

WAC 173-303-9904 Dangerous waste sources list. The following Hazard Codes are used to indicate the basis EPA used for listing the classes or types of wastes listed in this section:

- Ignitable Waste (I)
- Corrosive Waste (C)
- Reactive Waste (R)
- Toxicity Characteristic Waste (E)
- Acute Hazardous Waste (H)
- Toxic Waste (T)

DANGEROUS WASTE SOURCES LIST

(1)

Dangerous Waste No.	Sources
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Nonspecific Sources

Generic:

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| 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, a total of ten 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: Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane and 1,1,2-trichloroethane; all spent solvent mixtures/blends containing, before use, a total of ten 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 ten 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) |

(1)

Dangerous
Waste No.

Sources

F004	The following spent nonhalogenated solvents: Cresols and cresylic acid, nitrobenzene; all spent solvent mixtures/ blends containing, before use, a total of ten 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, pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures/ blends containing, before use, a total of ten 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)
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. (T)

(1)

Dangerous
Waste No.

Sources

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.) (See footnote 1, below.) (H)
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. (See footnote 1, below.) (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. (See footnote 1, below.) (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, or component in a formulating process) of tri- and tetrachlorophenols. (See footnote 1, below.) (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 this section.) (T)

(1)

Dangerous
Waste No.

Sources

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. (See footnote 1, below.) (H)
F027	Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (See footnote 1, below.) (This listing does not include formulations containing hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component.) (H)
F028	Residues resulting from the incineration or thermal treatment of soil contaminated with nonspecific sources wastes 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 WAC 173-303-083 or potentially cross-contaminated wastes that are otherwise currently regulated as dangerous 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)

(1)

Dangerous
Waste No.

Sources

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)
F037	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 noncontact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges generated in aggressive biological treatment units as defined in footnote 2, below (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 WAC 173-303-071 (3)(cc)(i), if those residuals are to be disposed of. (See footnote 2, below.) (T)

(1)

Dangerous
Waste No.

Sources

F038	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 noncontact 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 footnote 2, below (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. (See footnote 2, below.) (T)
F039	Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as dangerous under WAC 173-303-9903, 173-303-9904, and 173-303-9905. (Leachate resulting from the disposal of one or more of the following dangerous wastes, and no other dangerous wastes, retains its Dangerous Waste Number(s): F020, F021, F022, F026, F027, and/or F028.) (T)

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

Specific Sources

Wood Preservation:

K001	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol. (T)
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Inorganic Pigments:

K002	Wastewater treatment sludge from the production of chrome yellow and orange pigments. (T)
K003	Wastewater treatment sludge from the production of molybdate orange pigments. (T)
K004	Wastewater treatment sludge from the production of zinc yellow pigments. (T)
K005	Wastewater treatment sludge from the production of chrome green pigments. (T)
K006	Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated). (T)

(1) Dangerous Waste No.	Sources
K007	Wastewater treatment sludge from the production of iron blue pigments. (T)
K008	Oven residue from the production of chrome oxide green pigments. (T)
Organic Chemicals:	
K009	Distillation bottoms from the production of acetaldehyde from ethylene. (T)
K010	Distillation side cuts from the production of acetaldehyde from ethylene. (T)
K011	Bottom stream from the wastewater stripper in the production of acrylonitrile. (R,T)
K013	Bottom stream from the acetonitrile column in the production of acrylonitrile. (R,T)
K014	Bottoms from the acetonitrile purification column in the production of acrylonitrile. (T)
K015	Still bottoms from the distillation of benzyl chloride. (T)
K016	Heavy ends or distillation residues from the production of carbon tetrachloride. (T)
K017	Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin. (T)
K018	Heavy ends from the fractionation column in ethyl chloride production. (T)
K019	Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production. (T)
K020	Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production. (T)
K021	Aqueous spent antimony catalyst waste from fluoromethanes production. (T)
K022	Distillation bottom tars from the production of phenol/acetone from cumene. (T)
K023	Distillation light ends from the production of phthalic anhydride from naphthalene. (T)
K024	Distillation bottoms from the production of phthalic anhydride from naphthalene. (T)
K093	Distillation light ends from the production of phthalic anhydride from ortho-xylene. (T)
K094	Distillation bottoms from the production of phthalic anhydride from ortho-xylene. (T)
K025	Distillation bottoms from the production of nitrobenzene by the nitration of benzene. (T)
K026	Stripping still tails from the production of methyl ethyl pyridines. (T)
K027	Centrifuge and distillation residues from toluene diisocyanate production. (R,T)

(1)	Dangerous Waste No.	Sources
K028	Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane. (T)	
K029	Waste from the product steam stripper in the production of 1,1,1-trichloroethane. (T)	
K095	Distillation bottoms from the production of 1,1,1-trichloroethane. (T)	
K096	Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane. (T)	
K030	Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene. (T)	
K083	Distillation bottoms from aniline production. (T)	
K103	Process residues from aniline extraction from the production of aniline. (T)	
K104	Combined wastewater streams generated from nitrobenzene/aniline production. (T)	
K085	Distillation of fractionation column bottoms from the production of chlorobenzenes. (T)	
K105	Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes. (T)	
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 the 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)	
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)	

(1)

Dangerous Waste No.	Sources
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)

(1)

Dangerous
Waste No.

Sources

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)
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. (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 hazardous waste or nonhazardous 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 the Hazardous Waste Management Act or dangerous waste regulations 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)

(1)

Dangerous
Waste No.

Sources

K181 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 subsection (3) of this section that are equal to or greater than the corresponding subsection (3) of this section levels, as determined on a calendar year basis. These wastes will not be hazardous if the nonwastewaters are:

(i) Disposed in a municipal solid waste landfill unit subject to the design criteria in 40 C.F.R. 258.40;

(ii) Disposed in a dangerous waste landfill unit subject to either WAC 173-303-665(2) or 40 C.F.R. 265.301 (incorporated by reference at WAC 173-303-400 (3)(a));

(iii) Disposed in other municipal solid waste landfill units that meet the design criteria in 40 C.F.R. 258.40, WAC 173-303-665(2) or 40 C.F.R. 265.301 (incorporated by reference at WAC 173-303-400 (3)(a)); or

(iv) Treated in a combustion unit that is permitted under the Hazardous Waste Management Act and the dangerous waste regulations, or an on-site combustion unit that is permitted under the Clean Air Act. For the purposes of this listing, dyes and/or pigments production is defined in subsection (2) of this section.

Subsection (4) of this section 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 dangerous under WAC 173-303-090 (5) through (8), 173-303-100 (5) through (6), 173-303-9903, and 173-303-9904 at the point of generation. Also, the listing does not apply to wastes generated before any annual mass loading limit is met. (T)

Explosives:

K044 Wastewater treatment sludges from the manufacturing and processing of explosives. (R)

K045 Spent carbon from the treatment of wastewater containing explosives. (R)

K046 Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds. (T)

K047 Pink/red water from TNT operations. (R)

Inorganic Chemicals:

K071 Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used. (T)

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Dangerous Waste No.	Sources
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| K073 | Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production. (T) |
| K106 | Wastewater treatment sludge from the mercury cell process in chlorine production. (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) |
| 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) |

Petroleum Refining:

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| 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 operations. (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) |

Iron and Steel:

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| 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 (NAICS codes 331111 and 332111). (C,T) |

Pesticides:

(1)	Dangerous Waste No.	Sources
K031	Byproduct salts generated in the production of MSMA and cacodylic acid. (T)	
K032	Wastewater treatment sludge from the production of chlordane. (T)	
K033	Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane. (T)	
K034	Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane. (T)	
K097	Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane. (T)	
K035	Wastewater treatment sludges generated in the production of creosote. (T)	
K036	Still bottoms from toluene reclamation distillation in the production of disulfoton. (T)	
K037	Wastewater treatment sludges from the production of disulfoton. (T)	
K038	Wastewater from the washing and stripping of phorate production. (T)	
K039	Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate. (T)	
K040	Wastewater treatment sludge from the production of phorate. (T)	
K041	Wastewater treatment sludge from the production of toxaphene. (T)	
K098	Untreated process wastewater from the production of toxaphene. (T)	
K042	Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T. (T)	
K043	2,6-Dichlorophenol waste from the production of 2,4-D. (T)	
K099	Untreated wastewater from the production of 2,4-D. (T)	
K123	Process wastewater (including supernates, filtrates, and wastewaters) 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)	

(1)
 Dangerous
 Waste No. Sources

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)

Primary Aluminum:

K088 Spent potliners from primary aluminum reduction. (T)

Secondary Lead:

K069 Emission control dust/sludge from secondary lead smelting. (Note: This listing is stayed administratively for sludge generated from secondary acid scrubber systems. The stay will remain in effect until further administrative action is taken. If EPA takes further action affecting this stay, EPA will publish a notice of the action in the *Federal Register*.) (T)

K100 Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting. (T)

Veterinary Pharmaceuticals:

K084 Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds. (T)

K101 Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds. (T)

K102 Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds. (T)

Ink Formulation:

K086 Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead. (T)

Coking:

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).

(1)	Dangerous Waste No.	Sources
K142	Tar storage tank residues from the production of coke from coal or from the recovery of coke by-products produced from coal.	
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.	
K144	Wastewater sump residues from light oil refining, including, but not limited to, intercepting or contamination sump sludges from the recover of coke by-products produced from coal.	
K145	Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal.	
K147	Tar storage tank residues from coal tar refining.	
K148	Residues from coal tar distillation, including but not limited to, still bottoms.	

Footnotes

- 1 For wastes listed with the dangerous waste numbers F020, F021, F022, F023, F026, or F027 the quantity exclusion limit is 2.2 lbs. (1 kg) per month or per batch.
- 2 Listing Specific Definitions:
 - a For the purposes of the F037 and F038 listings, oil/water/solids is defined as oil and/or water and/or solids.
 - b(i) 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 (A) the units employs a minimum of 6 hp per million gallons of treatment volume; and either (B) the hydraulic retention time of the unit is no longer than 5 days; or (C) the hydraulic retention time is no longer than 30 days and the unit does not generate a sludge that is a dangerous waste by the Toxicity Characteristic.

- (ii) 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 on-site records, documents and data sufficient to prove that: (A) The unit is an aggressive biological treatment unit as defined in this subsection; and (B) the sludges sought to be exempted from the definitions of F037 and/or F038 were actually treated in the aggressive biological treatment unit.
- c(i) 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.
- (ii) For the purposes of the F038 listing,
- (A) 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
- (B) Floats are considered to be generated at the moment they are formed in the top of the unit.

State Sources

- WPCB Discarded transformers, capacitors or bushings containing polychlorinated biphenyls (PCB) at concentrations of 2 parts per million or greater (except when drained of all free flowing liquid) and the following wastes generated from the salvaging, rebuilding, or discarding of transformers, capacitors or bushings containing polychlorinated biphenyls (PCB) at concentrations of 2 parts per million or greater: Cooling and insulating fluids and cores, including core papers. (Note—Certain PCB wastes are excluded from this listing under WAC 173-303-071 (3)(k). The generator should check that section to determine if their PCB waste is excluded from the requirements of chapter 173-303 WAC.)
- (2) *Listing Specific Definitions:* For the 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 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 off site 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.

Constituent	Chemical Abstracts No.	Mass Levels (kg/yr)
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 (a) through (c) and (e) of this subsection 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 subsection (1) - the K181 listing - of this section). If the nonwastewaters are disposed in landfill units or treated in combustion units as described in subsection (1) of this section, 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 (d) of this subsection.

- (a) *Determination based on no K181 constituents.* Generators that have knowledge (for example, 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* subsection (3) of this section) 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.

- (b) *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 (for example, 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 subsection (3) of this section. To make this determination, the generator must:
 - (i) 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.
 - (ii) 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 (c) of this subsection for the remainder of the year.
 - (iii) Keep a running total of the K181 constituent mass loadings over the course of the calendar year.
 - (iv) Keep the following records on-site for the three most recent calendar years in which the hazardous waste determinations are made:
 - (A) The quantity of dyes and/or pigment nonwastewaters generated.
 - (B) The relevant process information used.
 - (C) The calculations performed to determine annual total mass loadings for each K181 constituent in the nonwastewaters during the year.
- (c) *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 (c)(i) through (xi) of this subsection in order to make a determination that its waste is not K181.
 - (i) Determine which K181 constituents (see subsection (3) of this section) are reasonably expected to be present in the wastes based on knowledge of the wastes (for example, based on prior sampling and analysis data and/or information about raw materials used, production processes used, and reaction and degradation products formed).

- (ii) 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 (b) of this subsection and keep the records described in (b)(iv) of this subsection. For determinations based on sampling and analysis, the generator must comply with the sampling and analysis and recordkeeping requirements described below in this subsection.
- (iii) Develop a waste sampling and analysis plan (or modify an existing plan) to collect and analyze representative waste samples for the K181 constituents reasonably expected to be present in the wastes. At a minimum, the plan must include:
 - (A) A discussion of the number of samples needed to characterize the wastes fully;
 - (B) The planned sample collection method to obtain representative waste samples;
 - (C) A discussion of how the sampling plan accounts for potential temporal and spatial variability of the wastes;
 - (D) A detailed description of the test methods to be used, including sample preparation, clean up (if necessary), and determinative methods.
- (iv) Collect and analyze samples in accordance with the waste sampling and analysis plan.
 - (A) The sampling and analysis must be unbiased, precise, and representative of the wastes;
 - (B) 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 subsection (3) of this section.
- (v) Record the analytical results.
- (vi) Record the waste quantity represented by the sampling and analysis results.
- (vii) Calculate constituent-specific mass loadings (product of concentrations and waste quantity).
- (viii) Keep a running total of the K181 constituent mass loadings over the course of the calendar year.
- (ix) Determine whether the mass of any of the K181 constituents listed in subsection (3) of this section generated between January 1 and December 31 of any year is below the K181 listing levels.
- (x) Keep the following records on-site for the three most recent calendar years in which the hazardous waste determinations are made:
 - (A) The sampling and analysis plan.

- (B) The sampling and analysis results (including QA/QC data).
- (C) The quantity of dyes and/or pigment nonwastewaters generated.
- (D) The calculations performed to determine annual mass loadings.
- (xi) Nonhazardous waste determinations must be conducted annually to verify that the wastes remain nonhazardous.
- (A) 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.
- (B) 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.
- (C) 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.
- (d) *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.
- (e) *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 Hazardous Waste Management Act and the dangerous waste regulation requirements during the interim period, the generator could be subject to an enforcement action for improper management.

[Statutory Authority: Chapters 70.105, 70.105D RCW and RCRA. WSR 19-04-038 (Order 16-03), § 173-303-9904, filed 1/28/19, effective 4/28/19. Statutory Authority: Chapter 70.105 RCW. WSR 15-01-123 (Order 13-07), § 173-303-9904, filed 12/18/14, effective 1/18/15. Statutory Authority: Chapters 70.105 and 70.105D RCW. WSR 09-14-105 (Order 07-12), § 173-303-9904, filed 6/30/09, effective 7/31/09. Statutory Authority: Chapters 70.105, 70.105D, and 15.54 RCW and RCW 70.105.007.

WSR 04-24-065 (Order 03-10), § 173-303-9904, filed 11/30/04, effective 1/1/05; WSR 00-11-040 (Order 99-01), § 173-303-9904, filed 5/10/00, effective 6/10/00. Statutory Authority: Chapters 70.105 and 70.105D RCW. WSR 98-03-018 (Order 97-03), § 173-303-9904, filed 1/12/98, effective 2/12/98; WSR 95-22-008 (Order 94-30), § 173-303-9904, filed 10/19/95, effective 11/19/95; WSR 94-01-060 (Order 92-33), § 173-303-9904, filed 12/8/93, effective 1/8/94. Statutory Authority: Chapters 70.105 and 70.105D RCW, 40 C.F.R. Part 271.3 and RCRA § 3006 (42 U.S.C. 3251). WSR 91-07-005 (Order 90-42), § 173-303-9904, filed 3/7/91, effective 4/7/91. Statutory Authority: Chapter 70.105 RCW. WSR 89-02-059 (Order 88-24), § 173-303-9904, filed 1/4/89; WSR 87-14-029 (Order DE-87-4), § 173-303-9904, filed 6/26/87; WSR 86-12-057 (Order DE-85-10), § 173-303-9904, filed 6/3/86; WSR 85-09-042 (Order DE-85-02), § 173-303-9904, filed 4/15/85; WSR 84-09-088 (Order DE 83-36), § 173-303-9904, filed 4/18/84. Statutory Authority: RCW 70.95.260 and chapter 70.105 RCW. WSR 82-05-023 (Order DE 81-33), § 173-303-9904, filed 2/10/82.]