

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

DIVISION OF MATERIALS MANAGEMENT

625 Broadway

Albany, NY 12233

**6 NYCRR PART 371**  
**IDENTIFICATION AND LISTING OF HAZARDOUS WASTES**

As of July 22, 2023

(Statutory authority: Environmental Conservation Law, art. 1, title 1, art. 3, title 3, §§ 19-0301, 19-0303, 19-0304, 19-0306, 23-2305, 23-2307, 23-2308, art. 27, §§ 27-0105, 27-0106, 27-0305, 27-0905, titles 1, 3, 7, 9, 27-2007, §§ 70-0107, 70-0109, 70-0115, art. 71, § 71-2201, titles 27, 35 )

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# PART 371

## IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

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## Section 371.1 General

### (a) Purpose and scope.

This Part establishes the procedures for identifying those solid wastes which are subject to regulation as hazardous wastes under Parts 370 through 373, and 376 of this Title. However, even though a given material is defined as a hazardous waste under this Part, it may be exempt from one or more of the substantive provisions of those Parts, as specified in each respectively. Definitions for terms used in this Part are given in Part 370 of this Title. For the purposes of subdivisions (c) and (g) of this section:

- (1) A material is '*accumulated speculatively*' if it is accumulated before being recycled. A material is not accumulated speculatively, however, if the person accumulating it can show that the material is potentially recyclable and has a feasible means of being recycled; and that during the calendar year (commencing on January 1st) the amount of material that is recycled, or transferred to a different site for recycling, equals at least 75 percent by weight or volume of the amount of that material accumulated at the beginning of the period. In calculating the percentage of turnover, the 75-percent requirement is to be applied to each material of the same type (e.g., slags from a single smelting process) that is recycled in the same way (i.e., from which the same material is recovered or that is used in the same way). Materials accumulating in units that would be exempt from regulation under section 371.1(e)(3) of this Title are not to be included in making the calculation. (Materials that are already defined as solid wastes also are not to be included in making the calculation.) Materials are no longer in this category once they are removed from accumulation by recycling, however.
- (2) A '*byproduct*' is a material that is not one of the primary products of a production process and is not solely or separately produced by the production process. Examples are process residues such as slags or distillation column bottoms. The term does not include a coproduct that is produced for the general public's use and is ordinarily used in the same form as produced by the process.
- (3) A material is '*reclaimed*' if it is processed to recover a usable product, or if it is regenerated. Examples are recovery of lead values from spent batteries and regeneration of spent solvents.
- (4) A material is '*recycled*' if it is used, reused or reclaimed.
- (5) A material is '*regenerated*' if it is restored to its original physical and chemical properties.
- (6) '*Scrap metal*' is bits and pieces of metal parts (e.g., bars, turnings, rods, sheets, wire) or metal pieces that may be combined together with bolts and soldering (e.g., radiators, scrap automobiles, railroad boxcars), which when worn or superfluous can be recycled.
- (7) A '*spent material*' is any material that has been used and as a result of contamination can no longer serve the purpose for which it was produced without processing.
- (8) A material is '*used*' or '*reused*' if it is either:
  - (i) employed as an ingredient (including use as an intermediate) in an industrial process to make a product (for example, distillation bottoms from one process used as feedstock in another process). However, a material will not satisfy this condition if distinct components of the material are recovered as separate end products (as when metals are recovered from metal containing secondary materials); or
  - (ii) employed in a particular function or application as an effective substitute for a commercial product (for example, spent pickle liquor used as phosphorus precipitant and sludge conditioner in wastewater treatment).

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- (9) ***'Excluded scrap metal'*** is processed scrap metal, unprocessed home scrap metal, and unprocessed prompt scrap metal.
- (10) ***'Processed scrap metal'*** is scrap metal which has been manually or physically altered to either separate it into distinct materials to enhance economic value or to improve the handling of materials. Processed scrap metal includes, but is not limited to scrap metal which has been baled, shredded, sheared, chopped, crushed, flattened, cut, melted, or separated by metal type (i.e., sorted), and, fines, drosses and related materials which have been agglomerated.

**Note:** Shredded circuit boards being sent for recycling are not considered processed scrap metal. They are covered under the exclusion from the definition of solid waste for shredded circuit boards being recycled (see subparagraph (e)(1)(xiv) of this section).

- (11) ***'Home scrap metal'*** is scrap metal as generated by steel mills, foundries, and refineries such as turnings, cuttings, punchings, and borings.
- (12) ***'Prompt scrap metal'*** is scrap metal as generated by the metal working/fabrication industries and includes such scrap metal as turnings, cuttings, punchings, and borings. Prompt scrap is also known as industrial or new scrap metal.

#### **(b) Applicability.**

The identification and listing of hazardous wastes given in this Part supersedes any other definition given in any other Part of this Title.

#### **(c) Definition of solid waste.**

- (1) A solid waste is any discarded material that is not excluded under paragraph (e)(1) of this section or that is not excluded by variance granted under section 370.3(d) and (e) of this Title.
- (2) A discarded material is any material which is:
  - (i) abandoned as explained in paragraph (3) of this subdivision; or
  - (ii) recycled as explained in paragraph (4) of this subdivision; or
  - (iii) considered inherently waste-like as explained in paragraph (5) of this subdivision; or
  - (iv) a military munition identified as a solid waste in section 374-1.13(c) of this Title.
- (3) Materials are solid waste if they are abandoned by being:
  - (i) disposed of; or
  - (ii) burned or incinerated; or
  - (iii) accumulated, stored or treated (but not recycled) before or in lieu of being abandoned by being disposed of, burned or incinerated.
- (4) Materials are solid waste if they are recycled—or accumulated, stored or treated before recycling—as specified in subparagraphs (i)-(iv) of this paragraph.
  - (i) Used in a manner constituting disposal.
    - (a) Materials noted with an asterisk in column 1 of Table 1 are solid wastes when they are:
      - (1) applied to or placed on the land in a manner that constitutes disposal; or
      - (2) contained in products that are applied to the land (in which case the product remains a solid waste).

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- (b') Commercial chemical products listed in section 371.4(d) of this Part are not solid wastes if they are applied to the land and that is their ordinary manner of use.
  - (ii) Burning for energy recovery.
    - (a') Materials noted with an asterisk in column 2 of Table 1 are solid wastes when they are:
      - (1') burned to recover energy; or
      - (2') used to produce a fuel or are otherwise contained in fuels (in which case the fuel itself remains a solid waste).
    - (b') However, commercial chemical products listed in section 371.4(d) of this Part are not solid waste if they are fuels.
  - (iii) Except as provided under subparagraph 371.1(e)(1)(xxii) of this section, reclaimed materials noted with an asterisk in column 3 of Table 1 are solid wastes when reclaimed. Materials noted with a “-” in column 3 of Table 1 are not solid wastes when reclaimed.
  - (iv) Materials accumulated speculatively noted with an asterisk in column 4 of Table 1 are solid waste when accumulated speculatively.
- (5) Inherently waste-like materials. The following materials are solid wastes when they are recycled in any manner:
- (i) Hazardous waste numbers F020, F021 (unless used as an ingredient to make a product at the site of generation), F022, F023, F026 and F028.
  - (ii) Secondary materials fed to a halogen acid furnace that exhibit a characteristic of a hazardous waste or are listed as a hazardous waste as defined in section 371.3 or 371.4 of this Part, except for brominated material that meets the following criteria:
    - (a') the material must contain a bromine concentration of at least 45 percent;
    - (b') the material must contain less than a total of one percent of toxic organic compounds listed in Appendix 23; and
    - (c') the material is processed continually on-site in the halogen acid furnace via direct conveyance (hard piping).
  - (iii) The commissioner will use the following criteria to add waste to that list:
    - (a') the materials are ordinarily disposed of, burned or incinerated; or
    - (b') the materials contain toxic constituents listed in Appendix 23, infra, and these constituents are not ordinarily found in raw materials or products for which the materials substitute (or are found in raw materials or products in smaller concentrations) and are not used or reused during the recycling process; and
    - (c') the materials may pose a substantial hazard to human health and the environment when recycled.
- (6) Materials that are not solid waste when recycled, though they remain solid waste as defined under section 360.2 of this Title.
- (i) Materials are not solid waste when they can be shown to be recycled by being:
    - (a') used or reused as ingredients in an industrial process to make a product, provided the materials are not being reclaimed; or
    - (b') used or reused as effective substitutes for commercial products; or
    - (c') returned to the original process from which they are generated, without first being reclaimed or land disposed. The material must be returned as a substitute for feedstock

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materials. In cases where the original process to which the material is returned is a secondary process, the materials must be managed such that there is no placement on the land.

- (ii) The following materials are solid wastes, even if the recycling involves use, reuse, or return to the process as described in clauses (i)(‘a’) through (‘c’) of this paragraph:
    - (‘a’) materials used in a manner constituting disposal, or used to produce products that are applied to the land; or
    - (‘b’) materials burned for energy recovery, used to produce fuel, or contained in fuels; or
    - (‘c’) materials accumulated speculatively; or
    - (‘d’) materials listed in subparagraphs (5)(i) and (ii) of this subdivision.
- (7)
- (i) Parties who raise a claim that a material intended to be reclaimed, recycled or reused is not a solid or hazardous waste, or who raise a claim that such material is exempt or conditionally exempt from regulation, must notify the department, in writing, before utilizing the exemption or exclusion. Such notification shall give the names and locations of the generating and receiving facilities, if different, identify all exemptions or exclusions that the party is claiming, and describe the activity or activities which are believed to qualify for such exemptions or exclusions. Claims of exemption or exclusion are subject to subparagraph (ii) of this paragraph. The requirement to submit notification to the department does not apply to:
    - (‘a’) dental amalgam as defined and regulated under Subpart 374-4 of this Title;
    - (‘b’) precious metals regulated under section 374-1.6 of this Title;
    - (‘c’) used lead acid batteries regulated under section 374-1.7 or Subpart 374-3 of this Title; or
    - (‘d’) used electronics directed for dismantling and recycling, meeting the conditions of clause 371.1(g)(1)(iii)(‘b’) or subparagraph 371.1(e)(1)(xxi) of this section.
  - (ii) Documentation of claims that materials are not solid wastes or are exempt or conditionally exempt from regulation. Parties who raise a claim that a material intended to be reclaimed, recycled or reused is not a solid or hazardous waste, or who raise a claim that such material is exempt or conditionally exempt from regulation, must maintain documentation on-site of the basis for this exemption. Respondents in actions to enforce regulations, implementing ECL article 27, who raise a claim that a certain material is not a solid or hazardous waste, or is exempt or conditionally exempt from regulation, when intended for reclamation, recycling, or reuse, must demonstrate:
    - (‘a’) that there is a known market or disposition for the material;
    - (‘b’) that the owner or operator of the receiving facility has the necessary equipment and capacity to process the entire volume of material offered; and
    - (‘c’) through appropriate documentation, such as contracts, that the receiving party will reclaim, recycle, use, or reuse the material in such a manner as to qualify it for the exemption or exclusion.

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Table 1

	<i>Use Constituting Disposal</i> (1)	<i>Energy Recovery/ Fuel</i> (2)	<i>Reclamation</i> (3)	<i>Speculative Accumulation</i> (4)
Spent materials	*	*	*	*
Sludges listed in 371.4(b) and (c)	*	*	*	*
Sludges exhibiting a characteristic of hazardous waste	*	*	—	*
Byproducts listed in 371.4(b) and (c)	*	*	*	*
Byproducts exhibiting a characteristic of hazardous waste	*	*	—	*
Commercial chemical products listed in 371.4(d)	*	*	—	—
Scrap metal that is not excluded under 371.1(e)(1)(xiii)	*	*	*	*

*Note:* the terms ‘*spent materials*,’ ‘*sludges*,’ ‘*by-products*,’ and ‘*scrap metal*’ and ‘*processed scrap metal*’ are defined in subdivision (a) of this section.

**(d) Definition of hazardous waste**

- (1) A solid waste, as defined in subdivision (c) of this section, is a hazardous waste if:
- (i) it is not excluded from regulation as a hazardous waste under paragraph (e)(2) of this section; and
  - (ii) it meets any of the following criteria:
    - (‘a’) it exhibits any of the characteristics of hazardous waste identified in section 371.3 of this Part. However, any mixture of a waste from the extraction, beneficiation, and processing of ores and minerals excluded under subdivision (e)(2)(vi) of this section and any other solid waste exhibiting a characteristic of hazardous waste under section 371.3 of this Part is a hazardous waste only if it exhibits a characteristic that would not have been exhibited by the excluded waste alone if such mixture had not occurred, or if it continues to exhibit any of the characteristics exhibited by the nonexcluded wastes prior to mixture. Further, for the purposes of applying the toxicity characteristic to such mixtures, the mixture is also a hazardous waste if it exceeds the maximum concentration for any contaminant listed in table 1 in section 371.3(e) of this Part that would not have been exceeded by the excluded waste alone if the mixture had not occurred or if it continues to exceed the maximum concentration for any contaminant exceeded by the nonexempt waste prior to mixture.
    - (‘b’) It is listed in section 371.4 of this Part and has not been excluded from the lists in section 371.4 under the provisions of section 370.3(a) and (c) of this Title.
    - (‘c’) Reserved.



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(d) It is a mixture of solid waste and one or more hazardous wastes listed in section 371.4 of this Part and has not been excluded from this subparagraph under section 370.3(a) and (c) of this Title, or paragraph (6) or (7) of this subdivision; however, the following mixtures of solid wastes and hazardous wastes listed in section 371.4 of this Part are not hazardous wastes (except by application of clause ('a') or ('b') of this subparagraph) if the generator can demonstrate that the mixture consists of wastewater the discharge of which is subject to regulation under either section 402 or section 307(b) of the Clean Water Act (see section 370.1(e)(7)(iii) of this Title) (including wastewater at facilities which have eliminated the discharge of wastewater) and:

(1) one or more of the following spent solvents listed in section 371.4(b) of this Part—benzene, carbon tetrachloride, tetrachloroethylene, trichloroethylene or the scrubber waters derived from the combustion of these spent solvents—provided that the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater), divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pretreatment system does not exceed 1 part per million, or that the total measured concentration of these solvents entering the headworks of the facility's wastewater treatment system (at facilities subject to regulation under the Clean Air Act, as amended at 40 CFR parts 60, 61, or 63, as incorporated by reference and implemented by section 200.10 of this Title, or at facilities subject to an enforceable limit in a State operating permit that minimizes fugitive emissions), does not exceed 1 part per million on an average weekly basis. Any facility that uses benzene as a solvent and claims this exemption must use an aerated biological wastewater treatment system and must use only lined surface impoundments or tanks prior to secondary clarification in the wastewater treatment system. Facilities that choose to monitor concentration levels must file a copy of their quality assurance project plan with the department at least 60 days prior to operating under this exemption. A facility must file a copy of a revised quality assurance project plan only if the initial plan is rendered inaccurate by changes in the facility's operations. A facility must file a copy of a revised quality assurance project plan to the department at least 30 days prior to modifying facility operations. The quality assurance project plan must include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once it receives confirmation that its quality assurance project plan has been received by the department. The department may reject the quality assurance project plan if the department finds that the quality assurance project plan fails to include the above information; or the plan parameters would not enable the facility to calculate the weekly average concentration of these chemicals accurately. If the department rejects the quality assurance project plan or if the department finds that the facility is not following the quality assurance

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- project plan, the department shall notify the facility to cease the use of the direct monitoring option until such time as the bases for rejection are corrected; or
- (2) one or more of the following spent solvents listed in section 371.4(b) of this Part—methylene chloride, 1,1,1-trichloroethane, chlorobenzene, o-dichlorobenzene, cresols, cresylic acid, nitrobenzene, toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, spent chlorofluorocarbon solvents, 2-ethoxyethanol, or scrubber waters derived-from the combustion of these spent solvents —provided that the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater), divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pretreatment system, does not exceed 25 parts per million or the total measured concentration of these solvents entering the headworks of the facility's wastewater treatment system (at facilities subject to regulation under the Clean Air Act, as amended at 40 CFR parts 60, 61, or 63, as incorporated by reference and implemented by section 200.10 of this Title, or at facilities subject to an enforceable limit in a State operating permit that minimizes fugitive emissions), does not exceed 25 parts per million on an average weekly basis. Facilities that choose to monitor concentration levels must file a copy of their quality assurance project plan with the department at least 60 days prior to operating under this exemption. A facility must file a copy of a revised quality assurance project plan only if the initial plan is rendered inaccurate by changes in the facility's operations. A facility must file a copy of a revised quality assurance project plan to the department at least 30 days prior to modifying facility operations. The quality assurance project plan must include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once it receives confirmation that the quality assurance project plan has been received by the department. The department may reject the quality assurance project plan if the department finds that the quality assurance project plan fails to include the above information; or the plan parameters would not enable the facility to calculate the weekly average concentration of these chemicals accurately. If the department rejects the quality assurance project plan or if the department finds that the facility is not following the quality assurance project plan, the department shall notify the facility to cease the use of the direct monitoring option until such time as the bases for rejection are corrected; or
- (3) one of the following wastes listed in section 371.4(c) of this Part, provided that the wastes are discharged to the refinery oil recovery sewer before primary oil/water/solids separation—heat exchanger bundle cleaning sludge from the petroleum refining industry (EPA Hazardous Waste No. K050), crude oil storage tank sediment from petroleum refining operations (EPA Hazardous Waste No. K169), clarified slurry oil tank sediment and/or in-line filter/separation solids from petroleum refining operations (EPA hazardous waste No. K170), spent

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- hydrotreating catalyst, (EPA Hazardous Waste No. K171), and spent hydrorefining catalyst (EPA Hazardous Waste No. K172); or
- (4') a discarded hazardous waste commercial chemical product, or chemical intermediate listed in section 371.4(b) through 371.4(d) of this Part arising from de minimis losses of these materials from manufacturing operations in which these materials are used as raw materials or are produced in the manufacturing process. For purposes of this ('4') of this clause, de minimis losses are inadvertent releases to a wastewater treatment system. De minimis losses include minor losses resulting from normal material handling operation (e.g., spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used to transfer materials); minor leaks of process equipment, storage tanks or containers; leaks from well-maintained pump packings and seals; sample purgings; relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; and rinsate from empty containers or from containers that are rendered empty by that rinsing. Any manufacturing facility that claims an exemption for de minimis quantities of wastes listed in sections 371.4(b) through 371.4(d) of this Part, or any nonmanufacturing facility that claims an exemption for de minimis quantities of wastes listed in section 371.4 of this Part must either have eliminated the discharge of wastewaters or have included in its State Pollutant Discharge Elimination System (SPDES) permit application, pursuant to Part 750 of this Title, or submission to its pretreatment control authority, the constituents for which each waste was listed (in Part 371 Appendix 22 of this Part) and the constituents in the table 'Treatment Standards for Hazardous Wastes' in Part 376.4 of this Title for which each waste has a treatment standard (i.e., Land Disposal Restriction constituents). A facility is eligible to claim the exemption once the permit writer or the control authority has been notified of possible de minimis releases via the SPDES permit application or the pretreatment control authority submission. A copy of the SPDES permit application or the submission to the pretreatment control authority must be placed in the facility's on-site files; or
- (5') wastewater resulting from laboratory operations containing any toxic (T) wastes listed in section 371.4 of this Part, provided that the annualized average flow of laboratory wastewater does not exceed one percent of total wastewater flow into the headworks of the facility's wastewater treatment or pretreatment system, or provided the wastes' combined annualized average concentration does not exceed one mg/l in the headworks of the facility's wastewater treatment or pretreatment facility. The annualized average flow means the total flow registered for the calendar year divided by the number of operating days of the laboratory. The combined annualized average concentration means the weight of the combination of wastes divided by the annualized average flow. Toxic (T) wastes used in

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laboratories that are demonstrated not to be discharged to wastewater are not to be included in this calculation; or

- (6) one or more of the following wastes listed in section 371.4(c) of this Part—wastewaters from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste No. K157)—provided that the maximum weekly usage of formaldehyde, methyl chloride, methylene chloride, and triethylamine (including all amounts that cannot be demonstrated to be reacted in the process, destroyed through treatment, or is recovered, i.e., what is discharged or volatilized) divided by the average weekly flow of process wastewater prior to any dilution into the headworks of the facility's wastewater treatment system does not exceed a total of five parts per million by weight or the total measured concentration of these chemicals entering the headworks of the facility's wastewater treatment system (at facilities subject to regulation under the Clean Air Act as amended, at 40 CFR Parts 60, 61 or 63 as incorporated by reference and implemented by section 200.10 of this Title, or at facilities subject to an enforceable limit in a State operating permit that minimizes fugitive emissions), does not exceed 5 parts per million on an average weekly basis. Facilities that choose to monitor concentration levels must file a copy of their quality assurance project plan with the department at least 60 days prior to operating under this exemption. A facility must file a copy of a revised quality assurance project plan only if the initial plan is rendered inaccurate by changes in the facility's operations. A facility must file a copy of a revised quality assurance project plan to the department at least 30 days prior to modifying facility operations. The quality assurance project plan must include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once it receives confirmation that the quality assurance project plan has been received by the department. The department may reject the quality assurance project plan if the department finds that the quality assurance project plan fails to include the above information; or the plan parameters would not enable the facility to calculate the weekly average concentration of these chemicals accurately. If the department rejects the quality assurance project plan or if the department finds that the facility is not following the quality assurance project plan, the department shall notify the facility to cease the use of the direct monitoring option until such time as the bases for rejection are corrected; or
- (7) wastewaters derived from the treatment of one or more of the following wastes listed in section 371.4(c) of this Part—organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste No. K156)—provided, that the maximum concentration of formaldehyde, methyl chloride, methylene chloride, and triethylamine prior to any dilutions into the headworks of the facility's wastewater treatment system does not exceed a total of five

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milligrams per liter or the total measured concentration of these chemicals entering the headworks of the facility's wastewater treatment system (at facilities subject to regulation under the Clean Air Act as amended, at 40 CFR parts 60, 61, or 63 as incorporated by reference and implemented by section 200.10 of this Title, or at facilities subject to an enforceable limit in a State operating permit that minimizes fugitive emissions), does not exceed 5 milligrams per liter on an average weekly basis. Facilities that choose to monitor concentration levels must file a copy of their quality assurance project plan with the department at least 60 days prior to operating under this exemption. A facility must file a copy of a revised quality assurance project plan only if the initial plan is rendered inaccurate by changes in the facility's operations. A facility must file a copy of a revised quality assurance project plan to the department at least 30 days prior to modifying facility operations. The quality assurance project plan must include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once it receives confirmation that the quality assurance project plan has been received by the department. The department may reject the quality assurance project plan if the department finds that the quality assurance project plan fails to include the above information; or the plan parameters would not enable the facility to calculate the weekly average concentration of these chemicals accurately. If the department rejects the quality assurance project plan or if the department finds that the facility is not following the quality assurance project plan, the department shall notify the facility to cease the use of the direct monitoring option until such time as the bases for rejection are corrected.

- (e) Rebuttable presumption for used oil. Used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in section 371.4. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste (for example, by demonstrating that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in Appendix 23).
  - (1) The rebuttable presumption does not apply to metalworking oils/fluids containing chlorinated paraffins, if they are processed, through a tolling agreement, to reclaim metalworking oils/fluids. The presumption does apply to metalworking oils/fluids if such oils/fluids are recycled in any other manner, or disposed.
  - (2) The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the CFCs are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units.

- (2) A solid waste which is not excluded from regulation under subparagraph (1)(i) of this subdivision becomes a hazardous waste when any of the following events occur:

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- (i) In the case of a waste listed in section 371.4, when the waste first meets the listing description therein.
  - (ii) In the case of a mixture of solid waste and one or more listed hazardous wastes, when a hazardous waste listed in section 371.4 is first added to the solid waste.
  - (iii) In the case of any other waste (including a waste mixture), when the waste exhibits any of the characteristics identified in section 371.3.
- (3) Unless and until it meets the criteria of paragraph (4) of this subdivision:
- (i) A hazardous waste will remain a hazardous waste.
  - (ii)
    - ('a') Except as otherwise provided in clause ('b') of this subparagraph, paragraph (6) or (7) of this subdivision, any solid waste generated from the treatment, storage or disposal of a hazardous waste, including any sludge, spill residue, ash, emission control dust or leachate (but not including precipitation runoff), is a hazardous waste. (However, materials that are reclaimed from solid waste and used beneficially are not solid waste and hence are not hazardous waste under this provision unless the reclaimed material is burned for energy recovery or used in a manner constituting disposal.)
    - ('b') The following solid waste is not hazardous even though it is generated from the treatment, storage, or disposal of a hazardous waste, unless it exhibits one or more of the characteristics of hazardous waste:
      - ('1') Waste pickle liquor sludge generated by lime stabilization of spent pickle liquor from the iron and steel industry (SIC codes 331 and 332).
      - ('2') Waste from burning any of the materials exempted from regulation by clauses (g)(1)(iii)(c') and (d') of this section.
      - ('3')
        - (i) Nonwastewater residues, such as slag, resulting from high temperature metals recovery (HTMR) processing of K061, K062 or F006 waste, in units identified as rotary kilns, flame reactors, electric furnaces, plasma arc furnaces, slag reactors, rotary hearth furnace/electric furnace combinations or industrial furnaces (as defined in the definition for industrial furnace in section 370.2(b) of this Title), that are disposed in solid waste management facilities, provided that these residues meet the generic exclusion levels identified in the tables in this clause for all constituents, and exhibit no characteristics of hazardous waste. Testing requirements must be incorporated in a facility's waste analysis plan; at a minimum, composite samples of residues must be collected and analyzed quarterly and/or when the process or operation generating the waste changes. Persons claiming this exclusion in an enforcement action will have the burden of proving by clear and convincing evidence that the material meets all of the exclusion requirements.

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**Generic exclusion levels for K061 and K062 nonwastewater HTMR residues**

<i>Constituent</i>	<i>Maximum for any single composite sample – TCLP (mg/l)</i>
Antimony	0.10
Arsenic	0.50
Barium	7.6
Beryllium	0.010
Cadmium	0.050
Chromium (total)	0.33
Lead	0.15
Mercury	0.009
Nickel	1.0
Selenium	0.16
Silver	0.30
Thallium	0.020
Zinc	70

**Generic exclusion levels for F006 nonwastewater HTMR residues**

<i>Constituent</i>	<i>Maximum for any single composite sample – TCLP (mg/l)</i>
Antimony	0.10
Arsenic	0.50
Barium	7.6
Beryllium	0.010
Cadmium	0.050
Chromium (total)	0.33
Cyanide (total)(mg/kg)	1.8
Lead	0.15
Mercury	0.009
Nickel	1.0
Selenium	0.16
Silver	0.30
Thallium	0.020
Zinc	70

(ii) A one-time notification and certification must be placed in the facility's files and sent to the department for K061, K062 or F006 HTMR residues that meet the generic exclusion levels for all constituents and do not exhibit any characteristics that are sent to solid waste management facilities. The

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notification and certification that is placed in the generator's or treater's files must be updated if the process or operation generating the waste changes and/or if the solid waste management facility receiving the waste changes. However, the generator or treater need only notify the department on an annual basis if such changes occur. Such notification and certification should be sent to the department no later than the end of the calendar year. The notification must include the following information: the name and address of the solid waste management facility receiving the waste shipments; the EPA hazardous waste number(s) and tractability group(s) at the initial point of generation; and, the treatment standards applicable to the waste at the initial point of generation. The certification must be signed by an authorized representative and must state as follows:

“I certify under penalty of law that the generic exclusion levels for all constituents have been met without impermissible dilution and that no characteristic of hazardous waste is exhibited. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.”

- (4') Biological treatment sludge from the treatment of one of the following wastes listed in section 371.4(c) of this Part—organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste No. K156), and wastewaters from the production of carbamates and carbamoyloximes (EPA Hazardous Waste No. K157).
  - (5') Catalyst inert support media separated from one of the following wastes listed in section 371.4(c) of this Part—spent hydrotreating catalyst (EPA Hazardous Waste No. K171), and spent hydrorefining catalyst (EPA Hazardous Waste No. K172).
- (4) Any solid waste described in paragraph (3) of this subdivision is not a hazardous waste if it meets the following criteria:
- (i) In the case of any solid waste, it does not exhibit any of the characteristics of a hazardous waste identified in section 371.3 of this Part. (However, wastes that exhibit a characteristic at the point of generation may still be subject to the requirements of Part 376 of this Title, even if they no longer exhibit a characteristic at the point of land disposal.)
  - (ii) In the case of a waste which is a waste listed under section 371.4, contains a waste listed under section 371.4 or is derived from a waste listed under section 371.4, it also has been excluded from paragraph (3) of this subdivision under section 370.3(a) and (c) of this Title. Section 370.3(c) provides for the petitioning for exclusion of a listed waste produced at a particular facility.
- (5) Notwithstanding paragraphs (1) through (4) of this subdivision and provided the debris as defined in Part 376 of this Title does not exhibit a characteristic identified at section 371.3 of this Part, the following materials are not subject to regulation under Parts 370 through 374 or 376 of this Title:
- (i) hazardous debris as defined in Part 376 of this Title that has been treated using one of the required extraction or destruction technologies specified in Table 1 of section 376.4(g) of this



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Title; persons claiming this exclusion in an enforcement action will have the burden of proving by clear and convincing evidence that the material meets all of the exclusion requirements; or

- (ii) debris as defined in Part 376 of this Title that the commissioner, considering the extent of contamination, has determined is no longer contaminated with hazardous waste.
- (6)
- (i) A hazardous waste that is listed in section 371.4 of this Part solely because it exhibits one or more characteristics of ignitability as defined under section 371.3(b) of this Part, corrosivity as defined under section 371.3(c) of this Part, or reactivity as defined under section 371.3(d) of this Part is not a hazardous waste, if the waste no longer exhibits any characteristic of hazardous waste identified in section 371.3 of this Part.
  - (ii) The exclusion described in subparagraph (i) of this paragraph also pertains to:
    - ('a') any mixture of a solid waste and a hazardous waste listed in section 371.4 of this Part solely because it exhibits the characteristics of ignitability, corrosivity, or reactivity as related under clause (1)(ii)('d') of this subdivision; and
    - ('b') any solid waste generated from treating, storing, or disposing of a hazardous waste listed in section 371.4 of this Part solely because it exhibits the characteristics of ignitability, corrosivity, or reactivity as regulated under clause (3)(ii)('a') of this subdivision.
  - (iii) Wastes excluded under this paragraph are subject to Part 376 of this Title (as applicable), even if they no longer exhibit a characteristic at the point of land disposal.
  - (iv) Any mixture of a solid waste excluded from regulation under subparagraph (e)(2)(vi) of this section and a hazardous waste listed in section 371.4 of this Part solely because it exhibits one or more of the characteristics of ignitability, corrosivity, or reactivity as regulated under clause (1)(ii)('d') of this subdivision is not a hazardous waste, if the mixture no longer exhibits any characteristic of hazardous waste identified in section 371.3 of this Part for which the hazardous waste listed in section 371.4 of this Part was listed.
- (7)
- (i) Hazardous waste containing radioactive waste is no longer a hazardous waste when it meets the eligibility criteria and conditions of section 374-1.9 of this Title (Eligible radioactive mixed waste).
  - (ii) The exemption described in subparagraph (i) of this paragraph also pertains to:
    - ('a') any mixture of a solid waste and an eligible radioactive mixed waste; and
    - ('b') any solid waste generated from treating, storing, or disposing of an eligible radioactive mixed waste.
  - (iii) Waste exempted under this paragraph must meet the eligibility criteria and specified conditions in section 374-1.9(b)(2) and (3) (for storage and treatment) and in section 374-1.9(i)(1) and (j)(1) (for transportation and disposal) of this Title. Waste that fails to satisfy these eligibility criteria and conditions is regulated as hazardous waste.

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### (e) Exclusions.

- (1) Materials which are not solid wastes. The following materials are not solid wastes for the purpose of this Part:
  - (i)
    - ('a') domestic sewage; and
    - ('b') any mixture of domestic sewage and other wastes that passes through a sewer system to a publicly owned treatment works for treatment. Domestic sewage means untreated sanitary wastes that pass through a sewer system;
  - (ii) industrial wastewater discharges that are surface water point source discharges subject to permits under article 17 of the Environmental Conservation Law;  
*Note:* This exclusion applies only to the actual point source discharge. It does not exclude industrial wastewaters while they are being collected, stored or treated before discharge, nor does it exclude sludges that are generated by industrial wastewater treatment.
  - (iii) irrigation return flows;
  - (iv) radioactive materials which are source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended through 1984, 42 USCA 2011 et seq. (see section 370.1(e) of this Title);
  - (v) materials subject to in situ mining techniques which are not removed from the ground as part of the extraction process;
  - (vi) black liquor that is reclaimed in a pulping liquor recovery furnace and then used in the process unless it is accumulated speculatively as defined in paragraph (a)(1) of this section;
  - (vii) spent sulfuric acid used to produce virgin sulfuric acid, unless it is accumulated speculatively as defined in paragraph (a)(1) of this section;
  - (viii) secondary materials that are reclaimed and returned to the original process or processes in which they were generated where they are reused in the production process provided:
    - ('a') only tank storage is involved, and the entire process through completion of reclamation is closed by being entirely connected with pipes or other comparable enclosed means of conveyance;
    - ('b') reclamation does not involve controlled flame combustion (such as occurs in boilers, industrial furnaces or incinerators);
    - ('c') the secondary materials are never accumulated in such tanks for over 12 months without being reclaimed; and
    - ('d') the reclaimed material is not used to produce a fuel, or used to produce products that are used in a manner constituting disposal;
  - (ix)
    - ('a') spent wood preserving solutions that have been reclaimed and are reused for their original intended purpose;
    - ('b') wastewaters from the wood preserving process that have been reclaimed and are reused to treat wood; and
    - ('c') prior to reuse, the wood preserving wastewaters and spent wood preserving solutions described in clauses ('a') and ('b') of this subparagraph, so long as they meet all the following conditions:

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- (1') the wood preserving wastewaters and spent wood preserving solutions are reused on-site at water borne plants in the production process for their original intended purpose;
  - (2') prior to reuse, the wastewaters and spent wood preserving solutions are managed to prevent release to either land or groundwater or both;
  - (3') any unit used to manage wastewaters and/or spent wood preserving solutions prior to reuse can be visually or otherwise determined to prevent such releases;
  - (4') any drip pad used to manage the wastewaters and/or spent wood preserving solutions prior to reuse complies with the standards in section 373-3.23 of this Title, regardless of whether the plant generates a total of less than 100 kg/month of hazardous waste; and
  - (5') prior to operating pursuant to this exclusion, the plant owner or operator submits to the department a one-time notification stating that the plant intends to claim the exclusion, giving the date on which the plant intends to begin operating under the exclusion, and containing the following language: "I have read the applicable regulation establishing an exclusion for wood preserving wastewaters and spent wood preserving solutions and understand it requires me to comply at all times with the conditions set out in the regulation." This notification satisfies the requirement to submit a notification pursuant to subparagraph (c)(7)(i) of this section. The plant must maintain a copy of that document in its on-site records until closure of the facility. The exclusion applies so long as the plant meets all of the conditions. If the plant goes out of compliance with any condition, it may apply to the commissioner for reinstatement. The department may reinstate the exclusion upon finding that the plant has returned to compliance with all conditions that the violations have been resolved and that the violations are not likely to recur;
- (x) EPA hazardous waste Nos. K060, K087, K141, K142, K143, K144, K145, K147, and K148, and any wastes from the coke by-products processes that are hazardous only because they exhibit the toxicity characteristic (TC) specified in section 371.3(e) of this Part when, subsequent to generation, these materials are recycled to coke ovens, to the tar recovery process as a feedstock to produce coal tar, or mixed with coal tar prior to the tar's sale or refining. This exclusion is conditioned on there being no land disposal of the wastes from the point they are generated to the point they are recycled to coke ovens or tar recovery or refining processes, or mixed with coal tar; and
  - (xi) nonwastewater splash condenser dross residue from the treatment of K061 in high temperature metals recovery units, provided it is shipped in drums (if shipped) and not land disposed before recovery;
  - (xii)
    - (a') oil-bearing hazardous secondary materials (i.e., sludges, byproducts, or spent materials) that are generated at a petroleum refinery (SIC code 2911) and are inserted into the petroleum refining process (SIC code 2911 - including, but not limited to, distillation, catalytic cracking, fractionation, or thermal cracking units (i.e., cokers)) unless the

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material is placed on the land, or speculatively accumulated before being so recycled. Materials inserted into thermal cracking units are excluded under this paragraph, provided that the coke product also does not exhibit a characteristic of hazardous waste. Oil-bearing hazardous secondary materials may be inserted into the same petroleum refinery where they are generated, or sent directly to another petroleum refinery, and still be excluded under this provision. Except as provided in clause ('b') of this subparagraph, oil-bearing hazardous secondary materials generated elsewhere in the petroleum industry (i.e., from sources other than petroleum refineries) are not excluded under this section. Residuals generated from processing or recycling materials excluded under this paragraph, where such materials as generated would have otherwise met a listing under section 371.4 of this Part, are designated as F037 listed wastes when disposed of or intended for disposal;

- (b') recovered oil that is recycled in the same manner and with the same conditions as described in clause ('a') of this subparagraph. Recovered oil is oil that has been reclaimed from secondary materials (including wastewater) generated from normal petroleum industry practices, including refining, exploration and production, bulk storage, and transportation incident thereto (SIC codes 1311, 1321, 1381, 1382, 1389, 2911, 4612, 4613, 4922, 4923, 4789, 5171, and 5172). Recovered oil does not include oil-bearing hazardous wastes listed in section 371.4 of this Part; however, oil recovered from such wastes may be considered recovered oil. Recovered oil does not include used oil as defined in section 374-2.1 of this Title;
- (xiii) excluded scrap metal (processed scrap metal, unprocessed home scrap metal, and unprocessed prompt scrap metal) being recycled;
- (xiv) shredded circuit boards being recycled provided that they are:
  - ('a') stored in containers sufficient to prevent a release to the environment prior to recovery; and
  - ('b') free of mercury switches, mercury relays and nickel-cadmium batteries and lithium batteries;
- (xv) condensates derived from the overhead gases from Kraft mill steam strippers that are used to comply with 40 CFR 63.446(e). The exemption applies only to combustion at the mill generating the condensates;
- (xvi) Reserved
- (xvii) petrochemical recovered oil from an associated organic chemical manufacturing facility, where the oil is to be inserted into the petroleum refining process (SIC code 2911) along with normal petroleum refinery process streams, provided:
  - ('a') the oil is hazardous only because it exhibits the characteristic of ignitability (as defined in section 371.3(b) of this Part) and/or toxicity for benzene (section 371.3(e) of this Part), (waste code D018); and
  - ('b') the oil generated by the organic chemical manufacturing facility is not placed on the land, or speculatively accumulated before being recycled into the petroleum refining process. An associated organic chemical manufacturing facility is a facility where the primary SIC code is 2869, but where operations may also include SIC codes 2821,

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2822, and 2865; and is physically co-located with a petroleum refinery; and where the petroleum refinery to which the oil being recycled is returned also provides hydrocarbon feedstocks to the organic chemical manufacturing facility. Petrochemical recovered oil is oil that has been reclaimed from secondary materials (i.e., sludges, byproducts, or spent materials, including wastewater) from normal organic chemical manufacturing operations, as well as oil recovered from organic chemical manufacturing processes;

- (xviii) spent caustic solutions from petroleum refining liquid treating processes used as a feedstock to produce cresylic or naphthenic acid unless the material is placed on the land, or accumulated speculatively as defined in subdivision (a) of this section.
- (xix) hazardous secondary materials used to make zinc fertilizers, provided that the following conditions specified are satisfied:
  - ('a') Hazardous secondary materials used to make zinc micronutrient fertilizers must not be accumulated speculatively, as defined in paragraph (a)(1) of this section.
  - ('b') Generators and intermediate handlers of zinc-bearing hazardous secondary materials that are to be incorporated into zinc fertilizers must:
    - ('1') Submit a one-time notice to the department, which contains the name, address and EPA ID number of the generator or intermediate handler facility, provides a brief description of the secondary material that will be subject to the exclusion, and identifies when the manufacturer intends to begin managing excluded zinc-bearing hazardous secondary materials under the conditions specified in this subparagraph.
    - ('2') Store the excluded secondary material in tanks, containers, or buildings that are constructed and maintained in a way that prevents releases of the secondary materials into the environment including the potential for flooding, and, for liquid excluded secondary material located over a sole source aquifer as described in section 373-1.1(d)(1)(iv) of this Title introductory language, meet the secondary containment requirements of section 373-1.1(d)(1)(iv)(f) of this Title. At a minimum, any building used for this purpose must be an engineered structure made of non-earthen materials that provide structural support, and must have a floor, walls and a roof that prevent wind dispersal and contact with rainwater. Tanks used for this purpose must be structurally sound and, if outdoors, must have roofs or covers that prevent contact with wind and rain. Containers used for this purpose must be kept closed except when it is necessary to add or remove material, and must be in sound condition. Containers stored outdoors must be managed within storage areas that:
      - ('i') have containment structures or systems sufficiently impervious to contain leaks, spills and accumulated precipitation; and
      - ('ii') provide for effective collection and management of leaks, spills and accumulated precipitation; and
      - ('iii') prevent run-on into the containment system.

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- (3') With each off-site shipment of excluded hazardous secondary materials, provide written notice to the receiving facility that the material is subject to the conditions of subparagraph 371.1(e)(1)(xix) of this Title.
- (4') Maintain records of all shipments of excluded hazardous secondary materials at the generator's or intermediate handler's facility for no less than three years. For each shipment these records must at a minimum contain the following information:
  - (i') name of the transporter and date of shipment;
  - (ii') name and address of the facility that received the excluded material, and documentation confirming receipt of the shipment; and
  - (iii') type and quantity of excluded secondary material in each shipment.
- (c') Manufacturers of zinc fertilizers or zinc fertilizer ingredients made from excluded hazardous secondary materials must:
  - (1') Store excluded hazardous secondary materials in accordance with the storage requirements for generators and intermediate handlers, as specified in subclause ('b')(2') of this subparagraph.
  - (2') Submit a one-time notification to the department that, at a minimum, specifies the name, address and EPA ID number of the manufacturing facility, and identifies when the manufacturer intends to begin managing excluded zinc-bearing hazardous secondary materials under the conditions specified in this subparagraph.
  - (3') Maintain records of all shipments of excluded hazardous secondary materials received by the manufacturer for a minimum of three years, which must at a minimum identify for each shipment the name and address of the generating facility, name of transporter and date the materials were received, the quantity received and a brief description of the industrial process that generated the material.
  - (4') Submit to the department an annual report that identifies the total quantities of all excluded hazardous secondary materials that were used to manufacture zinc fertilizers or zinc fertilizer ingredients in the previous year, the name and address of each generating facility, and the industrial process(s) from which they were generated.
- (d') Nothing in this section preempts, overrides or otherwise negates the provision in section 372.2(a)(2) of this Title, which requires any person who generates a solid waste to determine if that waste is a hazardous waste.
- (e') Interim status and permitted storage units that have been used to store only zinc-bearing hazardous wastes prior to the submission of the one-time notice described in subclause ('b')(1') of this paragraph, and that afterward will be used only to store hazardous secondary materials excluded under this paragraph, are not subject to the closure requirements of Subparts 373-2 and 373-3 of this Title.
- (xx) Zinc fertilizers made from hazardous wastes, or hazardous secondary materials that are excluded under subparagraph (xix) of this paragraph, provided that:

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(a) The fertilizers meet the following contaminant limits:

(1) For metal contaminants:

<i>Constituent</i>	<i>Maximum Allowable Total Concentration in Fertilizer, per Unit (1%) of Zinc (ppm)</i>
Arsenic	0.3
Cadmium	1.4
Chromium	0.6
Lead	2.8
Mercury	0.3

(2) For dioxin contaminants, the fertilizer must contain no more than eight (8) parts per trillion of dioxin, measured as toxic equivalent (TEQ).

(b) The manufacturer performs sampling and analysis of the fertilizer product to determine compliance with the contaminant limits for metals no less than every six months, and for dioxins no less than every twelve months. Testing must also be performed whenever changes occur to manufacturing processes or ingredients that could significantly affect the amounts of contaminants in the fertilizer product. The manufacturer may use any reliable analytical method to demonstrate that no constituent of concern is present in the product at concentrations above the applicable limits. It is the responsibility of the manufacturer to ensure that the sampling and analysis are unbiased, precise, and representative of the product(s) introduced into commerce.

(c) The manufacturer maintains records of all sampling and analyses performed for purposes of determining compliance with the requirements of clause (b) of this subparagraph for no less than three years. Such records must at a minimum include:

- (1) The dates and times product samples were taken, and the dates the samples were analyzed;
- (2) The names and qualifications of the person(s) taking the samples;
- (3) A description of the methods and equipment used to take the samples;
- (4) The name and address of the laboratory at which analyses of the samples were performed;
- (5) A description of the analytical methods used, including any cleanup and sample preparation methods; and
- (6) All laboratory analytical results used to determine compliance with the contaminant limits specified in this subparagraph.

(xxi) Used cathode ray tubes (CRTs)

(a) Used, intact CRTs as defined in section 370.2(b) of this Title, are not solid wastes within the United States unless they are disposed, or unless they are speculatively accumulated as defined in paragraph (a)(1) of this subdivision, by CRT collectors or glass processors.

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- (b) Used, intact CRTs as defined in section 370.2(b) of this Title, are not solid wastes when exported for recycling provided that they are managed in accordance with the requirements of section 371.5(c) of this Part.
- (c) Used, broken CRTs as defined in section 370.2(b) of this Title, are not solid wastes provided that they are managed in accordance with the requirements of section 371.5(b) of this Part.
- (d) Glass removed from CRTs is not a solid waste provided that it is managed in accordance with the requirements of paragraph 371.5(b)(3) of this Part.
- (xxii) Spent materials (as defined in paragraph (a)(7) of this Part) (other than hazardous wastes listed in section 371.4 of this Part) generated within the primary mineral processing industry from which minerals, acids, cyanide, water, or other values are recovered by mineral processing or by beneficiation, provided that:
  - (a) The spent material is legitimately recycled to recover minerals, acids, cyanide, water or other values;
  - (b) The spent material is not accumulated speculatively as defined in paragraph (a)(1) of this section;
  - (c) The spent material is stored in tanks, containers, or buildings meeting the following minimum integrity standards: a building must be an engineered structure with a floor, walls, and a roof all of which are made of non-earthen materials providing structural support (except smelter buildings may have partially earthen floors provided the spent material is stored on the non-earthen portion), and have a roof suitable for diverting rainwater away from the foundation; a tank must be free standing, not be a surface impoundment (as defined in subdivision 370.2(b) of this Title), and be manufactured of a material suitable for containment of its contents; a container must be free standing and be manufactured of a material suitable for containment of its contents. If tanks or containers contain any particulate which may be subject to wind dispersal, the owner/operator must operate these units in a manner which controls fugitive dust. Tanks, containers, and buildings must be designed, constructed and operated to prevent releases to the environment of these materials including the potential for flooding. For liquid spent material located over a sole source aquifer as described in subparagraph (d)(1)(iv) introductory language, the secondary containment requirements of clause (d)(1)(iv)(f) must be met.
  - (d) Solid mineral processing spent material may not be placed on pads.
  - (e) The owner or operator provides notice to the department providing the following information: the types of materials to be recycled; the type and location of the storage units and recycling processes; and the annual quantities expected to be placed in land-based units. This notification must be updated when there is a change in the type of materials recycled or the location of the recycling process.
  - (f) For purposes of subparagraph 371.1(e)(2)(vi) of this subdivision, mineral processing spent materials must be the result of mineral processing and may not include any listed hazardous wastes. Listed hazardous wastes and characteristic hazardous wastes



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generated by non-mineral processing industries are not eligible for the conditional exclusion from the definition of solid waste.

- (2) Solid wastes which are not hazardous wastes. The following solid wastes are not hazardous wastes:
- (i) household waste, including household waste that has been collected, transported, stored, treated, disposed, recovered (e.g., refuse-derived fuel) or reused. Household waste means any waste material (including garbage, trash and sanitary wastes in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds and day use recreation areas). A resource recovery facility managing municipal waste shall not be deemed to be treating, storing, disposing of, or otherwise managing hazardous waste for the purpose of regulation, if such facility:
    - ('a') receives and burns only:
      - ('1') household waste (from single and multiple dwellings, hotels, motels and other residential sources); and
      - ('2') solid waste from commercial or industrial sources that does not contain hazardous waste; and
    - ('b') does not accept hazardous waste and the owner or operator of such facility has established contractual requirements or other appropriate notification or inspection procedures to assure that hazardous wastes are not received at or burned in the facility;
  - (ii) solid wastes generated by any of the following and which are returned to the soils as fertilizers:
    - ('a') the growing and harvesting of agricultural crops; and
    - ('b') the raising of animals, including animal manures;
  - (iii) mining overburden returned to the mine site;
  - (iv) fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels, except as provided by section 374-1.8(m) of this Title for facilities that burn or process hazardous waste;
  - (v) drilling fluids, produced waters and other wastes associated with the exploration, development or production of geothermal energy;
  - (vi) solid waste from the extraction, beneficiation and processing of ores and minerals (including coal, phosphate rock and overburden from the mining of uranium ore), except as provided by section 374-1.8(m) of this Title for facilities that burn or process hazardous waste.
    - ('a') For purposes of this subparagraph beneficiation of ores and minerals is restricted to the following activities: crushing; grinding; washing; dissolution; crystallization; filtration; sorting; sizing; drying; sintering; pelletizing; briquetting; calcining to remove water and/or carbon dioxide; roasting, autoclaving, and/or chlorination in preparation for leaching (except where the roasting (and/or autoclaving and/or chlorination)/leaching sequence produces a final or intermediate product that does not undergo further beneficiation or processing); gravity concentration; magnetic separation; electrostatic separation; flotation; ion exchange; solvent extraction; electrowinning; precipitation; amalgamation; and heap, dump, vat, tank, and in situ leaching.

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- (b) For the purposes of this subparagraph, solid waste from the processing of ores and minerals includes only the following wastes as generated:
  - (1) slag from primary copper processing;
  - (2) slag from primary lead processing;
  - (3) red and brown muds from bauxite refining;
  - (4) phosphogypsum from phosphoric acid production;
  - (5) slag from elemental phosphorus production;
  - (6) gasifier ash from coal gasification;
  - (7) process wastewater from coal gasification;
  - (8) calcium sulfate wastewater treatment plant sludge from primary copper processing;
  - (9) slag tailings from primary copper processing;
  - (10) fluorogypsum from hydrofluoric acid production;
  - (11) process wastewater from hydrofluoric acid production;
  - (12) air pollution control dust/sludge from iron blast furnaces;
  - (13) iron blast furnace slag;
  - (14) treated residue from roasting/leaching of chrome ore;
  - (15) process wastewater from primary magnesium processing by the anhydrous process;
  - (16) process wastewater from phosphoric acid production;
  - (17) basic oxygen furnace and open hearth furnace air pollution control dust/sludge from carbon steel production;
  - (18) basic oxygen furnace and open hearth furnace slag from carbon steel production;
  - (19) chloride process waste solids from titanium tetrachloride production; and
  - (20) slag from primary zinc processing;
- (c) a residue derived from co-processing mineral processing secondary materials with normal beneficiation raw materials or with normal mineral processing raw materials remains excluded under paragraph (2) of this subdivision if the owner or operator:
  - (1) processes at least 50 percent by weight normal beneficiation raw materials or normal mineral processing raw materials; and
  - (2) legitimately reclaims the secondary mineral processing materials;
- (vii) cement kiln dust waste, except as provided by section 374-1.8(m) of this Title for facilities that burn or process hazardous waste;
- (viii) solid waste which consists of discarded arsenical-treated wood or wood products which fails the test for the toxicity characteristic for hazardous waste codes D004 through D017 and which is not a hazardous waste for any other reason if the waste is generated by persons who utilize the arsenical-treated wood and wood products for these materials' intended end use;  
**Note:** This exclusion does not apply to manufacturers of arsenical treated wood or wood products.
- (ix)
  - (a) wastes which fail the test for the toxicity characteristic because chromium is present or are listed in section 371.4 due to the presence of chromium, which do not fail the test

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for the toxicity characteristic for any other constituent or are not listed due to the presence of any other constituent, and which do not fail the test for any other characteristic, if it is shown by a waste generator or by waste generators that:

- (1) the chromium in the waste is exclusively (or nearly exclusively) trivalent chromium;
  - (2) the waste is generated from an industrial process which uses trivalent chromium exclusively (or nearly exclusively) and the process does not generate hexavalent chromium; and
  - (3) the waste is typically and frequently managed in nonoxidizing environments;
- (b) specific wastes which meet the standard in clause ('a') of this subparagraph (so long as they do not fail the test for the toxicity characteristic for any other constituent, and do not exhibit any other hazardous waste characteristic) are:
- (1) the following wastes generated by the following subcategories of the leather tanning and finishing industry: chrome (blue) trimmings, chrome (blue) shavings, sewer screenings and wastewater treatment sludges, generated by the subcategories known as hair pulp/chrome tan/retan/wet finish, hair save/chrome tan/retan/wet finish, no beamhouse, through-the blue, and shearling;
  - (2) buffing dust generated by the subcategories listed in subclause ('1') of this clause, except for shearling;
  - (3) waste scrap leather from the leather tanning industry, the shoe manufacturing industry, and other leather product manufacturing industries; and
  - (4) wastewater treatment sludges from the production of titanium dioxide pigment using chromium-bearing ores by the chloride process;
- (x) petroleum-contaminated media and debris that fail the test for the toxicity characteristic of section 371.3(e) (hazardous waste codes D018 through D043 only) and are subject to the corrective action regulations under 40 CFR part 280;
- (xi) non-terne plated used oil filters that are not mixed with wastes listed in section 371.4 of this Part if these oil filters have been gravity hot-drained using one of the following methods:
- (a) puncturing the filter anti-drain back valve or the filter dome end and hot-draining;
  - (b) hot-draining and crushing;
  - (c) dismantling and hot-draining; or
  - (d) any other equivalent hot-draining method that will remove used oil;
- (xii) used chlorofluorocarbon refrigerants from totally enclosed heat transfer equipment, including mobile air conditioning systems, mobile refrigeration, and commercial and industrial air conditioning and refrigeration systems that use chlorofluorocarbons as the heat transfer fluid in a refrigeration cycle, provided the refrigerant is reclaimed for further use; and
- (xiii) leachate or gas condensate collected from landfills where certain solid wastes have been disposed, provided that:
- (a) the solid wastes disposed would meet one or more of the listing descriptions for hazardous waste codes K169, K170, K171, K172, K174, K175, K176, K177, K178, and K181, if these wastes had been generated after the effective date of the listing;

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- (b) the solid wastes described in clause ('a') of this subparagraph were disposed prior to the effective date of the listing;
  - (c) the leachate or gas condensate do not exhibit any characteristic of hazardous waste nor are derived from any other listed hazardous waste;
  - (d) discharge of the leachate or gas condensate, including leachate or gas condensate transferred from the landfill to a POTW by truck, rail, or dedicated pipe, is subject to regulation under section 307(b) or 402 of the Federal Clean Water Act (see section 370.1(e) of this Title) and the State Pollutant Discharge Elimination System (SPDES), Parts 750 through 757 of this Title; and
  - (e) as of February 13, 2001, leachate or gas condensate derived from K169-K172 is no longer exempt if it is stored or managed in a surface impoundment prior to discharge. As of November 21, 2003, leachate or gas condensate derived from K176, K177, and K178 is no longer exempt if it is stored or managed in a surface impoundment prior to discharge. Leachate or gas condensate derived from K181 is no longer exempt if it is stored or managed in a system impoundment prior to discharge. There is one exception: if the surface impoundment is used to temporarily store leachate or gas condensate in response to an emergency situation (e.g., shutdown of wastewater treatment system), provided the impoundment has a double liner, and provided the leachate or gas condensate is removed from the impoundment and continues to be managed in compliance with the conditions of this clause after the emergency ends.
- (3) Hazardous wastes which are exempted from certain regulations.
- (i) A hazardous waste which is generated in a product or raw material storage tank, in a product or raw material transport vehicle or vessel, in a product or raw material pipeline, or in a manufacturing process unit or an associated non-waste treatment manufacturing unit, is not subject to regulation under Parts 372, 373, and 376 of this Title until it leaves the unit in which it was generated. However, this exemption does not apply if the unit is a surface impoundment, or if the hazardous waste remains in the unit more than 90 days after the unit ceases to be operated for manufacturing, or for storage or transportation of product or raw materials.
- (4) Samples.
- (i) Except as provided in subparagraph (ii) of this paragraph, a sample of solid waste or a sample of water, soil or air, which is collected for the sole purpose of testing to determine its characteristics, or composition, is not subject to any requirements of this Part or of Parts 372, 373, and 376 of this Title, when:
    - (a) the sample is being transported to a laboratory for the purpose of testing;
    - (b) the sample is being transported back to the sample collector after testing;
    - (c) the sample is being stored by the sample collector before transport to a laboratory for testing;
    - (d) the sample is being stored in a laboratory before testing;
    - (e) the sample is being stored in a laboratory after testing but before it is returned to the sample collector; or

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- (f) the sample is being stored temporarily in the laboratory after testing for a specific purpose (for example, until conclusion of a court case or enforcement action where further testing of the sample may be necessary).
- (ii) In order to qualify for the exemption in clauses (i)(‘a’) and (‘b’) of this paragraph, a sample collector shipping samples to a laboratory, or a laboratory returning samples to a sample collector, must:
  - (a) comply with the New York State Department of Transportation (NYSDOT), U.S. Department of Transportation (USDOT), U.S. Postal Service (USPS), or any other applicable shipping requirements; or
  - (b) comply with the following requirements if the sample collector determines that NYSDOT, USDOT, USPS, or other shipping requirements do not apply to the shipment of the sample:
    - (1) assure that the following information accompanies the sample:
      - (i) the sample collector's name, mailing address and telephone number;
      - (ii) the laboratory's name, mailing address and telephone number;
      - (iii) the quantity of the sample;
      - (iv) the date of shipment; and
      - (v) a description of the sample; and
    - (2) package the sample so that it does not leak, spill or vaporize from its packaging.
- (iii) This exemption does not apply if the laboratory determines that the waste is hazardous but the laboratory is no longer meeting any of the conditions stated in subparagraph (i) of this subparagraph.
- (iv) Treatability study samples.
  - (a) Except as provided in clause (‘b’) of this subparagraph, persons who generate or collect samples for the purpose of conducting treatability studies, as defined in section 370.2(b) of this Title, are not subject to any requirement of this Part or Part 372 nor are such samples included in the quantity determinations of subdivision (f) of this section and section 372.2(a)(8) of this Part when:
    - (1) the sample is being collected and prepared for transportation by the generator or sample collector;
    - (2) the sample is being accumulated or stored by the generator or sample collector prior to transportation to a laboratory or testing facility; or
    - (3) the sample is being transported to the laboratory or testing facility for the purpose of conducting a treatability study.
  - (b) The exemption in clause (‘a’) of this subparagraph is applicable to samples of hazardous waste being collected and shipped for the purpose of conducting treatability studies provided that:
    - (1) the generator or sample collector uses (in “treatability studies”) no more than 10,000 kilograms of media contaminated with non-acute hazardous waste, 1,000 kilograms of any non-acute hazardous waste other than contaminated media, 1 kilogram of acute hazardous waste, or 2,500 kilograms of media contaminated

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- with acute hazardous waste for each process being evaluated for each generated waste stream;
- (2') the mass of each sample shipment does not exceed 10,000 kilograms; the 10,000 kilogram quantity may be all media contaminated with non-acute hazardous waste, or may include 2,500 kilograms of media contaminated with acute hazardous waste, 1,000 kilograms of hazardous waste, and 1 kilogram of acute hazardous waste; and
  - (3') the sample must be packaged so that it will not leak, spill, or vaporize from its packaging during shipment and the requirements of item ('i') or ('ii') of this subclause are met;
    - (i) the transportation of each sample shipment complies with U.S. Department of Transportation (DOT), U.S. Postal Service (USPS), or any other applicable shipping requirements; or
    - (ii) if the DOT, USPS, or other shipping requirements do not apply to the shipment of the sample, the following information must accompany the sample:
      - (A) the name, mailing address, and telephone number of the originator of the sample;
      - (B) the name, address, and telephone number of the facility that will perform the treatability study;
      - (C) the quantity of the sample;
      - (D) the date of shipment; and
      - (E) a description of the sample, including its EPA hazardous waste number;
  - (4') the sample is shipped to a laboratory or testing facility which is exempt under subparagraph (v) of this paragraph or has an appropriate RCRA permit or interim status;
  - (5') the generator or sample collector maintains the following records for a period ending three years after completion of the treatability study:
    - (i) copies of the shipping documents;
    - (ii) a copy of the contract with the facility conducting the treatability study;
    - (iii) documentation showing:
      - (A) the amount of waste shipped under this exemption;
      - (B) the name, address, and EPA identification number of the laboratory or testing facility that received the waste;
      - (C) the date the shipment was made; and
      - (D) whether or not unused samples and residues were returned to the generator;
  - (6') the generator reports the information required under item ('5')('iii') of this clause in its annual report.
- (c') The commissioner may grant requests, on a case-by-case basis, for up to an additional two years for treatability studies involving bioremediation. The commissioner may

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grant requests, on a case-by-case basis, for quantity limits in excess of those specified in subclauses (iv)(‘b’)(‘1’) and (‘2’) and clause (v)(‘d’) of this paragraph, for up to an additional 5,000 kilograms of media contaminated with non-acute hazardous waste, 500 kilograms of non-acute hazardous waste, 2,500 kilograms of media contaminated with acute hazardous waste and 1 kilogram of acute hazardous waste:

- (‘1’) In response to requests for authorization to ship, store and conduct treatability studies on additional quantities in advance of commencing treatability studies. Factors to be considered in reviewing such requests include the nature of the technology, the type of process (e.g., batch versus continuous), size of the unit undergoing testing (particularly in relation to scale-up considerations), the time/quantity of material required to reach steady state operating conditions, or test design considerations such as mass balance calculations.
- (‘2’) In response to requests for authorization to ship, store and conduct treatability studies on additional quantities after initiation or completion of initial treatability studies, when: there has been an equipment or mechanical failure during the conduct of a treatability study; there is a need to verify the results of a previously conducted treatability study; there is a need to study and analyze alternative techniques within a previously evaluated treatment process; or there is a need to do further evaluation of an ongoing treatability study to determine final specifications for treatment.
- (‘3’) The additional quantities and time frames allowed in subclauses (‘1’) and (‘2’) of this clause are subject to all the provisions in clause (‘a’) and subclauses (‘b’)(‘2’)-(‘6’) of this subparagraph. The generator or sample collector must apply to the commissioner and provide in writing the following information:
  - (‘i’) the reason why the generator or sample collector requires additional time or quantity of sample for the treatability study evaluation and the additional time or quantity needed;
  - (‘ii’) documentation accounting for all samples of hazardous waste from the waste stream which have been sent for or undergone treatability studies including the date each previous sample from the waste stream was shipped, the quantity of each previous shipment, the laboratory or testing facility to which it was shipped, what treatability study processes were conducted on each sample shipped, and the available results of each treatability study;
  - (‘iii’) a description of the technical modifications or change in specifications which will be evaluated and the expected results;
  - (‘iv’) if such further study is being required due to equipment or mechanical failure, the applicant must include information regarding the reason for the failure or breakdown and also include what procedures or equipment improvements have been made to protect against further breakdowns; and
  - (‘v’) such other information that the commissioner considers necessary.
- (v) Samples undergoing treatability studies at laboratories and testing facilities. Samples undergoing treatability studies and the laboratory or testing facility conducting such treatment

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studies (to the extent such facilities are not otherwise subject to RCRA requirements) are not subject to any requirements of this Part of Parts 370-374 and Part 376, provided that the conditions of clauses ('a') through ('k') of this subparagraph are met. A mobile treatment unit (MTU) may qualify as a testing facility subject to clauses ('a') through ('k') of this subparagraph. Where a group of MTUs are located at the same site, the limitations specified in ('a') through ('k') of this subparagraph apply to the entire group of MTUs collectively as if the group were one MTU.

- ('a') No less than 45 days before conducting treatability studies, the facility notifies the commissioner in writing that it intends to conduct treatability studies under this paragraph.
- ('b') The laboratory or testing facility conducting the treatability study has an EPA identification number.
- ('c') No more than a total of 10,000 kilograms of "as received" media contaminated with non-acute hazardous waste, 2,500 kilograms of media contaminated with acute hazardous waste or 250 kilograms of other "as received" hazardous waste is subject to initiation of treatment in all treatability studies in any single day. "As received" waste refers to the waste as received in the shipment from the generator or sample collector.
- ('d') The quantity of "as received" hazardous waste stored at the facility for the purpose of evaluation in treatability studies does not exceed 10,000 kilograms, the total of which can include 10,000 kilograms of media contaminated with non-acute hazardous waste, 2,500 kilograms of media contaminated with acute hazardous waste, 1,000 kilograms of non-acute hazardous wastes other than contaminated media, and one kilogram of acute hazardous waste. This quantity limitation does not include treatment materials (including non-hazardous solid waste) added to "as received" hazardous waste.
- ('e') No more than 90 days have elapsed since the treatability study for the sample was completed, or no more than one year (two years for treatability studies involving bioremediation) have elapsed since the generator or sample collector shipped the sample to the laboratory or testing facility, whichever date first occurs. Up to 500 kilograms of treated material from a particular waste stream from treatability studies may be archived for future evaluation up to five years from the date of initial receipt. Quantities of materials archived are counted against the total storage limit for the facility.
- ('f') The treatability study does not involve the placement of hazardous waste on the land or open burning of hazardous waste.
- ('g') The facility maintains records for three years following completion of each study that show compliance with the treatment rate limits and the storage time and quantity limits. The following specific information must be included for each treatability study conducted:
  - ('1') the name, address, and EPA identification number of the generator or sample collector of each waste sample;
  - ('2') the date the shipment was received;
  - ('3') the quantity of waste accepted;



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- (4') the quantity of "as received" waste in storage each day;
  - (5') the date the treatment study was initiated and the amount of "as received" waste introduced to treatment each day;
  - (6') the date the treatability study was concluded;
  - (7') the date any unused sample or residues generated from the treatability study were returned to the generator or sample collector, or, if sent to a designated facility, the name of the facility, and the EPA identification number.
- (h') The facility keeps, on-site, a copy of the treatability study contract and all shipping papers associated with the transport of treatability study samples to and from the facility for a period ending three years from the completion date of each treatability study.
- (i') The facility prepares and submits a report to the department by March 15th of each year that includes the following information for the previous calendar year:
- (1') the name, address, and EPA identification number of the facility conducting the treatability studies;
  - (2') the types (by process) of treatability studies conducted;
  - (3') the names and addresses of persons for whom studies have been conducted (including their EPA identification numbers);
  - (4') the total quantity of waste in storage each day;
  - (5') the quantity and types of waste subjected to treatability studies;
  - (6') when each treatability study was conducted; and
  - (7') the final disposition of residues and unused sample from each treatability study.
- (j') The facility determines whether any unused sample or residues generated by the treatability study are hazardous waste under subdivision (d) of this section and, if so are subject to Parts 371-374 and Part 376, unless the residues and unused samples are returned to the sample originator under the subparagraph (4) (iv) of this subdivision exemption.
- (k') The facility notifies the commissioner by letter when the facility is no longer planning to conduct any treatability studies at the site.

### (f) **Special requirements for hazardous waste generated by conditionally exempt small quantity generators.**

- (1) A generator is a conditionally exempt small quantity generator in a calendar month if no more than 100 kilograms of hazardous waste are generated in that month.
- (2) Except for those wastes identified in paragraphs (5), (6), (7), and (10) of this subdivision, a conditionally exempt small quantity generator's hazardous wastes are not subject to regulation under Part 372 through Subpart 373-3, Subpart 374-1 and Part 376 of this Title and the notification requirements of section 3010 of RCRA (see section 370.1(e) of this Title), provided the generator complies with the requirements of paragraphs (5), (6), (7) and (10) of this subdivision;
- (3) When making the quantity determinations of this Part and Part 372 of this Title, the generator must include all hazardous waste that it generates, except hazardous waste that:
  - (i) is exempt from regulation under paragraphs (e)(3) and (4), subparagraphs (g)(1)(iii), (h)(1)(i) of this section or section 371.4(e) of this Title; or

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- (ii) is managed immediately upon generation only in on-site elementary neutralization units, wastewater treatment units, or totally enclosed treatment facilities as defined in section 370.2 of this Title; or
  - (iii) is recycled, without prior storage or accumulation, only in an on-site process subject to regulation under subparagraph (g)(3)(ii) of this section; or
  - (iv) is used oil managed under the requirements of subparagraph (g)(1)(iv) of this section and Subpart 374-2 of this Title; or
  - (v) is spent lead-acid batteries managed under the requirements of section 374-1.7 of this Title; or
  - (vi) is universal waste managed under subdivision (j) of this section and Subpart 374-3 of this Title; or
  - (vii) is a hazardous waste that is an unused commercial chemical product (listed in section 371.4 of this Part or exhibiting one or more characteristics in section 371.3 of this Part) that is generated solely as a result of a laboratory clean-out conducted at an eligible academic entity pursuant to paragraph 372.2(e)(14) of this Title. For purposes of this provision, the term eligible academic entity shall have the meaning as defined in paragraph 372.2(e)(1) of this Title.
- (4) In determining the quantity of hazardous waste generated, a generator need not include:
- (i) hazardous waste when it is removed from on-site storage;
  - (ii) hazardous waste produced by on-site treatment (including reclamation) of the generator's hazardous waste, so long as the hazardous waste that is treated was counted once; or
  - (iii) spent materials that are generated, reclaimed, and subsequently reused on-site, so long as such spent materials have been counted once.
- (5) If a conditionally exempt small quantity generator generates acute hazardous waste in a calendar month in quantities greater than set forth below, all quantities of that acute hazardous waste are subject to those regulations applicable to generators of 1,000kg or greater hazardous waste in a calendar month under Parts 372 through Subpart 374-1 and Part 376 of this Title, and the notification requirements of section 3010 of RCRA (see section 370.1(e) of this Title):
- (i) a total of one kilogram of acute hazardous waste listed in section 371.4(b), and (d)(5) of this Part; or
  - (ii) a total of 100 kilograms of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of any acute hazardous waste listed in section 371.4(b), and (d)(5) of this Part.
- (6) In order for acute hazardous wastes generated by a conditionally exempt small quantity generator of acute hazardous wastes in quantities equal to or less than those set forth in subparagraph (5)(i) or (ii) of this subdivision to be excluded from those regulations applicable to generators of 1,000 kg or greater of hazardous waste in a calendar month, the generator must comply with the following requirements:
- (i) section 372.2(a)(2) of this Title;
  - (ii) the conditionally exempt small quantity generator may accumulate acute hazardous waste on-site. If acutely hazardous wastes are accumulated at any time in quantities greater than those set forth in subparagraph (5)(i) or (ii) of this subdivision, the generator is subject to regulation under Parts 372 through Subpart 374-1, and Part 376 of this Title and the notification

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- requirements of section 3010 of RCRA (see section 370.1(e) of this Title for all of those accumulated wastes. The time period of section 372.2(a)(8)(ii) of this Title, for accumulation of wastes on-site, begins when the accumulated wastes exceed the applicable exclusion limit;
- (iii) a conditionally exempt small quantity generator may either treat or dispose of the acute hazardous wastes in an on-site facility, or ensure delivery to an off-site treatment, storage or disposal facility either of which, if located in the U.S., is:
    - ('a') permitted under Part 373 of this Title;
    - ('b') in interim status under Part 373 of this Title;
    - ('c') authorized to manage hazardous waste by a state with a hazardous waste management program approved under RCRA, if located outside New York;
    - ('d') authorized to receive hazardous waste under RCRA;
    - ('e') permitted, licensed, or registered by New York State pursuant to Part 360 of this Title to manage municipal or industrial solid waste, and authorized to receive such wastes, or permitted, licensed, or registered by a state other than New York to manage municipal solid waste if managed in a solid waste landfill subject to 40 CFR part 258, as incorporated by reference in section 370.1(e) of this Title, or registered by a state to manage industrial solid waste if managed in an industrial waste disposal unit subject to 40 CFR sections 257.5 through 257.30, as incorporated by reference in section 370.1(e) of this Title;
    - ('f') a facility which beneficially uses or reuses, or legitimately recycles or reclaims its waste; or treats its waste prior to beneficial use or reuse, or legitimate recycling or reclamation;
    - ('g') a facility authorized by the department to receive such wastes, pursuant to Subpart 362-4 of this Title; or
    - ('h') for universal waste managed under Subpart 374-3 of this Title, a universal waste handler or destination facility subject to the requirements of Subpart 374-3 of this Title;
  - (iv) in ensuring delivery of this waste to an off-site treatment, storage, or disposal facility, generators must:
    - ('a') transport the waste themselves pursuant to Part 364 of this Title; or
    - ('b') use a transporter authorized under Part 364 of this Title to transport the particular waste(s) offered for shipment to the designated facility.
- (7) In order for non-acute hazardous waste generated by a conditionally exempt small quantity generator in quantities of 100 kilograms or less of hazardous waste during a calendar month to be excluded from regulations applicable to generators of 1,000 kg or greater of hazardous waste in a calendar month, the generator must comply with the following requirements:
- (i) comply with section 372.2(a)(2) of this Title;
  - (ii) the conditionally exempt small quantity generator may accumulate hazardous waste on-site. If the generator accumulates at any time 1,000 kilograms or greater of hazardous wastes generated on this site, all of those accumulated non-acute hazardous wastes are subject to regulation under the special provisions of section 372.2(a)(8)(iii) of this Title applicable to generators of greater than 100 kg and less than 1,000 kg of hazardous waste in a calendar month as well as the requirements of Parts 373, 374 and 376 of this Title, and the applicable

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notification requirements of section 3010 of RCRA (see section 370.1(e) of this Title). The time period of section 372.2(a)(8)(iii) of this Title for accumulation of non-acute hazardous wastes on-site begins for a conditionally exempt small quantity generator when the accumulated wastes equal or exceed 1,000 kilograms;

- (iii) conditionally exempt small quantity generator may either treat or dispose of their hazardous waste in an on-site facility, or ensure delivery to an off-site treatment, storage or disposal facility, either of which, if located in the U.S., is:
  - ('a') permitted under Part 373 of this Title;
  - ('b') in interim status under Part 373 of this Title;
  - ('c') authorized to manage hazardous waste by a state with a hazardous waste management program approved under RCRA, if located outside New York;
  - ('d') authorized to receive hazardous waste under RCRA;
  - ('e') permitted, licensed, or registered by New York State pursuant to Part 360 of this Title to manage municipal or industrial solid waste, and authorized to receive such wastes, or permitted, licensed or registered by a state other than New York to manage municipal solid waste if managed in a solid waste landfill subject to 40 CFR Part 258, as incorporated by reference in section 370.1(e) of this Title, or registered by a state to manage industrial solid waste if managed in an industrial waste disposal unit subject to 40 CFR sections 257.5 through 257.30, as incorporated by reference in section 370.1(e) of this Title;
  - ('f') a facility which beneficially uses or reuses, or legitimately recycles or reclaims its waste; or treats its waste prior to beneficial use or reuse, or legitimate recycling or reclamation;
  - ('g') a facility authorized by the department to receive such wastes, pursuant to Subpart 362-4 of this Title; or
  - ('h') for universal waste managed under Subpart 374-3 of this Title, a universal waste handler or destination facility subject to the requirements of Subpart 374-3 of this Title;
- (iv) in ensuring delivery of this waste to an off-site treatment, storage, or disposal facility, generators must:
  - ('a') transport the waste themselves pursuant to Part 364 of this Title; or
  - ('b') use a transporter authorized under Part 364 of this Title to transport the particular waste(s) offered for shipment to the designated facility.
- (8) Hazardous waste subject to the reduced requirements of this subdivision may be mixed with non-hazardous waste and remain subject to these reduced requirements even though the resultant mixture exceeds the quantity limitation identified in this subdivision, as long as the mixture meets none of the characteristics of hazardous wastes identified in section 371.3 of this Part, or such mixing occurs at a facility regulated under Subpart 362-4 or permitted under Part 373 of this Title.
- (9) If a conditionally exempt small quantity generator mixes with a hazardous waste that exceeds a quantity exclusion level of this subdivision, the mixture is subject to full regulation under this Title.
- (10) If a conditionally exempt small quantity generator's wastes are mixed with used oil, the mixture is subject to Part 360 and Subpart 374-2 and Part 613 (if applicable) of this Title. Any material produced from such a mixture by processing, blending, or other treatment is also so regulated.

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**(g) Requirements for recyclable materials.**

(1)

- (i) Hazardous wastes that are recycled are subject to the requirements for generators, transporters, and storage facilities of paragraphs (2) and (3) of this subdivision, except for the materials listed in subparagraphs (ii) and (iii) of this paragraph. Hazardous wastes that are recycled will be known as recyclable materials.
- (ii) The following recyclable materials are not subject to the requirements of this subdivision but are regulated under sections 374-1.3 through 374-1.9, Subpart 374-2 and all applicable provisions in Subpart 373-1 and Parts 376, 621 and 624 of this Title:
  - ('a') recyclable materials used in a manner constituting disposal (see section 374-1.3 of this Title);
  - ('b') hazardous wastes burned (as defined in subdivision 374-1.8(a) of this Title) in boilers and industrial furnaces that are not regulated under sections 373-2.15 and 373-3.15 of this Title (see section 374-1.8 of this Title);
  - ('c') Reserved.
  - ('d') recyclable materials from which precious metals are reclaimed (see section 374-1.6 of this Title); and
  - ('e') spent lead-acid batteries that are being reclaimed (see section 374-1.7 of this Title).
- (iii) The following recyclable materials, or the following hazardous wastes burned for energy recovery, are not subject to regulation under Part 372 through Subpart 374-3 and Part 376 of this Title, and are not subject to the notification requirements of section 3010 of RCRA (see section 370.1(e) of this Title), provided that the waste is transported by a hauler complying with any applicable waste hauler permit requirements in Part 364 of this Title.
  - ('a') industrial ethyl alcohol that is reclaimed except that, unless provided otherwise in an international agreement as specified in section 372.5 of this Title:
    - ('1') a person initiating a shipment for reclamation in a foreign country, and any intermediary arranging for the shipment, must comply with the requirements applicable to a primary exporter in section 372.5(c), (f)(1)(i)-(iv), (vi), (f)(2), and (g) of this Title, export such materials only upon consent of the receiving country and in conformance with the EPA acknowledgment of consent as defined in section 372.5 of this Title, and provide a copy of the EPA acknowledgment of consent to the shipment to the transporter transporting the shipment for export; and
    - ('2') transporters transporting a shipment for export may not accept a shipment if he or she knows the shipment does not conform to the EPA acknowledgment of consent, must ensure that a copy of the EPA acknowledgment of consent accompanies the shipment and must ensure that it is delivered to the facility designated by the person initiating the shipment;
  - ('b') scrap metal that is not excluded under subparagraph (e)(1)(xiii) of this section;
  - ('c') fuels produced from the refining of oil-bearing hazardous waste along with normal process streams at a petroleum refining facility if such wastes result from normal petroleum refining, production, and transportation practices (this exemption does not

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apply to fuels produced from oil recovered from oil-bearing hazardous waste, where such recovered oil is already excluded under subparagraph (e)(1)(xii) of this section);

('d')

- (1) hazardous waste fuel produced from oil-bearing hazardous wastes from petroleum refining, production, or transportation practices, or produced from oil reclaimed from such hazardous wastes, where such hazardous wastes are reintroduced into a process that does not use distillation or does not produce products from crude oil so long as the resulting fuel meets the used oil specification under section 374-2.2(b) of this Title and so long as no other hazardous wastes are used to produce the hazardous waste fuel;
  - (2) hazardous waste fuel produced from oil-bearing hazardous waste from petroleum refining production, and transportation practices, where such hazardous wastes are reintroduced into a refining process after a point at which contaminants are removed, so long as the fuel meets the used oil fuel specification under section 374-2.2(b) of this Title; and
  - (3) oil reclaimed from oil-bearing hazardous wastes from petroleum refining, production, and transportation practices, which reclaimed oil is burned as a fuel without reintroduction to a refining process, so long as the reclaimed oil meets the used oil fuel specification under section 374-2.2(b) of this Title.
- (iv) Used oil that is recycled, or burned for energy recovery, and is also a hazardous waste solely because it exhibits a hazardous waste characteristic is not subject to the requirements of Parts 370 through 373, Subpart 374-1 and Part 376 of this Title, but is regulated under Part 364 and Subparts 360-14 and 374-2 of this Title. Used oil that is recycled includes any used oil which is reused, following its original use, for any purpose (including the purpose for which the oil was originally used). Such term includes, but is not limited to, oil which is rerefined, reclaimed, or reprocessed.
- (v) Hazardous waste, that is exported to or imported from designated member countries of the Organization for Economic Cooperation and Development (OECD) (as defined in section 372.5(h)(1) of this Title) for purpose of recovery is subject to the requirements of section 372.5 of this Title, if it is subject to either the manifesting requirements of Part 372 of this Title, or to the universal waste management standards of Subpart 374-3 of this Title.
- (2) Generators and transporters of recyclable materials, and generators and transporters of hazardous wastes burned for energy recovery, are subject to the applicable requirements of Part 372 of this Title and the notification requirements under section 3010 of RCRA (see section 370.1(e) of this Title), except as provided in paragraph (1) of this subdivision.
- (3)
- (i) Owners and operators of facilities that store recyclable materials before they are recycled, or store hazardous wastes prior to being burned for energy recovery are regulated under all applicable provisions of Subpart 371-1, sections 373-2.1 through 373-2.12, 373-2.27 through 373-2.29, sections 373-3.1 through 373-3.12, 373-3.27 through 373-2.29, Subpart 374-1, Parts 376, 621 and 624 of this Title, and the notification requirements under section 3010 of RCRA (see section 370.1(e) of this Title), except as provided in paragraph (1) of this

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subdivision. (The recycling process itself is exempt from regulation except as provided in paragraph (4) of this subdivision.)

- (ii) Owners or operators of facilities that recycle recyclable materials without storing them before they are recycled are subject to the following requirements, except as provided in paragraph (1) of this subdivision:

- (a) notification requirements under section 3010 of RCRA (see section 370.1[e] of this Title);

- (b) sections 373-2.5 and 373-3.5, and section 373-3.5(b) (dealing with the use of the manifest and manifest discrepancies) of this Title; and

- (c) paragraph (4) of this subdivision.

- (4) Owners or operators of facilities subject to RCRA permitting requirements with hazardous waste management units that recycle hazardous wastes are subject to the requirements of sections 373-2.27, 373-2.28, 373-3.27 and 373-3.28 of this Title.

### (h) Residues of hazardous waste in empty containers.

(1)

- (i) Any hazardous waste remaining in either an empty container or an inner liner removed from an empty container, as defined in paragraph (2) of this subdivision, is not subject to regulation under this Part and Parts 372 through 374, and 376 of this Title, or to the notification requirements of section 3010 of RCRA (see section 370.1(e) of this Title). (*Note:* The discarding of the empty drum or inner liner itself may be subject to the disposal requirements of Part 360 and the transportation requirements of Part 364 of this Title.)

- (ii) Any hazardous waste in either a container that is not empty or an inner liner removed from a container that is not empty, as defined in paragraph (2) of this subdivision, is subject to regulation under this Part and Parts 372 through 374, and 376 of this Title, or to the notification requirements of section 3010 of RCRA (see section 370.1(e) of this Title).

(2)

- (i) A container or an inner liner removed from a container that has held any hazardous waste, except a waste that is compressed gas or that is identified as an acute hazardous waste listed in section 371.4(b) or (d)(5) of this Part, is empty if:

- (a) all wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container, e.g., pouring, pumping and aspirating; and

- (b) no more than 2.54 centimeters (one inch) of residue remains on the bottom of the container or inner liner; or

- (c)

- (1) no more than three percent by weight of the total capacity of the container remains in the container or inner liner if the container is less than or equal to 119 gallons in size; or

- (2) no more than 0.3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is greater than 119 gallons in size.

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- (ii) A container that has held a hazardous waste that is a compressed gas is empty when the pressure in the container approaches atmospheric.
- (iii) A container or an inner liner removed from a container that has held an acute hazardous waste listed in section 371.4(b), or (d)(5) of this Part is empty if:
  - ('a') the container or inner liner has been triple-rinsed using a solvent capable of removing the commercial chemical product or manufacturing chemical intermediate;
  - ('b') the container or inner liner has been cleaned by another method that has been shown in the scientific literature, or by tests conducted by the generator, to achieve equivalent removal; or
  - ('c') in the case of a container, the inner liner that prevented contact of the commercial chemical product or manufacturing chemical intermediate with the container, has been removed.

*Note:* Approaching atmospheric pressure means that the pressure is essentially equal to atmospheric pressure.

#### (i) Severability.

If any provision of this Part or its application to any person or circumstance is held invalid, the remainder of this Part, and the application of those provisions to persons or circumstances other than those to which it is held invalid, shall not be affected thereby.

#### (j) Requirements for universal wastes.

- (1) The following wastes are exempt from regulation under Part 372, Part 373, Subpart 374-1 and Part 376 of this Title, and therefore are not fully regulated hazardous waste if the wastes are managed in accordance with Subpart 374-3 of this Title:
  - (i) batteries as described in section 374-3.1(b) of this Title;
  - (ii) pesticides as described in section 374-3.1(c) of this Title;
  - (iii) Mercury-containing equipment as described in section 374-3.1(d) of this Title;
  - (iv) lamps as described in section 374-3.1(e) of this Title;
  - (v) aerosol cans as described in section 374-3.1(f) of this Title; and
  - (vi) paint as described in section 374-3.1(g) of this Title.



**Section 371.2 Criteria for identifying the characteristics of hazardous waste and for listing hazardous wastes**

**(a) Criteria for identifying the characteristics of hazardous waste.**

The commissioner will identify and define a characteristic of hazardous waste in addition to those characteristics already identified in section 371.3 of this Part, upon determining that:

- (1) a solid waste that exhibits the characteristic may:
  - (i) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or
  - (ii) pose a substantial present or potential hazard to human health or the environment when it is improperly treated, stored, transported, disposed of or otherwise managed; and
- (2) the characteristic can be:
  - (i) measured by an available standardized test method which is reasonably within the capability of generators of solid waste or private sector laboratories that are available to serve generators of solid waste; or
  - (ii) reasonably detected by generators of solid waste through their knowledge of their waste.
- (3) Whenever a proposed characteristic of a hazardous waste has been identified by the commissioner, the adoption of the proposed characteristic is subject to the approval of the State Environmental Board.

**(b) Criteria for listing hazardous waste.**

- (1) The commissioner shall list a solid waste as a hazardous waste only upon determining that the solid waste meets one of the following criteria:
  - (i) The solid waste exhibits any of the characteristics of hazardous waste identified in section 371.3 of this Part.
  - (ii) The solid waste has been found to be fatal to humans in low doses or, in the absence of data on human toxicity, it has been shown in studies to have an oral LD 50 toxicity (rat) of less than 50 milligrams per kilogram, an inhalation LC 50 toxicity (rat) of less than 2 milligrams per liter, or a dermal LD 50 toxicity (rabbit) of less than 200 milligrams per kilogram, or is otherwise capable of causing or significantly contributing to an increase in serious irreversible, or incapacitating reversible, illness. (Waste listed in accordance with the criteria will be designated acute hazardous waste.)
  - (iii) The solid waste contains any of the toxic constituents listed in Appendix 23, *infra*, and, after considering the following factors, the commissioner concludes that the waste is capable of posing a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of, or otherwise managed:
    - ('a') the nature of the toxicity presented by the constituent;
    - ('b') the concentration of the constituent in the waste;
    - ('c') the potential of the constituent or any toxic degradation product of the constituent to migrate from the waste into the environment under the types of improper management considered in clause ('g') of this subparagraph;
    - ('d') the persistence of the constituent or any toxic degradation product of the constituent;

### 371.2(b)

- (e) the potential for the constituent or any toxic degradation product of the constituent to degrade into nonharmful constituents and the rate of degradation;
- (f) the degree to which the constituent or any degradation product of the constituent bioaccumulates in ecosystems;
- (g) the plausible types of improper management to which the waste could be subjected;
- (h) the quantities of the waste generated at individual generation sites or on a regional or national basis;
- (i) the nature and severity of the human health and environmental damage that has occurred as a result of the improper management of wastes containing the constituent;
- (j) action taken by other governmental agencies or regulatory programs based on the health or environmental hazard posed by the waste or other constituent; and
- (k) such other factors as may be appropriate.

Constituents will be listed in Appendix 23 only if they have been shown in scientific studies to have toxic, carcinogenic, mutagenic or teratogenic effects on humans or other life forms.

- (2) The commissioner may list classes or types of solid waste as hazardous waste if the commissioner has reason to believe that individual wastes, within the class or type of waste, typically or frequently are hazardous under the definition of hazardous waste found in article 27, title 9, of the Environmental Conservation Law.
- (3) The commissioner will use the criteria for listing specified in this subdivision to establish the exclusion limits referred to in section 371.1(f)(3) of this Part.
- (4) Whenever the commissioner proposes to list a solid waste as a hazardous waste where such solid waste has not been so listed by the administrator, the listing of the solid waste shall be subject to the approval of the State Environmental Board.

(Wastes listed in accordance with these criteria will be designated toxic wastes).

### Section 371.3 Characteristics of hazardous waste.

#### (a) General.

- (1) A solid waste, as defined in section 371.1(c) of this Part, which is not excluded from regulation as a hazardous waste under section 371.1(e), is a hazardous waste if it exhibits any of the characteristics identified in this section.

**Note:** Section 372.2(a) of this Title sets forth the generator's responsibility to determine whether the waste exhibits one or more of the characteristics identified in this section.

- (2) A hazardous waste which identified by a characteristic in this section is assigned every EPA hazardous waste number that is applicable as set forth in this section. This number(s) must be used in complying with the notification requirements of section 3010 of RCRA and all applicable recordkeeping and reporting requirements under Part 372 through Subpart 373-3, and Part 376 of this Title.

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- (3) For purposes of this section, the commissioner will consider a sample obtained using any of the applicable sampling methods specified in Appendix 19, *infra*, to be a representative sample. A person may employ a sampling method alternative to those listed in Appendix 19 and is not required to demonstrate the equivalency of that method under the procedures set forth in section 370.3(a) and (b) of this Title.

#### (b) Characteristic of ignitability.

- (1) A solid waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties:
  - (i) It is a liquid, other than an aqueous solution containing less than 24 percent alcohol by volume, and has a flash point less than 60 degrees Celsius (140 degrees Fahrenheit) as determined by a Pensky-Martens Closed Cup Tester, using the test method specified for Testing Materials (ASTM) Standard D93-79 or D93-80 (see section 370.1(e) of this Title); or a Setaflash Closed Cup Tester, using the test method specified in ASTM Standard D3278-78 (see section 370.1(e) of this Title).
  - (ii) It is not a liquid and is capable under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard.
  - (iii) It is an ignitable compressed gas, as defined in 40 CFR 261.21(a)(3) (see section 370.1(e) of this Title).
  - (iv) It is an oxidizer as defined in 40 CFR 261.21(a)(4) (see section 370.1(e) of this Title).
- (2) A solid waste that exhibits the characteristic of ignitability has the EPA hazardous waste number of D001.

#### (c) Characteristic of corrosivity.

- (1) A solid waste exhibits the characteristic of corrosivity if a representative sample of the waste has either of the following properties:
  - (i) it is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5 as determined by a pH meter using method 9040C in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA publication number SW-846 as incorporated by reference in section 370.1(e) of this Title; or
  - (ii) it is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 55 degrees Celsius (130 degrees Fahrenheit) as determined by Method 1110A in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in section 370.1(e) of this Title.
- (2) A solid waste that exhibits the characteristics of corrosivity has the EPA hazardous waste number of D002.

#### (d) Characteristic of reactivity.

- (1) A solid waste exhibits the characteristic of reactivity if a representative sample of the waste has any of the following properties:
  - (i) it is normally unstable and readily undergoes violent change without detonating;

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- (ii) it reacts violently with water;
  - (iii) it forms potentially explosive mixtures with water;
  - (iv) when mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment;
  - (v) it is a cyanide or sulfide-bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment;
  - (vi) it is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement;
  - (vii) it is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure; and
  - (viii) it is a forbidden explosive as defined in 49 CFR 173.54, or Division 1.1, 1.2, or 1.3 explosive as defined in 49 CFR 173.50 and 175.53 (see section 370.1(e) of this Title).
- (2) A solid waste that exhibits the characteristic of reactivity has the EPA hazardous waste number of D003.

#### (e) Toxicity characteristic.

- (1) Except as provided in subparagraph (i) of this paragraph, solid waste exhibits the characteristic of toxicity if, using the Toxicity Characteristic Leaching Procedure, test method 1311 in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA publication SW-846, as incorporated by reference in section 370.1(e) of this Title, the extract from a representative sample of the waste contains any of the contaminants listed in Table 1 at a concentration equal to or greater than the respective value given in that table. Where the waste contains less than 0.5 percent filterable solids, the waste itself, after filtering using the methodology outlined in method 1311, is considered to be the extract for the purpose of this subdivision.
- (i) Manufactured Gas Plant (MGP) related remediation waste exhibiting the Toxicity Characteristic for benzene is not a hazardous waste based on toxicity if the following conditions are met:
    - (‘a’) The remediation wastes are from former MGP sites being remediated under a department order, agreement or State assistance contract, or under the oversight of the EPA;
    - (‘b’) The remediation waste is soil or sediment contaminated with coal tar related residuals that will be thermally treated (as in a combustion boiler unit or in a thermal desorber) at an off-site facility permitted to receive non-hazardous contaminated soil or at an on-site facility. MGP site remediation waste meeting the applicability requirements that is being sent out of state must comply with the rules and regulations of the receiving state; and
    - (‘c’) This exemption does not apply to coal tar contaminated materials which contain significant quantities of purifier wastes or any quantity of other hazardous wastes. A significant quantity of purifier waste is defined as any quantity that would cause the MGP site remediation waste mixture, sent for thermal treatment, to contain in excess of 3.5 percent sulfur by weight.

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**Table 1 – Maximum Concentration of Contaminants for the Toxicity Characteristic**

<i>EPA HW No.<sup>1</sup></i>	<i>Contaminant</i>	<i>CAS No.<sup>2</sup></i>	<i>Regulatory Level (mg/L)</i>
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
D019	Carbon tetrachloride	56-23-5	0.5
D020	Chlordane	57-74-9	0.03
D021	Chlorobenzene	108-90-7	100.0
D022	Chloroform	67-66-3	6.0
D007	Chromium	7440-47-3	5.0
D023	o-Cresol	95-48-7	200.0 <sup>4</sup>
D024	m-Cresol	108-39-4	200.0 <sup>4</sup>
D025	p-Cresol	106-44-5	200.0 <sup>4</sup>
D026	Cresol	.....	200.0 <sup>4</sup>
D016	2,4-D	94-75-7	10.0
D027	1,4-Dichlorobenzene	106-46-7	7.5
D028	1,2-Dichloroethane	107-0-6	0.5
D029	1,1-Dichloroethylene	75-35-4	0.7
D030	2,4- Dinitrotoluene	121-14-2	0.13 <sup>3</sup>
D012	Endrin	72-20-8	0.02
D031	Heptachlor (and its epoxide)	76-44-8	0.008
D032	Hexachlorobenzene	118-74-1	0.13 <sup>3</sup>
D033	Hexachlorobutadiene	87-68-3	0.5
D034	Hexachloroethane	67-72-1	3.0
D008	Lead	7439-92-1	5.0
D013	Lindane	58-89-9	0.4
D009	Mercury	7439-97-6	0.2
D014	Methoxychlor	72-43-5	10.0
D035	Methyl ethyl ketone	78-93-3	200.0
D036	Nitrobenzene	98-95-3	2.0
D037	Pentachlorophenol	87-86-5	100.0
D038	Pyridine	110-86-1	5.0 <sup>3</sup>
D010	Selenium	7782-49-2	1.0
D011	Silver	7440-22-4	5.0
D039	Tetrachloroethylene	127-18-4	0.7
D015	Toxaphene	8001-35-2	0.5
D040	Trichloroethylene	79-01-6	0.5
D041	2,4,5-Trichlorophenol	95-95-4	400.0
D042	2,4,6-Trichlorophenol	88-06-2	2.0

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<i>EPA HW No.<sup>1</sup></i>	<i>Contaminant</i>	<i>CAS No.<sup>2</sup></i>	<i>Regulatory Level (mg/L)</i>
D017	2,4,5-TP (Silvex)	93-72-1	1.0
D043	Vinyl chloride	75-01-4	0.2

<sup>1</sup> Hazardous waste number.

<sup>2</sup> Chemical abstracts service number.

<sup>3</sup> Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.

<sup>4</sup> If o-, m-, and p-Cresol concentrations cannot be differentiated, the total cresol (D026) concentration is used. The regulatory level of total cresol is 200 mg/l.

- (2) A solid waste that exhibits the characteristic of toxicity has the EPA hazardous waste number specified in Table 1 which corresponds to the toxic contaminant causing it to be hazardous.

**Section 371.4 Lists of Hazardous Waste**

**(a) General.**

- (1) A solid waste is a hazardous waste if it is listed in this section, unless it has been excluded from this list under section 370.3(a) and (b) of this Title.

*Note:* Although the names used for chemicals in this list include common names, trade names and specific isomer names under various chemical naming systems, where any one of these previous names are used, all other equivalent names shall be considered to be listed.

- (2) The commissioner will indicate the basis for listing the classes or types of wastes listed in this section by employing one or more of the following hazard codes:

- Ignitable waste .....(I)
- Corrosive waste.....(C)
- Reactive waste .....(R)
- Toxicity characteristic waste.....(E)
- Acute hazardous waste.....(H)
- Toxic waste .....(T)

Appendix 22, *infra*, identifies the constituent which caused the commissioner to list the waste as a toxicity characteristic waste (E) or toxic waste (T) in subdivisions (b) and (c) of this section.

- (3) Each hazardous waste listed in this section is assigned an EPA hazardous waste number which precedes the name of the waste. This number must be used in complying with the notification requirements of section 3010 of the Resource Conservation and Recovery Act and certain recordkeeping and reporting requirements under Parts 372, 373 and 376 (see section 370.1(e) of this Title).

**371.4(a)**

- (4) The following hazardous wastes listed in subdivision (b) of this section are subject to the exclusion limits for acutely hazardous waste established in section 371.1(f) of this Part: EPA hazardous waste numbers F020, F021, F022, F023, F026 and F027.

**(b) Hazardous waste from nonspecific sources.**

- (1) The following solid wastes are listed hazardous wastes from nonspecific sources unless they are excluded under section 370.3(a) and (c) of this Title and listed in Appendix 24, *infra*:

371.4(b)

<i>Industry and EPA hazardous waste number</i>	<i>Hazardous waste</i>	<i>Hazard code</i>
<b>Generic:</b>		
F001	The following spent halogenated solvents used in degreasing: tetrachloroethylene, trichloroethylene, methylene chloride, 1,1, 1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, total of 10 percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004 and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(T)
F002	The following spent halogenated solvents: tetrachloro-ethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2- trifluoroethane, orthodichlorobenzene, trichlorofluoromethane and 1,1,2-trichloroethane; all spent solvent mixtures/blends containing, before use, a total of 10 percent or more (by volume) of one or more of the above halogenated solvents or those listed in F001, F004 or F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(T)
F003	The following spent nonhalogenated solvents: xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/blends containing, before use, only the above spent nonhalogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of the above nonhalogenated solvents, and a total of 10 percent or more (by volume) of one or more of those solvents listed in F001, F002, F004 and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(I)*
F004	The following spent nonhalogenated solvents: cresols and cresylic acid, and nitrobenzene; all spent solvent mixtures/blends containing, before use, a total of 10 percent or more (by volume) of one or more of the above nonhalogenated solvents or those solvents listed in F001, F002 and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(T)
F005	The following spent nonhalogenated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol, and pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures/blends containing, before use, a total of 10 percent or more (by volume) of one or more of the above nonhalogenated solvents or those solvents listed in F001, F002 or F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(I,T)



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<b><i>Industry and EPA hazardous waste number</i></b>	<b><i>Hazardous waste</i></b>	<b><i>Hazard code</i></b>
F006	Wastewater treatment sludges from electroplating operations, except from the following processes: (1) sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum.	(T)
F007	Spent cyanide plating bath solutions from electroplating operations.	(R,T)
F008	Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process.	(R,T)
F009	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.	(R,T)
F010	Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process.	(R,T)
F011	Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations.	(R,T)
F012	Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process.	(T)
F019	Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process. Wastewater treatment sludges from the manufacturing of motor vehicles using a zinc phosphating process will not be subject to this listing at the point of generation if the wastes are not placed on the land prior to shipment to a landfill for disposal and are either: disposed in a municipal or industrial landfill unit that is equipped with at least a single clay liner and is permitted, licensed or otherwise authorized by the state; or disposed in a landfill unit subject to, or otherwise meeting, the landfill requirements in Parts 360 and 363 of this Title and sections 373-2.15(c) and 373-3.14(j) of this Title. For the purposes of this listing, motor vehicle manufacturing is defined in clause (2)(iv)(‘a’); clause (2)(iv)(‘b’) of this subdivision describes the recordkeeping requirements for motor vehicle manufacturing facilities.	(T)
F020	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives. (This listing does not include wastes from the production of hexachlorophene from highly purified 2,4,5-trichlorophenol.)	(H)

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<i>Industry and EPA hazardous waste number</i>	<i>Hazardous waste</i>	<i>Hazard code</i>
F021	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol, or of intermediates used to produce its derivatives.	(H)
F022	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions.	(H)
F023	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, component in a formulating process) of tri- and tetra-chlorophenols. (This listing does not include wastes from equipment used only for the production or use of hexachlorophene from highly purified 2,4,5-trichlorophenol.)	(H)
F024	Process wastes, including but not limited to, distillation residues, heavy ends, tars, and reactor clean-out wastes, from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. (This listing does not include wastewaters, wastewater treatment sludges, spent catalysts, and wastes listed in subdivision (b) or (c) of this section.)	(T)
F025	Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.	(T)
F026	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzene under alkaline conditions.	(H)
F027	Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulation containing compounds derived from these chlorophenols. (This listing does not include formulations containing hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component.)	(H)

371.4(b)

<i>Industry and EPA hazardous waste number</i>	<i>Hazardous waste</i>	<i>Hazard code</i>
F028	Residues resulting from the incineration or thermal treatment of soil contaminated with EPA hazardous waste numbers F020, F021, F022, F023, F026 and F027.	(T)
F032	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that currently use or have previously used chlorophenolic formulations (except potentially cross-contaminated wastes that have had the F032 waste code deleted in accordance with subdivision (f) of this section or potentially cross-contaminated wastes that are otherwise currently regulated as hazardous wastes (i.e., F034 or F035), and where the generator does not resume or initiate use of chlorophenolic formulations). This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.	(T)
F034	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use creosote formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.	(T)
F035	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.	(T)

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<b><i>Industry and EPA hazardous waste number</i></b>	<b><i>Hazardous waste</i></b>	<b><i>Hazard code</i></b>
F037	<p>Petroleum refinery primary oil/water/solids separation sludge; any sludge generated from the gravitational separation of oil/ water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to, those generated in: oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow. Sludge generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges generated in aggressive biological treatment units as defined in subparagraph (2)(ii) of this subdivision (including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and K051 wastes are not included in this listing. This listing does include residuals generated from processing or recycling oil-bearing hazardous secondary materials excluded under section 371.1(e)(1)(xii)(‘a’) of this Part, if those residuals are to be disposed of.</p>	(T)
F038	<p>Petroleum refinery secondary (emulsified) oil/water/solids separation sludge; any sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludges and floats generated in: induced air flotation (IAF) units, tanks and impoundments, and all sludges generated in DAF units. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges and floats generated in aggressive biological treatment units as defined in subparagraph (2)(ii) of this subdivision (including sludges and floats generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and F037, K048, and K051 wastes are not included in this listing.</p>	(T)
F039	<p>Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under this section. (Leachate resulting from the disposal of one or more of the following EPA hazardous wastes and no other hazardous waste retains its EPA hazardous waste number(s): F020, F021, F022, F026, F027, and/or F028.)</p>	(T)

\* (I, T) should be used to specify mixtures that are ignitable and contain toxic constituents.

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### (2) Listing specific definitions:

- (i) For the purposes of the F037 and F038 listings, oil/water/solids is defined as oil and/or water and/or solids.
- (ii)
  - ('a') For the purposes of the F037 and F038 listings, aggressive biological treatment units are defined as units which employ one of the following four treatment methods: activated sludge; trickling filter; rotating biological contactor for the continuous accelerated biological oxidation of wastewaters; or high-rate aeration. High-rate aeration is a system of surface impoundments or tanks, in which intense mechanical aeration is used to completely mix the wastes, enhance biological activity, and:
    - ('1') the units employ a minimum of six hp per million gallons of treatment volume; and
    - ('2') either the hydraulic retention time of the unit is no longer than five days; or
    - ('3') the hydraulic retention time is no longer than 30 days and the unit does not generate a sludge that is a hazardous waste by the toxicity characteristic.
  - ('b') Generators and treatment, storage and disposal facilities have the burden of proving that their sludges are exempt from listing as F037 and F038 wastes under this definition. Generators and treatment, storage and disposal facilities must maintain, in their operating or other onsite records, documents and data sufficient to prove that:
    - ('1') the unit is an aggressive biological treatment unit as defined in this subparagraph; and
    - ('2') the sludges sought to be exempted from the definitions of F037 and/or F038 were actually generated in the aggressive biological treatment unit.
- (iii)
  - ('a') For the purposes of the F037 listing, sludges are considered to be generated at the moment of deposition in the unit, where deposition is defined as at least a temporary cessation of lateral particle movement.
  - ('b') For the purposes of the F038 listing:
    - ('1') sludges are considered to be generated at the moment of deposition in the unit, where deposition is defined as at least a temporary cessation of lateral particle movement; and
    - ('2') floats are considered to be generated at the moment they are formed in the top of the unit.
- (iv) For the purposes of the F019 listing, the following apply to wastewater treatment sludges from the manufacturing of motor vehicles using a zinc phosphating process.
  - ('a') Motor vehicle manufacturing is defined to include the manufacture of automobiles and light trucks/utility vehicles (including light duty vans, pick-up trucks, minivans, and sport utility vehicles). Facilities must be engaged in manufacturing complete vehicles (body and chassis or unibody) or chassis only.
  - ('b') Generators must maintain in their on-site records documentation and information sufficient to prove that the wastewater treatment sludges to be exempted from the F019 listing meet the conditions of the listing. These records must include: the volume of

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waste generated and disposed of offsite; documentation showing when the waste volumes were generated and sent offsite; the name and address of the receiving facility; and documentation confirming receipt of the waste by the receiving facility. Generators must maintain these records on-site for no less than three years. The retention period for the records is automatically extended during the course of any enforcement action or as requested by the department.

**(c) Hazardous wastes from specific sources.**

- (1) The following solid wastes are listed hazardous waste from specific sources unless excluded under section 370.3(a) and (c) of this Title and listed in Appendix 24, *infra*:

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<i>Industry and EPA hazardous waste number</i>	<i>Hazardous waste</i>	<i>Hazard code</i>
<b>Wood preservation:</b>		
K001	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol.	(T)
<b>Inorganic pigments:</b>		
K002	Wastewater treatment sludge from the production of chrome yellow and orange pigments.	(T)
K003	Wastewater treatment sludge from the production of molybdate orange pigments.	(T)
K004	Wastewater treatment sludge from the production of zinc yellow pigments.	(T)
K005	Wastewater treatment sludge from the production of chrome green pigments.	(T)
K006	Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated).	(T)
K007	Wastewater treatment sludge from the production of iron blue pigments.	(T)
K008	Oven residue from the production of chrome oxide green pigments.	(T)
<b>Organic chemicals:</b>		
K009	Distillation bottoms from the production of acetaldehyde from ethylene.	(T)
K010	Distillation side cuts from the production of acetaldehyde from ethylene.	(T)
K011	Bottom stream from the wastewater stripper in the production of acrylonitrile.	(R,T)
K013	Bottom stream from the acetonitrile column in the production of acrylonitrile.	(R,T)
K014	Bottoms from the acetonitrile purification column in the production of acrylonitrile.	(T)
K015	Still bottoms from the distillation of benzyl chloride.	(T)
K016	Heavy ends or distillation residues from the production of carbon tetrachloride.	(T)
K017	Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin.	(T)
K018	Heavy ends from the fractionation column in ethyl chloride production.	(T)
K019	Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production.	(T)
K020	Heavy ends from the distillation of vinyl chloride monomer production.	(T)
K021	Aqueous spent antimony catalyst waste from fluoromethanes production.	(T)
K022	Distillation bottom tars from the production of phenol/acetone from cumene.	(T)
K023	Distillation light ends from the production of phthalic anhydride from naphthalene.	(T)

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<i>Industry and EPA hazardous waste number</i>	<i>Hazardous waste</i>	<i>Hazard code</i>
K024	Distillation bottoms from the production of phthalic anhydride from naphthalene.	(T)
K025	Distillation bottoms from the production of nitrobenzene by the nitration of benzene.	(T)
K026	Stripping still tails from the production of methyl ethyl pyridines.	(T)
K027	Centrifuge and distillation residues from toluene diisocyanate production.	(R,T)
K028	Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane.	(T)
K029	Waste from the product steam stripper in the production of 1,1,1-trichloroethane.	(T)
K030	Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene.	(T)
K083	Distillation bottoms from aniline production.	(T)
K085	Distillation or fractionation column bottoms from the production of chlorobenzenes.	(T)
K093	Distillation light ends from the production of phthalic anhydride from ortho-xylene.	(T)
K094	Distillation bottoms from the production of phthalic anhydride from ortho-xylene.	(T)
K095	Distillation bottoms from the production of 1,1,1-trichloroethane.	(T)
K096	Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane.	(T)
K103	Process residues from aniline extraction from the production of aniline.	(T)
K104	Combined wastewater streams generated from nitrobenzene/aniline production.	(T)
K105	Separated aqueous stream from the reactor product washing step in the production of chlorobenzene.	(T)
K107	Column bottoms from product separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	(C,T)
K108	Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	(I,T)
K109	Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	(T)
K110	Condensed column overheads from intermediate separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	(T)
K111	Product washwaters from the production of dinitrotoluene via nitration of toluene.	(C,T)



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<i>Industry and EPA hazardous waste number</i>	<i>Hazardous waste</i>	<i>Hazard code</i>
K112	Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene.	(T)
K113	Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	(T)
K114	Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	(T)
K115	Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	(T)
K116	Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine.	(T)
K117	Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene.	(T)
K118	Spent adsorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.	(T)
K136	Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.	(T)
K149	Distillation bottoms from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups. (This waste does not include still bottoms from the distillation of benzyl chloride.)	(T)
K150	Organic residuals, excluding spent carbon adsorbent, from the spent chlorine gas and hydrochloric acid recovery processes associated with the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.	(T)
K151	Wastewater treatment sludges, excluding neutralization and biological sludges, generated during the treatment of wastewaters from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.	(T)
K156	Organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.)	(T)
K157	Wastewaters (including scrubber waters, condenser waters, washwaters, and separation waters) from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.)	(T)
K158	Bag house dusts and filter/separation solids from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.)	(T)

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<i>Industry and EPA hazardous waste number</i>	<i>Hazardous waste</i>	<i>Hazard code</i>
K159	Organics from the treatment of thiocarbamate wastes.	(T)
K161	Purification solids (including filtration, evaporation, and centrifugation solids), bag house dust and floor sweepings from the production of dithiocarbamate acids and their salts. (This listing does not include K125 and K126.)	(R,T)
K174	Wastewater treatment sludges from the production of ethylene dichloride or vinyl chloride monomer (including sludges that result from commingled ethylene dichloride or vinyl chloride monomer wastewater and other wastewater), unless the sludges meet the following conditions: (i) they are disposed of in a subtitle C or non-hazardous landfill licensed or permitted by the State or Federal government; (ii) they are not otherwise placed on the land prior to final disposal; and (iii) the generator maintains documentation demonstrating that the waste was either disposed of in an on-site landfill or consigned to a transporter or disposal facility that provided a written commitment to dispose of the waste in an off-site landfill. Respondents in any action brought to enforce the requirements of subtitle C must, upon a showing by the government that the respondent managed wastewater treatment sludges from the production of vinyl chloride monomer or ethylene dichloride, demonstrate that they meet the terms of the exclusion set forth above. In doing so, they must provide appropriate documentation (e.g., contracts between the generator and the landfill owner/operator, invoices documenting delivery of waste to landfill, etc.) that the terms of the exclusion were met.	(T)
K175	Wastewater treatment sludges from the production of vinyl chloride monomer using mercuric chloride catalyst in an acetylene-based process.	(T)

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<i>Industry and EPA hazardous waste number</i>	<i>Hazardous waste</i>	<i>Hazard code</i>
K181	<p>Nonwastewaters from the production of dyes and/or pigments (including nonwastewaters commingled at the point of generation with nonwastewaters from other processes) that, at the point of generation, contain mass loadings of any of the constituents identified in paragraph (3) of this subdivision, that are equal to or greater than the corresponding paragraph (3) levels, as determined on a calendar year basis. These wastes will not be hazardous if the nonwastewaters are: (i) disposed in a landfill permitted under Part 360 of this Title or if out of state disposed in a 40 CFR Subtitle D landfill unit subject to the design criteria in 40 CFR 258.40, as incorporated by reference in section 370.1(e) of this Title, (ii) disposed in a Part 373 landfill unit subject to either sections 373-2.14 or 373-3.14(j) of this Title or if out of state disposed in a 40 CFR Subtitle C landfill unit subject to either 40 CFR 264.301 or 40 CFR 265.301, as incorporated by reference in section 370.1(e) of this Title, (iii) if out of state, disposed in other 40 CFR Subtitle D landfill units that meet the design criteria in 40 CFR 258.40, 264.301, or 265.301 as incorporated by reference in section 370.1(e) of this Title, or (iv) treated in a combustion unit that is permitted under Part 373 or 40 CFR Subtitle C, as incorporated by reference in section 370.1(e) of this Title, or an on-site combustion unit that is permitted under the Clean Air Act at 40 CFR parts 60, 61, or 63, as incorporated by reference by section 200.10 of this Title. For the purposes of this listing, dyes and/or pigments production is defined in subparagraph (2)(i) of this subdivision. Paragraph (4) of this subdivision describes the process for demonstrating that a facility's nonwastewaters are not K181. This listing does not apply to wastes that are otherwise identified as hazardous under sections 371.3(b),(c), (d) and (e) of this Part and subdivisions (b), (c) and (d) of this section, at the point of generation. Also, the listing does not apply to wastes generated before any annual mass loading limit is met.</p>	T
<b>Inorganic chemicals:</b>		
K071	Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used.	(T)
K073	Chlorinated hydrocarbon waste from the steps of the diaphragm cell process using graphite anodes in chlorine production.	(T)
K106	Wastewater treatment sludges from the mercury cell process in chlorine production.	(T)
<b>Pesticides:</b>		
K031	By-product salts generated in the production of MSMA and cacodylic acid.	(T)
K032	Wastewater treatment sludge from the production of chlordane.	(T)

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<i>Industry and EPA hazardous waste number</i>	<i>Hazardous waste</i>	<i>Hazard code</i>
K033	Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane.	(T)
K034	Filter solids from the filtration of hexachloro-cyclopentadiene in the production of chlordane.	(T)
K035	Wastewater treatment sludges generated in the production of creosote.	(T)
K036	Still bottoms from toluene reclamation distillation in the production of disulfoton.	(T)
K037	Wastewater treatment sludges from the production of disulfoton.	(T)
K038	Wastewater from the washing and stripping of phorate production.	(T)
K039	Filter cake from the filtration of diethylphos-phorodithioic acid in the production of phorate.	(T)
K040	Wastewater treatment sludge from the production of phorate.	(T)
K041	Wastewater treatment sludge from the production of toxaphene.	(T)
K042	Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production 2,4,5-T.	(T)
K043	2,6-Dichlorophenol waste from the production of 2,4-D.	(T)
K097	Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane.	(T)
K098	Untreated process wastewater from the production of toxaphene.	(T)
K099	Untreated wastewater from the production of 2,4-D.	(T)
K123	Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salts.	(T)
K124	Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts.	(C,T)
K125	Filtration, evaporation, and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts.	(T)
K126	Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts.	(T)
K131	Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide.	(C,T)
K132	Spent absorbent and wastewater separator solids from the production of methyl bromide.	(T)
K176	Baghouse filters from the production of antimony oxide, including filters from the production of intermediates (e.g., antimony metal or crude antimony oxide).	(E)
K177	Slag from the production of antimony oxide that is speculatively accumulated or disposed, including slag from the production of intermediates (e.g., antimony metal or crude antimony oxide).	(T)

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<i>Industry and EPA hazardous waste number</i>	<i>Hazardous waste</i>	<i>Hazard code</i>
K178	Residues from manufacturing and manufacturing-site storage of ferric chloride from acids formed during the production of titanium dioxide using the chloride-ilmenite process.	(T)
<b>Explosives:</b>		
K044	Wastewater treatment sludges from the manufacturing and processing of explosives.	(R)
K045	Spent carbon from the treatment of wastewater containing explosives.	(R)
K046	Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds.	(T)
K047	Pink/red water from TNT operations.	(R)
<b>Petroleum refining:</b>		
K048	Dissolved air flotation (DAF) float from the petroleum refining industry.	(T)
K049	Slop oil emulsion solids from the petroleum refining industry.	(T)
K050	Heat exchanger bundle cleaning sludge from the petroleum refining industry.	(T)
K051	API separator sludge from the petroleum refining industry.	(T)
K052	Tank bottoms (leaded) from the petroleum refining industry.	(T)
K169	Crude oil storage tank sediment from petroleum refining operations.	(T)
K170	Clarified slurry oil tank sediment and/or in-line filter/separation solids from petroleum refining operation.	(T)
K171	Spent hydrotreating catalyst from petroleum refining operations, including guard beds used to desulfurize feeds to other catalytic reactors (this listing does not include inert support media).	(I, T)
K172	Spent hydrorefining catalyst from petroleum refining operations, including guard beds used to desulfurize feeds to other catalytic reactors (this listing does not include inert support media).	(I, T)
<b>Iron and steel:</b>		
K061	Emission control dust/sludge from the primary production of steel in electric furnaces.	(T)
K062	Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry (SIC codes 331 and 332).	(C,T)
<b>Primary aluminum:</b>		
K088	Spent potliners from primary aluminum reduction.	(T)
<b>Secondary lead:</b>		
K069	Emission control dust/sludge from secondary lead smelting, except sludge generated from secondary acid scrubber systems.	(T)

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<i>Industry and EPA hazardous waste number</i>	<i>Hazardous waste</i>	<i>Hazard code</i>
K100	Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting.	(T)
<b>Veterinary pharmaceuticals:</b>		
K084	Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	(T)
K101	Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	(T)
K102	Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	(T)
<b>Ink formation:</b>		
K086	Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead.	(T)
<b>Coking:</b>		
K060	Ammonia still lime sludge from coking operations.	(T)
K087	Decanter tank tar sludge from coking operations.	(T)
K141	Process residues from the recovery of coal tar, including, but not limited to, collecting sump residues from the production of coke from coal or the recovery of coke by-products produced from coal. This listing does not include K087 (decanter tank tar sludges from coking operations).	(T)
K142	Tar storage tank residues from the production of coke from coal or from the recovery of coke by-products produced from coal.	(T)
K143	Process residues from the recovery of light oil, including, but not limited to, those generated in stills, decanters, and wash oil recovery units from the recovery of coke by-products produced from coal.	(T)
K144	Wastewater sump residues from light oil refining, including, but not limited to, intercepting or contamination sump sludges from the recovery of coke by-products produced from coal.	(T)
K145	Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal.	(T)
K147	Tar storage tank residues from coal tar refining.	(T)
K148	Residues from coal tar distillation, including but not limited to, still bottoms.	(T)

## (2) Listing Specific Definitions:

- (i) For purposes of the K181 listing, dyes and/or pigments production is defined to include manufacture of the following product classes: dyes, pigments, or FDA certified colors that are

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classified as azo, triarylmethane, perylene or anthraquinone classes. Azo products include azo, monoazo, diazo, triazo, polyazo, azoic, benzidine, and pyrazolone products.

Triarylmethane products include both triarylmethane and triphenylmethane products.

Wastes that are not generated at a dyes and/or pigments manufacturing site, such as wastes from the offsite use, formulation, and packaging of dyes and/or pigments, are not included in the K181 listing.

- (3) K181 Listing Levels. Nonwastewaters containing constituents in amounts equal to or exceeding the following levels during any calendar year are subject to the K181 listing, unless the conditions in the K181 listing are met.

<i>Constituent</i>	<i>Chemical abstracts No.</i>	<i>Mass levels (kg/yr)</i>
Aniline	62-53-3	9,300
o-Anisidine	90-04-0	110
4-Chloroaniline	106-47-8	4,800
p-Cresidine	120-71-8	660
2,4-Dimethylaniline	95-68-1	100
1,2-Phenylenediamine	95-54-5	710
1,3-Phenylenediamine	108-45-2	1,200

- (4) Procedures for demonstrating that dyes and/or pigment nonwastewaters are not K181. The procedures described in subparagraphs (4)(i) through (4)(iii) and (4)(v) of this subdivision establish when nonwastewaters from the production of dyes/pigments would not be hazardous (these procedures apply to wastes that are not disposed in landfill units or treated in combustion units as specified in paragraph (1) of this subdivision). If the nonwastewaters are disposed in landfill units or treated in combustion units as described in paragraph (1) of this subdivision, then the nonwastewaters are not hazardous. In order to demonstrate that it is meeting the landfill disposal or combustion conditions contained in the K181 listing description, the generator must maintain documentation as described in subparagraph (4)(iv) of this subdivision.
- (i) Determination based on no K181 constituents. Generators that have knowledge (e.g., knowledge of constituents in wastes based on prior sampling and analysis data and/or information about raw materials used, production processes used, and reaction and degradation products formed) that their wastes contain none of the K181 constituents (see paragraph (3) of this subdivision) can use their knowledge to determine that their waste is not K181. The generator must document the basis for all such determinations on an annual basis and keep each annual documentation for three years.
- (ii) Determination for generated quantities of 1,000 MT/yr or less for wastes that contain K181 constituents. If the total annual quantity of dyes and/or pigment nonwastewaters generated is 1,000 metric tons or less, the generator can use knowledge of the wastes (e.g., knowledge of constituents in wastes based on prior analytical data and/or information about raw materials used, production processes used, and reaction and degradation products formed) to conclude that annual mass loadings for the K181 constituents are below the listing levels of paragraph (3) of this subdivision. To make this determination, the generator must:

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- (a) Each year document the basis for determining that the annual quantity of nonwastewaters expected to be generated will be less than 1,000 metric tons.
  - (b) Track the actual quantity of nonwastewaters generated from January 1 through December 31 of each year. If, at any time within the year, the actual waste quantity exceeds 1,000 metric tons, the generator must comply with the requirements of subparagraph (4)(iii) of this subdivision for the remainder of the year.
  - (c) Keep a running total of the K181 constituent mass loadings over the course of the calendar year.
  - (d) Keep the following records on site for the three most recent calendar years in which the hazardous waste determinations are made:
    - (1) The quantity of dyes and/or pigment nonwastewaters generated.
    - (2) The relevant process information used.
    - (3) The calculations performed to determine annual total mass loadings for each K181 constituent in the nonwastewaters during the year.
- (iii) Determination for generated quantities greater than 1,000 MT/yr for wastes that contain K181 constituents. If the total annual quantity of dyes and/or pigment nonwastewaters generated is greater than 1,000 metric tons, the generator must perform all of the steps described in clauses (('a') through ('k') of this subparagraph) in order to make a determination that its waste is not K181.
- (a) Determine which K181 constituents (see paragraph (3) of this subdivision) are reasonably expected to be present in the wastes based on knowledge of the wastes (e.g., based on prior sampling and analysis data and/or information about raw materials used, production processes used, and reaction and degradation products formed).
  - (b) If 1,2-phenylenediamine is present in the wastes, the generator can use either knowledge or sampling and analysis procedures to determine the level of this constituent in the wastes. For determinations based on use of knowledge, the generator must comply with the procedures for using knowledge described in subparagraph (ii) of this paragraph and keep the records described in clause (ii)(d) of this paragraph. For determinations based on sampling and analysis, the generator must comply with the sampling and analysis and recordkeeping requirements described below in this subdivision.
  - (c) Develop a waste sampling and analysis plan (or modify an existing plan) to collect and analyze representative waste samples for K181 constituents reasonably expected to be present in the wastes. At a minimum, the plan must include:
    - (1) A discussion of the number of samples needed to characterize the wastes fully;
    - (2) The planned sample collection method to obtain representative waste samples;
    - (3) A discussion of how the sampling plan accounts for potential temporal and spatial variability of the wastes.
    - (4) A detailed description of the test methods to be used, including sample preparation, clean up (if necessary), and determinative methods.
  - (d) Collect and analyze samples in accordance with the waste sampling and analysis plan.



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- (1') The sampling and analysis must be unbiased, precise, and representative of the wastes.  
The analytical measurements must be sufficiently sensitive, accurate and precise to support any claim that the constituent mass loadings are below the listing levels of paragraph (3) of this subdivision.
- ('e') Record the analytical results.
- ('f') Record the waste quantity represented by the sampling and analysis results.
- ('g') Calculate constituent-specific mass loadings (product of concentrations and waste quantity).
- ('h') Keep a running total of the K181 constituent mass loadings over the course of the calendar year.
- ('i') Determine whether the mass of any of the K181 constituents listed in paragraph (3) of this subdivision generated between January 1 and December 31 of any year is below the K181 listing levels.
- ('j') Keep the following records on site for the three most recent calendar years in which the hazardous waste determinations are made:
  - (1') The sampling and analysis plan.
  - (2') The sampling and analysis results (including QA/QC data).
  - (3') The quantity of dyes and/or pigment nonwastewaters generated.
  - (4') The calculations performed to determine annual mass loadings.
- ('k') Nonhazardous waste determinations must be conducted annually to verify that the wastes remain nonhazardous.
  - (1') The annual testing requirements are suspended after three consecutive successful annual demonstrations that the wastes are nonhazardous. The generator can then use knowledge of the wastes to support subsequent annual determinations.
  - (2') The annual testing requirements are reinstated if the manufacturing or waste treatment processes generating the wastes are significantly altered, resulting in an increase of the potential for the wastes to exceed the listing levels.
  - (3') If the annual testing requirements are suspended, the generator must keep records of the process knowledge information used to support a nonhazardous determination. If testing is reinstated, a description of the process change must be retained.
- (iv) Recordkeeping for the landfill disposal and combustion exemptions. For the purposes of meeting the landfill disposal and combustion condition set out in the K181 listing description, the generator must maintain on site for three years documentation demonstrating that each shipment of waste was received by a landfill unit that is subject to or meets the landfill design standards set out in the listing description, or was treated in combustion units as specified in the listing description.
- (v) Waste holding and handling. During the interim period, from the point of generation to completion of the hazardous waste determination, the generator is responsible for storing the wastes appropriately. If the wastes are determined to be hazardous and the generator has not complied with the requirements of Parts 370 through 374-4 and Part 376 of this Title during

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the interim period, the generator is in violation and could be subject to an enforcement action for improper management.

**(d) Discarded commercial chemical products, off-specification species, container residues, and spill residues thereof.**

The following materials or items are hazardous wastes if and when they are discarded or intended to be discarded as described in section 371.1(c)(2)(i) of this Part, when they are mixed with waste oil or used oil or other material and applied to the land for dust suppression or road treatment, when they are otherwise applied to the land in lieu of their original intended use or when they are contained in products that are applied to the land in lieu of their original intended use, or when, in lieu of their original intended use, they are produced for use as (or as a component of) a fuel, distributed for use as a fuel, or burned as a fuel:

- (1) any commercial chemical product, or manufacturing chemical intermediate having the generic name listed in paragraph (5) or (6) of this subdivision;
- (2) any off-specification commercial chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in paragraph (5) or (6) of this subdivision;
- (3) any residue remaining in a container or inner liner removed from a container that has been used to hold any commercial chemical product or manufacturing chemical intermediate having the generic names listed in paragraph (5) or (6) of this subdivision, or any residue remaining in a container or inner liner removed from a container that has been used to hold any off-specification chemical product or manufacturing chemical intermediate, which if it met specifications, would have the generic name listed in paragraph (5) or (6) of this subdivision, unless the container is empty as defined in section 371.1(h)(2) of this Part.

*Note:* Unless the residue is being beneficially used or reused, or legitimately recycled or reclaimed, or being accumulated, stored, transported or treated prior to such use, reuse, recycling or reclamation, EPA and the department consider the residue to be intended for discard, and thus, a hazardous waste. An example of a legitimate reuse of the residue would be where the residue remains in the container and the container is used to hold the same commercial chemical product or manufacturing chemical intermediate it previously held. An example of the discard of the residue would be where the drum is sent to a drum reconditioner who reconditions the drum but discards the residues. All waste resulting from the rinsing or cleansing of the container or inner liner, by a nonaqueous solvent, is a hazardous waste. All waste resulting from the aqueous rinsing or cleansing of the container or inner liner is a hazardous waste unless exempt pursuant to section 371.1(d)(1)(ii)(‘d’)(‘4’).

- (4) any residue or contaminated soil, water or other debris resulting from the cleanup of a spill into or on any land or water of any commercial chemical product or manufacturing chemical intermediate having the generic name listed in paragraph (5) or (6) of this subdivision, or any residue or contaminated soil, water or other debris resulting from the cleanup of a spill, into or on any land or water, of any off-specification chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in paragraph (5) or (6) of this subdivision.

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**Note:** The phrase “commercial chemical product or manufacturing chemical intermediate having the generic name listed in. . .” refers to a chemical substance which is manufactured or formulated for commercial or manufacturing use which consists of the commercially pure grade of the chemical, any technical grades of the chemical that are produced or marketed, and all formulations in which the chemical is the sole active ingredient. It does not refer to a material, such as a manufacturing process waste, that contains any of the substances listed in paragraph (5) or (6). Where a manufacturing process waste is deemed to be a hazardous waste because it contains a substance listed in paragraph (5) or (6), such waste will be listed in either subdivision (b) or (c) of this section, or will be identified as a hazardous waste by the characteristics set forth in section 371.3 of this Part.

- (5) Acute hazardous waste. The commercial chemical products, manufacturing chemical intermediates or off-specification commercial chemical products or manufacturing chemical intermediates referred to in paragraphs (1) through (4) of this subdivision, are identified as acute hazardous wastes (H) and are subject to the small quantity exclusion defined in section 371.1(f)(5) of this Part.

**Note:** For the convenience of the regulated community the primary hazardous properties of the materials have been indicated by the letters T (Toxicity), and R (Reactivity). Absence of a letter indicates that the compound only is listed for acute toxicity.

These wastes and their corresponding EPA hazardous waste numbers are:

<i>EPA hazardous waste No.</i>	<i>Chemical abstracts No.</i>	<i>Substance</i>
P023	107-20-0	Acetaldehyde, chloro-
P002	591-08-2	Acetamide, N-(aminothioxomethyl)-
P057	640-19-7	Acetamide, 2-fluoro-
P058	62-74-8	Acetic acid, fluoro-, sodium salt
P002	591-08-2	1-Acetyl-2-thiourea
P003	107-02-8	Acrolein
P070	116-06-3	Aldicarb
P203	1646-88-4	Aldicarb sulfone
P004	309-00-2	Aldrin
P005	107-18-6	Allyl alcohol
P006	20859-73-8	Aluminum phosphide (R,T)
P007	2763-96-4	5-(Aminomethyl)-3-isoxazolol
P008	504-24-5	4-Aminopyridine
P009	131-74-8	Ammonium picrate (R)
P119	7803-55-6	Ammonium vanadate
P099	506-61-6	Argentate (1-), bis (cyano-C)-, potassium
P010	7778-39-4	Arsenic acid H <sub>3</sub> AsO <sub>4</sub>
P012	1327-53-3	Arsenic oxide As <sub>2</sub> O <sub>3</sub>
P011	1303-28-2	Arsenic oxide As <sub>2</sub> O <sub>5</sub>
P011	1303-28-2	Arsenic pentoxide

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<i>EPA hazardous waste No.</i>	<i>Chemical abstracts No.</i>	<i>Substance</i>
P012	1327-53-3	Arsenic trioxide
P038	692-42-2	Arsine, diethyl-
P036	696-28-6	Arsonous dichloride, phenyl-
P054	151-56-4	Aziridine
P067	75-55-8	Aziridine, 2-methyl-
P013	542-62-1	Barium cyanide
P024	106-47-8	Benzenamine, 4-chloro-
P077	100-01-6	Benzenamine, 4-nitro-
P028	100-44-7	Benzene, (chloromethyl)-
P042	51-43-4	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino) ethyl]-, (R)-
P046	122-09-8	Benzeneethanamine, alpha, alpha-dimethyl-
P014	108-98-5	Benzenethiol
P127	1563-66-2	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate
P188	57-64-7	Benzoic acid, 2-hydroxy-, compd. w/(3aS-cis)-1,2,3a, 8,8a- hexahydro-1,3a,8-trimethylpyrrolo[2,3-b]indol-5-yl methycarbamate ester (1:1)
P001	<sup>1</sup> 81-81-2	2H-1-Benzopyran-2-one, 4-hydroxy-3- (3-oxo-1-phenylbutyl)-1, & salts, when present at concentrations greater than 0.3 percent
P028	100-44-7	Benzyl chloride
P015	7440-41-7	Beryllium powder
P017	598-31-2	Bromoacetone
P018	357-57-3	Brucine
P045	39196-18-4	2-Butanone, 3,3-dimethyl- 1-(methylthio)-, O-[(methylamino) carbonyl] oxime
P021	592-01-8	Calcium cyanide
P021	592-01-8	Calcium cyanide Ca(CN) <sub>2</sub>
P189	55285-14-8	Carbamic acid, [(dibutylamino)-thio]methyl-, 2, 3-dihydro-2,2-dimethyl-7-benzofuranyl ester
P191	644-64-4	Carbamic acid, dimethyl-, 1-[(dimethyl- amino)carbonyl]-5-methyl-1H-pyrazol-3-yl ester
P192	119-38-0	Carbamic acid, dimethyl-, 3-methyl-1(1-methylethyl)-1H-pyrazol-5yl ester
P190	1129-41-5	Carbamic acid, methyl-, 3-methylphenyl ester
P127	1563-66-2	Carbofuran
P022	75-15-0	Carbon disulfide
P095	75-44-5	Carbonic dichloride
P189	55285-14-8	Carbosulfan
P023	107-20-0	Chloroacetaldehyde
P024	106-47-8	p-Chloroaniline
P026	5344-82-1	1-(o-Chlorophenyl)thiourea

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<i>EPA hazardous waste No.</i>	<i>Chemical abstracts No.</i>	<i>Substance</i>
P027	542-76-7	3-Chloropropionitrile
P029	544-92-3	Copper cyanide
P029	544-92-3	Copper cyanide Cu(CN)
P202	64-00-6	m-Comenyl methylcarbamate
P030		Cyanides (soluble cyanide salts), not otherwise specified
P031	460-19-5	Cyanogen
P033	506-77-4	Cyanogen chloride
P033	506-77-4	Cyanogen chloride (CN)Cl
P034	131-89-5	2-Cyclohexyl-4, 6-dinitrophenol
P016	542-88-1	Dichloromethyl ether
P036	696-28-6	Dichlorophenylarsine
P037	60-57-1	Dieldrin
P038	692-42-2	Diethylarsine
P041	311-45-5	Diethyl-p-nitrophenyl phosphate
P040	297-97-2	O,O-Diethyl O-pyrazinyl phosphorothioate
P043	55-91-4	Diisopropylfluorophosphate (DFP)
P004	309-00-2	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10- hexa- chloro-1,4,4a,5,8,8a,-hexahydro-, (1alpha, 4alpha, 4abeta, 5alpha, 8alpha, 8abeta) -
P060	465-73-6	1,4,5,8- Dimethanonaphthalene, 1,2,3,4,10, 10-hexa-chloro- 1,4,4a,5,8,8a-hexahydro-, (1alpha, 4alpha, 4abeta, 5beta, 8beta, 8abeta) -
P037	60-57-1	2,7:3,6-Dimethanonaphth[2,3-b]oxirene 3,4,5,6,9,9- hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1-a-alpha, 2beta, 2aalpha, 3beta, 6beta, 6aalpha, 7beta, 7aalpha) -
P051	<sup>1</sup> 72-20-8	2,7:3,6-Dimethanonaphth [2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha, 2beta, 2abeta, 3alpha, 6alpha, 6abeta, 7beta, 7aalpha)-, & metabolites
P044	60-51-5	Dimethoate
P046	122-09-8	alpha,alpha-Dimethylphenethylamine
P191	644-64-4	Dimetilan
P047	<sup>1</sup> 534-52-1	4,6-Dinitro-o-cresol, & salts
P048	51-28-5	2,4-Dinitrophenol
P020	88-85-7	Dinoseb
P085	152-16-9	Diphosphoramide, octamethyl-
P111	107-49-3	Diphosphoric acid, tetraethyl ester
P039	298-04-4	Disulfoton
P049	541-53-7	Dithiobiuret
P185	26419-73-8	1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-,0-[(methylamino)-carbonyl]oxime
P050	115-29-7	Endosulfan

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<i>EPA hazardous waste No.</i>	<i>Chemical abstracts No.</i>	<i>Substance</i>
P088	145-73-3	Endothall
P051	72-20-8	Endrin
P051	72-20-8	Endrin, & metabolites
P042	51-43-4	Epinephrine
P031	460-19-5	Ethanedinitrile
P194	23135-22-0	Ethanimidothioic acid, 2-(dimethylamino)-N-[[[(methylamino) carbonyl]oxy]-2-oxo-, methyl ester
P066	16752-77-5	Ethanimidothioic acid, N-[[[(methylamino) carbonyl]oxy]-, methyl ester
P101	107-12-0	Ethyl cyanide
P054	151-56-4	Ethyleneimine
P097	52-85-7	Famphur
P056	7782-41-4	Fluorine
P057	640-19-7	Fluoroacetamide
P058	62-74-8	Fluoroacetic acid, sodium salt
P198	23422-53-9	Formetanate hydrochloride
P197	17702-57-7	Formparanate
P065	628-86-4	Fulminic acid, mercury (2+) salt (R,T)
P059	76-44-8	Heptachlor
P062	757-58-4	Hexaethyl tetraphosphate
P116	79-19-6	Hydrazinecarbothioamide
P068	60-34-4	Hydrazine, methyl-
P063	74-90-8	Hydrocyanic acid
P063	74-90-8	Hydrogen cyanide
P096	7803-51-2	Hydrogen phosphide
P060	465-73-6	Isodrin
P192	119-38-0	Isolan
P202	64-00-6	3-Isopropylphenyl N-methylcarbamate
P007	2763-96-4	3(2H)-Isoxazolone, 5-(aminomethyl)-
P196	15339-3603	Manganese, bis(dimethylcarbamo-dithioato-S,S')-
P196	15339-36-3	Manganese dimethyldithiocarbamate
P092	62-38-4	Mercury, (acetato-O)phenyl-
P065	628-86-4	Mercury fulminate (R,T)
P198	233422-53-9	Methanimidamide, N, N-dimethyl-N'-[3-[[[(methylamino) carbonyl]oxy]phenyl]-, monohydrochloride
P197	17702-57-7	Methanimidamide, N, N-dimethyl-N'-[2-methyl-4[[[(methylamino) carbonyl]oxy]phenyl]-
P082	62-75-9	Methanamine, N-methyl-N-nitroso-
P064	624-83-9	Methane, isocyanato-
P016	542-88-1	Methane, oxybis[chloro-

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<i>EPA hazardous waste No.</i>	<i>Chemical abstracts No.</i>	<i>Substance</i>
P112	509-14-8	Methane, tetranitro-(R)
P118	75-70-7	Methanethiol, trichloro-
P050	115-29-7	6,9-Methano-2,4, 3-benzodioxathiepin, 6,7,8,9,10,10- hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide
P059	76-44-8	4, 7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro- 3a,4,7,7a-tetrahydro-
P199	2032-65-7	Methiocarb
P066	16752-77-5	Methomyl
P068	60-34-4	Methyl hydrazine
P064	624-83-9	Methyl isocyanate
P069	75-86-5	2-Methylactonitrile
P071	298-00-0	Methyl parathion
P190	1129-41-5	Metolcarb
P128	315-18-4	Mexacarbate
P072	86-88-4	alpha-Naphthylthiourea
P073	13463-39-3	Nickel carbonyl
P073	13463-39-3	Nickel carbonyl Ni(CO) <sub>4</sub> , (T-4)-
P074	557-19-7	Nickel cyanide
P074	557-19-7	Nickel cyanide Ni(CN) <sub>2</sub>
P075	<sup>1</sup> 54-11-5	Nicotine, & salts
P076	10102-43-9	Nitric oxide
P077	100-01-6	p-Nitroaniline
P078	10102-44-0	Nitrogen dioxide
P076	10102-43-9	Nitrogen oxide NO
P078	10102-44-0	Nitrogen oxide NO <sub>2</sub>
P081	55-63-0	Nitroglycerine (R)
P082	62-75-9	N-Nitrosodimethylamine
P084	4549-40-0	N-Nitrosomethylvinylamine
P085	152-16-9	Octamethylpyrophosphoramide
P087	20816-12-0	Osmium oxide OsO <sub>4</sub> , (T-4)-
P087	20816-12-0	Osmium tetroxide
P088	145-73-3	7-Oxabicyclo[2.2.1]heptane-2, 3-dicarboxylic acid
P194	23135-22-0	Oxamyl
P089	56-38-2	Parathion
P034	131-89-5	Phenol, 2-cyclohexyl-4, 6-dinitro-
P128	315-18-4	Phenol, 4-(dimethylamino)-3,5-dimethyl-,methylcarbamate (ester)
P199	2032-65-7	Phenol,(3,5-dimethyl-4-(methylthio)-, methylcarbamate
P202	64-00-6	Phenol,3-(1-methylethyl)-,methyl carbamate
P201	2631-37-0	Phenol, 3-methyl-5-(1-methylethyl)-,methyl carbamate
P048	51-28-5	Phenol, 2,4-dinitro-

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<i>EPA hazardous waste No.</i>	<i>Chemical abstracts No.</i>	<i>Substance</i>
P047	<sup>1</sup> 534-52-1	Phenol, 2-methyl-4,6-dinitro-, & salts
P020	88-85-7	Phenol, 2-(1-methylpropyl)-4, 6-dinitro-
P009	131-74-8	Phenol, 2,4,6-trinitro-, ammonium salt (R)
P092	62-38-4	Phenylmercury acetate
P093	103-85-5	Phenylthiourea
P094	298-02-2	Phorate
P095	75-44-5	Phosgene
P096	7803-51-2	Phosphine
P041	311-45-5	Phosphoric acid, diethyl 4-nitrophenyl ester
P039	298-04-4	Phosphorodithioic acid O,O-diethyl S-[2-(ethylthio)ethyl] ester
P094	298-02-2	Phosphorodithioic acid, O,O-diethyl S-[(ethylthio) methyl] ester
P044	60-51-5	Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino) -2-oxoethyl] ester
P043	55-91-4	Phosphorofluoridic acid, bis(1-methylethyl) ester
P089	56-38-2	Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester
P040	297-97-2	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester
P097	52-85-7	Phosphorothioic acid, O-[4-[(dimethylamino) sulfonyl] phenyl] O,O-dimethyl ester
P071	298-00-0	Phosphorothioic acid, O,O,-dimethyl O-(4-nitrophenyl) ester
P204	57-47-6	Physostigmine
P188	57-64-7	Physostigmine salicylate
P110	78-00-2	Plumbane, tetraethyl-
P098	151-50-8	Potassium cyanide
P098	151-50-8	Potassium cyanide K(CN)
P099	506-61-6	Potassium silver cyanide
P201	2631-37-0	Promecarb
P070	116-06-3	Propanal, 2-methyl-2- (methylthio)-, O- [(methylamino)carbonyl]oxime
P203	1646-88-4	Propanal, 2-methyl-2-(methyl-sulfonyl)-, 0-[(methylamino)carbonyl] oxime
P101	107-12-0	Propanenitrile
P027	542-76-7	Propanenitrile, 3-chloro-
P069	75-86-5	Propanenitrile, 2-hydroxy-2-methyl-
P081	55-63-0	1,2,3-Propanetriol, trinitrate (R)
P017	598-31-2	2-Propanone, 1-bromo-
P102	107-19-7	Propargyl alcohol
P003	107-02-8	2-Propenal
P005	107-18-6	2-Propen-1-ol
P067	75-55-8	1,2-Propylenimine
P102	107-19-7	2-Propyn-1-ol



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<i>EPA hazardous waste No.</i>	<i>Chemical abstracts No.</i>	<i>Substance</i>
P008	504-24-5	4-Pyridinamine
P075	<sup>1</sup> 54-11-5	Pyridine, 3-(1-methyl- 2-pyrrolidinyl)-, (S)-, & salts
P204	57-47-6	Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a, 8-trimethyl-, methylcarbamate (ester), (3aS-cis)-
P114	12039-52-0	Selenious acid, dithallium(1 +) salt
P103	630-10-4	Selenourea
P104	506-64-9	Silver cyanide
P104	506-64-9	Silver cyanide Ag(CN)
P105	26628-22-8	Sodium azide
P106	143-33-9	Sodium cyanide
P106	143-33-9	Sodium cyanide Na(CN)
P108	<sup>1</sup> 57-24-9	Strychnidin-10-one, & salts
P018	357-57-3	Strychnidin-10-one, 2,3-dimethoxy-
P108	<sup>1</sup> 57-24-9	Strychnine, & salts
P115	7446-18-6	Sulfuric acid, dithallium(1 +) salt
P109	3689-24-5	Tetraethyldithio pyrophosphate
P110	78-00-2	Tetraethyl lead
P111	107-49-3	Tetraethyl pyrophosphate
P112	509-14-8	Tetranitromethane (R)
P062	757-58-4	Tetraphosphoric acid, hexaethyl ester
P113	1314-32-5	Thallic oxide
P113	1314-32-5	Thallium oxide Tl <sub>2</sub> O <sub>3</sub>
P114	12039-52-0	Thallium(I) selenite
P115	7446-18-6	Thallium(I) sulfate
P109	3689-24-5	Thiodiphosphoric acid, tetraethyl ester
P045	39196-18-4	Thiofanox
P049	541-53-7	Thioimidodicarbonic diamide [(H <sub>2</sub> N)C(S)] <sub>2</sub> NH
P014	108-98-5	Thiophenol
P116	79-19-6	Thiosemicarbazide
P026	5344-82-1	Thiourea, (2-chlorophenyl)-
P072	86-88-4	Thiourea, 1-naphthalenyl-
P093	103-85-5	Thiourea, phenyl-
P185	26419-73-8	Tirpate
P123	8001-35-2	Toxaphene
P118	75-70-7	Trichloromethanethiol
P119	7803-55-6	Vanadic acid, ammonium salt
P120	1314-62-1	Vanadium oxide V <sub>2</sub> O <sub>5</sub>
P120	1314-62-1	Vanadium pentoxide
P084	4549-40-0	Vinylamine, N-methyl-N-nitroso-

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<i>EPA hazardous waste No.</i>	<i>Chemical abstracts No.</i>	<i>Substance</i>
P001	<sup>1</sup> 81-81-2	Warfarin, & salts, when present at concentrations greater than 0.3 percent
P121	557-21-1	Zinc cyanide
P121	557-21-1	Zinc cyanide Zn(CN) <sub>2</sub>
P205	137-30-4	Zinc, bis(dimethylcarbamo-dithioato-S,S')-
P122	1314-84-7	Zinc phosphide Zn <sub>3</sub> P <sub>2</sub> , when present at concentrations greater than 10 percent (R,T)
P205	137-30-4	Ziram

<sup>1</sup>CAS number given for parent compound only.

- (6) The commercial chemical products, manufacturing chemical intermediates, or off- specification commercial chemical products referred to in paragraphs (1) through (4) of this subdivision, are identified as toxic waste (T) unless otherwise designated and are subject to the small quantity generator exclusion defined in section 371.1(f)(1) and (7) of this Part. (Note: For the convenience of the regulated community, the primary hazardous properties of these materials have been indicated by the letters T (Toxicity), R (Reactivity), I (Ignitability) and C (Corrosivity). Absence of a letter indicates that the compound is only listed for toxicity. These wastes and their corresponding EPA hazardous waste numbers are:

<i>EPA hazardous waste No.</i>	<i>Chemical abstracts No.</i>	<i>Substance</i>
U394	30558-43-1	A2213
U001	75-07-0	Acetaldehyde (I)
U034	75-87-6	Acetaldehyde, trichloro-
U187	62-44-2	Acetamide, N-(4-ethoxyphenyl)-
U005	53-96-3	Acetamide, N-9H-fluoren-2-yl-
U240	<sup>1</sup> 94-75-7	Acetic acid, (2,4-dichlorophenoxy)-, salts & esters
U112	141-78-6	Acetic acid ethyl ester (I)
U144	301-04-2	Acetic acid, lead(2+) salt
U214	563-68-8	Acetic acid, thallium(1+) salt
See F027	93-76-5	Acetic acid, (2,4,5-trichlorophenoxy)-
U002	67-64-1	Acetone (I)
U003	75-05-8	Acetonitrile (I,T)
U004	98-86-2	Acetophenone
U005	53-96-3	2-Acetylaminofluorene
U006	75-36-5	Acetyl chloride (C,R,T)
U007	79-06-1	Acrylamide
U008	79-10-7	Acrylic acid (I)
U009	107-13-1	Acrylonitrile
U011	61-82-5	Amitrole
U012	62-53-3	Aniline (I,T)

## 371.4(d)

<i>EPA hazardous waste No.</i>	<i>Chemical abstracts No.</i>	<i>Substance</i>
U136	75-60-5	Arsinic acid, dimethyl-
U014	492-80-8	Auramine
U015	115-02-6	Azaserine
U010	50-07-7	Azirino [2',3': 3,4]pyrrolo[1,2-a]indole-4,7-dione, 6-amino- 8- [[(aminocarbonyl oxy) methyl] -1,1a,2,8a,8b-hexahydro- 8a- methoxy-5-methyl-, [1aS- (1aalpha, 8beta, 8alpha,8balpha)]-
U280	101-27-9	Barban
U278	22781-23-3	Bemdcarb
U364	22961-82-6	Bendiocarb phenol
U271	17804-35-2	Benomyl
U157	56-49-5	Benz [j] aceanthrylene, 1,2-dihydro-3-methyl-
U016	225-51-4	Benz[c]acridine
U017	98-87-3	Benzal chloride
U192	23950-58-5	Benzamide, 3, 5-dichloro-N- (1,1-dimethyl-2-propynyl) -
U018	56-55-3	Benz[a]anthracene
U094	57-97-6	Benz[a]anthracene, 7,12-dimethyl-
U012	62-53-3	Benzenamine (I,T)
U014	492-80-8	Benzenamine, 4,4' -carbonimidoylbis[N,N-dimethyl-
U049	3165-93-3	Benzenamine, 4-chloro-2-methyl-, hydrochloride
U093	60-11-7	Benzenamine, N,N-dimethyl-4- (phenylazo)-
U328	95-53-4	Benzenamine, 2-methyl-
U353	106-49-0	Benzenamine, 4-methyl-
U158	101-14-4	Benzenamine, 4,4' -methylenebis [2-chloro-
U222	636-21-5	Benzenamine, 2-methyl-, hydrochloride
U181	99-55-8	Benzenamine, 2-methyl-5-nitro-
U019	71-43-2	Benzene (I,T)
U038	510-15-6	Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha- hydroxy-, ethyl ester
U030	101-55-3	Benzene, 1-bromo-4-phenoxy
U035	305-03-3	Benzenebutanoic acid, 4-[bis (2- chloroethyl) amino] -
U037	108-90-7	Benzene, chloro-
U221	25376-45-8	Benzenediamine, ar-methyl-
U028	117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester
U069	84-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester
U088	84-66-2	1,2-Benzenedicarboxylic acid, diethyl ester
U102	131-11-3	1,2-Benzenedicarboxylic acid, dimethyl ester
U107	117-84-0	1,2-Benzenedicarboxylic acid, dioctyl ester
U070	95-50-1	Benzene, 1,2-dichloro-
U071	541-73-1	Benzene, 1,3-dichloro-

## 371.4(d)

<i>EPA hazardous waste No.</i>	<i>Chemical abstracts No.</i>	<i>Substance</i>
U072	106-46-7	Benzene, 1,4-dichloro-
U060	72-54-8	Benzene, 1,1'-(2,2-dichloroethylidene) bis[4-chloro-
U017	98-87-3	Benzene, (dichloromethyl)-
U223	26471-62-5	Benzene, 1, 3-diisocyanatomethyl- (R, T)
U239	1330-20-7	Benzene, dimethyl-(I)
U201	108-46-3	1,3-Benzenediol
U127	118-74-1	Benzene, hexachloro-
U056	110-82-7	Benzene, hexahydro- (I)
U220	108-88-3	Benzene, methyl-
U105	121-14-2	Benzene, 1-methyl-2,4-dinitro-
U106	606-20-2	Benzene, 2-methyl-1,3-dinitro-
U055	98-82-8	Benzene, (1-methylethyl)- (I)
U169	98-95-3	Benzene, nitro-
U183	608-93-5	Benzene, pentachloro-
U185	82-68-8	Benzene, pentachloronitro-
U020	98-09-9	Benzenesulfonic acid chloride (C,R)
U020	98-09-9	Benzenesulfonyl chloride (C,R)
U207	95-94-3	Benzene, 1,2,4,5-tetrachloro-
U061	50-29-3	Benzene, 1,1'-(2,2,2-trichloroethylidene) bis[4-chloro-
U247	72-43-5	Benzene, 1,1'-(2,2,2-trichloroethylidene) bis[4- methoxy-
U023	98-07-7	Benzene, (trichloromethyl)-
U234	99-35-4	Benzene, 1,3,5-trinitro-
U021	92-87-5	Benzidine
U202	81-07-2	1,2-Benzisothiazol- 3(2H)-one, 1,1-dioxide, & salts
U203	94-59-7	1, 3-Benzodioxole, 5-(2-propenyl)-
U141	120-58-1	1, 3-Benzodioxole, 5-(1-propenyl)-
U090	94-58-6	1,3-Benzodioxole, 5-propyl-
U278	22781-23-3	1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate
U364	22961-82-6	1,3-Benzodioxol-4-ol, 2-2-dimethyl-
U367	1563-38-8	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-
U064	189-55-9	Benzo[rs]t]pentaphene
U248	181-81-2	2H-1-Benzopyran-2-one, 4-hydroxy-3- (3-oxo-1- phenyl- butyl)-, & salts, when present at concentrations of 0.3 percent or less
U022	50-32-8	Benzo[a]pyrene
U197	106-51-4	p-Benzoquinone
U023	98-07-7	Benzotrichloride (C,R,T)
U085	1464-53-5	2,2'-Bioxirane
U021	92-87-5	[1,1'-Biphenyl] -4,4'-diamine
U073	91-94-1	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-

## 371.4(d)

<i>EPA hazardous waste No.</i>	<i>Chemical abstracts No.</i>	<i>Substance</i>
U091	119-90-4	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-
U095	119-93-7	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-
U225	75-25-2	Bromoform
U030	101-55-3	4-Bromophenyl phenyl ether
U128	87-68-3	1, 3-Butadiene, 1,1,2,3,4,4-hexachloro-
U172	924-16-3	1-Butanamine, N-butyl-N-nitroso-
U031	71-36-3	1-Butanol (I)
U159	78-93-3	2-Butanone (I,T)
U160	1338-23-4	2-Butanone, peroxide (R,T)
U053	4170-30-3	2-Butenal
U074	764-41-0	2-Butene, 1,4-dichloro- (I,T)
U143	303-34-4	2-Butenoic acid, 2-methyl-,7-[[2,3-dihydroxy-2-(1-methoxyethyl) - 3-methyl-1-oxobutoxy] methyl] - 2,3,5,7a-tetrahydro-1H- pyrrolizin-1-yl ester, [1S- [1alpha(Z), 7(2S*,3R*),7aalpha]]-
U031	71-36-3	n-Butyl alcohol (I)
U136	75-60-5	Cacodylic acid
U032	13765-19-0	Calcium chromate
U238	51-79-6	Carbamic acid, ethyl ester
U372	10605-21-7	Carbamic acid, 1H-benzimidazol-2-yl,methyl ester
U271	17804-35-2	Carbamic acid, [1-[(butylamino)carbonyl]-1H- benzimidazol-2-yl]-,methyl ester
U280	101-27-9	Carbamic acid, (3-chlorophenyl)-,4-chloro-2-butynyl ester
U409	23564-05-8	Carbamic acid, [1,2-phenylenebis (iminocarbonothioyl)]bis-, dimethyl ester
U373	122-42-9	Carbamic acid, phenyl-, 1-methylethyl ester
U178	615-53-2	Carbamic acid, methylnitroso-, ethyl ester
U097	79-44-7	Carbamic chloride, dimethyl-
U114	111-54-6	Carbamodithioic acid, 1,2-ethanediy]bis-, salts & esters
U062	2303-16-4	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3- dichloro-2-propenyl) ester
U389	2303-17-5	Carbamothioic acid, bis(1-methylethyl-., S(2,3,3-trichloro-2-propenyl) ester
U387	52888-80-9	Carbamothioic acid, dipropyl-, S- (phenylmethyl) ester
U279	63-25-2	Carbaryl
U372	10605-21-7	Carbendazim
U367	1563-38-8	Carbofuran phenol
U215	6533-73-9	Carbonic acid, dithallium(1+) salt
U033	353-50-4	Carbonic difluoride
U156	79-22-1	Carbonochloridic acid, methyl ester (I,T)

## 371.4(d)

<i>EPA hazardous waste No.</i>	<i>Chemical abstracts No.</i>	<i>Substance</i>
U033	353-50-4	Carbon oxyfluoride (R,T)
U211	56-23-5	Carbon tetrachloride
U034	75-87-6	Chloral
U035	305-03-3	Chlorambucil
U036	57-74-9	Chlordane, alpha & gamma isomers
U026	494-03-1	Chlornaphazin
U037	108-90-7	Chlorobenzene
U038	510-15-6	Chlorobenzilate
U039	59-50-7	p-Chloro-m-cresol
U042	110-75-8	2-Chloroethyl vinyl ether
U044	67-66-3	Chloroform
U046	107-30-2	Chloromethyl methyl ether
U047	91-58-7	beta-Chloronaphthalene
U048	95-57-8	o-Chlorophenol
U049	3165-93-3	4-Chloro-o-toluidine, hydrochloride
U032	13765-19-0	Chromic acid H <sub>2</sub> CrO <sub>4</sub> , calcium salt
U050	218-01-9	Chrysene
U051		Creosote
U052	1319-77-3	Cresol (Cresylic acid)
U053	4170-30-3	Crotonaldehyde
U055	98-82-8	Cumene (I)
U246	506-68-3	Cyanogen bromide (CN)Br
U197	106-51-4	2, 5-Cyclohexadiene- 1,4-dione
U056	110-82-7	Cyclohexane (I)
U129	58-89-9	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha, 2alpha, 3beta, 4alpha, 5alpha, 6beta) -
U057	108-94-1	Cyclohexanone (I)
U130	77-47-4	1, 3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-
U058	50-18-0	Cyclophosphamide
U240	<sup>1</sup> 94-75-7	2,4-D, salts & esters
U059	20830-81-3	Daunomycin
U060	72-54-8	DDD
U061	50-29-3	DDT
U062	2303-16-4	Diallate
U063	53-70-3	Dibenz[a,h]anthracene
U064	189-55-9	Dibenzo[a,i]pyrene
U066	96-12-8	1,2-Dibromo- 3-chloropropane
U069	84-74-2	Dibutyl phthalate
U070	95-50-1	o-Dichlorobenzene

## 371.4(d)

<i>EPA hazardous waste No.</i>	<i>Chemical abstracts No.</i>	<i>Substance</i>
U071	541-73-1	m-Dichlorobenzene
U072	106-46-7	p-Dichlorobenzene
U073	91-94-1	3,3'-Dichlorobenzidine
U074	764-41-0	1,4-Dichloro-2-butene (I,T)
U075	75-71-8	Dichlorodifluoromethane
U078	75-35-4	1,1-Dichloroethylene
U079	156-60-5	1,2-Dichloroethylene
U025	111-44-4	Dichloroethyl ether
U027	108-60-1	Dichloroisopropyl ether
U024	111-91-1	Dichloromethoxy ethane
U081	120-83-2	2,4-Dichlorophenol
U082	87-65-0	2,6-Dichlorophenol
U084	542-75-6	1,3-Dichloropropene
U085	1464-53-5	1,2:3,4-Diepoxybutane (I, T)
U395	5952-26-1	Diethylene glycol, dicarbamate
U108	123-91-1	1,4-Diethyleneoxide
U028	117-81-7	Diethylhexyl phthalate
U086	1615-80-1	N,N'-Diethylhydrazine
U087	3288-58-2	O,O-Diethyl S-methyl dithiophosphate
U088	84-66-2	Diethyl phthalate
U089	56-53-1	Diethylstilbesterol
U090	94-58-6	Dihydrosafrole
U091	119-90-4	3,3'-Dimethoxybenzidine
U092	124-40-3	Dimethylamine (I)
U093	60-11-7	p-Dimethylaminoazobenzene
U094	57-97-6	7,12-Dimethylbenz[a]anthracene
U095	119-93-7	3,3'-Dimethylbenzidine
U096	80-15-9	alpha,alpha-Dimethylbenzylhydroperoxide (R)
U097	79-44-7	Dimethylcarbamoyl chloride
U098	57-14-7	1,1-Dimethylhydrazine
U099	540-73-8	1,2-Dimethylhydrazine
U101	105-67-9	2,4-Dimethylphenol
U102	131-11-3	Dimethyl phthalate
U103	77-78-1	Dimethyl sulfate
U105	121-14-2	2,4-Dinitrotoluene
U106	606-20-2	2,6-Dinitrotoluene
U107	117-84-0	Di-n-octyl phthalate
U108	123-91-1	1,4-Dioxane
U109	122-66-7	1,2-Diphenylhydrazine

## 371.4(d)

<i>EPA hazardous waste No.</i>	<i>Chemical abstracts No.</i>	<i>Substance</i>
U110	142-84-7	Dipropylamine (I)
U111	621-64-7	Di-n-propylnitrosamine
U041	106-89-8	Epichlorohydrin
U001	75-07-0	Ethanal (I)
U174	55-18-5	Ethanamine, N-ethyl-N-nitroso-
U404	121-44-8	Ethanamine, N,N-diethyl-
U394	30558-43-1	Ethanimidothioic acid, 2-(dimethylamino)-N-hydroxy-2-oxo-,methyl ester
U410	59669-26-0	Ethanimidothioic acid, N,N'-[thiobis[(methylimino)carbonyloxy]]bis-,dimethyl ester
U155	91-80-5	1,2-Ethanediamine, N,N-dimethyl-N' -2-pyridinyl- N' - (2-thienylmethyl) -
U067	106-93-4	Ethane, 1,2-dibromo-
U076	75-34-3	Ethane, 1,1-dichloro-
U077	107-06-2	Ethane, 1,2-dichloro-
U131	67-72-1	Ethane, hexachloro-
U024	111-91-1	Ethane, 1,1' - [methylenebis(oxy)]bis[2-chloro-
U117	60-29-7	Ethane, 1,1'-oxybis-(I)
U025	111-44-4	Ethane, 1,1'-oxybis[2-chloro-
U184	76-01-7	Ethane, pentachloro-
U208	630-20-6	Ethane, 1,1,1,2- tetrachloro-
U209	79-34-5	Ethane, 1,1,2,2- tetrachloro-
U218	62-55-5	Ethanethioamide
U226	71-55-6	Ethane, 1,1,1-trichloro-
U227	79-00-5	Ethane, 1,1,2-trichloro-
U359	110-80-5	Ethanol, 2-ethoxy-
U173	1116-54-7	Ethanol, 2,2'- (nitrosoimino)bis-
U395	5952-26-1	Ethanol, 2,2'-oxybis-, dicarbamate
U004	98-86-2	Ethanone, 1-phenyl-
U043	75-01-4	Ethene, chloro-
U042	110-75-8	Ethene, (2-chloroethoxy)-
U078	75-35-4	Ethene, 1,1-dichloro-
U079	156-60-5	Ethene, 1,2-dichloro-, (E)-
U210	127-18-4	Ethene, tetrachloro-
U228	79-01-6	Ethene, trichloro-
U112	141-78-6	Ethyl acetate (I)
U113	140-88-5	Ethyl acrylate (I)
U238	51-79-6	Ethyl carbamate (urethane)
U117	60-29-7	Ethyl ether (I)
U114	<sup>1</sup> 111-54-6	Ethylenebisdithiocarbamic acid, salts & esters
U067	106-93-4	Ethylene dibromide



## 371.4(d)

<i>EPA hazardous waste No.</i>	<i>Chemical abstracts No.</i>	<i>Substance</i>
U077	107-06-2	Ethylene dichloride
U359	110-80-5	Ethylene glycol monoethyl ether
U115	75-21-8	Ethylene oxide (I,T)
U116	96-45-7	Ethylenethiourea
U076	75-34-3	Ethylidene dichloride
U118	97-63-2	Ethyl methacrylate
U119	62-50-0	Ethyl methanesulfonate
U120	206-44-0	Fluoranthene
U122	50-00-0	Formaldehyde
U123	64-18-6	Formic acid (C,T)
U124	110-00-9	Furan (I)
U125	98-01-1	2-Furancarboxaldehyde (I)
U147	108-31-6	2,5-Furandione
U213	109-99-9	Furan, tetrahydro-(I)
U125	98-01-1	Furfural (I)
U124	110-00-9	Furfuran (I)
U206	18883-66-4	Glucopyranose, 2-deoxy-2- (3-methyl-3- nitrosoureido) -, D-
U206	18883-66-4	D-Glucose, 2-deoxy-2-[[ (methylnitrosoamino)- carbonyl]amino] -
U126	765-34-4	Glycidylaldehyde
U163	70-25-7	Guanidine, N-methyl- N'-nitro-N-nitroso-
U127	118-74-1	Hexachlorobenzene
U128	87-68-3	Hexachlorobutadiene
U130	77-47-4	Hexachlorocyclopentadiene
U131	67-72-1	Hexachloroethane
U132	70-30-4	Hexachlorophene
U243	1888-71-7	Hexachloropropene
U133	302-01-2	Hydrazine (R,T)
U086	1615-80-1	Hydrazine, 1,2-diethyl-
U098	57-14-7	Hydrazine, 1,1-dimethyl-
U099	540-73-8	Hydrazine, 1,2-dimethyl-
U109	122-66-7	Hydrazine, 1,2-diphenyl-
U134	7664-39-3	Hydrofluoric acid (C,T)
U134	7664-39-3	Hydrogen fluoride (C,T)
U135	7783-06-4	Hydrogen sulfide
U135	7783-06-4	Hydrogen sulfide H <sub>2</sub> S
U096	80-15-9	Hydroperoxide, 1-methyl-1-phenylethyl- (R)
U116	96-45-7	2-Imidazolidinethione
U137	193-39-5	Indeno [1,2, 3-cd] pyrene
U190	85-44-9	1, 3-Isobenzofurandione

## 371.4(d)

<i>EPA hazardous waste No.</i>	<i>Chemical abstracts No.</i>	<i>Substance</i>
U140	78-83-1	Isobutyl alcohol (I,T)
U141	120-58-1	Isosafrole
U142	143-50-0	Kepone
U143	303-34-4	Lasiocarpine
U144	301-04-2	Lead acetate
U146	1335-32-6	Lead, bis(acetato-O)tetrahydroxytri-
U145	7446-27-7	Lead phosphate
U146	1335-32-6	Lead subacetate
U129	58-89-9	Lindane
U163	70-25-7	MNNG
U147	108-31-6	Maleic anhydride
U148	123-33-1	Maleic hydrazide
U149	109-77-3	Malononitrile
U150	148-82-3	Melphalan
U151	7439-97-6	Mercury
U152	126-98-7	Methacrylonitrile (I,T)
U092	124-40-3	Methanamine, N-methyl- (I)
U029	74-83-9	Methane, bromo-
U045	74-87-3	Methane, chloro- (I,T)
U046	107-30-2	Methane, chloromethoxy-
U068	74-95-3	Methane, dibromo-
U080	75-09-2	Methane, dichloro-
U075	75-71-8	Methane, dichlorodifluoro-
U138	74-88-4	Methane, iodo-
U119	62-50-0	Methanesulfonic acid, ethyl ester
U211	56-23-5	Methane, tetrachloro-
U153	74-93-1	Methanethiol (I,T)
U225	75-25-2	Methane, tribromo-
U044	67-66-3	Methane, trichloro-
U121	75-69-4	Methane, trichlorofluoro-
U036	57-74-9	4, 7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro- 2,3,3a,4,7,7a-hexahydro-
U154	67-56-1	Methanol (I)
U155	91-80-5	Methapyrilene
U142	143-50-0	1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5, 5,5a,5b,6-decachlorooctahydro-
U247	72-43-5	Methoxychlor
U154	67-56-1	Methyl alcohol (I)
U029	74-83-9	Methyl bromide

## 371.4(d)

<i>EPA hazardous waste No.</i>	<i>Chemical abstracts No.</i>	<i>Substance</i>
U186	504-60-9	1-Methylbutadiene (I)
U045	74-87-3	Methyl chloride (I,T)
U156	79-22-1	Methyl chlorocarbonate (I,T)
U226	71-55-6	Methyl chloroform
U157	56-49-5	3-Methylcholanthrene
U158	101-14-4	4,4'-Methylenebis (2-chloroaniline)
U068	74-95-3	Methylene bromide
U080	75-09-2	Methylene chloride
U159	78-93-3	Methyl ethyl ketone (MEK) (I,T)
U160	1338-23-4	Methyl ethyl ketone peroxide (R,T)
U138	74-88-4	Methyl iodide
U161	108-10-1	Methyl isobutyl ketone (I)
U162	80-62-6	Methyl methacrylate (I,T)
U161	108-10-1	4-Methyl-2-pentanone (I)
U164	56-04-2	Methylthiouracil
U010	50-07-7	Mitomycin C
U059	20830-81-3	5,12-Naphthacenedione, 8-acetyl-10- [(3-amino-2,3,6-trideoxy) -alpha-L-lyxo-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8, 11-trihydroxy-1-methoxy-, (8S-cis)-
U167	134-32-7	1-Naphthalenamine
U168	91-59-8	2-Naphthalenamine
U026	494-03-1	Naphthalenamine, N,N'-bis(2-chloroethyl)-
U165	91-20-3	Naphthalene
U047	91-58-7	Naphthalene, 2-chloro-
U166	130-15-4	1,4-Naphthalenedione
U236	72-57-1	2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl) bis(azo)bis [5-amino-4-hydroxy]-, tetrasodium salt
U279	63-25-2	1-Naphthalenol, methylcarbamate
U166	130-15-4	1,4-Naphthoquinone
U167	134-32-7	alpha-Naphthylamine
U168	91-59-8	beta-Naphthylamine
U217	10102-45-1	Nitric acid, thallium(1 +) salt
U169	98-95-3	Nitrobenzene (I,T)
U170	100-02-7	p-Nitrophenol
U171	79-46-9	2-Nitropropane (I,T)
U172	924-16-3	N-Nitrosodi-n-butylamine
U173	116-54-7	N-Nitrosodiethanolamine
U174	55-18-5	N-Nitrosodiethylamine
U176	759-73-9	N-Nitroso-N-ethylurea

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<i>EPA hazardous waste No.</i>	<i>Chemical abstracts No.</i>	<i>Substance</i>
U177	684-93-5	N-Nitroso-N-methylurea
U178	615-53-2	N-Nitroso-N-methylurethane
U179	100-75-4	N-Nitrosopiperidine
U180	930-55-2	N-Nitrosopyrrolidine
U181	99-55-8	5-Nitro-o-toluidine
U193	1120-71-4	1,2-Oxathiolane, 2,2-dioxide
U058	50-18-0	2H-1,3,2-Oxazaphosphorin- 2-amine, N,N-bis (2-chloroethyl) tetrahydro-, 2-oxide
U115	75-21-8	Oxirane (I,T)
U126	765-34-4	Oxiranecarboxyaldehyde
U041	106-89-8	Oxirane, (chloromethyl)-
U182	123-63-7	Paraldehyde
U183	608-93-5	Pentachlorobenzene
U184	76-01-7	Pentachloroethane
U185	82-68-8	Pentachloronitrobenzene (PCNB)
See F027	87-86-5	Pentachlorophenol
U161	108-10-1	Pentanol, 4-methyl- (I)
U186	504-60-9	1,3-Pentadiene (I)
U187	62-44-2	Phenacetin
U188	108-95-2	Phenol
U048	95-57-8	Phenol, 2-chloro-
U039	59-50-7	Phenol, 4-chloro-3-methyl-
U081	120-83-2	Phenol, 2,4-dichloro-
U082	87-65-0	Phenol, 2,6-dichloro-
U089	56-53-1	Phenol, 4,4'- (1,2-diethyl-1,2-ethenediyl)bis-, (E) -
U101	105-67-9	Phenol, 2,4-dimethyl-
U052	1319-77-3	Phenol, methyl-
U132	70-30-4	Phenol, 2,2'-methylenebis [3,4,6-trichloro-
U411	114-26-1	Phenol, 2-(1-methylethoxy)-, methylcarbamate
U170	100-02-7	Phenol, 4-nitro-
See F027	87-86-5	Phenol, pentachloro-
See F027	58-90-2	Phenol, 2,3,4,6 -tetrachloro-
See F027	95-95-4	Phenol, 2,4,5-trichloro-
See F027	88-06-2	Phenol, 2,4,6-trichloro-
U150	148-82-3	L-Phenylalanine, 4-[bis(2-chloroethyl) amino]-
U145	7446-27-7	Phosphoric acid, lead(2+) salt (2:3)
U087	3288-58-2	Phosphorodithioic acid, O,O-diethyl S-methylester
U189	1314-80-3	Phosphorus sulfide (R)
U190	85-44-9	Phthalic anhydride

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<i>EPA hazardous waste No.</i>	<i>Chemical abstracts No.</i>	<i>Substance</i>
U191	109-06-8	2-Picoline
U179	100-75-4	Piperidine, 1-nitroso-
U192	23950-58-5	Pronamide
U194	107-10-8	1-Propanamine (I,T)
U111	621-64-7	1-Propanamine, N-nitroso-N-propyl-
U110	142-84-7	1-Propanamine, N-propyl- (I)
U066	96-12-8	Propane, 1,2-dibromo- 3-chloro-
U083	78-87-5	Propane, 1,2-dichloro-
U149	109-77-3	Propanedinitrile
U171	79-46-9	Propane, 2-nitro- (I,T)
U027	108-60-1	Propane, 2,2'-oxybis[2-chloro-
U193	1120-71-4	1,3-Propane sultone
See F027	93-72-1	Propanoic acid, 2- (2,4,5-trichlorophenoxy)-
U235	126-72-7	1-Propanol, 2,3-dibromo-, phosphate (3:1)
U140	78-83-1	1-Propanol, 2-methyl- (I,T)
U002	67-64-1	2-Propanone (I)
U007	79-06-1	2-Propenamide
U084	542-75-6	1-Propene, 1,3-dichloro-
U243	1888-71-7	1-Propene, 1,1,2,3,3,3 -hexachloro-
U009	107-13-1	2-Propenenitrile
U152	126-98-7	2-Propenenitrile, 2-methyl- (I,T)
U008	79-10-7	2-Propenoic acid (I)
U113	140-88-5	2-Propenoic acid, ethyl ester (I)
U118	97-63-2	2-Propenoic acid, 2-methyl-, ethyl ester
U162	80-62-6	2-Propenoic acid, 2-methyl-, methyl ester (I,T)
U373	122-42-9	Propham
U411	114-26-1	Propoxur
U194	107-10-8	n-Propylamine (I,T)
U083	78-87-5	Propylene dichloride
U387	52888-80-9	Prosulfocarb
U148	123-33-1	3,6-Pyridazinedione, 1,2-dihydro-
U196	110-86-1	Pyridine
U191	109-06-8	Pyridine, 2-methyl-
U237	66-75-1	2,4-(1H, 3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]-
U164	56-04-2	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-
U180	930-55-2	Pyrrolidine, 1-nitroso-
U200	50-55-5	Reserpine
U201	108-46-3	Resorcinol
U203	94-59-7	Safrole

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<i>EPA hazardous waste No.</i>	<i>Chemical abstracts No.</i>	<i>Substance</i>
U204	7783-00-8	Selenious acid
U204	7783-00-8	Selenium dioxide
U205	7488-56-4	Selenium sulfide
U205	7488-56-4	Selenium sulfide SeS <sub>2</sub> (R,T)
U015	115-02-6	L-Serine, diazoacetate (ester)
See F027	93-72-1	Silvex (2,4,5-TP)
U206	18883-66-4	Streptozotocin
U103	77-78-1	Sulfuric acid, dimethyl ester
U189	1314-80-3	Sulfur phosphide (R)
See F027	93-76-5	2,4,5-T
U207	95-94-3	1,2,4,5- Tetrachlorobenzene
U208	630-20-6	1,1,1,2- Tetrachloroethane
U209	79-34-5	1,1,2,2- Tetrachloroethane
U210	127-18-4	Tetrachloroethylene
See F027	58-90-2	2,3,4,6- Tetrachlorophenol
U213	109-99-9	Tetrahydrofuran (I)
U214	563-68-8	Thallium(I) acetate
U215	6533-73-9	Thallium (I) carbonate
U216	7791-12-0	Thallium(I) chloride
U216	7791-12-0	Thallium chloride TlCl
U217	10102-45-1	Thallium (I) nitrate
U218	62-55-5	Thioacetamide
U410	59669-26-0	Thiodicarb
U153	74-93-1	Thiomethanol (I,T)
U244	137-26-8	Thioperoxydicarbonic diamide [(H <sub>2</sub> N)C(S)] <sub>2</sub> S <sub>2</sub> , tetramethyl-
U409	23564-05-8	Thiophanate-methyl
U219	62-56-6	Thiourea
U244	137-26-8	Thiram
U220	108-88-3	Toluene
U221	25376-45-8	Toluenediamine
U223	26471-62-5	Toluene diisocyanate (R,T)
U328	95-53-4	o-Toluidine
U353	106-49-0	p-Toluidine
U222	636-21-5	o-Toluidine hydrochloride
U389	2303-17-5	Triallate
U011	61-82-5	1H-1,2,4-Triazol-3-amine
U226	71-55-6	1,1,1-Trichloroethane
U227	79-00-5	1,1,2-Trichloroethane
U228	79-01-6	Trichloroethylene

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<i>EPA hazardous waste No.</i>	<i>Chemical abstracts No.</i>	<i>Substance</i>
U121	75-69-4	Trichloromonofluoromethane
See F027	95-95-4	2,4,5-Trichlorophenol
See F027	88-06-2	2,4,6-Trichlorophenol
U404	121-44-8	Triethylamine
U234	99-35-4	1,3,5-Trinitrobenzene (R,T)
U182	123-63-7	1,3,5-Trioxane, 2,4,6-trimethyl-
U235	126-72-7	Tris(2,3-dibromopropyl) phosphate
U236	72-57-1	Trypan blue
U237	66-75-1	Uracil mustard
U176	759-73-9	Urea, N-ethyl-N-nitroso-
U177	684-93-5	Urea, N-methyl-N-nitroso-
U043	75-01-4	Vinyl chloride
U248	<sup>1</sup> 81-81-2	Warfarin, & salts, when present at concentrations of 0.3 percent or less
U239	1330-20-7	Xylene (I)
U200	50-55-5	Yohimban-16- carboxylic acid, 11,17-dimethoxy-18-[(3,4, 5-trimethoxybenzoyl)oxy]-, methyl ester, (3beta, 16beta, 17alpha, 18beta, 20alpha)-
U249	1314-84-7	Zinc phosphide Zn <sub>3</sub> P <sub>2</sub> , when present at concentrations of 10 percent or less

<sup>1</sup>CAS number given for parent compound only.

**(e) Wastes containing polychlorinated biphenyls (PCBs).**

- (1) All solid wastes containing 50 parts per million (ppm) by weight (on a dry weight basis for other than liquid wastes) or greater of polychlorinated biphenyls (PCBs) are listed hazardous wastes, excluding small capacitors as defined in paragraph (3) of this subdivision and PCB articles drained in accordance with subparagraphs (2)(ii) and (iii) of this subdivision. PCB articles that contain less than 50 ppm PCBs are not regulated as hazardous waste. Oils in or from electrical equipment whose PCB concentration is unknown, except circuit breakers, reclosers and cable, must be assumed to contain between 50 and 500 ppm PCB and are listed hazardous waste. PCB and PCBs mean any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees. Any chemical waste, combination of waste, or environmental media that contains less than 50 ppm PCBs are listed hazardous waste only as specifically provided in paragraph (2) of this subdivision. Wastes that may contain PCBs include dielectric fluids, contaminated solvents, waste oil, heat transfer fluids, hydraulic fluids, dredge spoils, and material contaminated as a result of spills. The hazardous code for these PCB wastes shall be toxic waste (T). Environmental media means naturally occurring, non-living substances, including soil, sediment, rock, groundwater, surface water, surface runoff, air, and only such animal and vegetable matters as may be incidentally contained therein (e.g., soil and water bacteria, underground roots, skeletal remains, etc.). These wastes shall have hazardous waste numbers assigned as follows:

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<i>DEC hazardous waste number</i>	<i>Waste</i>
B001	PCB oil (concentrated) from transformers, capacitors, etc.
B002	Petroleum oil or other liquid containing 50 ppm or greater of PCBs, but less than 500 ppm PCBs. This includes oil from electrical equipment whose PCB concentration is unknown, except for circuit breakers, reclosers, rectifiers, and cable.
B003	Petroleum oil or other liquid containing 500 ppm or greater of PCBs.
B004	PCB articles containing 50 ppm or greater of PCBs, but less than 500 ppm PCBs, excluding small capacitors. This includes oil-filled electrical equipment whose PCB concentration is unknown, except for circuit breakers, reclosers, rectifiers and cable.
B005	PCB articles, other than transformers, that contain 500 ppm or greater of PCBs, excluding small capacitors.
B006	PCB transformers. PCB transformers means any transformer that contains 500 ppm PCB or greater.
B007	Other PCB wastes, including contaminated soil, solids, sludges, clothing, rags and dredge material.

**Note:** PCBs are also regulated by 40 CFR part 761. A person must comply with both this Part and 40 CFR part 761 (see section 370.1(e) of this Title).

(2) Drained PCB articles.

- (i) Except as provided in subparagraphs (ii) and (iii) of this paragraph, drained PCB articles containing at least 50 ppm PCBs are regulated as hazardous waste.
- (ii) PCB articles, except capacitors, that contain between 50 and 500 ppm PCB, are no longer regulated as PCB listed hazardous waste provided that all free-flowing liquid has been drained from the article. The drained liquid is a listed hazardous waste, as is any solvent used for flushing.
- (iii)
  - ('a') Hydraulic machines containing less than 1,000 ppm PCB are no longer regulated as PCB listed hazardous waste, provided that all free-flowing liquid has been drained from the hydraulic machine. The drained liquid is a liquid hazardous waste, as is any solvent used for flushing.
  - ('b') Hydraulic machines containing 1,000 ppm PCB are no longer regulated as PCB listed hazardous waste, provided that all free-flowing liquid has been drained from the hydraulic machine, and the drained hydraulic machine is flushed with a solvent in which PCBs are readily soluble. The solvent to be used for flushing must contain less than 50 ppm PCB. The drained liquid and the solvent used for flushing are listed hazardous wastes.

(3) Definitions.

- (i) **PCB article** means any manufactured article, other than a PCB container, that contains PCBs and whose surface(s) has been in direct contact with PCBs. **PCB article** includes capacitors, transformers, electric motors, circuit breakers, reclosers, rectifiers, voltage regulators, switches (including sectionalizers and motor starters), electromagnets, cable, hydraulic machines, pumps, pipes, and any other manufactured item which is formed to a specific shape



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or design during manufacture, has end use function(s) dependent in whole or in part upon its shape or design during end use, and has either no change of chemical composition during its end use or only those changes of composition which have no commercial purpose separate from that of the PCB article.

- (ii) **Small capacitor** means a capacitor which contains less than 1.36 kg (3 lb.) of dielectric fluid. The following assumptions may be used if the actual weight of the dielectric fluid is unknown. A capacitor whose total volume is less than 1,639 cubic centimeters (100 cubic inches) may be considered to contain less than 1.36 kg (3 lb.) of dielectric fluid and a capacitor whose total volume is more than 3,278 cubic centimeters (200 cubic inches) must be considered to contain more than 1.36 kg (3 lb.) of dielectric fluid. A capacitor whose volume is between 1,639 and 3,278 cubic centimeters may be considered to contain less than 1.36 (3 lb.) of dielectric fluid if the total weight of the capacitor is less than 4.08 kg (9 lb.).

- (4) Testing procedures. The procedures in 40 CFR 761.60(g) (see section 370.1[e] of this Title) will be used to determine the concentration of PCBs, unless a petition for equivalent testing or analytical methods is submitted and approved per section 370.3 of this Title.

#### (f) Deletion of certain hazardous waste codes following equipment cleaning and replacement.

- (1) Wastes from wood preserving processes at plants that do not resume or initiate use of chlorophenolic preservatives will not meet the listing definition of F032 once the generator has met all of the requirements of paragraphs (2) and (3) of this subdivision. These wastes may, however, continue to meet another hazardous waste listing description or may exhibit one or more of the hazardous waste characteristics.
- (2) Generators must either clean or replace all process equipment that may have come into contact with chlorophenolic formulations or constituents thereof, including, but not limited to, treatment cylinders, sumps, tanks, piping systems, drip pads, fork lifts, and trams, in a manner that minimizes or eliminates the escape of hazardous waste or constituents, leachate, contaminated drippage, or hazardous waste decomposition products to the ground water, surface water, or atmosphere.
  - (i) Generators shall do one of the following:
    - ('a') prepare and follow an equipment replacement plan and clean equipment in accordance with this subdivision;
    - ('b') prepare and follow an equipment replacement plan and replace equipment in accordance with this subdivision; or
    - ('c') document cleaning and replacement in accordance with this subdivision, carried out after termination of use of chlorophenolic preservations.
  - (ii) Cleaning requirements.
    - ('a') Prepare and sign a written equipment cleaning plan that describes:
      - ('1') the equipment to be cleaned;
      - ('2') how the equipment will be cleaned;
      - ('3') the solvent to be used in cleaning;
      - ('4') how solvent rinses will be tested; and
      - ('5') how cleaning residues will be disposed.
    - ('b') Equipment must be cleaned as follows:

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- (1) remove all visible residues from process equipment; and
- (2) rinse process equipment with an appropriate solvent until dioxins and dibenzofurans are not detected in the final solvent rinse.
- (c) Analytical requirements.
  - (1) rinses must be tested by using an appropriate method.
  - (2) not detected means at or below the following lower method calibration limits (MCLs). The 2,3,7,8-TCDD-based MCL – 0.01 parts per trillion (ppt), sample weight of 1000 g, IS spiking level of 1 ppt, final extraction volume of 10-50  $\mu$ L (microlitre). For other congeners – multiply the values by 1 for TCDF/PeCDD/PeCDF, by 2.5 for HxCDD/HxCDF/HpCDD/HpCDF, and by 5 for OCDD/OCDF.
  - (d) The generator must manage all residues from the cleaning process as F032 waste.
- (iii) Replacement requirements.
  - (a) Prepare and sign a written equipment replacement plan that describes:
    - (1) the equipment to be replaced;
    - (2) how the equipment will be replaced; and
    - (3) how the equipment will be disposed.
  - (b) The generator must manage the discarded equipment as F032 waste.
- (iv) Documentation requirements.
  - (a) Document that previous equipment cleaning and/or replacement was performed in accordance with this subdivision and occurred after cessation of use of chlorophenolic preservatives.
- (3) The generator must maintain the following records documenting the cleaning and replacement as part of the facility's operating record:
  - (i) the name and address of the facility;
  - (ii) formulations previously used and the date on which their use ceased in each process at the plant;
  - (iii) formulations currently used in each process at the plant;
  - (iv) the equipment cleaning or replacement plan;
  - (v) the name and address of any persons who conducted the cleaning and replacement;
  - (vi) the dates on which cleaning and replacement were accomplished;
  - (vii) the dates of sampling and testing;
  - (viii) a description of the sample handling and preparation techniques, including techniques used for extraction, containerization, preservation, and chain-of-custody of the samples;
  - (ix) a description of the tests performed, the date the tests were performed, and the results of the tests;
  - (x) the name and model numbers of the instrument(s) used in performing the tests;
  - (xi) QA/QC documentation; and
  - (xii) the following statement signed by the generator or an authorized representative:

“I certify under penalty of law that all process equipment required to be cleaned or replaced under subdivision (f) of this section was cleaned or replaced as represented in the equipment

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cleaning and replacement plan and accompanying documentation. I am aware that there are significant penalties for providing false information, including the possibility of fine or imprisonment.”

## Section 371.5 Exclusions/exemptions

(a) **Reserved.**

(b) **Conditional Exclusion for Used, Broken Cathode Ray Tubes (CRTs) and Processed CRT Glass Undergoing Recycling.**

Used, broken CRTs are not solid wastes if they are managed in accordance with the following criteria. If the criteria are not met, the used, broken CRTs are solid waste, and hazardous waste if the definition of hazardous waste is met.

- (1) Prior to processing: these materials must be destined for recycling and the following requirements met:
  - (i) Storage. The broken CRTs must be either:
    - (a) Stored in a building with a roof, floor, and walls, or
    - (b) Placed in a container (i.e., a package or a vehicle) that is constructed, filled, and closed to minimize releases to the environment of CRT glass (including fine solid materials or their constituents).
  - (ii) Labeling. Each container in which the used, broken CRT is contained must be labeled or marked clearly with one of the following phrases: “Used cathode ray tube(s)-contains leaded glass” or “Leaded glass from televisions or computers.” It must also be labeled: “Do not mix with other glass materials.”
  - (iii) Transportation. The used, broken CRTs must be transported in a container meeting the requirements of section 371.4(j)(1)(i)(‘b’) and 371.4(j)(1)(ii) of this Part.
  - (iv) Speculative accumulation and use constituting disposal. The used, broken CRTs are subject to the limitations on speculative accumulation as defined in section 371.1(a)(1) of this Part. If they are used in a manner constituting disposal, they must comply with the applicable requirements of section 374-1.3 of this Title instead of the requirements of this subdivision.
  - (v) Exports. In addition to the applicable conditions specified in subparagraph (1)(i) through (iv) of this subdivision, exporters of used, broken CRTs must comply with the requirements of 40 CFR 261.39(a)(5) as implemented by USEPA (see section 370.1(e) of this Title).
    - (a) Notification of intent to export, required to be submitted to USEPA under 40 CFR 261.39(a)(5) (see section 370.1(e) of this Title), must also be submitted to the department.
- (2) Requirements for used CRT processing: Used, broken CRTs undergoing CRT processing as defined in subdivision 370.2(b) of this Title must be managed in accordance with the following criteria:
  - (i) Storage. Used, broken CRTs undergoing CRT processing are subject to the requirement of subparagraph (1)(iv) of this subdivision.
  - (ii) Processing.
    - (a) All activities specified in subparagraphs (ii) and (iii) of the definition of ‘CRT processing’ in subdivision 370.2(b) of this Title must be performed within a building with a roof, floor, and walls; and

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(b) No activities may be performed that use temperatures high enough to volatilize lead from CRTs.

- (3) Processed CRT glass sent to CRT glass making or lead smelting: Glass from used CRTs that is destined for recycling at a CRT glass manufacturer or a lead smelter after processing is not a solid waste unless it is speculatively accumulated as defined in paragraph 371.1(a)(1) of this Part.
- (4) Use constituting disposal: Glass from used CRTs that is used in a manner constituting disposal must comply with the requirements of section 374-1.3 of this Title, instead of the requirements of this subdivision.

**(c) Conditional Exclusion for Used, Intact Cathode Ray Tubes (CRTs) Exported for Recycling.**

Used, intact CRTs exported for recycling are not solid wastes if they meet the notice and consent conditions of subparagraph (j)(1)(v) of this section, and if they are not speculatively accumulated as defined in section 371.1(a)(1) of this Part.

**(d) Notification and Recordkeeping for Used, Intact Cathode Ray Tubes (CRTs) Exported for Reuse.**

CRT exporters who export used, intact CRTs for reuse must comply with the notification and recordkeeping requirements of 40 CFR 261.41 as implemented by USEPA (see section 370.1(e) of this Title). Notification of intent to export, required to be submitted to EPA under 40 CFR 261.41(a) (see section 370.1(e) of this Title), must be submitted to the department.

## APPENDICES

### Appendices to Part 371

#### APPENDIX 19 – REPRESENTATIVE SAMPLING METHODS

Appendix I to 40 CFR Part 261, as of July 1, 2014 is incorporated by reference as if fully set forth herein (see section 370.1(e) of this Title).

The methods and equipment used for sampling waste materials will vary with the form and consistency of the waste materials to be sampled.

#### APPENDIX 20 – Reserved

#### APPENDIX 21 – Reserved

#### APPENDIX 22 – BASIS FOR LISTING HAZARDOUS WASTE

<i>EPA hazardous waste number</i>	<i>Hazardous constituents for which listed</i>
F001	Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chlorinated fluorocarbons.
F002	Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane.
F003	N.A.
F004	Cresols and cresylic acid, nitrobenzene.
F005	Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, 2-ethoxyethanol, benzene, 2-nitropropane.
F006	Cadmium, hexavalent chromium, nickel, cyanide (complexed).
F007	Cyanide (salts).
F008	Cyanide (salts).
F009	Cyanide (salts).
F010	Cyanide (salts).
F011	Cyanide (salts).
F012	Cyanide (complexed).
F019	Hexavalent chromium, cyanide (complexed).
F020	Tetra- and pentachlorodibenzo-p-dioxins; tetra and pentachlorodibenzofurans; tri- and tetrachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F021	Penta- and hexachlorodibenzo-p-dioxins; penta and hexachlorodibenzofurans; pentachlorophenol and its derivatives.

## APPENDICES

<i>EPA hazardous waste number</i>	<i>Hazardous constituents for which listed</i>
F022	Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans.
F023	Tetra- and pentachlorodibenzo-p-dioxins; tetra and pentachlorodibenzofurans; tri- and tetra-chlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F024	Chloromethane; dichloromethane; trichloromethane; carbon tetrachloride; chloroethylene; 1,1-dichloroethane; 1,2-dichloroethane; trans-1,2-dichloroethylene; 1,1-dichloroethane; 1,1,1-trichloroethane; 1,1,2-trichloroethane; trichloroethylene; 1,1,1, 2-tetrachloroethane; 1,1,2,2-tetrachloroethane; tetrachloroethylene; pentachloroethane; hexachloroethane; allyl chloride (3-chloropropene); dichloropropane; dichloropropene; 2-chloro-1,3-butadiene; hexachloro-1,3-butadiene; hexachlorocyclopentadiene; hexachlorocyclohexane; benzene; chlorobenzene; dichlorobenzenes; 1,2,4-trichlorobenzene; tetrachlorobenzene; pentachlorobenzene; hexachlorobenzene; toluene; naphthalene.
F025	Chloromethane, dichloromethane, trichloromethane, carbontetrachloride, 1,1-Chloroethylene, 1,2-Dichloroethane, trans-1,2-Dichloroethane, 1,1-Dichloroethylene, Dichloroethylene 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1,1,2-Trichloroethylene, 1,1,2,2-Tetrachloroethane Tetrachloroethane, Tetrachloroethylene, Pentachloroethane, Hexachloroethane, Allyl, Chloride (3-Chloropropene), Dichloropropane, Dichloropropene, 2-Chloro-, 1,3-Butadiene, Hexachloro-, 1,3-Butadiene, Hexachlorocyclopentadiene, Benzene, Chlorobenzene, Dichlorobenzene, 1,2,4-Trichlorobenzene, Tetrachlorobenzene, Pentachlorobenzene, Hexachlorobezene, Toluene, Naphthalene.
F026	Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta, and hexachlorodibenzofurans.
F027	Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans; tri-, tetra-, and pentachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F028	Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans; tri-, tetra-, and pentachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F032	Benz(a)anthracene, benzo(a)pyrene, dibenz(a,h)-anthracene, indeno(1,2,3-cd)pyrene, pentachlorophenol, arsenic, chromium, tetra-, penta-, hexa-, heptachlorodibenzo-p-dioxins tetra-, penta-, hexa-, heptachlorodibenzofurans.
F034	Benz(a)anthracene, benzo(k)fluoranthene, benzo(a)pyrene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, naphthalene, arsenic, chromium.
F035	Arsenic, chromium, lead.
F037	Benzene, benzo(a)pyrene, chrysene, lead, chromium.
F038	Benzene, benzo(a)pyrene, chrysene, lead, chromium.
F039	All constituents for which treatment standards are specified for multi-source leachate (wastewaters and nonwastewaters) under section 376.4(d).

## APPENDICES

<i>EPA hazardous waste number</i>	<i>Hazardous constituents for which listed</i>
K001	Pentachlorophenol, phenol, 2-chlorophenol, p-chloro-m-cresol, 2,4-dimethylphenyl, 2,4-dinitrophenol, trichlorophenols, tetrachlorophenols, 2,4-dinitrophenol, creosote, chrysene, naphthalene, fluoranthene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benz(a)anthracene, dibenz(a)anthracene, acenaphthalene.
K002	Hexavalent chromium, lead.
K003	Hexavalent chromium, lead.
K004	Hexavalent chromium.
K005	Hexavalent chromium, lead.
K006	Hexavalent chromium.
K007	Cyanide (complexed), hexavalent chromium.
K008	Hexavalent chromium.
K009	Chloroform, formaldehyde, methylene chloride, methylchloride, paraldehyde, formic acid.
K010	Chloroform, formaldehyde, methylene chloride, methylchloride, paraldehyde, formic acid, chloroacetaldehyde.
K011	Acrylonitrie, acetonitrite, hydrocyanic acid.
K013	Hydrocyanic acid, acrylonitrite, acetonitrile.
K014	Acetonitrile, acrylamide.
K015	Benzyl chloride, chlorobenzene, toluene, benzotrichloride.
K016	Hexachlorobenzene, hexachlorobutadiene, carbon tetrachloride, hexachloroethane, perchloroethylene.
K017	Epichlorohydrin, chloroethers [bis(chloromethyl) ether and bis(2-chloroethyl) ethers], trichloropropane, dichloropropanols.
K018	1,2-dichloroethane, trichloroethylene, hexachlorobutadiene, hexachlorobenzene.
K019	Ethylene dichloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, tetrachloroethanes (1,1,2,2-tetrachloroethane and 1,1,1,2-tetrachloroethane), trichloroethylene, tetrachlorethylene, carbon tetrachloride, chloroform, vinyl chloride, vinylidene chloride.
K020	Ethylene dichloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, tetrachloroethanes (1,1,2,2-tetrachloroethane and 1,1,1,2-tetrachloroethane), trichloroethylene, tetrachloroethylene, carbon tetrachloride, chloroform, vinyl chloride, vinylidene chloride.
K021	Antimony, carbon tetrachloride, chloroform.
K022	Phenol, tars (polycyclic aromatic hydrocarbons).
K023	Phthalic anhydride, maleic anhydride.
K024	Phthalic anhydride, 1,4-naphthoquinone.
K025	Meta-dinitrobenzene, 2,4-dinitrotoluene.
K026	Paraldehyde, pyridines, 2-picoline.
K027	Toluene diisocyanate, toluene-2, 4-diamine.
K028	1,1,1-trichloroethane, vinyl chloride.
K029	1,2-dichloroethane, 1,1,1-trichloroethane, vinyl chloride, vinylidene chloride, chloroform.

## APPENDICES

<i>EPA hazardous waste number</i>	<i>Hazardous constituents for which listed</i>
K030	Hexachlorobenzene, hexachlorobutadiene, hexachloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, ethylene dichloride.
K031	Arsenic.
K032	Hexachlorocyclopentadiene.
K033	Hexachlorocyclopentadiene.
K034	Hexachlorocyclopentadiene.
K035	Creosote, chrysene, naphthalene, fluoranthene benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benzo(a)anthracene, dibenzo(a)anthracene, acenaphthalene.
K036	Toluene, phosphorodithioic and phosphorothioic acid esters.
K037	Toluene, phosphorodithioic and phosphorothioic acid esters.
K038	Phorate, formaldehyde, phosphorodithioic and phosphoro-thioic acid esters.
K039	Phosphorodithioic and phosphorothioic acid esters.
K040	Phorate, formaldehyde, phosphorodithioic and phosphorothioic acid esters.
K041	Toxaphene.
K042	Hexachlorobenzene, ortho-dichlorobenzene.
K043	2,4-dichlorophenol, 2,6-dichlorophenol, 2,4,6-trichlorophenol.
K044	N.A.*
K045	N.A.
K046	Lead.
K047	N.A.
K048	Hexavalent chromium, lead.
K049	Hexavalent chromium, lead.
K050	Hexavalent chromium.
K051	Hexavalent chromium, lead.
K052	Lead.
K060	Cyanide, naphthalene, phenolic compounds, arsenic.
K061	Hexavalent chromium, lead, cadmium.
K062	Hexavalent chromium, lead.
K069	Hexavalent chromium, lead, cadmium.
K071	Mercury.
K073	Chloroform, carbon tetrachloride, hexachloroethane, trichloroethane, tetrachloroethylene, dichloroethylene, 1,1,2,2-tetrachloroethane.
K083	Aniline, diphenylamine, nitrobenzene, phenylenediamine.
K084	Arsenic.
K085	Benzene, dichlorobenzene, trichlorobenzene, tetrachlorobenzene, pentachlorobenzene, hexachlorobenzene, benzyl chloride.
K086	Lead, hexavalent chromium.
K087	Phenol, naphthalene.
K088	Cyanide (complexes).



## APPENDICES

<i>EPA hazardous waste number</i>	<i>Hazardous constituents for which listed</i>
K093	Phthalic anhydride, maleic anhydride.
K094	Phthalic anhydride.
K095	1,1,2-trichloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane.
K096	1,2-dichloroethane, 1,1,1-trichloroethane, 1,1,2-trichloroethane.
K097	Chlordane, heptachlor.
K098	Toxaphene.
K099	2,4-dichlorophenol, 2,4,6-trichlorophenol.
K100	Hexavalent chromium, lead, cadmium.
K101	Arsenic.
K102	Arsenic.
K103	Aniline, nitrobenzene, phenylenediamine.
K104	Aniline, benzene, diphenylamine, nitrobenzene, phenylenediamine.
K105	Benzene, monochlorobenzene, dichlorobenzenes, 2,4,6-trichlorophenol.
K106	Mercury.
K107	1,1-Dimethylhydrazine (UDMH).
K108	1,1-Dimethylhydrazine (UDMH).
K109	1,1-Dimethylhydrazine (UDMH).
K110	1,1-Dimethylhydrazine (UDMH).
K111	2,4-Dinitrotoluene.
K112	2,4-Toluenediamine, o-toluidine, p-toluidine, aniline.
K113	2,4-Toluenediamine, o-toluidine, p-toluidine, aniline.
K114	2,4-Toluenediamine, o-toluidine, p-toluidine.
K115	2,4-Toluenediamine.
K116	Carbon tetrachloride, tetrachloroethylene, chloroform, phosgene.
K117	Ethylene dibromide.
K118	Ethylene dibromide.
K123	Ethylene thiourea.
K124	Ethylene thiourea.
K125	Ethylene thiourea.
K126	Ethylene thiourea.
K131	Dimethyl sulfate, methyl bromide.
K132	Methyl bromide.
K136	Ethylene dibromide.
K141	Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd) perylene.
K142	Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd) perylene.
K143	Benzene, benz(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene.

## APPENDICES

<i>EPA hazardous waste number</i>	<i>Hazardous constituents for which listed</i>
K144	Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene.
K145	Benzene, benz(a)anthracene, benzo(a)pyrene, dibenz(a,h)anthracene, naphthalene.
K147	Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd) pryene.
K148	Benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd) pryene.
K149	Benzotrichloride, benzylchloride, chloroform, chloromethane, chlorobenzene, 1,4-dichlorobenzene, hexachlorobenzene, pentachlorobenzene, 1,2,4,5-tetrachlorobenzene, toluene.
K150	Carbon tetrachloride, chloroform, chloromethane, 1,4-dichlorobenzene, hexachlorobenzene, pentachlorobenzene, 1,2,4,5-tetrachlorobenzene, 1,1,2,2-tetrachloroethane, tetrachloroethylene, 1,2,4-trichlorobenzene.
K151	Benzene, carbon tetrachloride, chloroform, hexachlorobenzene, pentachlorobenzene, toluene, 1,2,4,5-tetrachlorobenzene, tetrachloroethylene.
K156	Benomyl, carbaryl, carbendazim, carbofuran, carbosulfan, formaldehyde, methylene chloride, triethylamine
K157	Carbon tetrachloride, formaldehyde, methyl chloride, methylene chloride, pyridine, triethylamine
K158	Benomyl, carbendazim, carbofuran, carbosulfan, chloroform, methylene chloride
K159	Benzene, butylate, eptc, molinate, pebulate, vernolate
K161	Antimony, arsenic, metam-sodium, ziram
K169	Benzene
K170	Benzo(a)pyrene, dibenz(a,h)anthracene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, 3-methylcholanthrene, 7,12-dimethylbenz(a)anthracene
K171	Benzene, arsenic
K172	Benzene, arsenic
K174	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-HpCDD), 1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF), 1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,6,7,8,9-HpCDF), HxCDDs (all Hexachlorodibenzo-p-dioxins), HxCDFs (all Hexachlorodibenzofurans), PeCDDs (all Pentachlorodibenzo-p-dioxins), OCDD (1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin), OCDF (1,2,3,4,6,7,8,9-Octachlorodibenzofuran), PeCDFs (all Pentachlorodibenzofurans), TCDDs (all Tetracholorodibenzo-p-dioxins), TCDFs (all Tetrachlorodibenzofurans).
K175	Mercury.
K176	Arsenic, Lead.
K177	Antimony.
K178	Thallium.
K181	Aniline, o-anisidine, 4-chloroaniline, p-cresidine, 2,4-dimethylaniline, 1,2-phenylenediamine, 1,3-phenylenediamine.

## APPENDICES

\*N.A. Waste is hazardous because it fails the test for the characteristic of ignitability, corrosivity or reactivity.

### APPENDIX 23 – HAZARDOUS CONSTITUENTS

A2213 (ethanimidothioic acid, 2-(dimethylamino) -N-hydroxy-2-oxo-, methyl ester)

Acetic acid, 2,4,5-trichlorophenoxy-, salts and esters (2,4,5-T, salts and esters)

Acetonitrile (Ethanenitrile)

Acetophenone (Ethanone, 1-phenyl)

3-(alpha-Acetylbenzyl)-4-hydroxycoumarin and salts (Warfarin)

2-Acetylaminofluorene(Acetamide, N-(9H-fluoren-2-yl)-)

Acetyl chloride (Ethanoyl chloride)

1-Acetyl-2-thiourea(Acetamide, N-aminothioxomethyl)-)

Acrolein (2-Propenal)

Acrylamide (2-Propenamide)

Acrylonitrile (2-Propenenitrile)

Aflatoxins

Aldicarb sulfone (Propanal, 2-methyl-2- (methylsulfonyl)-, O - ((methylamino) carbonyl) oxime)

Aldrin (1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a,8b-

hexahydro-endo, exo - 1,4:5,8 - Dimethanonaphthalene)

Allyl alcohol (2-Propen-1-ol)

Allyl Chloride (1-Propane, 3-chloro)

Aluminum phosphide

4-Aminobiphenyl ((1,1'Biphenyl)-4-amine)

6-Amino-1,1a,2,8,8a,8b-hexahydro-8-(hydroxymethyl)-8a-methoxy-5-

methyl carbamate azirino(2',3':3,4) pyrrolo (1,2-a) indole-4,7-

dione. (ester) Mitomycin C) (Azirino (2' 3':3, 4)pyrrole

(1.2-a, indole 4,7-dione, 6-amino-8-((amino-carbonyl)oxy)methyl)-1,

1a,2,8,8a,8b-hexahydro- 8amethoxy-5-methyl-)

5-(Aminomethyl)-3-isoxaxolo1 (3(2H0-Isoxazolone, 5-(Aminomethyl)-)

## APPENDICES

Aminopyridine (4-Pyridinamine)

4-Aminopyridine (4-Pyridinamine)

Amitrole (1H-1,2,4-Triazol-3-amine)

Aniline (Benzenamine)

o-Anisidine (2-methoxyaniline)

Antimony and compounds, N.O.S.\*

Aramite (Sulfurous acid, 2-chloroethyl-, 2-(4-1,1-dimethylethyl) phenoxy)

Arsenic and compounds, N.O.S.\*

Arsenic acid (Orthoarsenic acid)

Arsenic pentoxide (Arsenic (V) oxide)

Arsenic trioxide (Arsenic (III) oxide)

Auramine (Benzenamine, 4,4'-carbonimidoylbis)N,N-Dimethyl-, monohydrochloride)

Azaserine (L-Serine, diazoacetate (ester))

Barban (Carbamic acid, (3-chlorophenyl) -, 4-chloro-2-butynyl ester)

Barium and compounds, N.O.S.\*

Barium cyanide

Bendiocarb (1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate)

Bendiocarb phenol (1,3-Benzodioxol-4-ol, 2,2-dimethyl-,)

Benomyl (Carbamic acid, (1-((butylamino) carbonyl)- 1H-benzimidazol-2-yl) -, methyl ester)

Benz(c)acridine (3,4-Benzacridine)

Benz(a)anthracene (1,2-Benzanthracene)

Benzene (Cyclohexatriene)

Benzene, 2-amino-1-methyl (o-Toluidine)

Benzene, 4-amino-1-methyl (p-Toluidine)

Benzenearsonic acid (Arsonic acid, phenyl)

Benzene, dichloromethyl (Benzal chloride)

## APPENDICES

Benzenethiol (Thiophenol)

Benzidine ((1,1'-Biphenyl)-4,4', diamine)

Benzo(b)fluoranthene (2,3-Benzofluoranthene)

Benzo(j)fluoranthene (7,8-Benzofluoranthene)

Benzo(k)fluoranthene

Benzo(a)pyrene (3,4-Benzopyrene)

p-Benzoquinone (1,4-Cyclohexadienedione)

Benzotrichloride (Benzene, trichloromethyl)

Benzyl chloride (Benzene, (chloromethyl)-)

Beryllium powder

Beryllium and compounds, N.O.S.\*

Bis (2-chloroethoxy)methane (Ethane, 1,1' -(methylenebis(oxy))bis(2-chloro-))

Bis (2-chloroethyl)ether (Ethane, 1,1'-oxybis(2-chloro-))

N,N-Bis (2-chloroethyl) -2-naphthylamine (Chlornaphazine)

Bis (2-chloroisopropyl)ether (Propane, 2,2'-oxybis(2-chloro-))

Bis(2-ethylhexyl)phthalate (1,2-Benzenedicarboxylic acid,  
bis (2-ethylhexyl) ester)

Bis (pentamethylene)-thiuram tetrasulfide (Piperidine, 1,1'-(tetrathiodicarbonothioyl)-bis-)

Bromoacetone (2-Propanone, 1-bromo-)

Bromomethane (Methyl bromide)

4-Bromophenyl phenyl ether (Benzene, 1-bromo-4-phenoxy-)

Brucine (Strychnidin-10-one, 2,3-dimethoxy-)

2-Butanone peroxide (Methyl ethyl ketone, peroxide)

Butylate (Carbamothioic acid, bis (2-methylpropyl)-, S-ethyl ester)

Butyl benzyl phthalate (1, 2-Benzenedicarboxylic acid, butyl phenylmethyl ester)

2-sec-Butyl-4, 6-dinitrophenol (DNBP) (Phenol, 2, 4-dinitro-6-(1-methylpropyl)-1)

Cadmium and compounds, N.O.S.\*

Calcium chromate (Chromic acid, calcium salt)

## APPENDICES

Calcium cyanide

Carbamic acid, ethyl ester

Carbaryl (1-Naphthalenol, methylcarbamate)

Carbendazim (Carbamic acid, 1H-benzimidazol-2-yl, methyl ester)

Carboduran (7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate)

Carbofuran phenol (7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-)

Carbon disulfide (Carbon bisulfide)

Carbon oxyfluoride (Carbonyl fluoride)

Carbosulfan (Carbamic acid, ((dibutylamino) thio) methyl-, 2,3-dihydro-2,2-dimethyl-7-benzofuranyl ester)

Chloral (Acetaldehyde, trichloro-)

Chlorambucil (Butanoic acid, 4-(bis(2-chloroethyl)amino)benzene-)

Chlordane (alpha and gamma isomers) (4,7-Methanoindane, 1, 2, 4, 5, 6,

7, 8, 8-octachloro 3, 4, 7, 7a-tetrachydro-) (alpha and gamma isomers)

Chlorinated benzenes, N.O.S.\*

Chlorinated ethane, N.O.S.\*

Chlorinated fluorocarbons, N.O.S.\*

Chlorinated naphthalene, N.O.S.\*

Chlorinated phenol, N.O.S.\*

Chloroacetaldehyde (Acetaldehyde, chloro-)

Chloroalkyl ethers, N.O.S.\*

p-Chloroaniline (Benzenamine, 4-chloro-)

Chlorobenzene (Benzene, chloro-)

Chlorobenzilate (Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-

alpha-hydroxy-ethyl ester)

2-Chloro-1,3-butadiene (chloroprene)

p-Chloro-m-cresol (Phenol, 4-chloro-3-methyl)

1-Chloro-2, 3-epoxypropane (Oxirane, 2-(chloromethyl)-)

2-Chloroethyl vinyl ether (Ethene, (2-chloroethoxy)-)

## APPENDICES

Chloroform (Methane, trichloro-)

Chloromethane (Methyl chloride)

Chloromethyl methyl ether (Methane, chloromethoxy-)

2-Chloronaphthalene (Naphthalene, betachloro-)

2-Chlorophenol (Phenol, o-chloro-)

1-(o-Chlorophenyl)thiourea (Thiourea, (2-chlorophenyl)-)

3-Chloropropane (allyl chloride)

3-Chloropropionitrile (Propanenitrile, 3-chloro-)

Chromium and compounds, N.O.S.\*

Chrysene (1, 2-Benzphenanthrene)

Citrus red No. 2(2-Naphthol, 1-((2,5-dimethoxyphenyl)azo)-)

Coal tars

Copper cyanide

Copper dimethyldithiocarbamate (Copper, bis(dimethylcarbamo-dithioato-S,S')-)

Creosote (Creosote, wood)

p-Cresidine

Cresols (Cresylic acid) (Phenol, methyl)

Crotonaldehyde (2-Butenal)

m-Cumenyl methylcarbamate (Phenol, 3-(methylethyl)-, methyl carbamate)

Cyanogen (Ethanedinitrile)

Cyanogen bromide (Bromine cyanide)

Cyanogen chloride (Chlorine cyanide)

Cycasin (beta-D-Glucopyranoside, (methyl-ONN-azoxy)methyl-)

Cycloate (Carbamothioic acid, cyclohexylethyl-, S-ethyl ester)

2-Cyclohexyl-4,6-dinitrophenol (Phenol, 2-cyclohexyl-4, 6-dinitro-)

Cyclophosphamide (2H-1, 3, 2,-Oxazaphosphorine, (bis (2-chloroethyl)amino)-tetrahydro-, 2-oxide)

Daunomycin (5, 12-Naphthacenedione, (8S-cis)-8-acetyl-10-((3-amino-2, 3,6-

## APPENDICES

trideoxy)-alpha-L-lyxo-hexopyranosyl)oxy)-7,8,9, 10-tetrahydro-6, 8,11-trihydroxy-1-methoxy-)

Dazomet (2H-1,3,5-thiadiazine-2-thione, tetrahydro-3,5-dimethyl)

DDD (Dichlorodiphenyldichloroethane) (Ethane, 1,1-dichloro-2,2-bis(p-chlorophenyl)-)

DDE (Ethylene, 1,1-dichloro-2, 2-bis (4-chlorophenyl)-)

DDT (Dichlorodiphenyltrichloroethane) (Ethane, 1,1, 1-trichloro-2,2-bis(p-chlorophenyl)-)

Diallate (S-(2, 3-dichloroallyl) diisopropylthiocarbamate)

Dibenz(a,h)acridine (1, 2, 5, 6-Dibenzacridine)

Dibenz(a,j)acridine (1, 2, 7, 8-Dibenzacridine)

Dibenz(a,h)anthracene (1, 2 5, 6-Dibenzanthracene)

7H-Dibenzo(c,g)carbazole (3, 4, 5, 6-Dibenzcarbazole)

Dibenzo(a,e)pyrene (1, 2, 4, 5-Dibenzpyrene)

Dibenzo(a,h)pyrene (1,2,5, 6-Dibenzpyrene)

Dibenzo(a,i)pyrene (1, 2, 7, 8-Dibenzpyrene)

1, 2-Dibromo-3-chloropropane (Propane, 1, 2-dibromo-3-chloro-)

1, 2-Dibromoethane (Ethylene dibromide)

Dibromomethane (Methylene bromide)

Di-n-butyl phthalate (1, 2-Benzenedicarboxylic acid, dibutyl ester)

o-Dichlorobenzene (Benzene, 1, 2-dichloro-)

m-Dichlorobenzene (Benzene, 1, 3-dichloro-)

p-Dichlorobenzene (Benzene, 1, 4-dichloro-)

Dichlorobenzene, N.O.S.\* (Benzene, dichloro-, N.O.S. \*)

3,3'-Dichlorobenzidine ((1, 1'-Biphenyl))-4, 4'-diamine, 3,3'-dichloro-)

1,4-Dichloro-2-butene (2-Butene, 1, 4-dichloro)

Dichlorodifluoromethane (Methane, dichlorodifluoro-)

1,1-Dichloroethane (Ethylidene, dichloride)

1,2-Dichloroethane (Ethylene dichloride)

trans-1,2-Dichloroethene (1,2-Dichloroethylene)



## APPENDICES

Dichloroethylene, N.O.S.\*(Ethene, dichloro-, N.O.S.\*)

1,1-Dichloroethylene (Ethene, 1,1-dichloro-)

Dichloromethane (Methylene chloride)

2,4-Dichlorophenol (Pheno1, 2,4-dichloro-)

2,6-Dichlorophenol (Pheno1, 2,6-dichloro-)

2,4-Dichlorophenoxyacetic acid (2, 4-D), salts and esters (Acetic acid, 2, 4-dichlorophenoxy-, salts and esters)

Dichlorophenylarsine (Phenyl dichloroarsine)

Dichloropropane, N.O.S.\*(Propane, dichloro-, N.O.S.\*)

1,2 Dichloropropane (Propylene dichloride)

Dichloropropanol, N.O.S.\*(Propanol, dichloro-, N.O.S.\*)

Dichloropropene, N.O.S.\*(Propene, dichloro-, N.O.S.\*)

1,3-Dichloropropene (1-Propene, 1,3-dichloro-)

Dieldrin (1, 2, 3, 4, 10, 10-hexachloro-6, 7-epoxy-1, 4, 4a, 5, 6, 7, 8, 8a-octa-hydro-endo, exo-1, 4: 5,8-Dimethanonaphthalene)

1,2:3,4-Diepoxybutane (2, 3'-Bioxirane)

Diethylarsine (Arsine, diethyl-)

Diethylene glycol, dicarbamate (Ethanol, 2,2'-oxybis-, dicarbamate)

N,N'-Diethylhydrazine (Hydrazine, 1,2-diethyl)

O,O Diethyl S-methyl ester of phosphorodithioic acid (Phosphorodithioic acid, 0,0 diethyl S-methyl ester)

0,0 Diethylphosphoric acid, 0-p-nitrophenyl ester (Phosphoric acid, diethyl p-nitrophenyl ester)

Diethyl phthalate (1, 2 Benzenedicarboxylic acid, diethyl ester)

0,0 Diethyl 0-2-pyrazinyl phosphorothioate (Phosphorothioic acid, 0,0 diethyl O-pyrazinyl ester)

Diethylstilbesterol (4,4'-Stilbenediol, alpha, alpha-diethyl, bis (dihydrogen phosphate, (E)-)

## APPENDICES

Dihydrosafrole (Benzene, 1,2-methylenedioxy-4-propyl-)

3,4-Dihydroxy-alpha-(methylamino)methyl benzyl alcohol (1,2-Benzenediol, 4-(1-hydroxy-2-(methylamino)ethyl)-)

Diisopropylfluorophosphate (DFP) (Phosphorofluoridic acid, bis(1-methylethyl)ester)

Dimethoate (Phosphorodithioic acid, 0,0-dimethyl S-(2-(methylamino)-2-oxoethyl) ester)

3,3'-Dimethoxybenzidine ((1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethoxy-)

p-Dimethylaminoazobenzene (Benzenamine, N,N-dimethyl-4-(phenylazo)-)

2,4-Dimethylaniline (2,4-xylylidine)

7,12-Dimethylbenz(a)anthracene (1,2-Benzanthracene, 7,12-dimethyl-)

3,3'-Dimethylbenzidine((1,1'-Biphenyl)-4,4'-diamine, 3,3'- dimethyl-)

Dimethylcarbamoyl chloride (Carbamoyl chloride, dimethyl-)

1,1-Dimethylhydrazine (Hydrazine, 1,1-dimethyl-)

1,2-Dimethylhydrazine (Hydrazine,1,2-dimethyl-)

3,3-Dimethyl-1- (methylthio)-2-butanone, 0-((methylamino) carbonyl)oxime (Thiofanox)

alpha, alpha-Dimethylphenethylamine (Ethanamine,1,1-dimethyl-2-phenyl-)

2,4-Dimethylphenol (Phenol, 2,4-dimethyl-)

Dimethyl phthalate (1,2-Benzenedicarboxylic acid, dimethyl ester)

Dimethyl sulfate (Sulfuric acid, dimethyl ester)

Dimetilan (Carbamic acid, dimethyl-, 1- ((dimethylamino) carbonyl)-5-methyl-1H-pyrazol-3-yl ester)

Dinitrobenzene, N.O.S.\*(Benzene, dinitro-, N.O.S.\*)

4,6-Dinitro-o-cresol and salts (Phenol, 2,4-dinitro-6-methyl-, and salts)

2,4-Dinitrophenol (Phenol, 2,4-dinitro-)

2,4-Dinitrotoluene (Benzene, 1-methyl-2,4-dinitro-)

2,6-Dinitrotoluene (Benzene, 1-methyl-2,6-dinitro-)

Di-n-octyl phthalate (1,1-Benzenedicarboxylic acid, dioctyl ester)

1,4-Dioxane (1,4-Diethylene oxide)

Diphenylamine (Benzenamine, N-phenyl-)

## APPENDICES

1,2-Diphenylhydrazine (Hydrazine, 1,2-diphenyl-)

Di-n-propylnitrosamine (N-Nitroso-di-n-propylamine)

Disulfiram (Thioperoxydicarbonic diamide, tetraethyl)

Disulfoton (0.0-diethyl S- (2-(ethylthio)ethyl) phosphorodithioate)

2,4-Dithiobiuret (Thioimidodicarbonic diamide)

Endosulfan (5-Norbornene, 2,3-dimethanol, 1,4,5,6,7,7-hexachloro-cyclic sulfite)

Endrin and metabolites (1,2,3,4,10,10-hexachloro-6, 7-epoxy- 1,4,4a,5,6,7,8,8a-octahydro-endo, endo-1,4:5,8 dimethanonaphthalene, and metabolites)

EPTC (Carbamothioic acid, dipropyl-, S-ethyl ester)

Ethyl carbamate (Urethane) Carbamic acid, ethyl ester

Ethyl cyanide (propanenitrile)

Ethylenebisdithiocarbamic acid, salts and esters (1,2-Ethanediylbiscarbamodithioic acid, salts and esters)

Ethyleneimine (Aziridine)

Ethylene oxide (Ocirane)

Ethylenethiourea (2-Imidazolidinethione)

Ethyl methacrylate (2-Propenoic acid, 2-methyl-, ethyl ester)

Ethyl methanesulfonate (Methanesulfonic acid, ethyl ester)

Ethyl Ziram (Zinc, bis(diethylcarbamodithioato-S,S')-)

Ferbam (Iron, tris(dimethylcarbamodithioato-S,S')-,)

Fluoranthene (Benzo(j,k)fluorene)

Fluorine

2-Fluoroacetamide (Acetamide, 2-fluoro-)

Fluoroacetic acid, sodium salt (Acetic acid, fluoro-, sodium salt)

Formaldehyde (Methylene oxide)

Formetanate hydrochloride (Methanimidamide, N,N-dimethyl-N'-(3-(((methylamino) carbonyl) oxy)phenyl)-, monohydrochloride)

Formic acid (Methanoic acid)

Formparanate (Methanimidamide, N,N-dimethyl-N'-(2-methyl-4-(((methylamino) carbonyl) oxy)phenyl)-)

## APPENDICES

Glycidylaldehyde (1-propanol-2,3-epoxy)

Halomethane, N.O.S.\*

Heptachlor (4,7 Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4, 7, 7a-tetrahydro-)

Heptachlor epoxide (alpha, beta, and gamma isomers)(4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7-tetrahydro-,alpha, beta, and gamma isomers)

Heptachlorodibenzofurans

Heptachlorodibenzo-p-dioxins

Hexachlorobenzene (Benzene, hexachloro-)

Hexachlorobutadiene (1,3-Butadiene, hexachloro-)

Hexachlorocyclohexane (all isomers) (Lindane and isomers)

Hexachlorocyclopentadiene (1,3-Cyclopentadiene,1,2,3,4,5,6-hexachloro-)

Hexachlorodibenzo-p-dioxins

Hexachlorodibenzofurans

Hexachloroethane (Ethane, hexachloro-)

1,2,3,4,10,10-Hexachloro-1,2,4a,5,8,8a-hexahydro-1,4:5,8-endo, endo-dimethanonaphthalene (Hexachlorohexahydro-endo, endo-dimethanonaphthalene)

Hexachlorophene (2,2'-Methylenebis (3,4,6-trichlorophenol))

Hexachloropropene (Propene, hexachloro-)

Hexaethyltetraphosphate (Tetraphosphoric acid, hexaethyl ester)

Hydrazine (Diamine)

Hydrocyanic acid (Hydrogen cyanide)

Hydrofluoric acid (Hydrogen fluoride)

Hydrogen sulfide (Sulfur hydride)

Hydroxydimethylarsine oxide (Cacodylic acid)

Indeno (1,2,3-cd)pyrene (1,10-(1,2-phenylene)pyrene)

Iodomethane (Methyl iodide)

## APPENDICES

3-Iodo-2-propynyl n-butylcarbamate (Carbamic acid, butyl-, 3-iodo-2-propynyl ester)  
Isocyanic acid, methyl ester (Methyl isocyanate)  
Isobutyl alcohol (1-Propanol, 2-methyl-)  
Isolan (Carbamic acid, dimethyl-, 3-methyl-1-(1-methylethyl)-1H-pyrazol-5-yl ester)  
Isosafrole (Benzene, 1,2-methylenedioxy-4-allyl-)  
Kepone (Decachlorooctahydro-1,3,4-methano-2H-cyclobuta(cd)pentalene-2-one)  
Lasiocarpine (2-Butenoic acid, 2-methyl-, 7-((2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy)methyl)-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester)  
Lead and compounds, N.O.S.\*  
Lead acetate (Acetic acid, lead salt)  
Lead phosphate (Phosphoric acid, lead salt)  
Lead subacetate (Lead, bis(acetato-O)tetrahydroxytri-)  
Maleic anhydride (2,5-Furandione)  
Maleic hydrazide (1,2-Dihydro-3,6-Pyridazinedione)  
Malononitrile (Propanedinitrile)  
Manganese dimethyldithiocarbamate (Manganese, bis(dimethylcarbamo-dithioato-S,S')-,)  
Melphalan (Alanine, 3-(p-bis(2-chloroethyl)amino)phenyl-, L-)  
Mercury fulminate (Fulminic acid, mercury salt)  
Mercury and compounds, N.O.S.\*  
Metam Sodium (Carbamodithioic acid, methyl-, monosodium salt)  
Methacrylonitrile (2-Propenenitrile, 2-methyl-)  
Methanethiol (Thiomethanol)  
Methapyrilene (Pyridine, 2-((2-dimethylamine)ethyl)-2-thenylamino-)  
Methiocarb (Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate)  
Metholmyl (Acetimidic acid, N-(methylcarbamo-yl, oxy)thio-, methyl ester)  
Methoxychlor (Ethane, 1,1,1-trichloro-2,2' -bis (p-methoxyphenyl)-)  
2-Methylaziridine (1,2-Propylenimine)

## APPENDICES

3-Methylcholanthrene (Benz(j)aceanthrylene,1,2-dihydro-3-methyl-)

Methyl chlorocarbonate (Carbonochloridic acid, methyl ester)

4,4'-Methylenebis (2-chloroaniline) (Benzenamine, 4,4' methylenebis-(2-chloro-))

Methyl ethyl ketone (MEK) (2-Butanone)

Methyl hydrazine (Hydrazine, methyl-)

2-Methylactonitrile (Propanenitrile, 2-hydroxy-2-methyl-)

Methyl methacrylate (2-Propenoic acid, 2-methyl-, methyl ester)

Methyl methanesulfonate (Methanesulfonic acid, methyl ester)

2-Methyl-2- (methylthio)propionaldehyde-o-(methylcarbonyl) oxime

N-Methyl-N-nitro-N-nitrosoguanidine  
(Guanidine, N-nitroso-N-methyl-N-nitro-)

Methyl Parathion (0,0-dimethyl O- (4-nitrophenyl)  
(phosphorothioate)

Methylthiouracil (4-1 H-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-)

Metolcarb (Carbamic acid, methyl-, 3-methylphenyl ester)

Mexacarbate (Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester))

Molinate (1H-Azepine-1-carbothioic acid, hexahydro-, S-ethyl ester)

Mustard gas (Sulfide, bis(2-chloroethyl))

Naphthalene

1,4 Naphthoquinone (1,4 Naphthalenedione)

1-Naphthylamine (alpha-Naphthylamine)

2-Naphthylamine (beta-Naphthylamine)

1-Naphthyl-2-thiourea (Thiourea, 1-naphthalenyl)

Nickel and compounds, N.O.S.\*

Nickel carbonyl (Nickel tetracarbonyl)

Nickel cyanide (Nickel (II) cyanide)

## APPENDICES

Nicotine and salts (Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)-, and salts)

Nitric oxide (Nitrogen (II) oxide)

p-Nitroaniline (Benzenamine, 4-nitro-)

Nitrobenzene (Benzene, nitro-)

Nitrogen dioxide (Nitrogen (IV) oxide)

Nitrogen mustard N-oxide and hydrochloride salt (Ethanamine, 2-chloro-, N-(2-chloroethyl)-N-methyl-, N-oxide, and hydrochloride salt)

Nitroglycerine (1,2,3-Propanetriol, trinitrate)

4-Nitrophenol (Phenol, 4 nitro-)

2-Nitropropane (Propane, 2-nitro)

4-Nitroquinoline-1-oxide (Quinoline, 4-nitro-1-oxide-)

Nitrosamine, N.O.S.\*

N-Nitrosodi-n-butylamine (1-Butanamine, N-butyl-N-nitroso-)

N-Nitrosodiethanolamine (Ethanol, 2,2-(nitrosoimino) bis-)

N-Nitrosodiethylamine (Ethanamine, N-ethyl-N-nitroso-)

N-Nitrosodimethylamine (Dimethylnitrosamine)

N-Nitroso-N-ethylurea (Carbamide, N-ethyl-N-nitroso-)

N-Nitrosomethylethylamine (Ethanamine, N-methyl-N-nitroso-)

N-Nitroso-N-methylurea (Carbamide, N-methyl-N-nitroso-)

N-Nitroso-N-methylurethane (Carbamic acid, methylnitroso-, ethyl ester)

N-Nitrosomethylvinylamine (Ethenamine, N-methyl-N-nitroso-)

N-Nitrosomorpholine (Morpholine, N-nitroso-)

N-Nitrosornicotine (Nornicotine, N-nitroso-)

N-Nitrosopiperidine (Pyridine, hexahydro-, N-nitroso-)

N-Nitrosopyrrolidine (Pyrrole, tetrahydro-, N-nitroso-)

N-Nitrososarcosine (Sarcosine, N-nitroso-)

5-Nitro-o-toluidine (Benzenamine, 2-methyl-5-nitro-)

## APPENDICES

Octachlorodibenzo-p-dioxin (OCDD)

Octachlorodibenzofuran (OCDF)

Octamethylpyrophosphoramidate (diphosphoramidate, octamethyl-)

Osmiumtetroxide (Osmium (VIII) oxide)

7-Oxabicyclo (2,2,1)heptane-2,3-dicarboxylic acid (Endothal)

Oxamyl (Ethanimidothioic acid, 2-(dimethylamino) -N-(((methylamino)carbonyl)oxy)-2-oxo-, methyl ester)

Paraldehyde (1,3,5-Trioxane, 2,4,6-trimethyl-)

Parathion (Phosphorothioic acid, 0,0-diethyl)

0-(p-nitrophenyl) ester

Pebulate (Carbamothioic acid, butylethyl-S-propyl ester)

Pentachlorobenzene (Benzene, pentachloro-)

Pentachlorodibenzo-p-dioxins

Pentachlorodibenzofurans

Pentachloroethane (Ethane, pentachloro-)

Pentachloronitrobenzene (PCNB) (Benzene, pentachloronitro-)

Pentachlorophenol (Phenol, pentachloro-)

Perchloromethyl mercaptan (methane sulfenyl chloride, trichloro-)

Phenacetin (Acetamide, N-(4-ethoxyphenyl)-)

Phenol (Benzene, hydroxy-)

Phenylenediamine (Benzenediamine)

1,2 Phenylenediamine

1,3-Phenylenediamine

Phenylmercury acetate (mercury, acetatophenyl-)

N-Phenylthiourea (Thiourea, phenyl-)

Phosgene (Carbonyl chloride)

Phosphine (Hydrogen phosphide)

Phosphorodithioic acid, 0,0-diethyl S-(ethylthio)methyl ester (Phorate)

Phosphorothioic acid, 0,0-dimethyl 0-(p-dimethylamino) sulfonylphenyl ester



## APPENDICES

(Famphur)

Phthalic acid esters, N.O.S.\* (Benzene, 1,2-dicarboxylic acid, esters, N.O.S.\*)

Phthalic anhydride (1,2-Benzenedicarboxylic acid anhydride)

Physostigmine (Pyrrolo(2,3-b)indol-5-01, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methylcarbamate (ester), (3aS-cis)-)

Physostigmine salicylate (Benzoic acid, 2-hydroxy-, copd. with (3aS-cis)-

-1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo (2,3-b)indol-5-yl methylcarbamate ester (1:1))

2-Picoline (Pyridine, 2-methyl-)

Polychlorinated biphenyl, N.O.S.\*

Potassium cyanide

Potassium dimethyldithiocarbamate (Carbamodithioic acid, dimethyl, potassium salt)

Potassium n-hydroxymethyl-n-methyl-dithiocarbamate

Potassium n-methyldithiocarbamate (Carbamodithioic acid, methyl-monopotassium salt)

Potassium pentachlorophenate (Pentachlorophenol, potassium salt)

Potassium silver cyanide (Argentate (1), dicyano-, potassium)

Pronamide (3,5-Dichloro-N-(1,1-dimethyl-2-Propynyl)benzamide)

1,3-Propane sultone (1,2-Oxathiolane, 2,2-dioxide)

Promecarb (Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate)

Propham (Carbamic acid, phenyl-, 1-methylethyl ester)

Propoxur (Phenol, 2-(1-methylethoxy)-, methylcarbamate)

n-Propylamine(1-Propanamine)

Propylthiouracil(2,3-dihydro-6-propyl-2-thioxo-4(IH)-pyrimidinone)

2-Propyn-1-ol (Propargyl alcohol)

Prosulfocarb (Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester)

Pyridine

Reserpine(Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-(3,4,5-trimethoxybenzoyloxyl)-methyl ester)

Resorcinol (1,3-Benzenediol)

Safrole (Benzene, 1,2-methylenedioxy-4-allyl-)

## APPENDICES

Selenious acid (Selenium dioxide)

Selenium and compounds, N.O.S.\*

Selenium sulfide (Sulfur selenide)

Selenium, tetrakis (dimethyl-dithiocarbamate) (Carbamodithioic acid, dimethyl-, tetraanhydrosulfide with orthothioselenious acid)

Selenourea (Cargaminimidoseleonic acid)

Silver and compounds, N.O.S.\*

Silver cyanide

Silvex, propionic acid, 2-(2,4,5-trichlorophenoxy), salts and esters (2,4,5-TP, salts and esters)

Sodium cyanide Sodium dibutyldithiocarbamate (Carbamodithioic acid, dibutyl, sodium salt)

Sodium diethyldithiocarbamate (Carbamodithioic acid, diethyl-sodium salt)

Sodium dimethyldithiocarbamate (Carbamodithioic acid, dimethyl-, sodium salt)

Sodium pentachlorophenate (Pentachlorophenol, sodium salt)

Streptozotocin (D-Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-)

Strychnine and salts (Strychnidin-10-one, and salts)

Sulfallate (Carbamodithioic acid, diethyl-, 2-chloro-2-propenyl ester)

Tetrabutylthiuram disulfide (Thioperoxydicarbonic diamide, tetrabutyl)

1,2,4,5-Tetrachlorobenzene (Benzene, 1,2,4,5-tetrachloro-)

2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) (Dibenzo-p-dioxin,2,3,7,8-tetrachloro-)

Trachlorodibenzo-p-dioxins

Tetrachlorodibenzofurans

Tetrachlorethane, N.O.S.\*(Ethane, tetrachloro-, N.O.S.\*)

1,1,1,2-Tetrachlorethane (Ethane, 1,1,1,2-tetrachloro-)

1,1,2,2-Tetrachlorethane (Ethane, 1,1,2,2-tetrachloro-)

Tetrachloromethane (Carbon tetrachloride)

2,3,4,6-Tetrachlorophenol (Phenol, 2,3,4,6-tetrachloro-)

## APPENDICES

2,3,4,6-Tetrachlorophenol, potassium salt

2,3,4,6-Tetrachlorophenol, sodium salt

Tetraethyldithiopyrophosphate (Dithiopyrophosphoric acid, tetraethyl-ester)

Tetraethyl lead (lumbane, tetraethyl-)

Tetraethylpyrophosphate (Pyrophosphoric acid, tetraethyl ester)

Tetramethylthiuram monosulfide

Tetranitromethane (Methane, tetranitro-)

Thallic oxide (Thallium (III) oxide)

Thallium and compounds, N.O.S.\*

Thallium (I) acetate (Acetic acid, thallium (I) salt)

Thallium (I) carbonate (Carbonic acid, dithallium (I) salt)

Thallium (I) chloride

Thallium (I) nitrate (Nitric acid, thallium (I) salt)

Thallium selenite

Thallium (I) sulfate (Sulfuric acid, thallium (I) salt)

Thioacetamide (Ethanethioamide)

Thiodicarb (Ethanimidothioic acid, N,N'-(thiobis ((methylimino) carbonyloxy)) bis-, dimethyl ester)

Thiophanate-methyl (Carbamic acid, (1,2-phenylenebis (iminocarbonothioyl)) bis-, dimethyl ester)

Thiosemicarbazide (Hydrazinecarbothioamide)

Thiourea (Carbamide thio-)

Thiuram (Bis(dimethylthiocarbamoyl) disulfide)

Tirpate (1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O-((methylamino) carbonyl) oxime)

Toluene (Benzene, methyl)

Toluene diisocyanate (Benzene, 2,4- and 2,6-diisocyanatomethyl-)

Toluenediamine, N.O.S.\*(Diaminotolulene, N.O.S. \*)

2,4-Toluenediamine

## APPENDICES

2,6-Toluenediamine

3,4-Toluenediamine

o-Toluidine hydrochloride (Benzenamine, 2-methyl, hydrochloride)

Toxaphene (Camphene, octachloro-)

Triallate (Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester)

Tribromomethane (Bromoform)

1,2,4-Trichlorobenzene (Benzene, 1,2,4-trichloro-)

1,1,1-Trichloroethane (Methyl chloroform)

1,1,2-Trichloroethane (Ethane, 1,1,2-trichloro-)

Trichloroethene (Trichloroethylene)

Trichloromonofluoromethane (Methane, trichlorofluoro-)

2,4,5-Trichlorophenol (Phenol, 2,4,5-trichloro-)

2,4,6-Trichlorophenol (Phenol, 2,4,6-trichloro-)

Trichloropropane, N.O.S.\* (Propane trichloro, N.O.S.\*)

1,2,3-Trichloropropane (Propane, 1,2,3-trichloro-)

Triethylamine (Ethanamine, N,N-diethyl-)

0,0,0-Triethyl phosphorothioate (Phosphorothioic acid, 0,0,0-triethyl ester)

sym-Trinitrobenzene (Benzene, 1,3,5-trinitro-)

Tris(1-aziridinyl) phosphine sulfide (Phosphine sulfide, tris(1-aziridinyl-)

Tris(2,3,-dibromo-, Phosphate)

Trypan blue (2,7-Naphthalenedisulfonic acid, 3,3-(3,3-dimethyl(1,1-biphenyl)-

4,4-diyl)bis(azo) (bis (5-amino-4-hydroxy-, tetrasodium salt)

Undecamethylenediamine, N,N'-bis-(2-chlorobenzyl) -, dihydrochloride (N,N' -

Undecamethylenebis(2-chlorobenzylamine, dihydrochloride)

Uracil mustard (Uracil 5-bis(2-chloroethyl)amino)-

Vanadic acid, ammonium salt (ammonium vanadate)

Vanadium pentoxide (Vanadium (V) oxide)

vernolate (Carbamothioic acid, dipropyl-, S-propyl ester)

## APPENDICES

Vinyl chloride (Ethene, chloro-)

Zinc cyanide

Zinc phosphide

Ziram (Zinc, bis(dimethylcarbamodithioato-S,S')-(T-4)-)

\*The abbreviation N.O.S. (not otherwise specified) signifies those members of the general class not specifically listed by name in this Appendix.