Guidelines: Handling and Disposal of Chemicals

is Purdue's chemical waste instruction booklet.

The whole thing is at
www.adpc.purdue.edu/PhysFac/rem/home/booklets/HMMguide.pdf

In this handout are pages

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HAZARDOUS WASTE DEFINED

In order for a material to be classified as a hazardous waste, it must first be a "solid waste". RCRA defines a solid waste as garbage, refuse, sludge, industrial waste, or other discarded materials. The term "solid waste" is very broad and includes both non-hazardous and hazardous waste but is not limited to wastes that are physically solid. Many solid wastes are liquid, semisolid, or gas.

A hazardous waste is a waste with properties that make it dangerous or capable of having a harmful effect on human health or the environment. There are two criteria to determine if the solid waste is hazardous waste. First, determine if the waste exhibits certain characteristics that can cause death, injury, or illness in humans or lead to ecological damage. Second, determine if the waste is a listed hazardous waste.

Wastes may be hazardous if they are specifically listed by the Environmental Protection Agency (EPA). There are four EPA lists for hazardous waste: the F list, the P list, the K list, and the U list. The F list includes wastes from nonspecific sources. At Purdue, the most common F listed waste is waste generated from the use of solvents. This includes waste mixtures of solvents, waste solvents, and media mixed with solvents, such as rags for cleaning. The F list is codified in the regulations at 40 CFR 261.31.[3]

The K list includes wastes generated from specific industrial process. The K list is found at 40 CFR 261.32. The P list and the U list include pure or commercial grade formulations of specific unused chemicals. Chemicals are included on the P list if they are acutely toxic. The U list is generally comprised of chemicals that are toxic, but also includes chemicals that display other characteristics, such as ignitability, corrosivity, or reactivity. Both the P list and U list are codified at 40 CFR 261.33.

Waste may also be hazardous if it exhibits a particular hazardous characteristic. The four hazardous characteristics are ignitability, corrosivity, reactivity, and toxicity. The ignitability characteristic identifies wastes that can readily catch fire and sustain combustion. Ignitable wastes carry the waste code D001. The corrosivity characteristic (D002) identifies wastes that are acidic or alkaline (basic) and can readily corrode or dissolve flesh, metal, or other materials[4]. The reactivity characteristic (D003) identifies wastes that readily explode or undergo violent reactions. The EPA developed the toxicity characteristic (TC) to identify wastes likely to leach dangerous concentration of toxic chemicals into ground water. Specific constituents that exhibit the toxicity characteristic are listed in Table V and identified by EPA waste numbers D004 through D043

SATELLITE ACCUMULATION AREA

I. DEFINITION

A satellite accumulation area (SAA) is a designated area within the laboratory or shop, which will store the hazardous waste until it is sent out for processing. The SAA must be at or near the point of generation. Waste within the SAA must be capped, labeled, and under the control of the generator. General access to your waste must be restricted: this means waste cannot be stored in hallways, walkways, or common areas.

II. WHY DOES PURDUE USE SAA'S FOR HAZARDOUS WASTE MANAGEMENT?

Purdue University uses SAA's to manage waste in laboratories and shops because it provides a safe and effective means to accumulate hazardous waste before removal to the University's TSDF. Additionally, SAA's are the *least restrictive* regulatory option for accumulation and storage of waste at or near the point of generation.

III. HOW TO DESIGN YOUR SAA

A. Location must be at or near the point of generation.

Establish an area to accumulate hazardous waste. This area can be a bench top, a fume hood, or a previously empty cabinet. The SAA must be at or near the point of generation and under the control of the operator generating the waste. Separate SAA's may be used for each waste stream. If multiple SAA's are used in the area, they must be clearly identified by boundaries and signage indicating the waste stream.

B. Regulations applicable to SAA:

Hazardous waste management at the University is regulated by the Indiana Department of Environmental Management (IDEM) and by the U.S. Environmental Protection Agency (EPA). State and federal regulations mandate the following regarding chemical waste:

1. Waste in SAA's must be kept in containers.
2. Containers must be in good condition.
3. Containers must be labeled or clearly marked with the words "HAZARDOUS WASTE" and with the contents of the container from the start of accumulation.
4. Containers must be compatible with the waste and suitable for transportation.
5. Containers must be properly capped **at all times** except when adding to or pouring off waste material.
6. Handle containers to avoid rupture or leakage.
7. SAA's must never exceed 55 gallons of chemical waste or one quart of acutely toxic chemical waste.
8. All spills and leaks must be cleaned-up immediately.
9. All persons using the SAA must be familiar with the emergency procedures. Call 911 in the event of an emergency (Emergency Response Procedures, p.17).
10. Make a good faith effort to minimize waste.

NON-HAZARDOUS WASTE

Small quantities of the following materials and those in the following table may be safely disposed of via the sanitary sewer if soluble in water or via the trash if water insoluble. The examples below do not include every non-hazardous substance, or every material that can be disposed of via the sanitary sewer or trash. Please call REM (ext. 40121) for further information.

I. MATERIALS FOR SEWER DISPOSAL:

A. First, completely dissolve the material in water. If the material does not completely dissolve, it cannot be disposed through the sewer.

B. The pH of the resulting solution must be between pH 5 and 10 or neutralized to within the same pH range using an appropriate acid or base that is also safe for the sanitary sewer.

II. MATERIALS FOR TRASH DISPOSAL:

A. Must contain no residual flammable solvents or toxic chemicals and must be odorless.

B. Must pose no dust hazard.

C. Must be clearly marked "Non-Hazardous" and securely packaged before placing in the trash.

D. No liquids may be trash disposed.

TABLE II: NON-HAZARDOUS MATERIALS

Actin	Acetylsalicylic acid	Adenosine
Alanine	Albumin	Alconox
Alginic acid	Aminoacetic acid	Aluminum sulfate
Amino acid	Ammonium bicarbonate	Ammonium bitrate
Ammonium carbonate	Ammonium chloride	Ammonium sulfate
Ammonium phosphate	Amylopectin	Arabinose
Arginine	Asparagine	Aspartic acid
Ascorbic acid	Beef extract	Bees wax
Bentonite	Benzoic acid	Bitumen
Boric acid	Broth nutrients	Calcium acetate
Calcium carbonate	Calcium chloride	Calcium fluoride
Calcium gluconate	Calcium phosphate	Calcium sulfate
Carnitine	Casein	Chlorophyll
Choline	Choline chloride	Corticotropin
Creatinine	Cysteine	Cytosine
Dextran	Dextrose	Diathymosulfone
Drierite	EDTA	Epsom salts
Ferric chloride	Ferric sulfate	Ferritin
Ferrous ammonium sulfate	Fructose	Fullers earth
Galactose	Gelatin	Glutamic acid
Glutamine	Glutaric acid	Glutathione

TABLE II: NON-HAZARDOUS MATERIALS

Glycerin	Glycylglycine	Guanosine
Gypsum	Hemoglobin	Histidine
Hydroxyproline	Insulin	Iron oxide
Isoleucine	Kaolin	Keratin
Lactic acid	Lactose	Lanolin
Lecithin	Leucine	Lithium carbonate
Lithium chloride	Lithium sulfate	Litmus
Magnesium carbonate	Magnesium phosphate	Magnesium sulfate
Malt Extract	Maltose	Manganese acetate
Manganese chloride	Manganese sulfate	Mannitol
Methionine	Molecular sieves	Naphthoflavone
Oleic acid	Ovalbumin	Pancreatin
Papain	Paraffin	Pepsin
Peptone	Phenylalanine	Phthalic acid
Plastics	Polymers (solid)	Potassium acetate
Potassium acid phosphate	Potassium bicarbonate	Potassium bisulfate
Potassium borate	Potassium bromide	Potassium carbonate
Potassium chloride	Potassium citrate	Potassium hydrogen phthalate
Potassium iodide	Potassium phosphate	Potassium pyrosulfate
Potassium sulfate	Potassium sulfite	Potassium tartrate
Pumice	Riboflavin	Riboflavin-5-phosphate
Serine	Silicon carbide	Silicon dioxide
Sodium acetate	Sodium ammonium phosphate	Sodium benzoate
Sodium bicarbonate	Sodium bisulfate	Sodium bisulfite
Sodium borate	Sodium carbonate	Sodium chloride
Sodium citrate	Sodium dodecyl sulfate	Sodium fluoride
Sodium formate	Sodium iodide	Sodium lactate
Sodium phosphate	Sodium salicylate	Sodium sulfate
Sodium sulfite	Sorbitol	Sorbose
Succinic acid	Sucrose	Sugars
Tartaric acid	Thiamine hydrochloride	Tocopherol
Trypsin	Tryptophan	Tyrosine
Urea	Uricase	Valine
Xanthine	Yeast extract	

NON-HAZARDOUS WASTE SOLUBILITY

The following table contains anion and cation combinations, which are safe for disposal via the sanitary sewer (if soluble) or via the trash (if insoluble) subject to the conditions stated. Materials that create acid or basic aqueous solutions will require neutralization to a pH of 6-9 prior to disposal to sanitary sewer. Reactive items should not be trashed.

TABLE III: NON-HAZARDOUS WASTE SOLUBILITY

	Acid[5, 6] (H^+)	Aluminum (Al^{3+})	Ammonium (NH^{4+})	Calcium (Ca^{2+})	Ferric[7] (Fe^{3+})	Ferrous[8] (Fe^{2+})	Lithium (Li^+)	Magnesium (Mg^{2+})	Manganous[9] (Mn^{2+})	Potassium (K^+)	Sodium (Na^+)
Acetate	C	SS	S	S	S	VS	VS	VS	S	VS	VS
Benzoate	S	SS	S	S	I	S	SS	S	S	S	VS
Borate[1] ($B_4O_7^{2-}$)	S	I	S	SS			S	SS	I	S	S
Bromide (Br^-)	C	R	VS	VS	S	VS	VS	VS	VS	VS	VS
Carbonate (CO_3^{2-})	S	I	VS	I	I	SS	S	I	I	VS	S
Chloride (Cl^-)	C	R	S	VS	VS	VS	VS	S	VS	S	S
Citrate	S	S	VS	S	S	SS	VS	SS	SS	VS	VS
Formate	C	S	VS	S	S	S	S	S	S	VS	VS
Gluconate	VS		S	SS		S		S		VS	S
Hydroxide[2] (OH^-)	VS	I	C	SS	I	I	C	I	I	C	C
Iodide (I^-)	C	R	VS	VS	S	S	VS	VS	VS	VS	VS
Lactate	S	S	VS	S	S	S	S	S	SS	S	VS
Phosphate[3] (PO_4^{3-})	C	I	S	I	I	I	I	I	SS	VS	VS
Salicylate	S	I	VS	S			VS	S		VS	VS
Silicate	I	I	S	I	I	I	I	I	I	S	S
Sulfate[4] (SO_4^{2-})	C	S	VS	I	S	S	S	VS	VS	S	S
Sulfite[4] (SO_3^{2-})	C		S	I		SS	S	SS		VS	S
Tartrate[4]	S	SS	S	SS	S	SS	S	SS	SS	VS	S

TABLE III Key

C = Caution! These acids and bases can generate a lot of heat or be violent when neutralized or diluted. This is especially true for concentrated solutions.

I = Insoluble, these may be marked as non-hazardous and placed in trash. [Approximate Solubility < 0.01g per 100g Water]

R = Caution! These anhydrous aluminum salts react violently with water. Reactive items should not be trashed.

S = Soluble (also miscible for liquids) [Approximate Solubility 1.0 to 60g per 100g Water]

SS = Slightly Soluble [Approximate Solubility 0.01 to 1.0g per 100g Water]

VS = Very Soluble [Approximate Solubility > 60g per 100g Water]

1 = Also known as tetrabonate. Boric acid, H_3BO_3, Magnesium Borate, $Mg(BO_2)_2$.

2 = All bases must be neutralized before sink disposal.

3 = Includes monobasic, dibasic, and tribasic phosphates. Solubility generally decreases with increasing basicity.

4 = Also known as hydrogen carbonate, hydrogen sulfate, hydrogen sulfite, and hydrogen tartrate.

5 = All acids must be neutralized before sink disposal.

6 = Except for Hydrobromic, Hydrochloric, Hydriodic, Phosphoric, Sulfuric, Sulfurous acids and water, acid names in the table are derived by dropping "ate" from the end of the anion name and adding "ic acid."

7 = Ferric, also known as Iron (III).

8 = Ferrous, also known as Iron (II).

9 = Manganous, also known as Manganese (II).

EPA CHARACTERISTIC WASTES CODES

The compounds listed by the USEPA as D004 through D043 and F001 through F005 **must be included in the *Hazardous Material Pickup Request*** form even in trace amounts.

TABLE V: TOXICITY CHARACTERISTIC WASTE CODES (D004 - D043)

EPA Waste Code	Chemical Name	EPA Waste Code	Chemical Name
D004	Arsenic	D024	m-Cresol
D005	Barium	D025	p-Cresol
D006	Cadmium	D026	Cresol
D007	Chromium	D027	1,4-Dichlorobenzene
D008	Lead	D028	1,2-Dichloroethane
D009	Mercury	D029	1,1-Dichloroethylene
D010	Selenium	D030	2,4-Dinitrotoluene
D011	Silver	D031	Heptachlor (and its epoxide)
D012	Endrin	D032	Hexachlorobenzene
D013	Lindane	D033	Hexachlorobutadiene
D014	Methoxychlor	D034	Hexachloroethane
D015	Toxaphene	D035	Methyl ethyl ketone
D016	2,4-D	D036	Nitrobenzene
D017	2,4,5-TP (Silvex)	D037	Pentachlorophenol
D018	Benzene	D038	Pyridine
D019	Carbon tetrachloride	D039	Tetrachloroethylene
D020	Chlordane	D040	Trichloroethylene
D021	Chlorobenzene	D041	2,4,5-Trichlorophenol
D022	Chloroform	D042	2,4,6-Trichlorophenol
D023	o-Cresol	D043	Vinyl Chloride

TABLE VI: HAZARDOUS WASTE CODES FOR NON-SPECIFIC SOURCES (F001 - F005)

F001 (Spent individual solvents used in degreasing.)	1,1,1-trichloroethane, carbon tetrachloride,chlorinated fluorocarbons, methylene chloride, trichloroethylene
F002 (Spent individual solvents.)	1,1,1-trichloroethane, 1,1,2-trichloro-1,1,2-trifluoroethane, 1,1,2-trichloroethane, chlorobenzene, methylene chloride, o-dichlorobenzene, tetrachloroethylene, trichlorofluoromethane
F003 (Spent individual solvents.)	Acetone, cyclohexanone, ethyl acetate, ethyl ether, methanol, methyl isobutyl ketone, n-butyl alcohol, xylene
F004 (Spent individual solvents.)	Cresols, cresylic acid, nitrobenzene
F005 (Spent individual solvents.)	2-ethoxyethanol, 2-nitropropene, benzene, carbon disulfide, isobutyl alcohol, methyl ethyl ketone, pyridine, toluene

The following F codes listed in 40 CFR 261.31, *Hazardous Waste from Non-Specific Sources,* are also counted as acute hazardous waste unless excluded (see 40 CFR 260.20 and 40 CFR 260.22)

F020 Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives. (This listing does not include wastes from the production of Hexachlorophene from highly purified 2,4,5- trichlorophenol.).
F021 Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol, or of intermediates used to produce its derivatives.
F022 Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions.
F023 Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- and tetrachlorophenols. (This listing does not include wastes from equipment used only for the production or use of Hexachlorophene from highly purified 2,4,5- trichlorophenol.).
F026 Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzene under alkaline conditions.
F027 Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. This listing does not include formulations containing Hexachlorophene sythesized from prepurified 2,4,5- trichlorophenol as the sole component.

The following P and U codes listed in 40 CFR 261.33, *Discarded commercial chemical products, off-specification species, container residues, and spill residues thereof,* are also counted as hazardous waste if and when they are discarded or intended to be discarded as described in 40 CFR 261.2(a)(2)(i).

TABLE VII: P - CODED MATERIALS

EPA Code	CAS#	Chemical Name
P023	107-20-0	Acetaldehyde, chloro-
P002	591-08-2	Acetamide, N-(aminothioxomethyl)-
P057	640-19-7	Acetamide, 2-fluoro-
P058	62-74-8	Acetic acid, fluoro-, sodium salt
P002	591-08-2	1-Acetyl-2-thiourea
P003	107-02-8	Acrolein
P070	116-06-3	Aldicarb
P203	1646-88-4	Aldicarb sulfone
P004	309-00-2	Aldrin
P005	107-18-6	Allyl alcohol
P006	20859-73-8	Aluminum phosphide
P007	2763-96-4	5-(Aminomethyl)-3-isoxazolol
P008	504-24-5	4-Aminopyridine
P009	131-74-8	Ammonium picrate
P119	7803-55-6	Ammonium vanadate
P099	506-61-6	Argentate(1-), bis(cyano-C)-, potassium
P010	7778-39-4	Arsenic acid H_3AsO_4
P012	1327-53-3	Arsenic oxide As_2O_3
P011	1303-28-2	Arsenic oxide As_2O_5
P011	1303-28-2	Arsenic pentoxide
P012	1327-53-3	Arsenic trioxide
P038	692-42-2	Arsine, diethyl-
P036	696-28-6	Arsonous dichloride, phenyl-
P054	151-56-4	Aziridine
P067	75-55-8	Aziridine, 2-methyl-
P013	542-62-1	Barium cyanide
P024	106-47-8	Benzenamine, 4-chloro-
P077	100-01-6	Benzenamine, 4-nitro-
P028	100-44-7	Benzene, (chloromethyl)-
P042	51-43-4	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-
P046	122-09-8	Benzeneethanamine, alpha,alpha-dimethyl-
P014	108-98-5	Benzenethiol
P127	1563-66-2	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate
P188	57-64-7	Benzoic acid, 2-hydroxy-(3aS-cis)-1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo[2,3-b]indol-5-yl methylcarbamateester
P001	[1]81-81-2	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, & salts, when present at concentrations greater than 0.3%
P028	100-44-7	Benzyl chloride
P015	7440-41-7	Beryllium powder
P017	598-31-2	Bromoacetone
P018	357-57-3	Brucine
P045	39196-18-4	2-Butanone,3,3-dimethyl-1-(methylthio)-O-[methylamino)carbonyl] oxime
P021	592-01-8	Calcium cyanide
P021	592-01-8	Calcium cyanide $Ca(CN)_2$

TABLE VII: P - CODED MATERIALS

EPA Code	CAS#	Chemical Name
P189	55285-14-8	Carbamic acid, [(dibutylamino)-thio]methyl-, 2,3-dihydro-2,2-dimethyl- 7-benzofuranyl ester
P191	644-64-4	Carbamic acid,dimethyl-,1-[(dimethylamino)carbonyl]-5-methyl-1H- pyrazol-3-yl ester
P192	119-38-0	Carbamic acid, dimethyl-, 3-methyl-1-(1-methylethyl)-1H- pyrazol-5-yl ester.
P190	1129-41-5	Carbamic acid, methyl-, 3-methylphenyl ester
P127	1563-66-2	Carbofuran
P022	75-15-0	Carbon disulfide
P095	75-44-5	Carbonic dichloride
P189	55285-14-8	Carbosulfan.
P023	107-20-0	Chloroacetaldehyde
P024	106-47-8	p-Chloroaniline
P026	5344-82-1	1-(o-Chlorophenyl)thiourea
P027	542-76-7	3-Chloropropionitrile
P029	544-92-3	Copper cyanide
P029	544-92-3	Copper cyanide Cu(CN)
P202	64-00-6	m-Cumenyl methylcarbamate
P030		Cyanides (soluble cyanide salts), not otherwise specified
P031	460-19-5	Cyanogen
P033	506-77-4	Cyanogen chloride
P033	506-77-4	Cyanogen chloride (CN)Cl
P034	131-89-5	2-Cyclohexyl-4,6-dinitrophenol
P016	542-88-1	Dichloromethyl ether
P036	696-28-6	Dichlorophenylarsine
P037	60-57-1	Dieldrin
P038	692-42-2	Diethylarsine
P041	311-45-5	Diethyl-p-nitrophenyl phosphate
P040	297-97-2	O,O-Diethyl O-pyrazinylphosphorothioate
P043	55-91-4	Diisopropylfluorophosphate (DFP)
P004	309-00-2	1,4,5,8-Dimethanonaphthalene,1,2,3,4,10,10-hexa-chloro-1,4,4a,5,8,8a,-hexahydro-(1α,4α,4β,5α,8α,8β)-
P060	465-73-6	1,4,5,8-Dimethanonaphthalene,1,2,3,4,10,10-hexa- chloro-1,4,4a,5,8,8a-hexahydro-,(1α,4α,4β,5β,8β,8β)-
P037	60-57-1	2,7:3,6-Dimethanonaphth[2,3-b]oxirene,3,4,5,6,9,9-hexachloro- 1a,2,2a,3,6,6a,7,7a-octahydro-, (1aα,2β,2aα,3β,6β,6aα,7β, 7aα)-
P051	[1]72-20-8	2,7:3,6-Dimethanonaphth [2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aα,2β,2β,3α,6α,6aβ,7β, 7aα)-, & metabolites
P044	60-51-5	Dimethoate
P046	122-09-8	alpha,alpha-Dimethylphenethylamine
P191	644-64-4	Dimetilan.
P047	[1]534-52-1	4,6-Dinitro-o-cresol, & salts
P048	51-28-5	2,4-Dinitrophenol
P020	88-85-7	Dinoseb
P085	152-16-9	Diphosphoramide, octamethyl-
P111	107-49-3	Diphosphoric acid, tetraethyl ester
P039	298-04-4	Disulfoton
P049	541-53-7	Dithiobiuret
P185	26419-73-8	1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O- [(methylamino)-carbonyl] oxime.
P050	115-29-7	Endosulfan
P088	145-73-3	Endothall
P051	72-20-8	Endrin
P051	72-20-8	Endrin, & metabolites
P042	51-43-4	Epinephrine
P031	460-19-5	Ethanedinitrile

TABLE VII: P - CODED MATERIALS

EPA Code	CAS#	Chemical Name
P194	23135-22-0	Ethanimidothioc acid, 2-(dimethylamino)-N-[[(methylamino)carbonyl]oxy]-2-oxo-, methyl ester
P066	16752-77-5	Ethanimidothioic acid,N-[[(methylamino)carbonyl]oxy]-,methyl ester
P101	107-12-0	Ethyl cyanide
P054	151-56-4	Ethyleneimine
P097	52-85-7	Famphur
P056	7782-41-4	Fluorine
P057	640-19-7	Fluoroacetamide
P058	62-74-8	Fluoroacetic acid, sodium salt
P198	23422-53-9	Formetanate hydrochloride.
P197	17702-57-7	Formparanate
P065	628-86-4	Fulminic acid, mercury(2+) salt
P059	76-44-8	Heptachlor
P062	757-58-4	Hexaethyl tetraphosphate
P116	79-19-6	Hydrazinecarbothioamide
P068	60-34-4	Hydrazine, methyl-
P063	74-90-8	Hydrocyanic acid
P063	74-90-8	Hydrogen cyanide
P096	7803-51-2	Hydrogen phosphide
P060	465-73-6	Isodrin
P192	119-38-0	Isolan
P202	64-00-6	3-Isopropylphenyl N-methylcarbamate.
P007	2763-96-4	3(2H)-Isoxazolone, 5-(aminomethyl)-
P196	15339-36-3	Manganese,bis(dimethylcarbamodithioato-S,S')-,
P196	15339-36-3	Manganese dimethyldithiocarbamate
P092	62-38-4	Mercury, (acetato-O)phenyl-
P065	628-86-4	Mercury fulminate
P082	62-75-9	Methanamine, N-methyl-N-nitroso-
P064	624-83-9	Methane, isocyanato-
P016	542-88-1	Methane, oxybis[chloro-
P112	509-14-8	Methane, tetranitro-
P118	75-70-7	Methanethiol, trichloro-
P198	23422-53-9	Methanimidamide, N,N-dimethyl-N'-[3-[[(methylamino)-carbonyl]oxy]phenyl]-, monohydrochloride
P197	17702-57-7	Methanimidamide, N,N-dimethyl-N'-[2-methyl-4-[[(methylamino)carbonyl]oxy]phenyl]-
P050	115-29-7	6,9-Methano-2,4,3-benzodioxathiepin,6,7,8,9,10,10-hexachloro- 1,5,5a,6,9,9a-hexahydro-,3-oxide
P059	76-44-8	4,7-Methano-1H-indene,1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-
P199	2032-65-7	Methiocarb.
P066	16752-77-5	Methomyl
P068	60-34-4	Methyl hydrazine
P064	624-83-9	Methyl isocyanate
P069	75-86-5	2-Methyllactonitrile
P071	298-00-0	Methyl parathion
P190	1129-41-5	Metolcarb.
P128	315-8-4	Mexacarbate.
P072	86-88-4	alpha-Naphthylthiourea
P073	13463-39-3	Nickel carbonyl
P073	13463-39-3	Nickel carbonyl $Ni(CO)_4$, (T-4)-
P074	557-19-7	Nickel cyanide
P074	557-19-7	Nickel cynaide $Ni(CN)_2$
P075	[1]54-11-5	Nicotine, & salts
P076	10102-43-9	Nitric oxide
P077	100-01-6	p-Nitroaniline

TABLE VII: P - CODED MATERIALS

EPA Code	CAS#	Chemical Name
P078	10102-44-0	Nitrogen dioxide
P076	10102-43-9	Nitrogen oxide NO
P078	10102-44-0	Nitrogen oxide NO_2
P081	55-63-0	Nitroglycerine
P082	62-75-9	N-Nitrosodimethylamine
P084	4549-40-0	N-Nitrosomethylvinylamine
P085	152-16-9	Octamethylpyrophosphoramide
P087	20816-12-0	Osmium oxide OsO_4, (T-4)-
P087	20816-12-0	Osmium tetroxide
P088	145-73-3	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid
P194	23135-22-0	Oxamyl
P089	56-38-2	Parathion
P034	131-89-5	Phenol, 2-cyclohexyl-4,6-dinitro-
P048	51-28-5	Phenol, 2,4-dinitro-
P047	[1]534-52-1	Phenol, 2-methyl-4,6-dinitro-, & salts
P020	88-85-7	Phenol, 2-(1-methylpropyl)-4,6-dinitro-
P009	131-74-8	Phenol, 2,4,6-trinitro-, ammonium salt
P128	315-18-4	Phenol,4-(dimethylamino)-3,5-dimethyl-,methylcarbamate (ester).
P199	2032-65-7	Phenol, (3,5-dimethyl-4-(methylthio)-,methylcarbamate
P202	64-00-6	Phenol, 3-(1-methylethyl)-, methylcarbamate.
P201	2631-37-0	Phenol, 3-methyl-5-(1-methylethyl)-,methyl carbamate.
P092	62-38-4	Phenylmercury acetate
P093	103-85-5	Phenylthiourea
P094	298-02-2	Phorate
P095	75-44-5	Phosgene
P096	7803-51-2	Phosphine
P041	311-45-5	Phosphoric acid, diethyl 4-nitrophenylester
P039	298-04-4	Phosphorodithioic acid, ,O-diethylS-[2-(ethylthio)ethyl] ester
P094	298-02-2	Phosphorodithioic acid, ,O-diethylS-[(ethylthio)methyl] ester
P044	60-51-5	Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester
P043	55-91-4	Phosphorofluoridic acid, bis(1-methylethyl) ester
P089	56-38-2	Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester
P040	297-97-2	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester
P097	52-85-7	Phosphorothioic acid,O-[4-[(dimethylamino)sulfonyl]phenyl] O,O-dimethyl ester
P071	298-00-0	Phosphorothioic acid, O,O,-dimethyl O-(4-nitrophenyl) ester
P204	57-47-6	Physostigmine
P188	57-64-7	Physostigmine salicylate
P110	78-00-2	Plumbane, tetraethyl-
P098	151-50-8	Potassium cyanide
P098	151-50-8	Potassium cyanide K(CN)
P099	506-61-6	Potassium silver cyanide
P201	2631-37-0	Promecarb
P070	116-06-3	Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl] oxime
P203	1646-88-4	Propanal, 2-methyl-2-(methyl-sulfonyl)-, O-[(methylamino)carbonyl] oxime
P101	107-12-0	Propanenitrile
P027	542-76-7	Propanenitrile, 3-chloro-
P069	75-86-5	Propanenitrile, 2-hydroxy-2-methyl-
P081	55-63-0	1,2,3-Propanetriol, trinitrate
P017	598-31-2	2-Propanone, 1-bromo-
P102	107-19-7	Propargyl alcohol
P003	107-02-8	2-Propenal

TABLE VII: P - CODED MATERIALS

EPA Code	CAS#	Chemical Name
P005	107-18-6	2-Propen-1-ol
P067	75-55-8	1,2-Propylenimine
P102	107-19-7	2-Propyn-1-ol
P008	504-24-5	4-Pyridinamine
P075	[1]54-11-5	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-, & salts
P204	57-47-6	Pyrrolo[2,3-b]indol-5-ol,1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl, methylcarbamate (ester), (3aS-cis)-
P114	12039-52-0	Selenious acid, dithallium(1+) salt
P103	630-10-4	Selenourea
P104	506-64-9	Silver cyanide
P104	506-64-9	Silver cyanide Ag(CN)
P105	26628-22-8	Sodium azide
P106	143-33-9	Sodium cyanide
P106	143-33-9	Sodium cyanide Na(CN)
P108	[1]57-24-9	Strychnidin-10-one, & salts
P018	357-57-3	Strychnidin-10-one, 2,3-dimethoxy-
P108	[1]57-24-9	Strychnine, & salts
P115	7446-18-6	Sulfuric acid, dithallium(1+) salt
P109	3689-24-5	Tetraethyldithiopyrophosphate
P110	78-00-2	Tetraethyl lead
P111	107-49-3	Tetraethyl pyrophosphate
P112	509-14-8	Tetranitromethane
P062	757-58-4	Tetraphosphoric acid, hexaethyl ester
P113	1314-32-5	Thallic oxide
P113	1314-32-5	Thallium oxide $Tl_2 O_3$
P114	12039-52-0	Thallium(I) selenite
P115	7446-18-6	Thallium(I) sulfate
P109	3689-24-5	Thiodiphosphoric acid, tetraethylester
P045	39196-18-4	Thiofanox
P049	541-53-7	Thioimidodicarbonic diamide $[(H_2N)C(S)]_2NH$
P014	108-98-5	Thiophenol
P116	79-19-6	Thiosemicarbazide
P026	5344-82-1	Thiourea, (2-chlorophenyl)-
P072	86-88-4	Thiourea, 1-naphthalenyl-
P093	103-85-5	Thiourea, phenyl-
P185	26419-73-8	Tirpate.
P123	8001-35-2	Toxaphene
P118	75-70-7	Trichloromethanethiol
P119	7803-55-6	Vanadic acid, ammonium salt
P120	1314-62-1	Vanadium oxide V_2O_5
P120	1314-62-1	Vanadium pentoxide
P084	4549-40-0	Vinylamine, N-methyl-N-nitroso-
P001	[1]81-81-2	Warfarin, & salts, at concentrations greater than 0.3%
P205	137-30-4	Zinc, bis(dimethylcarbamodithioato-S,S')-
P121	557-21-1	Zinc cyanide
P121	557-21-1	Zinc cyanide $Zn(CN)_2$
P122	1314-84-7	Zinc phosphide Zn_3P_2, when present at concentrations greater than 10%
P205	137-30-4	Ziram

[1]CAS Number given for parent compound only.

TABLE VIII: U - CODED MATERIALS

Hazardous Waste No.	Chemical Abstracts No.	Substance	Hazardous Waste No.	Chemical Abstracts No	Substance
U001	75-07-0	Acetaldehyde (I)	U034	75-87-6	Acetaldehyde, trichloro-
U187	62-44-2	Acetamide, N-(4-ethoxyphenyl)	U005	53-96-3	Acetamide, N-9H-fluoren-2-yl-
U112	141-78-6	Acetic acid, ethyl ester (I)	U144	301-04-2	Acetic acid, lead salt
U214	563-68-8	Acetic acid, thallium (1 +) salt	U232	93-76-5	Acetic acid, (2,4,5,-trichlorophenoxy)-
U002	67-64-1	Acetone (I)	U003	75-05-8	Acetonitrile (I,T)
U004	98-86-2	Acetophenone	U005	53-96-3	2-Acetylaminofluorene
U006	75-36-5	Acetyl chloride (C,R,T)	U007	79-06-1	Acrylamide
U008	79-10-7	Acrylic acid(I)	U009	107-13-1	Acrylonitrile
U011	61-82-5	Amitrole	U012	62-53-3	Aniline (I,T)
U014	492-80-8	Auramine	U015	115-02-6	Azaserine
U010	50-07-7	Azirino(2 ,3 :3,4)pyrrolo[1,2-a]indole-4,7-dione,6-amino-8-[((aminocarbonyl)oxy) methyl]-1, 1a, 2, 8, 8a, 8b-hexahydro-8a- methoxy-5-methyl-	U157	50-49-5	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-
U016	225-51-4	3,4-Benzacridine	U017	98-87-3	Benzal chloride
U192	23950-58-5	Benzamide, 3,5-dichloro-N-(1,1 diethyl-2-propynyl)-	U018	56-55-3	Benz[a]anthracene
U094	57-97-6	Benz[a]anthracene, 7,12-dimethyl-	U012	62-53-3	Benzenamine (I,T)
U014	492-80-8	Benzenamine, 4,4 -carbonimidoylbis[N,N-dimethyl-	U049	3165-93-3	Benzenamine, 4-chloro-2-methyl
U093	60-11-7	Benzenamine, N,N-dimethyl-4-(phenylazo)-	U328	95-53-4	Benzenamine, 2-methyl-
U353	106-49-0	Benzenamine, 4-methyl-	U158	101-14-4	Benzenamine, 4,4 -methylenebis[2-chloro-
U222	636-21-5	Benzenamine, 2-methyl-, hydrochloride	U181	99-55-8	Benzenamine, 2-methyl-5-nitro-
U019	71-43-2	Benzene	U038	510-15-6	Benzeneacetic acid, 4-chloro-alpha-(4 chlorophenyl)-alpha- hydroxy, ethyl ester
U030	101-55-3	Benzene, 1-bromo-4-phenoxy-	U035	305-03-3	Benzenebutanoic acid, 4[bis(2chloroethyl)amino]-
U037	108-90-7	Benzene, chloro-	U221	25376-45-8	Benzenediamine, ar-methyl
U028	117-81-7	1,2-Benzenedicarboxylic acid, [bis(2-ethyl-hexyl)] ester	U069	84-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester
U088	84-66-2	1,2-Benzenedicarboxylic acid, diethyl ester	U102	131-11-3	1,2-Benzenedicarboxylic acid, dimethyl ester
U107	117-84-0	1,2-Benzenedicarboxylic acid, di-n-octyl ester	U070	95-50-1	Benzene, 1,2-dichloro-
U071	541-73-1	Benzene, 1,3-dichloro-	U072	106-46-7	Benzene, 1,4-dichloro-
U060	72-54-8	Benzene, 1,1 -(2,2-dichloro-ethylidene) bis[4-chloro-	U017	98-87-3	Benzene, (dichloromethyl)-
U223	26471-62-5	Benzene, 1,3 diisocyanatomethyl- (R,T)	U239	1330-20-7	Benzene, dimethyl- (I,T)
U201	108-46-3	1,3-Benzenediol	U127	118-74-1	Benzene, hexachloro-
U056	110-82-7	Benzene, hexahydro- (I)	U220	108-88-3	Benzene, methyl-
U105	121-14-2	Benzene, 1-methyl-2,4-dinitro-	U106	606-20-2	Benzene, 2-methyl-1,3-dinitro-
U055	98-82-8	Benzene, (1-methylethyl)- (I)	U169	98-95-3	Benzene, nitro- (I,T)
U183	608-93-5	Benzene, pentachloro-	U185	82-68-8	Benzene, pentachloronitro-
U020	98-09-9	Benzenesulfonic acid chloride (C,R)	U020	98-09-9	Benzenesulfonyl chloride (C,R)
U207	95-94-3	Benzene, 1,2,4,5-tetrachloro-	U061	50-29-3	Benzene, 1,1 -(2,2,2-trichloroethylidene)bis[4-chloro-
U247	72-43-5	Benzene, 1,1 -(2,2,2-trichloroethylidene)[4 -methoxy-	U023	98-07-7	Benzene, (trichloromethyl)- (C,R,T)
U234	99-35-4	Benzene, 1,3,5-trinitro- (R,T)	U021	92-87-5	Benzidine
U202	[1]81-07-2	1.2-Benzisothiazol-3-(2H)-one.1.1	U203	94-59-7	1,3-Benzodioxole, 5-(2-propenyl)-

TABLE VIII: U - CODED MATERIALS

Hazardous Waste No.	Chemical Abstracts No.	Substance	Hazardous Waste No.	Chemical Abstracts No	Substance
		dioxide and salts			
U141	120-58-1	1,3-Benzodioxole, 5-(1-propenyl)-	U090	94-58-6	1,3-Benzodioxole, 5-propyl-
U064	189-55-9	Benzo[rst] pentaphene	U022	50-32-8	Benzo[a]pyrene
U197	106-51-4	p-Benzoquinone	U023	98-07-7	Benzotrichloride (C,R,T)
U085	1464-53-5	2,2'-Bioxirane (I,T)	U021	92-87-5	[1,1' -Biphenyl]-4,4' -diamine
U073	91-94-1	[1,1' -Biphenyl]-4,4' -diamine, 3,3' -dichloro-	U091	119-90-4	[1,1' -Biphenyl]-4,4' -diamine, 3,3' -dimethoxy-
U095	119-93-7	[1,1' -Biphenyl]-4,4' -diamine, 3,3' -dimethyl-	U027	39638-32-9	Bis(2-chloroisopropyl) ether
U024	111-91-1	Bis(2-chloromethoxy) ethane	U028	117-81-7	Bis(2-ethylhexyl) phthalate
U225	75-25-2	Bromoform	U030	101-55-3	4-Bromophenyl phenyl ether
U128	87-68-3	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	U172	924-16-3	1-Butanamine, N-butyl-N-nitroso
U031	71-36-3	1-Butanol (I)	U159	78-93-3	2-Butanone (I,T)
U160	1338-23-4	2-Butanone peroxide (R,T)	U053	4170-30-3	2-Butenal
U074	764-41-0	2-Butene, 1,4-dichloro- (I,T)	U143	303-34-4	2-Butenoic acid, 2-methyl-, 7-[(2,3-dihydroxy- 2-(1-methoxyethyl)- 3-methyl-1- oxobutoxy)methyl]-2,3,5,7a-tetrahydro-1- pyrrolizin-1- yl ester, [1S-[1alpha(Z),7(2S,3R),7aalpha]]-
U031	71-36-3	n-Butyl alchohol (I)	U136	75-60-5	Cacodylic acid
U032	13765-19-0	Calcium chromate	U238	51-79-6	Carbamic acid, ethyl ester
U178	615-53-2	Carbamic acid, methylnitroso, ethyl ester	U097	79-44-7	Carbamic chloride, dimethyl-
U114	[1]111-54-6	Carbamodithioic acid, 1,2-ethanediylbis-, salts and esters	U062	2303-16-4	Carbamothioic acid, bis(1-methylethyl)- S-(2,3-dichloro-2-propenyl) ester
U215	6533-73-9	Carbonic acid, dithallium (1+) salt	U033	353-50-4	Carbonic difluoride
U156	79-22-1	Carbonochloridic acid, methyl ester (I,T)	U033	353-50-4	Carbon oxyfluoride (R,T)
U211	56-23-5	Carbon tetrachloride	U034	75-87-6	Chloral
U035	30503-3	Chlorambucil	U036	12789-03-6	Chlordane
U026	494-03-1	Chlornaphazine	U037	108-90-7	Chlorobenzene
U039	59-50-7	p-Chloro-m-cresol	U041	106-89-8	1-Chloro-2,3 epoxypropane
U042	110-75-8	2-Chloroethyl vinyl ether	U044	67-66-3	Chloroform
U046	107-30-2	Chloromethyl methyl ether	U047	91-58-7	beta-Chloronaphthalene
U048	95-57-8	o-Chlorophenol	U049	3165-93-3	4-Chloro-o-toluidine, hydrochloride
U032	13765-19-0	Chromic acid, calcium salt	U050	218-01-9	Chrysene
U051	8021-39-4	Creosote	U052	1319-77-3	Cresols (Cresylic acid)
U053	4170-30-3	Crotonaldehyde	U055	98-82-8	Cumene (I)
U246	506-68-3	Cyanogen bromide	U197	106-51-4	2,5-Cyclohexadiene-1,4-dione
U056	110-82-7	Cyclohexane (I)	U057	108-94-1	Cyclohexanone (I)
U130	77-47-4	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexa-chloro-	U058	50-18-0	Cyclophosphamide
U240	[1]94-75-7	2,4-D, salts and esters	U059 2	0830-81-3	Daunomycin
U060	72-54-8	DDD	U061	50-29-3	DDT
U062	2303-16-4	Diallate	U063	53-70-3	Dibenz[a,h]anthracene
U064	189-55-9	Dibenzo[s,i]pyrene	U066	96-12-8	1,2-Dibromo-3-chloropropane
U069	84-74-2	Dibutyl phthalate	U070	95-50-1	o-Dichlorobenzene
U071	541-73-1	m-Dichlorobenzene	U072	106-46-7	p-Dichlorobenzene
U073	91-94-1	3,3'-Dichlorobenzidine	U074	764-41-0	1,4-Dichloro-2-butene (I,T)
U075	75-71-8	Dichlorodifluoromethane	U078	75-35-4	1,1-Dichloroethylene
U079	156-60-5	1,2-Dichloroethylene	U025	111-44-1	Dichloroethyl ether

TABLE VIII: U - CODED MATERIALS

Hazardous Waste No.	Chemical Abstracts No.	Substance	Hazardous Waste No.	Chemical Abstracts No	Substance
U081	120-83-2	2,4-Dichlorophenol	U082	87-65-0	2,6-Dichlorophenol
U240	[1]94-75-7	2,4-Dichlorophenoxyacetic acid, salts and esters	U083	78-87-5	1,2-Dichloropropane
U084	542-75-6	1,3-Dichloropropene	U085	1464-53-5	1,2:3,4-Diepoxybutane (I,T)
U108	123-91-1	1,4-Diethyleneoxide	U086	1615-80-1	N,N-Diethylhydrazine
U087	3288-58-2	O,O-Diethyl-S-methyl-dithiophosphate	U088	84-66-2	Diethyl phthalate
U089	56-53-1	Diethylstilbestrol	U090	94-58-6	Dihydrosafrole
U091	119-90-4	3,3'-Dimethoxybenzidine	U092	124-40-3	Dimethylamine (I)
U093	60-11-7	Dimethylaminoazobenzene	U094	57-97-6	7,12-Dimethylbenz [a]anthracene
U095	119-93-7	3,3'-Dimethylbenzidine	U096	80-15-9	alpha,alpha-Dimethylbenzylhydroperoxide (R)
U097	79-44-7	Dimethylcarbamoyl chloride	U098	57-14-7	1,1-Dimethylhydrazine
U099	540-73-8	1,2-Dimethylhydrazine	U101	105-67-9	2,4-Dimethylphenol
U102	131-11-3	Dimethyl phthalate	U103	77-78-1	Dimethyl sulfate
U105	121-14-2	2,4-Dinitrotoluene	U106	606-20-2	2,6-Dinitrotoluene
U107	117-84-0	Di-n octyl phthalate	U108	123-91-1	1,4-Dioxane
U109	122-66-7	1,2-Diphenylhydrazine	U110	142-84-7	Dipropylamine (I)
U111	621-64-7	Di-n-propylnitrosamine	U001	75-07-0	Ethanal (I)
U174	55-18-5	Ethanamine, N-ethyl-N-nitroso-	U155	91-80-5	1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'- (2-thienylmethyl)-
U067	106-93-4	Ethane, 1,2-dibromo-	U076	75-34-3	Ethane, 1,1-diichloro-
U077	107-06-2	Ethane, 1,2-dichloro-	U131	67-72-1	Ethane, hexachloro-
U024	111-91-1	Ethane, 1,1' -[methylenebis(oxy)]bis[2-chloro-	U117	60-29-7	Ethane, 1,1-oxybis- (1)
U025	111-44-4	Ethane, 1,1-oxybis[2-chloro-	U184	76-01-7	Ethane, pentachloro-
U208	630-20-6	Ethane, 1,1,1,2-tetrachloro-	U209	79-34-5	Ethane, 1,1,2,2-tetrachloro-
U218	62-55-5	Ethanethioamide	U227	110-80-5	Ethanol, 2-ethoxy
U359	79-00-5	Ethane, 1,1,2-trichloro-	U173	1116-54-7	Ethanol, 2,2'-(nitrosoimino)bis-
U004	98-86-2	Ethanone, 1-phenyl-	U043	75-01-4	Ethene, chloro-
U042	110-75-8	Ethene, (2-chloroethoxy)-	U078	75-35-4	Ethene, 1,1-dichloro-
U079	156-60-5	Ethene, 1,2-dichloro-	U210	127-18-4	Ethene, tetrachloro-
U228	79-01-6	Ethene, trichloro	U112	141-78-6	Ethyl acetate (I)
U113	140-88-5	Ethyl acrylate (I)	U238	51-79-6	Ethyl carbamate
U038	510-15-6	Ethyl 4,4'-dichlorobenzilate	U114	[1]111-54-6	Ethylenebis(dithiocarbamic acid), salts and esters
U067	106-93-4	Ethylene dibromide	U077	107-06-2	Ethylene dichloride
U359	110-80-5	Ethylene glycol monoethyl ether	U115	75-21-8	Ethylene oxide (I,T)
U116	96-45-7	Ethylene thiourea	U117	60-29-7	Ethyl ether (I)
U076	75-34-3	Ethylidene dichloride	U118	97-63-2	Ethyl methacrylate
U119	62-50-0	Ethylmethanesulfonate	U120	206-44-0	Fluoranthene
U122	50-00-0	Formaldehyde	U123	64-18-6	Formic acid (C,T)
U124	110-00-9	Furan (I)	U125	98-01-1	2-Furancarboxaldehyde (I)
U147	108-31-6	2,5-Furandione	U213	109-99-9	Furan, tetrahydro- (I)
U125	98-01-1	Furfural (I)	U124	110-00-9	Furfuran (I)
U206	18883-66-4	D-Glucopyranose, 2-deoxy-2(3-methyl-3-nitrosoureido)-	U126	765-34-4	Glycidylaldehyde
U163	70-25-7	Guanidine, N-methyl-N'-nitro-N-nitroso-	U127	18-74-1	Hexachlorobenzene
U128	87-68-3	Hexachlorobutadiene	U129	58-88-9	Hexachlorocyclohexane (gamma isomer)
U130	77-47-4	Hexachlorocyclopentadiene	U131	67-72-1	Hexachloroethane
U132	70-30-4	Hexachlorophene	U243	1888-71-7	Hexachloropropene
U133	302-01-2	Hydrazine (R,T)	U086	1615-80-1	Hydrazine, 1,2-dimethyl- -

TABLE VIII: U - CODED MATERIALS

Hazardous Waste No.	Chemical Abstracts No.	Substance	Hazardous Waste No.	Chemical Abstracts No	Substance
U098	57-14-7	Hydrazine, 1,1-dimethyl-	U099	540-73-8	Hydrazine, 1,2-diethyl
U109	122-66-7	Hydrazine, 1,2-diphenyl-	U134	7664-39-3	Hydrofluoric acid (C,T)
U134	7664-39-3	Hydrogen fluoride (C,T)	U135	7783-06-4	Hydrogen sulfide
U096	80-15-9	Hydroperoxide, 1-methyl-1-phenylethyl- (R)	U136	75-60-5	Hydroxydimethylarsine oxide
U116	96-45-7	2-Imidazolidinethione	U137	193-39-5	Indeno[1,2,3-cd]pyrene
U139	9004-66-4	Iron dextran	U190	85-44-9	1,3-isobenzofurandione
U140	78-83-1	Isobutyl alcohol (I,T)	U141	120-58-1	Isosafrole
U142	143-50-0	Kepone	U143	303-34-4	Lasiocarpine
U144	301-04-2	Lead acetate	U146	1335-32-6	Lead, bis(acetato-O)tetrahydroxytri-
U145	7446-27-7	Lead phosphate	U146	1335-32-6	Lead subacetate
U129	58-89-9	Lindane	U147	108-31-6	Maleic anhydride
U148	123-33-1	Maleic hydrazide	U149	109-77-3	Malononitrile
U150	148-82-3	Melphalan	U151	7439-97-6	Mercury
U152	126-98-7	Methacrylonitrile (I,T)	U092	124-40-3	Methanamine, N-methyl- (I)
U029	74-83-9	Methane, bromo-	U045	74-87-3	Methane, chloro-(I,T)
U046	107-30-2	Methane, chloromethoxy-	U068	74-95-3	Methane, dibromo-
U080	75-09-2	Methane, dichloro-	U075	75-71-8	Methane, dichlorodifluoro-
U138	74-88-4	Methane, iodo-	U119	62-50-0	Methanesulfonic acid, ethyl ester
U211	56-23-5	Methane, tetrachloro-	U153	74-93-1	Methanethiol (I,T)
U225	75-25-2	Methane, tribromo-	U044	67-66-3	Methane, trichloro-
U121	75-69-4	Methane, trichlorofluoro-	U123	64-18-6	Methanoic acid (C,T)
U154	67-56-1	Methanol (I)	U155	91-80-5	Methapyrilene
U142	143-50-0	1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one, 1, 1a,3,3a,4,5,5,5a,5b,6- decachloro-octahydro-	U247	72-43-5	Methoxychlor
U154	67-56-1	Methyl alcohol (I)	U029	74-83-9	Methyl bromide
U186	504-60-9	1-Methylbutadiene (I)	U045	74-87-3	Methyl chloride (I,T)
U156	79-22-1	Methylchlorocarbonate (I,T)	U226	71-55-6	Methylchloroform
U157	56-49-5	3-Methylcholanthrene	U158	101-14-4	4,4'-Methylenebis(2-chloroaniline)
U068	74-95-3	Methylene bromide	U080	75-09-2	Methylene chloride
U159	78-93-3	Methyl ethyl ketone (MEK)(I,T)	U160	1338-23-4	Methyl ethyl ketone peroxide (R,T)
U138	74-88-4	Methyl iodide	U161	108-10-1	Methyl isobutyl ketone (I)
U162	80-62-6	Methyl methacrylate (I,T)	U163	70-25-7	N-Methyl-N'-nitro-N-nitrosoguanidine
U161	108-10-1	4-Methyl-2-pentanone (I)	U164	56-04-2	Methylthiouracil
U010	50-07-7	Mitomycin C	U059	20830-81-3	5,12-Naphthacenedione, (8S-cis)-8-acetyl-10-[(3-amino- 2,3,6- trideoxy alpha-L-lyxo- hexopyranosyl)oxy]-7,8,9,10- tetrahydro- 6,8,11-trihydroxy-1-methoxy-
U165	91-20-3	Naphthalene	U047	91-58-7	Naphthalene, 2-chloro-
U166	130-15-4	1,4-Naphthalenedione	U236	72-57-1	2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'- dimethyl-(1,1'- biphenyl)-4,4'diyl)]-bis (azo) bis(5-amino-4-hydroxy)-, tetrasodium salt
U166	130-15-4	1,4-Naphthoquinone	U167	134-32-7	alpha-Naphthylamine
U168	91-59-8	beta-Naphthylamine	U026	494-03-1	2-Naphthylamine, N,N' -bis(2-chloroethyl)-
U167	134-32-7	1 -Naphthylenamine	U168	91-59-8	2-Naphthylenamine
U217	10102-45-1	Nitric acid, thallium(1 +) salt	U169	98-95-3	Nitrobenzene (I,T)
U170	100-02-7	p-Nitrophenol	U171	79-46-9	2-Nitropropane (I,T)
U172	924-16-3	N-Nitrosodi-n-butylamine	U173	1116-54-7	N-Nitrosodiethanolamine
U174	55-18-5	N-Nitrosodiethylamine	U176	759-73-9	N-Nitroso-N ethylurea

TABLE VIII: U - CODED MATERIALS

Hazardous Waste No.	Chemical Abstracts No.	Substance	Hazardous Waste No.	Chemical Abstracts No	Substance
U177	684-93-5	N-Nitroso-N-methylurea	U178	615-53-2	N-Nitroso-N-methylurethane
U179	100-75-4	N-Nitrosopiperidine	U180	930-55-2	N-Nitrosopyrrolidine
U181	99-55-8	5-Nitro-o-toluidine	U193	1120-71-4	1,2 Oxathiolane, 2,2-dioxide
U058	50-18-0	2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2- chloroethyl) tetrahydro-, 2-oxide	U115	75-21-8	Oxirane (I,T)
U126	765-34-4	Oxiranecarboxyaldehyde	U041	106-89-8	Oxirane, (chloromethyl)-
U182	123-63-7	Paraldehyde	U183	608-93-5	Pentachlorobenzene
U184	76-01-7	Pentachloroethane	U185	82-68-8	Pentachloronitrobenzene (PCNB)
U242	87-86-5	Pentachlorophenol	U186	504-60-9	1,3-Pentadiene (I)
U187	62-44-2	Phenacetin	U188	108-95-2	Phenol
U048	95-57-8	Phenol, 2-chloro-	U039	59-50-7	Phenol, 4-chloro-3-methyl-
U081	120-83-2	Phenol, 2,4-dichloro-	U082	87-65-0	Phenol, 2,6-dichloro-
U089	56-53-1	Phenol, 4,4' -(1,2-diethyl-1,2-ethenediyl)bis-,(E)-	U101	105-67-9	Phenol, 2,4-dimethyl-
U052	1319-77-3	Phenol, methyl-	U132	70-30-4	Phenol, 2,2' -methylenebis[3,4,6-trichloro-
U170	100-02-7	Phenol, 4-nitro-	U242	87-86-5	Phenol, pentachloro-
U212	58-90-2	Phenol, 2,3,4,6-tetrachloro-	U230	95-94-4	Phenol, 2,4,5-trichloro-
U231	88-06-2	Phenol, 2,4,6-trichloro-	U150	148-82-3	L-Phenylalanine, 4[bis(2-chloroethyl) amino]-
U145	7446-27-7	Phosphoric acid, lead salt	U087	3288-58-2	Phosphorodithioic acid, O,O-diethyl-, S-methyl ester
U189	108-95-2	Phosphorus sulfide (R)	U190	85-44-9	Phthalic anhydride
U191	109-06-8	2-Picoline	U179	100-75-4	Piperidine, 1-nitroso-
U192	23950-58-5	Pronamide	U194	107-10-8	1-Propanamine (I,T)
U111	621-64-7	1-Propanamine, N-nitroso-N-propyl-	U110	142-84-7	1-Propanamine, N-propyl- (I)
U066	96-12-8	Propane, 1,2-dibromo-3-chloro-	U149	109-77-3	Propanedinitrile
U171	79-46-9	Propane, 2-nitro-(I,T)	U027	39638-32-9	Propane, 2,2' -oxybis[2-chloro-
U193	1120-71-4	1,3-Propane sultone	U235	126-72-7	1-Propanol, 2,3-dibromo-, phosphate (3:1)
U140	78-83-1	1-Propanol, 2-methyl- (I,T)	U002	67-64-1	2-Propanone (I)
U084	542-75-6	1-Propane, 1,3-dichloro-	U152	126-98-7	2-Propanenitrile, 2-methyl- (I,T)
U007	79-06-1	2-Propenamide	U243	1888-71-7	1-Propene, hexachloro-
U009	107-13-1	2-Propenenitrile	U008	79-10-7	2-Propenoic acid (I)
U113	140-88-5	2-Propenoic acid, ethyl ester (I)	U118	97-63-2	2-Propenoic acid, 2-methyl-, ethyl ester
U162	80-66-2	2-Propenoic acid, 2-methyl-, methyl ester(I,T)	U233	93-72-1	Propionic acid, 2-(2,4,5-trichlorophenoxy)-
U194	107-10-8	n-Propylamine (I,T)	U083	78-87-5	Propylene dichloride
U148	123-33-1	3,6-Pyridazinedione, 1,2-dihydro	U196	110-86-1	Pyridine
U191	109-06-8	Pyridine, 2-methyl-	U237	66-75-1	2,4(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]-
U164	56-04-2	4-(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-	U180	930-55-2	Pyrrolidine, 1-nitroso-
U200	50-55-5	Reserpine	U201	108-46-3	Resorcinol
U202	[1]81-07-2	Saccharin and salts	U203	94-59-7	Safrole
U204	7783-00-8	Selenious acid	U204	7783-00-8	Selenium dioxide
U205	7446-34-6	Selenium sulfide (R,T)	U015	115-02-6	L-Serine, diazoacetate (ester)
U233	93-72-1	Silvex	U206	18883-66-4	Streptozotocin
U103	77-78-1	Sulfuric acid, dimethyl ester	U189	1314-80-3	Sulfur phosphide (R)
U232	93-76-5	2,4,5-T	U207	95-94-3	1,2,4,5-Tetrachlorobenzene
U208	630-20-6	1,1,1,2-Tetrachloroethane	U209	79-34-5	1,1,2,2-Tetrachloroethane
U210	127-18-4	Tetrachloroethylene	U212	58-90-2	2,3,4,6-Tetrachlorophenol

TABLE VIII: U - CODED MATERIALS

Hazardous Waste No.	Chemical Abstracts No.	Substance	Hazardous Waste No.	Chemical Abstracts No	Substance
U213	109-99-9	Tetrahydrofuran (I)	U214	15843-14-8	Thallium(I) acetate
U215	6533-73-9	Thallium(I) carbonate	U216	7791-12-0	Thallium chloride
U217	10102-45-1	Thallium(I) nitrate	U218	62-55-5	Thioacetamide
U153	74-93-1	Thiomethanol (I,T)	U244	137-26-8	Thioperoxydicarbonic diamide, tetramethyl-
U219	62-56-6	Thiourea	U244	137-26-8	Thiuram
U220	108-88-3	Toluene	U221	25376-45-8	Toluenediamine
U223	26471-62-5	Toluene diisocyanate (R,T)	U328	95-53-4	o-Toluidine
U353	106-49-0	p-Toluidine	U222	636-21-5	o-Toluidine hydrochlorlde
U011	61-82-5	1H-1,2,4- Triazol-3-amine	U226	71-55-6	1,1,1 -Trichloroethane
U227	79-00-5	1,1,2-Trichtoroethane	U228	79-01-6	Trichloroethylene
U121	75-69-4	Trichloromonofluoromethane	U230	95-95-4	2,4,5-Trichlorophenol
U231	88-06-2	2,4,6-Trichlorophenol	U234	99-35-4	sym-Trinitrobenzene (R,T)
U182	123-63-7	1,3,5- Trioxane, 2,4,6- trimethyl-	U235	126-72-7	Tris(2,3-dibromopropyl) phosphate
U236	72-57-1	Trypan blue	U237	66-75-1	Uracil mustard
U176	759-73-9	Urea, N-ethyl-N-nitroso-	U177	684-93-5	Urea, N-methyl-N-nitroso-
U043	75-01-4	Vinyl chloride	U248	[1]81-81-2	Warfarin, when present at concentrations of 0.3% or less
U239	1330-20-7	Xylene (I)	U200	50-55-5	Yohimban-16 carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyt) oxy]-, methyl ester
U249	1314-84-7	Zinc phosphide, when present at concentrations of 10% or less			

[1]CAS Number given for parent compound only.