

3745-51-32

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3745-51-32 Hazardous waste from specific sources.

(A) The following wastes are listed hazardous wastes from specific sources unless they are excluded under 40 CFR 260.20 and 40 CFR 260.22 and 40 CFR Part 261 appendix IX.

<u>Industry and EPA Hazardous Waste No.</u>	<u>Hazardous Waste</u>	<u>Code</u>
<u>Wood preservation:</u>		
<u>K001</u>	<u>Bottom sediment sludge from the treatment of wastewaters from wood preserving processes of that use creosote and/or pentachlorophenol</u>	<u>(T)</u>
<u>Inorganic pigments:</u>		
<u>K002</u>	<u>Wastewater treatment sludge from the production of chrome yellow and orange pigments</u>	<u>(T)</u>
<u>K003</u>	<u>Wastewater treatment sludge from the production of molybdate orange pigments</u>	<u>(T)</u>
<u>K004</u>	<u>Wastewater treatment sludge from the production of zinc yellow pigments</u>	<u>(T)</u>
<u>K005</u>	<u>Wastewater treatment sludge from the production of chrome green pigments</u>	<u>(T)</u>
<u>K006</u>	<u>Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated)</u>	<u>(T)</u>
<u>K007</u>	<u>Wastewater treatment sludge from the production of iron blue pigments</u>	<u>(T)</u>
<u>K008</u>	<u>Oven residue from the production of chrome oxide green pigments</u>	<u>(T)</u>
<u>Organic chemicals:</u>		
<u>K009</u>	<u>Distillation bottoms from the production of acetaldehyde from ethylene</u>	<u>(T)</u>
<u>K010</u>	<u>Distillation side cuts from the production of acetaldehyde from ethylene</u>	<u>(T)</u>
<u>K011</u>	<u>Bottom stream from the wastewater stripper in the production of acrylonitrile</u>	<u>(R, T)</u>
<u>K013</u>	<u>Bottom stream from the acetonitrile column in the production of acrylonitrile</u>	<u>(R, T)</u>
<u>K014</u>	<u>Bottoms from the acetonitrile purification column in the production of acrylonitrile</u>	<u>(T)</u>
<u>K015</u>	<u>Still bottoms from the distillation of benzyl chloride</u>	<u>(T)</u>
<u>K016</u>	<u>Heavy ends or distillation residues from the production of carbon tetrachloride</u>	<u>(T)</u>

<u>Industry and EPA Hazardous Waste No.</u>	<u>Hazardous Waste</u>	<u>Code</u>
<u>K017</u>	<u>Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin</u>	<u>(T)</u>
<u>K018</u>	<u>Heavy ends from the fractionation column in ethyl chloride production</u>	<u>(T)</u>
<u>K019</u>	<u>Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production</u>	<u>(T)</u>
<u>K020</u>	<u>Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production</u>	<u>(T)</u>
<u>K021</u>	<u>Aqueous spent antimony catalyst waste from fluoromethanes production</u>	<u>(T)</u>
<u>K022</u>	<u>Distillation bottom tars from the production of phenol/acetone from cumene</u>	<u>(T)</u>
<u>K023</u>	<u>Distillation light ends from the production of phthalic anhydride from naphthalene</u>	<u>(T)</u>
<u>K024</u>	<u>Distillation bottoms from the production of phthalic anhydride from naphthalene</u>	<u>(T)</u>
<u>K025</u>	<u>Distillation bottoms from the production of nitrobenzene by the nitration of benzene</u>	<u>(T)</u>
<u>K026</u>	<u>Stripping still tails from the production of methy ethyl pyridines</u>	<u>(T)</u>
<u>K027</u>	<u>Centrifuge and distillation residues from toluene diisocyanate production</u>	<u>(R, T)</u>
<u>K028</u>	<u>Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane</u>	<u>(T)</u>
<u>K029</u>	<u>Waste from the product steam stripper in the production of 1,1,1-trichloroethane</u>	<u>(T)</u>
<u>K030</u>	<u>Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene</u>	<u>(T)</u>
<u>K083</u>	<u>Distillation bottoms from aniline production</u>	<u>(T)</u>
<u>K085</u>	<u>Distillation or fractionation column bottoms from the production of chlorobenzenes</u>	<u>(T)</u>
<u>K093</u>	<u>Distillation light ends from the production of phthalic anhydride from orthoxylene</u>	<u>(T)</u>
<u>K094</u>	<u>Distillation bottoms from the production of phthalic anhydride from orthoxylene</u>	<u>(T)</u>
<u>K095</u>	<u>Distillation bottoms from the production of 1,1,1-trichloroethane</u>	<u>(T)</u>
<u>K096</u>	<u>Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane</u>	<u>(T)</u>

<u>Industry and EPA Hazardous Waste No.</u>	<u>Hazardous Waste</u>	<u>Code</u>
<u>K103</u>	<u>Process residues from aniline extraction from the production of aniline</u>	<u>(T)</u>
<u>K104</u>	<u>Combined wastewater streams generated from nitrobenzene/aniline production</u>	<u>(T)</u>
<u>K105</u>	<u>Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes</u>	<u>(T)</u>
<u>K107</u>	<u>Column bottoms from product separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides</u>	<u>(C, T)</u>
<u>K108</u>	<u>Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides</u>	<u>(I, T)</u>
<u>K109</u>	<u>Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides</u>	<u>(T)</u>
<u>K110</u>	<u>Condensed column overheads from intermediate separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides</u>	<u>(T)</u>
<u>K111</u>	<u>Product washwaters from the production of dinitrotoluene via nitration of toluene</u>	<u>(C, T)</u>
<u>K112</u>	<u>Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene</u>	<u>(T)</u>
<u>K113</u>	<u>Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene</u>	<u>(T)</u>
<u>K114</u>	<u>Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene</u>	<u>(T)</u>
<u>K115</u>	<u>Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene</u>	<u>(T)</u>
<u>K116</u>	<u>Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine</u>	<u>(T)</u>
<u>K117</u>	<u>Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene</u>	<u>(T)</u>
<u>K118</u>	<u>Spent adsorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene</u>	<u>(T)</u>

<u>Industry and EPA Hazardous Waste No.</u>	<u>Hazardous Waste</u>	<u>Code</u>
<u>K136</u>	<u>Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene</u>	<u>(T)</u>
<u>K149</u>	<u>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.)</u>	<u>(T)</u>
<u>K150</u>	<u>Organic residuals, excluding spent carbon absorbent, from the spent chlorine gas and hydrochloric acid recovery process associated with the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.</u>	<u>(T)</u>
<u>K151</u>	<u>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.</u>	<u>(T)</u>
<u>K156</u>	<u>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.)</u>	<u>(T)</u>
<u>K157</u>	<u>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.)</u>	<u>(T)</u>
<u>K158</u>	<u>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.)</u>	<u>(T)</u>
<u>K159</u>	<u>Organics from the treatment of thiocarbamate wastes.</u>	<u>(T)</u>
<u>K161</u>	<u>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 or K126.</u>	<u>(R,T)</u>

<u>Industry and EPA Hazardous Waste No.</u>	<u>Hazardous Waste</u>	<u>Code</u>
<u>K174</u>	<u>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: (a) they are disposed of in a hazardous waste or non-hazardous waste landfill licensed or permitted by the state or federal government; (b) they are not otherwise placed on the land prior to final disposal; and (c) 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 regulations adopted under Chapter 3734. of the Revised Code or subtitle C of RCRA 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 in this description. 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.</u>	<u>(T)</u>
<u>K175</u>	<u>Wastewater treatment sludges from the production of vinyl chloride monomer using mercuric chloride catalyst in an acetylene-based process</u>	<u>(T)</u>

<u>Industry and EPA Hazardous Waste No.</u>	<u>Hazardous Waste</u>	<u>Code</u>
<u>K181</u>	<u>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 (C) of this rule that are equal to or greater than the corresponding paragraph (C) levels, as determined on a calendar year basis. These wastes will not be hazardous if the nonwastewaters are: (a) disposed in a RCRA subtitle D landfill unit subject to the design criteria in 40 CFR 258.40, (b) disposed in a RCRA subtitle C landfill unit subject to either rule 3745-57-03 or rule 3745-68-05 of the Administrative Code, (c) disposed in other RCRA subtitle D landfill units that meet the design criteria in 40 CFR 258.40, rule 3745-57-03 of the Administrative Code, or rule 3745-68-05 of the Administrative Code, or (d) treated in a combustion unit that is permitted under RCRA subtitle C, or an onsite combustion unit that is permitted under the Clean Air Act. For the purposes of this listing, dyes and/ or pigments production is defined in paragraph (B)(1) of this rule. Paragraphs (D) to (D)(5) of this rule describe 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 rules 3745-51-21 to 3745-51-24 of the Administrative Code and rules 3745-51-31 to 3745-51-33 of the Administrative Code at the point of generation. Also, the listing does not apply to wastes generated before any annual mass loading limit is met.</u>	<u>(T)</u>
<u>Inorganic chemicals:</u>		
<u>K071</u>	<u>Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used</u>	<u>(T)</u>
<u>K073</u>	<u>Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production</u>	<u>(T)</u>
<u>K106</u>	<u>Wastewater treatment sludge from the mercury cell process in chlorine production</u>	<u>(T)</u>
<u>K176</u>	<u>Baghouse filters from the production of antimony oxide, including filters from the production of intermediates (e.g., antimony metal or crude antimony oxide)</u>	<u>(E)</u>
<u>K177</u>	<u>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)</u>	<u>(T)</u>

<u>Industry and EPA Hazardous Waste No.</u>	<u>Hazardous Waste</u>	<u>Code</u>
<u>K178</u>	<u>Residues from manufacturing and manufacturing-site storage of ferric chloride from acids formed during the production of titanium dioxide using the chloride-ilmenite process</u>	<u>(T)</u>
<u>Pesticides:</u>		
<u>K031</u>	<u>By-product salts generated in the production of MSMA and cacodylic acid</u>	<u>(T)</u>
<u>K032</u>	<u>Wastewater treatment sludge from the production of chlordane</u>	<u>(T)</u>
<u>K033</u>	<u>Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane</u>	<u>(T)</u>
<u>K034</u>	<u>Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane</u>	<u>(T)</u>
<u>K035</u>	<u>Wastewater treatment sludges generated in the production of creosote</u>	<u>(T)</u>
<u>K036</u>	<u>Still bottoms from toluene reclamation distillation in the production of disulfoton</u>	<u>(T)</u>
<u>K037</u>	<u>Wastewater treatment sludges from the production of disulfoton</u>	<u>(T)</u>
<u>K038</u>	<u>Wastewater from the washing and stripping of phorate production</u>	<u>(T)</u>
<u>K039</u>	<u>Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate</u>	<u>(T)</u>
<u>K040</u>	<u>Wastewater treatment sludge from the production of phorate</u>	<u>(T)</u>
<u>K041</u>	<u>Wastewater treatment sludge from the production of toxaphene</u>	<u>(T)</u>
<u>K042</u>	<u>Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T</u>	<u>(T)</u>
<u>K043</u>	<u>2,6-Dichlorophenol waste from the production of 2,4-D</u>	<u>(T)</u>
<u>K097</u>	<u>Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane</u>	<u>(T)</u>
<u>K098</u>	<u>Untreated process wastewater from the production of toxaphene</u>	<u>(T)</u>
<u>K099</u>	<u>Untreated wastewater from the production of 2,4-D</u>	<u>(T)</u>
<u>K123</u>	<u>Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salt</u>	<u>(T)</u>

<u>Industry and EPA Hazardous Waste No.</u>	<u>Hazardous Waste</u>	<u>Code</u>
<u>K124</u>	<u>Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts</u>	<u>(C, T)</u>
<u>K125</u>	<u>Filtration, evaporation, and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts</u>	<u>(T)</u>
<u>K126</u>	<u>Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts</u>	<u>(T)</u>
<u>K131</u>	<u>Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide</u>	<u>(C, T)</u>
<u>K132</u>	<u>Spent absorbent and wastewater separator solids from the production of methyl bromide</u>	<u>(T)</u>
<u>Explosives:</u>		
<u>K044</u>	<u>Wastewater treatment sludges from the manufacturing and processing of explosives</u>	<u>(R)</u>
<u>K045</u>	<u>Spent carbon from the treatment of wastewater containing explosives</u>	<u>(R)</u>
<u>K046</u>	<u>Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds</u>	<u>(T)</u>
<u>K047</u>	<u>Pink/red water from TNT operations</u>	<u>(R)</u>
<u>Petroleum refining:</u>		
<u>K048</u>	<u>Dissolved air flotation (DAF) float from the petroleum refining industry</u>	<u>(T)</u>
<u>K049</u>	<u>Slop oil emulsion solids from the petroleum refining industry</u>	<u>(T)</u>
<u>K050</u>	<u>Heat exchanger bundle cleaning sludge from the petroleum refining industry</u>	<u>(T)</u>
<u>K051</u>	<u>API separator sludge from the petroleum refining industry</u>	<u>(T)</u>
<u>K052</u>	<u>Tank bottoms (leaded) from the petroleum refining industry</u>	<u>(T)</u>
<u>K169</u>	<u>Crude oil storage tank sediment from petroleum refining operations.</u>	<u>(T)</u>
<u>K170</u>	<u>Clarified slurry oil tank sediment and/or in-line filter/separation solids from petroleum refining operations.</u>	<u>(T)</u>
<u>K171</u>	<u>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).</u>	<u>(I,T)</u>

<u>Industry and EPA Hazardous Waste No.</u>	<u>Hazardous Waste</u>	<u>Code</u>
<u>K172</u>	<u>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).</u>	<u>(I, T)</u>
<u>Iron and steel:</u>		
<u>K061</u>	<u>Emission control dust/sludge from the primary production of steel in electric furnaces</u>	<u>(T)</u>
<u>K062</u>	<u>Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry (SIC Codes 331 and 332)</u>	<u>(C, T)</u>
<u>Primary aluminum:</u>		
<u>K088</u>	<u>Spent potliners from primary aluminum reduction</u>	<u>(T)</u>
<u>Secondary lead:</u>		
<u>K069</u>	<u>Emission control dust/sludge from secondary lead smelting, except for sludge generated from secondary acid scrubber systems.</u>	<u>(T)</u>
<u>K100</u>	<u>Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting</u>	<u>(T)</u>
<u>Veterinary pharmaceuticals:</u>		
<u>K084</u>	<u>Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds</u>	<u>(T)</u>
<u>K101</u>	<u>Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds</u>	<u>(T)</u>
<u>K102</u>	<u>Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds</u>	<u>(T)</u>
<u>Ink formulation:</u>		
<u>K086</u>	<u>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</u>	<u>(T)</u>
<u>Coking:</u>		
<u>K060</u>	<u>Ammonia still lime sludge from coking operations</u>	<u>(T)</u>
<u>K087</u>	<u>Decanter tank tar sludge from coking operations</u>	<u>(T)</u>

<u>Industry and EPA Hazardous Waste No.</u>	<u>Hazardous Waste</u>	<u>Code</u>
<u>K141</u>	<u>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).</u>	<u>(T)</u>
<u>K142</u>	<u>Tar storage tank residues from the production of coke from coal or from the recovery of coke by-products produced from coal.</u>	<u>(T)</u>
<u>K143</u>	<u>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.</u>	<u>(T)</u>
<u>K144</u>	<u>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.</u>	<u>(T)</u>
<u>K145</u>	<u>Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal.</u>	<u>(T)</u>
<u>K147</u>	<u>Tar storage tank residues from coal tar refining.</u>	<u>(T)</u>
<u>K148</u>	<u>Residues from coal tar distillation, including, but not limited to, still bottoms.</u>	<u>(T)</u>

(B) Listing specific definitions:

(1) 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 "Food and Drug Administration" (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 offsite use, formulation, and packaging of dyes and/or pigments, are not included in the K181 listing.

(2) Reserved.

(C) 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.

<u>Constituent</u>	<u>Chemical abstracts number</u>	<u>Mass levels (kg/yr)</u>
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

- (D) Procedures for demonstrating that dyes and/or pigment nonwastewaters are not K181. The procedures described in paragraphs (D)(1) to (D)(3)(k)(iii) and (D)(5) of this rule 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 (A) of this rule]. If the nonwastewaters are disposed in landfill units or treated in combustion units as described in paragraph (A) of this rule, 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 paragraph (D)(4) of this rule.
- (1) 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 (C) of this rule] 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.
- (2) Determination for generated quantities of one thousand metric tons per year or less for wastes that contain K181 constituents. If the total annual quantity of dyes and/or pigment nonwastewaters generated is one thousand metric tons or less, the generator may 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 in paragraph (C) of this rule. To make this determination, the generator must:
- (a) Each year document the basis for determining that the annual quantity of nonwastewaters expected to be generated will be less than one thousand metric tons.

- (b) Track the actual quantity of nonwastewaters generated from January 1 to December 31 of each year. If, at any time within the year, the actual waste quantity exceeds one thousand metric tons, the generator must comply with the requirements of paragraphs (D)(3) to (D)(3)(k)(iii) of this rule 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:
 - (i) The quantity of dyes and/or pigment nonwastewaters generated.
 - (ii) The relevant process information used.
 - (iii) The calculations performed to determine annual total mass loadings for each K181 constituent in the nonwastewaters during the year.
- (3) Determination for generated quantities greater than one thousand metric tons per year for wastes that contain K181 constituents. If the total annual quantity of dyes and/or pigment nonwastewaters generated is greater than one thousand metric tons, the generator must perform all of the steps described in paragraphs (D)(3)(a) to (D)(3)(k)(iii) of this rule in order to make a determination that its waste is not K181.
- (a) Determine which K181 constituents [see paragraph (D) of this rule] 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 may 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 paragraph (D)(2) of this rule and keep the records described in paragraph (D)(2)(d) of this rule. For determinations based on sampling and analysis, the generator must comply with the sampling and analysis and recordkeeping requirements described in paragraph (D)(4) of this rule.
 - (c) 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:
 - (i) A discussion of the number of samples needed to characterize the wastes fully;
 - (ii) The planned sample collection method to obtain representative waste samples;

- (iii) A discussion of how the sampling plan accounts for potential temporal and spatial variability of the wastes.
 - (iv) 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.
 - (i) The sampling and analysis must be unbiased, precise, and representative of the wastes.
 - (ii) The analytical measurements must be sufficiently sensitive, accurate, and precise to support any claim that the constituent mass loadings are below the listing levels in paragraph (C) of this rule.
 - (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 (C) of this rule 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:
 - (i) The sampling and analysis plan.
 - (ii) The sampling and analysis results (including quality assurance/quality control data).
 - (iii) The quantity of dyes and/or pigment nonwastewaters generated.
 - (iv) The calculations performed to determine annual mass loadings.
 - (k) Nonhazardous waste determinations must be conducted annually to verify that the wastes remain nonhazardous.
 - (i) The annual testing requirements are suspended after three consecutive successful annual demonstrations that the wastes are nonhazardous. The generator may then use knowledge of the wastes to support subsequent annual determinations.

- (ii) 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.
 - (iii) 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.
- (4) 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.
- (5) Waste holding and handling. During the interim period (that is, 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 rules (as defined in rule 3745-50-10 of the Administrative Code) during the interim period, the generator could be subject to an enforcement action for improper management.

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-50-11 of the Administrative Code titled "Incorporated by reference."]

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