

§ 113.4

actions as the Federal On-Scene Coordinator may determine to be necessary to minimize or mitigate damage to the public health or welfare, including but not limited to, fish, shellfish, wildlife, and public and private property, shorelines, and beaches.

Additionally, the terms not otherwise defined herein shall have the meanings assigned them by section 311(a) of the Act.

**§ 113.4 Size classes and associated liability limits for fixed onshore oil storage facilities, 1,000 barrels or less capacity.**

Unless the United States can show that oil was discharged as a result of willful negligence or willful misconduct within the privity and knowledge of the owner or operator, the following limits of liability are established for fixed onshore facilities in the classes specified:

(a) Aboveground storage.

Size class	Capacity (barrels)	Limit (dollars)
I .....	Up to 10 .....	4,000
II .....	11 to 170 .....	60,000
III .....	171 to 500 .....	150,000
IV .....	501 to 1,000 .....	200,000

(b) Belowground storage.

Size class	Capacity (barrels)	Limit (dollars)
I .....	Up to 10 .....	5,200
II .....	11 to 170 .....	78,000
III .....	171 to 500 .....	195,000
IV .....	501 to 1,000 .....	260,000

**§ 113.5 Exclusions.**

This subpart does not apply to:

- (a) Those facilities whose average daily oil throughput is more than their fixed oil storage capacity.
- (b) Vehicles and rolling stock.

**§ 113.6 Effect on other laws.**

Nothing herein shall be construed to limit the liability of any facility under State or local law or under any Federal law other than section 311 of the Act, nor shall the liability of any facility for any charges or damages under State or local law reduce its liability to the Federal Government under sec-

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tion 311 of the Act, as limited by this subpart.

**PART 116—DESIGNATION OF HAZARDOUS SUBSTANCES**

Sec.

- 116.1 Applicability.
- 116.2 Abbreviations.
- 116.3 Definitions.
- 116.4 Designation of hazardous substances.

AUTHORITY: Secs. 311(b)(2)(A) and 501(a), Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.).

**§ 116.1 Applicability.**

This regulation designates hazardous substances under section 311(b)(2)(A) of the Federal Water Pollution Control Act (the Act). The regulation applies to discharges of substances designated in Table 116.4.

[43 FR 10474, Mar. 13, 1978]

**§ 116.2 Abbreviations.**

ppm=parts per million  
 mg=milligram(s)  
 kg=kilogram(s)  
 mg/l=milligrams(s) per liter= (approx.) ppm  
 mg/kg=milligram(s) per kilogram= (approx.) ppm

[43 FR 10474, Mar. 13, 1978]

**§ 116.3 Definitions.**

As used in this part, all terms shall have the meaning defined in the Act and as given below:

*The Act* means the Federal Water Pollution Control Act, as amended by the Federal Water Pollution Control Act Amendments of 1972 (Pub. L. 92-500), and as further amended by the Clean Water Act of 1977 (Pub. L. 95-217), 33 U.S.C. 1251 et seq.; and as further amended by the Clean Water Act Amendments of 1978 (Pub. L. 95-676);

*Animals* means appropriately sensitive animals which carry out respiration by means of a lung structure permitting gaseous exchange between air and the circulatory system;

*Aquatic animals* means appropriately sensitive wholly aquatic animals which carry out respiration by means of a gill structure permitting gaseous exchange between the water and the circulatory system;

*Aquatic flora* means plant life associated with the aquatic eco-system including, but not limited to, algae and higher plants;

*Contiguous zone* means the entire zone established or to be established by the United States under article 24 of the Convention of the Territorial Sea and the Contiguous Zone;

*Discharge* includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying or dumping, but excludes (A) discharges in compliance with a permit under section 402 of this Act, (B) discharges resulting from circumstances identified and reviewed and made a part of the public record with respect to a permit issued or modified under section 402 of this Act, and subject to a condition in such permit, and (C) continuous or anticipated intermittent discharges from a point source, identified in a permit or permit application under section 402 of this Act, which are caused by events occurring within the scope of relevant operating or treatment systems;

*LC50* means that concentration of material which is lethal to one-half of the test population of aquatic animals upon continuous exposure for 96 hours or less.

*Mixture* means any combination of two or more elements and/or compounds in solid, liquid, or gaseous form except where such substances have undergone a chemical reaction so as to become inseparable by physical means.

*Navigable waters* is defined in section 502(7) of the Act to mean "waters of the United States, including the territorial seas," and includes, but is not limited to:

(1) All waters which are presently used, or were used in the past, or may be susceptible to use as a means to transport interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide, and including adjacent wetlands; the term *wetlands* as used in this regulation shall include those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevelance of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include

swamps, marshes, bogs and similar areas; the term *adjacent* means bordering, contiguous or neighboring;

(2) Tributaries of navigable waters of the United States, including adjacent wetlands;

(3) Interstate waters, including wetlands; and

(4) All other waters of the United States such as intrastate lakes, rivers, streams, mudflats, sandflats and wetlands, the use, degradation or destruction of which affect interstate commerce including, but not limited to:

(i) Intrastate lakes, rivers, streams, and wetlands which are utilized by interstate travelers for recreational or other purposes; and

(ii) Intrastate lakes, rivers, streams, and wetlands from which fish or shellfish are or could be taken and sold in interstate commerce; and

(iii) Intrastate lakes, rivers, streams, and wetlands which are utilized for industrial purposes by industries in interstate commerce.

Navigable waters do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

*Offshore facility* means any facility of any kind located in, on, or under, any of the navigable waters of the United States, and any facility of any kind which is subject to the jurisdiction of the United States and is located in, on, or under any other waters, other than a vessel or a public vessel;

*Onshore facility* means any facility (including, but not limited to, motor vehicles and rolling stock) of any kind located in, on, or under, any land within the United States other than submerged land;

*Otherwise subject to the jurisdiction of the United States* means subject to the jurisdiction of the United States by virtue of United States citizenship, United States vessel documentation or numbering, or as provided for by international agreement to which the United States is a party.

A discharge *in connection with activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of*

1974, or which may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Fishery Conservation and Management Act of 1976), means: (1) A discharge into any waters beyond the contiguous zone from any vessel or on-shore or offshore facility, which vessel or facility is subject to or is engaged in activities under the Outer Continental Shelf Lands Act or the Deepwater Port Act of 1974, and (2) any discharge into any waters beyond the contiguous zone which contain, cover, or support any natural resource belonging to, appertaining to, or under the exclusive management authority of the United States (including resources under the Fishery Conservation and Management Act of 1976).

*Public vessel* means a vessel owned or bareboat-chartered and operated by the United States, or a State or political subdivision thereof, or by a foreign nation, except when such vessel is engaged in commerce.

*Territorial seas* means the belt of the seas measured from the line of ordinary low water along that portion of

the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters, and extending seaward a distance of 3 miles.

*Vessel* means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water other than a public vessel;

[43 FR 10474, Mar. 13, 1978; 43 FR 27533, June 26, 1978, as amended at 44 FR 10266, Feb. 16, 1979; 58 FR 45039, Aug. 25, 1993]

**§ 116.4 Designation of hazardous substances.**

The elements and compounds appearing in Tables 116.4 A and B are designated as hazardous substances in accordance with section 311(b)(2)(A) of the Act. This designation includes any isomers and hydrates, as well as any solutions and mixtures containing these substances. Synonyms and Chemical Abstract System (CAS) numbers have been added for convenience of the user only. In case of any disparity the common names shall be considered the designated substance.

TABLE 116.4A—LIST OF HAZARDOUS SUBSTANCES

Common name	CAS No.	Synonyms	Isomers	CAS No.
Acetaldehyde .....	75070	Ethanal, ethyl aldehyde, acetic aldehyde .....	.....	.....
Acetic acid .....	64197	Glacial acetic acid, vinegar acid .....	.....	.....
Acetic anhydride .....	108247	Acetic oxide, acetyl oxide .....	.....	.....
Acetone cyanohydrin .....	75865	2-methylactonitrile, alpha-hydroxyisobutyronitrile. ....	.....	.....
Acetyl bromide .....	506967	.....	.....	.....
Acetyl chloride .....	79367	.....	.....	.....
Acrolein .....	107028	2-propenal, acrylic aldehyde, acrylaldehyde, acraldehyde. ....	.....	.....
Acrylonitrile .....	107131	Cyanoethylene, Fumigrain, Ventox, propeneitrile, vinyl cyanide. ....	.....	.....
Adipic acid .....	124049	Hexanedioic acid .....	.....	.....
Aldrin .....	309002	Octalene, HHDN .....	.....	.....
Allyl alcohol .....	107186	2-propen-1-ol, 1-propenol-3, vinyl carbinol .....	.....	.....
Allyl chloride .....	107051	3-chloropropene, 3-chloropropylene, Chlorallylene. ....	.....	.....
Aluminum sulfate .....	10043013	Alum .....	.....	.....
Ammonia .....	7664417	.....	.....	.....
Ammonium acetate .....	631618	Acetic acid ammonium, salt .....	.....	.....
Ammonium benzoate .....	1863634	.....	.....	.....
Ammonium bicarbonate .....	1066337	Acid ammonium carbonate, ammonium hydrogen carbonate. ....	.....	.....
Ammonium bichromate .....	7789095	.....	.....	.....
Ammonium bifluoride .....	1341497	Acid ammonium fluoride, ammonium hydrogen fluoride. ....	.....	.....
Ammonium bisulfite .....	10192300	.....	.....	.....
Ammonium carbamate .....	1111780	Ammonium aminoformate .....	.....	.....
Ammonium carbonate .....	506876	.....	.....	.....
Ammonium chloride .....	12125029	Ammonium muriate, sal ammoniac, salmiac, Amchlor. ....	.....	.....
Ammonium chromate .....	7788989	.....	.....	.....
Ammonium citrate dibasic .....	3012655	Diammonium citrate, citric acid diammonium salt. ....	.....	.....

TABLE 116.4A—LIST OF HAZARDOUS SUBSTANCES—Continued

Common name	CAS No.	Synonyms	Isomers	CAS No.
Ammonium fluoborate .....	13826830	Ammonium fluoroborate, ammonium borofluoride.	.....	.....
Ammonium fluoride .....	12125018	Neutral ammonium fluoride .....	.....	.....
Ammonium hydroxide .....	1336216	.....	.....	.....
Ammonium oxalate .....	6009707	.....	.....	.....
.....	5972736	.....	.....	.....
.....	14258492	.....	.....	.....
Ammonium silicofluoride .....	16919190	Ammonium fluosilicate .....	.....	.....
Ammonium sulfamate .....	7773060	Ammate, AMS, ammonium amidosulfate .....	.....	.....
Ammonium sulfide .....	12135761	.....	.....	.....
Ammonium sulfite .....	10196040	.....	.....	.....
.....	10192300	.....	.....	.....
Ammonium tartrate .....	3164292	Tartaric acid ammonium salt .....	.....	.....
.....	14307438	.....	.....	.....
Ammonium thiocyanate .....	1762954	Ammonium rhodanide, ammonium sulfocyanate, ammonium sulfocyanide.	.....	.....
Amly acetate .....	628637	Amylacetate ester .....	iso- .....	123922
.....	.....	Pear oil .....	sec- .....	626380
.....	.....	Banana oil .....	tert- .....	625161
Aniline .....	62533	Aniline oil, phenylamine, aminobenzene, aminophen, kyanol.	.....	.....
Antimony pentachloride .....	7647189	.....	.....	.....
Antimony potassium tartrate .....	28300745	Tartar emetic, tartrated antimony, tartarized antimony, potassium antimonytartrate.	.....	.....
Antimony tribromide .....	7789619	.....	.....	.....
Antimony trichloride .....	10025919	Butter of antimony .....	.....	.....
Antimony trifluoride .....	7783564	Antimony fluoride .....	.....	.....
Antimony trioxide .....	1309644	Diantimony trioxide, flowers of antimony .....	.....	.....
Arsenic disulfide .....	1303328	Red arsenic sulfide .....	.....	.....
Arsenic pentoxide .....	1303282	Arsenic acid anhydride, arsenic oxide .....	.....	.....
Arsenic trichloride .....	7784341	Arsenic chloride, arsenious chloride, arsenous chloride, butter of arsenic.	.....	.....
Arsenic trioxide .....	1327533	Arsenious acid, arsenious oxide, white arsenic .....	.....	.....
Arsenic trisulfide .....	1303339	Arsenious sulfide, yellow arsenic sulfide .....	.....	.....
Barium cyanide .....	542621	.....	.....	.....
Benzene .....	71432	Cyclohexatriene, benzol .....	.....	.....
Benzoic acid .....	65850	Benzenecarboxylic acid, phenylformic acid, dracrylic acid.	.....	.....
Benzonitrile .....	100470	Phenyl cyanide, cyanobenzene .....	.....	.....
Benzoyl chloride .....	98884	Benzenecarbonyl chloride .....	.....	.....
Benzyl chloride .....	100447	.....	.....	.....
Beryllium chloride .....	7787475	.....	.....	.....
Beryllium fluoride .....	7787497	.....	.....	.....
Beryllium nitrate .....	7787555	.....	.....	.....
.....	13597994	.....	.....	.....
Butyl acetate .....	123864	Acetic acid butyl ester .....	iso- .....	110190
.....	.....	.....	sec- .....	105464
.....	.....	.....	tert- .....	540885
Butylamine .....	109739	1-aminobutane .....	iso- .....	78819
.....	.....	.....	sec- .....	513495
.....	.....	.....	sec- .....	13952846
.....	.....	.....	tert- .....	75649
n-butyl phthalate .....	84742	1,2-benzenedicarboxylic acid, dibutyl ester, dibutyl phthalate.	.....	.....
Butyric acid .....	107926	Butanoic acid, ethylacetic acid .....	iso- .....	79312
Cadmium acetate .....	543908	.....	.....	.....
Cadmium bromide .....	7789426	.....	.....	.....
Cadmium chloride .....	10108642	.....	.....	.....
Calcium arsenate .....	7778441	Tricalcium orthoarsenate .....	.....	.....
Calcium arsenite .....	52740166	.....	.....	.....
Calcium carbide .....	75207	Carbide, acetylenogen .....	.....	.....
Calcium chromate .....	13765190	Calcium chrome yellow, geblin, yellow ultramarine.	.....	.....
Calcium cyanide .....	592018	.....	.....	.....
Calcium dodecylbenzenesulfonate ..	26264062	.....	.....	.....
Calcium hypochlorite .....	7778543	.....	.....	.....
Captan .....	133062	Orthocide-406, SR-406, Vancide-89 .....	.....	.....
Carbaryl .....	63252	Sevin .....	.....	.....
Carbofuran .....	1563662	Furadan .....	.....	.....
Carbon disulfide .....	75150	Carbon bisulfide, dithiocarbonic anhydride .....	.....	.....
Carbon tetrachloride .....	56235	Tetrachloromethane Perchloromethane .....	.....	.....
Chlordane .....	57749	Toxichlor, chlordan .....	.....	.....

TABLE 116.4A—LIST OF HAZARDOUS SUBSTANCES—Continued

Common name	CAS No.	Synonyms	Isomers	CAS No.
Chlorine	75003	.....	.....	.....
Chlorobenzene	108907	Monochlorobenzene, benzene chloride	.....	.....
Chloroform	67663	Trichloromethane	.....	.....
Chlorpyrifos	2921882	Dursban	.....	.....
Chlorosulfonic acid	7790945	Sulfuric chlorohydrin	.....	.....
Chromic acetate	1066304	.....	.....	.....
Chromic acid	11115745	Chromic anhydride, chromium trioxide	.....	.....
Chromic sulfate	10101538	.....	.....	.....
Chromous chloride	10049055	.....	.....	.....
Cobaltous bromide	7789437	Cobalt bromide	.....	.....
Coabaltous formate	544183	Cobalt formate	.....	.....
Cobaltous sulfamate	14017415	Cobalt sulfamate	.....	.....
Coumaphos	56724	Co-Ral	.....	.....
Cresol	1319773	Cresylic acid	m- .....	108394
		Hydroxytoluene	o- .....	95487
			p- .....	106445
Crotonaldehyde	4170303	2-butenal propylene aldehyde	.....	.....
Cupric acetate	142712	Copper acetate, crystalized verdigris	.....	.....
Cupric acetoarsenite	12002038	Copper acetoarsenite, copper acetate arsenite, Paris green.	.....	.....
Cupric chloride	7447394	Copper chloride	.....	.....
Cupric nitrate	3251238	Copper nitrate	.....	.....
Cupric oxalate	5893663	Copper oxalate	.....	.....
Cupric sulfate	7758987	Copper sulfate	.....	.....
Cupric sulfate, ammoniated	10380297	Ammoniated copper sulfate	.....	.....
Cupric tartrate	815827	Copper tartrate	.....	.....
Cyanogen chloride	506774	.....	.....	.....
Cyclohexane	110827	Hexahydrobenzene, hexamethylene, hexanaphthene.	.....	.....
2,4-D acid	94757	2,4-dichlorophenoxyacetic acid	.....	.....
2,4-D ester	94111	2,4-dichlorophenoxyacetic acid ester	.....	.....
	94791	.....	.....	.....
	94804	.....	.....	.....
	1320189	.....	.....	.....
	1928387	.....	.....	.....
	1928616	.....	.....	.....
	1929733	.....	.....	.....
	2971382	.....	.....	.....
	25168267	.....	.....	.....
	53467111	.....	.....	.....
DDT	50293	p,p'-DDT	.....	.....
Diazinon	333415	Dipofene, Diazitol, Basudin, Spectracide	.....	.....
Dicamba	1918009	2-methoxy-3,6-dichlorobenzoic acid	.....	.....
Dichlobenil	1194656	2,6-dichlorobenzonitrile, 2,6-DBN	.....	.....
Dichlone	117806	Phygon, dichloronaphthoquinone	.....	.....
Dichlorobenzene	25321226	Di-chloride	Ortho .....	95501
		Paramoth (Para)	Para .....	106467
Dichloropropane	26638197	Propylene dichloride	1,1 .....	78999
			1,2 .....	78875
			1,3 .....	142289
Dichloropropene	26952238	.....	1,3 .....	542756
			2,3 .....	78886
Dichloropropene-dichloropropane (mixture).	8003198	D-D mixture Vidden D	.....	.....
2,2-Dichloropropionic acid	75990	Dalapon	.....	.....
Dichlorvos	62737	2,2-dichlorovinyl dimethyl phosphate, Vapona	.....	.....
Dicofol	115322	Di(p-chlorophenyl)-trichloromethylcarbinol, DTMC, dicofol.	.....	.....
Dieldrin	60571	Alvit	.....	.....
Diethylamine	109897	.....	.....	.....
Dimethylamine	124403	.....	.....	.....
Dinitrobenzene (mixed)	25154545	Dinitrobenzol	m- .....	99650
			o- .....	528290
			p- .....	100254
Dinitrophenol	51285	Aldifen	(2,5-) .....	329715
			(2,4-) .....	.....
			(2,6-) .....	573568
Dinitrotoluene	25321146	DNT	2,4 .....	121142
			2,6 .....	606202
			3,4 .....	610399
Diquat	85007	Aquacide	.....	.....
	2764729	Dextrone, Reglone, Diquat dibromide	.....	.....

TABLE 116.4A—LIST OF HAZARDOUS SUBSTANCES—Continued

Common name	CAS No.	Synonyms	Isomers	CAS No.
Disulfoton .....	298044	Di-syston .....	.....	.....
Diuron .....	330541	DCMU, DMU .....	.....	.....
Dodecylbenzenesulfonic acid .....	27176870	.....	.....	.....
Endosulfan .....	115297	Thiodan .....	.....	.....
Endrin .....	72208	Mendrin, Compound 269 .....	.....	.....
Epichlorohydrin .....	106898	-chloropropylene oxide .....	.....	.....
Ethion .....	563122	Nialate, ethyl methylene, phosphorodithioate ..	.....	.....
Ethylbenzene .....	100414	Phenylethane .....	.....	.....
Ethylenediamine .....	107153	1,2-diaminoethane .....	.....	.....
Ethylenediamine-tetraacetic acid (EDTA) .....	60004	Edetic acid, Havidote, (ethylenedinitrilo)-tetraacetic acid .....	.....	.....
Ethylene dibromide .....	106934	1,2-dibromoethane acetylene dibromide sym-dibromoethylene .....	.....	.....
Ethylene dichloride .....	107062	1,2-dichloroethane sym-bichloroethane .....	.....	.....
Ferric ammonium citrate .....	1185575	Ammonium ferric citrate .....	.....	.....
Ferric ammonium oxalate .....	2944674	Ammonium ferric oxalate .....	.....	.....
Ferric chloride .....	7705080	Flores martis, iron trichloride .....	.....	.....
Ferric fluoride .....	7783508	.....	.....	.....
Ferric nitrate .....	10421484	Iron nitrate .....	.....	.....
Ferric sulfate .....	10028225	Ferric persulfate, ferric sesquisulfate, ferric tersulfate .....	.....	.....
Ferrous ammonium sulfate .....	10045893	Mohr's salt, iron ammonium sulfate .....	.....	.....
Ferrous chloride .....	7758943	Iron chloride, iron dichloride, iron protochloride .....	.....	.....
Ferrous sulfate .....	7720787	Green vitriol .....	.....	.....
Formaldehyde .....	50000	Iron vitriol, iron sulfate, iron protosulfate .....	.....	.....
Formic acid .....	64186	Methyl aldehyde, methanal, formalin .....	.....	.....
Fumaric acid .....	110178	Methanoic acid .....	.....	.....
Furfural .....	98011	Trans-butenedioic acid, trans-1,2-ethylenedicarboxylic acid, boletic acid, allomaleic acid .....	.....	.....
Guthion .....	86500	2-furaldehyde, pyromucic aldehyde .....	.....	.....
Heptachlor .....	76448	Gusathion, azinphos-methyl .....	.....	.....
Hexachlorocyclopentadiene .....	77474	Velsicol-104, Drinox, Heptagran .....	.....	.....
Hydrochloric acid .....	7647010	Perchlorocyclopentadiene .....	.....	.....
Hydrofluoric acid .....	7664393	Hydrogen chloride, muriatic acid .....	.....	.....
Hydrogen cyanide .....	74908	Fluohydric acid .....	.....	.....
Hydrogen sulfide .....	7783064	Hydrocyanic acid .....	.....	.....
Isoprene .....	78795	Hydrosulfuric acid sulfur hydride .....	.....	.....
Isopropanolamine .....	42504461	2-methyl-1,3-butadiene .....	.....	.....
Kepon .....	143500	Chlordecone 1,1a,3,3a,4,5,5a,5b,6-decachlorooctahydro-1,3,4-metheno-2H-cyclobuta(cd)pentalen-2-one .....	.....	.....
Lead acetate .....	301042	Sugar of lead .....	.....	.....
Lead arsenate .....	7784409	.....	.....	.....
Lead chloride .....	7645252	.....	.....	.....
Lead fluoroborate .....	10102484	.....	.....	.....
Lead fluoride .....	7758954	Lead fluoroborate .....	.....	.....
Lead iodide .....	13814965	Lead difluoride, plumbous fluoride .....	.....	.....
Lead nitrate .....	7783462	.....	.....	.....
Lead stearate .....	10101630	.....	.....	.....
Lead sulfate .....	10099748	.....	.....	.....
Lead sulfide .....	7428480	Stearic acid lead salt .....	.....	.....
Lead thiocyanate .....	1072351	.....	.....	.....
Lindane .....	52652592	.....	.....	.....
Lithium chromate .....	7446142	Galena .....	.....	.....
Malathion .....	1314870	Lead sulfocyanate .....	.....	.....
Maleic acid .....	592870	Gamma-BHC, gamma-benzene hexachloride ..	.....	.....
Maleic anhydride .....	58899	.....	.....	.....
Mercaptodimethur .....	14307358	Phosphothion .....	.....	.....
Mercuric cyanide .....	121755	Cis-butenedioic acid, cis-1,2-ethylenedicarboxylic acid, toxilic acid .....	.....	.....
Mercuric nitrate .....	110167	2,5-furandione, cis-butenedioic anhydride, toxilic anhydride .....	.....	.....
Mercuric sulfate .....	108316	Mesuroil .....	.....	.....
Mercuric thiocyanate .....	203657	Mercury cyanide .....	.....	.....
.....	592041	Mercury nitrate, mercury pernitrate .....	.....	.....
.....	10045940	Mercury sulfate, mercury persulfate .....	.....	.....
.....	7783359	Mercury thiocyanate, mercuric sulfocyanate, mercuric sulfocyanide .....	.....	.....
.....	592858	.....	.....	.....

TABLE 116.4A—LIST OF HAZARDOUS SUBSTANCES—Continued

Common name	CAS No.	Synonyms	Isomers	CAS No.
Mercurous nitrate	7782867	.....	.....	.....
	10415755	Mercury protonitrate	.....	.....
Methoxychlor	72435	DMDT, methoxy-DDT	.....	.....
Methyl mercaptan	74931	Methanethiol, mercaptomethane, methyl sulfhydrate, thiomethyl alcohol.	.....	.....
Methyl methacrylate	80626	Methacrylic acid methyl ester, methyl-2-methyl-2-propenoate.	.....	.....
Methyl parathion	298000	Nitrox-80	.....	.....
Mevinphos	7786347	Phosdrin	.....	.....
Mexacarbate	315184	Zectran	.....	.....
Monoethylamine	75047	Ethylamine, aminoethane	.....	.....
Monomethylamine	74895	Methylamine, aminomethane	.....	.....
Naled	300765	Dibrom	.....	.....
Naphthalene	91203	White tar, tar camphor, naphthalin	.....	.....
Naphthenic acid	1338245	Cyclohexanecarboxylic acid, hexahydrobenzoic acid.	.....	.....
Nickel ammonium sulfate	15699180	Ammonium nickel sulfate	.....	.....
Nickel chloride	37211055	Nickelous chloride	.....	.....
	7718549	.....	.....	.....
Nickel hydroxide	12054487	Nickelous hydroxide	.....	.....
Nickel nitrate	14216752	.....	.....	.....
Nickel sulfate	7786814	Nickelous sulfate	.....	.....
Nitric acid	7697372	Aqua fortis	.....	.....
Nitrobenzene	98953	Nitrobenzol, oil of mirbane	.....	.....
Nitrogen dioxide	10102440	Nitrogen tetroxide	.....	.....
Nitrophenol (mixed)	25154556	Mononitrophenol	m- o- p- Ortho Meta Para	554847 88755 100027 88722 99081 99990
Nitrotoluene	1321126	.....	.....	.....
Paraformaldehyde	30525894	Paraform, Formagene, Triformol, polymerized formaldehyde, polyoxymethylene.	.....	.....
Parathion	56382	DNTP, Niran	.....	.....
Pentachlorophenol	87865	PCP, Penta	.....	.....
Phenol	108952	Carbolic acid, phenyl hydroxide, hydroxybenzene, oxybenzene.	.....	.....
Phosgene	75445	Diphosgene, carbonyl chloride, chloroformyl chloride.	.....	.....
Phosphoric acid	7664382	Orthophosphoric acid	.....	.....
Phosphorus	7723140	Black phosphorus, red phosphorus, white phosphorus, yellow phosphorus.	.....	.....
Phosphorus oxychloride	10025873	Phosphoryl chloride, phosphorus chloride	.....	.....
Phosphorus pentasulfide	1314803	Phosphoric sulfide, thiophosphoric anhydride, phosphorus persulfide.	.....	.....
Phosphorus trichloride	7719122	Phosphorous chloride	.....	.....
Polychlorinated biphenyls	1336363	PCB, Aroclor, polychlorinated diphenyls	.....	.....
Potassium arsenate	7784410	.....	.....	.....
Potassium arsenite	10124502	Potassium metaarsenite	.....	.....
Potassium bichromate	7778509	Potassium dichromate	.....	.....
Potassium chromate	7789006	.....	.....	.....
Potassium cyanide	151508	.....	.....	.....
Potassium hydroxide	1310583	Potassium hydrate, caustic potash, potassa	.....	.....
Potassium permanganate	7722647	Chameleon mineral	.....	.....
Propargite	2312358	Omite	.....	.....
Propionic acid	79094	Propanoic acid, methylacetic acid, ethylformic acid.	.....	.....
Propionic anhydride	123626	Propanoic anhydride, methylacetic anhydride	.....	.....
Propylene oxide	75569	Propene oxide	.....	.....
Pyrethrins	121299	Pyrethrin I	.....	.....
	121211	Pyrethrin II	.....	.....
Quinoline	91225	1-benzazine, benzo(b)pyridine, leuocoline, chinoleine, leucol.	.....	.....
Resorcinol	108463	Resorcin, 1,3-benzenediol, meta-dihydroxybenzene.	.....	.....
Selenium oxide	7446084	Selenium dioxide	.....	.....
Silver nitrate	7761888	Nitric acid silver (1+) salt lunar caustic	.....	.....
Sodium	7440235	Natrium	.....	.....
Sodium arsenate	7631892	Disodium arsenate	.....	.....
Sodium arsenite	7784465	Sodium metaarsenite	.....	.....
Sodium bichromate	10588019	Sodium dichromate	.....	.....
Sodium bifluoride	1333831	.....	.....	.....

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TABLE 116.4A—LIST OF HAZARDOUS SUBSTANCES—Continued

Common name	CAS No.	Synonyms	Isomers	CAS No.
Sodium bisulfite .....	7631905	Sodium acid sulfite, sodium hydrogen sulfite ...	.....	.....
Sodium chromate .....	7775113	.....	.....	.....
Sodium cyanide .....	143339	.....	.....	.....
Sodium dodecylbenzene-sulfonate .....	25155300	.....	.....	.....
Sodium fluoride .....	7681494	Villiaumite .....	.....	.....
Sodium hydrosulfide .....	16721805	Sodium hydrogen sulfide .....	.....	.....
Sodium hydroxide .....	1310732	Caustic soda, soda lye, sodium hydrate .....	.....	.....
Sodium hypochlorite .....	7681529	Bleach .....	.....	.....
.....	10022705	.....	.....	.....
Sodium methylate .....	124414	Sodium methoxide .....	.....	.....
Sodium nitrite .....	7632000	.....	.....	.....
Sodium phosphate, dibasic .....	7558794	.....	.....	.....
.....	10039324	.....	.....	.....
.....	10140655	.....	.....	.....
Sodium phosphate, tribasic .....	7785844	.....	.....	.....
.....	7601549	.....	.....	.....
.....	10101890	.....	.....	.....
.....	10361894	.....	.....	.....
.....	7758294	.....	.....	.....
.....	10124568	.....	.....	.....
Sodium selenite .....	10102188	.....	.....	.....
.....	7782823	.....	.....	.....
Strontium chromate .....	7789062	.....	.....	.....
Strychnine .....	57249	.....	.....	.....
Styrene .....	100425	Vinylbenzene, phenylethylene, styrol, styrolene, cinnamene, cinnamol.	.....	.....
Sulfuric acid .....	7664939	Oil of vitriol, oleum .....	.....	.....
Sulfur monochloride .....	12771083	Sulfur chloride .....	.....	.....
2,4,5-T acid .....	93765	2,4,5-trichlorophenoxyacetic acid .....	.....	.....
2,4,5-T amines .....	6369966	Acetic acid (2,4,5-trichlorophenoxy)-compound with N,N-dimethylmethanamine (1:1).	.....	.....
.....	6369977	Acetic acid (2,4,5-trichlorophenoxy)-compound with N-methylmethanamine (1:1).	.....	.....
.....	1319728	Acetic acid (2,4,5-trichlorophenoxy)-compound with 1-amino-2-propanol (1:1).	.....	.....
.....	3813147	Acetic acid (2,4,5-trichlorophenoxy)-compound with 2,2'2"-nitrotris [ethanol] (1:1).	.....	.....
2,4,5-T esters .....	2545597	2,4,5-trichlorophenoxyacetic esters .....	.....	.....
.....	93798	.....	.....	.....
.....	61792072	.....	.....	.....
.....	1928478	.....	.....	.....
.....	25168154	.....	.....	.....
2,4,5-T salts .....	13560991	Acetic acid (2,4,5-trichlorophenoxy)-sodium salt.	.....	.....
TDE .....	72548	DDD .....	.....	.....
2,4,5-TP acid .....	93721	Propanoic acid 2-(2,4,5-trichlorophenoxy) .....	.....	.....
2,4,5-TP esters .....	32534955	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-, isooctyl ester.	.....	.....
Tetraethyl lead .....	78002	Lead tetraethyl, TEL .....	.....	.....
Tetraethyl pyrophosphate .....	107493	TEPP .....	.....	.....
Thallium sulfate .....	10031591	.....	.....	.....
.....	7446186	.....	.....	.....
Toluene .....	108883	Toluol, methylbenzene, phenylmethane, Methacide.	.....	.....
Toxaphene .....	8001352	Campechlor .....	.....	.....
Trichlorfon .....	52686	Dipterex .....	.....	.....
.....	.....	Dylox .....	.....	.....
Trichlorethylene .....	79016	Ethylene trichloride .....	.....	.....
Trichlorophenol .....	25167822	Collunosol, Dowicide 2 or 2S, Omal, Phenachlor.	(2,3,4-) ..... 15950660 (2,3,5-) ..... 933788 (2,3,6-) ..... 933755 (2,4,5-) ..... 95954 (2,4,6-) ..... 88062 (3,4,5-) ..... 609198	.....
Triethanolamine dodecylbenzenesulfonate.	27323417	.....	.....	.....
Triethylamine .....	121448	.....	.....	.....
Trimethylamine .....	75503	TMA .....	.....	.....
Uranyl acetate .....	541093	.....	.....	.....
Uranyl nitrate .....	10102064	.....	.....	.....
.....	36478769	.....	.....	.....
Vanadium pentoxide .....	1314621	Vanadic anhydride, vanadic acid anhydride ...	.....	.....



TABLE 116.4A—LIST OF HAZARDOUS SUBSTANCES—Continued

Common name	CAS No.	Synonyms	Isomers	CAS No.
Vanadyl sulfate .....	27774136	Vanadic sulfate, vanadium sulfate .....	.....	.....
Vinyl acetate .....	108054	Acetic acid ethylene ether .....	.....	.....
Vinylidene chloride .....	75354	1,1-dichloroethylene .....	.....	.....
Xylene (mixed) .....	1330207	1,1-dichloroethene .....	.....	.....
		Dimethylbenzene .....	m- .....	108383
Xylenol .....	1300716	Xylol .....	o- .....	95476
		Dimethylphenol, hydroxydimethylbenzene .....	p- .....	106423
			.....	.....
Zinc acetate .....	557346	.....	.....	.....
Zinc ammonium chloride .....	14639975	.....	.....	.....
	14639986	.....	.....	.....
	52628258	.....	.....	.....
	.....	.....	.....	.....
Zinc borate .....	1332076	.....	.....	.....
Zinc bromide .....	7699458	.....	.....	.....
Zinc carbonate .....	3486359	.....	.....	.....
Zinc chloride .....	7646857	Butter of zinc .....	.....	.....
Zinc cyanide .....	557211	.....	.....	.....
Zinc fluoride .....	7783495	.....	.....	.....
Zinc formate .....	557415	.....	.....	.....
Zinc hydrosulfite .....	7779864	.....	.....	.....
Zinc nitrate .....	7779886	.....	.....	.....
Zinc phenolsulfonate .....	127822	Zinc sulfocarbolate .....	.....	.....
Zinc phosphide .....	1314847	.....	.....	.....
Zinc silicofluoride .....	16871719	Zinc fluosilicate .....	.....	.....
Zinc sulfate .....	7733020	White vitriol, zinc vitriol, white copperas .....	.....	.....
Zirconium nitrate .....	13746899	.....	.....	.....
Zirconium potassium fluoride .....	16923958	.....	.....	.....
Zirconium sulfate .....	14644612	Disulfatozirconic acid .....	.....	.....
Zirconium tetrachloride .....	10026116	.....	.....	.....

TABLE 116.4B—LIST OF HAZARDOUS SUBSTANCES BY CAS NUMBER

CAS No.	Common name
50000 .....	Formaldehyde
50293 .....	DDT
51285 .....	2,4-Dinitrophenol
52686 .....	Trichlorfon
56382 .....	Parathion
56724 .....	Coumaphos
57249 .....	Strychnine
57749 .....	Chlordane
58899 .....	Lindane
60004 .....	Ethylenediaminetetraacetic acid (EDTA)
60571 .....	Dieldrin
62533 .....	Aniline
62737 .....	Dichlorvos
63252 .....	Carbaryl
64186 .....	Formic acid
64197 .....	Acetic acid
65850 .....	Benzoic acid
67663 .....	Chloroform
71432 .....	Benzene
72208 .....	Endrin
72435 .....	Methoxychlor
72548 .....	TDE
74895 .....	Monomethylamine
74908 .....	Hydrogen cyanide
74931 .....	Methyl mercaptan
75047 .....	Monoethylamine
75070 .....	Acetaldehyde
75150 .....	Carbon disulfide
75207 .....	Calcium carbide
75445 .....	Phosgene
75503 .....	Trimethylamine
75649 .....	tert-Butylamine
75865 .....	Acetone cyanohydrin
75990 .....	2,2-Dichloropropionic acid
76448 .....	Heptachlor

TABLE 116.4B—LIST OF HAZARDOUS SUBSTANCES BY CAS NUMBER—Continued

CAS No.	Common name
78002 .....	Tetraethyl lead
78795 .....	Isoprene
78819 .....	iso-Butylamine
79094 .....	Propionic acid
79312 .....	iso-Butyric acid
79367 .....	Acetyl chloride
80626 .....	Methyl methacrylate
85007 .....	Diquat
86500 .....	Guthion
87865 .....	Pentachlorophenol
88755 .....	o-Nitrophenol
91203 .....	Naphthalene
91225 .....	Quinoline
93765 .....	2,4,5-T acid
93798 .....	2,4,5-T ester
94111 .....	2,4-D ester
94757 .....	2,4-D acid
94791 .....	2,4-D ester
94804 .....	2,4-D Butyl ester
95476 .....	o-Xylene
95487 .....	o-Cresol
98011 .....	Furfural
98884 .....	Benzoyl chloride
98953 .....	Nitrobenzene
99650 .....	m-Dinitrobenzene
100027 .....	p-Nitrophenol
100254 .....	p-Dinitrobenzene
100414 .....	Ethylbenzene
100425 .....	Styrene
100447 .....	Benzyl chloride
100470 .....	Benzonitrile
105464 .....	sec-Butyl acetate
106423 .....	p-Xylene
106445 .....	p-Cresol
107028 .....	Acrolein
107051 .....	Allyl chloride

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TABLE 116.4B—LIST OF HAZARDOUS SUBSTANCES BY CAS NUMBER—Continued

CAS No.	Common name
107131	Acrylonitrile
107153	Ethylenediamine
107186	Allyl alcohol
107493	Tetraethyl pyrophosphate
107926	n-Butyric acid
108054	Vinyl acetate
108247	Acetic anhydride
108316	Maleic anhydride
108383	m-Xylene
108394	m-Cresol
108463	Resorcinol
108883	Toluene
108907	Chlorobenzene
108952	Phenol
109739	n-Butylamine
109897	Diethylamine
110167	Maleic acid
110178	Fumaric acid
110190	iso-Butyl acetate
110827	Cyclohexane
115297	Endosulfan
115322	Dicofol
117806	Dichlone
121211	Pyrethrin
121299	Pyrethrin
121448	Triethylamine
121755	Malathion
123626	Propionic anhydride
123864	n-Butyl acetate
123922	iso-Amyl acetate
124403	Dimethylamine
124414	Sodium methylate
127822	Zinc phenolsulfonate
133062	Captan
142712	Cupric acetate
143339	Sodium cyanide
151508	Potassium cyanide
298000	Methyl parathion
298044	Disulfoton
300765	Naled
301042	Lead acetate
309002	Aldrin
315184	Mexacarbate
329715	2,5-Dinitrophenol
330541	Diuron
333415	Diazinon
506774	Cyanogen chloride
506876	Ammonium carbonate
506967	Acetyl bromide
513495	sec-Butylamine
528290	o-Dinitrobenzene
540885	tert-Butyl acetate
541093	Uranyl acetate
542621	Barium cyanide
543908	Cadmium acetate
544183	Cobaltous formate
554847	m-Nitrophenol
557211	Zinc cyanide
557346	Zinc acetate
557415	Zinc formate
563122	Ethion
573568	2,6-Dinitrophenol
592018	Calcium cyanide
592041	Mercuric cyanide
592858	Mercuric thiocyanate
592870	Lead thiocyanate
625161	tert-Amyl acetate
626380	sec-Amyl acetate
628637	n-Amyl acetate
631618	Ammonium acetate
815827	Cupric tartrate

TABLE 116.4B—LIST OF HAZARDOUS SUBSTANCES BY CAS NUMBER—Continued

CAS No.	Common name
1066304	Chromic acetate
1066337	Ammonium bicarbonate
1072351	Lead stearate
1111780	Ammonium carbamate
1185575	Ferric ammonium citrate
1194656	Dichlobenil
1300716	Xylenol
1303282	Arsenic pentoxide
1303328	Arsenic disulfide
1303339	Arsenic trisulfide
1309644	Antimony trioxide
1310583	Potassium hydroxide
1310732	Sodium hydroxide
1314621	Vanadium pentoxide
1314803	Phosphorus pentasulfide
1314847	Zinc phosphide
1314870	Lead sulfide
1319773	Cresol (mixed)
1320189	2,4-D ester
1327533	Arsenic trioxide
1330207	Xylene
1332076	Zinc borate
1333831	Sodium bifluoride
1336216	Ammonium hydroxide
1336363	Polychlorinated biphenyls
1338245	Naphthenic acid
1341497	Ammonium bifluoride
1762954	Ammonium thiocyanate
1863634	Ammonium benzoate
1918009	Dicamba
1928387	2,4-D esters
1928478	2,4,5-T ester
1928616	2,4-D ester
1929733	2,4-D ester
2545597	2,4,5-T ester
2764729	Diquat
2921882	Chlorpyrifos
2944674	Ferric ammonium oxalate
2971382	2,4-D ester
3012655	Ammonium citrate, dibasic
3164292	Ammonium tartrate
3251238	Cupric nitrate
3486359	Zinc carbonate
5893663	Cupric oxalate
5972736	Ammonium oxalate
6009707	Ammonium oxalate
6369966	2,4,5-T ester
7428480	Lead stearate
7440235	Sodium
7446084	Selenium oxide
7446142	Lead sulfate
7447394	Cupric chloride
7558794	Sodium phosphate, dibasic
7601549	Sodium phosphate, tribasic
7631892	Sodium arsenate
7631905	Sodium bisulfite
7632000	Sodium nitrite
7645252	Lead arsenate
7646857	Zinc chloride
7647010	Hydrochloric acid
7647189	Antimony pentachloride
7664382	Phosphoric acid
7664393	Hydrofluoric acid
7664417	Ammonia
7664939	Sulfuric acid
7681494	Sodium fluoride
7681529	Sodium hypochlorite
7697372	Nitric acid
7699458	Zinc bromide
7705080	Ferric chloride
7718549	Nickel chloride

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TABLE 116.4B—LIST OF HAZARDOUS SUBSTANCES BY CAS NUMBER—Continued

CAS No.	Common name
7719122	Phosphorus trichloride
7720787	Ferrous sulfate
7722647	Potassium permanganate
7723140	Phosphorus
7733020	Zinc sulfate
7758294	Sodium phosphate, tribasic
7758943	Ferrous chloride
7758954	Lead chloride
7758987	Cupric sulfate
7773060	Ammonium sulfamate
7775113	Sodium chromate
7778441	Calcium arsenate
7778509	Potassium bichromate
7778543	Calcium hypochlorite
7779864	Zinc hydrosulfite
7779886	Zinc nitrate
7782505	Chlorine
7782630	Ferrous sulfate
7782823	Sodium selenite
7782867	Mercurous nitrate
7783359	Mercuric sulfate
7783462	Lead fluoride
7783495	Zinc fluoride
7783508	Ferric fluoride
7783564	Antimony trifluoride
7784341	Arsenic trichloride
7784409	Lead arsenate
7784410	Potassium arsenate
7784465	Sodium arsenite
7785844	Sodium phosphate, tribasic
7786347	Mevinphos
7786814	Nickel sulfate
7787475	Beryllium chloride
7787497	Beryllium fluoride
7787555	Beryllium nitrate
7788989	Ammonium chromate
7789006	Potassium chromate
7789062	Strontium chromate
7789095	Ammonium bichromate
7789426	Cadmium bromide
7789437	Cobaltous bromide
7789619	Antimony tribromide
7790945	Chlorosulfonic acid
8001352	Toxaphene
10022705	Sodium hypochlorite
10025873	Phosphorus oxychloride
10025919	Antimony trichloride
10026116	Zirconium tetrachloride
10028225	Ferric sulfate
10028247	Sodium phosphate, dibasic
10039324	Sodium phosphate, dibasic
10043013	Aluminum sulfate
10045893	Ferrous ammonium sulfate
10045940	Mercuric nitrate
10049055	Chromous chloride
10099748	Lead nitrate
10101538	Chromic sulfate
10101630	Lead iodide
10101890	Sodium phosphate, tribasic
10102064	Uranyl nitrate
10102188	Sodium selenite
10102440	Nitrogen dioxide
10102484	Lead arsenate
10108642	Cadmium chloride
10124502	Potassium arsenite
10124568	Sodium phosphate, tribasic
10140655	Sodium phosphate, dibasic
10192300	Ammonium bisulfite
10196040	Ammonium sulfite
10361894	Sodium phosphate, tribasic
10380297	Cupric sulfate, ammoniated

TABLE 116.4B—LIST OF HAZARDOUS SUBSTANCES BY CAS NUMBER—Continued

CAS No.	Common name
10415755	Mercurous nitrate
10421484	Ferric nitrate
10588019	Sodium bichromate
11115745	Chromic acid
12002038	Cupric acetarsenite
12054487	Nickel hydroxide
12125018	Ammonium fluoride
12125029	Ammonium chloride
12135761	Ammonium sulfide
12771083	Sulfur chloride
13597994	Beryllium nitrate
13746899	Zirconium nitrate
13765190	Calcium chromate
13814965	Lead fluoborate
13826830	Ammonium fluoborate
13952846	sec-Butylamine
14017415	Cobaltous sulfamate
14216752	Nickel nitrate
14258492	Ammonium oxalate
14307358	Lithium chromate
14307438	Ammonium tartrate
14639975	Zinc ammonium chloride
14639986	Zinc ammonium chloride
14644612	Zirconium sulfate
15699180	Nickel ammonium sulfate
16721805	Sodium hydrosulfide
16871719	Zinc silicofluoride
16919190	Ammonium silicofluoride
16923958	Zirconium potassium fluoride
25154545	Dinitrobenzene
25154556	Nitrophenol
25155300	Sodium dodecylbenzenesulfonate
25167822	Trichlorophenol
25168154	2,4,5-T ester
25168267	2,4-D ester
26264062	Calcium dodecylbenzenesulfonate
27176870	Dodecylbenzenesulfonic acid
27323417	Triethanolamine
	dodecylbenzenesulfonate
27774136	Vanadyl sulfate
28300745	Antimony potassium tartrate
30525894	Paraformaldehyde
36478769	Uranyl nitrate
37211055	Nickel chloride
42504461	Dodecylbenzenesulfonate
	isopropanolamine
52628258	Zinc ammonium chloride
52740166	Calcium arsenite
53467111	2,4-D ester
55488874	Ferric ammonium oxalate
61792072	2,4,5-T ester

[43 FR 10474, Mar. 13, 1978; 43 FR 27533, June 26, 1978, as amended at 44 FR 10268, Feb. 16, 1979; 44 FR 65400, Nov. 13, 1979; 44 FR 66602, Nov. 20, 1979; 54 FR 33482, Aug. 14, 1989]

**PART 117—DETERMINATION OF REPORTABLE QUANTITIES FOR HAZARDOUS SUBSTANCES**

**Subpart A—General Provisions**

- Sec.  
 117.1 Definitions.  
 117.2 Abbreviations.  
 117.3 Determination of reportable quantities.