

Tier 1 ESLs

Feb. 2016 (Rev. 3)

Based on a generic conceptual site model designed for use at most sites¹

Chemicals	CAS No.	Groundwater (µg/L)	Soil (mg/kg)	Subslab ² / Soil Gas (µg/m ³)	Indoor Air (µg/m ³)
Acenaphthene	83-32-9	2.0E+01	1.6E+01	2.6E+05	5.1E+02
Acenaphthylene	208-96-8	3.0E+01	1.3E+01	--	--
Acetone	67-64-1	1.5E+03	5.0E-01	1.5E+07	3.1E+04
Aldrin	309-00-2	1.4E-04	3.6E-02	2.9E-01	5.7E-04
Anthracene	120-12-7	7.3E-01	2.8E+00	--	--
Antimony	7440-36-0	6.0E+00	3.1E+01	--	--
Arsenic	7440-38-2	1.0E+01	6.7E-02	--	--
Barium	7440-39-3	1.0E+03	3.0E+03	--	--
Benzene	71-43-2	1.0E+00	4.4E-02	4.8E+01	9.7E-02
Benz(a)anthracene	56-55-3	2.7E-02	1.6E-01	--	--
Benzo(b)fluoranthene	205-99-2	1.2E-02	1.6E-01	4.6E+00	9.2E-03
Benzo(k)fluoranthene	207-08-9	1.7E-02	1.6E+00	4.6E+00	9.2E-03
Benzo(g,h,i)perylene	191-24-2	1.0E-01	2.5E+00	--	--
Benzo(a)pyrene	50-32-8	1.4E-02	1.6E-02	--	--
Beryllium	7440-41-7	2.7E+00	4.2E+01	--	--
1,1-Biphenyl	92-52-4	5.0E-01	6.5E-01	2.1E+02	4.2E-01
Bis(2-chloroethyl) ether	111-44-4	6.3E-03	8.0E-05	2.0E+00	4.0E-03
Bis(2-chloroisopropyl) ether	108-60-1	3.6E-01	3.9E-03	1.4E+02	2.8E-01
Bis(2-ethylhexyl) phthalate	117-81-7	4.0E+00	3.9E+01	--	--
Boron	7440-42-8	1.6E+00	1.6E+04	--	--
Bromodichloromethane	75-27-4	8.0E+01	5.2E-01	3.8E+01	7.6E-02
Bromoform (Tribromomethane)	75-25-2	8.0E+01	1.7E+00	1.3E+03	2.6E+00
Bromomethane	74-83-9	7.5E+00	3.0E-01	2.6E+03	5.2E+00
Cadmium (soil)	7440-43-9	--	3.9E+01	--	--
Cadmium (water)	7440-43-9	2.5E-01	--	--	--
Carbon tetrachloride	56-23-5	2.2E-01	4.8E-02	3.3E+01	6.7E-02
Chlordane	57-74-9	5.9E-04	4.8E-01	4.1E+00	8.3E-03
p-Chloroaniline	106-47-8	3.6E-01	3.9E-03	--	--
Chlorobenzene	108-90-7	2.5E+01	1.5E+00	2.6E+04	5.2E+01
Chloroethane	75-00-3	1.6E+01	1.1E+00	5.2E+06	1.0E+04
Chloroform	67-66-3	2.3E+00	6.8E-02	6.1E+01	1.2E-01
Chloromethane	74-87-3	1.9E+02	2.9E+01	4.7E+04	9.4E+01
2-Chlorophenol	95-57-8	1.8E-01	1.2E-01	9.5E+03	1.9E+01
Chromium (total)	7440-47-3	5.0E+01	--	--	--
Chromium III	16065-83-1	1.8E+02	1.2E+05	--	--
Chromium VI	18540-29-9	1.0E+01	3.0E-01	--	--
Chrysene	218-01-9	4.9E-02	3.8E+00	4.6E+01	9.2E-02
Cobalt	7440-48-4	3.0E+00	2.3E+01	--	--
Copper	7440-50-8	3.1E+00	3.1E+03	--	--
Cyanide	57-12-5	1.0E+00	3.6E-03	4.2E+02	8.3E-01
Dibenz(a,h)anthracene	53-70-3	3.4E-03	1.6E-02	--	--
Dibromochloromethane	124-48-1	4.6E+01	3.8E+00	--	--
1,2-dibromo-3-chloropropane	96-12-8	2.0E-01	4.5E-03	8.4E-02	1.7E-04
1,2-Dibromoethane	106-93-4	5.0E-02	3.3E-04	2.3E+00	4.7E-03
1,2-Dichlorobenzene	95-50-1	1.4E+01	1.6E+00	1.0E+05	2.1E+02
1,3-Dichlorobenzene	541-73-1	6.5E+01	7.4E+00	--	--
1,4-Dichlorobenzene	106-46-7	5.0E+00	5.9E-01	1.3E+02	2.6E-01
3,3-Dichlorobenzidine	91-94-1	4.6E-02	1.2E-02	--	--
Dichlorodiphenyldichloroethane (DDD)	72-54-8	8.4E-04	2.7E+00	--	--
Dichlorodiphenyldichloroethane (DDE)	72-55-9	5.9E-04	1.9E+00	1.4E+01	2.9E-02
Dichlorodiphenyltrichloroethane (DDT)	50-29-3	5.9E-04	1.9E+00	1.4E+01	2.9E-02
1,1-Dichloroethane	75-34-3	5.0E+00	2.0E-01	8.8E+02	1.8E+00
1,2-Dichloroethane	107-06-2	5.0E-01	4.5E-03	5.4E+01	1.1E-01
1,1-Dichloroethene	75-35-4	3.2E+00	5.5E-01	3.7E+04	7.3E+01
cis-1,2-Dichloroethene	156-59-2	6.0E+00	1.9E-01	4.2E+03	8.3E+00
trans-1,2-Dichloroethene	156-60-5	1.0E+01	6.7E-01	4.2E+04	8.3E+01
2,4-Dichlorophenol	120-83-2	3.0E-01	3.0E-01	7.0E+05	1.4E+03
1,2-Dichloropropane	78-87-5	5.0E+00	1.2E-01	1.4E+02	2.8E-01
1,3-Dichloropropene	542-75-6	5.0E-01	5.9E-02	8.8E+01	1.8E-01
Dieldrin	60-57-1	1.4E-04	1.7E-04	3.1E-01	6.1E-04

Based on a generic conceptual site model designed for use at most sites¹

Chemicals	CAS No.	Groundwater (µg/L)	Soil (mg/kg)	Subslab ² / Soil Gas (µg/m ³)	Indoor Air (µg/m ³)
Diethyl phthalate	84-66-2	1.5E+00	3.5E-02	--	--
Dimethyl phthalate	131-11-3	1.5E+00	3.5E-02	--	--
2,4-Dimethylphenol	105-67-9	1.0E+02	6.7E-01	5.0E+02	1.0E+00
2,4-Dinitrophenol	51-28-5	3.9E+01	1.1E-01	--	--
2,4-Dinitrotoluene	121-14-2	2.4E-01	1.8E-03	--	--
1,4-Dioxane	123-91-1	3.8E-01	2.3E-04	1.8E+02	3.6E-01
Dioxin (2,3,7,8-TCDD)	1746-01-6	1.4E-08	4.9E-06	--	--
Endosulfan	115-29-7	8.7E-03	4.6E-03	--	--
Endrin	72-20-8	2.3E-03	6.5E-04	--	--
Ethylbenzene	100-41-4	1.3E+01	1.4E+00	5.6E+02	1.1E+00
Fluoranthene	206-44-0	8.0E+00	6.0E+01	--	--
Fluorene	86-73-7	3.9E+00	8.9E+00	--	--
Heptachlor	76-44-8	2.1E-04	7.7E-04	1.1E+00	2.2E-03
Heptachlor epoxide	1024-57-3	1.1E-04	4.2E-04	5.4E-01	1.1E-03
Hexachlorobenzene	118-74-1	7.7E-04	3.4E-01	2.8E+00	5.5E-03
Hexachlorobutadiene	87-68-3	1.4E-01	6.8E-01	6.4E+01	1.3E-01
γ-Hexachlorocyclohexane (Lindane)	58-89-9	1.6E-02	9.8E-03	--	--
Hexachloroethane	67-72-1	3.3E-01	1.1E+00	1.3E+02	2.6E-01
Indeno(1,2,3-c,d)pyrene	193-39-5	3.4E-02	1.6E-01	--	--
Lead	7439-92-1	2.5E+00	8.0E+01	--	--
Mercury (elemental)	7439-97-6	5.1E-02	1.3E+01	--	--
Methoxychlor	72-43-5	3.0E-03	1.9E+01	--	--
Methylene chloride	75-09-2	5.0E+00	7.7E-02	5.1E+02	1.0E+00
Methyl ethyl ketone	78-93-3	5.6E+03	5.1E+00	2.6E+06	5.2E+03
Methyl isobutyl ketone	108-10-1	1.2E+02	2.8E+00	2.1E+05	4.2E+02
Methyl mercury	22967-92-6	3.0E-03	6.3E+00	--	--
2-Methylnaphthalene	91-57-6	2.1E+00	2.5E-01	3.4E+04	6.8E+01
Methyl tertiary butyl ether (MTBE)	1634-04-4	5.0E+00	2.3E-02	5.4E+03	1.1E+01
Molybdenum	7439-98-7	1.0E+02	3.9E+02	--	--
Naphthalene	91-20-3	1.7E-01	3.3E-02	4.1E+01	8.3E-02
Nickel	7440-02-0	8.2E+00	8.6E+01	--	--
Pentachlorophenol	87-86-5	1.0E+00	1.0E+00	--	--
Perchlorate	7790-98-9	6.0E+00	5.5E+01	--	--
Phenanthrene	85-01-8	4.6E+00	1.1E+01	2.8E+04	5.5E+01
Phenol	108-95-2	5.0E+00	7.6E-02	7.8E+04	1.6E+02
Polychlorinated biphenyls (PCBs)	1336-36-3	1.7E-04	2.5E-01	2.5E+00	4.9E-03
Pyrene	129-00-0	2.0E+00	8.5E+01	--	--
Selenium	7782-49-2	5.0E+00	3.9E+02	--	--
Silver	7440-22-4	1.9E-01	3.9E+02	--	--
Styrene	100-42-5	1.0E+01	1.5E+00	4.7E+05	9.4E+02
tert-Butyl alcohol	75-65-0	1.2E+01	7.5E-02	--	--
1,1,1,2-Tetrachloroethane	630-20-6	5.7E-01	1.0E-02	1.9E+02	3.8E-01
1,1,2,2-Tetrachloroethane	79-34-5	1.0E+00	1.8E-02	2.4E+01	4.8E-02
Tetrachloroethene	127-18-4	3.0E+00	4.2E-01	2.4E+02	4.8E-01
Thallium	7440-28-0	2.0E+00	7.8E-01	--	--
Toluene	108-88-3	4.0E+01	2.9E+00	1.6E+05	3.1E+02
Toxaphene	8001-35-2	2.0E-04	4.2E-04	4.1E+00	8.3E-03
TPH gasoline	--	1.0E+02	1.0E+02	5.0E+04	1.0E+02
TPH Stoddard solvent	--	1.0E+02	1.0E+02	6.8E+04	1.4E+02
TPH diesel	--	1.0E+02	2.3E+02	6.8E+04	1.4E+02
TPH motor oil	--	See Note 3	5.1E+03	--	--
1,2,4-Trichlorobenzene	120-82-1	5.0E+00	1.5E+00	1.0E+03	2.1E+00
1,1,1-Trichloroethane	71-55-6	6.2E+01	7.8E+00	5.2E+05	1.0E+03
1,1,2-Trichloroethane	79-00-5	5.0E+00	7.0E-02	8.8E+01	1.8E-01
Trichloroethene	79-01-6	5.0E+00	4.6E-01	2.4E+02	4.8E-01
2,4,5-Trichlorophenol	95-95-4	1.1E+01	1.8E-01	--	--
2,4,6-Trichlorophenol	88-06-2	6.3E-01	2.1E-01	1.5E+02	3.0E-01
Vanadium	7440-62-2	1.9E+01	3.9E+02	--	--
Vinyl chloride	75-01-4	6.1E-02	8.2E-03	4.7E+00	9.5E-03
Xylenes	1330-20-7	2.0E+01	2.3E+00	5.2E+04	1.0E+02
Zinc	7440-66-6	8.1E+01	2.3E+04	--	--

Notes:

- 1 - See User's Guide Chapter 2. Input settings are: Land Use = Residential; Groundwater Use = Drinking Water Resource; MCL Priority over Risk-Based Levels = Yes; Intact Building Slab = Yes; Groundwater Depth = Shallow; Soil Type = Sand Scenario; Soil Exposure Depth = Shallow.
- 2 - Use of the subslab ESLs for the subslab line of evidence assumes an intact slab. See User's Guide Appendix B.
- 3 - TPH motor oil is not soluble. TPH motor oil detections in water most likely are petroleum degradates or less likely NAPL. If the detections are degradates, add TPH motor oil and TPH diesel results and compare to TPH diesel criterion. See User's Guide Chapter 9 for further information.

Feb. 2016 (Rev. 3)

Summary of Groundwater ESLs (µg/L)

Chemicals	CAS No.	Direct Exposure Human Health Risk Levels (Table GW-1)		Aquatic Habitat Goal Levels (Table GW-2)			Groundwater Vapor Intrusion Human Health Risk Levels (Table GW-3)						Gross Contamination Levels (GW-4)	Odor Nuisance Levels (Table GW-5)		GW Tier 1 ESL	Basis
		MCL Priority	Human Health Risk Based Only	Fresh Water Ecotox	Saltwater Ecotox	Seafood Ingestion Human Health	Shallow Groundwater		Deep Groundwater					Drinking Water	Non-Drinking Water		
							Res.	Com/Ind	Res: Sand Scenario	Res: Fine to Coarse Scenario	Com/Ind: Sand Scenario	Com/Ind: Fine to Coarse Scenario					
Acenaphthene	83-32-9	5.3E+02	5.3E+02	2.3E+01	4.0E+01	2.7E+03	--	--	--	--	--	--	2.1E+03	2.0E+01	2.0E+02	2.0E+01	Nuis/Odor
Acenaphthylene	208-96-8	--	--	--	3.0E+01	--	--	--	--	--	--	--	2.0E+03	--	--	3.0E+01	Dir Exp
Acetone	67-64-1	1.4E+04	1.4E+04	1.5E+03	--	--	3.4E+07	2.9E+08	4.5E+07	1.4E+08	3.7E+08	--	5.0E+04	2.0E+04	2.0E+05	1.5E+03	ETox
Aldrin	309-00-2	9.2E-04	9.2E-04	3.0E-01	1.3E-01	1.4E-04	--	--	--	--	--	--	8.5E+00	1.7E+01	1.7E+02	1.4E-04	ETox
Anthracene	120-12-7	1.8E+03	1.8E+03	7.3E-01	--	1.1E+05	--	--	--	--	--	--	2.2E+01	--	--	7.3E-01	ETox
Antimony	7440-36-0	6.0E+00	7.8E+00	3.0E+01	5.0E+02	4.3E+03	--	--	--	--	--	--	5.0E+04	--	--	6.0E+00	Dir Exp
Arsenic	7440-38-2	1.0E+01	4.0E-03	1.5E+02	3.6E+01	--	--	--	--	--	--	--	5.0E+04	--	--	1.0E+01	Dir Exp
Barium	7440-39-3	1.0E+03	2.0E+03	--	--	--	--	--	--	--	--	--	5.0E+04	--	--	1.0E+03	Dir Exp
Benzene	71-43-2	1.0E+00	1.5E-01	4.6E+01	3.5E+02	7.1E+01	1.1E+00	9.7E+00	1.4E+00	3.0E+01	1.2E+01	2.6E+02	5.0E+04	1.7E+02	2.0E+04	1.0E+00	Dir Exp
Benz(a)anthracene	56-55-3	3.4E-02	3.4E-02	2.7E-02	--	4.9E-02	--	--	--	--	--	--	5.0E+00	--	--	2.7E-02	ETox
Benzo(b)fluoranthene	205-99-2	1.2E-02	1.2E-02	--	--	4.9E-02	--	--	--	--	--	--	7.0E+00	--	--	1.2E-02	Dir Exp
Benzo(k)fluoranthene	207-08-9	1.7E-02	1.7E-02	3.7E+00	--	4.9E-02	--	--	--	--	--	--	4.0E-01	--	--	1.7E-02	Dir Exp
Benzo(g,h,i)perylene	191-24-2	--	--	1.0E-01	--	--	--	--	--	--	--	--	1.3E-01	--	--	1.0E-01	ETox
Benzo(a)pyrene	50-32-8	2.0E-01	3.4E-03	1.4E-02	--	4.9E-02	--	--	--	--	--	--	1.9E+00	--	--	1.4E-02	ETox
Beryllium	7440-41-7	4.0E+00	1.0E+00	2.7E+00	--	--	--	--	--	--	--	--	5.0E+04	--	--	2.7E+00	ETox
1,1-Biphenyl	92-52-4	8.3E-01	8.3E-01	1.4E+01	--	--	--	--	--	--	--	--	3.8E+03	5.0E-01	5.0E+00	5.0E-01	Nuis/Odor
Bis(2-chloroethyl) ether	111-44-4	6.3E-03	6.3E-03	6.1E+01	--	1.4E+00	--	--	--	--	--	--	5.0E+04	3.6E+02	3.6E+03	6.3E-03	Dir Exp
Bis(2-chloroisopropyl) ether	108-60-1	3.6E-01	3.6E-01	6.1E+01	--	1.7E+05	--	--	--	--	--	--	5.0E+04	3.2E+02	3.2E+03	3.6E-01	Dir Exp
Bis(2-ethylhexyl) phthalate	117-81-7	4.0E+00	5.6E+00	3.2E+01	--	5.9E+00	--	--	--	--	--	--	6.5E+02	--	--	4.0E+00	Dir Exp
Boron	7440-42-8	1.0E+03	1.0E+03	1.6E+00	--	--	--	--	--	--	--	--	5.0E+04	--	--	1.6E+00	ETox
Bromodichloromethane	75-27-4	8.0E+01	1.2E-01	1.1E+03	3.2E+03	--	--	--	--	--	--	--	5.0E+04	--	--	8.0E+01	Dir Exp
Bromoform (Tribromomethane)	75-25-2	8.0E+01	2.9E+00	1.1E+03	3.2E+03	3.6E+02	--	--	--	--	--	--	5.0E+04	5.1E+02	5.1E+03	8.0E+01	Dir Exp
Bromomethane	74-83-9	7.5E+00	7.5E+00	1.6E+02	3.2E+03	4.0E+03	3.6E+01	3.0E+02	4.3E+01	6.5E+03	3.7E+02	5.5E+03	5.0E+04	--	--	7.5E+00	Dir Exp
Cadmium (water)	7440-43-9	5.0E+00	4.0E-02	2.5E-01	9.3E+00	--	--	--	--	--	--	--	5.0E+04	--	--	2.5E-01	ETox
Carbon tetrachloride	56-23-5	5.0E-01	1.0E-01	2.4E+02	3.2E+03	4.4E+00	2.2E-01	1.9E+00	2.7E-01	7.9E+00	2.4E+00	6.9E+01	5.0E+04	5.2E+02	5.2E+03	2.2E-01	Dir Exp
Chlordane	57-74-9	1.0E-01	1.3E-02	4.3E-03	4.0E-03	5.9E-04	--	--	--	--	--	--	2.8E+01	2.5E+00	2.5E+01	5.9E-04	ETox
p-Chloroaniline	106-47-8	3.6E-01	3.6E-01	5.0E+00	--	--	--	--	--	--	--	--	5.0E+04	--	--	3.6E-01	Dir Exp
Chlorobenzene	108-90-7	7.0E+01	7.0E+01	2.5E+01	6.5E+01	2.1E+04	1.4E+03	1.2E+04	1.7E+03	3.1E+04	1.4E+04	2.6E+05	5.0E+04	5.0E+01	5.0E+02	2.5E+01	ETox
Chloroethane	75-00-3	2.1E+04	2.1E+04	--	--	--	4.7E+04	4.0E+05	5.7E+04	1.4E+06	4.8E+05	1.2E+07	5.0E+04	1.6E+01	1.6E+02	1.6E+01	Nuis/Odor
Chloroform	67-66-3	8.0E+01	2.3E-01	6.2E+02	3.2E+03	4.7E+02	2.3E+00	2.0E+01	2.8E+00	5.4E+01	2.5E+01	4.7E+02	5.0E+04	2.4E+03	2.4E+04	2.3E+00	Dir Exp
Chloromethane	74-87-3	1.9E+02	1.9E+02	1.1E+03	3.2E+03	--	4.4E+02	3.7E+03	5.3E+02	1.3E+04	4.4E+03	1.1E+05	5.0E+04	--	--	1.9E+02	Dir Exp
2-Chlorophenol	95-57-8	9.1E+01	9.1E+01	4.4E+02	--	4.0E+02	--	--	--	--	--	--	5.0E+04	1.8E-01	1.8E+00	1.8E-01	Nuis/Odor

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Summary of Groundwater ESLs (µg/L)

Chemicals	CAS No.	Direct Exposure Human Health Risk Levels (Table GW-1)		Aquatic Habitat Goal Levels (Table GW-2)			Groundwater Vapor Intrusion Human Health Risk Levels (Table GW-3)						Gross Contamination Levels (GW-4)	Odor Nuisance Levels (Table GW-5)		GW Tier 1 ESL	Basis
		MCL Priority	Human Health Risk Based Only	Fresh Water Ecotox	Saltwater Ecotox	Seafood Ingestion Human Health	Shallow Groundwater		Deep Groundwater					Drinking Water	Non-Drinking Water		
							Res.	Com/Ind	Res: Sand Scenario	Res: Fine to Coarse Scenario	Com/Ind: Sand Scenario	Com/Ind: Fine to Coarse Scenario					
Chromium (total)	7440-47-3	5.0E+01	--	1.8E+02	--	--	--	--	--	--	--	--	5.0E+04	--	--	5.0E+01	Dir Exp
Chromium III	16065-83-1	2.2E+04	2.2E+04	1.8E+02	1.0E+03	--	--	--	--	--	--	--	5.0E+04	--	--	1.8E+02	ETox
Chromium VI	18540-29-9	1.0E+01	2.0E-02	1.1E+01	5.0E+01	--	--	--	--	--	--	--	5.0E+04	--	--	1.0E+01	Dir Exp
Chrysene	218-01-9	1.7E-01	1.7E-01	3.5E-01	--	4.9E-02	--	--	--	--	--	--	8.0E-01	--	--	4.9E-02	ETox
Cobalt	7440-48-4	6.0E+00	6.0E+00	3.0E+00	--	--	--	--	--	--	--	--	5.0E+04	--	--	3.0E+00	ETox
Copper	7440-50-8	1.0E+03	3.0E+02	9.0E+00	3.1E+00	--	--	--	--	--	--	--	5.0E+04	1.0E+03	--	3.1E+00	Dir Exp
Cyanide	57-12-5	1.5E+02	1.5E+00	5.2E+00	1.0E+00	2.2E+05	--	--	--	--	--	--	5.0E+04	1.7E+02	1.7E+03	1.0E+00	Dir Exp
Dibenz(a,h)anthracene	53-70-3	3.4E-03	3.4E-03	7.5E+00	--	4.9E-02	--	--	--	--	--	--	2.5E-01	--	--	3.4E-03	Dir Exp
Dibromochloromethane	124-48-1	8.0E+01	7.0E-01	1.1E+03	3.2E+03	4.6E+01	--	--	--	--	--	--	5.0E+04	--	--	4.6E+01	ETox
1,2-dibromo-3-chloropropane	96-12-8	2.0E-01	3.0E-04	--	--	--	--	--	--	--	--	--	5.0E+04	1.0E+01	1.0E+02	2.0E-01	Dir Exp
1,2-Dibromoethane	106-93-4	5.0E-02	7.5E-03	1.4E+03	--	--	8.5E-01	7.4E+00	1.1E+00	8.4E+00	9.4E+00	7.3E+01	5.0E+04	--	--	5.0E-02	Dir Exp
1,2-Dichlorobenzene	95-50-1	1.0E+02	3.0E+02	1.4E+01	6.5E+01	1.7E+04	1.2E+04	1.0E+05	1.5E+04	--	1.3E+05	--	5.0E+04	1.0E+02	1.0E+02	1.4E+01	ETox
1,3-Dichlorobenzene	541-73-1	6.0E+02	6.0E+02	7.1E+01	6.5E+01	2.6E+03	--	--	--	--	--	--	5.0E+04	--	--	6.5E+01	Dir Exp
1,4-Dichlorobenzene	106-46-7	5.0E+00	4.8E-01	1.5E+01	6.5E+01	2.6E+03	1.2E+01	1.0E+02	1.5E+01	2.2E+02	1.3E+02	1.9E+03	3.7E+04	5.0E+00	1.1E+02	5.0E+00	Nuis/Odor
3,3-Dichlorobenzidine	91-94-1	4.6E-02	4.6E-02	2.5E+02	--	7.7E-02	--	--	--	--	--	--	1.6E+03	--	--	4.6E-02	Dir Exp
Dichlorodiphenyldichloroethane (DD)	72-54-8	3.1E-02	3.1E-02	1.0E-03	1.0E-03	8.4E-04	--	--	--	--	--	--	8.0E+01	--	--	8.4E-04	ETox
Dichlorodiphenyldichloroethene (DD)	72-55-9	4.6E-02	4.6E-02	1.0E-03	1.0E-03	5.9E-04	--	--	--	--	--	--	2.0E+01	--	--	5.9E-04	ETox
Dichlorodiphenyltrichloroethane (DD)	50-29-3	4.6E-02	4.6E-02	1.0E-03	1.0E-03	5.9E-04	--	--	--	--	--	--	1.5E+00	3.5E+02	3.5E+03	5.9E-04	ETox
1,1-Dichloroethane	75-34-3	5.0E+00	2.7E+00	4.7E+01	--	--	2.0E+01	1.8E+02	2.5E+01	5.5E+02	2.1E+02	4.8E+03	5.0E+04	--	--	5.0E+00	Dir Exp
1,2-Dichloroethane	107-06-2	5.0E-01	1.7E-01	1.0E+04	1.1E+04	9.9E+01	6.1E+00	5.3E+01	7.4E+00	9.0E+01	6.4E+01	7.9E+02	5.0E+04	7.0E+03	2.0E+05	5.0E-01	Dir Exp
1,1-Dichloroethene	75-35-4	6.0E+00	1.0E+01	2.5E+01	2.2E+04	3.2E+00	1.7E+02	1.4E+03	2.0E+02	5.7E+03	1.7E+03	4.8E+04	5.0E+04	1.5E+03	1.5E+04	3.2E+00	ETox
cis-1,2-Dichloroethene	156-59-2	6.0E+00	1.1E+01	5.9E+02	2.2E+04	--	1.1E+02	9.5E+02	1.4E+02	1.5E+04	1.1E+03	1.3E+05	5.0E+04	--	--	6.0E+00	Dir Exp
trans-1,2-Dichloroethene	156-60-5	1.0E+01	6.0E+01	5.9E+02	2.2E+04	1.4E+05	1.0E+03	1.1E+04	1.6E+03	3.1E+04	1.3E+04	2.6E+05	5.0E+04	2.6E+02	2.6E+03	1.0E+01	Dir Exp
2,4-Dichlorophenol	120-83-2	4.6E+01	4.6E+01	1.8E+02	--	7.9E+02	--	--	--	--	--	--	5.0E+04	3.0E-01	3.0E+00	3.0E-01	Nuis/Odor
1,2-Dichloropropane	78-87-5	5.0E+00	4.4E-01	2.9E+03	1.5E+03	3.9E+01	7.6E+00	6.6E+01	9.3E+00	1.6E+02	8.1E+01	1.4E+03	5.0E+04	1.0E+01	1.0E+02	5.0E+00	Dir Exp
1,3-Dichloropropene	542-75-6	5.0E-01	2.0E-01	1.2E+02	7.9E+01	1.7E+03	3.8E+00	3.3E+01	4.6E+00	8.7E+01	4.0E+01	7.6E+02	5.0E+04	--	--	5.0E-01	Dir Exp
Dieldrin	60-57-1	7.1E-04	7.1E-04	5.6E-02	1.9E-03	1.4E-04	--	--	--	--	--	--	9.3E+01	4.1E+01	4.1E+02	1.4E-04	ETox
Diethyl phthalate	84-66-2	1.5E+04	1.5E+04	1.5E+00	1.7E+00	1.2E+54	--	--	--	--	--	--	5.0E+04	--	--	1.5E+00	ETox
Dimethyl phthalate	131-11-3	--	--	1.5E+00	1.7E+00	2.9E+06	--	--	--	--	--	--	5.0E+04	--	--	1.5E+00	ETox
2,4-Dimethylphenol	105-67-9	1.0E+02	1.0E+02	5.3E+02	1.1E+02	2.3E+03	--	--	--	--	--	--	5.0E+04	4.0E+02	4.0E+03	1.0E+02	Dir Exp
2,4-Dinitrophenol	51-28-5	3.9E+01	3.9E+01	7.5E+01	4.9E+02	1.4E+04	--	--	--	--	--	--	5.0E+04	--	--	3.9E+01	Dir Exp
2,4-Dinitrotoluene	121-14-2	2.4E-01	2.4E-01	1.2E+02	1.9E+02	9.1E+00	--	--	--	--	--	--	5.0E+04	--	--	2.4E-01	Dir Exp

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Summary of Groundwater ESLs (µg/L)

Chemicals	CAS No.	Direct Exposure Human Health Risk Levels (Table GW-1)		Aquatic Habitat Goal Levels (Table GW-2)			Groundwater Vapor Intrusion Human Health Risk Levels (Table GW-3)						Gross Contamination Levels (GW-4)	Odor Nuisance Levels (Table GW-5)		GW Tier 1 ESL	Basis
		MCL Priority	Human Health Risk Based Only	Fresh Water Ecotox	Saltwater Ecotox	Seafood Ingestion Human Health	Shallow Groundwater		Deep Groundwater					Drinking Water	Non-Drinking Water		
							Res.	Com/Ind	Res: Sand Scenario	Res: Fine to Coarse Scenario	Com/Ind: Sand Scenario	Com/Ind: Fine to Coarse Scenario					
1,4-Dioxane	123-91-1	3.8E-01	3.8E-01	3.4E+05	5.0E+05	--	--	--	--	--	--	--	5.0E+04	2.3E+05	--	3.8E-01	Dir Exp
Dioxin (2,3,7,8-TCDD)	1746-01-6	3.0E-05	5.0E-08	5.0E-06	--	1.4E-08	--	--	--	--	--	--	7.0E+03	--	--	1.4E-08	ETox
Endosulfan	115-29-7	1.0E+02	1.0E+02	5.6E-02	8.7E-03	2.4E+02	--	--	--	--	--	--	7.5E+01	--	--	8.7E-03	Dir Exp
Endrin	72-20-8	2.0E+00	1.8E+00	3.6E-02	2.3E-03	8.1E-01	--	--	--	--	--	--	1.3E+02	4.1E+01	4.1E+02	2.3E-03	Dir Exp
Ethylbenzene	100-41-4	3.0E+01	1.5E+00	2.9E+02	4.3E+01	2.9E+04	1.3E+01	1.1E+02	1.6E+01	3.7E+02	1.4E+02	3.3E+03	5.0E+04	3.0E+01	3.0E+02	1.3E+01	Dir Exp
Fluoranthene	206-44-0	8.0E+02	8.0E+02	8.1E+00	8.0E+00	3.7E+02	--	--	--	--	--	--	1.3E+02	--	--	8.0E+00	Dir Exp
Fluorene	86-73-7	2.9E+02	2.9E+02	3.9E+00	3.0E+01	1.4E+04	--	--	--	--	--	--	9.5E+02	--	--	3.9E+00	ETox
Heptachlor	76-44-8	1.0E-02	1.4E-03	3.8E-03	3.6E-03	2.1E-04	--	--	--	--	--	--	2.8E+01	2.0E+01	2.0E+02	2.1E-04	ETox
Heptachlor epoxide	1024-57-3	1.0E-02	1.4E-03	3.8E-03	3.6E-03	1.1E-04	--	--	--	--	--	--	1.8E+02	--	--	1.1E-04	ETox
Hexachlorobenzene	118-74-1	1.0E+00	8.8E-03	3.7E+00	6.5E+01	7.7E-04	--	--	--	--	--	--	5.5E+01	3.0E+03	3.0E+04	7.7E-04	ETox
Hexachlorobutadiene	87-68-3	1.4E-01	1.4E-01	4.7E+00	3.2E+00	5.0E+01	--	--	--	--	--	--	1.0E+03	6.0E+00	6.0E+01	1.4E-01	Dir Exp
γ-Hexachlorocyclohexane (Lindane)	58-89-9	2.0E-01	3.2E-02	8.0E-02	1.6E-02	6.3E-02	--	--	--	--	--	--	3.5E+03	1.2E+04	1.2E+05	1.6E-02	Dir Exp
Hexachloroethane	67-72-1	3.3E-01	3.3E-01	1.2E+01	9.4E+01	8.9E+00	--	--	--	--	--	--	2.5E+04	1.0E+01	1.0E+02	3.3E-01	Dir Exp
Indeno(1,2,3-c,d)pyrene	193-39-5	3.4E-02	3.4E-02	--	--	4.9E-02	--	--	--	--	--	--	2.7E-01	--	--	3.4E-02	Dir Exp
Lead	7439-92-1	1.5E+01	2.0E-01	2.5E+00	8.1E+00	--	--	--	--	--	--	--	5.0E+04	--	--	2.5E+00	ETox
Mercury (elemental)	7439-97-6	2.0E+00	1.2E+00	7.7E-01	9.4E-01	5.1E-02	--	--	--	--	--	--	5.0E+04	--	--	5.1E-02	ETox
Methoxychlor	72-43-5	3.0E+01	9.0E-02	1.9E-02	3.0E-03	--	--	--	--	--	--	--	2.0E+01	4.7E+03	4.7E+04	3.0E-03	Dir Exp
Methylene chloride	75-09-2	5.0E+00	9.3E-01	2.2E+03	3.2E+03	1.6E+03	4.8E+01	4.2E+02	5.7E+01	1.1E+03	5.0E+02	9.3E+03	5.0E+04	9.1E+03	9.1E+04	5.0E+00	Dir Exp
Methyl ethyl ketone	78-93-3	5.6E+03	5.6E+03	1.4E+04	--	--	4.3E+06	3.6E+07	5.5E+06	2.2E+07	4.6E+07	1.8E+08	5.0E+04	8.4E+03	8.4E+04	5.6E+03	Dir Exp
Methyl isobutyl ketone	108-10-1	1.2E+02	1.2E+02	1.7E+02	--	--	1.6E+06	1.3E+07	2.0E+06	1.1E+07	1.7E+07	--	5.0E+04	1.3E+03	1.3E+04	1.2E+02	Dir Exp
Methyl mercury	22967-92-6	2.0E+00	2.0E+00	3.0E-03	--	--	--	--	--	--	--	--	5.0E+04	--	--	3.0E-03	ETox
2-Methylnaphthalene	91-57-6	3.6E+01	3.6E+01	2.1E+00	3.0E+01	--	--	--	--	--	--	--	1.3E+04	1.0E+01	1.0E+02	2.1E+00	ETox
Methyl tertiary butyl ether (MTBE)	1634-04-4	5.0E+00	1.3E+01	6.6E+04	8.0E+03	--	1.2E+03	1.1E+04	1.5E+03	1.5E+04	1.3E+04	1.3E+05	5.0E+04	5.0E+00	1.8E+02	5.0E+00	Nuis/Odor
Molybdenum	7439-98-7	1.0E+02	1.0E+02	2.4E+02	--	--	--	--	--	--	--	--	5.0E+04	--	--	1.0E+02	Dir Exp
Naphthalene	91-20-3	1.7E-01	1.7E-01	2.4E+01	2.4E+02	--	2.0E+01	1.7E+02	2.5E+01	1.8E+02	2.2E+02	1.6E+03	1.6E+04	2.1E+01	2.1E+02	1.7E-01	Dir Exp
Nickel	7440-02-0	1.0E+02	1.2E+01	5.2E+01	8.2E+00	4.6E+03	--	--	--	--	--	--	5.0E+04	--	--	8.2E+00	Dir Exp
Pentachlorophenol	87-86-5	1.0E+00	4.0E-02	1.5E+01	7.9E+00	8.2E+00	--	--	--	--	--	--	5.0E+04	3.0E+01	5.9E+03	1.0E+00	Dir Exp
Perchlorate	7790-98-9	6.0E+00	1.0E+00	6.0E+02	--	--	--	--	--	--	--	--	5.0E+04	--	--	6.0E+00	Dir Exp
Phenanthrene	85-01-8	--	--	6.3E+00	4.6E+00	--	--	--	--	--	--	--	4.1E+02	1.0E+03	1.0E+04	4.6E+00	Dir Exp
Phenol	108-95-2	4.2E+03	4.2E+03	1.3E+03	5.8E+02	4.6E+06	--	--	--	--	--	--	5.0E+04	5.0E+00	7.9E+04	5.0E+00	Nuis/Odor
Polychlorinated biphenyls (PCBs)	1336-36-3	5.0E-01	1.9E-03	1.4E-02	3.0E-02	1.7E-04	--	--	--	--	--	--	1.6E+01	--	--	1.7E-04	ETox
Pyrene	129-00-0	1.2E+02	1.2E+02	2.0E+00	--	1.1E+04	--	--	--	--	--	--	6.8E+01	--	--	2.0E+00	ETox

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Summary of Groundwater ESLs (µg/L)

Chemicals	CAS No.	Direct Exposure Human Health Risk Levels (Table GW-1)		Aquatic Habitat Goal Levels (Table GW-2)			Groundwater Vapor Intrusion Human Health Risk Levels (Table GW-3)						Gross Contamination Levels (GW-4)	Odor Nuisance Levels (Table GW-5)		GW Tier 1 ESL	Basis
		MCL Priority	Human Health Risk Based Only	Fresh Water Ecotox	Saltwater Ecotox	Seafood Ingestion Human Health	Shallow Groundwater		Deep Groundwater					Drinking Water	Non-Drinking Water		
							Res.	Com/Ind	Res: Sand Scenario	Res: Fine to Coarse Scenario	Com/Ind: Sand Scenario	Com/Ind: Fine to Coarse Scenario					
Selenium	7782-49-2	5.0E+01	3.0E+01	5.0E+00	7.1E+01	--	--	--	--	--	--	--	5.0E+04	--	--	5.0E+00	ETox
Silver	7440-22-4	1.0E+02	9.4E+01	3.4E-01	1.9E-01	--	--	--	--	--	--	--	5.0E+04	1.0E+02	--	1.9E-01	Dir Exp
Styrene	100-42-5	1.0E+01	5.0E-01	--	--	--	3.0E+04	2.5E+05	3.6E+04	--	3.1E+05	--	5.0E+04	1.0E+01	1.1E+02	1.0E+01	Nuis/Odor
tert-Butyl alcohol	75-65-0	1.2E+01	1.2E+01	1.8E+04	--	--	--	--	--	--	--	--	5.0E+04	--	--	1.2E+01	Dir Exp
1,1,1,2-Tetrachloroethane	630-20-6	5.7E-01	5.7E-01	9.3E+02	--	--	--	--	--	--	--	--	5.0E+04	--	--	5.7E-01	Dir Exp
1,1,2,2-Tetrachloroethane	79-34-5	1.0E+00	7.6E-02	4.2E+02	9.0E+02	1.1E+01	--	--	--	--	--	--	5.0E+04	5.0E+02	5.0E+03	1.0E+00	Dir Exp
Tetrachloroethene	127-18-4	5.0E+00	6.0E-02	1.2E+02	2.3E+02	8.9E+00	3.0E+00	2.6E+01	3.7E+00	1.0E+02	3.2E+01	8.8E+02	5.0E+04	1.7E+02	3.0E+03	3.0E+00	Dir Exp
Thallium	7440-28-0	2.0E+00	1.0E-01	2.0E+01	2.1E+02	6.3E+00	--	--	--	--	--	--	5.0E+04	--	--	2.0E+00	Dir Exp
Toluene	108-88-3	4.0E+01	1.5E+02	1.3E+02	2.5E+03	2.0E+05	3.6E+03	3.0E+04	4.3E+03	1.0E+05	3.7E+04	--	5.0E+04	4.0E+01	4.0E+02	4.0E+01	Nuis/Odor
Toxaphene	8001-35-2	3.0E+00	1.3E-02	2.0E-04	2.0E-04	7.5E-04	--	--	--	--	--	--	1.5E+03	1.4E+02	1.4E+02	2.0E-04	ETox
TPH gasoline	--	2.2E+02	2.2E+02	4.4E+02	3.7E+03	--	--	--	--	--	--	--	5.0E+04	1.0E+02	5.0E+03	1.0E+02	Nuis/Odor
TPH Stoddard solvent	--	1.5E+02	1.5E+02	6.4E+02	6.4E+02	--	--	--	--	--	--	--	2.5E+03	1.0E+02	5.0E+03	1.0E+02	Nuis/Odor
TPH diesel	--	1.5E+02	1.5E+02	6.4E+02	6.4E+02	--	--	--	--	--	--	--	2.5E+03	1.0E+02	5.0E+03	1.0E+02	Nuis/Odor
TPH motor oil	--	Note 1	Note 1	--	--	--	--	--	--	--	--	--	5.0E+04	Note 1	Note 1	5.0E+04	Gross Contam
1,2,4-Trichlorobenzene	120-82-1	5.0E+00	1.1E+00	2.5E+01	6.5E+01	--	2.4E+02	2.0E+03	3.0E+02	3.1E+03	2.5E+03	2.6E+04	5.0E+04	3.0E+03	3.0E+04	5.0E+00	Dir Exp
1,1,1-Trichloroethane	71-55-6	2.0E+02	1.0E+03	6.2E+01	3.1E+03	--	4.9E+03	4.2E+04	6.1E+03	1.7E+05	5.1E+04	--	5.0E+04	9.7E+02	5.0E+05	6.2E+01	ETox
1,1,2-Trichloroethane	79-00-5	5.0E+00	2.8E-01	4.7E+03	--	4.2E+01	--	--	--	--	--	--	5.0E+04	--	--	5.0E+00	Dir Exp
Trichloroethene	79-01-6	5.0E+00	4.9E-01	3.6E+02	2.0E+02	8.1E+01	5.6E+00	4.9E+01	6.9E+00	1.7E+02	6.0E+01	1.5E+03	5.0E+04	3.1E+02	1.0E+05	5.0E+00	Dir Exp
2,4,5-Trichlorophenol	95-95-4	1.2E+03	1.2E+03	6.3E+01	1.1E+01	--	--	--	--	--	--	--	5.0E+04	2.0E+02	2.0E+03	1.1E+01	Dir Exp
2,4,6-Trichlorophenol	88-06-2	6.3E-01	6.3E-01	4.9E+02	--	6.5E+00	--	--	--	--	--	--	5.0E+04	1.0E+02	1.0E+03	6.3E-01	Dir Exp
Vanadium	7440-62-2	5.0E+01	5.0E+01	1.9E+01	--	--	--	--	--	--	--	--	5.0E+04	--	--	1.9E+01	ETox
Vinyl chloride	75-01-4	5.0E-01	9.7E-03	7.8E+02	--	5.3E+02	6.1E-02	5.3E-01	7.3E-02	2.0E+00	6.4E-01	1.7E+01	5.0E+04	3.4E+03	3.4E+04	6.1E-02	Dir Exp
Xylenes	1330-20-7	2.0E+01	1.9E+02	--	1.0E+02	--	1.3E+03	1.1E+04	1.6E+03	3.8E+04	1.3E+04	--	5.0E+04	2.0E+01	5.3E+03	2.0E+01	Nuis/Odor
Zinc	7440-66-6	5.0E+03	6.0E+03	1.2E+02	8.1E+01	--	--	--	--	--	--	--	5.0E+04	5.0E+03	--	8.1E+01	Dir Exp

Notes:

1 - TPH motor oil is not soluble. TPH motor oil detections in water most likely are petroleum degradates or less likely NAPL. If the detections are degradates, add TPH motor oil and TPH diesel results and compare to TPH diesel criterion. See User's Guide Chapter 9 for further information.

MCLs - Maximum Contaminant Levels

Res. - Residential

Com/Ind - Commercial/Industrial

Dir Exp - Direct Exposure

Nuis/Odor - Nuisance-Odor

ETox - Ecological Toxicity

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Summary of Soil ESLs (mg/kg)

Chemicals	CAS No.	Direct Exposure Human Health Risk Levels (Table S-1)			Leaching to Groundwater Levels (Table S-2)		Gross Contamination Levels (Table S-3)	Odor Nuisance Levels (Table S-4)			Soil Tier 1 ESL	Basis
		Res: Shallow Soil Exposure	Com/Ind: Shallow Soil Exposure	Any Land Use/ Any Depth Soil Exposure: Construction Worker	Drinking Water	Nondrinking Water		Res: Shallow Soil Exposure	Com/Ind: Shallow Soil Exposure	Any Land Use: Deep Soil Exposure (CW)		
Acenaphthene	83-32-9	3.6E+03	4.5E+04	1.0E+04	1.6E+01	1.9E+01	1.3E+02	1.0E+03	2.5E+03	2.5E+03	1.6E+01	Leaching
Acenaphthylene	208-96-8	--	--	--	1.3E+01	1.3E+01	5.9E+01	5.0E+02	1.0E+03	1.0E+03	1.3E+01	Leaching
Acetone	67-64-1	5.9E+04	6.3E+05	2.6E+05	5.0E-01	5.0E-01	1.0E+05	5.0E+02	1.0E+03	1.0E+03	5.0E-01	Leaching
Aldrin	309-00-2	3.6E-02	1.6E-01	1.0E+00	5.0E+00	5.0E+00	5.0E+00	1.0E+03	2.5E+03	2.5E+03	3.6E-02	Dir Exp
Anthracene	120-12-7	1.8E+04	2.3E+05	5.0E+04	2.8E+00	2.8E+00	6.1E+00	5.0E+02	1.0E+03	1.0E+03	2.8E+00	Leaching
Antimony	7440-36-0	3.1E+01	4.7E+02	1.4E+02	--	--	--	--	--	--	3.1E+01	Dir Exp
Arsenic	7440-38-2	6.7E-02	3.1E-01	9.8E-01	--	--	--	--	--	--	6.7E-02	Dir Exp
Barium	7440-39-3	1.5E+04	2.2E+05	3.0E+03	--	--	--	--	--	--	3.0E+03	Dir Exp
Benzene	71-43-2	2.3E-01	1.0E+00	2.4E+01	4.4E-02	4.9E-02	8.7E+02	5.0E+02	1.0E+03	1.0E+03	4.4E-02	Leaching
Benz(a)anthracene	56-55-3	1.6E-01	2.9E+00	1.6E+01	1.2E+01	1.2E+01	1.2E+01	5.0E+02	1.0E+03	1.0E+03	1.6E-01	Dir Exp
Benzo(b)fluoranthene	205-99-2	1.6E-01	2.9E+00	1.6E+01	4.6E+01	6.4E+02	4.6E+01	5.0E+02	1.0E+03	1.0E+03	1.6E-01	Dir Exp
Benzo(k)fluoranthene	207-08-9	1.6E+00	2.9E+01	1.5E+02	2.6E+00	3.7E+01	2.6E+00	5.0E+02	1.0E+03	1.0E+03	1.6E+00	Dir Exp
Benzo(g,h,i)perylene	191-24-2	--	--	--	2.7E+01	2.7E+01	2.5E+00	5.0E+02	1.0E+03	1.0E+03	2.5E+00	Gross Contam
Benzo(a)pyrene	50-32-8	1.6E-02	2.9E-01	1.6E+00	1.3E+02	1.3E+02	1.3E+02	5.0E+02	1.0E+03	1.0E+03	1.6E-02	Dir Exp
Beryllium	7440-41-7	1.5E+02	2.2E+03	4.2E+01	--	--	--	--	--	--	4.2E+01	Dir Exp
1,1-Biphenyl	92-52-4	6.4E+01	2.7E+02	2.4E+02	6.5E-01	6.5E+00	3.5E+02	5.0E+02	1.0E+03	1.0E+03	6.5E-01	Leaching
Bis(2-chloroethyl) ether	111-44-4	1.2E-01	5.3E-01	6.8E+00	8.0E-05	7.8E-01	9.6E+03	5.0E+02	1.0E+03	1.0E+03	8.0E-05	Leaching
Bis(2-chloroisopropyl) ether	108-60-1	3.6E+00	1.6E+01	2.2E+02	3.9E-03	6.6E-01	7.9E+02	5.0E+02	1.0E+03	1.0E+03	3.9E-03	Leaching
Bis(2-ethylhexyl) phthalate	117-81-7	3.9E+01	1.6E+02	9.5E+02	7.8E+02	7.8E+02	7.8E+02	5.0E+02	1.0E+03	1.0E+03	3.9E+01	Dir Exp
Boron	7440-42-8	1.6E+04	2.3E+05	4.5E+04	--	--	--	--	--	--	1.6E+04	Dir Exp
Bromodichloromethane	75-27-4	5.2E-01	2.3E+00	4.7E+01	1.5E+00	2.1E+01	3.0E+03	1.0E+03	2.5E+03	2.5E+03	5.2E-01	Dir Exp
Bromoform (Tribromomethane)	75-25-2	6.3E+01	3.0E+02	2.2E+03	1.7E+00	2.4E+01	2.4E+03	5.0E+02	1.0E+03	1.0E+03	1.7E+00	Leaching
Bromomethane	74-83-9	8.0E+00	3.6E+01	3.4E+01	3.0E-01	1.5E+00	3.1E+03	5.0E+02	1.0E+03	1.0E+03	3.0E-01	Leaching
Cadmium (soil)	7440-43-9	3.9E+01	5.8E+02	4.3E+01	--	--	--	--	--	--	3.9E+01	Dir Exp
Carbon tetrachloride	56-23-5	1.2E-01	5.4E-01	1.3E+01	4.8E-02	4.8E-02	1.1E+03	5.0E+02	1.0E+03	1.0E+03	4.8E-02	Leaching
Chlordane	57-74-9	4.8E-01	2.2E+00	1.4E+01	1.5E+01	1.5E+01	1.5E+01	1.0E+03	2.5E+03	2.5E+03	4.8E-01	Dir Exp
p-Chloroaniline	106-47-8	3.5E+00	1.6E+01	1.2E+02	3.9E-03	5.3E-02	1.3E+03	5.0E+02	1.0E+03	1.0E+03	3.9E-03	Leaching
Chlorobenzene	108-90-7	2.5E+02	1.2E+03	1.1E+03	1.5E+00	1.5E+00	6.8E+02	5.0E+02	1.0E+03	1.0E+03	1.5E+00	Leaching
Chloroethane	75-00-3	1.3E+04	5.3E+04	5.3E+04	1.1E+00	1.1E+01	1.6E+03	5.0E+02	1.0E+03	1.0E+03	1.1E+00	Leaching
Chloroform	67-66-3	3.0E-01	1.3E+00	3.2E+01	6.8E-02	6.8E-02	2.9E+03	5.0E+02	1.0E+03	1.0E+03	6.8E-02	Leaching

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Summary of Soil ESLs (mg/kg)

Chemicals	CAS No.	Direct Exposure Human Health Risk Levels (Table S-1)			Leaching to Groundwater Levels (Table S-2)		Gross Contamination Levels (Table S-3)	Odor Nuisance Levels (Table S-4)			Soil Tier 1 ESL	Basis
		Res: Shallow Soil Exposure	Com/Ind: Shallow Soil Exposure	Any Land Use/ Any Depth Soil Exposure: Construction Worker	Drinking Water	Nondrinking Water		Res: Shallow Soil Exposure	Com/Ind: Shallow Soil Exposure	Any Land Use: Deep Soil Exposure (CW)		
Chloromethane	74-87-3	1.0E+02	4.3E+02	4.3E+02	2.9E+01	6.8E+01	4.1E+03	1.0E+02	5.0E+02	5.0E+02	2.9E+01	Leaching
2-Chlorophenol	95-57-8	3.9E+02	5.8E+03	1.8E+03	1.2E-02	1.2E-01	5.5E+04	1.0E+02	5.0E+02	5.0E+02	1.2E-02	Leaching
Chromium (total)	7440-47-3	--	--	--	--	--	--	--	--	--	--	--
Chromium III	16065-83-1	1.2E+05	1.8E+06	5.3E+05	--	--	--	--	--	--	1.2E+05	Dir Exp
Chromium VI	18540-29-9	3.0E-01	6.2E+00	2.8E+00	--	--	--	--	--	--	3.0E-01	Dir Exp
Chrysene	218-01-9	1.5E+01	2.6E+02	1.5E+03	3.8E+00	2.3E+01	3.8E+00	5.0E+02	1.0E+03	1.0E+03	3.8E+00	Gross Contam
Cobalt	7440-48-4	2.3E+01	3.5E+02	2.8E+01	--	--	--	--	--	--	2.3E+01	Dir Exp
Copper	7440-50-8	3.1E+03	4.7E+04	1.4E+04	--	--	--	--	--	--	3.1E+03	Dir Exp
Cyanide	57-12-5	5.3E+00	2.4E+01	2.1E+01	3.6E-03	3.6E-03	2.0E+05	1.0E+02	5.0E+02	5.0E+02	3.6E-03	Leaching
Dibenz(a,h)anthracene	53-70-3	1.6E-02	2.9E-01	1.6E+00	9.9E+00	1.4E+02	9.9E+00	5.0E+02	1.0E+03	1.0E+03	1.6E-02	Dir Exp
Dibromochloromethane	124-48-1	8.3E+00	3.9E+01	2.9E+02	3.8E+00	9.1E+01	1.3E+04	1.0E+02	5.0E+02	5.0E+02	3.8E+00	Leaching
1,2-dibromo-3-chloropropane	96-12-8	5.3E-03	7.2E-02	1.3E+00	4.5E-03	2.2E+00	1.1E+03	5.0E+02	1.0E+03	1.0E+03	4.5E-03	Leaching
1,2-Dibromoethane	106-93-4	3.6E-02	1.6E-01	3.2E+00	3.3E-04	5.7E-03	9.2E+02	5.0E+02	1.0E+03	1.0E+03	3.3E-04	Leaching
1,2-Dichlorobenzene	95-50-1	2.0E+03	1.1E+04	8.5E+03	1.6E+00	1.6E+00	6.0E+02	1.0E+03	2.5E+03	2.5E+03	1.6E+00	Leaching
1,3-Dichlorobenzene	541-73-1	--	--	--	7.4E+00	7.4E+00	6.0E+02	1.0E+02	5.0E+02	5.0E+02	7.4E+00	Leaching
1,4-Dichlorobenzene	106-46-7	3.0E+00	1.3E+01	3.1E+02	5.9E-01	1.4E+00	2.8E+02	5.0E+02	1.0E+03	1.0E+03	5.9E-01	Leaching
3,3-Dichlorobenzidine	91-94-1	5.8E-01	2.7E+00	2.0E+01	1.2E-02	6.6E+01	3.0E+01	5.0E+02	1.0E+03	1.0E+03	1.2E-02	Leaching
Dichlorodiphenyldichloroethane (72-54-8)	72-54-8	2.7E+00	1.2E+01	8.1E+01	7.5E+02	7.5E+02	7.5E+02	5.0E+02	1.0E+03	1.0E+03	2.7E+00	Dir Exp
Dichlorodiphenyldichloroethene (72-55-9)	72-55-9	1.9E+00	8.5E+00	5.7E+01	1.1E+03	1.1E+03	1.1E+03	5.0E+02	1.0E+03	1.0E+03	1.9E+00	Dir Exp
Dichlorodiphenyltrichloroethane (50-29-3)	50-29-3	1.9E+00	8.5E+00	5.7E+01	4.3E+00	4.3E+00	4.3E+00	5.0E+02	1.0E+03	1.0E+03	1.9E+00	Dir Exp
1,1-Dichloroethane	75-34-3	3.8E+00	1.7E+01	3.9E+02	2.0E-01	8.1E-01	1.7E+03	5.0E+02	1.0E+03	1.0E+03	2.0E-01	Leaching
1,2-Dichloroethane	107-06-2	3.7E-01	1.6E+00	3.7E+01	4.5E-03	5.4E-02	1.8E+03	1.0E+02	5.0E+02	5.0E+02	4.5E-03	Leaching
1,1-Dichloroethene	75-35-4	9.4E+01	4.0E+02	3.9E+02	5.5E-01	4.3E+00	1.5E+03	5.0E+02	1.0E+03	1.0E+03	5.5E-01	Leaching
cis-1,2-Dichloroethene	156-59-2	1.9E+01	9.0E+01	8.2E+01	1.9E-01	3.5E+00	1.2E+03	1.0E+02	5.0E+02	5.0E+02	1.9E-01	Leaching
trans-1,2-Dichloroethene	156-60-5	1.6E+02	7.3E+02	6.8E+02	6.7E-01	3.9E+01	3.1E+03	5.0E+02	1.0E+03	1.0E+03	6.7E-01	Leaching
2,4-Dichlorophenol	120-83-2	2.3E+02	3.5E+03	1.1E+03	3.0E-01	3.0E+00	1.6E+05	5.0E+02	1.0E+03	1.0E+03	3.0E-01	Leaching
1,2-Dichloropropane	78-87-5	8.8E-01	3.9E+00	5.8E+01	1.2E-01	1.9E-01	1.1E+03	1.0E+02	5.0E+02	5.0E+02	1.2E-01	Leaching
1,3-Dichloropropene	542-75-6	2.8E-01	1.2E+00	2.9E+01	5.9E-02	4.4E-01	1.4E+03	5.0E+02	1.0E+03	1.0E+03	5.9E-02	Leaching
Dieldrin	60-57-1	3.8E-02	1.7E-01	1.1E+00	1.7E-04	2.3E-03	8.3E+00	5.0E+02	1.0E+03	1.0E+03	1.7E-04	Leaching
Diethyl phthalate	84-66-2	5.1E+04	6.6E+05	1.5E+05	3.5E-02	3.5E-02	8.4E+02	5.0E+02	1.0E+03	1.0E+03	3.5E-02	Leaching

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Summary of Soil ESLs (mg/kg)

Chemicals	CAS No.	Direct Exposure Human Health Risk Levels (Table S-1)			Leaching to Groundwater Levels (Table S-2)		Gross Contamination Levels (Table S-3)	Odor Nuisance Levels (Table S-4)			Soil Tier 1 ESL	Basis
		Res: Shallow Soil Exposure	Com/Ind: Shallow Soil Exposure	Any Land Use/ Any Depth Soil Exposure: Construction Worker	Drinking Water	Nondrinking Water		Res: Shallow Soil Exposure	Com/Ind: Shallow Soil Exposure	Any Land Use: Deep Soil Exposure (CW)		
Dimethyl phthalate	131-11-3	--	--	--	3.5E-02	3.5E-02	4.7E+03	5.0E+02	1.0E+03	1.0E+03	3.5E-02	Leaching
2,4-Dimethylphenol	105-67-9	1.6E+03	2.3E+04	7.1E+03	6.7E-01	7.4E-01	2.7E+03	1.0E+02	5.0E+02	5.0E+02	6.7E-01	Leaching
2,4-Dinitrophenol	51-28-5	1.6E+02	2.3E+03	7.1E+02	1.1E-01	2.1E-01	1.1E+03	5.0E+02	1.0E+03	1.0E+03	1.1E-01	Leaching
2,4-Dinitrotoluene	121-14-2	2.2E+00	1.1E+01	7.9E+01	1.8E-03	8.6E-01	1.0E+02	5.0E+02	1.0E+03	1.0E+03	1.8E-03	Leaching
1,4-Dioxane	123-91-1	7.0E+00	3.3E+01	2.5E+02	2.3E-04	3.0E+01	1.2E+05	5.0E+02	1.0E+03	1.0E+03	2.3E-04	Leaching
Dioxin (2,3,7,8-TCDD)	1746-01-6	4.9E-06	2.2E-05	1.5E-04	1.1E+06	1.1E+06	1.1E+06	1.0E+02	5.0E+02	5.0E+02	4.9E-06	Dir Exp
Endosulfan	115-29-7	4.2E+02	5.8E+03	1.5E+03	4.6E-03	4.6E-03	2.9E+00	5.0E+02	1.0E+03	1.0E+03	4.6E-03	Leaching
Endrin	72-20-8	2.1E+01	2.9E+02	7.4E+01	6.5E-04	6.5E-04	2.7E+00	5.0E+02	1.0E+03	1.0E+03	6.5E-04	Leaching
Ethylbenzene	100-41-4	5.1E+00	2.2E+01	4.8E+02	1.4E+00	1.4E+00	4.0E+02	5.0E+02	1.0E+03	1.0E+03	1.4E+00	Leaching
Fluoranthene	206-44-0	2.4E+03	3.0E+04	6.7E+03	6.0E+01	6.0E+01	6.0E+01	5.0E+02	1.0E+03	1.0E+03	6.0E+01	Gross Contam
Fluorene	86-73-7	2.4E+03	3.0E+04	6.7E+03	8.9E+00	8.9E+00	1.6E+02	5.0E+02	1.0E+03	1.0E+03	8.9E+00	Leaching
Heptachlor	76-44-8	1.4E-01	6.0E-01	3.8E+00	7.7E-04	1.3E-02	7.4E+00	1.0E+03	2.5E+03	2.5E+03	7.7E-04	Leaching
Heptachlor epoxide	1024-57-3	6.7E-02	3.0E-01	1.9E+00	4.2E-04	1.4E-02	4.8E+01	1.0E+03	2.5E+03	2.5E+03	4.2E-04	Leaching
Hexachlorobenzene	118-74-1	3.4E-01	1.5E+00	9.5E+00	7.9E+02	7.9E+02	7.9E+02	5.0E+02	1.0E+03	1.0E+03	3.4E-01	Dir Exp
Hexachlorobutadiene	87-68-3	8.9E+00	4.2E+01	3.1E+02	6.8E-01	1.6E+01	3.5E+02	5.0E+02	1.0E+03	1.0E+03	6.8E-01	Leaching
γ-Hexachlorocyclohexane (Lindane)	58-89-9	5.5E-01	2.5E+00	1.6E+01	9.8E-03	9.8E-03	1.6E+02	5.0E+02	1.0E+03	1.0E+03	9.8E-03	Leaching
Hexachloroethane	67-72-1	1.4E+01	5.7E+01	1.3E+02	1.1E+00	4.1E+01	6.0E+03	5.0E+02	1.0E+03	1.0E+03	1.1E+00	Leaching
Indeno(1,2,3-c,d)pyrene	193-39-5	1.6E-01	2.9E+00	1.6E+01	9.1E+00	7.0E+01	5.1E+00	5.0E+02	1.0E+03	1.0E+03	1.6E-01	Dir Exp
Lead	7439-92-1	8.0E+01	3.2E+02	1.6E+02	--	--	--	--	--	--	8.0E+01	Dir Exp
Mercury (elemental)	7439-97-6	1.3E+01	1.9E+02	4.4E+01	--	--	--	5.0E+02	1.0E+03	1.0E+03	1.3E+01	Dir Exp
Methoxychlor	72-43-5	3.5E+02	4.8E+03	1.2E+03	1.9E+01	1.9E+01	1.9E+01	5.0E+02	1.0E+03	1.0E+03	1.9E+01	Gross Contam
Methylene chloride	75-09-2	1.9E+00	2.5E+01	5.0E+02	7.7E-02	7.3E-01	2.4E+03	5.0E+02	1.0E+03	1.0E+03	7.7E-02	Leaching
Methyl ethyl ketone	78-93-3	3.1E+04	2.5E+05	1.4E+05	5.1E+00	1.3E+01	3.4E+04	5.0E+02	1.0E+03	1.0E+03	5.1E+00	Leaching
Methyl isobutyl ketone	108-10-1	5.8E+03	7.1E+04	2.6E+04	2.8E+00	3.9E+00	1.7E+04	1.0E+02	5.0E+02	5.0E+02	2.8E+00	Leaching
Methyl mercury	22967-92-6	6.3E+00	8.2E+01	1.9E+01	--	--	--	1.0E+02	5.0E+02	5.0E+02	6.3E+00	Dir Exp
2-Methylnaphthalene	91-57-6	2.4E+02	3.0E+03	6.7E+02	2.5E-01	2.5E-01	1.1E+02	5.0E+02	1.0E+03	1.0E+03	2.5E-01	Leaching
Methyl tertiary butyl ether (MTBE)	1634-04-4	4.2E+01	1.8E+02	3.7E+03	2.3E-02	8.4E-01	2.1E+04	1.0E+02	5.0E+02	5.0E+02	2.3E-02	Leaching
Molybdenum	7439-98-7	3.9E+02	5.8E+03	1.8E+03	--	--	--	--	--	--	3.9E+02	Dir Exp
Naphthalene	91-20-3	3.3E+00	1.4E+01	3.5E+02	3.3E-02	3.9E+00	2.2E+02	5.0E+02	1.0E+03	1.0E+03	3.3E-02	Leaching
Nickel	7440-02-0	8.2E+02	1.1E+04	8.6E+01	--	--	--	--	--	--	8.6E+01	Dir Exp

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Summary of Soil ESLs (mg/kg)

Chemicals	CAS No.	Direct Exposure Human Health Risk Levels (Table S-1)			Leaching to Groundwater Levels (Table S-2)		Gross Contamination Levels (Table S-3)	Odor Nuisance Levels (Table S-4)			Soil Tier 1 ESL	Basis
		Res: Shallow Soil Exposure	Com/Ind: Shallow Soil Exposure	Any Land Use/ Any Depth Soil Exposure: Construction Worker	Drinking Water	Nondrinking Water		Res: Shallow Soil Exposure	Com/Ind: Shallow Soil Exposure	Any Land Use: Deep Soil Exposure (CW)		
Pentachlorophenol	87-86-5	1.0E+00	4.0E+00	2.0E+01	2.7E+06	2.7E+06	2.7E+06	5.0E+02	1.0E+03	1.0E+03	1.0E+00	Dir Exp
Perchlorate	7790-98-9	5.5E+01	8.2E+02	2.5E+02	--	--	--	--	--	--	5.5E+01	Dir Exp
Phenanthrene	85-01-8	--	--	--	1.1E+01	1.1E+01	6.9E+01	5.0E+02	1.0E+03	1.0E+03	1.1E+01	Leaching
Phenol	108-95-2	2.3E+04	3.5E+05	9.8E+04	7.6E-02	8.8E+00	5.2E+04	5.0E+02	1.0E+03	1.0E+03	7.6E-02	Leaching
Polychlorinated biphenyls (PCBs)	1336-36-3	2.5E-01	1.0E+00	5.6E+00	6.3E+00	6.3E+00	6.3E+00	5.0E+02	1.0E+03	1.0E+03	2.5E-01	Dir Exp
Pyrene	129-00-0	1.8E+03	2.3E+04	5.0E+03	8.5E+01	8.5E+01	8.5E+01	5.0E+02	1.0E+03	1.0E+03	8.5E+01	Gross Contam
Selenium	7782-49-2	3.9E+02	5.8E+03	1.7E+03	--	--	--	--	--	--	3.9E+02	Dir Exp
Silver	7440-22-4	3.9E+02	5.8E+03	1.8E+03	--	--	--	--	--	--	3.9E+02	Dir Exp
Styrene	100-42-5	6.6E+03	4.0E+04	2.9E+04	1.5E+00	1.6E+01	1.5E+03	5.0E+02	1.0E+03	1.0E+03	1.5E+00	Leaching
tert-Butyl alcohol	75-65-0	--	--	--	7.5E-02	1.1E+02	3.2E+05	1.0E+02	5.0E+02	5.0E+02	7.5E-02	Leaching
1,1,1,2-Tetrachloroethane	630-20-6	4.2E+00	1.8E+01	3.4E+02	1.0E-02	1.6E+01	2.0E+03	1.0E+02	5.0E+02	5.0E+02	1.0E-02	Leaching
1,1,2,2-Tetrachloroethane	79-34-5	5.3E-01	2.3E+00	4.4E+01	1.8E-02	7.4E+00	2.0E+03	5.0E+02	1.0E+03	1.0E+03	1.8E-02	Leaching
Tetrachloroethene	127-18-4	6.0E-01	2.7E+00	3.3E+01	4.2E-01	4.2E-01	2.3E+02	5.0E+02	1.0E+03	1.0E+03	4.2E-01	Leaching
Thallium	7440-28-0	7.8E-01	1.2E+01	3.5E+00	--	--	--	--	--	--	7.8E-01	Dir Exp
Toluene	108-88-3	9.7E+02	4.6E+03	4.1E+03	2.9E+00	9.3E+00	6.5E+02	5.0E+02	1.0E+03	1.0E+03	2.9E+00	Leaching
Toxaphene	8001-35-2	5.1E-01	2.2E+00	1.4E+01	4.2E-04	4.2E-04	9.3E+01	5.0E+02	1.0E+03	1.0E+03	4.2E-04	Leaching
TPH gasoline	--	7.4E+02	3.9E+03	2.8E+03	7.7E+02	3.4E+03	1.0E+03	1.0E+02	5.0E+02	5.0E+02	1.0E+02	Nuis/Odor
TPH Stoddard solvent	--	1.6E+02	8.2E+02	6.3E+02	1.0E+03	6.5E+03	2.3E+03	1.0E+02	5.0E+02	5.0E+02	1.0E+02	Nuis/Odor
TPH diesel	--	2.3E+02	1.1E+03	8.8E+02	5.7E+02	3.6E+03	2.3E+03	5.0E+02	1.0E+03	1.0E+03	2.3E+02	Dir Exp
TPH motor oil	--	1.1E+04	1.4E+05	3.2E+04	--	--	5.1E+03	--	--	--	5.1E+03	Gross Contam
1,2,4-Trichlorobenzene	120-82-1	2.4E+01	1.1E+02	3.1E+02	1.5E+00	7.6E+00	3.2E+03	1.0E+03	2.5E+03	2.5E+03	1.5E+00	Leaching
1,1,1-Trichloroethane	71-55-6	2.1E+03	8.9E+03	8.8E+03	7.8E+00	7.8E+00	1.2E+03	5.0E+02	1.0E+03	1.0E+03	7.8E+00	Leaching
1,1,2-Trichloroethane	79-00-5	9.6E-01	4.2E+00	5.2E+00	7.0E-02	6.6E+01	1.8E+03	1.0E+02	5.0E+02	5.0E+02	7.0E-02	Leaching
Trichloroethene	79-01-6	1.2E+00	8.0E+00	2.3E+01	4.6E-01	5.1E-01	1.3E+03	5.0E+02	1.0E+03	1.0E+03	4.6E-01	Leaching
2,4,5-Trichlorophenol	95-95-4	7.8E+03	1.2E+05	3.5E+04	1.8E-01	1.8E-01	7.6E+02	1.0E+02	5.0E+02	5.0E+02	1.8E-01	Leaching
2,4,6-Trichlorophenol	88-06-2	9.9E+00	4.7E+01	3.5E+02	2.1E-01	1.6E+02	9.7E+03	1.0E+02	5.0E+02	5.0E+02	2.1E-01	Leaching
Vanadium	7440-62-2	3.9E+02	5.8E+03	4.7E+02	--	--	--	--	--	--	3.9E+02	Dir Exp
Vinyl chloride	75-01-4	8.2E-03	1.5E-01	3.4E+00	1.0E-02	1.0E-02	1.2E+03	5.0E+02	1.0E+03	1.0E+03	8.2E-03	Dir Exp
Xylenes	1330-20-7	5.6E+02	2.4E+03	2.4E+03	2.3E+00	1.1E+01	4.2E+02	5.0E+02	1.0E+03	1.0E+03	2.3E+00	Leaching
Zinc	7440-66-6	2.3E+04	3.5E+05	1.1E+05	--	--	--	--	--	--	2.3E+04	Dir Exp

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Summary of Soil ESLs (mg/kg)

Chemicals	CAS No.	Direct Exposure Human Health Risk Levels (Table S-1)			Leaching to Groundwater Levels (Table S-2)		Gross Contamination Levels (Table S-3)	Odor Nuisance Levels (Table S-4)			Soil Tier 1 ESL	Basis
		Res: Shallow Soil Exposure	Com/Ind: Shallow Soil Exposure	Any Land Use/ Any Depth Soil Exposure: Construction Worker	Drinking Water	Nondrinking Water		Res: Shallow Soil Exposure	Com/Ind: Shallow Soil Exposure	Any Land Use: Deep Soil Exposure (CW)		

Notes:
 Res. - Residential
 Com/Ind - Commercial/Industrial
 CW - Construction Worker
 Exp - Exposure

Feb. 2016 (Rev. 3)		Summary of Vapor ESLs										
Chemicals	CAS No.	Subslab ¹ / Soil Gas (µg/m ³)						Indoor Air (µg/m ³)				
		Subslab/Soil Gas Vapor Intrusion: Human Health Risk Levels (Table SG-1)		Subslab/Soil Gas Vapor Intrusion: Odor Nuisance Levels (Table SG-2)		Tier 1 ESL	Basis	Direct Exposure Human Health Risk Levels (Table IA-1)		Odor Nuisance Levels (Table IA-2)	Tier 1 ESL	Basis
		Residential	Commercial/Industrial	Residential	Commercial/Industrial			Residential	Commercial/Industrial			
Acenaphthene	83-32-9	--	--	2.6E+05	5.1E+05	2.6E+05	Nuis/Odor	--	--	5.1E+02	5.1E+02	Nuis/Odor
Acenaphthylene	208-96-8	--	--	--	--	--	--	--	--	--	--	--
Acetone	67-64-1	1.6E+07	1.4E+08	1.5E+07	3.1E+07	1.5E+07	Nuis/Odor	3.2E+04	1.4E+05	3.1E+04	3.1E+04	Nuis/Odor
Aldrin	309-00-2	2.9E-01	2.5E+00	1.3E+05	2.6E+05	2.9E-01	Dir Exp	5.7E-04	2.5E-03	2.6E+02	5.7E-04	Dir Exp
Anthracene	120-12-7	--	--	--	--	--	--	--	--	--	--	--
Antimony	7440-36-0	--	--	--	--	--	--	--	--	--	--	--
Arsenic	7440-38-2	--	--	--	--	--	--	--	--	--	--	--
Barium	7440-39-3	--	--	--	--	--	--	--	--	--	--	--
Benzene	71-43-2	4.8E+01	4.2E+02	2.4E+06	4.9E+06	4.8E+01	Dir Exp	9.7E-02	4.2E-01	4.9E+03	9.7E-02	Dir Exp
Benz(a)anthracene	56-55-3	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	205-99-2	4.6E+00	1.1E+02	--	--	4.6E+00	Dir Exp	9.2E-03	1.1E-01	--	9.2E-03	Dir Exp
Benzo(k)fluoranthene	207-08-9	4.6E+00	1.1E+02	--	--	4.6E+00	Dir Exp	9.2E-03	1.1E-01	--	9.2E-03	Dir Exp
Benzo(g,h,i)perylene	191-24-2	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	50-32-8	--	--	--	--	--	--	--	--	--	--	--
Beryllium	7440-41-7	--	--	--	--	--	--	--	--	--	--	--
1,1-Biphenyl	92-52-4	2.1E+02	1.8E+03	3.0E+04	6.0E+04	2.1E+02	Dir Exp	4.2E-01	1.8E+00	6.0E+01	4.2E-01	Dir Exp
Bis(2-chloroethyl) ether	111-44-4	2.0E+00	1.7E+01	1.4E+05	2.9E+05	2.0E+00	Dir Exp	4.0E-03	1.7E-02	2.9E+02	4.0E-03	Dir Exp
Bis(2-chloroisopropyl) ether	108-60-1	1.4E+02	1.2E+03	1.1E+06	2.2E+06	1.4E+02	Dir Exp	2.8E-01	1.2E+00	2.2E+03	2.8E-01	Dir Exp
Bis(2-ethylhexyl) phthalate	117-81-7	--	--	--	--	--	--	--	--	--	--	--
Boron	7440-42-8	--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	75-27-4	3.8E+01	3.3E+02	5.5E+09	1.1E+10	3.8E+01	Dir Exp	7.6E-02	3.3E-01	1.1E+07	7.6E-02	Dir Exp
Bromoform (Tribromomethane)	75-25-2	1.3E+03	1.1E+04	6.7E+06	1.3E+07	1.3E+03	Dir Exp	2.6E+00	1.1E+01	1.3E+04	2.6E+00	Dir Exp
Bromomethane	74-83-9	2.6E+03	2.2E+04	4.0E+07	8.0E+07	2.6E+03	Dir Exp	5.2E+00	2.2E+01	8.0E+04	5.2E+00	Dir Exp
Cadmium (soil)	7440-43-9	--	--	--	--	--	--	--	--	--	--	--
Cadmium (water)	7440-43-9	--	--	--	--	--	--	--	--	--	--	--
Carbon tetrachloride	56-23-5	3.3E+01	2.9E+02	3.2E+07	6.3E+07	3.3E+01	Dir Exp	6.7E-02	2.9E-01	6.3E+04	6.7E-02	Dir Exp
Chlordane	57-74-9	4.1E+00	3.6E+01	4.2E+03	8.4E+03	4.1E+00	Dir Exp	8.3E-03	3.6E-02	8.4E+00	8.3E-03	Dir Exp
p-Chloroaniline	106-47-8	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	2.6E+04	2.2E+05	5.0E+05	1.0E+06	2.6E+04	Dir Exp	5.2E+01	2.2E+02	1.0E+03	5.2E+01	Dir Exp
Chloroethane	75-00-3	5.2E+06	4.4E+07	1.9E+08	3.8E+08	5.2E+06	Dir Exp	1.0E+04	4.4E+04	3.8E+05	1.0E+04	Dir Exp
Chloroform	67-66-3	6.1E+01	5.3E+02	2.1E+08	4.2E+08	6.1E+01	Dir Exp	1.2E-01	5.3E-01	4.2E+05	1.2E-01	Dir Exp
Chloromethane	74-87-3	4.7E+04	3.9E+05	--	--	4.7E+04	Dir Exp	9.4E+01	3.9E+02	--	9.4E+01	Dir Exp
2-Chlorophenol	95-57-8	--	--	9.5E+03	1.9E+04	9.5E+03	Nuis/Odor	--	--	1.9E+01	1.9E+01	Nuis/Odor
Chromium (total)	7440-47-3	--	--	--	--	--	--	--	--	--	--	--
Chromium III	16065-83-1	--	--	--	--	--	--	--	--	--	--	--

Feb. 2016 (Rev. 3)		Summary of Vapor ESLs											
Chemicals	CAS No.	Subslab ¹ / Soil Gas (µg/m ³)						Indoor Air (µg/m ³)					
		Subslab/Soil Gas Vapor Intrusion: Human Health Risk Levels (Table SG-1)		Subslab/Soil Gas Vapor Intrusion: Odor Nuisance Levels (Table SG-2)		Tier 1 ESL	Basis	Direct Exposure Human Health Risk Levels (Table IA-1)		Odor Nuisance Levels (Table IA-2)	Tier 1 ESL	Basis	
		Residential	Commercial/Industrial	Residential	Commercial/Industrial			Residential	Commercial/Industrial				
Chromium VI	18540-29-9	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	218-01-9	4.6E+01	1.1E+03	--	--	4.6E+01	Dir Exp	9.2E-02	1.1E+00	--	9.2E-02	Dir Exp	
Cobalt	7440-48-4	--	--	--	--	--	--	--	--	--	--	--	
Copper	7440-50-8	--	--	--	--	--	--	--	--	--	--	--	
Cyanide	57-12-5	4.2E+02	3.5E+03	3.3E+05	6.5E+05	4.2E+02	Dir Exp	8.3E-01	3.5E+00	6.5E+02	8.3E-01	Dir Exp	
Dibenz(a,h)anthracene	53-70-3	--	--	--	--	--	--	--	--	--	--	--	
Dibromochloromethane	124-48-1	--	--	--	--	--	--	--	--	--	--	--	
1,2-dibromo-3-chloropropane	96-12-8	8.4E-02	2.0E+00	--	--	8.4E-02	Dir Exp	1.7E-04	2.0E-03	--	1.7E-04	Dir Exp	
1,2-Dibromoethane	106-93-4	2.3E+00	2.0E+01	1.0E+08	2.0E+08	2.3E+00	Dir Exp	4.7E-03	2.0E-02	2.0E+05	4.7E-03	Dir Exp	
1,2-Dichlorobenzene	95-50-1	1.0E+05	8.8E+05	1.5E+08	3.1E+08	1.0E+05	Dir Exp	2.1E+02	8.8E+02	3.1E+05	2.1E+02	Dir Exp	
1,3-Dichlorobenzene	541-73-1	--	--	--	--	--	--	--	--	--	--	--	
1,4-Dichlorobenzene	106-46-7	1.3E+02	1.1E+03	5.5E+05	1.1E+06	1.3E+02	Dir Exp	2.6E-01	1.1E+00	1.1E+03	2.6E-01	Dir Exp	
3,3-Dichlorobenzidine	91-94-1	--	--	--	--	--	--	--	--	--	--	--	
Dichlorodiphenyldichloroethane (DDT)	72-54-8	--	--	--	--	--	--	--	--	--	--	--	
Dichlorodiphenyldichloroethene (DDE)	72-55-9	1.4E+01	1.3E+02	--	--	1.4E+01	Dir Exp	2.9E-02	1.3E-01	--	2.9E-02	Dir Exp	
Dichlorodiphenyltrichloroethane (DDT)	50-29-3	1.4E+01	1.3E+02	--	--	1.4E+01	Dir Exp	2.9E-02	1.3E-01	--	2.9E-02	Dir Exp	
1,1-Dichloroethane	75-34-3	8.8E+02	7.7E+03	6.3E+07	1.3E+08	8.8E+02	Dir Exp	1.8E+00	7.7E+00	1.3E+05	1.8E+00	Dir Exp	
1,2-Dichloroethane	107-06-2	5.4E+01	4.7E+02	1.2E+06	2.4E+06	5.4E+01	Dir Exp	1.1E-01	4.7E-01	2.4E+03	1.1E-01	Dir Exp	
1,1-Dichloroethene	75-35-4	3.7E+04	3.1E+05	1.0E+09	2.0E+09	3.7E+04	Dir Exp	7.3E+01	3.1E+02	2.0E+06	7.3E+01	Dir Exp	
cis-1,2-Dichloroethene	156-59-2	4.2E+03	3.5E+04	--	--	4.2E+03	Dir Exp	8.3E+00	3.5E+01	--	8.3E+00	Dir Exp	
trans-1,2-Dichloroethene	156-60-5	4.2E+04	3.5E+05	3.4E+07	6.7E+07	4.2E+04	Dir Exp	8.3E+01	3.5E+02	6.7E+04	8.3E+01	Dir Exp	
2,4-Dichlorophenol	120-83-2	--	--	7.0E+05	1.4E+06	7.0E+05	Nuis/Odor	--	--	1.4E+03	1.4E+03	Nuis/Odor	
1,2-Dichloropropane	78-87-5	1.4E+02	1.2E+03	6.0E+05	1.2E+06	1.4E+02	Dir Exp	2.8E-01	1.2E+00	1.2E+03	2.8E-01	Dir Exp	
1,3-Dichloropropene	542-75-6	8.8E+01	7.7E+02	2.1E+06	4.2E+06	8.8E+01	Dir Exp	1.8E-01	7.7E-01	4.2E+03	1.8E-01	Dir Exp	
Dieldrin	60-57-1	3.1E-01	2.7E+00	--	--	3.1E-01	Dir Exp	6.1E-04	2.7E-03	--	6.1E-04	Dir Exp	
Diethyl phthalate	84-66-2	--	--	--	--	--	--	--	--	--	--	--	
Dimethyl phthalate	131-11-3	--	--	--	--	--	--	--	--	--	--	--	
2,4-Dimethylphenol	105-67-9	--	--	5.0E+02	1.0E+03	5.0E+02	Nuis/Odor	--	--	1.0E+00	1.0E+00	Nuis/Odor	
2,4-Dinitrophenol	51-28-5	--	--	--	--	--	--	--	--	--	--	--	
2,4-Dinitrotoluene	121-14-2	--	--	--	--	--	--	--	--	--	--	--	
1,4-Dioxane	123-91-1	1.8E+02	1.6E+03	3.1E+08	6.1E+08	1.8E+02	Dir Exp	3.6E-01	1.6E+00	6.1E+05	3.6E-01	Dir Exp	
Dioxin (2,3,7,8-TCDD)	1746-01-6	--	--	--	--	--	--	--	--	--	--	--	
Endosulfan	115-29-7	--	--	--	--	--	--	--	--	--	--	--	
Endrin	72-20-8	--	--	--	--	--	--	--	--	--	--	--	
Ethylbenzene	100-41-4	5.6E+02	4.9E+03	1.0E+06	2.0E+06	5.6E+02	Dir Exp	1.1E+00	4.9E+00	2.0E+03	1.1E+00	Dir Exp	

Feb. 2016 (Rev. 3)		Summary of Vapor ESLs										
Chemicals	CAS No.	Subslab ¹ / Soil Gas (µg/m ³)						Indoor Air (µg/m ³)				
		Subslab/Soil Gas Vapor Intrusion: Human Health Risk Levels (Table SG-1)		Subslab/Soil Gas Vapor Intrusion: Odor Nuisance Levels (Table SG-2)		Tier 1 ESL	Basis	Direct Exposure Human Health Risk Levels (Table IA-1)		Odor Nuisance Levels (Table IA-2)	Tier 1 ESL	Basis
		Residential	Commercial/Industrial	Residential	Commercial/Industrial			Residential	Commercial/Industrial			
Fluoranthene	206-44-0	--	--	--	--	--	--	--	--	--	--	--
Fluorene	86-73-7	--	--	--	--	--	--	--	--	--	--	--
Heptachlor	76-44-8	1.1E+00	9.4E+00	1.5E+05	3.0E+05	1.1E+00	Dir Exp	2.2E-03	9.4E-03	3.0E+02	2.2E-03	Dir Exp
Heptachlor epoxide	1024-57-3	5.4E-01	4.7E+00	1.5E+05	3.0E+05	5.4E-01	Dir Exp	1.1E-03	4.7E-03	3.0E+02	1.1E-03	Dir Exp
Hexachlorobenzene	118-74-1	2.8E+00	2.4E+01	--	--	2.8E+00	Dir Exp	5.5E-03	2.4E-02	--	5.5E-03	Dir Exp
Hexachlorobutadiene	87-68-3	6.4E+01	5.6E+02	6.0E+06	1.2E+07	6.4E+01	Dir Exp	1.3E-01	5.6E-01	1.2E+04	1.3E-01	Dir Exp
γ-Hexachlorocyclohexane (Lindane)	58-89-9	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	67-72-1	1.3E+02	1.1E+03	--	--	1.3E+02	Dir Exp	2.6E-01	1.1E+00	--	2.6E-01	Dir Exp
Indeno(1,2,3-c,d)pyrene	193-39-5	--	--	--	--	--	--	--	--	--	--	--
Lead	7439-92-1	--	--	--	--	--	--	--	--	--	--	--
Mercury (elemental)	7439-97-6	--	--	--	--	--	--	--	--	--	--	--
Methoxychlor	72-43-5	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride	75-09-2	5.1E+02	1.2E+04	2.8E+08	5.6E+08	5.1E+02	Dir Exp	1.0E+00	1.2E+01	5.6E+05	1.0E+00	Dir Exp
Methyl ethyl ketone	78-93-3	2.6E+06	2.2E+07	1.6E+07	3.2E+07	2.6E+06	Dir Exp	5.2E+03	2.2E+04	3.2E+04	5.2E+03	Dir Exp
Methyl isobutyl ketone	108-10-1	1.6E+06	1.3E+07	2.1E+05	4.2E+05	2.1E+05	Nuis/Odor	3.1E+03	1.3E+04	4.2E+02	4.2E+02	Nuis/Odor
Methyl mercury	22967-92-6	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	--	--	3.4E+04	6.8E+04	3.4E+04	Nuis/Odor	--	--	6.8E+01	6.8E+01	Nuis/Odor
Methyl tertiary butyl ether (MTBE)	1634-04-4	5.4E+03	4.7E+04	2.7E+05	5.3E+05	5.4E+03	Dir Exp	1.1E+01	4.7E+01	5.3E+02	1.1E+01	Dir Exp
Molybdenum	7439-98-7	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	91-20-3	4.1E+01	3.6E+02	2.2E+05	4.4E+05	4.1E+01	Dir Exp	8.3E-02	3.6E-01	4.4E+02	8.3E-02	Dir Exp
Nickel	7440-02-0	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	--	--	--	--	--	--	--	--	--	--	--
Perchlorate	7790-98-9	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	85-01-8	--	--	2.8E+04	5.5E+04	2.8E+04	Nuis/Odor	--	--	5.5E+01	5.5E+01	Nuis/Odor
Phenol	108-95-2	--	--	7.8E+04	1.6E+05	7.8E+04	Nuis/Odor	--	--	1.6E+02	1.6E+02	Nuis/Odor
Polychlorinated biphenyls (PCBs)	1336-36-3	2.5E+00	2.2E+01	--	--	2.5E+00	Dir Exp	4.9E-03	2.2E-02	--	4.9E-03	Dir Exp
Pyrene	129-00-0	--	--	--	--	--	--	--	--	--	--	--
Selenium	7782-49-2	--	--	--	--	--	--	--	--	--	--	--
Silver	7440-22-4	--	--	--	--	--	--	--	--	--	--	--
Styrene	100-42-5	4.7E+05	3.9E+06	6.8E+05	1.4E+06	4.7E+05	Dir Exp	9.4E+02	3.9E+03	1.4E+03	9.4E+02	Dir Exp
tert-Butyl alcohol	75-65-0	--	--	--	--	--	--	--	--	--	--	--
1,1,1,2-Tetrachloroethane	630-20-6	1.9E+02	1.7E+03	--	--	1.9E+02	Dir Exp	3.8E-01	1.7E+00	--	3.8E-01	Dir Exp
1,1,2,2-Tetrachloroethane	79-34-5	2.4E+01	2.1E+02	5.2E+06	1.0E+07	2.4E+01	Dir Exp	4.8E-02	2.1E-01	1.0E+04	4.8E-02	Dir Exp
Tetrachloroethene	127-18-4	2.4E+02	2.1E+03	1.6E+07	3.2E+07	2.4E+02	Dir Exp	4.8E-01	2.1E+00	3.2E+04	4.8E-01	Dir Exp
Thallium	7440-28-0	--	--	--	--	--	--	--	--	--	--	--

Feb. 2016 (Rev. 3)		Summary of Vapor ESLs										
Chemicals	CAS No.	Subslab ¹ / Soil Gas (µg/m ³)						Indoor Air (µg/m ³)				
		Subslab/Soil Gas Vapor Intrusion: Human Health Risk Levels (Table SG-1)		Subslab/Soil Gas Vapor Intrusion: Odor Nuisance Levels (Table SG-2)		Tier 1 ESL	Basis	Direct Exposure Human Health Risk Levels (Table IA-1)		Odor Nuisance Levels (Table IA-2)	Tier 1 ESL	Basis
		Residential	Commercial/Industrial	Residential	Commercial/Industrial			Residential	Commercial/Industrial			
Toluene	108-88-3	1.6E+05	1.3E+06	1.5E+07	3.0E+07	1.6E+05	Dir Exp	3.1E+02	1.3E+03	3.0E+04	3.1E+02	Dir Exp
Toxaphene	8001-35-2	4.1E+00	3.6E+01	--	--	4.1E+00	Dir Exp	8.3E-03	3.6E-02	--	8.3E-03	Dir Exp
TPH gasoline	--	3.0E+05	2.5E+06	5.0E+04	1.0E+05	5.0E+04	Nuis/Odor	5.9E+02	2.5E+03	1.0E+02	1.0E+02	Nuis/Odor
TPH Stoddard solvent	--	6.8E+04	5.7E+05	5.0E+05	1.0E+06	6.8E+04	Dir Exp	1.4E+02	5.7E+02	1.0E+03	1.4E+02	Dir Exp
TPH diesel	--	6.8E+04	5.7E+05	5.0E+05	1.0E+06	6.8E+04	Dir Exp	1.4E+02	5.7E+02	1.0E+03	1.4E+02	Dir Exp
TPH motor oil	--	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	120-82-1	1.0E+03	8.8E+03	1.1E+07	2.2E+07	1.0E+03	Dir Exp	2.1E+00	8.8E+00	2.2E+04	2.1E+00	Dir Exp
1,1,1-Trichloroethane	71-55-6	5.2E+05	4.4E+06	3.3E+07	6.5E+07	5.2E+05	Dir Exp	1.0E+03	4.4E+03	6.5E+04	1.0E+03	Dir Exp
1,1,2-Trichloroethane	79-00-5	8.8E+01	7.7E+02	--	--	8.8E+01	Dir Exp	1.8E-01	7.7E-01	--	1.8E-01	Dir Exp
Trichloroethene	79-01-6	2.4E+02	3.0E+03	6.8E+08	1.4E+09	2.4E+02	Dir Exp	4.8E-01	3.0E+00	1.4E+06	4.8E-01	Dir Exp
2,4,5-Trichlorophenol	95-95-4	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	--	--	1.5E+02	3.0E+02	1.5E+02	Nuis/Odor	--	--	3.0E-01	3.0E-01	Nuis/Odor
Vanadium	7440-62-2	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride	75-01-4	4.7E+00	1.6E+02	3.9E+08	7.7E+08	4.7E+00	Dir Exp	9.5E-03	1.6E-01	7.7E+05	9.5E-03	Dir Exp
Xylenes	1330-20-7	5.2E+04	4.4E+05	2.2E+05	4.4E+05	5.2E+04	Dir Exp	1.0E+02	4.4E+02	4.4E+02	1.0E+02	Dir Exp
Zinc	7440-66-6	--	--	--	--	--	--	--	--	--	--	--

Notes:
1 - Use of the subslab ESLs for the subslab line of evidence assumes an intact slab. See User's Guide Appendix B.
Dir Exp - Direct Exposure
Nuis/Odor - Nuisance-Odor
VI - Vapor Intrusion