

Chapter NR 664

APPENDIX IX

GROUNDWATER MONITORING LIST

Common name ¹	CAS RN ²	Chemical abstracts service index name ³
Acenaphthene	83-32-9	Acenaphthylene, 1,2-dihydro-
Acenaphthylene	208-96-8	Acenaphthylene
Acetone	67-64-1	2-Propanone
Acetophenone	98-86-2	Ethanone, 1-phenyl-
Acetonitrile; Methyl cyanide	75-05-8	Acetonitrile
2-Acetylaminofluorene; 2-AAF	53-96-3	Acetamide, N-9H-fluoren-2-yl-
Acrolein	107-02-8	2-Propenal
Acrylonitrile	107-13-1	2-Propenenitrile
Aldrin	309-00-2	1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa- chloro-1,4,4a,5,8,8a-hexahy- dro-(1 α ,4 α , 4 β , 5 α ,8 α ,8 β)-
Allyl chloride	107-05-1	1-Propene, 3-chloro-
4-Aminobiphenyl	92-67-1	[1,1'-Biphenyl]- 4-amine
Aniline	62-53-3	Benzenamine
Anthracene	120-12-7	Anthracene
Antimony	(Total)	Antimony
Aramite	140-57-8	Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl) phe- noxy]-1-methylethyl ester
Arsenic	(Total)	Arsenic
Barium	(Total)	Barium
Benzene	71-43-2	Benzene
Benzo[a]anthracene; Benzan- thracene	56-55-3	Benzo[a]anthracene
Benzo[b]fluoranthene	205-99-2	Benzo[e]acephenanthrylene
Benzo[k]fluoranthene	207-08-9	Benzo[k]fluoranthene
Benzo[ghi]perylene	191-24-2	Benzo[ghi]perylene
Benzo[a]pyrene	50-32-8	Benzo[a]pyrene
Benzyl alcohol	100-51-6	Benzenemethanol
Beryllium	(Total)	Beryllium
alpha-BHC	319-84-6	Cyclohexane, 1,2,3,4,5,6- hexa- chloro-,(1 α ,2 α ,3 β ,4 α ,5 β , 6 β)-
beta-BHC	319-85-7	Cyclohexane, 1,2,3,4,5,6- hexa- chloro-,(1 α ,2 β ,3 α ,4 β ,5 α , 6 β)-
delta-BHC	319-86-8	Cyclohexane, 1,2,3,4,5,6- hexa- chloro-,(1 α ,2 α ,3 α ,4 β ,5 α , 6 β)-
gamma-BHC; Lindane	58-89-9	Cyclohexane, 1,2,3,4,5,6- hexa- chloro-,(1 α ,2 α ,3 β ,4 α ,5 α , 6 β)-
Bis(2-chloroethoxy)methane	111-91-1	Ethane, 1,1'-[methylenebis(oxy)] bis [2-chloro-
Bis(2-chloroethyl)ether	111-44-4	Ethane, 1,1'-oxybis[2-chloro-
Bis(2-chloro-1-methylethyl) ether; 2,2'- Di- chlorodiisopropyl ether	108-60-1	Propane, 2,2'-oxybis[1-chloro-
Bis(2-ethylhexyl) phthalate	117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl)ester
Bromodichloromethane	75-27-4	Methane, bromodichloro-

Common name ¹	CAS RN ²	Chemical abstracts service index name ³
Bromoform; Tribromomethane	75–25–2	Methane, tribromo–
4–Bromophenyl phenyl ether	101–55–3	Benzene, 1–bromo–4–phenoxy–
Butyl benzyl phthalate; Benzyl butyl phthalate	85–68–7	1,2–Benzenedicarboxylic acid, butyl phenylmethyl ester
Cadmium	(Total)	Cadmium
Carbon disulfide	75–15–0	Carbon disulfide
Carbon tetrachloride	56–23–5	Methane, tetrachloro–
Chlordane	57–74–9	4,7–Methano–1H–indene, 1,2,4,5,6,7,8,8–octa– chloro–2,3,3a,4,7,7a– hexahydro–
p–Chloroaniline	106–47–8	Benzenamine, 4–chloro–
Chlorobenzene	108–90–7	Benzene, chloro–
Chlorobenzilate	510–15–6	Benzenoacetic acid, 4–chloro– α–(4–chlorophenyl)–α–hydroxy–, ethyl ester
p–Chloro–m–cresol	59–50–7	Phenol, 4–chloro–3–methyl–
Chloroethane; Ethyl chloride	75–00–3	Ethane, chloro–
Chloroform	67–66–3	Methane, trichloro–
2–Chloronaphthalene	91–58–7	Naphthalene, 2–chloro–
2–Chlorophenol	95–57–8	Phenol, 2–chloro–
4–Chlorophenyl phenyl ether	7005–72–3	Benzene, 1–chloro–4–phenoxy–
Chloroprene	126–99–8	1,3–Butadiene, 2–chloro–
Chromium	(Total)	Chromium
Chrysene	218–01–9	Chrysene
Cobalt	(Total)	Cobalt
Copper	(Total)	Copper
m–Cresol	108–39–4	Phenol, 3–methyl–
o–Cresol	95–48–7	Phenol, 2–methyl–
p–Cresol	106–44–5	Phenol, 4–methyl–
Cyanide	57–12–5	Cyanide
2,4–D; 2,4–Dichlorophenoxyacetic acid	94–75–7	Acetic acid, (2,4– dichlorophenoxy)–
4,4′–DDD	72–54–8	Benzene 1,1′–(2,2–dichloroethylidene) bis[4–chloro–
4,4′–DDE	72–55–9	Benzene, 1,1′–(dichloroethenylidene) bis[4–chloro–
4,4′–DDT	50–29–3	Benzene, 1,1′–(2,2,2–trichloroethylidene) bis[4–chloro–
Diallate	2303–16–4	Carbamothioic acid, bis(1–methylethyl)–, S– (2,3–dichloro–2–propenyl) ester
Dibenz[a,h]anthracene	53–70–3	Dibenz[a,h]anthracene
Dibenzofuran	132–64–9	Dibenzofuran
Dibromochloromethane; Chlorodibromomethane	124–48–1	Methane, dibromochloro–
1,2–Dibromo–3–chloropropane; DBCP	96–12–8	Propane, 1,2–dibromo–3–chloro–
1,2–Dibromoethane; Ethylene dibromide	106–93–4	Ethane, 1,2–dibromo–
Di–n–butyl phthalate	84–74–2	1,2–Benzenedicarboxylic acid, dibutyl ester
o–Dichlorobenzene	95–50–1	Benzene, 1,2–dichloro–
m–Dichlorobenzene	541–73–1	Benzene, 1,3–dichloro–

Common name ¹	CAS RN ²	Chemical abstracts service index name ³
p-Dichlorobenzene	106–46–7	Benzene, 1,4-dichloro-
3,3'-Dichlorobenzidine	91–94–1	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-
trans-1,4-Dichloro-2-butene and and	110–57–6	2-Butene, 1,4-dichloro-, (E)- and
Dichlorodifluoromethane	75–71–8	Methane, dichlorodifluoro-
1,1-Dichloroethane	75–34–3	Ethane, 1,1-dichloro-
1,2-Dichloroethane; Ethylene dichloride	107–06–2	Ethane, 1,2-dichloro-
1,1-Dichloroethylene; Vinylidene chloride	75–35–4	Ethene, 1,1-dichloro-
trans-1,2-Dichloroethylene	156–60–5	Ethene, 1,2-dichloro-, (E)-
2,4-Dichlorophenol	120–83–2	Phenol, 2,4-dichloro-
2,6-Dichlorophenol	87–65–0	Phenol, 2,6-dichloro-
1,2-Dichloropropane	78–87–5	Propane, 1,2-dichloro-
cis-1,3-Dichloropropene	10061–01–5	1-Propene, 1,3-dichloro-, (Z)-
trans-1,3-Dichloropropene	10061–02–6	1-Propene, 1,3-dichloro-, (E)-
Dieldrin	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-, (1 α ,2 β ,2 α ,3 β ,6 β ,6 α ,7 β , 7 α)-
Diethyl phthalate	84–66–2	1,2-Benzenedicarboxylic acid, diethyl ester
O,O-Diethyl O-2-pyrazinyl phos- phorothioate; Thionazin	297–97–2	Phosphorothioic acid, O,O- diethyl O-pyrazinyl ester
Dimethoate	60–51–5	Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)- 2-oxoethyl] ester
p-(Dimethylamino) azobenzene	60–11–7	Benzenamine, N,N-dimethyl-4-(phenyl- azo)-
7,12-Dimethylbenz[a] anthracene	57–97–6	Benz[a]anthracene, 7,12- dimethyl-
3,3'-Dimethylbenzidine	119–93–7	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-
alpha, alpha-Dimethylphene- thylamine	122–09–8	Benzeneethanamine, α,α -dimethyl-
2,4-Dimethylphenol	105–67–9	Phenol, 2,4-dimethyl-
Dimethyl phthalate	131–11–3	1,2-Benzenedicarboxylic acid, dimethyl ester
m-Dinitrobenzene	99–65–0	Benzene, 1,3-dinitro-
4,6-Dinitro-o-cresol	534–52–1	Phenol, 2-methyl-4,6-dinitro-
2,4-Dinitrophenol	51–28–5	Phenol, 2,4-dinitro-
2,4-Dinitrotoluene	121–14–2	Benzene, 1-methyl-2,4-dinitro-
2,6-Dinitrotoluene	606–20–2	Benzene, 2-methyl-1,3-dinitro-
Dinoseb; DNBP; 2-sec-Butyl- 4,6- dinitrophenol	88–85–7	Phenol, 2-(1-methylpropyl)-4,6- dini- tro-
Di-n-octyl phthalate	117–84–0	1,2-Benzenedicarboxylic acid, dioctyl ester
1,4-Dioxane	123–91–1	1,4-Dioxane
Diphenylamine	122–39–4	Benzenamine, N-phenyl-
Disulfoton	298–04–4	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl]ester

Common name ¹	CAS RN ²	Chemical abstracts service index name ³
Endosulfan I	959–98–8	6,9–Methano–2,4,3–benzodioxathiepin,6,7,8,9,10,10–hexachloro–1,5,5a,6,9,9a–hexahydro–, 3–oxide,(3 α ,5a β ,6 α ,9 α ,9a β)–
Endosulfan II	33213–65–9	6,9–Methano–2,4,3–benzodioxathiepin, 6,7,8,9,10,10–hexachloro–1,5,5a,6,9,9a–hexahydro–, 3–oxide, (3 α ,5a α ,6 β ,9 β , 9a α)–
Endosulfan sulfate	1031–07–8	6,9–Methano–2,4,3–benzodioxathiepin,6,7,8,9,10,10–hexachloro–1,5,5a,6,9,9a–hexahydro–, 3,3–dioxide
Endrin	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–, (1 α ,2 β , 2a β ,3 α ,6 α ,6a β ,7 β , 7a α)–
Endrin aldehyde	7421–93–4	1,2,4–Methenocyclopenta[cd] pentalene–5–carboxaldehyde,2,2a,3,3,4,7–hexachlorodecahydro–, (1 α ,2 β ,2a β ,4 β ,4a β ,5 β ,6a β , 6b β ,7R*)–
Ethylbenzene	100–41–4	Benzene, ethyl–
Ethyl methacrylate	97–63–2	2–Propenoic acid, 2–methyl–, ethyl ester
Ethyl methanesulfonate	62–50–0	Methanesulfonic acid, ethyl ester
Famphur	52–85–7	Phosphorothioic acid, O–[4–[(dimethylamino)sulfonyl] phenyl]–O,O–dimethyl ester
Fluoranthene	206–44–0	Fluoranthene
Fluorene	86–73–7	9H–Fluorene
Heptachlor	76–44–8	4,7–Methano–1H–indene, 1,4,5,6,7,8,8–heptachloro–3a,4,7,7a–tetrahydro–
Heptachlor epoxide	1024–57–3	2,5–Methano–2H–indeno[1,2–b] oxirene, 2,3,4,5,6,7,7–heptachloro–1a,1b,5,5a,6,6a,–hexahydro–,(1 α ,1b β ,2 α ,5 α , 5a β ,6 β ,6a α)
Hexachlorobenzene	118–74–1	Benzene, hexachloro–
Hexachlorobutadiene	87–68–3	1,3–Butadiene, 1,1,2,3,4,4–hexachloro–
Hexachlorocyclopentadiene	77–47–4	1,3–Cyclopentadiene,1,2,3,4,5,5–hexachloro–
Hexachloroethane	67–72–1	Ethane, hexachloro–
Hexachlorophene	70–30–4	Phenol, 2,2'–methylenebis[3,4,6–trichloro–
Hexachloropropene	1888–71–7	1–Propene, 1,1,2,3,3,3–hexachloro–
2–Hexanone	591–78–6	2–Hexanone
Indeno(1,2,3–cd)pyrene	193–39–5	Indeno[1,2,3–cd]pyrene
Isobutyl alcohol	78–83–1	1–Propanol, 2–methyl–
Isodrin	465–73–6	1,4,5,8–Dimethanonaphthalene, 1,2,3,4,10,10–hexachloro–1,4,4a,5,8,8a hexahydro–(1 α , 4 α , 4a β ,5 β , 8 β ,8a β)–
Isophorone	78–59–1	2–Cyclohexen–1–one, 3,5,5–trimethyl–
Isosafrole	120–58–1	1,3–Benzodioxole, 5–(1–propenyl)–

Common name ¹	CAS RN ²	Chemical abstracts service index name ³
Kepone	143-50-0	1,3,4-Metheno-2H-cyclobuta-[cd]penta- len-2-one, 1,1a,3,3a,4,5,5a,5b,6-decach- lorooctahydro-
Lead	(Total)	Lead
Mercury	(Total)	Mercury
Methacrylonitrile	126-98-7	2-Propenenitrile, 2-methyl-
Methapyrilene	91-80-5	1,2-Ethanediamine, N,N-dimethyl-N'-2- pyridinyl- N'-(2-thienylmethyl)-
Methoxychlor	72-43-5	Benzene, 1,1'-(2,2,2, trichloro- ethylidene)bis[4-methoxy-
Methyl bromide; Bromomethane	74-83-9	Methane, bromo-
Methyl chloride; Chloromethane	74-87-3	Methane, chloro-
3-Methylcholanthrene	56-49-5	Benz[j]aceanthrylene, 1,2-dihy- dro-3-methyl-
Methylene bromide; Dibromo- methane	74-95-3	Methane, dibromo-
Methylene chloride; Dichloro- methane	75-09-2	Methane, dichloro-
Methyl ethyl ketone; MEK	78-93-3	2-Butanone
Methyl iodide; Iodomethane	74-88-4	Methane, iodo-
Methyl methacrylate	80-62-6	2-Propenoic acid, 2-methyl-, methyl ester
Methyl methanesulfonate	66-27-3	Methanesulfonic acid, methyl ester
2-Methylnaphthalene	91-57-6	Naphthalene, 2-methyl-
Methyl parathion; Parathion methyl	298-00-0	Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester
4-Methyl-2-pentanone; Methyl isobutyl ketone	108-10-1	2-Pentanone, 4-methyl-
Naphthalene	91-20-3	Naphthalene
1,4-Naphthoquinone	130-15-4	1,4-Naphthalenedione
1-Naphthylamine	134-32-7	1-Naphthalenamine
2-Naphthylamine	91-59-8	2-Naphthalenamine
Nickel	(Total)	Nickel
o-Nitroaniline	88-74-4	Benzenamine, 2-nitro-
m-Nitroaniline	99-09-2	Benzenamine, 3-nitro-
p-Nitroaniline	100-01-6	Benzenamine, 4-nitro-
Nitrobenzene	98-95-3	Benzene, nitro-
o-Nitrophenol	88-75-5	Phenol, 2-nitro-
p-Nitrophenol	100-02-7	Phenol, 4-nitro-
4-Nitroquinoline 1-oxide	56-57-5	Quinoline, 4-nitro-, 1-oxide
N-Nitrosodi-n-butylamine	924-16-3	1-Butanamine, N-butyl-N-nitroso-
N-Nitrosodiethylamine	55-18-5	Ethanamine, N-ethyl-N-nitroso-
N-Nitrosodimethylamine	62-75-9	Methanamine, N-methyl-N-nitroso-
N-Nitrosodiphenylamine	86-30-6	Benzenamine, N-nitroso-N-phenyl- ..
N-Nitrosodipropylamine; Di-n- propylnitrosamine	621-64-7	1-Propanamine, N-nitroso-N- propyl-
N-Nitrosomethylethylamine	10595-95-6	Ethanamine, N-methyl-N-nitroso-
N-Nitrosomorpholine	59-89-2	Morpholine, 4-nitroso-
N-Nitrosopiperidine	100-75-4	Piperidine, 1-nitroso-
N-Nitrosopyrrolidine	930-55-2	Pyrrolidine, 1-nitroso-
5-Nitro-o-toluidine	99-55-8	Benzenamine, 2-methyl-5-nitro-

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Parathion	56–38–2	Phosphorothioic acid, O,O–diethyl–O–(4–nitrophenyl) ester
Polychlorinated biphenyls; PCBs	See Note 4	1,1'–Biphenyl, chloro derivatives
Polychlorinated dibenzo–p–dioxins; PCDDs	See Note 5	Dibenzo[b,e][1,4]dioxin, chloro derivatives
Polychlorinated dibenzofurans; PCDFs	See Note 6	Dibenzofuran, chloro derivatives
Pentachlorobenzene	608–93–5	Benzene, pentachloro–
Pentachloroethane	76–01–7	Ethane, pentachloro–
Pentachloronitrobenzene	82–68–8	Benzene, pentachloronitro–
Pentachlorophenol	87–86–5	Phenol, pentachloro–
Phenacetin	62–44–2	Acetamide, N–(4–ethoxyphenyl)
Phenanthrene	85–01–8	Phenanthrene
Phenol	108–95–2	Phenol
p–Phenylenediamine	106–50–3	1,4–Benzenediamine
Phorate	298–02–2	Phosphorodithioic acid, O,O–diethyl S–[(ethylthio)methyl] ester
2–Picoline	109–06–8	Pyridine, 2–methyl–
Pronamide	23950–58–5	Benzamide, 3,5–dichloro–N–(1,1–dimethyl–2–propynyl)–
Propionitrile; Ethyl cyanide	107–12–0	Propanenitrile
Pyrene	129–00–0	Pyrene
Pyridine	110–86–1	Pyridine
Safrole	94–59–7	1,3–Benzodioxole, 5–(2–propenyl)–
Selenium	(Total)	Selenium
Silver	(Total)	Silver
Silvex; 2,4,5–TP	93–72–1	Propanoic acid, 2–(2,4,5–trichlorophenoxy)–
Styrene	100–42–5	Benzene, ethenyl–
Sulfide	18496–25–8	Sulfide
2,4,5–T; 2,4,5–Trichlorophenoxyacetic acid	93–76–5	Acetic acid, (2,4,5–trichlorophenoxy)–
2,3,7,8–TCDD; 2,3,7,8–Tetrachlorodibenzo–p–dioxin	1746–01–6	Dibenzo[b,e][1,4]dioxin, 2,3,7,8–tetrachloro–
1,2,4,5–Tetrachlorobenzene	95–94–3	Benzene, 1,2,4,5–tetrachloro–
1,1,1,2–Tetrachloroethane	630–20–6	Ethane, 1,1,1,2–tetrachloro–
1,1,2,2–Tetrachloroethane	79–34–5	Ethane, 1,1,2,2–tetrachloro–
Tetrachloroethylene; Perchloroethylene; Tetrachloroethene	127–18–4	Ethene, tetrachloro–
2,3,4,6–Tetrachlorophenol	58–90–2	Phenol, 2,3,4,6–tetrachloro–
Tetraethyl dithiopyrophosphate; Sulfotepp	3689–24–5	Thiodiphosphoric acid ((HO) ₂ P(S) ₂ O), tetraethyl ester
Thallium	(Total)	Thallium
Tin	(Total)	Tin
Toluene	108–88–3	Benzene, methyl–
o–Toluidine	95–53–4	Benzenamine, 2–methyl–
Toxaphene	8001–35–2	Toxaphene
1,2,4–Trichlorobenzene	120–82–1	Benzene, 1,2,4–trichloro–
1,1,1–Trichloroethane; Methylchloroform	71–55–6	Ethane, 1,1,1–trichloro–
1,1,2–Trichloroethane	79–00–5	Ethane, 1,1,2–trichloro–

Common name ¹	CAS RN ²	Chemical abstracts service index name ³
Trichloroethylene; Trichloroethene	79–01–6	Ethene, trichloro–
Trichlorofluoromethane	75–69–4	Methane, trichlorofluoro–
2,4,5–Trichlorophenol	95–95–4	Phenol, 2,4,5–trichloro–
2,4,6–Trichlorophenol	88–06–2	Phenol, 2,4,6–trichloro–
1,2,3–Trichloropropane	96–18–4	Propane, 1,2,3–trichloro–
O,O,O–Triethyl phosphorothioate	126–68–1	Phosphorothioic acid, O,O,O– triethyl ester
sym–Trinitrobenzene	99–35–4	Benzene, 1,3,5–trinitro–
Vanadium	(Total)	Vanadium
Vinyl acetate	108–05–4	Acetic acid, ethenyl ester
Vinyl chloride	75–01–4	Ethene, chloro–
Xylene (total)	1330–20–7	Benzene, dimethyl–
Zinc	(Total)	Zinc

¹ Common names are those widely used in government regulations, scientific publications and commerce; synonyms exist for many chemicals.

² Chemical Abstracts Service registry number. Where “Total” is entered, all species in the groundwater that contain this element are included.

³ CAS index names are those used in the 9th Cumulative Index.

⁴ Polychlorinated biphenyls (CAS RN 1336–36–3). This category contains congener chemicals, including constituents of Aroclor–1016 (CAS RN 12674–11–2), Aroclor–1221 (CAS RN 11104–28–2), Aroclor–1232 (CAS RN 11141–16–5), Aroclor–1242 (CAS RN 53469–21–9), Aroclor–1248 (CAS RN 12672–29–6), Aroclor–1254 (CAS RN 11097–69–1) and Aroclor–1260 (CAS RN 11096–82–5).

⁵ This category contains congener chemicals, including tetrachlorodibenzo–p–dioxins (see also 2,3,7,8–TCDD), pentachlorodibenzo–p–dioxins and hexachlorodibenzo–p–dioxins.

⁶ This category contains congener chemicals, including tetrachlorodibenzofurans, pentachlorodibenzofurans and hexachlorodibenzofurans.