

U.S. EPA'S
 HAZARDOUS WASTE
 IDENTIFICATION AND LISTS
 FROM FEDERAL REGISTER
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 SECTION 3001, R.C.R.A.

§ 250.14 Hazardous waste lists.

A solid waste is a hazardous waste if it is listed in paragraphs (a) or (b) below unless it can be demonstrated, pursuant to the procedures under § 250.15, that the Administrator's basis for listing the waste does not meet the criteria for listing under § 250.12(b). The Administrator's basis for listing a waste in paragraphs (a) and (b) is identified by parenthetical codes that follow each listed waste. These codes reference the following bases for listing:

- I—Meets the criterion of § 250.12(b)(1) because the waste meets the ignitable characteristic of § 250.13(a)
- C—Meets the criterion of § 250.12(b)(1) because the waste meets the corrosive characteristic of § 250.13(b).
- R—Meets the criterion of § 250.12(b)(1) because the waste meets the reactive characteristic of § 250.13(c).
- T—Meets the criterion of § 250.12(b)(1) because the waste meets the toxic characteristic § 250.13(d).
- N—Meets the criterion of § 250.12(b)(2) because the waste contains infectious agents.
- A—Meets the criterion of § 250.12(b)(2) because the waste contains radioactive substances.
- M—Meets the criterion of § 250.12(b)(2) because the waste contains mutagenic, carcinogenic, or teratogenic substances.
- B—Meets the criterion of § 250.12(b)(2) because the waste contains substances that bioaccumulate.
- O—Meets the criterion of § 250.12(b)(2) because the waste contains toxic organic substances.

NOTE.—The process waste streams are listed by Standard Industrial Classification (SIC) codes for ease of reference only. The SIC classification of the industry generating the waste has no effect on the listing of that process waste as hazardous.

(a) Hazardous waste.

- Waste chlorinated hydrocarbons from degreasing operations (I,T,O)
- Waste non-halogenated solvent (such as methanol, acetone, isopropyl alcohol, polyvinyl alcohol, stoddard solvent and methyl ethyl ketone) and solvent sludges from cleaning, compounding milling and other processes (I,O)
- Waste lubricating oil (T,O)
- Waste Hydraulic or cutting oil (T,O)
- Paint wastes (such as used rags, slops, latex sludge, spent solvent) (T,I,O)
- Water-based paint wastes (T)
- Tank bottoms, leaded (T)
- Spent or waste cyanide solutions or sludges (R,T)
- Etching acid solution or sludges (T,C)
- Waste paint and varnish remover or stripper (I,O)
- Solvents and solvent recovery still bottoms (non-halogenated) (I,O)
- Solvents and solvent recovery still bottoms (halogenated) (O)
- Waste or waste off-spec toluene diisocyanate (I,R,O)
- Leachate from hazardous waste landfills (T,O,M,B.)

PROPOSED RULES

Electroplating wastewater treatment sludge (T)

Material which is within the scope of Section 250.10(b) and is normally shipped using a name listed in Appendix III (Pesticides), Appendix IV (DOT Poison A, Poison B, ORM-A Materials), or Appendix V (Priority Pollutants) (T,O,M)

Spill clean-up residues and debris from spills of materials which appear in Appendix III, IV, or V (T,O,M)

Off-specification material which is within the scope of Section 250.10(b) and, if met specification would be shipped using a name listed in Appendix III, IV, or V (T,O,M)

Containers, unless triple rinsed, which have contained materials normally shipped using a name listed in Appendix III, IV, or V (T,O,M)

(b) *Hazardous waste sources and processes.* (1) *Sources generating hazardous waste.* The following sources generate hazardous waste unless the waste from these sources does not contain microorganisms or helminths of CDC Classes 2 through 5 of the Etiologic Agents listed in Appendix VI of this Subpart.

(i) *Health care facilities.* (A) The following departments of hospitals as defined by SIC Codes 8062 and 8069, unless the waste has been treated as specified in Appendix VII of this Subpart. (N)

Obstetrics department including patients' rooms
Emergency departments
Surgery department including patients' rooms
Morgue
Pathology department
Autopsy department
Isolation rooms
Laboratories
Intensive care unit
Pediatrics department

(B) The following departments of veterinary hospitals as defined by SIC Codes 0741 and 0742, unless the waste has been treated as specified in Appendix VII. (N)

Emergency department
Surgery department including patients' rooms
Morgue
Pathology department
Autopsy department
Isolation rooms
Laboratories
Intensive care unit

(ii) Laboratories, as defined by SIC Codes 7391, 8071 and 8922, unless the laboratories do not work with CDC Classes 2 through 5 of Etiologic Agents as listed in Appendix VI. (N)

(iii) Sewage Treatment Plants, with the exception of publicly owned treatment works, unless sludge generated by such a plant has been stabilized by means of chemical, physical thermal, or biological treatment processes that result in the significant reduction of odors, volatile organics and pathogenic microorganisms. These processes are

discussed in "Municipal Sludge Management: Environmental Factors; Technical Bulletin" (42 FR 57420). Specifications for the stabilization processes discussed in this publication are given in *Process Design Manual for Sludge Treatment and Disposal*, (EPA 625/1-1-74/006, October 1974). (N)

(2) *Processes generating hazardous waste:*

SIC	Process Description
1094	Waste rock and overburden from uranium mining (A)
1099	Chlorinator residues and clarifier sludge from zirconium extraction (A)
1475	Overburden and slimes from phosphate surface mining (A)
2874	Waste gypsum from phosphoric acid production (A)
2819-2874	Slag and fluid bed prills from elemental phosphorus production (A)
2231	Wool fabric dyeing and finishing wastewater treatment sludges (T,O)
2261-2	Woven fabric dyeing and finishing wastewater treatment sludges (Y,O)
2250	Knit fabric dyeing and finishing wastewater treatment sludges (O,T)
2289	Yarn and stock dyeing and finishing wastewater treatment sludges (O,T)
2279	Carpet dyeing and finishing wastewater treatment sludges (O,T)
2299	Wool scouring wastewater treatment sludges (T)
2812	Mercury bearing sludges from brine treatment from mercury cell process in chlorine production (T)
2812	Sodium calcium sludge from production of chlorine by Down Cell process (R)
2812	Mercury bearing brine purification muds from mercury cell process in chlorine production (T)
2812	Waste water treatment sludge from diaphragm cell process in production of chlorine (T)
2812	Chlorinated hydrocarbon bearing wastes from diaphragm cell process in chlorine production (O,M)
2816	Chromium bearing wastewater treatment sludge from production of chrome green pigment (T)
2816	Chromium bearing wastewater treatment sludge and other chromium bearing wastes from production of chrome oxide green pigment (anhydrous & hydrated)
2816	Ferric ferrocyanide bearing wastewater treatment sludges from the production of iron blue pigments (T)
2816	Mercury bearing wastewater treatment sludges from the production of mercuric sulfide pigment (T)
2816	Chromium bearing wastewater treatment sludges from the production of TiO ₂ pigment by the chloride process (T)
2816	Chromium bearing wastewater treatment sludges from the production of TiO ₂ pigment by the sulfate process (T)
2816	Arsenic bearing sludges from purification process in the production of antimony oxide (T)
2816	Antimony bearing wastewater treatment sludge from production of antimony oxide (T)
2816	Chromium or lead bearing wastewater treatment sludge from production of chrome yellows and oranges (lead chromate) (T)

2816 Chromium or lead bearing wastewater treatment sludge from production of molybdate orange (lead molybdate lead chromate) (T)

2816 Zinc and chromium bearing wastewater treatment sludge from production of zinc yellow pigment (hydrated zinc potassium chromate) (T)

2816 Ash from incinerated still bottoms (paint and pigment production) (T)

2819 Arsenic bearing wastewater treatment sludges from production of boric acid. (T)

2834 Arsenic or organo-arsenic containing wastewater treatment sludges from production or veterinary pharmaceuticals (T,M,O)

2851 Wastewater treatment sludges from paint production (C,T)

2851 Air pollution control sludges from paint production (T)

2865 Vacuum still bottoms from the production of maleic anhydride (O)

2865 Still bottoms from distillation of benzyl chloride (O)

2865 Distillation residues from fractionating tower for recovery of benzene and chlorobenzenes (O,B)

2865 Vacuum distillation residues from purification of 1-chloro-4-nitrobenzene (O,M)

2865 Still bottoms or heavy ends from methanol recovery in methyl methacrylate production (O)

2869 Heavy ends (still bottoms) from fractionator in production of epichlorohydrin (M,O)

2869 Heavy ends from fractionation in ethyl chloride production (M,O)

2869 Column bottoms or heavy ends from production of trichloroethylene (O,B)

2869 Residues from the production of hexachlorophenol, trichlorophenol and 2,4,5-T (O)

2869 Heavy ends from distillation of vinyl chloride in production of vinyl chloride from ethylene dichloride (O)

2869 Heavy ends from distillation of ethylene dichloride in vinyl chloride production (O)

2869 Heavy ends or distillation residues from carbon tetrachloride fractionation tower (B,O)

2869 Heavy ends from distillation of ethylene dichloride in ethylene dichloride production (O)

2869 Purification column wastes from production of nitrobenzene (O)

2869 Still bottoms from production of furfural (O)

2869 Spent catalyst from fluorocarbon production (T,O)

2869 Centrifuge residue from toluene diisocyanate production (O)

2869 Lead slag from lead alkyl production (T)

2869 Stripping still tails from production of methyl ethyl pyridines (I,O)

2869 Still bottoms from aniline production (O)

2869 Aqueous effluent from scrubbing of spent acid in nitrobenzene production (O)

2869 Bottom stream from quench column in acrylonitrile production (O)

2869 Bottom stream from wastewater stripper in production of acrylonitrile (O)

2869 Still bottoms from final purification of acrylonitrile (O,M)

2869 Solid waste discharge from ion exchange column in production of acrylonitrile (O,M)

- 2869 Waste stream from purification of HCN in production of acrylonitrile (O,M)
- 3369 Waste stream (column bottoms) from acetonitrile purification in production of acrylonitrile (O)
- 2890 Sludges, wastes from tub washer (Ink Formulation) (T,C,O)
- 2869 Wastewater treatment, sludges from the production of dieldrin, chlordane, toxaphene, disulfoton, malathion, phorate, carbaryl, pentadiene, trifluralin, alachlor, methyl parathion, vernoloate, methomyl, carbofuran, captan, creosote, dithiocarbamates, pentachlorophenol, bromacil, diuron, p-chlorobenzene and chloroxuron. (O,M,B)
- 2869 Wastewater from oxidation of aldrin solution in production of dieldrin. (O,M,B)
- 2869 Wastewater from extraction of dieldrin solution in production of dieldrin. (O,M,B)
- 2869 Wastewater and scrub water from chlorination of cyclopentadiene in production of chlordane. (O,M,B)
- 2869 Filter solids from filtration of hexachlorocyclopentadiene in production of chlordane. (O,M,B)
- 2869 Filter cake from filtration of toxaphene solution in production of toxaphene. (O,M,B)
- 2869 Unrecovered triester from production of disulfoton. (O,M)
- 2869 Still bottoms from toluene reclamation distillation in production of disulfoton. (O,M)
- 2869 Filter cakes from filtration of dimethylphosphorothion and DMTA in production of malathion. (O,M)
- 2869 Liquid wastes from washing and stripping in production of malathion. (O,M)
- 2869 Liquid and solid wastes from the washing, stripping and filtering of phorate in phorate production. (O,M)
- 2869 Filter cake from the filtration of diethylphosphorodithiolic acid in the production of phorate. (O,M)
- 2869 Heavy ends and distillation residues from production of carbaryl. (O,M)
- 2869 2,6-D waste by-product from production of 2,4-D. (O,M,B)
- 2869 Heavy ends or distillation residues from distillation of tetrachlorobenzene in production of 2,4,5-T. (O,M,B)
- 2869 Scrubber and filter wastes from production of atrazine. (O,M)
- 2869 Filter cake from production of pyrethrin. (O)
- 2869 Filter cake from production of diazinon. (O,M)
- 2869 By-product salts in production of MSMA. (O)
- 2869 By-product salts in production of codylic acid. (T)
- 2869 Tars from manufacture of bicycloheptadiene and cyclopentadiene. (O,M,B)
- 2892 Wastewater treatment sludges from explosives, propellants and initiating compounds manufacture (C,T,R,I)
- 2892 Wastes recovered from acid vapor scrubber stream in the production of RDX/HMX (O,R,I)
- 2892 Catch basin materials in RDX/HMX production (C)
- 2892 Spent carbon columns used in treatment of wastewater-LAP operations (R)
- 2892 Wastewater treatment sludges from production of initiating compounds (T)
- 2892 Red water and pink water from TNT production (O)
- 2911 Petroleum refining, high octane production neutralization HF alkylation sludge (T,O,M)
- 2911 Petroleum refining DAF sludge (T, I, O)
- 2911 Petroleum refining kerosene filter cakes (T,O,M)
- 2911 Petroleum refining lube oil filtration clays (T,O,M)
- 2911 Petroleum refining—slop oil emulsion solids (T,I,O)
- 2911 Petroleum refining exchange bundle cleaning solvent (T,O)
- 2911 API separator sludge (T,O)
- 3111 Leather tanning and finishing: Wastewater treatment sludge from chrome tannery, beamhouse/tanhouse (T)
- 3111 Leather tanning and finishing: Wastewater treatment screenings from sheepskin tannery, split tannery and retan/finishers (T)
- 3111 Trimmings and shavings from leather tanning and finishing chrome, split, beam/tanhouse and retan/finishers (T)
- 3111 Wastewater treatment sludge from dehairing (R,T)
- 3312 Coking: Decanter tank tar (T,O)
: Decanter tank pitch sludge (T,O)
: Oleum wash waste (C)
: Caustic neutralization waste (C)
: Ammonia still lime sludge (T)
- 3312 Iron Making: Ferromanganese blast furnace dust (T,R)
: Ferromanganese blast furnace sludge (T)
: Electric furnace dust and sludge (T)
- 3312 Steel Finishing: Alkaline cleaning waste (C)
: Waste pickle liquor (C)
: Cyanide-bearing wastes from electrolytic coating (T)
: Chromate and dichromate wastes from chemical treatment (T)
: Descaling acid (T,C)
- 3331 Primary copper smelting and refining electric furnace slag, converter dust, acid plant sludge, and reverberatory dust (T)
- 3332 Primary lead blast furnace dust (T)
- 3332 Primary lead lagoon dredging from smelter (T)
- 3333 Zinc acid plant blowdown lime treatment: gypsum cake (acid cooling tower and neutral cooling tower) (T)
- 3333 Zinc production: oxide furnace residue and acid plant sludge (T)
- 3333 Zinc anode sludge (T)
- 3339 Primary antimony—electrolytic sludge (T)
- 3339 Primary tungsten—digestion residues (T)
- 3339 Primary lead sinter dust scrubbing sludge (T)
- 3339 Ferromanganese emissions control: baghouse dusts and scrubwater solids (T)
- 3339 Ferrochrome silicon furnace emission control dust or sludge (T)
- 3339 Ferrochrome emissions control: furnace baghouse dust, and ESP dust (T)
- 3339 Primary antimony—pyrometallurgical blast furnace slag (T)
- 3341 Secondary lead, scrubber sludge from SO₂ emission control, soft lead production (T)
- 3341 Secondary lead—white metal production furnace dust (T)
- 3341 Secondary copper—pyrometallurgical, blast furnace slag. (T)
- 3341 Secondary copper—electrolytic refining wastewater treatment sludge (T)
- 3341 Secondary aluminum dross smelting—high salt slag plant residue (T)
- 3341 Zinc—cadmium metal reclamation, cadmium plant residue. (T)
- 3691 Lead acid storage battery production wastewater treatment sludges (T)
- 3691 Lead acid storage battery production clean-up wastes from cathode and anode paste production (T)
- 3691 Nickel cadmium battery production wastewater treatment sludges (T)
- 3691 Cadmium silver oxide battery production wastewater treatment sludge (T)
- 3691 Mercury cadmium battery production wastewater treatment sludges (T)
- 3692 Magnesium carbon battery production chromic acid wastewater treatment sludges (T)

§ 250.15 Demonstration of non-inclusion in the hazardous waste system.

(a) Any person wishing to demonstrate to EPA that a solid waste from an individual facility, whose waste is listed in § 250.14 (a) or (b), is not a hazardous waste may do so by performing the tests described below on a representative sample of the waste for those characteristics or properties indicated by the codes (i.e., (I), (C), (R), (N), (T), (A), (O), (M), (B)) following the waste listing. A certification of the test results shall be submitted to the EPA Administrator by certified mail with return receipt requested. The results of the tests must show the waste is non-hazardous for each characteristic or property indicated.

(1) Waste designated as ignitable (I) must be shown by the § 250.13(a) ignitable characteristic method not to meet the § 250.13(a) definition.

(2) Waste designated as corrosive (C) must be shown by the § 250.13(b) corrosive characteristic method not to meet the § 250.13 (b) definition.

(3) Waste designated as reactive (R) must be shown by the § 250.13(c) reactive characteristic method not to meet the § 250.13 (c) definition.

(4) Waste designated as toxic (T) must be shown by the § 250.13(d) toxic characteristic method not to meet the § 250.13(d) definition.

(5) Waste designated as radioactive (A) must be shown to have either of the following properties:

(i) An average radium-226 concentration less than 5 picocuries per gram for solid waste or 50 picocuries (radium-226 and radium-228 combined) per liter for liquid waste as determined by either of the methods cited in Appendix VIII of this Subpart; or

(ii) A total radium-226 activity less than 10 microcuries for any single discrete source.

(6) Waste designated as mutagenic (M), bioaccumulative (B), or toxic organic (O) must be shown to have an Extraction Procedure extract (see

§ 250.13(d)(2)) with none of the following properties:

(i) *Mutagenic (M)*: Contains more than one mg/liter of any compound on the Controlled Substances List in Appendix IX of this Subpart or gives a positive response in any one of a set of required tests for mutagenic activity. A total of three assays must be conducted. One shall be chosen from group I, one from group II, and one from those listed in group III. Test protocols are defined in Appendix X of this Subpart.

Group I Detection of gene mutations

1. Point mutation in bacteria

Group II Detection of gene mutations

1. Mammalian somatic cells in culture.
2. Fungal microorganisms.

Group III Detecting effects of DNA repair or recombination as an indication of genetic damage

1. DNA repair in bacteria (including differential killing of repair defective strains).
2. Unscheduled DNA synthesis in human diploid cells.
3. Sister-chromatid exchange in mammalian cells.
4. Mitotic recombination and/or gene conversion in yeast.

(ii) *Bioaccumulative (B)*: Gives a positive result in the Bioaccumulation Potential Test, defined in Appendix XI of this Subpart.

(iii) *Toxic Organic (O)*: Contains any organic substance which has a calculated human LD50* of less than 800 mg/kg, at a concentration in mg/l greater than or equal to 0.35 times its LD50 expressed in units of mg/kg. For purposes of this Subpart, metallic salts of organic acids containing 3 or fewer carbon atoms are considered not to be organic substances.

* Procedure for Calculating Human LD50 Value

The LD50 value to be used will be that for oral exposure to rats. Where a value for the rat is not available, mouse oral LD50 data may be employed. Where an appropriate LD50 value for the rat or mouse is listed in the *NIOSH Registry of Toxic Effects of Chemical Substances* ("Registry"), this value may be used without validation. If other values are used, they must be supported by specific and verified laboratory reports. The appropriate conversion factors to use in calculating LD50s are:

Rat x.16 = human

Mouse x.066 = human

Example: Tetraethylenepentamine

Listed oral rat LD50 is 3990 mg/kg calculated human LD50 is $3990 \times 0.16 = 638$ mg/kg, $638 \times 0.35 = 223$ mg/l

Thus if the EP extract contains more than 223 mg/l of tetraethylenepentamine the waste is hazardous.

(b) A person desiring to demonstrate that solid waste from an individual facility is not hazardous may perform the tests himself or have an appropriate laboratory facility perform them.

(c) The certification of the test results shall contain the following information:

(1) *General information.* (i) The name, address and identification number of person desiring the demonstration.

(ii) The name and address of the laboratory facility performing the sampling and/or tests if different from that of the person desiring demonstration.

(iii) The name(s) and qualification(s) of the person(s) sampling the waste.

(iv) The name(s) and qualification(s) of the person(s) testing the waste.

(v) The date(s) of the sampling of the waste.

(vi) The date(s) of the testing of the waste.

(vii) The quantity of waste generated or handled per month.

(2) *Waste sampling.* (i) A description of the methodology used to obtain the representative sample.

(ii) A description of sample handling techniques (e.g., sample splitting, extraction, containerization, preservation, etc.).

(iii) A description of the equipment used in obtaining or handling the sample.

(3) *Waste testing.* (i) A description of the test(s) performed (e.g., Extraction Procedure, flash point, etc.).

(ii) The results of each test performed.

(iii) The names and model numbers of the instruments used in performing the tests.

(iv) A statement as to whether there are or will be any significant changes in the person's feed materials or operations which may alter the results of any of the tests performed.

(v) A copy of any documents indicating results of any of the tests.

(4) *Certification/signature.* The following statement signed by the person desiring demonstration, and by the supervisors of all persons who participated in the sampling and testing of the waste:

I have personally examined and am familiar with the information submitted in this certification, and I hereby certify under penalty of law that this information is true, accurate, and complete. I am aware that there are significant penalties for submit-

ting false information, including the possibility of fine and imprisonment.

(d) If a person submits a demonstration under paragraph (a) of this section, that demonstration shall take effect 90 days after the receipt by the Administrator of the demonstration, except that it shall cease to be effective at any time the Administrator disapproves the demonstration. During the time that a demonstration is in effect, persons otherwise covered are not subject to Subparts B, C, D and E with respect to waste included in the demonstration.

(e) The Administrator may disapprove a demonstration submitted under this section for good cause and for the following reasons:

(1) The procedures prescribed in paragraphs (a) (1)-(a) (6) were not followed;

(2) The results of the demonstration do not show that the solid waste fails to meet the criteria for listing under § 250.12(b);

(3) The results of the demonstration are based on fraudulently derived or inaccurate information

(4) There is insufficient information, or on which to make a determination.

(f) Where the Administrator disapproves a demonstration, the party who submitted it may request that a public hearing be held. If a demonstration is approved, an interested party who can show that he is aggrieved by such an action may request a hearing. The Administrator may grant the request for a hearing if there are genuine and relevant factual issues that may be resolved in such a hearing. Each hearing shall be preceded by adequate public notice, shall be informal rather than a formal adjudication and shall be presided over by the Administrator or some person to whom he delegates that responsibility.

(g) The decisions of the presiding officer at a hearing held under paragraph (f) shall constitute final Agency action, and are not appealable to the Administrator.

(h) While a request for a hearing is pending, the decision which is being appealed shall be considered effective, except that at his discretion the Administrator may grant a request for a stay of the effectiveness, pending the outcome of the hearing.