
20 total concentration greater than or equal to 1,000 mg/l and are  
21 not prohibited under item C; and

22 E. nonliquid hazardous wastes containing HOC's in  
23 total concentration greater than or equal to 1,000 mg/kg and are  
24 not wastes described in subpart 2, items A and B.

25 Subp. 2. **Exceptions.** The requirements of subpart 1, items  
26 A to E, do not apply until:

27 A. July 8, 1989, where the wastes are contaminated  
28 soil or debris not resulting from a response action taken under  
29 section 104 or 106 of the Comprehensive Environmental Response,  
30 Compensation, and Liability Act of 1980 or a corrective action  
31 taken under RCRA, subtitle C. Between July 8, 1987, and July 8,  
32 1989, the wastes may be disposed of in a landfill or surface  
33 impoundment only if the disposal is in compliance with the  
34 requirements of ~~Code of Federal Regulations, title 40, section~~  
35 ~~268.5(h)(2)~~ part 7045.0532.

1           B. November 8, 1990, where the wastes are  
2 contaminated soil or debris resulting from a response action  
3 taken under section 104 or 106 of the Comprehensive  
4 Environmental Response, Compensation, and Liability Act of 1980  
5 or a corrective action taken under RCRA, subtitle C. Between  
6 November 8, 1988, and November 8, 1990, the wastes may be  
7 disposed of in a landfill or surface impoundment only if the  
8 unit is in compliance with the requirements of ~~Code of Federal~~  
9 ~~Regulations, title 40, section 268.5(h)(2)~~ part 7045.0532.

10           C. Between July 8, 1987, and November 8, 1988, the  
11 wastes included in subpart 1, items D and E, may be disposed of  
12 in a landfill or surface impoundment only if the unit is in  
13 compliance with the requirements of ~~Code of Federal Regulations,~~  
14 ~~title 40, part 268.5(h)(2)~~ part 7045.0532.

15           [For text of item D, see M.R.]

16           E. The prohibitions and effective dates in subpart 1,  
17 items C to E, and subpart 2, items A and B, do not apply where  
18 the waste is subject to an effective date and prohibition under  
19 parts 7045.1320 to 7045.1330 for a specified HOC, such as a  
20 hazardous waste chlorinated solvent.

21           [For text of subp 3, see M.R.]

22 7045.1333 WASTE SPECIFIC PROHIBITIONS; FIRST ONE-THIRD OF  
23 REGULATED WASTES.

24           Subpart 1. **Application.** The hazardous wastes in items A  
25 ~~and B~~ to D are prohibited from land disposal.

26           A. Effective August 8, 1988, the wastes specified as  
27 EPA Hazardous Waste Nos. F006 (nonwastewater) in part 7045.0135;  
28 K001 and K004 wastes specified in part 7045.1358, subpart 1;  
29 K008 wastes specified in part 7045.1358, subpart 1; K016, K018,  
30 K019, K020 and K021 wastes specified in part 7045.1358, subpart  
31 1; K022 (nonwastewater), K024, and K025 nonwastewaters specified  
32 in part 7045.1358, subpart 1; K030, K036 (nonwastewater), K037,  
33 K044, K045, nonexplosive K046 (nonwastewater), K047, K060  
34 (nonwastewater), K061 (nonwastewaters containing less than 15  
35 percent zinc), K062, non CaSO<sub>4</sub> K069 (nonwastewaters), K086

1 (solvent washes), K087, K099, and K100 nonwastewaters specified  
 2 in part 7045.1358, subpart 1; K101 (wastewater), K101  
 3 (nonwastewater, low arsenic subcategory less than one percent  
 4 total arsenic), K102 (wastewater), K102 (nonwastewater, low  
 5 arsenic subcategory less than one percent total arsenic), K103,  
 6 and K104 are prohibited from land disposal.

7 B. Effective August 8, 1988, and continuing until  
 8 August 7, 1990, K061 wastes containing 15 percent zinc or  
 9 greater are prohibited from land disposal under the treatment  
 10 standards specified in part 7045.1355 applicable to K061 wastes  
 11 that contain less than 15 percent zinc.

12 C. Effective August 8, 1990, the waste specified in  
 13 part 7045.0135, subpart 3, as EPA Hazardous Waste No. K071 is  
 14 prohibited from land disposal.

15 D. Effective August 8, 1990, the wastes specified in  
 16 Code of Federal Regulations, title 40, section 268.10, having a  
 17 treatment standard in parts 7045.1350 to 7045.1360 based on  
 18 incineration that are contaminated soil and debris are  
 19 prohibited from land disposal.

20 Subp. 2. Exceptions to subpart 1. Items A ~~to~~ D and B are  
 21 exceptions from the prohibitions in subpart 1.

22 ~~A. Effective August 8, 1990, the waste specified in~~  
 23 ~~part 7045.0135, subpart 3, as EPA Hazardous Waste No. K071 is~~  
 24 ~~prohibited from land disposal.~~

25 ~~B. Effective August 8, 1990, the wastes specified in~~  
 26 ~~Code of Federal Regulations, title 40, section 268.10, having a~~  
 27 ~~treatment standard in parts 7045.1350 to 7045.1360 based on~~  
 28 ~~incineration that are contaminated soil and debris are~~  
 29 ~~prohibited from land disposal.~~

30 E. A. Between November 8, 1988, and August 8, 1990,  
 31 wastes included in subpart 1, items A C and B D may be  
 32 disposed of in a landfill or surface impoundment only if the  
 33 unit is in compliance with the requirements of ~~Code of Federal~~  
 34 ~~Regulations, title 40, section 268.5(h)(2)~~ part 7045.0532.

35 ~~D.~~ B. The requirements of this subpart and subpart 1  
 36 do not apply if:



1 (1) the wastes meet the applicable standards in  
2 part 7045.1355;

3 (2) persons have been granted an exemption to an  
4 effective date of a prohibition under part 7045.0075, subpart 7,  
5 with respect to those wastes and units covered by the petition;  
6 or

7 (3) persons have been granted an extension to an  
8 effective date of a prohibition under part 7045.0075, subpart 6,  
9 with respect to those wastes covered by the extension.

10 Subp. 3. **Applicability between August 8, 1988, and May 8,**  
11 **1990.** Between August 8, 1988, and May 8, 1990, the wastes  
12 specified in Code of Federal Regulations, title 40, section  
13 268.10, for which treatment standards under part 7045.1355 have  
14 not been adopted, including wastes that are subject to the  
15 statutory prohibitions of RCRA section 3004(d) or codified  
16 prohibitions under part 7045.0135, subpart 3, but not including  
17 wastes subject to a treatment standard under part 7045.1360, are  
18 prohibited from disposal in a landfill or surface impoundment  
19 unless a demonstration and certification have been submitted.

20 Subp. 4. **Waste analysis.** To determine whether a hazardous  
21 waste listed in Code of Federal Regulations, title 40, section  
22 268.10, exceeds the applicable treatment standards in parts  
23 7045.1355 and 7045.1358, the initial generator must test a  
24 representative sample of the waste extract or the entire waste  
25 depending on whether the treatment standards are expressed as  
26 concentrations in the waste extract or the waste, or the  
27 generator may use knowledge of the waste. If the waste contains  
28 constituents in excess of the applicable subpart D levels, the  
29 waste is prohibited from land disposal and all requirements of  
30 parts 7045.1300 to 7045.1380 are applicable, except as otherwise  
31 specified.

32 7045.1334 WASTE SPECIFIC PROHIBITION; SECOND ONE-THIRD OF  
33 REGULATED WASTES.

34 Subpart 1. **Application.** The wastes in items A to E are  
35 prohibited from land disposal.

1           A. Effective June 8, 1989, the wastes specified in  
2 part 7045.0135 as EPA Hazardous Waste Nos. F010; F024; K005;  
3 K007; K009 (nonwastewaters); K010; K023; K027; K028; K029  
4 (nonwastewaters); K036 (wastewaters); K038; K039; K040; K043;  
5 K093; K094; K095 (nonwastewaters); K096 (nonwastewaters); K113;  
6 K114; K115; K116; P013; P021; P029; P030; P039; P040; P041;  
7 P043; P044; P062; P063; P071; P074; P085; P089; P094; P097;  
8 P098; P099; P104; P106; P109; P111; P121; U028; U058; U069;  
9 U087; U088; U102; U107; U221; U223; and U235 are prohibited from  
10 land disposal.

11           B. Effective June 8, 1989, the wastes specified in  
12 part 7045.0135 as EPA Hazardous Waste Nos. K009 (wastewaters);  
13 K011 (nonwastewaters); K013 (nonwastewaters); and K014  
14 (nonwastewaters) are prohibited from land disposal.

15           C. Effective July 8, 1989, the wastes specified in  
16 part 7045.0135 as EPA Hazardous Waste Nos. F006--cyanide  
17 (nonwastewater); F008; F009; F011 (wastewaters); and F012  
18 (wastewaters) are prohibited from land disposal.

19           D. Effective July 8, 1989, the waste specified in  
20 Code of Federal Regulations, title 40, section 261.31, as EPA  
21 Hazardous Waste No. F007 is prohibited from land disposal.

22           E. Effective July 8, 1989 through December 8, 1989,  
23 F011 (nonwastewaters) and F012 (nonwastewaters) are prohibited  
24 from land disposal pursuant to the treatment standards in parts  
25 7045.1355 and 7045.1358 applicable to EPA Hazardous Waste Nos.  
26 F007, F008, and F009 nonwastewaters. Effective December 8,  
27 1989, F011 (nonwastewaters) and F012 (nonwastewaters) are  
28 prohibited from land disposal pursuant to the treatment  
29 standards in parts 7045.1355 and 7045.1358 applicable to F011  
30 (nonwastewaters) and F012 (nonwastewaters).

31           Subp. 2. **Exceptions.** Items A to D are exceptions from the  
32 prohibitions in subpart 1.

33           A. Effective June 8, 1991, the wastes specified in  
34 this part, having a treatment standard in parts 7045.1350 to  
35 7045.1360 based on incineration, that are contaminated soil and  
36 debris are prohibited from land disposal.

1           B. Between June 8, 1989, and June 8, 1991, (for EPA  
2 Hazardous Waste Nos. F007, F008, F009, F011, and F012 between  
3 June 8, 1989, and July 8, 1989) wastes included in item A and  
4 subpart 1, item C, may be disposed of in a landfill or surface  
5 impoundment only if the unit is in compliance with the technical  
6 requirements of ~~Code of Federal Regulations, title 40, section~~  
7 ~~268.5(h)(2)~~ part 7045.0532.

8           C. The requirements of item A and subpart 1, items A  
9 to C, do not apply if:

10                   (1) the wastes meet the applicable standards in  
11 parts 7045.1350 to 7045.1360;

12                   (2) an exemption has been granted from a  
13 prohibition as a result of a petition under part 7045.0075,  
14 subpart 7, with respect to wastes and units covered by the  
15 petition; or

16                   (3) an extension to the effective date of a  
17 prohibition under part 7045.0075, subpart 7, has been granted  
18 with respect to wastes covered by the extension.

19           D. Between June 8, 1989, and May 8, 1990, the wastes  
20 specified in Code of Federal Regulations, title 40, section  
21 268.11, for which treatment standards under parts 7045.1350 to  
22 7045.1360 are not applicable, including California list wastes  
23 subject to the statutory prohibitions of RCRA section 3004(d) or  
24 codified prohibitions under part 7045.0135, subpart 3, are  
25 prohibited from disposal in a landfill or surface impoundment  
26 unless the wastes are the subject of a valid demonstration and  
27 certification under ~~part 7045.1308~~ Code of Federal Regulations,  
28 title 40, section 268.8.

29           Subp. 3. **Waste analysis.** To determine whether a hazardous  
30 waste listed in Code of Federal Regulations, title 40, sections  
31 268.10 to 268.12, exceeds the applicable treatment standards  
32 specified in parts 7045.1355 and 7045.1358, the initial  
33 generator must test a representative sample of the waste extract  
34 or the entire waste, depending on whether the treatment  
35 standards are expressed as concentrations in the waste extract  
36 ~~of~~ or the waste, or the generator may use knowledge of the waste.

1 If the waste contains constituents in excess of the applicable  
2 levels specified in parts 7045.1350 to 7045.1360, the waste is  
3 prohibited from land disposal and all requirements of parts  
4 7045.1300 to 7045.1380 are applicable, except as otherwise  
5 specified.

6 7045.1335 WASTE SPECIFIC PROHIBITIONS; THIRD ONE-THIRD OF  
7 REGULATED WASTES.

8 Subpart 1. **Applicability as of August 8, 1990.** Effective  
9 August 8, 1990, the following wastes are prohibited from land  
10 disposal:

11 A. wastes specified in part 7045.1325 as EPA  
12 Hazardous Waste Nos. F002 (1,1,2-trichloroethane); F005  
13 (benzene); F005 (2-ethoxy ethanol); F005 (2-nitro-propane); F006  
14 (wastewaters); F019; F025; and F039 (wastewaters);

15 B. wastes specified in part 7045.1330 as EPA  
16 Hazardous Waste Nos. K002; K003; K004 (wastewaters); K005  
17 (wastewaters); K006; K008 (wastewaters); K011 (wastewaters);  
18 K013 (wastewaters); K014 (wastewaters); K015 (nonwastewaters);  
19 K017; K021 (wastewaters); K022 (wastewaters); K025  
20 (wastewaters); K026; K029 (wastewaters); K031 (wastewaters);  
21 K032; K033; K034; K035; K041; K042; K046 (wastewaters, reactive  
22 nonwastewaters); K048 (wastewaters); K049 (wastewaters); K050  
23 (wastewaters); K051 (wastewaters); K052 (wastewaters); K060  
24 (wastewaters); K061 (wastewaters and high zinc subcategory > 15  
25 percent zinc); K069 (wastewaters, calcium sulfate  
26 nonwastewaters); K073; K083; K084 (wastewaters); K085; K095  
27 (wastewaters); K096 (wastewaters); K097; K098; K100  
28 (wastewaters); K101 (wastewaters); K102 (wastewaters); K105; and  
29 K106 (wastewaters);

30 C. wastes specified in part 7045.1333, subpart 2, as  
31 EPA Hazardous Waste Nos. P001; P002; P003; P004; P005; P006;  
32 P007; P008; P009; P010 (wastewaters); P011 (wastewaters); P012  
33 (wastewaters); P014; P015; P016; P017; P018; P020; P022; P023;  
34 P024; P026; P027; P028; P031; P033; P034; P036 (wastewaters);  
35 P037; P038 (wastewaters); P042; P045; P046; P047; P048; P049;

1 P050; P051; P054; P056; P057; P058; P059; P060; P064; P065  
2 (wastewaters); P066; P067; P068; P069; P070; P072; P073; P075;  
3 P076; P077; P078; P081; P082; P084; P088; P092 (wastewaters);  
4 P093; P095; P096; P101; P102; P103; P105; P108; P110; P112;  
5 P113; P114; P115; P116; P118; P119; P120; P122; and P123;

6 D. wastes specified in part 7045.1333, subpart 3, as  
7 EPA Hazardous Waste Nos. U001; U002; U003; U004; U005; U006;  
8 U007; U008; U009; U010; U011; U012; U014; U015; U016; U017;  
9 U018; U019; U020; U021; U022; U023; U024; U025; U026; U027;  
10 U029; U030; U031; U032; U033; U034; U035; U036; U037; U038;  
11 U039; U041; U042; U043; U044; U045; U046; U047; U048; U049;  
12 U050; U051; U052; U053; U055; U056; U057; U059; U060; U061;  
13 U062; U063; U064; U066; U067; U068; U070; U071; U072; U073;  
14 U074; U075; U076; U077; U078; U079; U080; U081; U082; U083;  
15 U084; U085; U086; U089; U090; U091; U092; U093; U094; U095;  
16 U096; U097; U098; U099; U101; U103; U105; U106; U108; U109;  
17 U110; U111; U112; U113; U114; U115; U116; U117; U118; U119;  
18 U120; U121; U122; U123; U124; U125; U126; U127; U128; U129;  
19 U130; U131; U132; U133; U134; U135; U136 (wastewaters); U137;  
20 U138; U140; U141; U142; U143; U144; U145; U146; U147; U148;  
21 U149; U150; U151 (wastewaters); U152; U153; U154; U155; U156;  
22 U157; U158; U159; U160; U161; U162; U163; U164; U165; U166;  
23 U167; U168; U169; U170; U171; U172; U173; U174; U176; U177;  
24 U178; U179; U180; U181; U182; U183; U184; U185; U186; U187;  
25 U188; U189; U191; U192; U193; U194; U196; U197; U200; U201;  
26 U202; U203; U204; U205; U206; U207; U208; U209; U210; U211;  
27 U213; U214; U215; U216; U217; U218; U219; U220; U222; U225;  
28 U226; U227; U228; U234; U236; U237; U238; U239; U240; U243;  
29 U244; U246; U247; U248; and U249; and

30 E. the following wastes identified as hazardous based  
31 on a characteristic alone: D001; D002; D003; D004  
32 (wastewaters); D005; D006; D007; D008 (except for lead materials  
33 stored before secondary smelting); D009 (wastewaters); D010;  
34 D011; D012; D013; D014; D015; D016; and D017.

35 Subp. 2. **Applicability as of November 8, 1990.** Effective  
36 November 8, 1990, the wastes specified in part 7045.1330 as EPA

1 Hazardous Waste Nos. K048 (nonwastewaters); K049  
2 (nonwastewaters); K050 (nonwastewaters); K051 (nonwastewaters);  
3 and K052 (nonwastewaters) are prohibited from land disposal.

4 Subp. 3. **Applicability as of May 8, 1992.** Effective May  
5 8, 1992, the following wastes are prohibited from land disposal:

6 A. waste specified in part 7045.1325 as EPA Hazardous  
7 Waste No. F039 (nonwastewaters);

8 B. wastes specified in part 7045.1330 as EPA  
9 Hazardous Waste Nos. K031 (nonwastewaters); K084  
10 (nonwastewaters); K101 (nonwastewaters); K102 (nonwastewaters);  
11 and K106 (nonwastewaters);

12 C. wastes specified in part 7045.1333, subpart 2, as  
13 EPA Hazardous Waste Nos. P010 (nonwastewaters); P011  
14 (nonwastewaters); P012 (nonwastewaters); P036 (nonwastewaters);  
15 P038 (nonwastewaters); P065 (nonwastewaters); P087; and P092  
16 (nonwastewaters);

17 D. wastes specified in part 7045.1333, subpart 3, as  
18 EPA Hazardous Waste Nos. U136 (nonwastewaters); and U151  
19 (nonwastewaters); and

20 E. the following wastes identified as hazardous based  
21 on a characteristic alone: D004 (nonwastewaters); D008 (lead  
22 materials stored before secondary smelting), and D009  
23 (nonwastewaters); inorganic solids debris as defined in part  
24 7045.0020, subpart 45a (which also applies to chromium  
25 refractory bricks carrying the EPA Hazardous Waste Nos.  
26 K048-K052); and RCRA hazardous wastes that contain naturally  
27 occurring radioactive materials.

28 Subp. 4. **Mixed radioactive/hazardous wastes.** Effective  
29 May 8, 1992, hazardous wastes listed in Code of Federal  
30 Regulations, title 40, sections 268.10, 268.11, and 268.12, that  
31 are mixed radioactive/hazardous wastes, and soil or debris  
32 contaminated with the hazardous wastes, are prohibited from land  
33 disposal.

34 Subp. 5. **Contaminated soil or debris.** Effective May 8,  
35 1992, the wastes specified in this part having a treatment  
36 standard in parts 7045.1350 to 7045.1360 based on incineration,



1 mercury retorting, vitrification, acid leaching followed by  
2 chemical precipitation, or thermal recovery of metals, and which  
3 are contaminated soil or debris, are prohibited from land  
4 disposal.

5 Subp. 6. Exceptions between May 8, 1990, and August 8,  
6 1990. Between May 8, 1990, and August 8, 1990, the wastes in  
7 subpart 1 may be disposed of in a landfill or surface  
8 impoundment only if the unit is in compliance with the  
9 requirements ~~in~~ of part ~~7045-00757-subpart-8~~ 7045.0532.

10 Subp. 7. Exceptions between May 8, 1990, and November 8,  
11 1990. Between May 8, 1990, and November 8, 1990, the wastes in  
12 subpart 2 may be disposed of in a landfill or surface  
13 impoundment only if the unit is in compliance with the  
14 requirements ~~in~~ of part ~~7045-00757-subpart-8~~ 7045.0532.

15 Subp. 8. Exceptions between May 8, 1990, and May 8, 1992.  
16 Between May 8, 1990, and May 8, 1992, the wastes in subparts 3  
17 to 5 may be disposed of in a landfill or surface impoundment  
18 only if the unit is in compliance with the requirements of ~~Code~~  
19 ~~of-Federal-Regulations, title-40, section-268-5(h)(2)~~ part  
20 7045.0532.

21 Subp. 9. General exceptions. The requirements of subparts  
22 1 to 5 do not apply if:

23 A. the wastes meet the applicable standards in parts  
24 7045.1350 to 7045.1360;

25 B. persons have been granted an exemption from a  
26 prohibition pursuant to a petition under part 7045.0075, subpart  
27 9, with respect to wastes and units covered by the petition;

28 C. the wastes meet the applicable alternate standards  
29 established pursuant to a petition granted under Code of Federal  
30 Regulations, title 40, section 268.44; and

31 D. persons have been granted an extension to the  
32 effective date of a prohibition under part 7045.0075, subpart 8,  
33 with respect to wastes covered by the extension.

34 Subp. 10. Waste analysis. To determine whether a  
35 hazardous waste listed in Code of Federal Regulations, title 40,  
36 sections 268.10, 268.11, and 268.12, exceeds the applicable

1 treatment standards in parts 7045.1355 and 7045.1358, the  
2 initial generator must test a representative sample of the waste  
3 extract or the entire waste, depending on whether the treatment  
4 standards are expressed as concentrations in the waste extract  
5 or the waste, or the generator may use knowledge of the waste.  
6 If the waste contains constituents in excess of the applicable  
7 levels listed in parts 7045.1350 to 7045.1360, the waste is  
8 prohibited from land disposal and all requirements of parts  
9 7045.1300 to 7045.1380 are applicable, except as otherwise  
10 specified.

11 7045.1339 EFFECTIVE DATES OF SURFACE DISPOSED WASTES REGULATED  
12 IN THE LAND DISPOSAL RESTRICTIONS.

13 The comprehensive list of effective dates of surface  
14 disposed wastes regulated in the land disposal restrictions is  
15 found in Code of Federal Regulations, title 40, section 268,  
16 Appendix VII, Tables 1 and 2. This table does not include mixed  
17 radioactive wastes which are receiving a national capacity  
18 variance until May 8, 1992, for all applicable treatment  
19 technologies.

20 7045.1350 TREATMENT STANDARDS.

21 Subpart 1. Concentration standard for waste extract. A  
22 restricted waste identified in part 7045.1355 may be land  
23 disposed only if an extract of the waste or of the treatment  
24 residue of the waste developed using the test method in Code of  
25 Federal Regulations, title 40, part 261, Appendix II, does not  
26 exceed the value shown in Code of Federal Regulations, title 40,  
27 part 268.41, Table CCWE, for any hazardous constituent listed  
28 for that waste, with the following exceptions: D004; D008;  
29 K031; K084; K101; K102; P010; P011; P012; P036; P038; and U136.  
30 These wastes may be land disposed only if an extract of the  
31 waste or of the treatment residue of the waste developed using  
32 either the test method in Code of Federal Regulations, title 40,  
33 part 261, Appendix II, or the test method in Code of Federal  
34 Regulations, title 40, part 268, Appendix ~~IX~~ I, does not exceed  
35 the concentrations shown in Code of Federal Regulations, title

1 40, part 268.41, Table CCWE, for any hazardous constituent  
2 listed for that waste.

3 [For text of subp 2, see M.R.]

4 Subp. 3. Concentration standard for waste or treatment  
5 residue. Except as otherwise specified in part 7045.1358, a  
6 restricted waste identified in part 7045.1358 may be land  
7 disposed only if the constituent concentrations in the waste or  
8 treatment residue of the waste do not exceed the value shown in  
9 Code of Federal Regulations, title 40, part 268.43, Table CCW,  
10 for any hazardous constituents listed for that waste.

11 7045.1355 TREATMENT STANDARDS EXPRESSED AS CONCENTRATIONS IN  
12 WASTE EXTRACT.

13 Subpart 1. **Applicability.** Code of Federal Regulations,  
14 title 40, part 268.41, Table CCWE, identifies the restricted  
15 wastes and the concentrations of their associated constituents  
16 that may not be exceeded by the extract of a waste or waste  
17 treatment residual developed using the test method in Code of  
18 Federal Regulations, title 40, part 261, Appendix II, for the  
19 allowable land disposal of such wastes, with the exception of  
20 EPA Hazardous Waste Nos. D004, D008, K031, K084, K101, K102,  
21 P010, P011, P012, P036, P038, and U136. Table CCWE also  
22 identifies the restricted EPA Hazardous Waste Nos. D004, D008,  
23 K031, K084, K101, K102, P010, P011, P012, P036, P038, and U136  
24 and the concentrations of their associated constituents which  
25 may not be exceeded by the extract of a waste or waste treatment  
26 residual developed using the test method in Code of Federal  
27 Regulations, title 40, part 261, Appendix II, for the allowable  
28 land disposal of such wastes. Code of Federal Regulations,  
29 title 40, part 268, Appendix II, provides agency guidance on  
30 treatment methods that have been shown to achieve the Table CCWE  
31 levels for the respective wastes. This guidance is provided to  
32 assist generators and owners or operators in their selection of  
33 appropriate treatment methods. Compliance with these  
34 concentrations is required based on grab samples.

35 [For text of subp 2, see M.R.]

1 Subp. 3. Constituent concentrations in waste extract.  
2 Constituents in waste extracts are listed with the applicable  
3 concentration limits in Code of Federal Regulations, title 40,  
4 part 268.41, Table CCWE.

5 7045.1358 TREATMENT STANDARDS EXPRESSED AS WASTE CONCENTRATIONS.

6 Subpart 1. **Applicability.** Subpart 3 identifies the  
7 restricted wastes and the concentrations of their associated  
8 hazardous constituents that may not be exceeded by the waste or  
9 treatment residual, not an extract of the waste or residual, for  
10 the allowable land disposal of the waste or residual.

11 Compliance with these concentrations is required based on grab  
12 samples, unless otherwise noted in subpart 3. Limits are  
13 expressed in milligrams per kilogram (mg/kg) for nonwastewaters  
14 and in milligrams per liter (mg/l) for wastewaters.

15 Subp. 2. **Combined wastes.** When wastes with differing  
16 treatment standards for a constituent of concern are combined  
17 for purposes of treatment, the treatment residue must meet the  
18 lowest treatment standard for the constituent of concern.

19 Subp. 3. **Constituent concentrations in wastes.**  
20 Constituent concentrations in wastes are listed with the  
21 applicable concentration limits in Code of Federal Regulations,  
22 title 40, section 268.43, Table CCW.

23 Subp. 4. **No land disposal.** The nonwastewater forms of the  
24 following wastes generated by the processes described in the  
25 waste listing description applies only to wastes generated and  
26 disposed after the dates shown, if a date is shown, and not  
27 generated in the course of treating wastewater forms of these  
28 wastes based on no generation, except as noted, are prohibited  
29 from land disposal:

- 30 A. K004, after August 17, 1988;
- 31 B. K005, after June 8, 1989;
- 32 C. K007, after June 8, 1989;
- 33 D. K008, after August 17, 1988;
- 34 E. K015, after May 8, 1990, based on no ash;
- 35 F. K021, after August 17, 1988;

- 1 G. K025, after August 17, 1988;
- 2 H. K036, after August 17, 1988;
- 3 I. K044, based on reactivity;
- 4 J. K045, based on reactivity;
- 5 K. K047, based on reactivity;
- 6 L. K060, after August 17, 1988;
- 7 M. K061 - high zinc subcategory, greater than or
- 8 equal to 15 percent total zinc, after August 17, 1990, based on
- 9 recycling, effective August 8, 1990;
- 10 N. K069 - noncalcium sulfate subcategory, after
- 11 August 17, 1988, based on recycling;
- 12 O. K083 - no ash subcategory, less than 0.01 percent
- 13 total ash, after May 8, 1990, based on no ash; and
- 14 P. K100, after August 17, 1988.

15 Subp. 5. Demonstrating compliance with treatment standards

16 for organic constituents. Notwithstanding the prohibitions in

17 subpart 1, treatment and disposal facilities may demonstrate,

18 and certify under part 7045.1315, subpart 2, item E, compliance

19 with the treatment standards for organic constituents specified

20 by a footnote in Code of Federal Regulations, title 40, section

21 268.43, Table CCW, provided the following conditions are

22 satisfied:

23 A. the treatment standards for the organic

24 constituents were established based on incineration in units

25 operated according to the technical requirements of part

26 7045.0542 or 7045.0640, or based on combustion in fuel

27 substitution units operating in ~~accordance to~~ accordance with

28 applicable technical requirements;

29 B. the treatment or disposal facility has used the

30 methods referenced in item A to treat the organic constituents;

31 and

32 C. the treatment or disposal facility has been unable

33 to detect the organic constituents despite using its best good

34 faith efforts as defined by applicable guidance or standards.

35 Until the guidance or standards are developed, the treatment or

36 disposal facility may demonstrate such good faith efforts by

1 achieving detection limits for the regulated organic  
2 constituents that do not exceed an order of magnitude of the  
3 treatment standards specified in this part.

4 7045.1360 TREATMENT STANDARDS EXPRESSED AS SPECIFIED  
5 TECHNOLOGIES.

6 Subpart 1. **Applicability.** The wastes in items A and B and  
7 subparts 4 and 5 must be treated using the technology or  
8 technologies specified in items A to C and subpart 3.

9 [For text of item A, see M.R.]

10 B. Nonliquid hazardous wastes containing halogenated  
11 organic compounds (HOC's) in total concentration greater than or  
12 equal to 1,000 mg/kg and liquid HOC-containing wastes that are  
13 prohibited under part 7045.1330, subpart 1, item D, must be  
14 incinerated in accordance with the requirements of part  
15 7045.0542 or 7045.0640. These treatment standards do not apply  
16 if the waste is subject to a treatment standard in parts  
17 7045.1350 to 7045.1360 for a specific HOC.

18 C. A mixture consisting of wastewater, the discharge  
19 of which is subject to regulation under either section 307(b) or  
20 402 of the Clean Water Act, and de minimis losses of materials  
21 from manufacturing operations in which these materials are used  
22 as raw materials or are produced as products in the  
23 manufacturing process, and that meet the criteria of the D001  
24 ignitable liquids containing greater than ten percent total  
25 organic constituents (TOC) subcategory, is subject to the DEACT  
26 treatment standard described in subpart 3. For purposes of this  
27 item, de minimis losses include those from normal material  
28 handling operations such as spills from the unloading or  
29 transfer of materials from bins or other containers, leaks from  
30 pipes, valves, or other devices used to transfer materials;  
31 minor leaks from process equipment, storage tanks, or  
32 containers; leaks from well-maintained pump packings and seals;  
33 sample purgings; and relief device discharges.

34 Subp. 2. **Alternative technology.** A person may submit an  
35 application to the commissioner demonstrating that an



1 alternative treatment method can achieve a measure of  
2 performance equivalent to that achievable by methods specified  
3 in subpart 1. The applicant must submit information  
4 demonstrating that the alternative treatment method complies  
5 with federal, state, and local requirements and is protective of  
6 human health and the environment. On the basis of all available  
7 information, the commissioner may approve the use of the  
8 alternative treatment method if the commissioner finds that the  
9 alternative treatment method provides a measure of performance  
10 equivalent to that achieved by methods specified in subpart 1.  
11 An approval must be stated in writing and contain provisions and  
12 conditions the commissioner considers appropriate. The person  
13 to whom the approval is issued must comply with all limitations  
14 contained in the determination.

15       Subp. 3. **Technology codes and description of**  
16 **technology-based standards.** The items in this subpart list the  
17 five-letter technology codes for use in notifications and the  
18 description of each technology-based standard.

19       When a combination of these technologies, called a  
20 treatment train, is specified as a single treatment standard,  
21 the order of application is specified in subpart 4 by indicating  
22 the five-letter technology code that must be applied first, then  
23 the designation "fb," which is an abbreviation for "followed  
24 by," then the five-letter technology code for the technology  
25 that must be applied next, and so on.

26       When more than one technology or treatment train are  
27 specified as alternative treatment standards, the five-letter  
28 technology codes or the treatment trains are separated by a  
29 semicolon (;) with the last technology preceded by the word  
30 "OR." This indicates that any one of these BDAT technologies or  
31 treatment trains can be used for compliance with the standard.

32       A. **ADGAS:** venting of compressed gases into an  
33 absorbing or reacting media (i.e., solid or liquid). Venting  
34 can be accomplished through physical release using  
35 valves/piping; physical penetration of the container; or  
36 penetration through detonation.

1           B. AMLGM: amalgamation of liquid, elemental mercury  
2 contaminated with radioactive materials using inorganic reagents  
3 such as copper, zinc, nickel, gold, and sulfur that result in a  
4 nonliquid, semisolid amalgam and thereby reducing potential  
5 emissions of elemental mercury vapors to the air.

6           C. BIODG: biodegradation of organics or nonmetallic  
7 inorganics (i.e., degradable inorganics that contain the  
8 elements of phosphorus, nitrogen, and sulfur) in units operated  
9 under either aerobic or anaerobic conditions so that a surrogate  
10 compound or indicator parameter has been substantially reduced  
11 in concentration in the residuals (e.g., total organic carbon  
12 can often be used as an indicator parameter for the  
13 biodegradation of many organic constituents that cannot be  
14 directly analyzed in wastewater residues).

15           D. CARBN: carbon adsorption (granulated or powdered)  
16 of nonmetallic inorganics, organo metallics, and/or organic  
17 constituents, operated so that a surrogate compound or indicator  
18 parameter has not undergone breakthrough (e.g., total organic  
19 carbon can often be used as an indicator parameter for the  
20 adsorption of many organic constituents that cannot be directly  
21 analyzed in wastewater residues). Breakthrough occurs when the  
22 carbon has become saturated with the constituent (or indicator  
23 parameter) and substantial change in adsorption rate associated  
24 with that constituent occurs.

25           E. CHOXD: chemical or electrolytic oxidation using  
26 the following oxidation reagents (or waste reagents) or  
27 combinations or reagents:

- 28                   (1) hypochlorite (e.g., bleach);
- 29                   (2) chlorine;
- 30                   (3) chlorine dioxide;
- 31                   (4) ozone or ultraviolet light assisted ozone;
- 32                   (5) peroxides;
- 33                   (6) persulfates;
- 34                   (7) perchlorates;
- 35                   (8) permangantes; and/or
- 36                   (9) other oxidizing reagents of equivalent

1 efficiency, performed in units operated so that a surrogate  
2 compound or indicator parameter has been substantially reduced  
3 in concentration in the residuals (e.g., total organic carbon  
4 can often be used as an indicator parameter for the oxidation of  
5 many organic constituents that cannot be directly analyzed in  
6 wastewater residues). Chemical oxidation specifically includes  
7 what is commonly referred to as alkaline chlorination.

8 F. CHRED: chemical reduction using the following  
9 reducing reagents (or waste reagents) or combinations of  
10 reagents:

- 11 (1) sulfur dioxide;
- 12 (2) sodium, potassium, or alkali salts of  
13 sulfites, bisulfites, metabisulfites, and polyethylene glycols  
14 (e.g., NaPEG and KPEG);
- 15 (3) sodium hydrosulfide;
- 16 (4) ferrous salts; and/or
- 17 (5) other reducing reagents of equivalent

18 efficiency, performed in units operated such that a surrogate  
19 compound or indicator parameter has been substantially reduced  
20 in concentration in the residuals (e.g., total organic halogens  
21 can often be used as an indicator parameter for the reduction of  
22 many halogenated organic constituents that cannot be directly  
23 analyzed in wastewater residues). Chemical reduction is  
24 commonly used for the reduction of hexavalent chromium to the  
25 trivalent state.

26 G. DEACT: deactivation to remove the hazardous  
27 characteristics of a waste due to its ignitability, corrosivity,  
28 and/or reactivity.

29 H. FSUBS: fuel substitution in units operated  
30 according to applicable technical operating requirements.

31 I. HLVIT: vitrification of high level mixed  
32 radioactive wastes in units in compliance with all applicable  
33 radioactive protection requirements under control of the Nuclear  
34 Regulatory Commission.

35 J. IMERC: incineration of wastes containing organics  
36 and mercury in units operated according to the technical

1 operating requirements of parts 7045.0542 and 7045.0640. All  
2 wastewater and nonwastewater residues derived from this process  
3 must comply with the corresponding treatment standards per waste  
4 code with consideration of any applicable subcategories (e.g.,  
5 high or low mercury subcategories).

6 K. INCIN: incineration units operated according to  
7 the technical operating requirements of parts 7045.0542 and  
8 7045.0640.

9 L. LLEXT: liquid-liquid extraction (often referred  
10 to as solvent extraction) of organics from liquid wastes into an  
11 immiscible solvent for which the hazardous constituents have a  
12 greater solvent affinity, resulting in an extract high in  
13 organics that must undergo either incineration, reuse as a fuel,  
14 or other recovery/reuse and a raffinate (extracted liquid waste)  
15 proportionately low in organics that must undergo further  
16 treatment as specified in the standard.

17 M. MACRO: macroencapsulation with surface coating  
18 materials such as polymeric organics (e.g., resins and plastics)  
19 or with a jacket of inert inorganic materials to substantially  
20 reduce surface exposure to potential leaching media.  
21 Macroencapsulation specifically does not include any material  
22 that would be classified as a tank or container according to  
23 part 7045.0020.

24 N. NEUTR: neutralization with the following reagents  
25 (or waste reagents) or combinations of reagents:

26 (1) acids;

27 (2) bases; or

28 (3) water (including wastewaters) resulting in a  
29 pH greater than two but less than 12.5 as measured in the  
30 aqueous residuals.

31 O. NLDBR: no land disposal based on recycling.

32 P. PRECP: chemical precipitation of metals and other  
33 inorganics as insoluble precipitates of oxides, hydroxides,  
34 carbonates, sulfides, sulfates, chlorides, fluorides, or  
35 phosphates. The following reagents (or waste reagents) are  
36 typically used alone or in combination:

- 1 (1) lime (i.e., containing oxides and/or
- 2 hydroxides of calcium and/or magnesium);
- 3 (2) caustic (i.e., sodium and/or potassium
- 4 hydroxides);
- 5 (3) soda ash (i.e., sodium carbonate);
- 6 (4) sodium sulfide;
- 7 (5) ferric sulfate or ferric chloride;
- 8 (6) alum; or
- 9 (7) sodium sulfate.

10 Additional flocculating, coagulation, or similar  
11 reagents/processes that enhance sludge dewatering  
12 characteristics are not precluded from use.

13 Q. RBERY: thermal recovery of beryllium.

14 R. RCGAS: recovery/reuse of compressed gases  
15 including techniques such as reprocessing of the gases for  
16 reuse/resale; filtering/adsorption of impurities; remixing for  
17 direct reuse of resale; and use of the gas as a fuel source.

18 S. RCORR: recovery of acids or bases using one or  
19 more of the following recovery technologies:

- 20 (1) distillation (i.e., thermal concentration);
- 21 (2) ion exchange;
- 22 (3) resin or solid adsorption;
- 23 (4) reverse osmosis; and/or
- 24 (5) incineration for the recovery of acid.

25 Note: this does not preclude the use of other physical phase  
26 separation or concentration techniques such as decantation,  
27 filtration (including ultrafiltration), and centrifugation, when  
28 used in conjunction with the recovery technologies in subitems  
29 (1) to (5).

30 T. RLEAD: thermal recovery of lead in secondary lead  
31 smelters.

32 U. RMERC: retorting or roasting in a thermal  
33 processing unit capable of volatilizing mercury and subsequently  
34 condensing the volatilized mercury for recovery. The retorting  
35 or roasting unit or facility must be subject to one or more of  
36 the following:

1 (1) a National Emissions Standard for Hazardous  
2 Air Pollutants (NESHAP) for mercury;

3 (2) a Best Available Control Technology (BACT) or  
4 a Lowest Achievable Emission Rate (LAER) standard for mercury  
5 imposed pursuant to a Prevention of Significant Deterioration  
6 (PSD) permit; or

7 (3) a state permit that establishes emission  
8 limitations for mercury within meaning of section 302 of the  
9 Clean Air Act. All wastewater and nonwastewater residues  
10 derived from this process must comply with the corresponding  
11 treatment standards per waste code with consideration of any  
12 applicable subcategories (e.g., high or low mercury  
13 subcategories).

14 V. RMETL: recovery of metals or inorganics using one  
15 or more of the following direct physical/removal technologies:

- 16 (1) ion exchange;
- 17 (2) resin or solid (i.e., zeolites) adsorption;
- 18 (3) reverse osmosis;
- 19 (4) chelation/solvent extraction;
- 20 (5) freeze crystallization;
- 21 (6) ultrafiltration; and/or
- 22 (7) simple precipitation (i.e., crystallization).

23 NOTE: This does not preclude the use of other physical phase  
24 separation or concentration techniques such as decantation,  
25 filtration (including ultrafiltration), and centrifugation, when  
26 used in conjunction with the recovery technologies in subitems  
27 (1) to (7).

28 W. RORGS: recovery of organics using one or more of  
29 the following technologies:

- 30 (1) distillation;
- 31 (2) thin film evaporation;
- 32 (3) steam stripping;
- 33 (4) carbon adsorption;
- 34 (5) critical fluid extraction;
- 35 (6) liquid-liquid extraction;
- 36 (7) precipitation/crystallization (including



1 freeze crystallization); or

2 (8) chemical phase separation techniques (i.e.,  
3 addition of acids, bases, demulsifiers, or similar chemicals).

4 NOTE: This does not preclude the use of other physical phase  
5 separation techniques such as decantation, filtration (including  
6 ultrafiltration), and centrifugation, when used in conjunction  
7 with the recovery technologies in subitems (1) to (8).

8 X. RTHRM: thermal recovery of metals or inorganics  
9 from nonwastewaters in units defined in part 7045.0020, under  
10 the definition of industrial furnaces.

11 Y. RZINC: resmelting for the purpose of recovery of  
12 zinc high temperature metal recovery units.

13 Z. STABL: stabilization with the following reagents  
14 (or waste reagents) or combinations of reagents:

15 (1) portland cement; or

16 (2) lime/pozzolans (e.g., fly ash and cement  
17 kiln dust).

18 NOTE: This does not preclude the addition of reagents (e.g.,  
19 iron salts, silicates, and clays) designed to enhance the  
20 set/cure time and/or compressive strength, or to overall reduce  
21 the leachability of the metal or inorganic.

22 AA. SSTRP: steam stripping of organics from liquid  
23 wastes using direct application of steam to the wastes operated  
24 so that liquid and vapor flow rates and temperature and pressure  
25 ranges have been optimized, monitored, and maintained. These  
26 operating parameters are dependent on the design parameters of  
27 the unit, such as the number of separation stages and the  
28 internal column design, thus resulting in a condensed extract  
29 high in organics that must undergo incineration, reuse as a  
30 fuel, or other recovery/reuse and an extracted wastewater that  
31 must undergo further treatment as specified in the standard.

32 BB. WETOX: wet air oxidation performed in units  
33 operated so that a surrogate compound or indicator parameter has  
34 been substantially reduced in concentration in the residuals  
35 (e.g., total organic carbon can often be used as an indicator  
36 parameter for the oxidation of many organic constituents that

1 cannot be directly analyzed in wastewater residues).

2 CC. WTRRX: controlled reaction with water for highly  
3 reactive inorganic or organic chemicals with precautionary  
4 controls for protection of workers from potential violent  
5 reactions and precautionary controls for potential emissions of  
6 toxic/ignitable levels of gases released during the reaction.

7 Subp. 4. **Technology-based standards by RCRA waste code.**

8 Governed by technology-based standards listed in Code of Federal  
9 Regulations, title 40, part 268.42, Table 2.

10 Subp. 5. **Technology-based standards for specific**  
11 **radioactive hazardous mixed waste.** Governed by standards listed  
12 in Code of Federal Regulations, title 40, part 268.42, Table 3.

13 Subp. 6. **Application for alternative treatment methods.** A  
14 person may submit an application to the commissioner  
15 demonstrating that an alternative treatment method can achieve a  
16 measure of performance equivalent to that achievable by methods  
17 specified in subparts 1, 7, and 8. The applicant must submit  
18 information demonstrating that the applicant's treatment method  
19 complies with federal, state, and local requirements and is  
20 protective of human health and the environment. On the basis of  
21 all available information, the commissioner may approve the use  
22 of an alternative treatment method. The approval must be stated  
23 in writing and contain provisions and conditions the  
24 commissioner considers appropriate. The person to whom the  
25 approval is issued must comply with all limitations contained in  
26 the determination.

27 Subp. 7. **Exceptions for lab packs.** As an alternative to  
28 the otherwise applicable treatment standards under parts  
29 7045.1350 to 7045.1360, lab packs are eligible for land  
30 disposal, provided the following requirements are met:

31 A. the lab packs comply with parts 7045.0538 and  
32 7045.0638;

33 B. all hazardous wastes contained in the lab packs  
34 are specified in subpart 9 or 10;

35 C. the lab packs are incinerated according to part  
36 7045.0542 or 7045.0640; and

1 D. any incinerator residues from lab packs containing  
2 D004, D005, D006, D007, D008, D010, and D011 are treated in  
3 compliance with the applicable treatment standards specified for  
4 the wastes in parts 7045.1350 to 7045.1360.

5 Subp. 8. **Exceptions for radioactive hazardous mixed**  
6 **wastes.** Radioactive hazardous mixed wastes with treatment  
7 standards specified in subpart 5 are not subject to any  
8 treatment standards specified in subpart 4 or part 7045.1355 or  
9 7045.1358. Radioactive hazardous mixed wastes not subject to  
10 treatment standards in subpart 1 remain subject to all  
11 applicable treatment standards specified in subpart 4 and parts  
12 7045.1355 and 7045.1358.

13 Subp. 9. **Organometallic lab packs.** Hazardous waste with  
14 the following EPA Hazardous Waste Nos. may be placed in an  
15 organometallic lab pack: P001; P002; P003; P004; P005; P006;  
16 P007; P008; P009; P013; P014; P015; P016; P017; P018; P020;  
17 P022; P023; P024; P025; P026; P027; P028; P031; P034; P036;  
18 P037; P038; P039; P040; P041; P042; P043; P044; P045; P047;  
19 P048; P049; P050; P051; P054; P056; P057; P058; P059; P060;  
20 P062; P063; P064; P065; P066; P067; P068; P069; P070; P071;  
21 P072; P073; P074; P075; P077; P081; P082; P084; P085; P087;  
22 P088; P089; P092; P093; P094; P095; P096; P097; P098; P099;  
23 P101; P102; P103; P104; P105; P108; P109; P110; P112; P113;  
24 P114; P115; P116; P118; P119; P120; P122; P123; U001; U002;  
25 U003; U004; U005; U006; U007; U008; U009; U010; U011; U012;  
26 U014; U015; U016; U017; U018; U019; U020; U021; U022; U023;  
27 U024; U025; U026; U027; U028; U029; U030; U031; U032; U033;  
28 U034; U035; U036; U037; U038; U039; U041; U042; U043; U044;  
29 U045; U046; U047; U048; U049; U050; U051; U052; U053; U055;  
30 U056; U057; U058; U059; U060; U061; U062; U063; U064; U066;  
31 U067; U068; U069; U070; U071; U072; U073; U074; U075; U076;  
32 U077; U078; U079; U080; U081; U082; U083; U084; U085; U086;  
33 U087; U088; U089; U090; U091; U092; U093; U094; U095; U096;  
34 U097; U098; U099; U101; U102; U103; U105; U106; U107; U108;  
35 U109; U110; U111; U112; U113; U114; U115; U116; U117; U118;  
36 U119; U120; U121; U122; U123; U124; U125; U126; U127; U128;

1 U129; U130; U131; U132; U133; U134; U135; U136; U137; U138;  
 2 U139; U140; U141; U142; U143; U144; U145; U146; U147; U148;  
 3 U149; U150; U152; U153; U154; U155; U156; U157; U158; U159;  
 4 U160; U161; U162; U163; U164; U165; U166; U167; U168; U169;  
 5 U170; U171; U172; U173; U174; U176; U177; U178; U179; U180;  
 6 U181; U182; U183; U184; U185; U186; U187; U188; U189; U190;  
 7 U191; U192; U193; U194; U196; U197; U200; U201; U202; U203;  
 8 U204; U205; U206; U207; U208; U209; U210; U211; U213; U214;  
 9 U215; U216; U217; U218; U219; U220; U221; U222; U223; U225;  
 10 U226; U227; U228; U234; U235; U236; U237; U238; U239; U240;  
 11 U243; U244; U246; U247; U248; U249; U328; U353; U359; F001;  
 12 F002; F003; F004; F005; F006; F010; F020; F021; F023; F024;  
 13 F026; F027; F028; K001; K002; K008; K009; K010; K011; K013;  
 14 K014; K015; K016; K017; K018; K019; K020; K021; K022; K023;  
 15 K024; K025; K026; K027; K028; K029; K030; K031; K032; K033;  
 16 K034; K035; K036; K037; K038; K039; K040; K041; K042; K043;  
 17 K044; K045; K046; K047; K048; K049; K050; K051; K052; K054;  
 18 K060; K061; K064; K065; K066; K069; K071; K073; K083; K084;  
 19 K085; K086; K087; K093; K094; K095; K096; K097; K098; K099;  
 20 K101; K102; K103; K104; K105; K111; K112; K113; K114; K115;  
 21 K116; K117; K118; K123; K124; K125; K126; K136; D001; D002;  
 22 D003; D004; D005; D006; D007; D008; D010; D011; D012; D013;  
 23 D014; D015; D016; and D017.

24 Subp. 10. Organic lab packs. Hazardous wastes with the  
 25 following EPA Hazardous Waste Nos. may be placed in an organic  
 26 lab pack: P001; P002; P003; P004; P005; P006; P007; P008; P009;  
 27 P013; P014; P015; P016; P017; P018; P020; P022; P023; P024;  
 28 P025; P026; P027; P028; P031; P034; P036; P037; P038; P039;  
 29 P040; P041; P042; P043; P044; P045; P046; P047; P048; P049;  
 30 P050; P051; P054; P057; P058; P059; P060; P062; P063; P064;  
 31 P065; P066; P067; P068; P069; P070; P071; P072; P073; P074;  
 32 P075; P077; P081; P082; P084; P085; P087; P088; P089; P092;  
 33 P093; P094; P095; P096; P097; P098; P099; P101; P102; P103;  
 34 P104; P105; P108; P109; P110; P111; P112; P113; P114; P115;  
 35 P116; P118; P119; P120; P122; P123; U001; U002; U003; U004;  
 36 U005; U006; U007; U008; U009; U010; U011; U012; U014; U015;

1 U016; U017; U018; U019; U020; U021; U022; U023; U024; U025;  
 2 U026; U027; U028; U029; U030; U031; U033; U034; U035; U036;  
 3 U037; U038; U039; U041; U042; U043; U044; U045; U046; U047;  
 4 U048; U049; U050; U051; U052; U053; U055; U056; U057; U058;  
 5 U059; U060; U061; U062; U063; U064; U066; U067; U068; U069;  
 6 U070; U071; U072; U073; U074; U075; U076; U077; U078; U079;  
 7 U080; U081; U082; U083; U084; U085; U086; U087; U088; U089;  
 8 U090; U091; U092; U093; U094; U095; U096; U097; U098; U099;  
 9 U101; U102; U103; U105; U106; U107; U108; U109; U110; U111;  
 10 U112; U113; U114; U115; U116; U117; U118; U119; U120; U121;  
 11 U122; U123; U124; U125; U126; U127; U128; U129; U130; U131;  
 12 U132; U133; U135; U137; U138; U139; U140; U141; U142; U143;  
 13 U147; U148; U149; U150; U153; U154; U155; U156; U157; U158;  
 14 U159; U160; U161; U162; U163; U164; U165; U166; U167; U168;  
 15 U169; U170; U171; U172; U173; U174; U176; U177; U178; U179;  
 16 U180; U181; U182; U183; U184; U185; U186; U187; U188; U189;  
 17 U190; U191; U192; U193; U194; U196; U197; U200; U201; U202;  
 18 U203; U205; U206; U207; U208; U209; U210; U211; U213; U214;  
 19 U218; U219; U220; U221; U222; U223; U225; U226; U227; U228;  
 20 U234; U235; U236; U237; U238; U239; U240; U243; U244; U246;  
 21 U247; U248; U249; U328; U353; U359; F001; F002; F003; F004;  
 22 F005; F010; F020; F021; F023; F024; F026; F027; F028; K001;  
 23 K009; K010; K011; K013; K014; K015; K016; K017; K018; K019;  
 24 K020; K021; K022; K023; K024; K025; K026; K027; K029; K030;  
 25 K031; K032; K033; K034; K035; K036; K037; K038; K039; K040;  
 26 K041; K042; K043; K044; K045; K046; K047; K048; K049; K050;  
 27 K051; K052; K054; K060; K065; K073; K083; K084; K085; K086;  
 28 K087; K093; K094; K095; K096; K097; K098; K099; K101; K102;  
 29 K103; K104; K105; K111; K112; K113; K114; K115; K116; K117;  
 30 K118; K123; K124; K125; K126; K136; D001; D012; D013; D014;  
 31 D015; D016; and D017.

32 Subp. 11. Recommended technologies to achieve deactivation  
 33 of characteristics. The treatment standard for many  
 34 subcategories of the EPA Hazardous Waste Nos. D001, D002, D003,  
 35 K044, K045, and K047 wastes is listed simply as "Deactivation to  
 36 remove the characteristics of ignitability, corrosivity, and

1 reactivity." EPA has determined that many technologies, when  
2 used alone or in combination, can achieve this standard. The  
3 following appendix presents a partial list of these  
4 technologies, using the five-letter technology codes established  
5 in subpart 3. Use of these specific technologies is not  
6 mandatory and does not preclude direct reuse, recovery, or the  
7 use of other pretreatment technologies, provided deactivation is  
8 achieved and these alternative methods are not performed in  
9 units designated as land disposal.

10 7045.1380 PROHIBITIONS ON STORAGE OF RESTRICTED WASTES.

11 [For text of subps 1 to 3, see M.R.]

12 Subp. 4. Exemptions. If a generator's waste is exempt  
13 from a prohibition on the type of land disposal used for the  
14 waste, because of an approved case-by-case extension under part  
15 7045.0075, subpart 6, an approved petition under part 7045.0075,  
16 subparts 8 and 9, or a national capacity variance under parts  
17 7045.1320 to 7045.1330, the prohibition in subpart 1 does not  
18 apply during the period of the exemption.

19 [For text of subps 5 and 6, see M.R.]