

1 Pollution Control Agency

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3 Adopted Permanent Rules Relating to Toxicity Characteristics

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5 Rules as Adopted

6 7001.0640 ADDITIONAL PART B INFORMATION REQUIREMENTS FOR SURFACE
7 IMPOUNDMENTS, WASTE PILES, LAND TREATMENT UNITS, AND LANDFILLS.

8 Subpart 1. Groundwater protection. The additional
9 information designated in items A to H regarding protection of
10 groundwater is required from owners or operators of hazardous
11 waste facilities containing surface impoundments, waste piles,
12 land treatment units, and landfills, except as otherwise
13 provided in part 7045.0484, subpart 1, item B, and must be
14 submitted with Part B of the permit application. The following
15 information is in addition to the information requirements of
16 parts 7001.0560, 7001.0590, 7001.0600, 7001.0610, and 7001.0620:

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

18 D. A description of any plume of contamination that
19 has entered the groundwater from a regulated unit at the time
20 that the application is submitted that:

21 (1) delineates the extent of the plume on the
22 topographic map required under part 7001.0560, item R; and

23 (2) identifies the concentration of each
24 constituent listed in part 7045.0143 throughout the plume or
25 identifies the maximum concentrations of each such constituent
26 in the plume. The commissioner may require this information on
27 additional constituents if waste managed at the facility has met
28 the characteristic of lethality as defined in part 7045.0131,
29 subpart 6.

30 [For text of items E to H, see M.R.]

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

32 7045.0102 MIXTURES OF WASTES.

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

34 Subp. 2. Mixtures of hazardous and nonhazardous wastes.

35 A. A mixture is a hazardous waste if it is a mixture

1 of nonhazardous waste and any waste which is hazardous solely
2 because it exhibits the characteristic of ignitability,
3 corrosivity, oxidativity, or reactivity as described in part
4 7045.0131, unless the resulting mixture no longer exhibits any
5 of the characteristics of ignitability, corrosivity,
6 oxidativity, or reactivity and does not exhibit characteristics
7 of toxicity or lethality as defined in part 7045.0131.

8 B. A mixture is a hazardous waste if it is a mixture
9 of nonhazardous waste and any waste listed in part 7045.0135
10 solely because of ignitability, corrosivity, or reactivity,
11 unless the resulting mixture either no longer exhibits any of
12 the characteristics of ignitability, corrosivity, and
13 reactivity, and does not exhibit characteristics of toxicity or
14 lethality as defined in part 7045.0131, or has been excluded
15 from regulation pursuant to part 7045.0075, subpart 2.

16 C. A mixture is a hazardous waste if it is a
17 nonsewered mixture of nonhazardous waste and any waste listed in
18 part 7045.0135 (other than wastes listed solely because of
19 ignitability, corrosivity, or reactivity) or any waste which is
20 hazardous because it exhibits the characteristics of toxicity or
21 lethality as identified in part 7045.0131 unless the resulting
22 mixture has been excluded from regulation pursuant to part
23 7045.0075, subpart 2.

24 D. A mixture is a hazardous waste if it is a sewered
25 mixture of nonhazardous waste and any waste which is hazardous
26 because it exhibits the characteristics of toxicity or lethality
27 as defined in part 7045.0131 unless before entering the sewer
28 the resulting mixture no longer exhibits the characteristics of
29 toxicity or lethality, and the sewerage of the mixture has been
30 approved by the agency pursuant to parts 7045.0220 to
31 7045.0255. This provision does not apply to those mixtures
32 defined as nonhazardous under item F.

33 [For text of items E to G, see M.R.]

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

35 7045.0120 EXEMPT WASTES.

1 The following wastes may be stored, labeled, transported,
2 treated, processed, and disposed of without complying with the
3 requirements of this chapter:

4 [For text of items A to N, see M.R.]

5 O. spent sulfuric acid used to produce virgin
6 sulfuric acid, unless it is accumulated speculatively as defined
7 in part 7045.0020;

8 P. secondary materials that are reclaimed and
9 returned to the original process or processes in which they were
10 generated where they are reused in the production process
11 provided that:

12 [For text of subitems (1) and (2), see M.R.]

13 (3) the secondary materials are never accumulated
14 in such tanks for over 12 months without being reclaimed; and

15 (4) the reclaimed material is not used to produce
16 a fuel, or used to produce products that are used in a manner
17 constituting disposal; or

18 Q. petroleum-contaminated media and debris that fail
19 the test for the toxicity characteristic in part 7045.0131,
20 subpart 7 (hazardous waste codes D018 to D043 only), and are
21 subject to corrective action regulations under chapter 7150.

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.

28 [For text of subps 2 to 5, see M.R.]

29 Subp. 6. Lethality. Lethality is determined as follows:

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

33 [For text of subitems (1) to (4), see M.R.]

34 B. Lethality shall be determined by applying
35 knowledge of materials and processes used, including reasonably

1 available information on the lethality of the components of the
2 waste. If available information and knowledge are insufficient
3 to reasonably determine lethality, the generator must notify the
4 commissioner. The commissioner may order additional evaluation
5 as specified in part 7045.0217. Additional evaluation may
6 include testing according to the specifications of item C.

7 C. Lethality shall be determined as described in
8 subitems (1) to (3):

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

10 D. A waste that exhibits the characteristics of
11 lethality, but is not listed as a hazardous waste in part
12 7045.0135, has the hazardous waste number MN01.

13 Subp. 7. Toxicity. Toxicity is determined as follows:

14 A. A waste exhibits the characteristic of toxicity
15 if, using the test methods described in Code of Federal
16 Regulations, title 40, part 261, appendix II, as amended, or
17 equivalent methods approved by the commissioner under the
18 procedures in part 7045.0075, subpart 1, the extract from a
19 representative sample of the waste contains any of the
20 contaminants listed in subpart 8 at a concentration equal to or
21 greater than the respective value given in that table. Where
22 the waste contains less than 0.5 percent filterable solids, the
23 waste itself, after filtering, is considered to be the extract.

24 B. A waste that exhibits the characteristic of
25 toxicity, but is not listed as a hazardous waste in part
26 7045.0135, has the hazardous waste number specified in subpart 8
27 which corresponds to the toxic contaminant causing it to be
28 hazardous.

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

30 Subp. 8. Maximum concentration of contaminants for the
31 toxicity characteristic.

Hazardous Waste Number	Contaminant	CAS No.	Maximum Concentration (milligrams per liter)
D004	Arsenic	7440-38-2	5.0
D005	Barium	7440-39-3	100.0
D018	Benzene	71-43-2	0.5
D006	Cadmium	7440-43-9	1.0

1	D019	Carbon tetrachloride	56-23-5	0.5
2	D020	Chlordane	57-74-9	0.03
3	D021	Chlorobenzene	108-90-7	100.0
4	D022	Chloroform	67-66-3	6.0
5	D007	Chromium	7440-47-3	5.0
6	D023	o-Cresol	95-48-7	*200.0
7	D024	m-Cresol	108-39-4	*200.0
8	D025	p-Cresol	106-44-5	*200.0
9	D026	Cresol		*200.0
10	D016	2,4-D	94-75-7	10.0
11	D027	1,4-Dichlorobenzene	106-46-7	7.5
12	D028	1,2-Dichloroethane	107-06-2	0.5
13	D029	1,1-Dichloroethylene	75-35-4	0.7
14	D030	2,4-Dinitrotoluene	121-14-2	0.13
15	D012	Endrin	72-20-8	0.02
16	D031	Heptachlor (and its epoxide)	76-44-8	0.008
17	D032	Hexachlorobenzene	118-74-1	0.13
18	D033	Hexachlorobutadiene	87-68-3	0.5
19	D034	Hexachloroethane	67-72-1	3.0
20	D008	Lead	7439-92-1	5.0
21	D013	Lindane	58-89-9	0.4
22	D009	Mercury	7439-97-6	0.2
23	D014	Methoxychlor	72-43-5	10.0
24	D035	Methyl ethyl ketone	78-93-3	200.0
25	D036	Nitrobenzene	98-95-3	2.0
26	D037	Pentachlorophenol	87-86-5	100.0
27	D038	Pyridine	110-86-1	5.0
28	D010	Selenium	7782-49-2	1.0
29	D011	Silver	7440-22-4	5.0
30	D039	Tetrachloroethylene	127-18-4	0.7
31	D015	Toxaphene	8001-35-2	0.5
32	D040	Trichloroethylene	79-01-6	0.5
33	D041	2,4,5-Trichlorophenol	95-95-4	400.0
34	D042	2,4,6-Trichlorophenol	88-06-2	2.0
35	D017	2,4,5-TP (Silvex)	93-72-1	1.0
36	D043	Vinyl chloride	75-01-4	0.2

37
38 *If o-, m-, and p-cresol concentrations cannot be
39 differentiated, the total cresol (D026) concentration is used.
40 The regulatory level of total cresol is 200 milligrams per liter.

41 7045.0133 EXEMPTION FROM REGULATION DUE TO LETHALITY.

42 Subpart 1. In general. A specific generator's waste that
43 meets any of the lethality characteristics as described in part
44 7045.0131, subpart 6, may be exempted from regulation under
45 parts 7045.0100 to 7045.1030 if the generator can demonstrate to
46 the satisfaction of the agency that the waste is not capable of
47 posing a present or potential hazard to human health and the
48 environment if the waste were to be improperly treated,
49 transported, stored, disposed, or managed under routine waste
50 management methods.

51 Subp. 2. Factors to be considered. In demonstrating that
52 a waste should be exempt from regulation under parts 7045.0100
53 to 7045.1030, the generator must present information related to
54 the following factors:

1 A. the nature of the lethality displayed by the
2 waste;

3 B. the median lethal dose or median lethal
4 concentration of the entire waste and each of the lethal
5 constituents within the waste;

6 C. the lethal constituent or constituents present in
7 the waste and the respective concentrations;

8 [For text of items D and E, see M.R.]

9 F. based upon the improper or routine waste
10 management methods considered in item E, the following factors:

11 (1) the potential of the lethal constituent or
12 constituents or any lethal degradation product or products to
13 migrate from the waste into the environment;

14 (2) the persistence of the lethal constituent or
15 constituents or any lethal degradation product or products;

16 (3) the degree to which the lethal constituent or
17 constituents or any lethal degradation product or products may
18 bioaccumulate in the environment;

19 (4) the potential for the lethal constituents or
20 constituents of any lethal degradation product or products to
21 degrade into nonhazardous constituents and the rate of
22 degradation; and

23 [For text of subitem (5), see M.R.]

24 [For text of item G, see M.R.]

25 7045.0135 LISTS OF HAZARDOUS WASTES.

26 Subpart 1. **General.** A waste is a hazardous waste if it is
27 listed under subparts 2 to 5 unless it has been excluded from
28 the list under part 7045.0075, subpart 2.

29 The basis for listing the classes or types of wastes listed
30 in subparts 2 to 5 is indicated by employing one or more of the
31 following hazard codes:

32 A. ignitable waste, (I);

33 B. corrosive waste, (C);

34 C. reactive waste, (R);

35 D. toxicity characteristic waste, (E);

- 1 E. acute hazardous waste, (H); and
2 F. toxic waste, (T).

3 The constituent which caused the agency to list the waste
4 as a toxicity characteristic waste (E) or toxic waste (T) in
5 subparts 2 and 3 is identified in part 7045.0139.

6 Each listed hazardous waste is assigned a hazardous waste
7 number which precedes the name of the waste. This number must
8 be used in complying with the disclosure requirements of parts
9 7045.0205 to 7045.0304 and certain record keeping and reporting
10 requirements under parts 7045.0205 to 7045.1030, 7045.1300 to
11 7045.1380, and the agency's permitting procedures in chapter
12 7001.

13 The following hazardous wastes listed in subparts 2 and 3
14 are subject to the exclusion limits for acutely hazardous wastes
15 established in part 7045.0219: Hazardous Waste Numbers F020,
16 F021, F022, F023, F026, and F027.

17 [For text of subps 2 to 5, see M.R.]

18 7045.0216 EVALUATION REPORTS TO THE COMMISSIONER.

19 Subpart 1. **Necessary information.** The commissioner may
20 request at any time that a person producing a waste submit the
21 results of the evaluation of the waste. The person must submit
22 the following information as requested by the commissioner:

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

24 C. The concentration of each component listed in part
25 7045.0131, subpart 8 found in the leachate of the waste. The
26 person evaluating the waste may submit soft data in lieu of
27 testing the waste if the data is sufficient to demonstrate
28 whether the waste is hazardous or nonhazardous due to the
29 toxicity characteristic.

30 [For text of items D and E, see M.R.]

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

32 7045.0219 SPECIAL REQUIREMENTS FOR SMALL QUANTITY GENERATORS OF
33 HAZARDOUS WASTE.

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

35 Subp. 7. **Testing.** When testing wastes for the toxicity

1 characteristic of part 7045.0131, subpart 7, a small quantity
2 generator must apply the extraction procedure toxicity test
3 described in Code of Federal Regulations, title 40, part 261,
4 appendix II (1989). Effective March 29, 1991, a small quantity
5 generator must apply the toxicity characteristic leaching
6 procedure of part 7045.0131, subpart 7, when testing wastes for
7 the toxicity characteristic.

8 7045.0230 CONTENT OF DISCLOSURE.

9 Subpart 1. **Information required.** Each disclosure must
10 include the following information:

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

12 D. the concentration of each component in part
13 7045.0131, subpart 8 that is known or suspected to be in the
14 leachate of the waste following the toxicity characteristic
15 leaching procedure. If a component listed in that exhibit is
16 known or suspected to be in the waste, the results from the
17 toxicity characteristic leaching procedure for that component
18 must be included unless alternative data approved by the
19 commissioner is submitted;

20 [For text of items E to I, see M.R.]

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

22 7045.0484 GROUNDWATER PROTECTION.

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

24 Subp. 4. **Hazardous constituents.** The agency shall specify
25 in the facility permit the hazardous constituents to which the
26 groundwater protection standard applies. Hazardous constituents
27 are constituents identified in part 7045.0141, or constituents
28 which are not listed in part 7045.0141, but which are contained
29 in wastes that meet criteria established in part 7045.0131,
30 subpart 6, for lethality and which may reasonably be expected to
31 contribute to the lethality.

32 [For text of subps 5 to 14, see M.R.]

33 7045.0634 LAND TREATMENT.

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

1 Subp. 3. **Waste analysis.** In addition to the waste
2 analyses required by part 7045.0564 before placing a hazardous
3 waste in or on a land treatment facility, the owner or operator
4 shall:

5 A. determine the concentrations in the waste of any
6 substances which equal or exceed the maximum concentrations
7 contained in part 7045.0131, subpart 8, that cause a waste to
8 exhibit the toxicity characteristic;

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

10 [For text of subps 4 to 8, see M.R.]