



# Protocol for Conducting Environmental Compliance Audits of Hazardous Waste Generators under the Resource Conservation and Recovery Act

## Appendix A: Identification and Listing of Hazardous Waste (40 CFR 261.30 through 261.31)

**Table 1 - Hazardous Waste from Nonspecific Sources**

Industry and USEPA Hazardous Waste Number	Hazardous Waste	Hazard Code*
F001	The spent halogenated solvents used in degreasing. Trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and the chlorinated fluorocarbons; all spent solvent mixtures or 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 listed in F002, F004, 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-1,1,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane, and 1,1,2-trichloroethane; all spent solvent mixtures or blends containing, before use, a total of ten	(t)

	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.	
F003	The spent nonhalogenated solvents, xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; and the still bottoms from the recovery of these solvents and spent solvent mixtures.	(i)
F004	The spent nonhalogenated solvents, cresols and cresylic acid, and nitrobenzene; and the still bottoms from the recovery of these solvents.	(t)
F005	The following spent nonhalogenated solvents: toluene, methyl ethyl ketone, carbons disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures or 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 solvents.	(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 solution 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)
F020	Wastes from use of tri-, or tetrachlorophenol, or intermediates used to produce its pesticide derivatives. **	(h)
F021	Wastes of pentachlorophenol, or intermediates used to produce its derivatives. **	(h)
F022	Wastes, of tetra-, penta-, or hexachlorobenzenes under alkaline conditions. **	(h)
F023	Wastes, of tri- and tetrachlorophenols. **	(t)
F024	Wastes, including but not limited to distillation residues, heavy ends, tars and reactor cleanout wastes from the production of chlorinated aliphatic hydrocarbons, utilizing free radical catalyzed processes having carbon chain lengths from one to five, (Omits light ends, spent filters and filter aids, spent desiccants, wastewater, wastewater treatment sludges, spent catalysts and wastes listed in 40 CFR 261.32).	(t)
F025	Condensed light ends, spent filters 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 of tetra-, penta-, or hexachlorobenzene under alkaline conditions.	(h)

F027	Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols (does not include hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component.	(h)
F028	Residues from incineration or thermal treatment of soil contaminated with EPA hazardous waste Nos. F020, F021, F022, F023, F026 and F027.	(t)
F032	Wastewaters (except those that have not come into contact with process contaminants), process residue, 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 261.35 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 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 sludge from the treatment of wastewater from wood preserving processes that use creosote and or pentachlorophenol.	(t)
F035	Wastewaters (except those that have 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)

<p>F037</p>	<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 refiners. This includes, but is not limited to, sludges generated in: oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow.</p> <p>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 generated in aggressive biological treatment units*** (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.</p>	<p>(t)</p>
<p>F038</p>	<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.</p> <p>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*** (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>	<p>(t)</p>

F039	Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under 40 CFR 261 Subpart D. (Leachate resulting from the management of one or more of the following wastes and no other hazardous waste retains its hazardous waste number(s): F020, F021, F022, F023, F026, F027, and/or F028.)
------	---

NOTE: The listing of wastewaters that have not come into contact with process contaminants is stayed administratively. The listing for plants that have previously used chlorophenolic formulations is administratively stayed whenever these wastes are covered by the F034 or F035 listings. These stays will remain in effect until further administrative action is taken.

\* Hazard Codes:

t = toxic waste      h = acute hazardous waste  
 i = ignitable waste   c = corrosive waste  
 r = reactive waste   e = toxicity characteristic waste

\*\* (except wastewater and spent carbon from hydrogen chloride purification) the manufacturing or production use: as a reactant, chemical intermediate, or component in a formulating process. The listing for F020 and F023 does not include wastes from the production of hexachlorophene from highly purified 2,4,5-trichlorophenol.

\*\*\* Aggressive biological treatment units are defined as units which employ one of the following 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 hazardous waste by the Toxicity Characteristic.

**Table 2 - Hazardous Waste from Organic and Inorganic Chemical Industries**

Industry and EPA Hazardous Waste Number	Hazardous Waste	Hazard Code*
<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 fractionation 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)

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 residue 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 stream 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 of fractionation column bottoms from the production of chlorobenzene.	(t)

K103	Process residues from aniline extraction from the production of aniline.	(t)
K104	Combined wastewater streams generated from nitrobenzene or aniline production.	(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	(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 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)
K093	Distillation light ends from the production of phthalic anhydride from orthoxylene.	(t)
K094	Distillation bottoms from the production of phthalic anhydride from orthozylene.	(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)
K111	Product washwaters from the production of dinitrotoluene via nitration of toluene.	(c, t)
K112	Reaction byproduct water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene.	(t)
K113	Condensed liquid light ennation of dinitrotoluene.	(t)

K114	Vicinals from the purification of toluenediamine in the production of toluenediamine.	(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)
<b>Inorganic Chemicals</b>		
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)
K071	Brine purification muds from the mercury cell process in chlorine production, where separately	(t)

	prepurified brine is not used.	
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)
<b>Hazardous Waste from Explosives Manufacturing</b>		
K044	Wastewater treatment sludge 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.	(t)

\* Hazard Codes:

t = toxic waste

i = ignitable waste

r = reactive waste

c = corrosive waste

---

## Protocol for Conducting Environmental Compliance Audits of Hazardous Waste Generators under the Resource Conservation and Recovery Act

### Appendix B: Commercial Chemical Products or Manufacturing Chemical Intermediates Identified as Toxic Wastes (40 CFR 261.33)

(COMMENT: 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 acute toxicity.)

EPA Hazardous Waste No.	Substance
U001	acetaldehyde (i)
U034	acetaldehyde, trichloro-
U187	acetamide, N-(4-ethoxyphenyl)-
U005	acetamide, N-9H-fluoren-2-y1-
U240	acetic acid, (2,4-dichlorophenoxy)-, salts and esters
U112	acetic acid, ethyl ester (i)
U144	acetic acid, lead(2+) salt

U214	acetic acid, thallium(1+) salt
see F027	acetic acid, (2,4,5-trichlorophenoxy)-
U002	acetone (i)
U003	acetonitrile (i, t)
U004	acetophenone
U005	2-acetylaminofluorene
U006	acetyl chloride (c, r, t)
U007	acrylamide
U008	acrylic acid (i)
U009	acrylonitrile
U011	amitrole
U012	aniline (i, t)
U136	arsenic acid, dimethyl-
U014	auramine
U015	azaserine
U010	azirino(2,3,3,4(pyrrolo(1,2-a)indole -4,7-dione, 6-amino-8-[(aminocarbonyl)oxy)methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-,
U157	benz[j]aceanthrylene, 1,2-dihydro-3- methyl-
U016	benza[c]ridine
U017	benzal chloride
U192	benzamide, 3,5-dichloro-n-(1,1-diethyl-2-propynyl-
U018	benz[a]anthracene
U094	1,2-benzanthracene, 7,12-dimethyl-
U012	benzenamine
U014	benzenamine, 4,4-carbonimidoylbis(N,N-dimethyl-
U049	benzenamine, 4-chloro-2-methyl-,hydrochloride
U093	benzenamine, N,N-dimethyl-4-(phenylazo)-
U328	benzenamine, 2-methyl-
U353	benzenamine, 4-methyl-

U158	benzenamine, 4,4-methylenebis(2-chloro-
U222	benzenamine, 2-methyl-, hydrochloride
U181	benzenamine, 2,-methyl-5-nitro
U019	benzene (i, t)
U038	benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy, ethyl ester
U030	benzene, 1-bromo-4-phenoxy-
U035	benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-
U037	benzene, chloro-
U221	benzenediamine, ar-methyl-
U028	1,2-benzendicarboxylic acid, [bis(2-ethyl-hexyl)]ester
U069	1,2-benzenedicarboxylic acid, dibutyl ester
U088	1,2-benzenedicarboxylic acid, diethyl ester
U102	1,2-benzendicarboxylic acid, dimethyl ester
U107	1,2-benzenedicarboxylic acid, dioctyl ester
U070	benzene, 1,2-dichloro-
U071	benzene, 1,3-dichloro-
U072	benzene, 1,4-dichloro-
U060	benzene, 1,1'- (2,2-dichloroethylidene) bis[4-chloro-
U017	benzene, (dichloromethyl)-
U223	benzene, 1,3-diisocyanatomethyl- (r,t)
U239	benzene, dimethyl-(i, t)
U201	1,3-benzenediol
U127	benzene, hexachloro-
U056	benzene, hexahydro- (i)
U220	benzene, methyl-

U105	benzene, 1-methyl-2,4-dinitro-
U106	benzene, 2-methyl-1,3-dinitro-
U055	benzene, (1-methylethyl)-(i)
U169	benzene, nitro- (i, t)
U183	benzene, pentachloro-
U185	benzene, pentachloronitro-
U020	benzenesulfonic acid chloride (c, r)
U020	benzenesulfonyl chloride (c, r)
U207	benzene, 1,2,4,5-tetrachloro-
U061	benzene, 1,1'-(2,2,2-trichloroethylidene) bis[4-chloro
U247	benzene, 1,1'(2,2,2-trichloroethylidene)[4-methoxy-
U023	benzene, (trichloromethyl)-
U234	benzene, 1,3,5-trinitro-
U021	benzidine
U202	1,2-benzisothiazolin-3-one, 1,1-dioxide and salts
U203	1,3-benzodioxole, 5-(2-propenyl)-
U141	1,3-benzodioxole, 5-(1-propenyl)-
U090	1,3-benzodioxole, 5-propyl-
U064	benzo[rs]pentaphene
U248	2-H-1-benzopyran-2-on2, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, and salts, when present at concentrations of 0.3% or less
U022	benzo[a]pyrene
U197	p-benzoquinone
U023	benzotrichloride (c,r,t)
U085	2,2-bioxirane (i, t)
U021	(1,1-biphenyl)-4,4-diamine

U073	(1,1-biphenyl)-4,4-diamine, 3,3-dichloro
U091	(1,1-biphenyl)-4,4-diamine, 3,3- dimethoxy-
U095	(1,1-biphenyl)4,4-diamine, 3,3- dimethyl-
U225	bromoform
U030	4-bromophenyl phenyl ether
U128	1,3-butadiene, 1,1,2,3,4,4-hexachloro
U172	1-butanamine, N-butyl-N-nitroso-
U031	1-butanol (i)
U159	2-butanone (i, t)
U160	2-butanone peroxide (r, t)
U053	2-butenal
U074	2-butene, 1,4-dichloro- (i, t)
U143	2-butenic acid, 2-methyl-, 7- [(2,3-dihydroxy-2-(1-methoxyethyl) -3-methyl-1-oxobutoxy)methyl] -2,3,5,7s- yrytshyfto-1- pyrrolizin-1-yl ester, [1S-[alpha(Z),7 (2S,3R), 7aalpha]]-
U031	n-butyl alcohol (i)
U136	cacodylic acid
U032	calcium chromate
U238	carbamic acid, ethyl ester
U178	carbamic acid, methylnitroso- ethyl ester
U097	carbamic chloride, dimethyl-
U114	carbamodithioic acid, 1,2-ethanedylbis-, salts and esters
U062	carbamothioic acid, bis(1-methylethyl)-S- (2,3-dichloro-2-propenyl) ester
U215	carbonic acid, dithallium(1+) salt
U033	carbonic difluoride
U156	carbonochlorodic acid, methyl ester (i, t)

U033	carbon oxyfluoride (r, t)
U211	carbon tetrachloride
U034	chloral
U035	chlorambucil
U036	chlordan, alpha and gamma isomers
U026	chlomaphazine
U037	chlorobenzene
U039	p-chloro-m-cresol
U041	1-chloro-2,3-epoxypropane
U042	2-chloroethyl vinyl ether
U044	chloroform
U046	chloromethyl methyl ether
U047	beta-chloronaphthalene
U048	o-chlorophenol
U049	4-chloro-o-toluidine, hydrochloride
U032	chromic acid H <sub>2</sub> CrO <sub>4</sub> , calcium salt
U050	chrysene
U051	creosote
U052	cresols (cresylic acid)
U053	crotonaldehyde
U055	cumene (i)
U246	cyanogen bromide
U197	2,5-cyclohexadiene-1, 4-dione
U056	cyclohexane (i)
U129	cyclohexane 1,2,3,4,5,6-hexachloro-, (1alpha, 2alpha, 3beta, 4alpha, 6beta)-
U057	cyclohexanone (i)
U130	1,3-cyclopentadiene, 1,2,3,4,5,5- hexachloro-
U058	cyclophosphamide
U240	2,4-d, salts and esters
U059	daunomycin
U060	DDD
U061	DDT

U062	diallate
U063	dibenz[a,h]anthracene
U064	dibenzo[a,i]pyrene
U066	1,2-dibromo-3-chloropropane
U069	dibutyl phthalate
U070	o-dichlorobenzene
U071	m-dichlorobenzene
U072	p-dichlorobenzene
U073	3,3'-dichlorobenzidine
U074	1,4-dichloro-2-butene (i, t)
U075	dichlorodifluoromethane
U078	1,1-dichloroethylene
U079	1,2-dichloroethylene
U025	dichloroethyl ether
U027	dichloroisopropyl ether
U024	dichloromethoxy ethane
U081	2,4-dichlorophenol
U082	2,6-dichlorophenol
U084	1,3-dichloropropene
U085	1,2:3,4-diepoxybutane (i, t)
U108	1,4-diethyleneoxide
U028	diethylhexyl phthalate
U086	N,N-diethylhydrazine
U087	O,O-diethyl-s-methyl dithiophosphate
U088	diethyl phthalate
U089	diethylstilbestrol
U090	dihydrosafrole
U091	3,3'-dimethoxybenzidine
U092	dimethylamine (i)
U093	dimethylaminoazobenzene
U094	7,12-dimethylbenz[a]anthracene
U095	3,3-dimethylbenzidine
U096	alpha,alpha-dimethylbenzylhydroperoxide (r)
U097	dimethylcarbamoyl chloride

U098	1,1-dimethylhydrazine
U099	1,2-dimethylhydrazine
U101	2,4-dimethylphenol
U102	dimethyl phthalate
U103	dimethyl sulfate
U105	2,4-dinitrotoluene
U106	2,6-dinitrotoluene
U107	di-n-octyl phthalate
U108	1,4-dioxane
U109	1,2-diphenylhydrazine
U110	dipropylamine (i)
U111	di-n-propylnitrosamine
U041	epichlorhydrin
U001	ethanal (i)
U174	ethanamine, N-ethyl-N-nitroso-
U155	1,2-ethanediamine, n,n-dimethyl-n'-2-pyridinyl- n'-(2-thienylmethyl)-
U067	ethane, 1,2-dibromo-
U076	ethane, 1,1-dichloro-
U077	ethane, 1,2-dichloro-
U131	ethane, hexachloro-
U024	ethane, 1,1-[methylenebis(oxy)] bis[2-chloro-
U117	ethane, 1,1-oxybis- (i)
U025	ethane 1,1-oxybis[2-chloro-
U184	ethane, pentachloro-
U208	ethane, 1,1,1,2-tetrachloro-
U209	ethane, 1,1,2,2-tetrachloro-
U218	ethanethioamide
U359	ethane, 1,1,2-trichloro-
U173	ethanol, 2,2'-(nitrosoimino) bis-
U004	ethanone, 1-phenyl-
U043	ethene, chloro-
U042	ethene, (2-chloroethoxy-)
U078	ethene, 1,1-dichloro-
U079	ethene, 1,2-dichloro- (e)

U210	ethene, tetrachloro-
U228	ethene, trichloro
U112	ethyl acetate (i)
U113	ethyl acrylate (i)
U238	ethyl carbamate (urethane)
U117	ethyl ether (i)
U114	ethylenebisdithiocarbamic acid, salts and esters
U067	ethylene dibromide
U077	ethylene dichloride
U359	ethylene glycol monoethyl ether
U115	ethylene oxide (i, t)
U116	ethylenethiourea
U076	ethylidene dichloride
U118	ethyl methacrylate
U119	ethyl methanesulfonate
U120	fluoranthene
U122	formaldehyde
U123	formic acid (c, t)
U124	furan (i)
U125	2-furancarboxaldehyde (i)
U147	2,5-furandione
U213	furan, tetrahydro- (i)
U125	furfural (i)
U124	furfuran (i)
U206	glucopyranose, 2-deoxy-2 (3-methyl-3-nitrosoureido)-
U126	glycidylaldehyde
U163	guanidine, N-methyl-N'-nitro-N-nitroso-
U127	hexachlorobenzene
U128	hexachlorobutadiene
U130	hexachlorocyclopentadiene
U131	hexachloroethane
U132	hexachlorophene
U243	hexachloropropene
U133	hydrazine (r, t)
U086	hydrazine, 1,2-diethyl-

U098	hydrazine, 1,1-dimethyl-
U099	hydrazine, 1,2-dimethyl-
U109	hydrazine, 1,2-diphenyl-
U134	hydrofluoric acid (c,t)
U134	hydrogen fluoride (c,t)
U135	hydrogen sulfide
U096	hydroperoxide, 1-methyl-1-phenylethyl- (r)
U116	2-imidazolidinethione
U137	indeno(1,2,3-cd)pyrene
U190	1,3-isobenzofurandione
U140	isobutyl alcohol (i, t)
U141	isosafrole
U142	kepone
U143	lasiocarpine
U144	lead acetate
U146	lead, bis(acetato-O) tetrahydroxytri-
U145	lead phosphate
U146	lead subacetate
U129	lindane
U163	MNNG
U147	maleic anhydride
U148	maleic hydrazide
U149	malononitrile
U150	melphalan
U151	mercury
U152	methacrylonitrile (i, t)
U092	methanamine (N-methyl- (i)
U029	methane, bromo-
U045	methane, chloro- (i, t)
U046	methane, chloromethoxy-
U068	methane, dibromo-
U080	methane, dichloro-
U075	methane, dichlorodifluoro-
U138	methane, iodo-
U119	methanesulfonic acid, ethyl ester
U211	methane, tetrachloro-

U153	methanethiol (i, t)
U225	methane, tribromo-
U044	methane, trichloro-
U121	methane, trichlorofluoro-
U154	methanol (i)
U155	methapyrilene
U142	1,3,4-metheno-2H- cyclobuta [cd]pentalen-2-one- 1,1a,3,3a,4,5,5a,5b,6- decachlorooctahydro-
U247	methoxychlor
U154	methyl alcohol (i)
U029	methyl bromide
U186	1-methylbutadiene (i)
U045	methyl chloride (i, t)
U156	methyl chlorocarbonate (i, t)
U226	methyl chloroform
U157	3-methylcholanthrene
U158	4,4-methylenebis-(2- chloroaniline)
U068	methylene bromide
U080	methylene chloride
U159	methyl ethyl ketone (mek) (i, t)
U160	methyl ethyl ketone peroxide (r,t)
U138	methyl iodide
U161	methyl isobutyl ketone (i)
U162	methyl methacrylate (i, t)
U161	4-methyl-2-pentanone (i)
U164	methylthiouracil
U010	mitomycin C
U059	5,12-naphthacenedione, (Bs (cis)8- acetyl-10-[(3-amino- 2,3,6-trideoxy- alpha-L-lyxo- hexopyranosyl)oxyl]- 7- 8,9,10-tetrahydro-6,8,11- trihydroxy-1-methoxy-
U167	1-naphthalenamine
U168	2-naphthalenamine

U026	naphthalenamine, N,N'-bis(2-chloroethyl)-
U165	naphthalene
U047	naphthalene, 2-chloro-
U166	1,4-naphthalenedione
U236	2,7-naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl-(1,1'-biphenyl)- bis(azo)bis(5-amino-4-hydroxy)-, tetrasodium salt
U166	1,4-naphthoquinone
U167	alpha-naphthylamine
U168	beta-naphthylamine
U217	nitric acid, thallium(1+) salt (2-chloromethyl)-
U169	nitrobenzene (i, t)
U170	p-nitrophenol
U171	2-nitropropane (i)
U172	n-nitrosodi-n-butylamine
U173	n-nitrosodiethanolamine
U174	n-nitrosodiethylamine
U176	n-nitroso-n-ethylurea
U177	n-nitroso-n-methylurea
U178	n-nitroso-n-methylurethane
U179	n-nitrosopiperidine
U180	n-nitrosopyrrolidine
U181	5-nitro-o-toluidine
U193	1,2-oxathiolane, 2,2-dioxide
U058	2H-1,3,2-oxazaphosphorine,2[bis(2-chloroethyl)amino] tetrahydro-, 2-oxide.
U115	oxirane (i, t)
U126	oxiranecarboxyaldehyde
U041	oxirane, 2-(chloromethyl)-
U182	paraldehyde
U183	pentachlorobenzene
U184	pentachloroethane
U185	pentachloronitrobenzene
see F027	pentachlorophenol

U161	pentanol, 4-methyl-
U186	1,3-pentadiene (i)
U187	phenacetin
U188	phenol
U048	phenol, 2-chloro-
U039	phenol, 4-chloro-3-methyl-
U081	phenol, 2,4-dichloro-
U082	phenol, 2,6-dichloro-
U089	phenol, 4,4'-(1,2-diethyl- 1,2-ethenediyl)bis-,
U101	phenol, 2,4-dimethyl-
U052	phenol, methyl
U132	phenol, 2,2'-methylenebis [3,4,6-trichloro-
U170	phenol, 4-nitro-
see F027	phenol, pentachloro-
see F027	phenol, 2,3,4,6-tetrachloro-
see F027	phenol, 2,4,5-trichloro-
see F027	phenol, 2,4,6-trichloro-
U150	l-phenylalanine, 4- [bis(2-chloroethyl)amino]-
U145	phosphoric acid, lead salt
U087	phosphorodithioic acid, 0,0-diethyl S-methyl ester
U189	phosphorus sulfide (r)
U190	phthalic anhydride
U191	2-picoline
U179	piperidine, 1-nitroso-
U192	pronamide
U194	1-propanamine (i, t)
U111	1-propanamine, n-nitroso-n-propyl-
U110	1-propanamine, n-propyl- (i)
U066	propane, 1,2-dibromo-3-chloro-
U083	propane, 1,2-dichloro-
U149	propanedinitrile
U171	propane, 2-nitro- (i, t)
U027	propane, 2,2-oxybis[2-chloro-

U193	1,3-propane sultone
see F027	propanoic acid, 2-(2,4,5-trichlorophenoxy)-
U235	1-propanol, 2,3-dibromo-, phosphate (3:1)
U140	1-propanol, 2-methyl- (i, t)
U002	2-propanone (i)
U007	2-propenamamide
U084	1-propene, 1,3-dichloro-
U243	1-propene, 1,1,2,3,3,3-hexachloro-
U009	2-propenenitrile
U152	2-propanenitrile, 2-methyl- (i, t)
U008	2-propenoic acid (i)
U113	2-propenic acid, ethyl ester (i)
U118	2-propenoic acid, 2-methyl-, ethyl ester
U162	2-propenoic acid, 2-methyl-, methyl ester (i, t)
U194	n-propylamine (i, t)
U083	propylene dichloride
U148	3,6-pyridazinedione, 1,2-dihydro-
U196	pyridine
U191	pyridine, 2-methyl-
U237	2,4(1H,3H)-pyrimidinedione, 5-[bis(2-chloroethyl)amino]-
U164	4(1H)-pyrimidinone, 2,3-dihydro-6-methyl 2-thioxo-
U180	pyrrolidine, 1-nitroso-
U200	reserpine
U201	resorcinol
U202	saccharin and salts
U203	safrole
U204	selenious acid
U204	selenium dioxide
U205	selenium sulfide
U205	selenium sulfide SeS <sub>2</sub> (r, t)

U015	l-serine, diazoacetate (ester)
see F027	silvex (2,4,5-tp)
U206	streptozotocin
U103	sulfuric acid, dimethyl ester
U189	sulfur phosphide (r)
U232	2,4,5-T
U207	1,2,4,5-tetrachlorobenzene
U208	1,1,1,2-tetrachloroethane
U209	1,1,2,2-tetrachloroethane
U210	tetrachloroethylene
see F027	2,3,4,6-tetrachlorophenol
U213	tetrahydrofuran (i)
U214	thallium (i) acetate
U215	thallium (i) carbonate
U216	thallium chloride
U216	thallium chloride TlCl
U217	thallium (i) nitrate
U218	thioacetamide
U153	thiomethanol (i, t)
U244	thioperoxydicarbonic diamide, tetramethyl-
U219	thiourea
U244	thiuram
U220	toluene
U221	toluenediamine
U223	toluene diisocyanate (r, t)
U328	o-toluidine
U353	p-toluidine
U222	o-toluidine hydrochloride
U011	1H-1,2,4-triazol-3-amine
U227	1,1,2-trichloroethane
U228	trichloroethylene
U121	trichloromonofluoromethane
U230	2,4,5-trichlorophenol
U231	2,4,6-trichlorophenol
U234	1,3,5-trinitrobenzene (r, t)
U182	1,3,5-trioxane, 2,4,6-trimethyl-

U235	tris(2,3-dibromopropyl) phosphate
U236	trypan blue
U237	uracil mustard
U176	urea, n-ethyl-n-nitroso-
U177	urea, n-methyl-n-nitroso-
U043	vinyl chloride
U248	warfarin, when present at concentrations of 0.3% or less
U239	xylene (i)
U200	yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxy-benzoyl)oxy], methyl ester
U249	zinc phosphide, when present at concentrations of 10% or less.

---

## Protocol for Conducting Environmental Compliance Audits of Hazardous Waste Generators under the Resource Conservation and Recovery Act

### Appendix C: Toxicity Characteristics Constituents and Regulatory Levels (40 CFR 261.24)

EPA Hazardous Waste No.	Constituent	CAS No.	Chronic Toxicity Reference Level	Regulatory Level (mg/L)
D004	Arsenic	7440-38-2	0.05	5.0
D005	Barium	7440-39-3	1.0	100.0
D018	Benzene	71-43-2	0.005	0.5

D006	Cadmium	7440-43-9	0.01	1.0
D019	Carbon tetrachloride	56-23-5	0.005	0.5
D020	Chlordane	57-74-9	0.0003	0.03
D021	Chlorobenzene	108-90-7	1	100.0
D022	Chloroform	67-66-3	0.06	6.0
D007	Chromium	7440-47-3	0.05	5.0
D023	o-Cresol	95-48-7	2	200.0 <sup>1</sup>
D024	m-Cresol	108-39-4	2	200.0 <sup>1</sup>
D025	p-Cresol	106-44-5	2	200.0 <sup>1</sup>
D026	Cresol		2	200.0 <sup>1</sup>
D016	2,4-D	94-75-7	0.1	10.0
D027	1,4-Dichlorobenzene	106-46-7	0.075	7.5
D028	1,2-Dichloroethane	107-06-2	0.005	0.5
D029	1,1-Dichloroethylene	75-35-4	0.007	0.7
D030	2,4-Dinitrotoluene	121-14-2	0.0005	0.13 <sup>2</sup>
D012	Endrin	72-20-8	0.0002	0.02
D031	Heptachlor (and its hydroxide)	76-44-8	0.00008	0.008
D032	Hexachlorobenzene	118-74-1	0.0002	0.13 <sup>2</sup>
D033	Hexachloro-1,3-butadiene	87-68	3	0.005
D034	Hexachloroethane	67-72-1	0.03	3.0
D008	Lead	7439-92-1	0.05	5.0
D013	Lindane	58-89-9	0.004	0.4

D009	Mercury	7439-97-6	0.002	0.2
D014	Methoxychlor	72-43-5	0.1	10.0
D035	Methyl ethyl ketone	78-93-3	2	200.0
D036	Nitrobenzene	98-95-3	0.02	2.0
D037	Pentachlorophenol	87-86-5	1	100.0
D038	Pyridine	110-86-1	0.04	5.0 <sup>2</sup>
D010	Selenium	7782-49-2	0.01	1.0
D011	Silver	7440-22-4	0.05	5.0
D039	Tetrachloroethylene	127-18-4	0.007	0.7
D015	Toxaphene	8001-35-2	0.005	0.5
D040	Trichloroethylene	79-01-6	0.005	0.5
D041	2,4,5-Trichlorophenol	95-95-4	4	400.0
D042	2,4,6-Trichlorophenol	88-06-2	0.02	2.0
D017	2,4,5-TP (Silvex)	93-72-1	0.01	1.0
D043	Vinyl chloride	75-01-4	0.002	0.2

*1 If o-, m-, and p-cresol concentrations cannot be differentiated, the total cresol (D026) concentration is used.*

*2 Quantitation limit is greater than the calculated regulatory level. Therefore, the quantitation limit becomes the regulatory level.*

---

## Protocol for Conducting Environmental Compliance Audits of Hazardous Waste Generators under the Resource Conservation and Recovery Act

## Appendix D: Identification of Hazardous Waste Hazardous Constituents (40 CFR 261, Appendix VIII)

Common Name	Chemical Abstracts Name	Chemical Abstracts No.
Acetonitrile	Same	75-0
Acetophenone	Ethanone, 1-phenyl-	98-8
2-Acetylaminofluorene	Acetamide, N-9H-fluorene-2-yl	53-9
Acetyl chloride	Same	75-3
1-Acetyl-2-thiourea	Acetamide, N-(aminothioxomethyl)-	591-
Acrolein	2-Propenal	107-
Acrylamide	2-Propenamide	79-0
Acrylonitrile	2-Propenenitrile	107-
Aflatoxins	Same	140-2
Aldicarb	Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime	116-
Aldrin	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro- 1,4,4a,5,8,8a-hexahydro-, (1 alpha, 4alpha, 4beta, 5alpha, 8alpha, 8beta)-	309-
Allyl alcohol	2-Propen-1-ol	107-
Allyl chloride	1-Propane, 3-chloro	107-
Aluminum phosphide	Same	208-73-8
4-Aminobiphenyl	[1,1'-Biphenyl]-4-amine	92-6
5-(Aminomethyl)-3-isoxazolol	3(2H)-Isoxazolone, 5-(aminomethyl)-	276-4
4-Aminopyridine	4-Pyridinamine	504-
Amitrole	1H-1,2,4-Triazol-3-amine	61-8
Ammonium vanadate	Vanadic acid, ammonium salt	780-6
Aniline	Benzenamine	62-5
Antimony	Same	744-0
Antimony compounds, N.O.S. <sup>1</sup>		

Aramite	Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester	140
Arsenic	Same	744 2
Arsenic compounds, N.O.S. <sup>1</sup>		
Arsenic acid	Arsenic acid H <sup>3</sup> AsO <sup>4</sup>	777 4
Arsenic pentoxide	Arsenic oxide As <sup>2</sup> O <sup>5</sup>	130 2
Arsenic trioxide	Arsenic oxide As <sup>2</sup> O <sup>3</sup>	132 3
Auramine	Benzenamine, 4,4'-carbonimidoylbis[N,N-dimethyl	492
Azaserine	L-Serine, diazoacetate (ester)	115
Barium	Same	744 3
Barium compounds, N.O.S. <sup>1</sup>		
Barium cyanide	Same	542
Benz[c]acridine	Same	225
Benz[a]anthracene	Same	56-5
Benzal chloride	Benzene, (dichloromethyl)-	98-8
Benzene	Same	71-4
Benzeneearsonic acid	Arsonic acid, phenyl-	98-0
Benzidine	[1,1'-Biphenyl]-4,4 1 -diamine	92-8
Benzo[b]fluoranthene	Benz[e]acehpenanthrylene	205
Benzo[j]fluoranthene	Same	205
Benzo(k)fluoranthene	Same	207
Benzo[a]pyrene	Same	50-3
p-Benzoquinone	2,5-Cyclohexadiene-1,4-dione	106
Benzotrichloride	Benzene, (trichloromethyl)-	98-0
Benzyl chloride	Benzene, (chloromethyl)-	100
Beryllium powder	Same	744 7
Beryllium coumpounds, N.O.S. <sup>1</sup>		
Bromoacetone	2-Propanone, 1-bromo-	598
Bromoform	Methane, tribromo-	75-2
4-Bromophenyl phenyl ether	Benzene, 1-bromo-4-phenoxy-	101
Brucine	Strychnidin-10-one, 2,3-dimethoxy-	357

Butyl benzyl phthalate	1,2-Benzenedicarboxylic acid, butyl phenyl-methyl ester	85-6
Cacodylic acid	Arsinic acid, dimethyl-	75-6
Cadmium	Same	744-9
Cadmium compounds, N.O.S. <sup>1</sup>		
Calcium chromate	Chromic acid H <sub>2</sub> CrO <sub>4</sub> , calcium salt	137-19-0
Calcium cyanide	Calcium cyanide Ca(CN) <sub>2</sub>	592
Carbon disulfide	Same	75-1
Carbon oxyfluoride	Carbonic difluoride	353
Carbon tetrachloride	Methane, tetrachloro-	56-2
Chloral	Acetaldehyde, trichloro-	75-8
Chlorambucil	Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-	305
Chlordane	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-oc-tachloro-2,3,3a,4,7,7a-hexahydro-	57-7
Chlordane (alpha and gamma isomers)		
Chlorinated benzenes, N.O.S. <sup>1</sup>		
Chlorinated ethane, N.O.S. <sup>1</sup>		
Chlorinated fluorocarbons, N.O.S. <sup>1</sup>		
Chlorinated naphthalene, N.O.S. <sup>1</sup>		
Chlorinated phenol, N.O.S. <sup>1</sup>		
Chlomaphazin	Naphthalenamine, N,N'-bis(2-chloroethyl)-	494
Chloroacetaldehyde	Acetaldehyde, chloro-	107
Chloroalkyl ethers, N.O.S. <sup>1</sup>		
p-Chloroaniline	Benzenamine, 4-chloro-	106
Chlorobenzene	Benzene, chloro-	108
Chlorobenzilate	Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-,ethyl ester	510
p-Chloro-m-cresol	Phenol, 4-chloro-3-methyl-	59-5
2-Chloroethyl vinyl ether	Ethene, (2-chloroethoxy)-	110
Chloroform	Methane, trichloro-	67-6
Chloromethyl methyl ether	Methane, chloromethoxy-	107
beta-Chloronaphthalene	Naphthalene, 2-chloro-	91-5
o-Chlorophenol	Phenol, 2-chloro-	95-5

1-(o-Chlorophenyl)thiourea	Thiourea, (2-chlorophenyl)-	534-1
Chloroprene	1,3-Butadiene, 2-chloro	126
3-Chloropropionitrile	Propanenitrile, 3-chloro-	542
Chromium	Same	744-3
Chromium compounds, N.O.S. <sup>1</sup>		
Chrysene	Same	218
Citrus red no. 2	2-Naphthalenol, 1-[(2,5-dimethoxyphenyl)azo]-	635-8
Coal tar creosote	Same	800-2
Copper cyanide	Copper cyanide CuCN	544
Creosote	Same	
Cresol (Cresylic acid)	Phenol, methyl-	131-3
Crotonaldehyde	2-Butenal	417-3
Cyanides (soluble salts and complexes) N.O.S. <sup>1</sup>		
Cyanogen	Ethanedinitrile	460
Cyanogen bromide	Cyanogen bromide (CN)Br	506
Cyanogen chloride	Cyanogen chloride (CN)Cl	506
Cycasin	beta-D-Glucopyranoside, (methyl-ONN-azoxy)methyl	149-08-7
2-Cyclohexyl-4,6-dinitrophenol	Phenol, 2-cyclohexyl-4,6-dinitro-	131-
Cyclophosphamide	2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide.	50-1
2,4-D	Acetic acid, (2,4-dichlorophenoxy)-	94-7
2,4-D, salts, esters		
Daunomycin	5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy-alpha-L-lyxohexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)-	208-81-3
DDD	Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro-	72-5
DDE	Benzene, 1,1'-(dichloroethenylidene)bis[4-chloro-	72-5
DDT	Benzene, 1,1'-(2,2,2 trichloroethylidene)bis[4-chloro-	50-2

Diallate	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl) ester	230-4
Dibenz[a,h]acridine	Same	226
Dibenz[a,j]acridine	Same	224
Dibenz[a,h]anthracene	Same	53-7
7H-Dibenzo[c,g]carbazole	Same	194
Dibenzo[a,e]pyrene	Naphtho[1,2,3,4-def]chrysene	192
Dibenzo[a,h]pyrene	Dibenzo[b,dif]chrysene	189
Dibenzo[a,i]pyrene	Benzo[rst]pentaphene	189
1,2-Dibromo-3-chloropropane	Propane, 1,2-dibromo-3-chloro-	96-1
Dibutyl phthalate	1,2-Benzenedicarboxylic acid, dibutyl ester	84-7
o-Dichlorobenzene	Benzene, 1,2-dichloro-	95-5
m-Dichlorobenzene	Benzene, 1,3-dichloro-	541
p-Dichlorobenzene	Benzene, 1,4-dichloro-	106
Dichlorobenzene, N.O.S. <sup>1</sup>	Benzene, dichloro-	253-22-6
3,3'-Dichlorobenzidine	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-	91-9
1,4-Dichloro-2-butene	2-Butene, 1,4-dichloro	764
Dichlorodifluoromethane	Methane, dichlorodifluoro-	75-7
Dichloroethylene, N.O.S. <sup>1</sup>	Dichloroethylene	253-30-2
1,1-Dichloroethylene	Ethene, 1,1-dichloro	75-3
1,2-Dichloroethylene	Ethene, 1,2-dichloro-, (E)	156
Dichloroethyl ether	Ethane, 1,1'-oxybis[2-chloro-	111
Dichloroisopropyl ether	Propane, 2,2'-oxybis[2-chloro	108
Dichloromethoxy ethane	Ethane, 1,1'-[methylenebis(oxy)bix[2-chloro-	111
Dichloromethyl ether	Methane, oxybis[chloro-	542
2,4-Dichlorophenol	Phenol, 2,4-dichloro-	120
2,6-Dichlorophenol	Phenol, 1,6-dichloro-	87-6
Dichlorophenylarsine	Arsonous dichloride, phenyl-	696
Dichloropropane, N.O.S. <sup>1</sup>	Propane, dichloro-	266-19-7
Dichloropropanol, N.O.S. <sup>1</sup>	Propanol, dichloro-	265-73-3
Dichloropropene, N.O.S. <sup>1</sup>	1-Propene, dichloro-	269-23-8
1,3-Dichloropropene	1-Propene, 1,3-dichloro-	542

Dieldrin	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,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)-	60-5
1,2:3,4-Diepoxybutane	2,2'-Bioxirane	146-5
Diethylarsine	Arsine, diethyl-	692
1,4-Diethyleneoxide	1,4-Dioxane	123
Diethylhexyl phthalate	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	117
N,N'-Diethylhydrazine	Hydrazine, 1,2-diethyl-	161-1
O,O-Diethyl S-methyl dithiophosphate	Phosphorodithioic acid, O,O-diethyl S-methyl	328-2
Diethyl-p-nitrophenyl phosphate	Phosphoric acid, diethyl 4-nitrophenyl ester	311
Diethyl phthalate	1,2-Benzenedicarboxylic acid, diethyl ester	84-6
O,O-Diethyl O-pyrazinyl phosphorothioate	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester	297
Diethylstilbesterol	Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-,(E)-	56-5
Dihydrosafrole	1,3-Benzodioxole, 5-propyl-	94-5
Diisopropylfluorophosphate (DFP)	Phosphorofluoridic, bis(1-mthylethyl) ester	55-9
Dimethoate	Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester	60-5
3,3'-Dimethoxybenzidine	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-	119
p-Dimethylaminoazobenzene	Benzenamine, N,N-dimethyl-4-(phenylazo)-	60-1
7,12-Dimethylbenz[a]anthracene	Benz[a]anthracene, 7,12-dimethyl-	57-9
3,3'-Dimethylbenzidine	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-	119
Dimethylcarbamoyl chloride	Carbamic chloride, dimethyl-	79-4
1,1-Dimethylhydrazine	Hydrazine, 1,1-dimethyl-	57-1
1,2-Dimethylhydrazine	Hydrazine, 1,2-dimethyl-	540
alpha,alpha-Dimethylphenethylamine	Benzeneethanamine, alpha,alpha-dimethyl	122
2,4-Dimethylphenol	Phenol, 2,4-dimethyl-	105
Dimethyl phthalate	1,2-Benzenedicarboxylic acid, dimethyl ester	131
Dimethyl sulfatate	Sulfuric acid, dimethyl ester	77-7

Dinitrobenzene, N.O.S. <sup>1</sup>	Benzene, dinitro-	251-54-5
4,6-Dinitro-o-cresol	Phenol, 2-methyl-4,6-dinitro-	534
4,6-Dinitro-o-cresol salts		
2,4-Dinitrophenol	Phenol, 2-methyl-4,6-dinitro-	51-2
2,4-Dinitrotoluene	Benzene, 1-methyl-2,4-dinitro-	121
2,6-Dinitrotoluene	Benzene, 2-methyl-1,3-dinitro-	606
Dinoseb	Phenol, 2-(1-methylpropyl)-4,6-dinitro-	88-8
Di-n-octyl phthalate	1,2-Benzenedicarboxylic acid, dioctyl ester	117
Diphenylamine	Benzenamine, N-phenyl-	122
1,2-Diphenylhydrazine	Hydrazine, 1,2-diphenyl-	122
Di-n-propylnitrosamine	1-Propanamine, N-nitroso-N-propyl-	621
Disulfoton	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl]ester	298
Dithiobiuret	Thioimidodicarbonic diamide [(H <sub>3</sub> N)C(S)] <sub>2</sub> NH	541
Endothall	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic	145
Endrin	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octa-hydro-, (1aalpha,2beta,2abeta,3alpha,6alpha,6abeta,7beta,7aalpha)-	72-2
Endrin metabolites		
Epichlorohydrin	Oxirane, (chloromethyl)-	106
Epinephrine	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, (R)-	51-4
Ethyl carbamate (urethane)	Carbamic acid, ethyl ester	51-7
Ethyl cyanide	Propanenitrile	107
Ethylenebisdithiocarbamic acid	Carbamodithioic acid, 1,2-ethanediylbis-	111
Ethylenebisdithiocarbamic acid, salts and esters.		
Ethylene dibromide	Ethane, 1,2-dibromo-	106
Ethylene dichloride	Ethane, 1,2-dichloro-	107
Ethylene glycol monoethyl ether	Ethanol, 2-ethoxy-	110
Ethyleneimine	Aziridine	151
Ethylene oxide	Oxirane	75-2
Ethylenethiourea	2-Imidazolidinethione	96-4
Ethylidene dichloride	Ethane, 1,1-dichloro-	75-3
Ethyl methacrylate	2-Propenoic acid, 2-methyl-, ethyl ester	97-6

Ethyl methanesulfonate	Methanesulfonic acid, ethyl ester	65-5
Famphur	Phosphorothioic acid, O-[4-[(dimethylamino) sulfonyl]phenyl] O,O-di-methyl ester	52-8
Fluoranthene	Same	206
Fluorine	Same	778-4
Fluoroacetamide	Acetamide, 2-fluoro-, sodium salt	62-7
Formaldehyde	Same	50-0
Formic acid	Same	64-1
Glycidylaldehyde	Oxiranecarboxyaldehyde	765
Halomethanes, N.O.S. <sup>1</sup>		
Heptachlor	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-	76-4
Heptachlor epoxide	2,5-Methano-2H-indeno[1,2-b]oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexa- hydro-, 1aalpha, 1bbeta, 2alpha, 5alpha, 5abeta, 6beta, 6aalpha)-	
Heptachlor epoxide (alpha, beta, and gamma isomers).		
Heptachlorodibenzofurans		
Heptachlorodibenzo-p-dioxins		
Hexachlorobenzene	Benzene, hexachloro-	118
Hexachlorobutadiene	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	87-6
Hexachlorocyclopentadiene	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-	77-4
Hexchlorodibenzo-p-dioxins		
Hexchlorodibenzofurans		
Hexachloroethane	Ethane, hexachloro-	67-7
Hexachlorophene	Phenol, 2,2'-methylenebis[3,4,6-trichloro-	70-3
Hexachloropropene	1-Propene, 1,1,2,3,3,3-hexachloro-	188-7
Hexaethyl tetraphosphate	Tetraphosphoric acid, hexaethyl ester	757-
Hydrazine	Same	302
Hydrogen cyanide	Hydrocyanic acid	74-9
Hydrogen fluoride	Hydrofluoric acid	765-3
Hydrogen sulfide	Hydrogen sulfide H <sub>2</sub> S	773-4
Indeno[1,2,3-cd]pyrene	Same	193
Isobutyl alcohol	1-Propanol, 2-methyl-	78-8

Isodrin	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro- 1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5beta,8beta,8abeta)-	465
Isosafrole	1,3-Benzodioxole, 5-(1-propenyl)-	120
Kepone	1,3,4-Methano-2H-cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro-	143
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, [S-[1alpha(Z),7(2S*,3R*),7aalpha]]-	303
Lead	Same	743 1
Lead xompounds, N.O.S. <sup>1</sup>		
Lead acetate	Acetic acid, lead(2+) salt	301
Lead phosphate	Phosphoric acid, lead(2+) salt (2:3)	744 7
Lead subacetate	Lead, bus(acetato-O)tetrahydroxytri-	133 6
Lindane	Cyciohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)-	58-8
Maleic anhydride	2,5-Furandione	108
Maleic hydrazide	3,6-Pyridazinedione, 1,2-dihydro-	123
Malononitrile	Propanedinitrile	109
Melphalan	L-Phenylalanine, 4-[bis(2-chloroethyl)aminol]-	148
Mercury	Same	743 6
Mercury compounds, N.O.S. <sup>1</sup>		
Mercury fulminate	Fulminic acid, mercury(2+) salt	628
Methacrylonitrile	2Propenenitrile, 2-methyl-	126
Methapyrilene	1,2-Ethanediamine, NN-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-	91-8
Methomyl	Ethanimidothioic acid, N-[[[(methylamino)carbonyl]oxy]-, methyl ester.	167- 77-5
Methoxychlor	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis [4-methoxy-	72-4
Methyl bromide	Methane, bromo-	74-8
Methyl chloride	Methane, chloro-	74-8

Methyl chlorocarbonate	Carbonochloridic acid, methyl ester	79-2
Methyl chloroform	Ethane, 1,1,1-trichloro-	71-5
3-Methylcholanthrene	Benz[ <i>j</i> ]aceanthrylene, 1,2-dihydro-3-methyl	56-4
4,4'-Methylenebis(2-chloroaniline)	Benzenamine, 4,4'-methylenebis[2-chloro-	101-
Methylene bromide	Methane, dibromo-	74-9
Methylene chloride	Methane, dichloro-	75-0
Methyl ethyl ketone (MEK)	2-Butanone	78-9
Methyl ethyl ketone peroxide	2-Butanone, peroxide	133-4
Methyl hydrazine	Hydrazine, methyl-	60-3
Methyl iodide	Methane, iodo-	74-8
Methyl isocyanate	Methane, isocyanato-	624-
2-Methylactonitrile	Propanenitrile, 2-hydroxy-2-methyl-	75-8
Methyl methacrylate	2-Propenoic acid, 2-methyl-methyl ester	80-6
Methyl methanesulfonate	Methanesulfonic acid, methyl ester	66-2
Methyl parathion	Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester	298-
Methylthiouracil	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-	56-0
Mitomycin C	Azirino[2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione, 6-amino-8-[[aminocarbonyloxy]methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-, [1a <i>S</i> -1aalpha,8beta,8aalpha,8balpha)]-	50-0
MNNG	Guanidine, N-methyl-N'-nitro-N-nitroso-	70-2
Mustard gas	Ethane, 1,1'-thiobis[2-chloro-	505-
Naphthalene	Same	91-2
1,4-Naphthoquinone	1,4-Naphthalenedione	130-
alpha-Naphthylamine	1-Naphthalenamine	134-
beta-Naphthylamine	2-Naphthalenamine	91-5
alpha-Naphthylthiourea	Thiourea, 1-naphthalenyl-	86-8
Nickel	Same	744-0
Nickel compounds, N.O.S. <sup>1</sup>		
Nickel carbonyl	Nickel carbonyl Ni(CO) <sub>4</sub> , (T-4)-	134-39-3
Nickel cyanide	Nickel cyanide Ni(CN) <sub>2</sub>	557-
Nicotine	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-	54-1
Nicotine salts		

Nitric oxide	Nitrogen oxide NO	101 43-9
p-Nitroaniline	Benzeneamine, 4-nitro-	100
Nitrobenzene	Benzene, nitro-	98-9
Nitrogen dioxide	Nitrogen dioxide NO <sub>2</sub>	101 44-0
Nitrogen mustard	Ethanamine, 2-chloro-N-(2-chloroethyl)-N-methyl-, N-oxide	51-7
Nitrogen mustard, N-oxide, hydro-chloride salt.		
Nitroglycerin	1,2,3-Propanetriol, trinitrate	55-6
p-Nitrophenol	Phenol, 4-nitro-	100
2-Nitropropane	Propane, 2-nitro-	79-4
Nitrosamines, N.O.S. <sup>1</sup>		355 91-1
N-Nitrosodi-n-butylamine	1-Butamine, N-butyl-N-nitroso	924
N-Nitrosodiethanolamine	Ethanol, 2,2'-(nitrosoimino)bis-	111 7
N-Nitrosodiethylamine	Ethanamine, N-ethyl-N-nitroso-	55-1
N-Nitrosodimethylamine	Methanamine, N-methyl-N-nitroso-	62-7
N-Nitroso-N-ethylurea	Urea, N-ethyl-N-nitroso-	759
N-Nitrosomethylethylamine	Ethanamine, N-methyl-N-nitroso-	105 95-6
N-Nitroso-N-methylurea	Urea, N-methyl-N-nitroso-	684
N-Nitroso-N-methylurethane	Carbamic acid, methylnitroso-, ethyl ester	615
N-Nitrosomethylvinylamine	Vinylamine, N-methyl-N-nitroso-	454 0
N-Nitrosomorpholine	Morpholine, 4-nitroso-	59-8
N-Nitrosomicotine	Pyridine, 3-(1-nitroso-2-pyrrolidinyl)-, (S)	165 55-8
N-Nitrosopiperidine	Piperidine, 1-nitroso-	100
N-Nitrosopyrrolidine	Pyrrolidine, 1-nitroso-	930
N-Nitrososarcosine	Glycine, N-methyl-N-nitroso-	132 22-9
5-Nitro-o-toluidine	Benzenamine, 2-methyl-5-nitro-	99-5
Octamethylpyrophosphoramidate	Diphosphoramidate, octamethyl-	152
Osmium tetroxide	Osmium oxide OsO <sub>4</sub> (T-4)-	208 12-0
Paraldehyde	1,3,5-Trioxane, 2,4,6-trimethyl-	123
Parathion	Phosphorothioic acid, O,O-diethyl O-(4-nitro-phenyl) ester	56-3

Pentachlorobenzene	Benzene, pentachloro-	608
Pentachlorodibenzo-p-dioxins		
Pentachlorodibenzofurans		
Pentachloroethane	Ethane, pentachloro-	76-0
Pentachloronitrobenzene (PCNB)	Benzene, pentachloronitro-	82-6
Pentachlorophenol	Phenol, pentachloro-	87-8
Phenacetin	Acetamide, N-(4-ethoxyphenyl)-	62-4
Phenol	Same	108
Phenylenediamine	Benzenediamine	252 76-3
Phenylmercury acetate	Mercury, (acetato-O)phenyl-	62-3
Phenylthiourea	Thiourea, phenyl-	103
Phosgene	Carbonic dichloride	75-4
Phosphine	Same	780 2
Phorate	Phosphorodithioic, O,O-diethyl S-[(ethylthio)methyl] ester	298
Phthalic acid esters, N.O.S. <sup>1</sup>		
Phthalic anhydride	1,3-Isobenzofurandione	85-4
2-Picoline	Pyridine, 2-methyl-	109
Polychlorinated biphenyls, N.O.S. <sup>1</sup>		
Potassium cyanide	Potassium cyanide K(CN)	151
Potassium silver cyanide	Argentate(1-), bis(cyano-C)-, potassium	506
Pronamide	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-	239 58-5
1,3-Propane sultone	1,2-Oxathiolane, 2,2-dioxide	112 4
n-Propylamine	1-Propanamine	107
Propargyl alcohol	2-Propyn-1-ol	107
Propylene dichloride	Propane, 1,2-dichloro-	78-8
1,2-Propylenimine	Aziridine, 2-methyl-	75-5
Propylthiouracil	4(1H)-Pyrimidinone, 2,3-dihydro-6-propyl-2-thio-	51-5
Pyridine	Same	110
Reserpine	Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-smethyl ester, (3beta,16beta,17alpha,18beta,20alpha)-	50-5

Resorcinol	1,3-Benzenediol	108
Saccharin	1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide	81-0
Saccharin salts		
Safrole	1,3-Benzodioxole, 5-(2-propenyl)-	94-5
Selenium	Same	778.2
Selenium compounds, N.O.S. <sup>1</sup>		
Selenium dioxide	Selenious acid	778.8
Selenium sulfide	Selenium sulfide SeS <sub>2</sub>	748.4
Selenourea	Same	630
Silver	Same	744.4
Silver compounds, N.O.S. <sup>1</sup>		
Silver cyanide	Silver cyanide Ag(CN)	506
Silvex (2,4,5-TP)	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-	93-7
Sodium cyanide	Sodium cyanide Na(CN)	143
Streptozotocin	D-Glucose, 2-deoxy-2-[[[(methylnitrosoamino)carbonyl]amino]-	188.66-4
Strychnine	Strychnidin-10-one	57-2
Strychnine salts		
TCDD	Dibenzob,e][1,4]dioxin, 2,3,7,8-tetrachloro-	174.6
1,2,4,5-Tetrachlorobenzene	Benzene, 1,2,4,5-tetrachloro-	95-9
Tetrachlorodibenzo-p-dioxins		
Tetrachlorodibenzofurans		
Tetrachloroethane, N.O.S. <sup>1</sup>	Ethane, tetrachloro-, N.O.S.	253.20-7
1,1,1,2-Tetrachloroethane	Ethane, 1,1,1,2-tetrachloro-	630
1,1,2,2-Tetrachloroethane	Ethane, 1,1,2,-tetrachloro-	79-3
Tetrachloroethylene	Ethene, tetrachloro-	127-
2,3,4,6-Tetrachlorophenol	Phenol, 2,3,4,6-tetrachloro-	58-9
Tetraethyldithiopyrophosphate	Thiodiphosphoric acid, tertaethyl ester	368.5
Tetraethyl lead	Plumbane, tetraethyl-	78-0
Tetraethyl pyrophosphate	Diphosphoric acid, tetraethyl ester	107-
Tetranitromethane	Methane, tetranitro-	509
Thallium	Same	744.0

Thallium compounds, N.O.S.1		
Thallic oxide	Thallium oxide $Tl_2O_3$	131.5
Thallium(I) acetate	Acetic acid, thallium(1+) salt	563
Thallium(I) carbonate	Carbonic acid, dithallium(1+) salt	653.9
Thallium(I) chloride	Thallium chloride $TlCl$	779.0
Thallium(I) nitrate	Nitric acid, thallium(1+) salt	101.45-1
Thallium selenite	Selenious acid, dithallium(1+) salt	120.52-0
Thallium(I) sulfate	Sulfuric acid, dithallium(1+) salt	744.6
Thioacetamide	Ethanethioamide	62-5
Thiofanox	2-Butanone, 3,3-dimethyl-1-(methylthio)-, -[(methylamino)carbonyl] oxime	391.18-4
Thiomethanol	Methanethiol	74-9
Thiophenol	Benzenethiol	108
Thiosemicarbazide	Hydrazinecarbothioamide	79-1
Thiourea	Same	62-5
Thiram	Thioperoxydicarbonic diamide $[(H_2N)C(S)]_2S_2$ tetramethyl-	137
Toluene	Benzene, methyl-	108
Toluenediamine	Benzenediamine, ar-methyl-	253.45-8
Toluene-2,4-diamine	1,3-Benzenediamine, 4-methyl-	95-8
Touene-2,6-diamine	1,3-Benzenediamine, 2-methyl-	823
Toluene-3,4-diamine	1,2-Benzenediamine, 4-methyl-	496
Toluene diisocyanate	Benzene, 1,3-diisocyanatomethyl-	264.62-5
o-Toluidine	Benzenamine, 2-methyl-	95-5
o-Toluidine hydrochloride	Benzenamine, 2-methyl-, hydrochloride	636
p-Toluidine	Benzenamine, 4-methyl-	106
Toxaphene	Same	800.2
1,2,4-Trichlorobenzene	Benzene, 1,2,4-trichloro-	120
1,1,2-Trichloroethane	Ethane, 1,1,3-trichloro-	79-0
Trichloroethylene	Ethene, trichloro-	79-0
Trichloromethanethiol	Methanethiol, trichloro-	75-7

Trichloromonofluoromethane	Methane, trichlorofluoro-	75-6
2,4,5-Trichlorophenol	Phenol, 2,4,5-trichloro-	95-9
2,4,6-Trichlorophenol	Phenol, 2,4,6-trichloro-	88-0
2,4,5-T	Acetic acid, (2,4,5-trichlorophenoxy)-	93-7
Trichloropropane, N.O.S. <sup>1</sup>		257-29-9
1,2,3-Trichloropropane	Propane, 1,2,3-trichloro-	96-1
O,O,O-Triethyl phosphorothioate	Phosphorothioic acid, O,O,O-triethyl ester	126
1,3,5-Trinitrobenzene	Benzene, 1,3,5-trinitro-	99-3
Tris(1-aziridinyl)phosphine sulfide	Aziridine, 1,1',1''-phosphinothioylidynetris-	
Tris(2,3-dibromopropyl) phosphate	1-Propanol, 2,3-dibromo-, phosphate (3:1)	126
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	72-5
Uracil mustard	2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]-	66-7
Vanadium pentoxide	Vanadium oxide V <sub>2</sub> O <sub>5</sub>	13-11
Vinyl chloride	Ethene, chloro-	75-0
Warfarin	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, when present at concentrations greater than 0.3%	81-8
Warfarin salts, when present at concentrations less than 0.3%.		
Warfarin salts, when present at concentrations greater than 0.3%		
Zinc cyanide	Zinc cyanide Zn(CN) <sub>2</sub>	557
Zinc phosphide	Zinc phosphide Zn <sub>3</sub> P <sub>2</sub> , when present at concentrations greater than 10%.	131-7
Zinc phosphide	Zinc phosphide Zn <sub>3</sub> P <sub>2</sub> , when present at concentrations of 10% or less	131-7

---

## Protocol for Conducting Environmental Compliance Audits of Hazardous Waste Generators under the Resource

## Conservation and Recovery Act

### Appendix E: Commercial Chemical Products or Manufacturing Chemical Intermediates Identified as Acute Hazardous Waste (40 CFR 261.33(a) through 261.33(e))

(COMMENT: Primary hazardous properties of these 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.)

Hazardous Waste No.	Substance
P023	Acetaldehyde, chloro-
P002	Acetamide, N-(aminothioxomethyl)-
P057	Acetamide, 2-fluoro-
P058	Acetic acid, fluoro-, sodium salt
P002	1-Acetyl-2-thiourea
P003	Acrolein
P070	Aldicarb
P004	Aldrin
P005	Allyl alcohol
P006	Aluminum phosphide (r, t)
P007	5-(Aminomethyl)-3-isoxazolol
P008	4-Aminopyridine
P009	Ammonium picrate (r)
P119	Ammonium vanadate
P099	Argebtate(1), bis(cyano-C)-, potassium
P010	Arsenic acid $H_3AsO_4$
P012	Arsenic oxide $As_2O_3$
P011	Arsenic oxide $As_2O_5$
P011	Arsenic pentoxide
P012	Arsenic trioxide
P038	Arsine, diethyl
P036	Arsonous dichloride, phenyl

P054	Aziridine
P067	Aziridine, 2-methyl
P013	Barium cyanide
P024	Benzenamine, 4-chloro-
P077	Benzenamine, 4-nitro-
P028	Benzene, (chloromethyl)-
P042	1,2-Benzenediol, 4-[1-hydroxy- 2-(methylamino)ethyl]- (r)
P046	Benzeneethanamine, alpha,alpha-dimethyl- (r)
P014	Benzenethiol
P001	2H-1-Benzopyran-2-one,4-hydroxy-3-(3-oxo-1-phenylbutyl)-, and salts when present at concentrations greater than 0.3%
P028	Benzyl chloride
P015	Beryllium powder
P016	Bis(chloromethyl)ether
P017	Bromoacetone
P018	Brucine
P021	Calcium cyanide
P021	Calcium cyanide $\text{Ca}(\text{CN})_2$
P022	Carbon disulfide
P095	Carbonic dichloride
P023	Chloroacetaldehyde
P024	p-Chloroaniline
P026	1-(o-Chlorophenyl)thiourea
P027	3-Chloropropionitrile
P029	Copper cyanide
P029	Copper cyanide $\text{Cu}(\text{CN})$
P030	Cyanides (soluble cyanide salts), n.o.s.
P031	Cyanogen
P033	Cyanogen chloride
P033	Cyanogen chloride $(\text{CN})\text{Cl}$
P034	2-Cyclohexyl-4,6-dinitrophenol
P016	Dichloromethyl ether
P036	Dichlorophenylarsine
P037	Dieldrin

P038	Diethylarsine
P041	Diethyl-p-nitrophenyl phosphate
P040	O,O-Diethyl O-pyrazinyl phosphorothioate
P043	Diisopropyl fluorophosphate (DEP)
P004	1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a- hexahydro, (1alpha, 4alpha,4abeta,5alpha, 8alpha,8abeta)-
P060	1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a- hexahydro-, (1alpha, 4alpha,4abeta,5beta, 8beta,8abeta)-
P037	2,7:3,6-Dimethanonaph[2,3b]oxirane, 3,4,5,6,9,9-hexachloro-1a,2,2a,3, 6,6a,7,7a-octahydro-, (1-aalpha, 2beta,2aalpha,3beta,6beta,6aalpha, 7beta,7aalpha)-
P051	2,7:3,6-Dimethanonaph[2,3b]oxirane, octahydro-, (1aalpha,2beta,2abeta, 3alpha,6alpha,6abeta,7beta,7aalpha)-
P044	Dimethoate
P045	3,3-Dimethyl-1-(methylthio)-2-butanone, O-[(methylamino)carbonyl] oxime
P046	alpha,alpha-Dimethylphenethylamine
P047	4,6-Dinitro-o-cresol and salts
P048	2,4-Dinitrophenol
P020	Dinoseb
P085	Diphosphoramidate, octamethyl-
P111	Diphosphoric acid, tetraethyl ester
P039	Disulfoton
P049	Dithiobiuret
P050	Endosulfan
P088	Endothall
P051	Endrin
P051	Endrin and metabolites
P042	Epinephrine
P031	Ethanedinitrile

P066	Ethanimidothioic acid, N- [[[(methylamino)carbony] oxy]-, methyl ester
P101	Ethyl cyanide
P054	Ethyleneimine
P097	Famphur
P056	Fluorine
P057	Fluoroacetamide
P058	Fluoroacetic acid, sodium salt
P065	Fulminic acid,mercury(2+)salt (r, t)
P059	Heptachlor
P062	Hexaethyl tetraphosphate
P116	Hydrazinecarbothioamide
P068	Hydrazine, methyl-
P063	Hydrocyanic acid
P063	Hydrogen cyanide
P096	Hydrogen phosphide
P064	Isocyanic acid, methyl ester
P060	Isodrin
P007	3(2H)-Isoxazolone, 5-(aminomethyl)-
P092	Mercury (acetato-O)phenyl-
P065	Mercury fulminate (r,t)
P082	Methanamine, N-methyl-N-nitroso
P064	Methane, isocyanato-
P016	Methane, oxybis[chloro-
P112	Methane, tetranitro- (r)
P118	Methanethiol, trichloro-
P050	6,9-Methano-2,4,3- benzodioxathlepen, 6,7,8,9,10,10- hexachloro- 1,5,5a,6,9,9a-hexahydro- ,3-oxide
P059	4,7-Methano-1H-indene, 1,4,5,6,7,8,8- heptachloro-3a,4,7,7a- tetrahydro-
P066	Methomyl
P068	Methyl hydrazine
P064	Methyl isocyanate
P069	2-Methylactonitrile
P071	Methyl parathion
P072	alpha-Naphthylthiourea

P073	Nickel carbonyl
P073	Nickel carbonyl, (T-4)-
P074	Nickel cyanide
P074	Nickel cyanide Ni(CN) <sub>2</sub>
P075	Nicotine and salts
P076	Nitric oxide
P077	p-Nitroaniline
P078	Nitrogen dioxide
P076	Nitrogen oxide NO
P078	Nitrogen oxide
P081	Nitroglycerine (r)
P082	N-Nitrosodimethylamine
P084	N-Nitrosomethylvinylamine
P074	Nickel cyanide
P085	Octamethylpyrophosphoramidate
P087	Osmium oxide
P087	Osmium tetroxide
P088	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid
P089	Parathion
P034	Phenol, 2-cyclohexyl-4,6-dinitro
P048	Phenol, 2,4-dinitro
P047	Phenol, 2-methyl-4,6-dinitro- and salts
P020	Phenol, 2-(1-methylpropyl)-4,6-dinitro
P009	Phenol, 2,4,6-trinitro-, ammonium salt (r)
P092	Phenylmercury acetate
P093	Phenylthiourea
P094	Phorate
P095	Phosgene
P096	Phosphine
P041	Phosphoric acid, diethyl 4-nitrophenyl ester
P039	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester
P094	Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester
P044	Phosphorodithioic acid, O,O-dimethyl S[2-(methylamino)-2-oxoethyl] ester

P043	Phosphorofluoric acid, bis(1-methylethyl) -ester
P089	Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester
P040	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester
P097	Phosphorothioic acid, O-[4-[(dimethylamino) sulfonyl]phenyl] O,O-dimethyl ester
P071	Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester
P110	Plumbane, tetraethyl-
P098	Potassium cyanide
P098	Potassium cyanide K(CN)
P099	Potassium silver cyanide
P070	Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime
P101	Propanenitrile
P027	Propanenitrile, 3-chloro-
P069	Propanenitrile, 2-hydroxy-2-methyl
P081	1,2,3-Propanetriol, trinitrate (r)
P017	2-Propanone, 1-bromo-
P102	Propargyl alcohol
P003	2-Propenal
P005	2-Propen- 1 -ol
P067	1,2-Propylenimine
P102	2-Propyn-1 -ol
P008	4-Pyridinamine
P075	Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)-,(S)-, and salts
P103	Selenourea
P104	Silver cyanide
P104	Silver cyanide Ag(CN)
P105	Sodium azide
P106	Sodium cyanide
P106	Sodium cyanide Na(CN)
P108	Strychnidin-10-one, and salts
P018	Strychnidin 10-one, 2,3-dimethoxy-
P108	Strychnine and salts
P115	Sulfuric acid, dithallium(I) salt

P109	Tetraethyldithiopyrophosphate
P110	Tetraethyl lead
P111	Tetraethylpyrophosphate
P112	Tetranitromethane (r)
P062	Tetraphosphoric acid, hexaethyl ester
P113	Thallic oxide
P113	Thallium(III) oxide
P114	Thallium(I) selenite
P115	Thallium(I) sulfate
P109	Thiodiphosphoric acid, tetraethyl ester
P045	Thiofanox
P049	Thiomidodicarbonic diamide
P014	Thiophenol
P116	Thiosemicarbazide
P026	Thiourea, (2-chlorophenyl)-
P072	Thiourea, 1-naphthalenyl-
P093	Thiourea, phenyl-
P123	Toxaphene
P118	Trichloromethanethiol
P119	Vanadic acid, ammonium salt
P120	Vanadium oxide $V_2O_3$
P120	Vanadium pentoxide
P084	Vinylamine, N-methyl-N-nitroso
P001	Warfarin and salts, when present at concentrations greater than 0.3%
P121	Zinc cyanide
P121	Zinc cyanide $Zn(CN)_2$
P122	Zinc phosphide $Zn_3P_2$ , when present at concentrations greater than 0.3%

---

## Protocol for Conducting Environmental Compliance Audits of Hazardous Waste Generators under the Resource Conservation and Recovery Act

## Appendix F: Potentially Incompatible Hazardous Wastes (40 CFR 264, Appendix V)

Below are examples of potentially incompatible wastes and waste components along with the harmful consequences that result from mixing wastes in one group with wastes in another group. The list is intended as a guide to indicate the need for special precautions when managing these potentially incompatible waste materials or components. This list is not intended to be exhaustive. Operators must, as the regulations require, adequately analyze their wastes so they can avoid creating uncontrolled substances or reactions of the type listed below, whether listed below or not.

In the lists below, the mixing of a Group A material with a Group B material may have the potential consequences as noted.

Group 1-A	Group 1-B
Acetylene sludge	Acid sludge
Alkaline caustic liquids	Acid and water
Alkaline cleaner	Battery acid
Alkaline corrosive liquids	Chemical cleaners
Alkaline corrosive battery acid	Electrolyte, acid
Alkaline corrosive battery acid	Etching acid liquid or solvent
Caustic wastewater	Pickling liquor and other corrosive
Lime sludge and	acids

other corrosive alkalies	Spent acid
Lime wastewater	Spent mixed acid
Lime and water	Spent sulfuric acid
Spent caustic	

**Potential Consequences: Heat generation, violent reaction.**

<b>Group 2-A</b>	<b>Group 2-B</b>
Aluminum	Any waste in Group 1-A or 1-B
Beryllium	
Calcium	
Lithium	
Magnesium	
Potassium	
Sodium	
Zinc powder	
Other reactive metals and metal hydrides	

**Potential Consequences: Fire or explosion; generation of flammable hydrogen gas.**

Group 3-A	Group 3-B
Alcohols Water	Any concentrated waste in Groups 1-A or 1-B Calcium Lithium Metal hydrides Potassium SO <sub>2</sub> -Cl <sub>2</sub> , SOCl <sub>1</sub> , PCl <sub>3</sub> , CH <sub>3</sub> SiCl <sub>3</sub> Other water-reactive waste

**Potential Consequences: Fire, explosion, or heat generation; generation of flammable or toxic gases.**

Group 4-A	Group 4-B
Alcohols Aldehydes Halogenated hydrocarbons Nitrated hydrocarbons Unsaturated hydrocarbons Other reactive	Concentrated Group 1-A or Group 1-B wastes Group 2-A wastes

organic compounds and solvents	
--------------------------------	--

**Potential Consequences: Fire, explosion, or violent reaction.**

Group 5-A	Group 5-B
Spent cyanide and sulfide solutions	Group 1-B wastes

**Potential Consequences: Generation of toxic hydrogen cyanide, or hydrogen sulfide gas.**

Group 6-A	Group 6-B
Chlorates	Acetic acid and other organic acids
Chlorine	
Chlorites	Concentrated mineral acids
Chromic acid	Group 2-A wastes
Hypochlorites	
Nitrates	Group 4-A wastes
Nitric acid, fuming	Other flammable and combustible wastes
Perchlorates	
Permanganates	
Peroxides	
Other strong oxidizers	

**Potential Consequences: Fire, explosion, or violent reaction.**

"Law, Regulations, and Guidelines for Handling of Hazardous Waste," California Department of Health, February 1975.

---

## Protocol for Conducting Environmental Compliance Audits of Hazardous Waste Generators under the Resource Conservation and Recovery Act

### Appendix G: Land Disposal Restricted Wastes and Their Effective Dates (40 CFR 268, Appendix VII)

**Table 1 - Land Disposal Restricted Wastes and Their Effective Dates**

<b>Waste Code</b>	<b>Waste Category</b>	<b>Effective Date</b>
California list	Liquid hazardous wastes, including free liquids associated with solid or sludge, containing free cyanides at concentrations greater than or equal to 1000 mg/L or certain metals or compounds of these metals greater than or equal to the prohibition levels.	8 July 1987
California list	Liquid (aqueous) hazardous wastes having a pH less than or equal to 2.	8 July 1987
California list	Dilute HOC wastewaters, defined as HOC-waste mixtures that are primarily water and that contain greater than or equal to 1000 mg/L but less than	8 July 1987

	10,000 mg/L.	
California list	Liquid hazardous waste containing PCBs greater than or equal to 50 ppm.	8 July 1987
California list	Other liquid and nonliquid hazardous wastes containing HOCs in total concentration greater than or equal to 1000 mg.	8 Nov 1988
RCRA Hazardous Wastes	Those that contain naturally occurring radioactive materials.	8 May 1992
RCRA Listed Wastes	Mixed radioactive/hazardous wastes.	8 May 1992
D001	All	8 Aug 1990
D002	All	8 Aug 1990
D003	All	8 Aug 1990
D004	Wastewater	8 Aug 1990
D004	Nonwastewaters	8 May 1992
D005	Nonwastewater	8 May 1992
D006	All	8 Aug 1990
D007	All	8 Aug 1990
D007	All	8 Aug 1990
D008	Lead materials before secondary smelting	8 May 1992
D008	All others	8 Aug 1990
D009	Nonwastewater	8 May 1992
D010	All	8 Aug 1990

D011	All	8 Aug 1990
D012	All	8 Aug 1990
D013	All	8 Aug 1990
D014	All	8 Aug 1990
D015	All	8 Aug 1990
D016	All	8 Aug 1990
D017	All	8 Aug 1990
F001	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids.	8 Nov 1988
F001	All others	8 Nov 1986
F002 (1,1,2 - trichloroethane)	Wastewater and Nonwastewater	8 Aug 1990
F002	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids.	8 Nov 1988
F002	All others	8 Nov 1986
F003	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges	8 Nov 1988

	and solids.	
F003	All others	8 Nov 1986
F004	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids.	8 Nov 1988
F004	All others	8 Nov 1986
F005 (benzene, 2-ethoxy ethanol, 2-nitropropane).	Wastewater and Nonwastewater	8 Aug 1990
F005	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and soils.	8 Nov 1988
F005	All others	8 Nov 1986
F006	Wastewater	8 Aug 1990
F006	Nonwastewater	8 Aug 1988
F006 (cyanides)	Nonwastewater	8 July 1989
F007	All	8 July 1989
F008	All	8 July 1989
F009	All	8 July 1989
F010	All	8 June 1989
F011 (cyanides)	Nonwastewater	8 Dec 1986

F011	All others	8 July 1989
F012 (cyanides)	Nonwastewater	8 Dec 1989
F012	All others	8 July 1989
F019	All	8 Aug 1990
F020	All	8 Nov 1988
F021	All	8 Nov 1988
F022	All	8 Nov 1988
F023	All	8 Nov 1988
F024 (metals)	Wastewater	8 June 1989
F024 (metals)	Nonwastewater	8 Aug 1990
F024	All others	8 June 1989
F025	All	8 Aug 1990
F026	All	8 Nov 1988
F027	All	8 Nov 1988
F028	All	8 Nov 1988
F039	Wastewater	8 Aug 1990
F039	Nonwastewater	8 May 1992
K001 (organics) <sup>b</sup>	All	8 Aug 1988
K001	All others	8 Aug 1988
K002	All	8 Aug 1990
K003	All	8 Aug 1990

K004	Wastewater	8 Aug 1990
K004 <sup>c</sup>	Nonwastewater	8 Aug 1990
K005	Wastewater	8 Aug 1990
K005 <sup>c</sup>	Nonwastewater	8 June 1989
K006	All	8 Aug 1990
K007	Wastewater	8 Aug 1990
K007 <sup>c</sup>	Nonwastewater	8 June 1989
K008	Wastewater	8 Aug 1990
K008 <sup>c</sup>	Nonwastewater	8 Aug 1988
K009	All	8 June 1989
K010	All	8 June 1989
K011	Wastewater	8 Aug 1990
K011	Nonwastewater	8 June 1989
K013	Wastewater	8 Aug 1990
K013	Nonwastewater	8 June 1989
K014	Wastewater	8 Aug 1990
K014	Nonwastewater	8 June 1989
K015	Wastewater	8 Aug 1988
K015	Nonwastewater	8 Aug 1990
K016	All	8 Aug 1988
K017	All	8 Aug 1990

K018	All	8 Aug 1988
K019	All	8 Aug 1988
K020	All	8 Aug 1988
K021	Wastewater	8 Aug 1990
K021 <sup>c</sup>	Nonwastewater	8 Aug 1988
K022	Wastewater	8 Aug 1990
K022	Nonwastewater	8 Aug 1988
K023	All	8 June 1989
K024	All	8 Aug 1988
K025	Wastewater	8 Aug 1990
K025 <sup>c</sup>	Nonwastewater	8 Aug 1988
K026	All	8 Aug 1990
K027	All	8 June 1989
K028 (metals)	Nonwastewater	8 Aug 1990
K028	All others	8 June 1989
K029	Wastewater	8 Aug 1990
K029	Nonwastewater	8 June 1989
K030	All	8 Aug 1990
K031	Wastewater	8 Aug 1990
K031	Nonwastewater	8 May 1992
K032	All	8 Aug 1990

K033	All	8 Aug 1990
K034	All	8 Aug 1990
K035	All	8 Aug 1990
K036	Wastewater	8 June 1989
K036c	Nonwastewater	8 Aug 1988
K037 <sup>b</sup>	Wastewater	8 Aug 1988
K037	Nonwastewater	8 Aug 1988
K038	All	8 June 1989
K039	All	8 June 1989
K040	All	8 June 1989
K041	All	8 Aug 1990
K042	All	8 Aug 1990
K043	All	8 June 1989
K044 <sup>c</sup>	All	8 Aug 1988
K045 <sup>c</sup>	all	8 Aug 1988
K046 (Nonreactive)	Nonwastewater	8 Aug 1988
K046	All others	8 Aug 1990
K047	All	8 Aug 1988
K048	Wastewater	8 Aug 1990
K048	Nonwastewater	8 Nov 1990
K049	Wastewater	8 Aug 1990

K049	Nonwastewater	8 Nov 1990
K050	Wastewater	8 Aug 1990
K050	Nonwastewater	8 Nov 1990
K051	Wastewater	8 Aug 1990
K051	Nonwastewater	8 Nov 1990
K052	Wastewater	8 Aug 1990
K052	Nonwastewater	8 Nov 1990
K060	Wastewater	8 Aug 1990
K060 <sup>c</sup>	Nonwastewater	8 Aug 1988
K061	Wastewater	8 Aug 1990
K061	Nonwastewater (low zinc) (interim standard for high zinc remains in effect until 7 Aug 1991).	8 Aug 1988
K062	All	8 Aug 1988
K069 (Non-Calcium Sulfate) <sup>c</sup>	Nonwastewater	8 Aug 1988
K069	All others	8 Aug 1990
K071	All	8 Aug 1990
K073	All	8 Aug 1990
K083	All	8 Aug 1990
K084	Wastewater	8 Aug 1990
K084	Nonwastewater	8 May 1992
K085	All	8 Aug 1990

K086 (organics) <sup>b</sup>	All	8 Aug 1988
K086	All others	8 Aug 1988
K087	All	8 Aug 1988
K093	All	8 June 1989
K094	All	8 June 1989
K095	Wastewater	8 Aug 1990
K095	Nonwastewater	8 June 1989
K096	Wastewater	8 Aug 1990
K096	Nonwastewater	8 June 1989
K097	All	8 Aug 1990
K098	All	8 Aug 1990
K099	All	8 Aug 1988
K100	Wastewater	8 Aug 1990
K100 <sup>c</sup>	Nonwastewater	8 Aug 1988
K101 (organics)	Wastewater	8 Aug 1988
K101 (metals)	Wastewater	8 Aug 1990
K101 (organics)	Nonwastewater	8 Aug 1988
K101 (metals)	Nonwastewater	8 May 1992
K102 (organics)	Wastewater	8 Aug 1988
K102 (metals)	Wastewater	8 Aug 1990
K102 (organics)	Nonwastewater	8 Aug 1988

K102 (metals)	Nonwastewater	8 May 1992
K103	All	8 Aug 1988
K104	All	8 Aug 1988
K105	All	8 Aug 1990
K106	Wastewater	8 Aug 1990
K106	Nonwastewater	8 May 1992
K113	All	8 June 1989
K114	All	8 June 1989
K115	All	8 June 1989
K116	All	8 June 1989
P001	All	8 Aug 1990
P002	All	8 Aug 1990
P003	All	8 Aug 1990
P004	All	8 Aug 1990
P005	All	8 Aug 1990
P006	All	8 Aug 1990
P007	All	8 Aug 1990
P008	All	8 Aug 1990
P009	All	8 Aug 1990
P010	Wastewater	8 Aug 1990
P010	Nonwastewater	8 May 1992

P011	Wastewater	8 Aug 1990
P011	Nonwastewater	8 May 1992
P012	Wastewater	8 Aug 1990
P012	Nonwastewater	8 May 1992
P013 (barium)	Nonwastewater	8 Aug 1990
P013	All others	8 June 1989
P014	All	8 Aug 1990
P015	All	8 Aug 1990
P016	All	8 Aug 1990
P017	All	8 Aug 1990
P018	All	8 Aug 1990
P020	All	8 Aug 1990
P021	All	8 June 1989
P022	All	8 Aug 1990
P023	All	8 Aug 1990
P024	All	8 Aug 1990
P026	All	8 Aug 1990
P027	All	8 Aug 1990
P028	All	8 Aug 1990
P029	All	8 June 1989
P030	All	8 June 1989

P031	All	8 Aug 1990
P033	All	8 Aug 1990
P034	All	8 Aug 1990
P036	Wastewater	8 Aug 1990
P036	Nonwastewater	8 May 1992
P037	All	8 Aug 1990
P038	Wastewater	8 Aug 1990
P038	Nonwastewater	8 May 1992
P039	All	8 June 1989
P040	All	8 June 1989
P041	All	8 June 1989
P042	All	8 Aug 1990
P043	All	8 June 1989
P044	All	8 June 1989
P045	All	8 Aug 1990
P046	All	8 Aug 1990
P047	All	8 Aug 1990
P048	All	8 Aug 1990
P049	All	8 Aug 1990
P050	All	8 Aug 1990
P051	All	8 Aug 1990

P054	All	8 Aug 1990
P056	All	8 Aug 1990
P057	All	8 Aug 1990
P058	All	8 Aug 1990
P059	All	8 Aug 1990
P060	All	8 Aug 1990
P062	All	8 June 1989
P063	All	8 June 1989
P064	All	8 Aug 1990
P065	Wastewater	8 Aug 1990
P065	Nonwastewater	8 May 1992
P066	All	8 Aug 1990
P067	All	8 Aug 1990
P068	All	8 Aug 1990
P069	All	8 Aug 1990
P070	All	8 Aug 1990
P071	All	8 June 1989
P072	All	8 Aug 1990
P073	All	8 Aug 1990
P074	All	8 June 1989
P075	All	8 Aug 1990

P076	All	8 Aug 1990
P077	All	8 Aug 1990
P078	All	8 Aug 1990
P079	All	8 Aug 1990
P081	All	8 Aug 1990
P082	All	8 Aug 1990
P084	All	8 Aug 1990
P085	All	8 June 1989
P087	All	8 May 1992
P088	All	8 Aug 1990
P089	All	8 June 1989
P092	Wastewater	8 Aug 1990
P092	Nonwastewater	8 May 1992
P093	All	8 Aug 1990
P094	All	8 June 1989
P095	All	8 Aug 1990
P096	All	8 Aug 1990
P099 (silver)	Wastewater	8 Aug 1990
P099	All others	8 June 1989
P101	All	8 Aug 1990
P102	All	8 Aug 1990

P103	All	8 Aug 1990
P104 (silver)	Wastewater	8 Aug 1990
P104	All others	8 June 1989
P105	All	8 Aug 1990
P106	All	8 June 1989
P108	All	8 Aug 1990
P109	All	8 June 1989
P110	All	8 Aug 1990
P111	All	8 June 1989
P112	All	8 Aug 1990
P113	All	8 Aug 1990
P114	All	8 Aug 1990
P115	All	8 Aug 1990
P116	All	8 Aug 1990
P118	All	8 Aug 1990
P119	All	8 Aug 1990
P120	All	8 Aug 1990
P121	All	8 June 1989
P122	All	8 Aug 1990
P123	All	8 Aug 1990
U001	All	8 Aug 1990

U002	All	8 Aug 1990
U003	All	8 Aug 1990
U004	All	8 Aug 1990
U005	All	8 Aug 1990
U006	All	8 Aug 1990
U007	All	8 Aug 1990
U008	All	8 Aug 1990
U009	All	8 Aug 1990
U010	All	8 Aug 1990
U011	All	8 Aug 1990
U012	All	8 Aug 1990
U014	All	8 Aug 1990
U015	All	8 Aug 1990
U016	All	8 Aug 1990
U017	All	8 Aug 1990
U018	All	8 Aug 1990
U019	All	8 Aug 1990
U020	All	8 Aug 1990
U021	All	8 Aug 1990
U022	All	8 Aug 1990
U023	All	8 Aug 1990

U024	All	8 Aug 1990
U025	All	8 Aug 1990
U026	All	8 Aug 1990
U027	All	8 Aug 1990
U028	All	8 June 1989
U029	All	8 Aug 1990
U030	All	8 Aug 1990
U031	All	8 Aug 1990
U032	All	8 Aug 1990
U033	All	8 Aug 1990
U034	All	8 Aug 1990
U035	All	8 Aug 1990
U036	All	8 Aug 1990
U037	All	8 Aug 1990
U038	All	8 Aug 1990
U039	All	8 Aug 1990
U041	All	8 Aug 1990
U042	All	8 Aug 1990
U043	All	8 Aug 1990
U044	All	8 Aug 1990
U045	All	8 Aug 1990

U046	All	8 Aug 1990
U047	All	8 Aug 1990
U048	All	8 Aug 1990
U049	All	8 Aug 1990
U050	All	8 Aug 1990
U051	All	8 Aug 1990
U052	All	8 Aug 1990
U053	All	8 Aug 1990
U055	All	8 Aug 1990
U056	All	8 Aug 1990
U057	All	8 Aug 1990
U058	All	8 June 1989
U059	All	8 Aug 1990
U060	All	8 Aug 1990
U061	All	8 Aug 1990
U062	All	8 Aug 1990
U063	All	8 Aug 1990
U064	All	8 Aug 1990
U066	All	8 Aug 1990
U067	All	8 Aug 1990
U068	All	8 Aug 1990

U069	All	8 June 1989
U070	All	8 Aug 1990
U071	All	8 Aug 1990
U072	All	8 Aug 1990
U073	All	8 Aug 1990
U074	All	8 Aug 1990
U075	All	8 Aug 1990
U076	All	8 Aug 1990
U077	All	8 Aug 1990
U078	All	8 Aug 1990
U079	All	8 Aug 1990
U080	All	8 Aug 1990
U081	All	8 Aug 1990
U082	All	8 Aug 1990
U083	All	8 Aug 1990
U084	All	8 Aug 1990
U084	All	8 Aug 1990
U085	All	8 Aug 1990
U086	All	8 Aug 1990
U087	All	8 June 1989
U088	All	8 June 1989

U089	All	8 Aug 1990
U090	All	8 Aug 1990
U091	All	8 Aug 1990
U092	All	8 Aug 1990
U093	All	8 Aug 1990
U094	All	8 Aug 1990
U095	All	8 Aug 1990
U096	All	8 Aug 1990
U097	All	8 Aug 1990
U098	All	8 Aug 1990
U099	All	8 Aug 1990
U101	All	8 Aug 1990
U101	All	8 June 1989
U103	All	8 Aug 1990
U105	All	8 Aug 1990
U106	All	8 Aug 1990
U107	All	8 June 1989
U108	All	8 Aug 1990
U109	All	8 Aug 1990
U110	All	8 Aug 1990
U111	All	8 Aug 1990

U112	All	8 Aug 1990
U113	All	8 Aug 1990
U114	All	8 Aug 1990
U115	All	8 Aug 1990
U116	All	8 Aug 1990
U117	All	8 Aug 1990
U118	All	8 Aug 1990
U119	All	8 Aug 1990
U120	All	8 Aug 1990
U121	All	8 Aug 1990
U122	All	8 Aug 1990
U123	All	8 Aug 1990
U124	All	8 Aug 1990
U125	All	8 Aug 1990
U126	All	8 Aug 1990
U127	All	8 Aug 1990
U128	All	8 Aug 1990
U129	All	8 Aug 1990
U130	All	8 Aug 1990
U131	All	8 Aug 1990
U132	All	8 Aug 1990

U133	All	8 Aug 1990
U134	All	8 Aug 1990
U135	All	8 Aug 1990
U136	Wastewater	8 Aug 1990
U136	Nonwastewater	8 May 1992
U137	All	8 Aug 1990
U138	All	8 Aug 1990
U140	All	8 Aug 1990
U141	All	8 Aug 1990
U142	All	8 Aug 1990
U143	All	8 Aug 1990
U144	All	8 Aug 1990
U145	All	8 Aug 1990
U146	All	8 Aug 1990
U147	All	8 Aug 1990
U148	All	8 Aug 1990
U149	All	8 Aug 1990
U150	All	8 Aug 1990
U151	Wastewater	8 Aug 1990
U151	Nonwastewater	8 May 1992
U152	All	8 Aug 1990

U153	All	8 Aug 1990
U154	All	8 Aug 1990
U155	All	8 Aug 1990
U156	All	8 Aug 1990
U157	All	8 Aug 1990
U158	All	8 Aug 1990
U159	All	8 Aug 1990
U160	All	8 Aug 1990
U161	All	8 Aug 1990
U162	All	8 Aug 1990
U163	All	8 Aug 1990
U164	All	8 Aug 1990
U165	All	8 Aug 1990
U166	All	8 Aug 1990
U167	All	8 Aug 1990
U168	All	8 Aug 1990
U169	All	8 Aug 1990
U170	All	8 Aug 1990
U171	All	8 Aug 1990
U172	All	8 Aug 1990
U173	All	8 Aug 1990

U174	All	8 Aug 1990
U176	All	8 Aug 1990
U177	All	8 Aug 1990
U178	All	8 Aug 1990
U179	All	8 Aug 1990
U180	All	8 Aug 1990
U181	All	8 Aug 1990
U182	All	8 Aug 1990
U183	All	8 Aug 1990
U184	All	8 Aug 1990
U185	All	8 Aug 1990
U186	All	8 Aug 1990
U187	All	8 Aug 1990
U188	All	8 Aug 1990
U189	All	8 Aug 1990
U190	All	8 June 1989
U191	All	8 Aug 1990
U192	All	8 Aug 1990
U193	All	8 Aug 1990
U194	All	8 Aug 1990
U196	All	8 Aug 1990

U197	All	8 Aug 1990
U200	All	8 Aug 1990
U201	All	8 Aug 1990
U202	All	8 Aug 1990
U203	All	8 Aug 1990
U204	All	8 Aug 1990
U205	All	8 Aug 1990
U206	All	8 Aug 1990
U207	All	8 Aug 1990
U208	All	8 Aug 1990
U209	All	8 Aug 1990
U210	All	8 Aug 1990
U211	All	8 Aug 1990
U212	All	8 Aug 1990
U213	All	8 Aug 1990
U214	All	8 Aug 1990
U215	All	8 Aug 1990
U216	All	8 Aug 1990
U217	All	8 Aug 1990
U218	All	8 Aug 1990
U219	All	8 Aug 1990

U220	All	8 Aug 1990
U221	All	8 June 1989
U222	All	8 Aug 1990
U223	All	8 June 1989
U225	All	8 Aug 1990
U226	All	8 Aug 1990
U227	All	8 Aug 1990
U228	All	8 Aug 1990
U234	All	8 Aug 1990
U235	All	8 June 1989
U236	All	8 Aug 1990
U237	All	8 Aug 1990
U238	All	8 Aug 1990
U239	All	8 Aug 1990
U240	All	8 Aug 1990
U243	All	8 Aug 1990
U244	All	8 Aug 1990
U246	All	8 Aug 1990
U247	All	8 Aug 1990
U248	All	8 Aug 1990
U249	All	8 Aug 1990

<sup>a</sup> This table also does not include contaminated soil and debris wastes.

<sup>b</sup> The standard has been revised in the Third Third Final Rule.

<sup>c</sup> No land disposal standard has been revised in the Third Third Final Rule.

**Table 2 - Summary of Effective Dates of  
Land Disposal Restrictions for  
Contaminated Soil and Debris (CSD)**

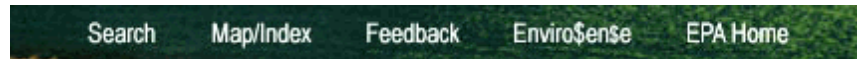
	<b>Restricted hazardous waste in CSD</b>	<b>Effective Date</b>
1.	Solvent-(F001-F005) and dioxin-(F020-F023 and F026-F028) containing soil and debris from CERCLA response of RCRA corrective actions.	8 Nov 1990
2.	Soil and debris not from CERCLA response or RCRA corrective actions contaminated with less than 1% total solvents (F001-F005) or dioxins (F020-F023 and F026-F028).	8 Nov 1990
3.	Soil and debris contaminated with California list HOCs from CERCLA response or RCRA corrective actions.	8 Nov 1990

4.	Soil and debris contaminated with California list HOCs not from CERCLA response or RCRA corrective actions.	8 July 1989
5.	All soil and debris contaminated with First Third wastes for which treatment standards are based on incineration.	8 Aug 1990
6.	All soil and debris contaminated with Second Third wastes for which treatment standards are based on incineration.	8 June 1991
7.	All soil and debris contaminated with Third Third wastes or, First or Second Third "soft hammer" wastes which had treatment standards promulgated in the Third Third rule, for which treatment standards are based on incineration, vitrification, or mercury retorting, acid leaching followed by chemical precipitation, or thermal recovery of metals; as well as all inorganic	8 May 1993

	solids debris contaminated with D004-D011 wastes, and all soil and debris contaminated with mixed RCRA/radioactive wastes.	
8.	Debris that is contaminated with wastes listed in 40 CFR 268.10, 268.11, and 268.12 (including such wastes that are mixed radioactive hazardous wastes), and debris that is contaminated with any characteristic waste for which treatment standards are established (including such wastes that are mixed radioactive hazardous wastes).	8 May 1993
9.	Hazardous soil having treatment standards based on incineration, mercury retorting or vitrification, and soils contaminated with hazardous wastes listed in 40 CFR 268.10, 268.11, 268.12 that are mixed radioactive hazardous wastes.	8 May 1993

NOTE:

1. Appendix VII is provided for the convenience of the reader.
2. Contaminated Soil and Debris Rule will be promulgated in the future.



Contact: [Emily Chow](#), CCSMD Coordinator, <http://es.epa.gov/oeca/ccsmd/>  
This page last updated on March 14, 1998.

URL: [http://es.epa.gov/oeca/ccsmd/gen\\_pt2.html](http://es.epa.gov/oeca/ccsmd/gen_pt2.html)