Table A-1. Shallow Soil Screening Levels (≤3m bgs)
Residential Land Use
(groundwater is a current or potential drinking water resource)

Residential Land Use (mg/kg)							
Chemical	Final ESL	Basis	Ceiling Value (Odors, etc.) (Table H-2)	Urban Area Ecotoxicity	Human Health (Table K-1)	Endpoint	Protection of Groundwater (Table G)
Acenaphthene	1.6E+01	GW Protection	1.0E+03	-	3.4E+03	nc	1.6E+01
Acenaphthylene	1.3E+01	GW Protection	5.0E+02	-	No Value	nc	1.3E+01
Acetone	5.0E-01	GW Protection	5.0E+02	-	6.0E+04	nc	5.0E-01
Aldrin	3.2E-02	Human Health	1.0E+03	3.5E-01	3.2E-02	ca	5.0E+00
Anthracene	2.8E+00	GW Protection	5.0E+02	4.0E+01	2.3E+04	nc	2.8E+00
Antimony	2.0E+01	Ecotox	1.0E+03	2.0E+01	3.1E+01	nc	
Arsenic	3.9E-01	Human Health	1.0E+03	2.0E+01	3.9E-01	ca	
Barium	7.5E+02	Ecotox	1.0E+03	7.5E+02	1.5E+04	nc	
Benzene	4.4E-02	GW Protection	5.0E+02	2.5E+01	7.4E-01	ca	4.4E-02
Benzo(a)anthracene	3.8E-01	Human Health	5.0E+02	4.0E+01	3.8E-01	ca	1.2E+01
Benzo(b)fluoranthene	3.8E-01	Human Health	5.0E+02	4.0E+01	3.8E-01	ca	4.6E+01
Benzo(k)fluoranthene	3.8E-01	Human Health	5.0E+02	-	3.8E-01	ca	5.1E+00
Benzo(g,h,i)perylene	2.7E+01	GW Protection	5.0E+02	4.0E+01	No Value	nc	2.7E+01
Benzo(a)pyrene	3.8E-02	Human Health	5.0E+02	4.0E+01	3.8E-02	ca	1.3E+02
Beryllium	4.0E+00	Ecotox	1.0E+03	4.0E+00	1.6E+02	nc	
1,1-Biphenyl	6.5E-01	GW Protection	5.0E+02	-	3.9E+03	nc	6.5E-01
Bis(2-chloroethyl) ether	7.0E-05	GW Protection	5.0E+02	-	1.1E-01	ca	7.0E-05
Bis(2-chloroisopropyl) ether	1.3E-01	GW Protection	5.0E+02	-	No Value	nc	1.3E-01
Bis(2-ethylhexyl) phthalate	1.6E+02	Human Health	5.0E+02	-	1.6E+02	ca	7.8E+02
Boron	1.6E+00	Ecotox	1.0E+03	1.6E+00	1.6E+04	nc	
Bromodichloromethane	4.8E-01	Human Health	1.0E+03	-	4.8E-01	ca	1.5E+00
Bromoform (Tribromomethane)	1.7E+00	GW Protection	5.0E+02	-	5.8E+01	ca	1.7E+00
Bromomethane	2.8E-01	GW Protection	5.0E+02	-	8.6E+00	nc	2.8E-01
Cadmium (water)	-	Ceiling Value	-	-	3.9E+01	nc	
Cadmium (soil)	1.2E+01	Ecotox	1.0E+03	1.2E+01	7.8E+01	nc	
Carbon tetrachloride	1.1E-01	GW Protection	5.0E+02	-	1.2E-01	ca	1.1E-01
Chlordane	4.4E-01	Human Health	1.0E+03	-	4.4E-01	ca	1.5E+01
p-Chloroaniline	5.3E-02	GW Protection	5.0E+02	-	3.1E+02	nc	5.3E-02
Chlorobenzene	1.5E+00	GW Protection	5.0E+02	3.0E+01	1.3E+03	nc	1.5E+00
Chloroethane	1.1E+00	GW Protection	5.0E+02	-	4.1E+04	nc	1.1E+00
Chloroform	1.1E+00	Human Health	5.0E+02	-	1.1E+00	ca	2.4E+00
Chloromethane	2.0E+01	GW Protection	1.0E+02	-	1.0E+02	nc	2.0E+01
2-Chlorophenol	1.2E-02	GW Protection	1.0E+02	1.0E+01	3.9E+02	nc	1.2E-02
Chromium (total)	1.0E+03	Ceiling Value	1.0E+03	-	No Value	nc	
Chromium III	7.5E+02	Ecotox	1.0E+03	7.5E+02	1.2E+05	nc	
Chromium VI	8.0E+00	Ecotox	1.0E+03	8.0E+00	2.1E+01	ca	
Chrysene	3.8E+00	Human Health	5.0E+02	4.0E+01	3.8E+00	ca	2.3E+01
Cobalt	2.3E+01	Human Health	1.0E+03	4.0E+01	2.3E+01	nc	
Copper	2.3E+02	Ecotox	1.0E+03	2.3E+02	3.1E+03	nc	
Cyanide	3.6E-03	GW Protection	1.0E+02	-	3.7E+01	nc	3.6E-03
Dibenz(a,h)anthracene	1.1E-01	Human Health	5.0E+02	-	1.1E-01	ca	9.9E+00
Dibromochloromethane	6.6E+00	GW Protection	1.0E+02	-	7.6E+00	ca	6.6E+00
1,2-dibromo-3-chloropropane	4.5E-03	GW Protection	5.0E+02	-	9.1E-02	ca	4.5E-03
1,2-Dibromoethane	3.3E-04	GW Protection	5.0E+02	-	1.1E-01	ca	3.3E-04
1,2-Dichlorobenzene	1.1E+00	GW Protection	6.0E+02	3.0E+01	2.1E+03	nc	1.1E+00
1,3-Dichlorobenzene	7.4E+00	GW Protection	1.0E+02	3.0E+01	No Value	nc	7.4E+00
1,4-Dichlorobenzene	5.9E-01	GW Protection	5.0E+02	3.0E+01	2.8E+00	ca	5.9E-01
3,3-Dichlorobenzidine	1.5E-02	GW Protection	5.0E+02	-	5.3E-01	ca	1.5E-02
Dichlorodiphenyldichloroethane (DDD)	2.4E+00	Human Health	5.0E+02	-	2.4E+00	ca	7.5E+02
Dichlorodiphenyldichloroethene (DDE)	1.7E+00	Human Health	5.0E+02	4.0E+00	1.7E+00	ca	1.1E+03
Dichlorodiphenyltrichloroethane (DDT)	1.7E+00	Human Health	5.0E+02	4.0E+00	1.7E+00	ca	4.3E+00
1,1-Dichloroethane	2.0E-01	GW Protection	5.0E+02	-	3.5E+00	ca	2.0E-01
1,2-Dichloroethane	4.5E-03	GW Protection	1.0E+02	6.0E+01	4.4E-01	ca	4.5E-03
1,1-Dichloroethene	1.0E+00	GW Protection	5.0E+02	-	2.7E+02	nc	1.0E+00
cis-1,2-Dichloroethene	1.9E-01	GW Protection	1.0E+02	-	1.8E+01	nc	1.9E-01
trans-1,2-Dichloroethene	6.7E-01	GW Protection	5.0E+02	-	1.3E+02	nc	6.7E-01
2,4-Dichlorophenol	3.0E-01	GW Protection	5.0E+02	1.0E+01	2.3E+02	nc	3.0E-01
1,2-Dichloropropane	1.2E-01	GW Protection	1.0E+02	-	8.2E-01	ca	1.2E-01
1,3-Dichloropropene	5.9E-02	GW Protection	5.0E+02	-	2.7E-01	ca	5.9E-02
Dieldrin	2.3E-03	GW Protection	5.0E+02	4.0E+00	3.4E-02	ca	2.3E-03
Diethyl phthalate	3.5E-02	GW Protection	5.0E+02	-	4.9E+04	nc	3.5E-02
Dimethyl phthalate	3.5E-02	GW Protection	5.0E+02	-	6.1E+05	nc	3.5E-02

Table A-1. Shallow Soil Screening Levels (≤3m bgs)
Residential Land Use
(groundwater is a current or potential drinking water resource)

Residential Land Use (mg/kg)							
Chemical	Final ESL	Basis	Ceiling Value (Odors, etc.) (Table H-2)	Urban Area Ecotoxicity	Human Health (Table K-1)	Endpoint	Protection of Groundwater (Table G)
2,4-Dimethylphenol	6.7E-01	GW Protection	1.0E+02	-	1.6E+03	nc	6.7E-01
2,4-Dinitrophenol	4.2E-02	GW Protection	5.0E+02	-	1.6E+02	nc	4.2E-02
2,4-Dinitrotoluene	7.4E-04	GW Protection	5.0E+02	-	9.4E-01	ca	7.4E-04
1,4-Dioxane	1.5E-03	GW Protection	5.0E+02	-	2.4E+01	ca	1.5E-03
Dioxin (2,3,7,8-TCDD)	4.5E-06	Human Health	no criteria	-	4.5E-06	ca	
Endosulfan	4.6E-03	GW Protection	5.0E+02	-	4.7E+02	nc	4.6E-03
Endrin	6.5E-04	GW Protection	5.0E+02	6.0E-02	2.3E+01	nc	6.5E-04
Ethylbenzene	3.3E+00	GW Protection	4.0E+02	-	4.8E+00	ca	3.3E+00
Fluoranthene	4.0E+01	Ecotox	5.0E+02	4.0E+01	2.3E+03	nc	6.0E+01
Fluorene	8.9E+00	GW Protection	5.0E+02	-	3.1E+03	nc	8.9E+00
Heptachlor	1.3E-02	GW Protection	1.0E+03	-	1.3E-01	ca	1.3E-02
Heptachlor epoxide	1.4E-02	GW Protection	1.0E+03	-	6.1E-02	ca	1.4E-02
Hexachlorobenzene	3.1E-01	Human Health	5.0E+02	3.0E+01	3.1E-01	ca	7.9E+02
Hexachlorobutadiene	4.3E+00	GW Protection	5.0E+02	-	8.2E+00	ca	4.3E+00
γ-Hexachlorocyclohexane (Lindane)	9.8E-03	GW Protection	5.0E+02	2.0E+00	2.1E+01	nc	9.8E-03
Hexachloroethane	5.8E+00	GW Protection	5.0E+02	-	1.2E+01	ca	5.8E+00
Indeno(1,2,3-c,d)pyrene	3.8E-01	Human Health	5.0E+02	4.0E+01	3.8E-01	ca	1.5E+01
Lead	8.0E+01	Human Health	1.0E+03	2.0E+02	8.0E+01	nc	
Mercury (elemental)	6.7E+00	Human Health	5.0E+02	1.0E+01	6.7E+00	nc	
Methoxychlor	1.9E+01	GW Protection	5.0E+02	-	3.9E+02	nc	1.9E+01
Methylene chloride	7.7E-02	GW Protection	5.0E+02	-	9.9E+00	ca	7.7E-02
Methyl ethyl ketone	4.5E+00	GW Protection	5.0E+02	-	3.2E+04	nc	4.5E+00
Methyl isobutyl ketone	2.8E+00	GW Protection	1.0E+02	1.0E+01	3.6E+04	nc	2.8E+00
Methyl mercury	6.1E+00	Human Health	1.0E+02	-	6.1E+00	nc	
2-Methylnaphthalene	2.5E-01	GW Protection	5.0E+02	-	2.3E+02	nc	2.5E-01
tert-Butyl methyl ether	2.3E-02	GW Protection	1.0E+02	-	3.9E+01	ca	2.3E-02
Molybdenum	4.0E+01	Ecotox	1.0E+03	4.0E+01	3.9E+02	nc	
Naphthalene	1.2E+00	GW Protection	5.0E+02	4.0E+01	3.1E+00	ca	1.2E+00
Nickel	1.5E+02	Ecotox	1.0E+03	1.5E+02	1.5E+03	nc	
Pentachlorophenol	3.0E+00	Human Health	5.0E+02	5.0E+00	3.0E+00	ca	2.7E+06
Perchlorate	5.5E+01	Human Health	1.0E+03	-	5.5E+01	nc	
Phenanthrene	1.1E+01	GW Protection	5.0E+02	4.0E+01	No Value	nc	1.1E+01
Phenol	7.6E-02	GW Protection	5.0E+02	4.0E+01	2.3E+04	nc	7.6E-02
Polychlorinated biphenyls (PCBs)	2.2E-01	Human Health	5.0E+02	-	2.2E-01	ca	6.3E+00
Pyrene	8.5E+01	GW Protection	5.0E+02	-	3.4E+03	nc	8.5E+01
Selenium	1.0E+01	Ecotox	1.0E+03	1.0E+01	3.9E+02	nc	
Silver	2.0E+01	Ecotox	1.0E+03	2.0E+01	3.9E+02	nc	
Styrene	1.5E+00	GW Protection	5.0E+02	-	6.9E+03	nc	1.5E+00
tert-Butyl alcohol	7.5E-02	GW Protection	1.0E+02	-	No Value	nc	7.5E-02
1,1,1,2-Tetrachloroethane	9.1E-03	GW Protection	1.0E+02	-	3.8E+00	ca	9.1E-03
1,1,2,2-Tetrachloroethane	1.8E-02	GW Protection	5.0E+02	-	4.7E-01	ca	1.8E-02
Tetrachloroethene	5.5E-01	Human Health	2.3E+02	-	5.5E-01	ca	7.0E-01
Thallium	7.8E-01	Human Health	1.0E+03	-	7.8E-01	nc	
Toluene	2.9E+00	GW Protection	5.0E+02	-	1.0E+03	nc	2.9E+00
Toxaphene	4.2E-04	GW Protection	5.0E+02	-	4.6E-01	ca	4.2E-04
TPH gasoline	1.0E+02	Ceiling Value	1.0E+02	-	7.7E+02	nc	7.7E+02
TPH diesel	1.0E+02	Ceiling Value	1.0E+02	-	2.4E+02	nc	5.7E+02
TPH motor oil	1.0E+02	Ceiling Value	1.0E+02	-	1.0E+04	nc	
1,2,4-Trichlorobenzene	1.5E+00	GW Protection	1.0E+03	3.0E+01	1.4E+02	nc	1.5E+00
1,1,1-Trichloroethane	7.8E+00	GW Protection	5.0E+02	-	1.1E+04	nc	7.8E+00
1,1,2-Trichloroethane	7.0E-02	GW Protection	1.0E+02	-	8.8E-01	ca	7.0E-02
Trichloroethene	4.6E-01	GW Protection	5.0E+02	6.0E+01	1.7E+00	ca	4.6E-01
2,4,5-Trichlorophenol	1.8E-01	GW Protection	1.0E+02	1.0E+01	7.8E+03	nc	1.8E-01
2,4,6-Trichlorophenol	5.2E-01	GW Protection	1.0E+02	1.0E+01	7.8E+00	nc	5.2E-01
Vanadium	2.0E+02	Ecotox	1.0E+03	2.0E+02	3.9E+02	nc	
Vinyl chloride	3.2E-02	Human Health	5.0E+02	6.0E+01	3.2E-02	ca	8.5E-02
Xylenes	2.3E+00	GW Protection	4.2E+02	-	6.0E+02	nc	2.3E+00
Zinc	6.0E+02	Ecotox	1.0E+03	6.0E+02	2.3E+04	nc	

Notes:
Shallow soils defined as soils <3 meters below ground surface.
Residential Land Use screening levels generally considered adequate for other sensitive uses.

Table A-1. Shallow Soil Screening Levels (≤3m bgs)
Residential Land Use
(groundwater is a current or potential drinking water resource)

Residential Land Use (mg/kg)							
Chemical	Final ESL	Basis	Ceiling Value (Odors, etc.) (Table H-2)	Urban Area Ecotoxicity	Human Health (Table K-1)	Endpoint	Protection of Groundwater (Table G)
Soil data should be reported on dry-weight basis.							

Table A-2. Shallow Soil Screening Levels (<3m bgs)
Commercial/Industrial Land Use
(groundwater is a current or potential drinking water resource)

Commercial/Industrial Land Use (mg/kg)							
Chemical	Final ESL	Basis	Ceiling Value (Odors, etc.) (Table H-3)	Urban Area Ecotoxicity	Human Health (Table K-2)	Endpoint	Protection of Groundwater (Table G)
Acenaphthene	1.6E+01	GW Protection	2.5E+03	-	1.5E+04	nc	1.6E+01
Acenaphthylene	1.3E+01	GW Protection	1.0E+03	-	No Value	nc	1.3E+01
Acetone	5.0E-01	GW Protection	1.0E+03	-	5.9E+05	nc	5.0E-01
Aldrin	1.3E-01	Human Health	2.5E+03	3.5E-01	1.3E-01	ca	5.0E+00
Anthracene	2.8E+00	GW Protection	1.0E+03	4.0E+01	1.7E+05	nc	2.8E+00
Antimony	4.0E+01	Ecotox	2.5E+03	4.0E+01	4.1E+02	nc	
Arsenic	1.6E+00	Human Health	2.5E+03	4.0E+01	1.6E+00	ca	
Barium	1.5E+03	Ecotox	2.5E+03	1.5E+03	1.9E+05	nc	
Benzene	4.4E-02	GW Protection	8.7E+02	2.5E+01	3.7E+00	ca	4.4E-02
Benzo(a)anthracene	1.3E+00	Human Health	1.0E+03	4.0E+01	1.3E+00	ca	1.2E+01
Benzo(b)fluoranthene	1.3E+00	Human Health	1.0E+03	4.0E+01	1.3E+00	ca	4.6E+01
Benzo(k)fluoranthene	1.3E+00	Human Health	1.0E+03	-	1.3E+00	ca	5.1E+00
Benzo(g,h,i)perylene	2.7E+01	GW Protection	1.0E+03	4.0E+01	No Value	nc	2.7E+01
Benzo(a)pyrene	1.3E-01	Human Health	1.0E+03	4.0E+01	1.3E-01	ca	1.3E+02
Beryllium	8.0E+00	Ecotox	2.5E+03	8.0E+00	2.0E+03	nc	
1,1-Biphenyl	6.5E-01	GW Protection	1.0E+03	-	3.1E+04	nc	6.5E-01
Bis(2-chloroethyl) ether	7.0E-05	GW Protection	1.0E+03	-	5.2E-01	ca	7.0E-05
Bis(2-chloroisopropyl) ether	1.3E-01	GW Protection	7.9E+02	-	No Value	nc	1.3E-01
Bis(2-ethylhexyl) phthalate	5.7E+02	Human Health	1.0E+03	-	5.7E+02	ca	7.8E+02
Boron	2.0E+00	Ecotox	2.5E+03	2.0E+00	2.0E+05	nc	
Bromodichloromethane	1.5E+00	GW Protection	2.5E+03	-	2.4E+00	ca	1.5E+00
Bromoform (Tribromomethane)	1.7E+00	GW Protection	1.0E+03	-	2.6E+02	ca	1.7E+00
Bromomethane	2.8E-01	GW Protection	1.0E+03	-	3.8E+01	nc	2.8E-01
Cadmium (water)	-	Ceiling Value	-	-	5.1E+02	nc	
Cadmium (soil)	1.2E+01	Ecotox	2.5E+03	1.2E+01	1.0E+03	nc	
Carbon tetrachloride	1.1E-01	GW Protection	1.0E+03	-	5.8E-01	ca	1.1E-01
Chlordane	1.7E+00	Human Health	2.5E+03	-	1.7E+00	ca	1.5E+01
p -Chloroaniline	5.3E-02	GW Protection	1.0E+03	-	4.1E+03	nc	5.3E-02
Chlorobenzene	1.5E+00	GW Protection	6.8E+02	3.0E+01	1.2E+04	nc	1.5E+00
Chloroethane	1.1E+00	GW Protection	1.0E+03	-	1.7E+05	nc	1.1E+00
Chloroform	2.4E+00	GW Protection	1.0E+03	-	5.7E+00	ca	2.4E+00
Chloromethane	2.0E+01	GW Protection	5.0E+02	-	4.5E+02	nc	2.0E+01
2-Chlorophenol	1.2E-02	GW Protection	5.0E+02	1.0E+01	5.1E+03	nc	1.2E-02
Chromium (total)	2.5E+03	Ceiling Value	2.5E+03	-	No Value	nc	
Chromium III	7.5E+02	Ecotox	2.5E+03	7.5E+02	1.5E+06	nc	
Chromium VI	8.0E+00	Ecotox	2.5E+03	8.0E+00	1.1E+02	ca	
Chrysene	1.3E+01	Human Health	1.0E+03	4.0E+01	1.3E+01	ca	2.3E+01
Cobalt	8.0E+01	Ecotox	2.5E+03	8.0E+01	3.0E+02	nc	
Copper	2.3E+02	Ecotox	2.5E+03	2.3E+02	4.1E+04	nc	
Cyanide	3.6E-03	GW Protection	5.0E+02	-	3.7E+02	nc	3.6E-03
Dibenz(a,h)anthracene	3.8E-01	Human Health	1.0E+03	-	3.8E-01	ca	9.9E+00
Dibromochloromethane	6.6E+00	GW Protection	5.0E+02	-	3.4E+01	ca	6.6E+00
1,2-dibromo-3-chloropropane	4.5E-03	GW Protection	1.0E+03	-	4.1E-01	ca	4.5E-03
1,2-Dibromoethane	3.3E-04	GW Protection	1.0E+03	-	5.3E-01	ca	3.3E-04
1,2-Dichlorobenzene	1.1E+00	GW Protection	6.0E+02	3.0E+01	1.1E+04	nc	1.1E+00
1,3-Dichlorobenzene	7.4E+00	GW Protection	5.0E+02	3.0E+01	No Value	nc	7.4E+00
1,4-Dichlorobenzene	5.9E-01	GW Protection	1.0E+03	3.0E+01	1.4E+01	ca	5.9E-01
3,3-Dichlorobenzidine	1.5E-02	GW Protection	1.0E+03	-	2.4E+00	ca	1.5E-02
Dichlorodiphenyldichloroethane (DDD)	1.0E+01	Human Health	1.0E+03	-	1.0E+01	ca	7.5E+02
Dichlorodiphenyldichloroethene (DDE)	4.0E+00	Ecotox	1.0E+03	4.0E+00	7.0E+00	ca	1.1E+03
Dichlorodiphenyltrichloroethane (DDT)	4.0E+00	Ecotox	1.0E+03	4.0E+00	7.0E+00	ca	4.3E+00
1,1-Dichloroethane	2.0E-01	GW Protection	1.0E+03	-	1.8E+01	ca	2.0E-01
1,2-Dichloroethane	4.5E-03	GW Protection	5.0E+02	6.0E+01	2.2E+00	ca	4.5E-03
1,1-Dichloroethene	1.0E+00	GW Protection	1.0E+03	-	1.2E+03	nc	1.0E+00
cis -1,2-Dichloroethene	1.9E-01	GW Protection	5.0E+02	-	8.4E+01	nc	1.9E-01
trans -1,2-Dichloroethene	6.7E-01	GW Protection	1.0E+03	-	5.9E+02	nc	6.7E-01
2,4-Dichlorophenol	3.0E-01	GW Protection	1.0E+03	1.0E+01	3.1E+03	nc	3.0E-01
1,2-Dichloropropane	1.2E-01	GW Protection	5.0E+02	-	4.1E+00	ca	1.2E-01
1,3-Dichloropropene	5.9E-02	GW Protection	1.0E+03	-	1.3E+00	ca	5.9E-02
Dieldrin	2.3E-03	GW Protection	1.0E+03	4.0E+00	1.3E-01	ca	2.3E-03
Diethyl phthalate	3.5E-02	GW Protection	1.0E+03	-	4.9E+05	nc	3.5E-02
Dimethyl phthalate	3.5E-02	GW Protection	1.0E+03	-	6.2E+06	nc	3.5E-02
2,4-Dimethylphenol	6.7E-01	GW Protection	5.0E+02	-	2.0E+04	nc	6.7E-01

Table A-2. Shallow Soil Screening Levels (<3m bgs)
Commercial/Industrial Land Use
(groundwater is a current or potential drinking water resource)

Commercial/Industrial Land Use (mg/kg)							
Chemical	Final ESL	Basis	Ceiling Value (Odors, etc.) (Table H-3)	Urban Area Ecotoxicity	Human Health (Table K-2)	Endpoint	Protection of Groundwater (Table G)
2,4-Dinitrophenol	4.2E-02	GW Protection	1.0E+03	-	2.0E+03	nc	4.2E-02
2,4-Dinitrotoluene	7.4E-04	GW Protection	1.0E+03	-	4.2E+00	ca	7.4E-04
1,4-Dioxane	1.5E-03	GW Protection	1.0E+03	-	1.1E+02	ca	1.5E-03
Dioxin (2,3,7,8-TCDD)	1.8E-05	Human Health	no criteria	-	1.8E-05	ca	
Endosulfan	4.6E-03	GW Protection	1.0E+03	-	4.6E+03	nc	4.6E-03
Endrin	6.5E-04	GW Protection	1.0E+03	6.0E-02	2.3E+02	nc	6.5E-04
Ethylbenzene	3.3E+00	GW Protection	4.0E+02	-	2.4E+01	ca	3.3E+00
Fluoranthene	4.0E+01	Ecotox	1.0E+03	4.0E+01	2.2E+04	nc	6.0E+01
Fluorene	8.9E+00	GW Protection	1.0E+03	-	2.2E+04	nc	8.9E+00
Heptachlor	1.3E-02	GW Protection	2.5E+03	-	5.2E-01	ca	1.3E-02
Heptachlor epoxide	1.4E-02	GW Protection	2.5E+03	-	2.4E-01	ca	1.4E-02
Hexachlorobenzene	1.2E+00	Human Health	1.0E+03	3.0E+01	1.2E+00	ca	7.9E+02
Hexachlorobutadiene	4.3E+00	GW Protection	1.0E+03	-	3.7E+01	ca	4.3E+00
γ-Hexachlorocyclohexane (Lindane)	9.8E-03	GW Protection	1.0E+03	2.0E+00	2.3E+02	nc	9.8E-03
Hexachloroethane	5.8E+00	GW Protection	1.0E+03	-	4.4E+01	ca	5.8E+00
Indeno(1,2,3-c,d)pyrene	1.3E+00	Human Health	1.0E+03	4.0E+01	1.3E+00	ca	1.5E+01
Lead	3.2E+02	Human Health	2.5E+03	-	3.2E+02	nc	
Mercury (elemental)	1.0E+01	Ecotox	1.0E+03	1.0E+01	8.8E+01	nc	
Methoxychlor	1.9E+01	GW Protection	1.0E+03	-	3.8E+03	nc	1.9E+01
Methylene chloride	7.7E-02	GW Protection	1.0E+03	-	4.9E+01	ca	7.7E-02
Methyl ethyl ketone	4.5E+00	GW Protection	1.0E+03	-	2.5E+05	nc	4.5E+00
Methyl isobutyl ketone	2.8E+00	GW Protection	5.0E+02	1.0E+01	2.4E+05	nc	2.8E+00
Methyl mercury	6.2E+01	Human Health	5.0E+02	-	6.2E+01	nc	
2-Methylnaphthalene	2.5E-01	GW Protection	1.0E+03	-	2.2E+03	nc	2.5E-01
tert-Butyl methyl ether	2.3E-02	GW Protection	5.0E+02	-	1.9E+02	ca	2.3E-02
Molybdenum	4.0E+01	Ecotox	2.5E+03	4.0E+01	5.1E+03	nc	
Naphthalene	1.2E+00	GW Protection	1.0E+03	4.0E+01	1.5E+01	ca	1.2E+00
Nickel	1.5E+02	Ecotox	2.5E+03	1.5E+02	1.9E+04	nc	
Pentachlorophenol	5.0E+00	Ecotox	1.0E+03	5.0E+00	9.0E+00	ca	2.7E+06
Perchlorate	7.2E+02	Human Health	2.5E+03	-	7.2E+02	nc	
Phenanthrene	1.1E+01	GW Protection	1.0E+03	4.0E+01	No Value	nc	1.1E+01
Phenol	7.6E-02	GW Protection	1.0E+03	4.0E+01	3.1E+05	nc	7.6E-02
Polychlorinated biphenyls (PCBs)	7.4E-01	Human Health	1.0E+03	-	7.4E-01	ca	6.3E+00
Pyrene	8.5E+01	GW Protection	1.0E+03	-	3.3E+04	nc	8.5E+01
Selenium	1.0E+01	Ecotox	2.5E+03	1.0E+01	5.1E+03	nc	
Silver	4.0E+01	Ecotox	2.5E+03	4.0E+01	5.1E+03	nc	
Styrene	1.5E+00	GW Protection	1.0E+03	-	4.2E+04	nc	1.5E+00
tert-Butyl alcohol	7.5E-02	GW Protection	5.0E+02	-	No Value	nc	7.5E-02
1,1,1,2-Tetrachloroethane	9.1E-03	GW Protection	5.0E+02	-	1.9E+01	ca	9.1E-03
1,1,2,2-Tetrachloroethane	1.8E-02	GW Protection	1.0E+03	-	2.3E+00	ca	1.8E-02
Tetrachloroethene	7.0E-01	GW Protection	2.3E+02	-	2.6E+00	ca	7.0E-01
Thallium	1.0E+01	Human Health	2.5E+03	-	1.0E+01	nc	
Toluene	2.9E+00	GW Protection	6.5E+02	-	4.9E+03	nc	2.9E+00
Toxaphene	4.2E-04	GW Protection	1.0E+03	-	1.8E+00	ca	4.2E-04
TPH gasoline	5.0E+02	Ceiling Value	5.0E+02	-	4.0E+03	nc	7.7E+02
TPH diesel	1.1E+02	Ceiling Value	1.1E+02	-	1.1E+03	nc	5.7E+02
TPH motor oil	5.0E+02	Ceiling Value	5.0E+02	-	1.0E+05	nc	
1,2,4-Trichlorobenzene	1.5E+00	GW Protection	2.5E+03	3.0E+01	7.0E+02	nc	1.5E+00
1,1,1-Trichloroethane	7.8E+00	GW Protection	1.0E+03	-	4.7E+04	nc	7.8E+00
1,1,2-Trichloroethane	7.0E-02	GW Protection	5.0E+02	-	4.4E+00	ca	7.0E-02
Trichloroethene	4.6E-01	GW Protection	1.0E+03	6.0E+01	8.3E+00	ca	4.6E-01
2,4,5-Trichlorophenol	1.8E-01	GW Protection	5.0E+02	1.0E+01	1.0E+05	nc	1.8E-01
2,4,6-Trichlorophenol	5.2E-01	GW Protection	5.0E+02	1.0E+01	1.0E+02	nc	5.2E-01
Vanadium	2.0E+02	Ecotox	2.5E+03	2.0E+02	5.1E+03	nc	
Vinyl chloride	8.5E-02	GW Protection	1.0E+03	6.0E+01	1.6E-01	ca	8.5E-02
Xylenes	2.3E+00	GW Protection	4.2E+02	-	2.6E+03	nc	2.3E+00
Zinc	6.0E+02	Ecotox	2.5E+03	6.0E+02	3.1E+05	nc	

Table A-2. Shallow Soil Screening Levels (<3m bgs)
Commercial/Industrial Land Use
(groundwater is a current or potential drinking water resource)

Commercial/Industrial Land Use (mg/kg)							
Chemical	Final ESL	Basis	Ceiling Value (Odors, etc.) (Table H-3)	Urban Area Ecotoxicity	Human Health (Table K-2)	Endpoint	Protection of Groundwater (Table G)

Notes:
Shallow soils defined as soils <3 meters below ground surface.
Final Environmental Screening Level is lowest of ceiling value (nuisance concerns etc.), ecotoxicity, direct-exposure, and leaching to groundwater.
Soil data should be reported on dry-weight basis.

Table B-1. Shallow Soil Screening Levels(<3m bgs)
Residential Land Use
(groundwater is not a current or potential drinking water resource)

Residential Land Use (mg/kg)								
Chemical	Final ESL	Basis	Ceiling Value (Odors, etc.) (Table H-2)	Urban Area Ecotoxicity	Background	Human Health (Table K-1)	Endpoint	Protection of Groundwater (Table G)
Acenaphthene	1.9E+01	GW Protection	1.0E+03	-		3.4E+03	nc	1.9E+01
Acenaphthylene	1.3E+01	GW Protection	5.0E+02	-		No Value	nc	1.3E+01
Acetone	5.0E-01	GW Protection	5.0E+02	-		6.0E+04	nc	5.0E-01
Aldrin	3.2E-02	Human Health	1.0E+03	3.5E-01		3.2E-02	ca	5.0E+00
Anthracene	2.8E+00	GW Protection	5.0E+02	4.0E+01		2.3E+04	nc	2.8E+00
Antimony	2.0E+01	Ecotox	1.0E+03	2.0E+01		3.1E+01	nc	
Arsenic	3.9E-01	Human Health	1.0E+03	2.0E+01		3.9E-01	ca	
Barium	7.5E+02	Ecotox	1.0E+03	7.5E+02		1.5E+04	nc	
Benzene	7.4E-01	Human Health	5.0E+02	2.5E+01		7.4E-01	ca	1.2E+00
Benzo(a)anthracene	3.8E-01	Human Health	5.0E+02	4.0E+01		3.8E-01	ca	1.2E+01
Benzo(b)fluoranthene	3.8E-01	Human Health	5.0E+02	4.0E+01		3.8E-01	ca	4.6E+01
Benzo(k)fluoranthene	3.8E-01	Human Health	5.0E+02	-		3.8E-01	ca	3.7E+01
Benzo(g,h,i)perylene	2.7E+01	GW Protection	5.0E+02	4.0E+01		No Value	nc	2.7E+01
Benzo(a)pyrene	3.8E-02	Human Health	5.0E+02	4.0E+01		3.8E-02	ca	1.3E+02
Beryllium	4.0E+00	Ecotox	1.0E+03	4.0E+00		1.6E+02	nc	
1,1-Biphenyl	6.5E+00	GW Protection	5.0E+02	-		3.9E+03	nc	6.5E+00
Bis(2-chloroethyl) ether	1.1E-01	Human Health	5.0E+02	-		1.1E-01	ca	1.6E-01
Bis(2-chloroisopropyl) ether	1.3E-01	GW Protection	5.0E+02	-		No Value	nc	1.3E-01
Bis(2-ethylhexyl) phthalate	1.6E+02	Human Health	5.0E+02	-		1.6E+02	ca	7.8E+02
Boron	1.6E+00	Ecotox	1.0E+03	1.6E+00		1.6E+04	nc	
Bromodichloromethane	4.8E-01	Human Health	1.0E+03	-		4.8E-01	ca	2.1E+01
Bromoform (Tribromomethane)	2.4E+01	GW Protection	5.0E+02	-		5.8E+01	ca	2.4E+01
Bromomethane	6.4E+00	GW Protection	5.0E+02	-		8.6E+00	nc	6.4E+00
Cadmium (water)	0.0E+00	Ceiling Value					nc	
Cadmium (soil)	1.2E+01	Ecotox	1.0E+03	1.2E+01		7.8E+01	nc	
Carbon tetrachloride	1.2E-01	Human Health	5.0E+02	-		1.2E-01	ca	1.0E+00
Chlordane	4.4E-01	Human Health	1.0E+03	-		4.4E-01	ca	1.5E+01
p-Chloroaniline	5.3E-02	GW Protection	5.0E+02	-		3.1E+02	nc	5.3E-02
Chlorobenzene	1.5E+00	GW Protection	5.0E+02	3.0E+01		1.3E+03	nc	1.5E+00
Chloroethane	1.1E+00	GW Protection	5.0E+02	-		4.1E+04	nc	1.1E+00
Chloroform	1.1E+00	Human Health	5.0E+02	-		1.1E+00	ca	5.0E+00
Chloromethane	1.0E+02	Ceiling Value	1.0E+02	-		1.0E+02	nc	1.7E+02
2-Chlorophenol	1.2E-01	GW Protection	1.0E+02	1.0E+01		3.9E+02	nc	1.2E-01
Chromium (total)	1.0E+03	Ceiling Value	1.0E+03	-		No Value	nc	
Chromium III	7.5E+02	Ecotox	1.0E+03	7.5E+02		1.2E+05	nc	
Chromium VI	8.0E+00	Ecotox	1.0E+03	8.0E+00		2.1E+01	ca	
Chrysene	3.8E+00	Human Health	5.0E+02	4.0E+01		3.8E+00	ca	2.3E+01
Cobalt	2.3E+01	Human Health	1.0E+03	4.0E+01		2.3E+01	nc	
Copper	2.3E+02	Ecotox	1.0E+03	2.3E+02		3.1E+03	nc	
Cyanide	3.6E-03	GW Protection	1.0E+02	-		3.7E+01	nc	3.6E-03
Dibenz(a,h)anthracene	1.1E-01	Human Health	5.0E+02	-		1.1E-01	ca	1.4E+02
Dibromochloromethane	7.6E+00	Human Health	1.0E+02	-		7.6E+00	ca	9.1E+01
1,2-dibromo-3-chloropropane	4.5E-03	GW Protection	5.0E+02	-		9.1E-02	ca	4.5E-03
1,2-Dibromoethane	1.1E-01	Human Health	5.0E+02	-		1.1E-01	ca	5.1E-01
1,2-Dichlorobenzene	1.6E+00	GW Protection	6.0E+02	3.0E+01		2.1E+03	nc	1.6E+00
1,3-Dichlorobenzene	7.4E+00	GW Protection	1.0E+02	3.0E+01		No Value	nc	7.4E+00
1,4-Dichlorobenzene	1.8E+00	GW Protection	5.0E+02	3.0E+01		2.8E+00	ca	1.8E+00
3,3-Dichlorobenzidine	5.3E-01	Human Health	5.0E+02	-		5.3E-01	ca	6.6E+01
Dichlorodiphenyldichloroethane (DDD)	2.4E+00	Human Health	5.0E+02	-		2.4E+00	ca	7.5E+02
Dichlorodiphenyldichloroethene (DDE)	1.7E+00	Human Health	5.0E+02	4.0E+00		1.7E+00	ca	1.1E+03
Dichlorodiphenyltrichloroethane (DDT)	1.7E+00	Human Health	5.0E+02	4.0E+00		1.7E+00	ca	4.3E+00
1,1-Dichloroethane	1.9E+00	GW Protection	5.0E+02	-		3.5E+00	ca	1.9E+00
1,2-Dichloroethane	4.4E-01	Human Health	1.0E+02	6.0E+01		4.4E-01	ca	9.1E-01
1,1-Dichloroethene	4.3E+00	GW Protection	5.0E+02	-		2.7E+02	nc	4.3E+00
cis-1,2-Dichloroethene	1.8E+01	GW Protection	1.0E+02	-		1.8E+01	nc	1.8E+01
trans-1,2-Dichloroethene	3.9E+01	GW Protection	5.0E+02	-		1.3E+02	nc	3.9E+01
2,4-Dichlorophenol	3.0E+00	GW Protection	5.0E+02	1.0E+01		2.3E+02	nc	3.0E+00
1,2-Dichloropropane	8.2E-01	Human Health	1.0E+02	-		8.2E-01	ca	2.5E+00
1,3-Dichloropropene	2.7E-01	Human Health	5.0E+02	-		2.7E-01	ca	2.9E+00
Dieldrin	2.3E-03	GW Protection	5.0E+02	4.0E+00		3.4E-02	ca	2.3E-03
Diethyl phthalate	3.5E-02	GW Protection	5.0E+02	-		4.9E+04	nc	3.5E-02
Dimethyl phthalate	3.5E-02	GW Protection	5.0E+02	-		6.1E+05	nc	3.5E-02
2,4-Dimethylphenol	7.4E-01	GW Protection	1.0E+02	-		1.6E+03	nc	7.4E-01
2,4-Dinitrophenol	4.2E-02	GW Protection	5.0E+02	-		1.6E+02	nc	4.2E-02
2,4-Dinitrotoluene	8.6E-01	GW Protection	5.0E+02	-		9.4E-01	ca	8.6E-01
1,4-Dioxane	2.4E+01	Human Health	5.0E+02	-		2.4E+01	ca	3.0E+01
Dioxin (2,3,7,8-TCDD)	4.5E-06	Human Health	no criteria	-		4.5E-06	ca	
Endosulfan	4.6E-03	GW Protection	5.0E+02	-		4.7E+02	nc	4.6E-03
Endrin	6.5E-04	GW Protection	5.0E+02	6.0E-02		2.3E+01	nc	6.5E-04
Ethylbenzene	4.7E+00	GW Protection	4.0E+02	-		4.8E+00	ca	4.7E+00
Fluoranthene	4.0E+01	Ecotox	5.0E+02	4.0E+01		2.3E+03	nc	6.0E+01
Fluorene	8.9E+00	GW Protection	5.0E+02	-		3.1E+03	nc	8.9E+00
Heptachlor	1.3E-02	GW Protection	1.0E+03	-		1.3E-01	ca	1.3E-02
Heptachlor epoxide	1.4E-02	GW Protection	1.0E+03	-		6.1E-02	ca	1.4E-02
Hexachlorobenzene	3.1E-01	Human Health	5.0E+02	3.0E+01		3.1E-01	ca	7.9E+02
Hexachlorobutadiene	4.6E+00	GW Protection	5.0E+02	-		8.2E+00	ca	4.6E+00
γ-Hexachlorocyclohexane (Lindane)	9.8E-03	GW Protection	5.0E+02	2.0E+00		2.1E+01	nc	9.8E-03

Table B-1. Shallow Soil Screening Levels(<3m bgs)
Residential Land Use
(groundwater is not a current or potential drinking water resource)

Residential Land Use (mg/kg)								
Chemical	Final ESL	Basis	Ceiling Value (Odors, etc.) (Table H-2)	Urban Area Ecotoxicity	Background	Human Health (Table K-1)	Endpoint	Protection of Groundwater (Table G)
Hexachloroethane	1.2E+01	Human Health	5.0E+02	-		1.2E+01	ca	4.1E+01
Indeno(1,2,3-c,d)pyrene	3.8E-01	Human Health	5.0E+02	4.0E+01		3.8E-01	ca	1.5E+01
Lead	8.0E+01	Human Health	1.0E+03	2.0E+02		8.0E+01	nc	
Mercury (elemental)	6.7E+00	Human Health	5.0E+02	1.0E+01		6.7E+00	nc	
Methoxychlor	1.9E+01	GW Protection	5.0E+02	-		3.9E+02	nc	1.9E+01
Methylene chloride	9.9E+00	Human Health	5.0E+02	-		9.9E+00	ca	3.4E+01
Methyl ethyl ketone	1.3E+01	GW Protection	5.0E+02	-		3.2E+04	nc	1.3E+01
Methyl isobutyl ketone	3.9E+00	GW Protection	1.0E+02	1.0E+01		3.6E+04	nc	3.9E+00
Methyl mercury	6.1E+00	Human Health	1.0E+02	-		6.1E+00	nc	
2-Methylnaphthalene	2.5E-01	GW Protection	5.0E+02	-		2.3E+02	nc	2.5E-01
tert-Butyl methyl ether	8.4E+00	GW Protection	1.0E+02	-		3.9E+01	ca	8.4E+00
Molybdenum	4.0E+01	Ecotox	1.0E+03	4.0E+01		3.9E+02	nc	
Naphthalene	3.1E+00	Human Health	5.0E+02	4.0E+01		3.1E+00	ca	4.8E+00
Nickel	1.5E+02	Ecotox	1.0E+03	1.5E+02		1.5E+03	nc	
Pentachlorophenol	3.0E+00	Human Health	5.0E+02	5.0E+00		3.0E+00	ca	2.7E+06
Perchlorate	5.5E+01	Human Health	1.0E+03	-		5.5E+01	nc	
Phenanthrene	1.1E+01	GW Protection	5.0E+02	4.0E+01		No Value	nc	1.1E+01
Phenol	3.9E+00	GW Protection	5.0E+02	4.0E+01		2.3E+04	nc	3.9E+00
Polychlorinated biphenyls (PCBs)	2.2E-01	Human Health	5.0E+02	-		2.2E-01	ca	6.3E+00
Pyrene	8.5E+01	GW Protection	5.0E+02	-		3.4E+03	nc	8.5E+01
Selenium	1.0E+01	Ecotox	1.0E+03	1.0E+01		3.9E+02	nc	
Silver	2.0E+01	Ecotox	1.0E+03	2.0E+01		3.9E+02	nc	
Styrene	1.5E+01	GW Protection	5.0E+02	-		6.9E+03	nc	1.5E+01
tert-Butyl alcohol	1.0E+02	Ceiling Value	1.0E+02	-		No Value	nc	1.1E+02
1,1,1,2-Tetrachloroethane	3.8E+00	Human Health	1.0E+02	-		3.8E+00	ca	1.6E+01
1,1,2,2-Tetrachloroethane	4.7E-01	Human Health	5.0E+02	-		4.7E-01	ca	4.2E+00
Tetrachloroethene	5.5E-01	Human Health	2.3E+02	-		5.5E-01	ca	8.9E+00
Thallium	7.8E-01	Human Health	1.0E+03	-		7.8E-01	nc	
Toluene	9.3E+00	GW Protection	5.0E+02	-		1.0E+03	nc	9.3E+00
Toxaphene	4.2E-04	GW Protection	5.0E+02	-		4.6E-01	ca	4.2E-04
TPH gasoline	1.0E+02	Ceiling Value	1.0E+02	-		7.7E+02	nc	3.8E+03
TPH diesel	1.0E+02	Ceiling Value	1.0E+02	-		2.4E+02	nc	3.6E+03
TPH motor oil	1.0E+02	Ceiling Value	1.0E+02	-		1.0E+04	nc	
1,2,4-Trichlorobenzene	7.6E+00	GW Protection	1.0E+03	3.0E+01		1.4E+02	nc	7.6E+00
1,1,1-Trichloroethane	7.8E+00	GW Protection	5.0E+02	-		1.1E+04	nc	7.8E+00
1,1,2-Trichloroethane	8.8E-01	Human Health	1.0E+02	-		8.8E-01	ca	1.3E+01
Trichloroethene	1.7E+00	Human Health	5.0E+02	6.0E+01		1.7E+00	ca	1.2E+01
2,4,5-Trichlorophenol	1.8E-01	GW Protection	1.0E+02	1.0E+01		7.8E+03	nc	1.8E-01
2,4,6-Trichlorophenol	7.8E+00	Human Health	1.0E+02	1.0E+01		7.8E+00	nc	3.2E+01
Vanadium	2.0E+02	Ecotox	1.0E+03	2.0E+02		3.9E+02	nc	
Vinyl chloride	3.2E-02	Human Health	5.0E+02	6.0E+01		3.2E-02	ca	3.1E-01
Xylenes	1.1E+01	GW Protection	4.2E+02	-		6.0E+02	nc	1.1E+01
Zinc	6.0E+02	Ecotox	1.0E+03	6.0E+02		2.3E+04	nc	

Notes:
Shallow soils defined as soils <3 meters below ground surface.
Final Environmental Screening Level is lowest of ceiling value (nuisance concerns etc.), ecotoxicity, direct-exposure, and leaching to groundwater
Soil data should be reported on dry-weight basis.

Table B-2. Shallow Soil Screening Levels (<3m bgs)
Commercial/industrial Land Use
(groundwater is not a current or potential drinking water resource)

Commercial/Industrial Land Use (mg/kg)							
Chemical	**Final ESL**	**Basis**	**Ceiling Value (Odors, etc.) (Table H-2)**	**Urban Area Ecotoxicity Criteria**	**Human Health (Table K-2)**	**Endpoint**	**Protection of Groundwater (Table G)**
Acenaphthene	1.9E+01	GW Protection	2.5E+03	-	1.5E+04	nc	1.9E+01
Acenaphthylene	1.3E+01	GW Protection	1.0E+03	-	No Value	nc	1.3E+01
Acetone	5.0E-01	GW Protection	1.0E+03	-	5.9E+05	nc	5.0E-01
Aldrin	1.3E-01	Human Health	2.5E+03	3.5E-01	1.3E-01	ca	5.0E+00
Anthracene	2.8E+00	GW Protection	1.0E+03	4.0E+01	1.7E+05	nc	2.8E+00
Antimony	4.0E+01	Ecotox	2.5E+03	4.0E+01	4.1E+02	nc	
Arsenic	1.6E+00	Human Health	2.5E+03	4.0E+01	1.6E+00	ca	
Barium	1.5E+03	Ecotox	2.5E+03	1.5E+03	1.9E+05	nc	
Benzene	1.2E+00	GW Protection	8.7E+02	2.5E+01	3.7E+00	ca	1.2E+00
Benzo(a)anthracene	1.3E+00	Human Health	1.0E+03	4.0E+01	1.3E+00	ca	1.2E+01
Benzo(b)fluoranthene	1.3E+00	Human Health	1.0E+03	4.0E+01	1.3E+00	ca	4.6E+01
Benzo(k)fluoranthene	1.3E+00	Human Health	1.0E+03	-	1.3E+00	ca	3.7E+01
Benzo(g,h,i)perylene	2.7E+01	GW Protection	1.0E+03	4.0E+01	No Value	nc	2.7E+01
Benzo(a)pyrene	1.3E-01	Human Health	1.0E+03	4.0E+01	1.3E-01	ca	1.3E+02
Beryllium	8.0E+00	Ecotox	2.5E+03	8.0E+00	2.0E+03	nc	
1,1-Biphenyl	6.5E+00	GW Protection	1.0E+03	-	3.1E+04	nc	6.5E+00
Bis(2-chloroethyl) ether	1.6E-01	GW Protection	1.0E+03	-	5.2E-01	ca	1.6E-01
Bis(2-chloroisopropyl) ether	1.3E-01	GW Protection	7.9E+02	-	No Value	nc	1.3E-01
Bis(2-ethylhexyl) phthalate	5.7E+02	Human Health	1.0E+03	-	5.7E+02	ca	7.8E+02
Boron	2.0E+00	Ecotox	2.5E+03	2.0E+00	2.0E+05	nc	
Bromodichloromethane	2.4E+00	Human Health	2.5E+03	-	2.4E+00	ca	2.1E+01
Bromoform (Tribromomethane)	2.4E+01	GW Protection	1.0E+03	-	2.6E+02	ca	2.4E+01
Bromomethane	6.4E+00	GW Protection	1.0E+03	-	3.8E+01	nc	6.4E+00
Cadmium (water)	5.1E+02	Human Health			5.1E+02	nc	
Cadmium (soil)	1.2E+01	Ecotox	2.5E+03	1.2E+01	1.0E+03	nc	
Carbon tetrachloride	5.8E-01	Human Health	1.0E+03	-	5.8E-01	ca	1.0E+00
Chlordane	1.7E+00	Human Health	2.5E+03	-	1.7E+00	ca	1.5E+01
p-Chloroaniline	5.3E-02	GW Protection	1.0E+03	-	4.1E+03	nc	5.3E-02
Chlorobenzene	1.5E+00	GW Protection	6.8E+02	3.0E+01	1.2E+04	nc	1.5E+00
Chloroethane	1.1E+00	GW Protection	1.0E+03	-	1.7E+05	nc	1.1E+00
Chloroform	5.0E+00	GW Protection	1.0E+03	-	5.7E+00	ca	5.0E+00
Chloromethane	1.7E+02	GW Protection	5.0E+02	-	4.5E+02	nc	1.7E+02
2-Chlorophenol	1.2E-01	GW Protection	5.0E+02	1.0E+01	5.1E+03	nc	1.2E-01
Chromium (total)	2.5E+03	Ceiling Value	2.5E+03	-	No Value	nc	
Chromium III	7.5E+02	Ecotox	2.5E+03	7.5E+02	1.5E+06	nc	
Chromium VI	8.0E+00	Ecotox	2.5E+03	8.0E+00	1.1E+02	ca	
Chrysene	1.3E+01	Human Health	1.0E+03	4.0E+01	1.3E+01	ca	2.3E+01
Cobalt	8.0E+01	Ecotox	2.5E+03	8.0E+01	3.0E+02	nc	
Copper	2.3E+02	Ecotox	2.5E+03	2.3E+02	4.1E+04	nc	
Cyanide	3.6E-03	GW Protection	5.0E+02	-	3.7E+02	nc	3.6E-03
Dibenz(a,h)anthracene	3.8E-01	Human Health	1.0E+03	-	3.8E-01	ca	1.4E+02
Dibromochloromethane	3.4E+01	Human Health	5.0E+02	-	3.4E+01	ca	9.1E+01
1,2-dibromo-3-chloropropane	4.5E-03	GW Protection	1.0E+03	-	4.1E-01	ca	4.5E-03
1,2-Dibromoethane	5.1E-01	GW Protection	1.0E+03	-	5.3E-01	ca	5.1E-01
1,2-Dichlorobenzene	1.6E+00	GW Protection	6.0E+02	3.0E+01	1.1E+04	nc	1.6E+00
1,3-Dichlorobenzene	7.4E+00	GW Protection	5.0E+02	3.0E+01	No Value	nc	7.4E+00
1,4-Dichlorobenzene	1.8E+00	GW Protection	1.0E+03	3.0E+01	1.4E+01	ca	1.8E+00
3,3-Dichlorobenzidine	2.4E+00	Human Health	1.0E+03	-	2.4E+00	ca	6.6E+01
Dichlorodiphenyldichloroethane (DDD)	1.0E+01	Human Health	1.0E+03	-	1.0E+01	ca	7.5E+02
Dichlorodiphenyldichloroethene (DDE)	4.0E+00	Ecotox	1.0E+03	4.0E+00	7.0E+00	ca	1.1E+03
Dichlorodiphenyltrichloroethane (DDT)	4.0E+00	Ecotox	1.0E+03	4.0E+00	7.0E+00	ca	4.3E+00
1,1-Dichloroethane	1.9E+00	GW Protection	1.0E+03	-	1.8E+01	ca	1.9E+00
1,2-Dichloroethane	9.1E-01	GW Protection	5.0E+02	6.0E+01	2.2E+00	ca	9.1E-01
1,1-Dichloroethene	4.3E+00	GW Protection	1.0E+03	-	1.2E+03	nc	4.3E+00
cis-1,2-Dichloroethene	1.8E+01	GW Protection	5.0E+02	-	8.4E+01	nc	1.8E+01
trans-1,2-Dichloroethene	3.9E+01	GW Protection	1.0E+03	-	5.9E+02	nc	3.9E+01
2,4-Dichlorophenol	3.0E+00	GW Protection	1.0E+03	1.0E+01	3.1E+03	nc	3.0E+00
1,2-Dichloropropane	2.5E+00	GW Protection	5.0E+02	-	4.1E+00	ca	2.5E+00
1,3-Dichloropropene	1.3E+00	Human Health	1.0E+03	-	1.3E+00	ca	2.9E+00
Dieldrin	2.3E-03	GW Protection	1.0E+03	4.0E+00	1.3E-01	ca	2.3E-03
Diethyl phthalate	3.5E-02	GW Protection	1.0E+03	-	4.9E+05	nc	3.5E-02
Dimethyl phthalate	3.5E-02	GW Protection	1.0E+03	-	6.2E+06	nc	3.5E-02
2,4-Dimethylphenol	7.4E-01	GW Protection	5.0E+02	-	2.0E+04	nc	7.4E-01
2,4-Dinitrophenol	4.2E-02	GW Protection	1.0E+03	-	2.0E+03	nc	4.2E-02
2,4-Dinitrotoluene	8.6E-01	GW Protection	1.0E+03	-	4.2E+00	ca	8.6E-01
1,4-Dioxane	3.0E+01	GW Protection	1.0E+03	-	1.1E+02	ca	3.0E+01
Dioxin (2,3,7,8-TCDD)	1.8E-05	Human Health	no criteria	-	1.8E-05	ca	
Endosulfan	4.6E-03	GW Protection	1.0E+03	-	4.6E+03	nc	4.6E-03
Endrin	6.5E-04	GW Protection	1.0E+03	6.0E-02	2.3E+02	nc	6.5E-04
Ethylbenzene	4.7E+00	GW Protection	4.0E+02	-	2.4E+01	ca	4.7E+00
Fluoranthene	4.0E+01	Ecotox	1.0E+03	4.0E+01	2.2E+04	nc	6.0E+01
Fluorene	8.9E+00	GW Protection	1.0E+03	-	2.2E+04	nc	8.9E+00

Table B-2. Shallow Soil Screening Levels (<3m bgs)
Commercial/industrial Land Use
(groundwater is not a current or potential drinking water resource)

Commercial/Industrial Land Use (mg/kg)							
Chemical	**Final ESL**	**Basis**	**Ceiling Value (Odors, etc.) (Table H-2)**	**Urban Area Ecotoxicity Criteria**	**Human Health (Table K-2)**	**Endpoint**	**Protection of Groundwater (Table G)**
Heptachlor	1.3E-02	GW Protection	2.5E+03	-	5.2E-01	ca	1.3E-02
Heptachlor epoxide	1.4E-02	GW Protection	2.5E+03	-	2.4E-01	ca	1.4E-02
Hexachlorobenzene	1.2E+00	Human Health	1.0E+03	3.0E+01	1.2E+00	ca	7.9E+02
Hexachlorobutadiene	4.6E+00	GW Protection	1.0E+03	-	3.7E+01	ca	4.6E+00
γ-Hexachlorocyclohexane (Lindane)	9.8E-03	GW Protection	1.0E+03	2.0E+00	2.3E+02	nc	9.8E-03
Hexachloroethane	4.1E+01	GW Protection	1.0E+03	-	4.4E+01	ca	4.1E+01
Indeno(1,2,3-c,d)pyrene	1.3E+00	Human Health	1.0E+03	4.0E+01	1.3E+00	ca	1.5E+01
Lead	3.2E+02	Human Health	2.5E+03	-	3.2E+02	nc	
Mercury (elemental)	1.0E+01	Ecotox	1.0E+03	1.0E+01	8.8E+01	nc	
Methoxychlor	1.9E+01	GW Protection	1.0E+03	-	3.8E+03	nc	1.9E+01
Methylene chloride	3.4E+01	GW Protection	1.0E+03	-	4.9E+01	ca	3.4E+01
Methyl ethyl ketone	1.3E+01	GW Protection	1.0E+03	-	2.5E+05	nc	1.3E+01
Methyl isobutyl ketone	3.9E+00	GW Protection	5.0E+02	1.0E+01	2.4E+05	nc	3.9E+00
Methyl mercury	6.2E+01	Human Health	5.0E+02	-	6.2E+01	nc	
2-Methylnaphthalene	2.5E-01	GW Protection	1.0E+03	-	2.2E+03	nc	2.5E-01
tert-Butyl methyl ether	8.4E+00	GW Protection	5.0E+02	-	1.9E+02	ca	8.4E+00
Molybdenum	4.0E+01	Ecotox	2.5E+03	4.0E+01	5.1E+03	nc	
Naphthalene	4.8E+00	GW Protection	1.0E+03	4.0E+01	1.5E+01	ca	4.8E+00
Nickel	1.5E+02	Ecotox	2.5E+03	1.5E+02	1.9E+04	nc	
Pentachlorophenol	5.0E+00	Ecotox	1.0E+03	5.0E+00	9.0E+00	ca	2.7E+06
Perchlorate	7.2E+02	Human Health	2.5E+03	-	7.2E+02	nc	
Phenanthrene	1.1E+01	GW Protection	1.0E+03	4.0E+01	No Value	nc	1.1E+01
Phenol	3.9E+00	GW Protection	1.0E+03	4.0E+01	3.1E+05	nc	3.9E+00
Polychlorinated biphenyls (PCBs)	7.4E-01	Human Health	1.0E+03	-	7.4E-01	ca	6.3E+00
Pyrene	8.5E+01	GW Protection	1.0E+03	-	3.3E+04	nc	8.5E+01
Selenium	1.0E+01	Ecotox	2.5E+03	1.0E+01	5.1E+03	nc	
Silver	4.0E+01	Ecotox	2.5E+03	4.0E+01	5.1E+03	nc	
Styrene	1.5E+01	GW Protection	1.0E+03	-	4.2E+04	nc	1.5E+01
tert-Butyl alcohol	1.1E+02	GW Protection	5.0E+02	-	No Value	nc	1.1E+02
1,1,1,2-Tetrachloroethane	1.6E+01	GW Protection	5.0E+02	-	1.9E+01	ca	1.6E+01
1,1,2,2-Tetrachloroethane	2.3E+00	Human Health	1.0E+03	-	2.3E+00	ca	4.2E+00
Tetrachloroethene	2.6E+00	Human Health	2.3E+02	-	2.6E+00	ca	8.9E+00
Thallium	1.0E+01	Human Health	2.5E+03	-	1.0E+01	nc	
Toluene	9.3E+00	GW Protection	6.5E+02	-	4.9E+03	nc	9.3E+00
Toxaphene	4.2E-04	GW Protection	1.0E+03	-	1.8E+00	ca	4.2E-04
TPH gasoline	5.0E+02	Ceiling Value	5.0E+02	-	4.0E+03	nc	3.8E+03
TPH diesel	1.1E+02	Ceiling Value	1.1E+02	-	1.1E+03	nc	3.6E+03
TPH motor oil	5.0E+02	Ceiling Value	5.0E+02	-	1.0E+05	nc	
1,2,4-Trichlorobenzene	7.6E+00	GW Protection	2.5E+03	3.0E+01	7.0E+02	nc	7.6E+00
1,1,1-Trichloroethane	7.8E+00	GW Protection	1.0E+03	-	4.7E+04	nc	7.8E+00
1,1,2-Trichloroethane	4.4E+00	Human Health	5.0E+02	-	4.4E+00	ca	1.3E+01
Trichloroethene	8.3E+00	Human Health	1.0E+03	6.0E+01	8.3E+00	ca	1.2E+01
2,4,5-Trichlorophenol	1.8E-01	GW Protection	5.0E+02	1.0E+01	1.0E+05	nc	1.8E-01
2,4,6-Trichlorophenol	1.0E+01	Ecotox	5.0E+02	1.0E+01	1.0E+02	nc	3.2E+01
Vanadium	2.0E+02	Ecotox	2.5E+03	2.0E+02	5.1E+03	nc	
Vinyl chloride	1.6E-01	Human Health	1.0E+03	6.0E+01	1.6E-01	ca	3.1E-01
Xylenes	1.1E+01	GW Protection	4.2E+02	-	2.6E+03	nc	1.1E+01
Zinc	6.0E+02	Ecotox	2.5E+03	6.0E+02	3.1E+05	nc	

Notes:
Shallow soils defined as soils <3 meters below ground surface.
Final Environmental Screening Level is lowest of ceiling value (nuisance concerns etc.), ecotoxicity, direct-exposure, indoor-air, and leaching screening levels.
Soil data should be reported on dry-weight basis.

Table C-1. Deep Soil Screening Levels (>3m bgs)
Residential Land Use
(groundwater is a current or potential drinking water resource)

Residential Land Use (mg/kg)						
Chemical	Final ESL	Basis	Ceiling Value (Odors, etc.) (Table H-3)	Human Health (Table K-1)	Endpoint	Protection of Groundwater (Table G)
Acenaphthene	1.6E+01	GW Protection	2.5E+03	3.4E+03	nc	1.6E+01
Acenaphthylene	1.3E+01	GW Protection	1.0E+03	No Value	nc	1.3E+01
Acetone	5.0E-01	GW Protection	1.0E+03	6.0E+04	nc	5.0E-01
Aldrin	3.2E-02	Human Health	2.5E+03	3.2E-02	ca	5.0E+00
Anthracene	2.8E+00	GW Protection	1.0E+03	2.3E+04	nc	2.8E+00
Antimony	3.1E+01	Human Health	2.5E+03	3.1E+01	nc	
Arsenic	3.9E-01	Human Health	2.5E+03	3.9E-01	ca	
Barium	2.5E+03	Ceiling Value	2.5E+03	1.5E+04	nc	
Benzene	4.4E-02	GW Protection	8.7E+02	7.4E-01	ca	4.4E-02
Benzo(a)anthracene	3.8E-01	Human Health	1.0E+03	3.8E-01	ca	1.2E+01
Benzo(b)fluoranthene	3.8E-01	Human Health	1.0E+03	3.8E-01	ca	4.6E+01
Benzo(k)fluoranthene	3.8E-01	Human Health	1.0E+03	3.8E-01	ca	5.1E+00
Benzo(g,h,i)perylene	2.7E+01	GW Protection	1.0E+03	No Value	nc	2.7E+01
Benzo(a)pyrene	3.8E-02	Human Health	1.0E+03	3.8E-02	ca	1.3E+02
Beryllium	1.6E+02	Human Health	2.5E+03	1.6E+02	nc	
1,1-Biphenyl	6.5E-01	GW Protection	1.0E+03	3.9E+03	nc	6.5E-01
Bis(2-chloroethyl) ether	7.0E-05	GW Protection	1.0E+03	1.1E-01	ca	7.0E-05
Bis(2-chloroisopropyl) ether	1.3E-01	GW Protection	7.9E+02	No Value	nc	1.3E-01
Bis(2-ethylhexyl) phthalate	1.6E+02	Human Health	1.0E+03	1.6E+02	ca	7.8E+02
Boron	2.5E+03	Ceiling Value	2.5E+03	1.6E+04	nc	
Bromodichloromethane	4.8E-01	Human Health	2.5E+03	4.8E-01	ca	1.5E+00
Bromoform (Tribromomethane)	1.7E+00	GW Protection	1.0E+03	5.8E+01	ca	1.7E+00
Bromomethane	2.8E-01	GW Protection	1.0E+03	8.6E+00	nc	2.8E-01
Cadmium (water)	0.0E+00	Ceiling Value			nc	
Cadmium (soil)	7.8E+01	Human Health	2.5E+03	7.8E+01	nc	
Carbon tetrachloride	1.1E-01	GW Protection	1.0E+03	1.2E-01	ca	1.1E-01
Chlordane	4.4E-01	Human Health	2.5E+03	4.4E-01	ca	1.5E+01
p -Chloroaniline	5.3E-02	GW Protection	1.0E+03	3.1E+02	nc	5.3E-02
Chlorobenzene	1.5E+00	GW Protection	6.8E+02	1.3E+03	nc	1.5E+00
Chloroethane	1.1E+00	GW Protection	1.0E+03	4.1E+04	nc	1.1E+00
Chloroform	1.1E+00	Human Health	1.0E+03	1.1E+00	ca	2.4E+00
Chloromethane	2.0E+01	GW Protection	5.0E+02	1.0E+02	nc	2.0E+01
2-Chlorophenol	1.2E-02	GW Protection	5.0E+02	3.9E+02	nc	1.2E-02
Chromium (total)	2.5E+03	Ceiling Value	2.5E+03	No Value	nc	
Chromium III	2.5E+03	Ceiling Value	2.5E+03	1.2E+05	nc	
Chromium VI	2.1E+01	Human Health	2.5E+03	2.1E+01	ca	
Chrysene	3.8E+00	Human Health	1.0E+03	3.8E+00	ca	2.3E+01
Cobalt	2.3E+01	Human Health	2.5E+03	2.3E+01	nc	
Copper	2.5E+03	Ceiling Value	2.5E+03	3.1E+03	nc	
Cyanide	3.6E-03	GW Protection	5.0E+02	3.7E+01	nc	3.6E-03
Dibenz(a,h)anthracene	1.1E-01	Human Health	1.0E+03	1.1E-01	ca	9.9E+00
Dibromochloromethane	6.6E+00	GW Protection	5.0E+02	7.6E+00	ca	6.6E+00
1,2-dibromo-3-chloropropane	4.5E-03	GW Protection	1.0E+03	9.1E-02	ca	4.5E-03
1,2-Dibromoethane	3.3E-04	GW Protection	1.0E+03	1.1E-01	ca	3.3E-04
1,2-Dichlorobenzene	1.1E+00	GW Protection	6.0E+02	2.1E+03	nc	1.1E+00
1,3-Dichlorobenzene	7.4E+00	GW Protection	5.0E+02	No Value	nc	7.4E+00
1,4-Dichlorobenzene	5.9E-01	GW Protection	1.0E+03	2.8E+00	ca	5.9E-01
3,3-Dichlorobenzidine	1.5E-02	GW Protection	1.0E+03	5.3E-01	ca	1.5E-02
Dichlorodiphenyldichloroethane (DDD)	2.4E+00	Human Health	1.0E+03	2.4E+00	ca	7.5E+02
Dichlorodiphenyldichloroethene (DDE)	1.7E+00	Human Health	1.0E+03	1.7E+00	ca	1.1E+03
Dichlorodiphenyltrichloroethane (DDT)	1.7E+00	Human Health	1.0E+03	1.7E+00	ca	4.3E+00
1,1-Dichloroethane	2.0E-01	GW Protection	1.0E+03	3.5E+00	ca	2.0E-01
1,2-Dichloroethane	4.5E-03	GW Protection	5.0E+02	4.4E-01	ca	4.5E-03
1,1-Dichloroethene	1.0E+00	GW Protection	1.0E+03	2.7E+02	nc	1.0E+00
cis -1,2-Dichloroethene	1.9E-01	GW Protection	5.0E+02	1.8E+01	nc	1.9E-01
trans -1,2-Dichloroethene	6.7E-01	GW Protection	1.0E+03	1.3E+02	nc	6.7E-01
2,4-Dichlorophenol	3.0E-01	GW Protection	1.0E+03	2.3E+02	nc	3.0E-01
1,2-Dichloropropane	1.2E-01	GW Protection	5.0E+02	8.2E-01	ca	1.2E-01
1,3-Dichloropropene	5.9E-02	GW Protection	1.0E+03	2.7E-01	ca	5.9E-02
Dieldrin	2.3E-03	GW Protection	1.0E+03	3.4E-02	ca	2.3E-03
Diethyl phthalate	3.5E-02	GW Protection	1.0E+03	4.9E+04	nc	3.5E-02
Dimethyl phthalate	3.5E-02	GW Protection	1.0E+03	6.1E+05	nc	3.5E-02
2,4-Dimethylphenol	6.7E-01	GW Protection	5.0E+02	1.6E+03	nc	6.7E-01
2,4-Dinitrophenol	4.2E-02	GW Protection	1.0E+03	1.6E+02	nc	4.2E-02
2,4-Dinitrotoluene	7.4E-04	GW Protection	1.0E+03	9.4E-01	ca	7.4E-04
1,4-Dioxane	1.5E-03	GW Protection	1.0E+03	2.4E+01	ca	1.5E-03

Table C-1. Deep Soil Screening Levels (>3m bgs)
Residential Land Use
(groundwater is a current or potential drinking water resource)

Residential Land Use (mg/kg)						
Chemical	Final ESL	Basis	Ceiling Value (Odors, etc.) (Table H-3)	Human Health (Table K-1)	Endpoint	Protection of Groundwater (Table G)
Dioxin (2,3,7,8-TCDD)	4.5E-06	Human Health	no criteria	4.5E-06	ca	
Endosulfan	4.6E-03	GW Protection	1.0E+03	4.7E+02	nc	4.6E-03
Endrin	6.5E-04	GW Protection	1.0E+03	2.3E+01	nc	6.5E-04
Ethylbenzene	3.3E+00	GW Protection	4.0E+02	4.8E+00	ca	3.3E+00
Fluoranthene	6.0E+01	GW Protection	1.0E+03	2.3E+03	nc	6.0E+01
Fluorene	8.9E+00	GW Protection	1.0E+03	3.1E+03	nc	8.9E+00
Heptachlor	1.3E-02	GW Protection	2.5E+03	1.3E-01	ca	1.3E-02
Heptachlor epoxide	1.4E-02	GW Protection	2.5E+03	6.1E-02	ca	1.4E-02
Hexachlorobenzene	3.1E-01	Human Health	1.0E+03	3.1E-01	ca	7.9E+02
Hexachlorobutadiene	4.3E+00	GW Protection	1.0E+03	8.2E+00	ca	4.3E+00
γ-Hexachlorocyclohexane (Lindane)	9.8E-03	GW Protection	1.0E+03	2.1E+01	nc	9.8E-03
Hexachloroethane	5.8E+00	GW Protection	1.0E+03	1.2E+01	ca	5.8E+00
Indeno(1,2,3-c,d)pyrene	3.8E-01	Human Health	1.0E+03	3.8E-01	ca	1.5E+01
Lead	8.0E+01	Human Health	2.5E+03	8.0E+01	nc	
Mercury (elemental)	6.7E+00	Human Health	1.0E+03	6.7E+00	nc	
Methoxychlor	1.9E+01	GW Protection	1.0E+03	3.9E+02	nc	1.9E+01
Methylene chloride	7.7E-02	GW Protection	1.0E+03	9.9E+00	ca	7.7E-02
Methyl ethyl ketone	4.5E+00	GW Protection	1.0E+03	3.2E+04	nc	4.5E+00
Methyl isobutyl ketone	2.8E+00	GW Protection	5.0E+02	3.6E+04	nc	2.8E+00
Methyl mercury	6.1E+00	Human Health	5.0E+02	6.1E+00	nc	
2-Methylnaphthalene	2.5E-01	GW Protection	1.0E+03	2.3E+02	nc	2.5E-01
tert-Butyl methyl ether	2.3E-02	GW Protection	5.0E+02	3.9E+01	ca	2.3E-02
Molybdenum	3.9E+02	Human Health	2.5E+03	3.9E+02	nc	
Naphthalene	1.2E+00	GW Protection	1.0E+03	3.1E+00	ca	1.2E+00
Nickel	1.5E+03	Human Health	2.5E+03	1.5E+03	nc	
Pentachlorophenol	3.0E+00	Human Health	1.0E+03	3.0E+00	ca	2.7E+06
Perchlorate	5.5E+01	Human Health	2.5E+03	5.5E+01	nc	
Phenanthrene	1.1E+01	GW Protection	1.0E+03	No Value	nc	1.1E+01
Phenol	7.6E-02	GW Protection	1.0E+03	2.3E+04	nc	7.6E-02
Polychlorinated biphenyls (PCBs)	2.2E-01	Human Health	1.0E+03	2.2E-01	ca	6.3E+00
Pyrene	8.5E+01	GW Protection	1.0E+03	3.4E+03	nc	8.5E+01
Selenium	3.9E+02	Human Health	2.5E+03	3.9E+02	nc	
Silver	3.9E+02	Human Health	2.5E+03	3.9E+02	nc	
Styrene	1.5E+00	GW Protection	1.0E+03	6.9E+03	nc	1.5E+00
tert-Butyl alcohol	7.5E-02	GW Protection	5.0E+02	No Value	nc	7.5E-02
1,1,1,2-Tetrachloroethane	9.1E-03	GW Protection	5.0E+02	3.8E+00	ca	9.1E-03
1,1,2,2-Tetrachloroethane	1.8E-02	GW Protection	1.0E+03	4.7E-01	ca	1.8E-02
Tetrachloroethene	5.5E-01	Human Health	2.3E+02	5.5E-01	ca	7.0E-01
Thallium	7.8E-01	Human Health	2.5E+03	7.8E-01	nc	
Toluene	2.9E+00	GW Protection	6.5E+02	1.0E+03	nc	2.9E+00
Toxaphene	4.2E-04	GW Protection	1.0E+03	4.6E-01	ca	4.2E-04
TPH gasoline	5.0E+02	Ceiling Value	5.0E+02	7.7E+02	nc	7.7E+02
TPH diesel	1.1E+02	Ceiling Value	1.1E+02	2.4E+02	nc	5.7E+02
TPH motor oil	5.0E+02	Ceiling Value	5.0E+02	1.0E+04	nc	
1,2,4-Trichlorobenzene	1.5E+00	GW Protection	2.5E+03	1.4E+02	nc	1.5E+00
1,1,1-Trichloroethane	7.8E+00	GW Protection	1.0E+03	1.1E+04	nc	7.8E+00
1,1,2-Trichloroethane	7.0E-02	GW Protection	5.0E+02	8.8E-01	ca	7.0E-02
Trichloroethene	4.6E-01	GW Protection	1.0E+03	1.7E+00	ca	4.6E-01
2,4,5-Trichlorophenol	1.8E-01	GW Protection	5.0E+02	7.8E+03	nc	1.8E-01
2,4,6-Trichlorophenol	5.2E-01	GW Protection	5.0E+02	7.8E+00	nc	5.2E-01
Vanadium	3.9E+02	Human Health	2.5E+03	3.9E+02	nc	
Vinyl chloride	3.2E-02	Human Health	1.0E+03	3.2E-02	ca	8.5E-02
Xylenes	2.3E+00	GW Protection	4.2E+02	6.0E+02	nc	2.3E+00
Zinc	2.5E+03	Ceiling Value	2.5E+03	2.3E+04	nc	

Notes:
Deep soils defined as soils >3 meters below ground surface.
Final Environmental Screening Level is lowest of ceiling values (nuisance concerns etc.), direct-exposure, and leaching to groundwater
Soil data should be reported on dry-weight basis.

Table C-2. Deep Soil Screening Levels (>3m bgs)
Commercial/Industrial Land Use
(groundwater is a current or potential drinking water resource)

Commercial/Industrial Land Use (mg/kg)						
Chemical	Final ESL	Basis	Ceiling Value (Odors, etc.) (Table H-3)	Human Health (Table K-2)	Endpoint	Protection of Groundwater (Table G)
Acenaphthene	1.6E+01	GW Protection	5.0E+03	1.5E+04	nc	1.6E+01
Acenaphthylene	1.3E+01	GW Protection	2.5E+03	No Value	nc	1.3E+01
Acetone	5.0E-01	GW Protection	2.5E+03	5.9E+05	nc	5.0E-01
Aldrin	1.3E-01	Human Health	5.0E+03	1.3E-01	ca	5.0E+00
Anthracene	2.8E+00	GW Protection	2.5E+03	1.7E+05	nc	2.8E+00
Antimony	4.1E+02	Human Health	5.0E+03	4.1E+02	nc	
Arsenic	1.6E+00	Human Health	5.0E+03	1.6E+00	ca	
Barium	5.0E+03	Ceiling Value	5.0E+03	1.9E+05	nc	
Benzene	4.4E-02	GW Protection	8.7E+02	3.7E+00	ca	4.4E-02
Benzo(a)anthracene	1.3E+00	Human Health	2.5E+03	1.3E+00	ca	1.2E+01
Benzo(b)fluoranthene	1.3E+00	Human Health	2.5E+03	1.3E+00	ca	4.6E+01
Benzo(k)fluoranthene	1.3E+00	Human Health	2.5E+03	1.3E+00	ca	5.1E+00
Benzo(g,h,i)perylene	2.7E+01	GW Protection	2.5E+03	No Value	nc	2.7E+01
Benzo(a)pyrene	1.3E-01	Human Health	2.5E+03	1.3E-01	ca	1.3E+02
Beryllium	2.0E+03	Human Health	5.0E+03	2.0E+03	nc	
1,1-Biphenyl	6.5E-01	GW Protection	2.5E+03	3.1E+04	nc	6.5E-01
Bis(2-chloroethyl) ether	7.0E-05	GW Protection	2.5E+03	5.2E-01	ca	7.0E-05
Bis(2-chloroisopropyl) ether	1.3E-01	GW Protection	7.9E+02	No Value	nc	1.3E-01
Bis(2-ethylhexyl) phthalate	5.7E+02	Human Health	2.5E+03	5.7E+02	ca	7.8E+02
Boron	5.0E+03	Ceiling Value	5.0E+03	2.0E+05	nc	
Bromodichloromethane	1.5E+00	GW Protection	3.0E+03	2.4E+00	ca	1.5E+00
Bromoform (Tribromomethane)	1.7E+00	GW Protection	2.5E+03	2.6E+02	ca	1.7E+00
Bromomethane	2.8E-01	GW Protection	2.5E+03	3.8E+01	nc	2.8E-01
Cadmium (water)	5.1E+02	Human Health		5.1E+02	nc	
Cadmium (soil)	1.0E+03	Human Health	5.0E+03	1.0E+03	nc	
Carbon tetrachloride	1.1E-01	GW Protection	1.1E+03	5.8E-01	ca	1.1E-01
Chlordane	1.7E+00	Human Health	5.0E+03	1.7E+00	ca	1.5E+01
p-Chloroaniline	5.3E-02	GW Protection	2.5E+03	4.1E+03	nc	5.3E-02
Chlorobenzene	1.5E+00	GW Protection	6.8E+02	1.2E+04	nc	1.5E+00
Chloroethane	1.1E+00	GW Protection	1.6E+03	1.7E+05	nc	1.1E+00
Chloroform	2.4E+00	GW Protection	2.5E+03	5.7E+00	ca	2.4E+00
Chloromethane	2.0E+01	GW Protection	1.0E+03	4.5E+02	nc	2.0E+01
2-Chlorophenol	1.2E-02	GW Protection	1.0E+03	5.1E+03	nc	1.2E-02
Chromium (total)	5.0E+03	Ceiling Value	5.0E+03	No Value	nc	
Chromium III	5.0E+03	Ceiling Value	5.0E+03	1.5E+06	nc	
Chromium VI	1.1E+02	Human Health	5.0E+03	1.1E+02	ca	
Chrysene	1.3E+01	Human Health	2.5E+03	1.3E+01	ca	2.3E+01
Cobalt	3.0E+02	Human Health	5.0E+03	3.0E+02	nc	
Copper	5.0E+03	Ceiling Value	5.0E+03	4.1E+04	nc	
Cyanide	3.6E-03	GW Protection	1.0E+03	3.7E+02	nc	3.6E-03
Dibenz(a,h)anthracene	3.8E-01	Human Health	2.5E+03	3.8E-01	ca	9.9E+00
Dibromochloromethane	6.6E+00	GW Protection	1.0E+03	3.4E+01	ca	6.6E+00
1,2-dibromo-3-chloropropane	4.5E-03	GW Protection	2.5E+03	4.1E-01	ca	4.5E-03
1,2-Dibromoethane	3.3E-04	GW Protection	2.5E+03	5.3E-01	ca	3.3E-04
1,2-Dichlorobenzene	1.1E+00	GW Protection	6.0E+02	1.1E+04	nc	1.1E+00
1,3-Dichlorobenzene	7.4E+00	GW Protection	6.0E+02	No Value	nc	7.4E+00
1,4-Dichlorobenzene	5.9E-01	GW Protection	2.5E+03	1.4E+01	ca	5.9E-01
3,3-Dichlorobenzidine	1.5E-02	GW Protection	2.5E+03	2.4E+00	ca	1.5E-02
Dichlorodiphenyldichloroethane (DDD)	1.0E+01	Human Health	2.5E+03	1.0E+01	ca	7.5E+02
Dichlorodiphenyldichloroethene (DDE)	7.0E+00	Human Health	2.5E+03	7.0E+00	ca	1.1E+03
Dichlorodiphenyltrichloroethane (DDT)	4.3E+00	GW Protection	2.5E+03	7.0E+00	ca	4.3E+00
1,1-Dichloroethane	2.0E-01	GW Protection	1.7E+03	1.8E+01	ca	2.0E-01
1,2-Dichloroethane	4.5E-03	GW Protection	1.0E+03	2.2E+00	ca	4.5E-03
1,1-Dichloroethene	1.0E+00	GW Protection	1.5E+03	1.2E+03	nc	1.0E+00
cis-1,2-Dichloroethene	1.9E-01	GW Protection	1.0E+03	8.4E+01	nc	1.9E-01
trans-1,2-Dichloroethene	6.7E-01	GW Protection	2.5E+03	5.9E+02	nc	6.7E-01
2,4-Dichlorophenol	3.0E-01	GW Protection	2.5E+03	3.1E+03	nc	3.0E-01
1,2-Dichloropropane	1.2E-01	GW Protection	1.0E+03	4.1E+00	ca	1.2E-01
1,3-Dichloropropene	5.9E-02	GW Protection	1.4E+03	1.3E+00	ca	5.9E-02
Dieldrin	2.3E-03	GW Protection	2.5E+03	1.3E-01	ca	2.3E-03
Diethyl phthalate	3.5E-02	GW Protection	2.5E+03	4.9E+05	nc	3.5E-02
Dimethyl phthalate	3.5E-02	GW Protection	2.5E+03	6.2E+06	nc	3.5E-02
2,4-Dimethylphenol	6.7E-01	GW Protection	1.0E+03	2.0E+04	nc	6.7E-01
2,4-Dinitrophenol	4.2E-02	GW Protection	2.5E+03	2.0E+03	nc	4.2E-02
2,4-Dinitrotoluene	7.4E-04	GW Protection	2.5E+03	4.2E+00	ca	7.4E-04
1,4-Dioxane	1.5E-03	GW Protection	2.5E+03	1.1E+02	ca	1.5E-03
Dioxin (2,3,7,8-TCDD)	1.8E-05	Human Health	no criteria	1.8E-05	ca	
Endosulfan	4.6E-03	GW Protection	2.5E+03	4.6E+03	nc	4.6E-03
Endrin	6.5E-04	GW Protection	2.5E+03	2.3E+02	nc	6.5E-04

Table C-2. Deep Soil Screening Levels (>3m bgs)
Commercial/Industrial Land Use
(groundwater is a current or potential drinking water resource)

Commercial/Industrial Land Use (mg/kg)						
Chemical	Final ESL	Basis	Ceiling Value (Odors, etc.) (Table H-3)	Human Health (Table K-2)	Endpoint	Protection of Groundwater (Table G)
Ethylbenzene	3.3E+00	GW Protection	4.0E+02	2.4E+01	ca	3.3E+00
Fluoranthene	6.0E+01	GW Protection	2.5E+03	2.2E+04	nc	6.0E+01
Fluorene	8.9E+00	GW Protection	2.5E+03	2.2E+04	nc	8.9E+00
Heptachlor	1.3E-02	GW Protection	5.0E+03	5.2E-01	ca	1.3E-02
Heptachlor epoxide	1.4E-02	GW Protection	5.0E+03	2.4E-01	ca	1.4E-02
Hexachlorobenzene	1.2E+00	Human Health	2.5E+03	1.2E+00	ca	7.9E+02
Hexachlorobutadiene	4.3E+00	GW Protection	2.5E+03	3.7E+01	ca	4.3E+00
γ-Hexachlorocyclohexane (Lindane)	9.8E-03	GW Protection	2.5E+03	2.3E+02	nc	9.8E-03
Hexachloroethane	5.8E+00	GW Protection	2.5E+03	4.4E+01	ca	5.8E+00
Indeno(1,2,3-c,d)pyrene	1.3E+00	Human Health	2.5E+03	1.3E+00	ca	1.5E+01
Lead	3.2E+02	Human Health	5.0E+03	3.2E+02	nc	
Mercury (elemental)	8.8E+01	Human Health	2.5E+03	8.8E+01	nc	
Methoxychlor	1.9E+01	GW Protection	2.5E+03	3.8E+03	nc	1.9E+01
Methylene chloride	7.7E-02	GW Protection	2.4E+03	4.9E+01	ca	7.7E-02
Methyl ethyl ketone	4.5E+00	GW Protection	2.5E+03	2.5E+05	nc	4.5E+00
Methyl isobutyl ketone	2.8E+00	GW Protection	1.0E+03	2.4E+05	nc	2.8E+00
Methyl mercury	6.2E+01	Human Health	1.0E+03	6.2E+01	nc	
2-Methylnaphthalene	2.5E-01	GW Protection	2.5E+03	2.2E+03	nc	2.5E-01
tert-Butyl methyl ether	2.3E-02	GW Protection	1.0E+03	1.9E+02	ca	2.3E-02
Molybdenum	5.0E+03	Ceiling Value	5.0E+03	5.1E+03	nc	
Naphthalene	1.2E+00	GW Protection	2.5E+03	1.5E+01	ca	1.2E+00
Nickel	5.0E+03	Ceiling Value	5.0E+03	1.9E+04	nc	
Pentachlorophenol	9.0E+00	Human Health	2.5E+03	9.0E+00	ca	2.7E+06
Perchlorate	7.2E+02	Human Health	5.0E+03	7.2E+02	nc	
Phenanthrene	1.1E+01	GW Protection	2.5E+03	No Value	nc	1.1E+01
Phenol	7.6E-02	GW Protection	2.5E+03	3.1E+05	nc	7.6E-02
Polychlorinated biphenyls (PCBs)	7.4E-01	Human Health	2.5E+03	7.4E-01	ca	6.3E+00
Pyrene	8.5E+01	GW Protection	2.5E+03	3.3E+04	nc	8.5E+01
Selenium	5.0E+03	Ceiling Value	5.0E+03	5.1E+03	nc	
Silver	5.0E+03	Ceiling Value	5.0E+03	5.1E+03	nc	
Styrene	1.5E+00	GW Protection	1.5E+03	4.2E+04	nc	1.5E+00
tert-Butyl alcohol	7.5E-02	GW Protection	1.0E+03	No Value	nc	7.5E-02
1,1,1,2-Tetrachloroethane	9.1E-03	GW Protection	1.0E+03	1.9E+01	ca	9.1E-03
1,1,2,2-Tetrachloroethane	1.8E-02	GW Protection	2.0E+03	2.3E+00	ca	1.8E-02
Tetrachloroethene	7.0E-01	GW Protection	2.3E+02	2.6E+00	ca	7.0E-01
Thallium	1.0E+01	Human Health	5.0E+03	1.0E+01	nc	
Toluene	2.9E+00	GW Protection	6.5E+02	4.9E+03	nc	2.9E+00
Toxaphene	4.2E-04	GW Protection	2.5E+03	1.8E+00	ca	4.2E-04
TPH gasoline	7.7E+02	GW Protection	1.0E+03	4.0E+03	nc	7.7E+02
TPH diesel	1.1E+02	Ceiling Value	1.1E+02	1.1E+03	nc	5.7E+02
TPH motor oil	1.0E+03	Ceiling Value	1.0E+03	1.0E+05	nc	
1,2,4-Trichlorobenzene	1.5E+00	GW Protection	5.0E+03	7.0E+02	nc	1.5E+00
1,1,1-Trichloroethane	7.8E+00	GW Protection	1.2E+03	4.7E+04	nc	7.8E+00
1,1,2-Trichloroethane	7.0E-02	GW Protection	1.0E+03	4.4E+00	ca	7.0E-02
Trichloroethene	4.6E-01	GW Protection	1.3E+03	8.3E+00	ca	4.6E-01
2,4,5-Trichlorophenol	1.8E-01	GW Protection	1.0E+03	1.0E+05	nc	1.8E-01
2,4,6-Trichlorophenol	5.2E-01	GW Protection	1.0E+03	1.0E+02	nc	5.2E-01
Vanadium	5.0E+03	Ceiling Value	5.0E+03	5.1E+03	nc	
Vinyl chloride	8.5E-02	GW Protection	1.2E+03	1.6E-01	ca	8.5E-02
Xylenes	2.3E+00	GW Protection	4.2E+02	2.6E+03	nc	2.3E+00
Zinc	5.0E+03	Ceiling Value	5.0E+03	3.1E+05	nc	

Notes:
Deep soils defined as soils >3 meters below ground surface.
Final Environmental Screening Level is lowest of ceiling values (nuisance concerns etc.), direct-exposure, indoor-air, and leaching screening levels.
Soil data should be reported on dry-weight basis.

Table D-1. Deep Soil Screening Levels (>3m bgs)
Residential Land Use
(groundwater is not a current or potential drinking water resource)

Residential Land Use (mg/kg)							
Chemical	**Final ESL**	**Basis**	**Ceiling Value (Odors, etc.) (Table H-3)**	**Human Health (Table K-1)**	**Vapor Intrusion Into Buildings**	**Endpoint**	**Protection of Groundwaer (Table G)**
Acenaphthene	1.9E+01	GW Protection	2.5E+03	3.4E+03	Sample soil gas	nc	1.9E+01
Acenaphthylene	1.3E+01	GW Protection	1.0E+03	No Value	Sample soil gas	nc	1.3E+01
Acetone	5.0E-01	GW Protection	1.0E+03	6.0E+04	Sample soil gas	nc	5.0E-01
Aldrin	3.2E-02	Human Health	2.5E+03	3.2E-02		ca	5.0E+00
Anthracene	2.8E+00	GW Protection	1.0E+03	2.3E+04	Sample soil gas	nc	2.8E+00
Antimony	3.1E+01	Human Health	2.5E+03	3.1E+01		nc	
Arsenic	3.9E-01	Human Health	2.5E+03	3.9E-01		ca	
Barium	2.5E+03	Ceiling Value	2.5E+03	1.5E+04		nc	
Benzene	7.4E-01	Human Health	8.7E+02	7.4E-01	Sample soil gas	ca	1.2E+00
Benzo(a)anthracene	3.8E-01	Human Health	1.0E+03	3.8E-01		ca	1.2E+01
Benzo(b)fluoranthene	3.8E-01	Human Health	1.0E+03	3.8E-01		ca	4.6E+01
Benzo(k)fluoranthene	3.8E-01	Human Health	1.0E+03	3.8E-01		ca	3.7E+01
Benzo(g,h,i)perylene	2.7E+01	GW Protection	1.0E+03	No Value		nc	2.7E+01
Benzo(a)pyrene	3.8E-02	Human Health	1.0E+03	3.8E-02		ca	1.3E+02
Beryllium	1.6E+02	Human Health	2.5E+03	1.6E+02		nc	
1,1-Biphenyl	6.5E+00	GW Protection	1.0E+03	3.9E+03	Sample soil gas	nc	6.5E+00
Bis(2-chloroethyl) ether	1.1E-01	Human Health	1.0E+03	1.1E-01	Sample soil gas	ca	1.6E-01
Bis(2-chloroisopropyl) ether	1.3E-01	GW Protection	7.9E+02	No Value	Sample soil gas	nc	1.3E-01
Bis(2-ethylhexyl) phthalate	1.6E+02	Human Health	1.0E+03	1.6E+02		ca	7.8E+02
Boron	2.5E+03	Ceiling Value	2.5E+03	1.6E+04		nc	
Bromodichloromethane	4.8E-01	Human Health	2.5E+03	4.8E-01	Sample soil gas	ca	2.1E+01
Bromoform (Tribromomethane)	2.4E+01	GW Protection	1.0E+03	5.8E+01		ca	2.4E+01
Bromomethane	6.4E+00	GW Protection	1.0E+03	8.6E+00	Sample soil gas	nc	6.4E+00
Cadmium (water)	0.0E+00	Ceiling Value				nc	
Cadmium (soil)	7.8E+01	Human Health	2.5E+03	7.8E+01		nc	
Carbon tetrachloride	1.2E-01	Human Health	1.0E+03	1.2E-01	Sample soil gas	ca	1.0E+00
Chlordane	4.4E-01	Human Health	2.5E+03	4.4E-01		ca	1.5E+01
p -Chloroaniline	5.3E-02	GW Protection	1.0E+03	3.1E+02		nc	5.3E-02
Chlorobenzene	1.5E+00	GW Protection	6.8E+02	1.3E+03	Sample soil gas	nc	1.5E+00
Chloroethane	1.1E+00	GW Protection	1.0E+03	4.1E+04	Sample soil gas	nc	1.1E+00
Chloroform	1.1E+00	Human Health	1.0E+03	1.1E+00	Sample soil gas	ca	5.0E+00
Chloromethane	1.0E+02	Human Health	5.0E+02	1.0E+02	Sample soil gas	nc	1.7E+02
2-Chlorophenol	1.2E-01	GW Protection	5.0E+02	3.9E+02	Sample soil gas	nc	1.2E-01
Chromium (total)	2.5E+03	Ceiling Value	2.5E+03	No Value		nc	
Chromium III	2.5E+03	Ceiling Value	2.5E+03	1.2E+05		nc	
Chromium VI	2.1E+01	Human Health	2.5E+03	2.1E+01		ca	
Chrysene	3.8E+00	Human Health	1.0E+03	3.8E+00		ca	2.3E+01
Cobalt	2.3E+01	Human Health	2.5E+03	2.3E+01		nc	
Copper	2.5E+03	Ceiling Value	2.5E+03	3.1E+03		nc	
Cyanide	3.6E-03	GW Protection	5.0E+02	3.7E+01		nc	3.6E-03
Dibenz(a,h)anthracene	1.1E-01	Human Health	1.0E+03	1.1E-01		ca	1.4E+02
Dibromochloromethane	7.6E+00	Human Health	5.0E+02	7.6E+00	Sample soil gas	ca	9.1E+01
1,2-dibromo-3-chloropropane	4.5E-03	GW Protection	1.0E+03	9.1E-02	Sample soil gas	ca	4.5E-03
1,2-Dibromoethane	1.1E-01	Human Health	1.0E+03	1.1E-01	Sample soil gas	ca	5.1E-01
1,2-Dichlorobenzene	1.6E+00	GW Protection	6.0E+02	2.1E+03	Sample soil gas	nc	1.6E+00
1,3-Dichlorobenzene	7.4E+00	GW Protection	5.0E+02	No Value	Sample soil gas	nc	7.4E+00
1,4-Dichlorobenzene	1.8E+00	GW Protection	1.0E+03	2.8E+00	Sample soil gas	ca	1.8E+00
3,3-Dichlorobenzidine	5.3E-01	Human Health	1.0E+03	5.3E-01		ca	6.6E+01
Dichlorodiphenyldichloroethane (DDD)	2.4E+00	Human Health	1.0E+03	2.4E+00		ca	7.5E+02
Dichlorodiphenyldichloroethene (DDE)	1.7E+00	Human Health	1.0E+03	1.7E+00		ca	1.1E+03
Dichlorodiphenyltrichloroethane (DDT)	1.7E+00	Human Health	1.0E+03	1.7E+00		ca	4.3E+00
1,1-Dichloroethane	1.9E+00	GW Protection	1.0E+03	3.5E+00	Sample soil gas	ca	1.9E+00
1,2-Dichloroethane	4.4E-01	Human Health	5.0E+02	4.4E-01	Sample soil gas	ca	9.1E-01
1,1-Dichloroethene	4.3E+00	GW Protection	1.0E+03	2.7E+02	Sample soil gas	nc	4.3E+00
cis -1,2-Dichloroethene	1.8E+01	GW Protection	5.0E+02	1.8E+01	Sample soil gas	nc	1.8E+01
trans -1,2-Dichloroethene	3.9E+01	GW Protection	1.0E+03	1.3E+02	Sample soil gas	nc	3.9E+01
2,4-Dichlorophenol	3.0E+00	GW Protection	1.0E+03	2.3E+02		nc	3.0E+00
1,2-Dichloropropane	8.2E-01	Human Health	5.0E+02	8.2E-01	Sample soil gas	ca	2.5E+00
1,3-Dichloropropene	2.7E-01	Human Health	1.0E+03	2.7E-01	Sample soil gas	ca	2.9E+00
Dieldrin	2.3E-03	GW Protection	1.0E+03	3.4E-02		ca	2.3E-03
Diethyl phthalate	3.5E-02	GW Protection	1.0E+03	4.9E+04		nc	3.5E-02
Dimethyl phthalate	3.5E-02	GW Protection	1.0E+03	6.1E+05		nc	3.5E-02
2,4-Dimethylphenol	7.4E-01	GW Protection	5.0E+02	1.6E+03	Sample soil gas	nc	7.4E-01
2,4-Dinitrophenol	4.2E-02	GW Protection	1.0E+03	1.6E+02		nc	4.2E-02
2,4-Dinitrotoluene	8.6E-01	GW Protection	1.0E+03	9.4E-01		ca	8.6E-01
1,4-Dioxane	2.4E+01	Human Health	1.0E+03	2.4E+01		ca	3.0E+01

Table D-1. Deep Soil Screening Levels (>3m bgs)
Residential Land Use
(groundwater is not a current or potential drinking water resource)

Residential Land Use (mg/kg)							
Chemical	Final ESL	Basis	Ceiling Value (Odors, etc.) (Table H-3)	Human Health (Table K-1)	Vapor Intrusion Into Buildings	Endpoint	Protection of Groundwaer (Table G)
Dioxin (2,3,7,8-TCDD)	4.5E-06	Human Health	no criteria	4.5E-06		ca	
Endosulfan	4.6E-03	GW Protection	1.0E+03	4.7E+02		nc	4.6E-03
Endrin	6.5E-04	GW Protection	1.0E+03	2.3E+01		nc	6.5E-04
Ethylbenzene	4.7E+00	GW Protection	4.0E+02	4.8E+00	Sample soil gas	ca	4.7E+00
Fluoranthene	6.0E+01	GW Protection	1.0E+03	2.3E+03		nc	6.0E+01
Fluorene	8.9E+00	GW Protection	1.0E+03	3.1E+03	Sample soil gas	nc	8.9E+00
Heptachlor	1.3E-02	GW Protection	2.5E+03	1.3E-01		ca	1.3E-02
Heptachlor epoxide	1.4E-02	GW Protection	2.5E+03	6.1E-02		ca	1.4E-02
Hexachlorobenzene	3.1E-01	Human Health	1.0E+03	3.1E-01		ca	7.9E+02
Hexachlorobutadiene	4.6E+00	GW Protection	1.0E+03	8.2E+00		ca	4.6E+00
γ-Hexachlorocyclohexane (Lindane)	9.8E-03	GW Protection	1.0E+03	2.1E+01		nc	9.8E-03
Hexachloroethane	1.2E+01	Human Health	1.0E+03	1.2E+01		ca	4.1E+01
Indeno(1,2,3-c,d)pyrene	3.8E-01	Human Health	1.0E+03	3.8E-01		ca	1.5E+01
Lead	8.0E+01	Human Health	2.5E+03	8.0E+01		nc	
Mercury (elemental)	6.7E+00	Human Health	1.0E+03	6.7E+00	Sample soil gas	nc	
Methoxychlor	1.9E+01	GW Protection	1.0E+03	3.9E+02		nc	1.9E+01
Methylene chloride	9.9E+00	Human Health	1.0E+03	9.9E+00	Sample soil gas	ca	3.4E+01
Methyl ethyl ketone	1.3E+01	GW Protection	1.0E+03	3.2E+04	Sample soil gas	nc	1.3E+01
Methyl isobutyl ketone	3.9E+00	GW Protection	5.0E+02	3.6E+04	Sample soil gas	nc	3.9E+00
Methyl mercury	6.1E+00	Human Health	5.0E+02	6.1E+00		nc	
2-Methylnaphthalene	2.5E-01	GW Protection	1.0E+03	2.3E+02	Sample soil gas	nc	2.5E-01
tert-Butyl methyl ether	8.4E+00	GW Protection	5.0E+02	3.9E+01	Sample soil gas	ca	8.4E+00
Molybdenum	3.9E+02	Human Health	2.5E+03	3.9E+02		nc	
Naphthalene	3.1E+00	Human Health	1.0E+03	3.1E+00	Sample soil gas	ca	4.8E+00
Nickel	1.5E+03	Human Health	2.5E+03	1.5E+03		nc	
Pentachlorophenol	3.0E+00	Human Health	1.0E+03	3.0E+00		ca	2.7E+06
Perchlorate	5.5E+01	Human Health	2.5E+03	5.5E+01		nc	
Phenanthrene	1.1E+01	GW Protection	1.0E+03	No Value	Sample soil gas	nc	1.1E+01
Phenol	3.9E+00	GW Protection	1.0E+03	2.3E+04		nc	3.9E+00
Polychlorinated biphenyls (PCBs)	2.2E-01	Human Health	1.0E+03	2.2E-01		ca	6.3E+00
Pyrene	8.5E+01	GW Protection	1.0E+03	3.4E+03	Sample soil gas	nc	8.5E+01
Selenium	3.9E+02	Human Health	2.5E+03	3.9E+02		nc	
Silver	3.9E+02	Human Health	2.5E+03	3.9E+02		nc	
Styrene	1.5E+01	GW Protection	1.0E+03	6.9E+03	Sample soil gas	nc	1.5E+01
tert-Butyl alcohol	1.1E+02	GW Protection	5.0E+02	No Value	Sample soil gas	nc	1.1E+02
1,1,1,2-Tetrachloroethane	3.8E+00	Human Health	5.0E+02	3.8E+00	Sample soil gas	ca	1.6E+01
1,1,2,2-Tetrachloroethane	4.7E-01	Human Health	1.0E+03	4.7E-01	Sample soil gas	ca	4.2E+00
Tetrachloroethene	5.5E-01	Human Health	2.3E+02	5.5E-01	Sample soil gas	ca	8.9E+00
Thallium	7.8E-01	Human Health	2.5E+03	7.8E-01		nc	
Toluene	9.3E+00	GW Protection	6.5E+02	1.0E+03	Sample soil gas	nc	9.3E+00
Toxaphene	4.2E-04	GW Protection	1.0E+03	4.6E-01		ca	4.2E-04
TPH gasoline	5.0E+02	Ceiling Value	5.0E+02	7.7E+02	Sample soil gas	nc	3.8E+03
TPH diesel	1.1E+02	Ceiling Value	1.1E+02	2.4E+02	Sample soil gas	nc	3.6E+03
TPH motor oil	5.0E+02	Ceiling Value	5.0E+02	1.0E+04		nc	
1,2,4-Trichlorobenzene	7.6E+00	GW Protection	2.5E+03	1.4E+02	Sample soil gas	nc	7.6E+00
1,1,1-Trichloroethane	7.8E+00	GW Protection	1.0E+03	1.1E+04	Sample soil gas	nc	7.8E+00
1,1,2-Trichloroethane	8.8E-01	Human Health	5.0E+02	8.8E-01	Sample soil gas	ca	1.3E+01
Trichloroethene	1.7E+00	Human Health	1.0E+03	1.7E+00	Sample soil gas	ca	1.2E+01
2,4,5-Trichlorophenol	1.8E-01	GW Protection	5.0E+02	7.8E+03	Sample soil gas	nc	1.8E-01
2,4,6-Trichlorophenol	7.8E+00	Human Health	5.0E+02	7.8E+00		nc	3.2E+01
Vanadium	3.9E+02	Human Health	2.5E+03	3.9E+02		nc	
Vinyl chloride	3.2E-02	Human Health	1.0E+03	3.2E-02	Sample soil gas	ca	3.1E-01
Xylenes	1.1E+01	GW Protection	4.2E+02	6.0E+02	Sample soil gas	nc	1.1E+01
Zinc	2.5E+03	Ceiling Value	2.5E+03	2.3E+04		nc	

Table D-1. Deep Soil Screening Levels (>3m bgs)
Residential Land Use
(groundwater is not a current or potential drinking water resource)

Residential Land Use (mg/kg)							
Chemical	Final ESL	Basis	Ceiling Value (Odors, etc.) (Table H-3)	Human Health (Table K-1)	Vapor Intrusion Into Buildings	Endpoint	Protection of Groundwaer (Table G)

Notes:
Deep soils defined as soils >3 meters below ground surface.
Final Environmental Screening Level is lowest of ceiling values (nuisance concerns etc.), direct-exposure, and leaching to groundwater
Soil data should be reported on dry-weight basis.

Table D-2. Deep Soil Screening Levels (>3m bgs)
Commerical/Industrial Land Use
(groundwater is not a current or potential drinking water resource)

Commercial/Industrial Land Use (mg/kg)							
Chemical	**ESL**	**Basis**	**Ceiling Level (Table H-3)**	**Human Health (Table K-2)**	**Vapor Intrusion**	**Endpoint**	**Leaching (Table G)**
Acenaphthene	1.9E+01	GW Protection	5.0E+03	1.5E+04	Sample soil gas	nc	1.9E+01
Acenaphthylene	1.3E+01	GW Protection	2.5E+03	No Value	Sample soil gas	nc	1.3E+01
Acetone	5.0E-01	GW Protection	2.5E+03	5.9E+05	Sample soil gas	nc	5.0E-01
Aldrin	1.3E-01	Human Health	5.0E+03	1.3E-01		ca	5.0E+00
Anthracene	2.8E+00	GW Protection	2.5E+03	1.7E+05	Sample soil gas	nc	2.8E+00
Antimony	4.1E+02	Human Health	5.0E+03	4.1E+02		nc	
Arsenic	1.6E+00	Human Health	5.0E+03	1.6E+00		ca	
Barium	5.0E+03	Ceiling Value	5.0E+03	1.9E+05		nc	
Benzene	1.2E+00	GW Protection	8.7E+02	3.7E+00	Sample soil gas	ca	1.2E+00
Benzo(a)anthracene	1.3E+00	Human Health	2.5E+03	1.3E+00		ca	1.2E+01
Benzo(b)fluoranthene	1.3E+00	Human Health	2.5E+03	1.3E+00		ca	4.6E+01
Benzo(k)fluoranthene	1.3E+00	Human Health	2.5E+03	1.3E+00		ca	3.7E+01
Benzo(g,h,i)perylene	2.7E+01	GW Protection	2.5E+03	No Value		nc	2.7E+01
Benzo(a)pyrene	1.3E-01	Human Health	2.5E+03	1.3E-01		ca	1.3E+02
Beryllium	2.0E+03	Human Health	5.0E+03	2.0E+03		nc	
1,1-Biphenyl	6.5E+00	GW Protection	2.5E+03	3.1E+04	Sample soil gas	nc	6.5E+00
Bis(2-chloroethyl) ether	1.6E-01	GW Protection	2.5E+03	5.2E-01	Sample soil gas	ca	1.6E-01
Bis(2-chloroisopropyl) ether	1.3E-01	GW Protection	7.9E+02	No Value	Sample soil gas	nc	1.3E-01
Bis(2-ethylhexyl) phthalate	5.7E+02	Human Health	2.5E+03	5.7E+02		ca	7.8E+02
Boron	5.0E+03	Ceiling Value	5.0E+03	2.0E+05		nc	
Bromodichloromethane	2.4E+00	Human Health	3.0E+03	2.4E+00	Sample soil gas	ca	2.1E+01
Bromoform (Tribromomethane)	2.4E+01	GW Protection	2.5E+03	2.6E+02		ca	2.4E+01
Bromomethane	6.4E+00	GW Protection	2.5E+03	3.8E+01	Sample soil gas	nc	6.4E+00
Cadmium (water)	5.1E+02	Human Health		5.1E+02		nc	
Cadmium (soil)	1.0E+03	Human Health	5.0E+03	1.0E+03		nc	
Carbon tetrachloride	5.8E-01	Human Health	1.1E+03	5.8E-01	Sample soil gas	ca	1.0E+00
Chlordane	1.7E+00	Human Health	5.0E+03	1.7E+00		ca	1.5E+01
p -Chloroaniline	5.3E-02	GW Protection	2.5E+03	4.1E+03		nc	5.3E-02
Chlorobenzene	1.5E+00	GW Protection	6.8E+02	1.2E+04	Sample soil gas	nc	1.5E+00
Chloroethane	1.1E+00	GW Protection	1.6E+03	1.7E+05	Sample soil gas	nc	1.1E+00
Chloroform	5.0E+00	GW Protection	2.5E+03	5.7E+00	Sample soil gas	ca	5.0E+00
Chloromethane	1.7E+02	GW Protection	1.0E+03	4.5E+02	Sample soil gas	nc	1.7E+02
2-Chlorophenol	1.2E-01	GW Protection	1.0E+03	5.1E+03	Sample soil gas	nc	1.2E-01
Chromium (total)	5.0E+03	Ceiling Value	5.0E+03	No Value		nc	
Chromium III	5.0E+03	Ceiling Value	5.0E+03	1.5E+06		nc	
Chromium VI	1.1E+02	Human Health	5.0E+03	1.1E+02		ca	
Chrysene	1.3E+01	Human Health	2.5E+03	1.3E+01		ca	2.3E+01
Cobalt	3.0E+02	Human Health	5.0E+03	3.0E+02		nc	
Copper	5.0E+03	Ceiling Value	5.0E+03	4.1E+04		nc	
Cyanide	3.6E-03	GW Protection	1.0E+03	3.7E+02		nc	3.6E-03
Dibenz(a,h)anthracene	3.8E-01	Human Health	2.5E+03	3.8E-01		ca	1.4E+02
Dibromochloromethane	3.4E+01	Human Health	1.0E+03	3.4E+01	Sample soil gas	ca	9.1E+01
1,2-dibromo-3-chloropropane	4.5E-03	GW Protection	2.5E+03	4.1E-01	Sample soil gas	ca	4.5E-03
1,2-Dibromoethane	5.1E-01	GW Protection	2.5E+03	5.3E-01	Sample soil gas	ca	5.1E-01
1,2-Dichlorobenzene	1.6E+00	GW Protection	6.0E+02	1.1E+04	Sample soil gas	nc	1.6E+00
1,3-Dichlorobenzene	7.4E+00	GW Protection	6.0E+02	No Value	Sample soil gas	nc	7.4E+00
1,4-Dichlorobenzene	1.8E+00	GW Protection	2.5E+03	1.4E+01	Sample soil gas	ca	1.8E+00
3,3-Dichlorobenzidine	2.4E+00	Human Health	2.5E+03	2.4E+00		ca	6.6E+01
Dichlorodiphenyldichloroethane (DDD)	1.0E+01	Human Health	2.5E+03	1.0E+01		ca	7.5E+02
Dichlorodiphenyldichloroethene (DDE)	7.0E+00	Human Health	2.5E+03	7.0E+00		ca	1.1E+03
Dichlorodiphenyltrichloroethane (DDT)	4.3E+00	GW Protection	2.5E+03	7.0E+00		ca	4.3E+00
1,1-Dichloroethane	1.9E+00	GW Protection	1.7E+03	1.8E+01	Sample soil gas	ca	1.9E+00
1,2-Dichloroethane	9.1E-01	GW Protection	1.0E+03	2.2E+00	Sample soil gas	ca	9.1E-01
1,1-Dichloroethene	4.3E+00	GW Protection	1.5E+03	1.2E+03	Sample soil gas	nc	4.3E+00
cis -1,2-Dichloroethene	1.8E+01	GW Protection	1.0E+03	8.4E+01	Sample soil gas	nc	1.8E+01
trans -1,2-Dichloroethene	3.9E+01	GW Protection	2.5E+03	5.9E+02	Sample soil gas	nc	3.9E+01
2,4-Dichlorophenol	3.0E+00	GW Protection	2.5E+03	3.1E+03		nc	3.0E+00
1,2-Dichloropropane	2.5E+00	GW Protection	1.0E+03	4.1E+00	Sample soil gas	ca	2.5E+00
1,3-Dichloropropene	1.3E+00	Human Health	1.4E+03	1.3E+00	Sample soil gas	ca	2.9E+00
Dieldrin	2.3E-03	GW Protection	2.5E+03	1.3E-01		ca	2.3E-03
Diethyl phthalate	3.5E-02	GW Protection	2.5E+03	4.9E+05		nc	3.5E-02
Dimethyl phthalate	3.5E-02	GW Protection	2.5E+03	6.2E+06		nc	3.5E-02
2,4-Dimethylphenol	7.4E-01	GW Protection	1.0E+03	2.0E+04	Sample soil gas	nc	7.4E-01
2,4-Dinitrophenol	4.2E-02	GW Protection	2.5E+03	2.0E+03		nc	4.2E-02
2,4-Dinitrotoluene	8.6E-01	GW Protection	2.5E+03	4.2E+00		ca	8.6E-01
1,4-Dioxane	3.0E+01	GW Protection	2.5E+03	1.1E+02		ca	3.0E+01
Dioxin (2,3,7,8-TCDD)	1.8E-05	Human Health	no criteria	1.8E-05		ca	
Endosulfan	4.6E-03	GW Protection	2.5E+03	4.6E+03		nc	4.6E-03

Table D-2. Deep Soil Screening Levels (>3m bgs)
Commerical/Industrial Land Use
(groundwater is not a current or potential drinking water resource)

Commercial/Industrial Land Use (mg/kg)							
Chemical	**ESL**	**Basis**	**Ceiling Level (Table H-3)**	**Human Health (Table K-2)**	**Vapor Intrusion**	**Endpoint**	**Leaching (Table G)**
Endrin	6.5E-04	GW Protection	2.5E+03	2.3E+02		nc	6.5E-04
Ethylbenzene	4.7E+00	GW Protection	4.0E+02	2.4E+01	Sample soil gas	ca	4.7E+00
Fluoranthene	6.0E+01	GW Protection	2.5E+03	2.2E+04		nc	6.0E+01
Fluorene	8.9E+00	GW Protection	2.5E+03	2.2E+04	Sample soil gas	nc	8.9E+00
Heptachlor	1.3E-02	GW Protection	5.0E+03	5.2E-01		ca	1.3E-02
Heptachlor epoxide	1.4E-02	GW Protection	5.0E+03	2.4E-01		ca	1.4E-02
Hexachlorobenzene	1.2E+00	Human Health	2.5E+03	1.2E+00		ca	7.9E+02
Hexachlorobutadiene	4.6E+00	GW Protection	2.5E+03	3.7E+01		ca	4.6E+00
γ-Hexachlorocyclohexane (Lindane)	9.8E-03	GW Protection	2.5E+03	2.3E+02		nc	9.8E-03
Hexachloroethane	4.1E+01	GW Protection	2.5E+03	4.4E+01		ca	4.1E+01
Indeno(1,2,3-c,d)pyrene	1.3E+00	Human Health	2.5E+03	1.3E+00		ca	1.5E+01
Lead	3.2E+02	Human Health	5.0E+03	3.2E+02		nc	
Mercury (elemental)	8.8E+01	Human Health	2.5E+03	8.8E+01	Sample soil gas	nc	
Methoxychlor	1.9E+01	GW Protection	2.5E+03	3.8E+03		nc	1.9E+01
Methylene chloride	3.4E+01	GW Protection	2.4E+03	4.9E+01	Sample soil gas	ca	3.4E+01
Methyl ethyl ketone	1.3E+01	GW Protection	2.5E+03	2.5E+05	Sample soil gas	nc	1.3E+01
Methyl isobutyl ketone	3.9E+00	GW Protection	1.0E+03	2.4E+05	Sample soil gas	nc	3.9E+00
Methyl mercury	6.2E+01	Human Health	1.0E+03	6.2E+01		nc	
2-Methylnaphthalene	2.5E-01	GW Protection	2.5E+03	2.2E+03	Sample soil gas	nc	2.5E-01
tert-Butyl methyl ether	8.4E+00	GW Protection	1.0E+03	1.9E+02	Sample soil gas	ca	8.4E+00
Molybdenum	5.0E+03	Ceiling Value	5.0E+03	5.1E+03		nc	
Naphthalene	4.8E+00	GW Protection	2.5E+03	1.5E+01	Sample soil gas	ca	4.8E+00
Nickel	5.0E+03	Ceiling Value	5.0E+03	1.9E+04		nc	
Pentachlorophenol	9.0E+00	Human Health	2.5E+03	9.0E+00		ca	2.7E+06
Perchlorate	7.2E+02	Human Health	5.0E+03	7.2E+02		nc	
Phenanthrene	1.1E+01	GW Protection	2.5E+03	No Value	Sample soil gas	nc	1.1E+01
Phenol	3.9E+00	GW Protection	2.5E+03	3.1E+05		nc	3.9E+00
Polychlorinated biphenyls (PCBs)	7.4E-01	Human Health	2.5E+03	7.4E-01		ca	6.3E+00
Pyrene	8.5E+01	GW Protection	2.5E+03	3.3E+04	Sample soil gas	nc	8.5E+01
Selenium	5.0E+03	Ceiling Value	5.0E+03	5.1E+03		nc	
Silver	5.0E+03	Ceiling Value	5.0E+03	5.1E+03		nc	
Styrene	1.5E+01	GW Protection	1.5E+03	4.2E+04	Sample soil gas	nc	1.5E+01
tert-Butyl alcohol	1.1E+02	GW Protection	1.0E+03	No Value	Sample soil gas	nc	1.1E+02
1,1,1,2-Tetrachloroethane	1.6E+01	GW Protection	1.0E+03	1.9E+01	Sample soil gas	ca	1.6E+01
1,1,2,2-Tetrachloroethane	2.3E+00	Human Health	2.0E+03	2.3E+00	Sample soil gas	ca	4.2E+00
Tetrachloroethene	2.6E+00	Human Health	2.3E+02	2.6E+00	Sample soil gas	ca	8.9E+00
Thallium	1.0E+01	Human Health	5.0E+03	1.0E+01		nc	
Toluene	9.3E+00	GW Protection	6.5E+02	4.9E+03	Sample soil gas	nc	9.3E+00
Toxaphene	4.2E-04	GW Protection	2.5E+03	1.8E+00		ca	4.2E-04
TPH gasoline	1.0E+03	Ceiling Value	1.0E+03	4.0E+03	Sample soil gas	nc	3.8E+03
TPH diesel	1.1E+02	Ceiling Value	1.1E+02	1.1E+03	Sample soil gas	nc	3.6E+03
TPH motor oil	1.0E+03	Ceiling Value	1.0E+03	1.0E+05		nc	
1,2,4-Trichlorobenzene	7.6E+00	GW Protection	5.0E+03	7.0E+02	Sample soil gas	nc	7.6E+00
1,1,1-Trichloroethane	7.8E+00	GW Protection	1.2E+03	4.7E+04	Sample soil gas	nc	7.8E+00
1,1,2-Trichloroethane	4.4E+00	Human Health	1.0E+03	4.4E+00	Sample soil gas	ca	1.3E+01
Trichloroethene	8.3E+00	Human Health	1.3E+03	8.3E+00	Sample soil gas	ca	1.2E+01
2,4,5-Trichlorophenol	1.8E-01	GW Protection	1.0E+03	1.0E+05	Sample soil gas	nc	1.8E-01
2,4,6-Trichlorophenol	3.2E+01	GW Protection	1.0E+03	1.0E+02		nc	3.2E+01
Vanadium	5.0E+03	Ceiling Value	5.0E+03	5.1E+03		nc	
Vinyl chloride	1.6E-01	Human Health	1.2E+03	1.6E-01	Sample soil gas	ca	3.1E-01
Xylenes	1.1E+01	GW Protection	4.2E+02	2.6E+03	Sample soil gas	nc	1.1E+01
Zinc	5.0E+03	Ceiling Value	5.0E+03	3.1E+05		nc	

Notes:
Deep soils defined as soils >3 meters below ground surface.
Final Environmental Screening Level is lowest of ceiling values (nuisance concerns etc.), direct-exposure, indoor-air, and leaching screening levels.
Soil data should be reported on dry-weight basis.

Table E-1. Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion (volatile chemicals only)

			Fine - Coarse Mix		All Sand	
Chemical	Physical State		Residential Land Use (µg/L)	Commercial/Industrial Land Use (µg/L)	Residential Land Use (µg/L)	Commercial/Industrial Land Use (µg/L)
Acenaphthene	V	S	No Value	No Value	No Value	No Value
Acenaphthylene	V	S	No Value	No Value	No Value	No Value
Acetone	V	L	1.3E+08	Sample Soil Gas	4.7E+07	4.0E+08
Aldrin	NV	S	No Value	No Value	No Value	No Value
Anthracene	V	S	No Value	No Value	No Value	No Value
Antimony	NV	S	No Value	No Value	No Value	No Value
Arsenic	NV	S	No Value	No Value	No Value	No Value
Barium	NV	S	No Value	No Value	No Value	No Value
Benzene	V	L	2.7E+01	2.7E+02	1.2E+00	1.2E+01
Benzo(a)anthracene	NV	S	No Value	No Value	No Value	No Value
Benzo(b)fluoranthene	NV	S	No Value	No Value	No Value	No Value
Benzo(k)fluoranthene	NV	S	No Value	No Value	No Value	No Value
Benzo(g,h,i)perylene	NV	S	No Value	No Value	No Value	No Value
Benzo(a)pyrene	NV	S	No Value	No Value	No Value	No Value
Beryllium	NV	S	No Value	No Value	No Value	No Value
1,1-Biphenyl	V	S	No Value	No Value	No Value	No Value
Bis(2-chloroethyl) ether	V	L	No Value	No Value	No Value	No Value
Bis(2-chloroisopropyl) ether	V	L	No Value	No Value	No Value	No Value
Bis(2-ethylhexyl) phthalate	NV	S	No Value	No Value	No Value	No Value
Boron	NV	S	No Value	No Value	No Value	No Value
Bromodichloromethane	V	L	No Value	No Value	No Value	No Value
Bromoform (Tribromomethane)	NV	S	No Value	No Value	No Value	No Value
Bromomethane	V	G	1.5E+03	1.3E+04	6.8E+01	5.7E+02
Cadmium (soil)	NV	S	No Value	No Value	No Value	No Value
Cadmium (water)	NV	S	No Value	No Value	No Value	No Value
Carbon tetrachloride	V	L	4.8E+00	4.8E+01	1.7E-01	1.7E+00
Chlordane	NV	S	No Value	No Value	No Value	No Value
p-Chloroaniline	NV	S	No Value	No Value	No Value	No Value
Chlorobenzene	V	L	Sample Soil Gas	Sample Soil Gas	2.9E+04	2.5E+05
Chloroethane	V	G	2.3E+06	Sample Soil Gas	1.1E+05	9.6E+05
Chloroform	V	L	1.7E+02	1.7E+03	8.5E+00	8.6E+01
Chloromethane	V	G	1.3E+04	1.1E+05	5.3E+02	4.5E+03
2-Chlorophenol	V	L	No Value	No Value	No Value	No Value
Chromium (total)	NV	S	No Value	No Value	No Value	No Value
Chromium III	NV	S	No Value	No Value	No Value	No Value
Chromium VI	NV	S	No Value	No Value	No Value	No Value
Chrysene	NV	S	No Value	No Value	No Value	No Value
Cobalt	NV	S	No Value	No Value	No Value	No Value
Copper	NV	S	No Value	No Value	No Value	No Value
Cyanide	NV	S	No Value	No Value	No Value	No Value
Dibenz(a,h)anthracene	NV	S	No Value	No Value	No Value	No Value
Dibromochloromethane	V	S	No Value	No Value	No Value	No Value
1,2-dibromo-3-chloropropane	V	L	No Value	No Value	No Value	No Value
1,2-Dibromoethane	V	S	7.7E+01	7.7E+02	1.4E+01	1.4E+02
1,2-Dichlorobenzene	V	L	1.9E+02	1.6E+03	1.3E+01	1.1E+02
1,3-Dichlorobenzene	V	L	No Value	No Value	No Value	No Value
1,4-Dichlorobenzene	V	S	1.8E+02	1.8E+03	1.1E+01	1.1E+02
3,3-Dichlorobenzidine	NV	S	No Value	No Value	No Value	No Value
Dichlorodiphenyldichloroethane (DDD)	NV	S	No Value	No Value	No Value	No Value
Dichlorodiphenyldichloroethene (DDE)	NV	S	No Value	No Value	No Value	No Value
Dichlorodiphenyltrichloroethane (DDT)	NV	S	No Value	No Value	No Value	No Value
1,1-Dichloroethane	V	L	No Value	No Value	No Value	No Value
1,2-Dichloroethane	V	L	1.0E+02	1.0E+03	8.5E+00	8.6E+01
1,1-Dichloroethene	V	L	1.6E+04	1.3E+05	5.7E+02	4.8E+03
cis-1,2-Dichloroethene	V	L	3.1E+03	2.6E+04	1.6E+02	1.4E+03
trans-1,2-Dichloroethene	V	L	1.4E+04	1.2E+05	6.1E+02	5.1E+03
2,4-Dichlorophenol	NV	S	No Value	No Value	No Value	No Value
1,2-Dichloropropane	V	L	1.4E+02	1.4E+03	7.9E+00	8.0E+01
1,3-Dichloropropene	V	L	2.6E+01	2.6E+02	9.7E-01	9.8E+00
Dieldrin	NV	S	No Value	No Value	No Value	No Value
Diethyl phthalate	NV	S	No Value	No Value	No Value	No Value
Dimethyl phthalate	NV	S	No Value	No Value	No Value	No Value
2,4-Dimethylphenol	V	S	No Value	No Value	No Value	No Value
2,4-Dinitrophenol	NV	S	No Value	No Value	No Value	No Value
2,4-Dinitrotoluene	NV	S	No Value	No Value	No Value	No Value
1,4-Dioxane	NV	L	No Value	No Value	No Value	No Value
Dioxin (2,3,7,8-TCDD)	NV	S	No Value	No Value	No Value	No Value
Endosulfan	NV	S	No Value	No Value	No Value	No Value
Endrin	NV	S	No Value	No Value	No Value	No Value
Ethylbenzene	V	L	3.1E+02	3.1E+03	1.3E+01	1.3E+02

Table E-1. Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion (volatile chemicals only)

			Fine - Coarse Mix		All Sand	
Chemical	**Physical State**		**Residential Land Use (µg/L)**	**Commercial/Industrial Land Use (µg/L)**	**Residential Land Use (µg/L)**	**Commercial/Industrial Land Use (µg/L)**
Acenaphthene	V	S	No Value	No Value	No Value	No Value
Fluoranthene	NV	S	No Value	No Value	No Value	No Value
Fluorene	V	S	No Value	No Value	No Value	No Value
Heptachlor	NV	S	No Value	No Value	No Value	No Value
Heptachlor epoxide	NV	S	No Value	No Value	No Value	No Value
Hexachlorobenzene	NV	S	No Value	No Value	No Value	No Value
Hexachlorobutadiene	NV	S	No Value	No Value	No Value	No Value
γ-Hexachlorocyclohexane (Lindane)	NV	S	No Value	No Value	No Value	No Value
Hexachloroethane	NV	S	No Value	No Value	No Value	No Value
Indeno(1,2,3-c,d)pyrene	NV	S	No Value	No Value	No Value	No Value
Lead	NV	S	No Value	No Value	No Value	No Value
Mercury (elemental)	V	S	No Value	No Value	No Value	No Value
Methoxychlor	NV	S	No Value	No Value	No Value	No Value
Methylene chloride	V	L	2.6E+03	2.6E+04	1.6E+02	1.6E+03
Methyl ethyl ketone	V	L	2.3E+07	2.0E+08	7.8E+06	6.6E+07
Methyl isobutyl ketone	V	L	1.1E+07	Sample Soil Gas	2.3E+06	1.9E+07
Methyl mercury	NV	S	No Value	No Value	No Value	No Value
2-Methylnaphthalene	V	S	No Value	No Value	No Value	No Value
tert-Butyl methyl ether	V	L	9.9E+03	1.0E+05	1.0E+03	1.0E+04
Molybdenum	NV	S	No Value	No Value	No Value	No Value
Naphthalene	V	S	1.6E+02	1.6E+03	2.2E+01	2.2E+02
Nickel	NV	S	No Value	No Value	No Value	No Value
Pentachlorophenol	NV	S	No Value	No Value	No Value	No Value
Perchlorate	NV	S	No Value	No Value	No Value	No Value
Phenanthrene	V	S	No Value	No Value	No Value	No Value
Phenol	NV	S	No Value	No Value	No Value	No Value
Polychlorinated biphenyls (PCBs)	NV	S	No Value	No Value	No Value	No Value
Pyrene	V	S	No Value	No Value	No Value	No Value
Selenium	NV	S	No Value	No Value	No Value	No Value
Silver	NV	S	No Value	No Value	No Value	No Value
Styrene	V	L	Sample Soil Gas	Sample Soil Gas	3.8E+04	Sample Soil Gas
tert-Butyl alcohol	V	L	No Value	No Value	No Value	No Value
1,1,1,2-Tetrachloroethane	V	L	No Value	No Value	No Value	No Value
1,1,2,2-Tetrachloroethane	V	L	No Value	No Value	No Value	No Value
Tetrachloroethene	V	L	6.3E+01	6.4E+02	2.3E+00	2.3E+01
Thallium	NV	S	No Value	No Value	No Value	No Value
Toluene	V	L	9.5E+04	Sample Soil Gas	4.1E+03	3.4E+04
Toxaphene	NV	S	No Value	No Value	No Value	No Value
TPH gasoline	V	L	No Value	No Value	No Value	No Value
TPH diesel	V	L	No Value	No Value	No Value	No Value
TPH motor oil	NV	L/S	No Value	No Value	No Value	No Value
1,2,4-Trichlorobenzene	V	L	7.3E+03	Sample Soil Gas	8.1E+02	6.8E+03
1,1,1-Trichloroethane	V	L	7.2E+05	Sample Soil Gas	2.7E+04	2.2E+05
1,1,2-Trichloroethane	V	L	No Value	No Value	No Value	No Value
Trichloroethene	V	L	1.3E+02	1.3E+03	5.2E+00	5.2E+01
2,4,5-Trichlorophenol	V	S	No Value	No Value	No Value	No Value
2,4,6-Trichlorophenol	NV	S	No Value	No Value	No Value	No Value
Vanadium	NV	S	No Value	No Value	No Value	No Value
Vinyl chloride	V	G	1.8E+00	1.8E+01	6.7E-02	6.7E-01
Xylenes	V	L	3.7E+04	Sample Soil Gas	1.6E+03	1.3E+04
Zinc	NV	S	No Value	No Value	No Value	No Value

Notes:

These screening levels only apply if depth to groundwater is 10 feet or greater. For shallower groundwater, the collection of soil gas samples is recommended.

Physical state of chemical at ambient conditions (V - volatile, NV - nonvolatile, S -id, L - liquid, G - gas).

Chemical considered to be volatile if Henry's Law constant (atm m^3/mole) $>10^{-5}$ and molecular weight <200.

Dibromochloromethane, dibromochloropropane and pyrene considered volatile for purposes of modeling.

Table E-2. Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion (volatile chemicals only)

Chemcial	Physical State		Residential Exposure			Commercial/Industrial Land Use		
			Lowest Residential ($\mu g/m^3$)	Carcinogenic Effects ($\mu g/m^3$)	Noncarcinogenic Effects ($\mu g/m^3$)	Lowest C/I ($\mu g/m^3$)	Carcinogenic Effects ($\mu g/m^3$)	Noncarcinogenic Effects ($\mu g/m^3$)
Acenaphthene	V	S	No Value	No Value	No Value	No Value	No Value	No Value
Acenaphthylene	V	S	No Value	No Value	No Value	No Value	No Value	No Value
Acetone	V	L	1.6E+07	No Value	1.6E+07	1.4E+08	No Value	1.4E+08
Aldrin	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Anthracene	V	S	No Value	No Value	No Value	No Value	No Value	No Value
Antimony	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Arsenic	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Barium	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Benzene	V	L	4.2E+01	4.2E+01	1.6E+04	4.2E+02	4.2E+02	1.3E+05
Benzo(a)anthracene	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Benzo(b)fluoranthene	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Benzo(k)fluoranthene	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Benzo(g,h,i)perylene	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Benzo(a)pyrene	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Beryllium	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
1,1-Biphenyl	V	S	No Value	No Value	No Value	No Value	No Value	No Value
Bis(2-chloroethyl) ether	V	L	1.7E+00	1.7E+00	No Value	1.7E+01	1.7E+01	No Value
Bis(2-chloroisopropyl) ether	V	L	No Value	No Value	No Value	No Value	No Value	No Value
Bis(2-ethylhexyl) phthalate	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Boron	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Bromodichloromethane	V	L	3.3E+01	3.3E+01	No Value	3.3E+02	3.3E+02	No Value
Bromoform (Tribromomethane)	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Bromomethane	V	G	2.6E+03	No Value	2.6E+03	2.2E+04	No Value	2.2E+04
Cadmium (water)	NV		No Value	No Value	No Value	No Value	No Value	No Value
Cadmium (soil)	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Carbon tetrachloride	V	L	2.9E+01	2.9E+01	2.1E+04	2.9E+02	2.9E+02	1.8E+05
Chlordane	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
p-Chloroaniline	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Chlorobenzene	V	L	5.2E+05	No Value	5.2E+05	4.4E+06	No Value	4.4E+06
Chloroethane	V	G	1.6E+07	No Value	1.6E+07	1.3E+08	No Value	1.3E+08
Chloroform	V	L	2.3E+02	2.3E+02	1.6E+05	2.3E+03	2.3E+03	1.3E+06
Chloromethane	V	G	4.7E+04	No Value	4.7E+04	3.9E+05	No Value	3.9E+05
2-Chlorophenol	V	L	No Value	No Value	No Value	No Value	No Value	No Value
Chromium (total)	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Chromium III	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Chromium VI	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Chrysene	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Cobalt	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Copper	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Cyanide	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Dibenz(a,h)anthracene	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Dibromochloromethane	V	S	No Value	No Value	No Value	No Value	No Value	No Value
1,2-dibromo-3-chloropropane	V	L	6.1E-01	6.1E-01	1.0E+02	6.1E+00	6.1E+00	8.8E+02
1,2-Dibromoethane	V	S	1.7E+01	1.7E+01	4.7E+03	1.7E+02	1.7E+02	3.9E+04
1,2-Dichlorobenzene	V	L	1.0E+05	No Value	1.0E+05	8.8E+05	No Value	8.8E+05
1,3-Dichlorobenzene	V	L	No Value	No Value	No Value	No Value	No Value	No Value
1,4-Dichlorobenzene	V	S	1.1E+02	1.1E+02	4.2E+05	1.1E+03	1.1E+03	3.5E+06
3,3-Dichlorobenzidine	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Dichlorodiphenyldichloroethane (DDD)	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Dichlorodiphenyldichloroethene (DDE)	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Dichlorodiphenyltrichloroethane (DDT)	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
1,1-Dichloroethane	V	L	7.6E+02	7.6E+02	No Value	7.7E+03	7.7E+03	No Value
1,2-Dichloroethane	V	L	5.8E+01	5.8E+01	1.3E+03	5.8E+02	5.8E+02	1.1E+04
1,1-Dichloroethene	V	L	1.0E+05	No Value	1.0E+05	8.8E+05	No Value	8.8E+05
cis-1,2-Dichloroethene	V	L	3.7E+03	No Value	3.7E+03	3.1E+04	No Value	3.1E+04
trans-1,2-Dichloroethene	V	L	3.1E+04	No Value	3.1E+04	2.6E+05	No Value	2.6E+05
2,4-Dichlorophenol	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
1,2-Dichloropropane	V	L	1.2E+02	1.2E+02	2.1E+03	1.2E+03	1.2E+03	1.8E+04
1,3-Dichloropropene	V	L	7.6E+01	7.6E+01	1.0E+04	7.7E+02	7.7E+02	8.8E+04
Dieldrin	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Diethyl phthalate	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Dimethyl phthalate	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
2,4-Dimethylphenol	V	S	No Value	No Value	No Value	No Value	No Value	No Value
2,4-Dinitrophenol	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
2,4-Dinitrotoluene	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
1,4-Dioxane	NV	L	No Value	No Value	No Value	No Value	No Value	No Value
Dioxin (2,3,7,8-TCDD)	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Endosulfan	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Endrin	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Ethylbenzene	V	L	4.9E+02	4.9E+02	5.2E+05	4.9E+03	4.9E+03	4.4E+06
Fluoranthene	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Fluorene	V	S	No Value	No Value	No Value	No Value	No Value	No Value

Table E-2. Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion (volatile chemicals only)

Chemcial	Physical State		Residential Exposure			Commercial/Industrial Land Use		
			Lowest Residential ($\mu g/m^3$)	Carcinogenic Effects ($\mu g/m^3$)	Noncarcinogenic Effects ($\mu g/m^3$)	Lowest C/I ($\mu g/m^3$)	Carcinogenic Effects ($\mu g/m^3$)	Noncarcinogenic Effects ($\mu g/m^3$)
Heptachlor	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Heptachlor epoxide	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Hexachlorobenzene	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Hexachlorobutadiene	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
γ-Hexachlorocyclohexane (Lindane)	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Hexachloroethane	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Indeno(1,2,3-c,d)pyrene	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Lead	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Mercury (elemental)	V	S	1.6E+01	No Value	1.6E+01	1.3E+02	No Value	1.3E+02
Methoxychlor	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Methylene chloride	V	L	2.6E+03	2.6E+03	2.1E+05	2.6E+04	2.6E+04	1.8E+06
Methyl ethyl ketone	V	L	2.6E+06	No Value	2.6E+06	2.2E+07	No Value	2.2E+07
Methyl isobutyl ketone	V	L	1.6E+06	No Value	1.6E+06	1.3E+07	No Value	1.3E+07
Methyl mercury	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
2-Methylnaphthalene	V	S	No Value	No Value	No Value	No Value	No Value	No Value
tert-Butyl methyl ether	V	L	4.7E+03	4.7E+03	1.6E+06	4.7E+04	4.7E+04	1.3E+07
Molybdenum	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Naphthalene	V	S	3.6E+01	3.6E+01	1.6E+03	3.6E+02	3.6E+02	1.3E+04
Nickel	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Pentachlorophenol	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Perchlorate	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Phenanthrene	V	S	No Value	No Value	No Value	No Value	No Value	No Value
Phenol	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Polychlorinated biphenyls (PCBs)	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Pyrene	V	S	No Value	No Value	No Value	No Value	No Value	No Value
Selenium	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Silver	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Styrene	V	L	4.7E+05	No Value	4.7E+05	3.9E+06	No Value	3.9E+06
tert-Butyl alcohol	V	L	No Value	No Value	No Value	No Value	No Value	No Value
1,1,1,2-Tetrachloroethane	V	L	1.6E+02	1.6E+02	No Value	1.6E+03	1.6E+03	No Value
1,1,2,2-Tetrachloroethane	V	L	2.1E+01	2.1E+01	No Value	2.1E+02	2.1E+02	No Value
Tetrachloroethene	V	L	2.1E+02	2.1E+02	1.4E+05	2.1E+03	2.1E+03	1.2E+06
Thallium	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Toluene	V	L	1.6E+05	No Value	1.6E+05	1.3E+06	No Value	1.3E+06
Toxaphene	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
TPH gasoline	V	L	3.0E+05	No Value	3.0E+05	2.5E+06	No Value	2.5E+06
TPH diesel	V	L	6.8E+04	No Value	6.8E+04	5.7E+05	No Value	5.7E+05
TPH motor oil	NV	L/S	No Value	No Value	No Value	No Value	No Value	No Value
1,2,4-Trichlorobenzene	V	L	2.1E+03	No Value	2.1E+03	1.8E+04	No Value	1.8E+04
1,1,1-Trichloroethane	V	L	2.6E+06	No Value	2.6E+06	2.2E+07	No Value	2.2E+07
1,1,2-Trichloroethane	V	L	7.6E+01	7.6E+01	No Value	7.7E+02	7.7E+02	No Value
Trichloroethene	V	L	3.0E+02	3.0E+02	1.0E+03	3.0E+03	3.0E+03	8.8E+03
2,4,5-Trichlorophenol	V	S	No Value	No Value	No Value	No Value	No Value	No Value
2,4,6-Trichlorophenol	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Vanadium	NV	S	No Value	No Value	No Value	No Value	No Value	No Value
Vinyl chloride	V	G	1.6E+01	1.6E+01	5.2E+04	1.6E+02	1.6E+02	4.4E+05
Xylenes	V	L	5.2E+04	No Value	5.2E+04	4.4E+05	No Value	4.4E+05
Zinc	NV	S	No Value	No Value	No Value	No Value	No Value	No Value

Notes:
Soil gas screening levels intended to be protective of indoor air quality, calculated for volatile chemicals only.
Physical state of chemical at ambient conditions (V - volatile, NV - nonvolatile, S - solid, L - liquid, G - gas).
Chemical considered to be volatile if Henry's Law constant (atm m^3/mole) $>10^{-5}$ and molecular weight <200
Dibromochloromethane, dibromochloropropane and pyrene considered volatile for purposes of modeling (USEPA 2004).

Table E-3. Ambient and Indoor Air Screening Levels
(volatile chemicals only)

Chemical	Physical State		Inhalation Unit Risk (IUR) $(\mu g/m^3)^{-1}$	Reference Concentration (RfC) $(\mu g/m^3)$	Residential Exposure			Commercial/Industrial Exposure		
					Lowest Residential $(\mu g/m^3)$	Carcinogenic Endpoint $(\mu g/m^3)$	Noncarcinogenic Endpoint $(\mu g/m^3)$	Lowest C/I $(\mu g/m^3)$	Carcinogenic Endpoint $(\mu g/m^3)$	Noncarcinogenic Endpoint $(\mu g/m^3)$
Acenaphthene	V	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Acenaphthylene	V	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Acetone	V	L	No Value	3.1E+04	3.2E+04	No Value	3.2E+04	1.4E+05	No Value	1.4E+05
Aldrin	NV	S	4.9E-03	No Value	5.0E-04	5.0E-04	No Value	2.5E-03	2.5E-03	No Value
Anthracene	V	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Antimony	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Arsenic	NV	S	4.3E-03	1.5E-02	5.7E-04	5.7E-04	1.6E-02	2.9E-03	2.9E-03	6.6E-02
Barium	NV	S	No Value	5.0E-01	5.2E-01	No Value	5.2E-01	2.2E+00	No Value	2.2E+00
Benzene	V	L	2.9E-05	3.0E+01	8.4E-02	8.4E-02	3.1E+01	4.2E-01	4.2E-01	1.3E+02
Benzo(a)anthracene	NV	S	1.1E-04	No Value	2.2E-02	2.2E-02	No Value	1.1E-01	1.1E-01	No Value
Benzo(b)fluoranthene	NV	S	1.1E-04	No Value	2.2E-02	2.2E-02	No Value	1.1E-01	1.1E-01	No Value
Benzo(k)fluoranthene	NV	S	1.1E-04	No Value	2.2E-02	2.2E-02	No Value	1.1E-01	1.1E-01	No Value
Benzo(g,h,i)perylene	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Benzo(a)pyrene	NV	S	1.1E-03	No Value	2.2E-03	2.2E-03	No Value	1.1E-02	1.1E-02	No Value
Beryllium	NV	S	2.4E-03	2.0E-02	1.0E-03	1.0E-03	2.1E-02	5.1E-03	5.1E-03	8.8E-02
1,1-Biphenyl	V	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Bis(2-chloroethyl) ether	V	L	7.1E-04	No Value	3.4E-03	3.4E-03	No Value	1.7E-02	1.7E-02	No Value
Bis(2-chloroisopropyl) ether	V	L	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Bis(2-ethylhexyl) phthalate	NV	S	2.4E-06	No Value	1.0E+00	1.0E+00	No Value	5.1E+00	5.1E+00	No Value
Boron	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Bromodichloromethane	V	L	3.7E-05	No Value	6.6E-02	6.6E-02	No Value	3.3E-01	3.3E-01	No Value
Bromoform (Tribromomethane)	NV	S	1.1E-06	No Value	2.2E+00	2.2E+00	No Value	1.1E+01	1.1E+01	No Value
Bromomethane	V	G	No Value	5.0E+00	5.2E+00	No Value	5.2E+00	2.2E+01	No Value	2.2E+01
Cadmium (water)	NV	S	4.2E-03	No Value	5.8E-04	5.8E-04	No Value	2.9E-03	2.9E-03	No Value
Cadmium (soil)	NV	S	4.2E-03	No Value	5.8E-04	5.8E-04	No Value	2.9E-03	2.9E-03	No Value
Carbon tetrachloride	V	L	4.2E-05	4.0E+01	5.8E-02	5.8E-02	4.2E+01	2.9E-01	2.9E-01	1.8E+02
Chlordane	NV	S	3.4E-04	7.0E-01	7.2E-03	7.2E-03	7.3E-01	3.6E-02	3.6E-02	3.1E+00
p-Chloroaniline	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Chlorobenzene	V	L	No Value	1.0E+03	1.0E+03	No Value	1.0E+03	4.4E+03	No Value	4.4E+03
Chloroethane	V	G	No Value	3.0E+04	3.1E+04	No Value	3.1E+04	1.3E+05	No Value	1.3E+05
Chloroform	V	L	5.3E-06	3.0E+02	4.6E-01	4.6E-01	3.1E+02	2.3E+00	2.3E+00	1.3E+03
Chloromethane	V	G	No Value	9.0E+01	9.4E+01	No Value	9.4E+01	3.9E+02	No Value	3.9E+02
2-Chlorophenol	V	L	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Chromium (total)	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Chromium III	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Chromium VI	NV	S	1.5E-01	1.0E-01	1.6E-05	1.6E-05	1.0E-01	8.2E-05	8.2E-05	4.4E-01
Chrysene	NV	S	1.1E-05	No Value	2.2E-01	2.2E-01	No Value	1.1E+00	1.1E+00	No Value
Cobalt	NV	S	9.0E-03	6.0E-03	2.7E-04	2.7E-04	6.3E-03	1.4E-03	1.4E-03	2.6E-02
Copper	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Cyanide	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Dibenz(a,h)anthracene	NV	S	1.2E-03	No Value	2.0E-03	2.0E-03	No Value	1.0E-02	1.0E-02	No Value
Dibromochloromethane	V	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
1,2-dibromo-3-chloropropane	V	L	2.0E-03	2.0E-01	1.2E-03	1.2E-03	2.1E-01	6.1E-03	6.1E-03	8.8E-01
1,2-Dibromoethane	V	S	7.1E-05	9.0E+00	3.4E-02	3.4E-02	9.4E+00	1.7E-01	1.7E-01	3.9E+01
1,2-Dichlorobenzene	V	L	No Value	2.0E+02	2.1E+02	No Value	2.1E+02	8.8E+02	No Value	8.8E+02
1,3-Dichlorobenzene	V	L	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
1,4-Dichlorobenzene	V	S	1.1E-05	8.0E+02	2.2E-01	2.2E-01	8.3E+02	1.1E+00	1.1E+00	3.5E+03
3,3-Dichlorobenzidine	NV	S	3.0E-04	No Value	8.1E-03	8.1E-03	No Value	4.1E-02	4.1E-02	No Value
Dichlorodiphenyldichloroethane (DDD)	NV	S	6.9E-05	No Value	3.5E-02	3.5E-02	No Value	1.8E-01	1.8E-01	No Value
Dichlorodiphenyldichloroethene (DDE)	NV	S	9.7E-05	No Value	2.5E-02	2.5E-02	No Value	1.3E-01	1.3E-01	No Value
Dichlorodiphenyltrichloroethane (DDT)	NV	S	9.7E-05	No Value	2.5E-02	2.5E-02	No Value	1.3E-01	1.3E-01	No Value
1,1-Dichloroethane	V	L	1.6E-06	No Value	1.5E+00	1.5E+00	No Value	7.7E+00	7.7E+00	No Value
1,2-Dichloroethane	V	L	2.1E-05	2.4E+00	1.2E-01	1.2E-01	2.5E+00	5.8E-01	5.8E-01	1.1E+01
1,1-Dichloroethene	V	L	No Value	2.0E+02	2.1E+02	No Value	2.1E+02	8.8E+02	No Value	8.8E+02
cis-1,2-Dichloroethene	V	L	No Value	7.0E+00	7.3E+00	No Value	7.3E+00	3.1E+01	No Value	3.1E+01
trans-1,2-Dichloroethene	V	L	No Value	6.0E+01	6.3E+01	No Value	6.3E+01	2.6E+02	No Value	2.6E+02
2,4-Dichlorophenol	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
1,2-Dichloropropane	V	L	1.0E-05	4.0E+00	2.4E-01	2.4E-01	4.2E+00	1.2E+00	1.2E+00	1.8E+01
1,3-Dichloropropene	V	L	1.6E-05	2.0E+01	1.5E-01	1.5E-01	2.1E+01	7.7E-01	7.7E-01	8.8E+01
Dieldrin	NV	S	4.6E-03	No Value	5.3E-04	5.3E-04	No Value	2.7E-03	2.7E-03	No Value
Diethyl phthalate	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Dimethyl phthalate	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
2,4-Dimethylphenol	V	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
2,4-Dinitrophenol	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
2,4-Dinitrotoluene	NV	S	8.9E-05	No Value	2.7E-02	2.7E-02	No Value	1.4E-01	1.4E-01	No Value
1,4-Dioxane	NV	L	7.7E-06	3.0E+03	3.2E-01	3.2E-01	3.1E+03	1.6E+00	1.6E+00	1.3E+04
Dioxin (2,3,7,8-TCDD)	NV	S	3.8E+01	No Value	6.4E-08	6.4E-08	No Value	3.2E-07	3.2E-07	No Value
Endosulfan	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Endrin	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Ethylbenzene	V	L	2.5E-06	1.0E+03	9.7E-01	9.7E-01	1.0E+03	4.9E+00	4.9E+00	4.4E+03
Fluoranthene	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Fluorene	V	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Heptachlor	NV	S	1.2E-03	No Value	2.1E-03	2.1E-03	No Value	1.0E-02	1.0E-02	No Value
Heptachlor epoxide	NV	S	2.6E-03	No Value	9.4E-04	9.4E-04	No Value	4.7E-03	4.7E-03	No Value
Hexachlorobenzene	NV	S	5.1E-04	No Value	4.8E-03	4.8E-03	No Value	2.4E-02	2.4E-02	No Value
Hexachlorobutadiene	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
γ-Hexachlorocyclohexane (Lindane)	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Hexachloroethane	NV	S	1.1E-05	No Value	2.2E-01	2.2E-01	No Value	1.1E+00	1.1E+00	No Value
Indeno(1,2,3-c,d)pyrene	NV	S	1.1E-04	No Value	2.2E-02	2.2E-02	No Value	1.1E-01	1.1E-01	No Value
Lead	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Mercury (elemental)	V	S	No Value	3.0E-02	3.1E-02	No Value	3.1E-02	1.3E-01	No Value	1.3E-01
Methoxychlor	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Methylene chloride	V	L	4.7E-07	4.0E+02	5.2E+00	5.2E+00	4.2E+02	2.6E+01	2.6E+01	1.8E+03
Methyl ethyl ketone	V	L	No Value	5.0E+03	5.2E+03	No Value	5.2E+03	2.2E+04	No Value	2.2E+04
Methyl isobutyl ketone	V	L	No Value	3.0E+03	3.1E+03	No Value	3.1E+03	1.3E+04	No Value	1.3E+04
Methyl mercury	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
2-Methylnaphthalene	V	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value

Table E-3. Ambient and Indoor Air Screening Levels
(volatile chemicals only)

Chemical	Physical State		Inhalation Unit Risk (IUR) $(\mu g/m^3)^{-1}$	Reference Concentration (RfC) $(\mu g/m^3)$	Residential Exposure			Commercial/Industrial Exposure		
					Lowest Residential $(\mu g/m^3)$	Carcinogenic Endpoint $(\mu g/m^3)$	Noncarcinogenic Endpoint $(\mu g/m^3)$	Lowest C/I $(\mu g/m^3)$	Carcinogenic Endpoint $(\mu g/m^3)$	Noncarcinogenic Endpoint $(\mu g/m^3)$
tert-Butyl methyl ether	V	L	2.6E-07	3.0E+03	9.4E+00	9.4E+00	3.1E+03	4.7E+01	4.7E+01	1.3E+04
Molybdenum	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Naphthalene	V	S	3.4E-05	3.0E+00	7.2E-02	7.2E-02	3.1E+00	3.6E-01	3.6E-01	1.3E+01
Nickel	NV	S	No Value	5.0E-02	5.2E-02	No Value	5.2E-02	2.2E-01	No Value	2.2E-01
Pentachlorophenol	NV	S	5.1E-06	No Value	4.8E-01	4.8E-01	No Value	2.4E+00	2.4E+00	No Value
Perchlorate	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Phenanthrene	V	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Phenol	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Polychlorinated biphenyls (PCBs)	NV	S	1.0E-04	No Value	2.4E-02	2.4E-02	No Value	1.2E-01	1.2E-01	No Value
Pyrene	V	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Selenium	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Silver	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Styrene	V	L	No Value	9.0E+02	9.4E+02	No Value	9.4E+02	3.9E+03	No Value	3.9E+03
tert-Butyl alcohol	V	L	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
1,1,1,2-Tetrachloroethane	V	L	7.6E-06	No Value	3.2E-01	3.2E-01	No Value	1.6E+00	1.6E+00	No Value
1,1,2,2-Tetrachloroethane	V	L	5.8E-05	No Value	4.2E-02	4.2E-02	No Value	2.1E-01	2.1E-01	No Value
Tetrachloroethene	V	L	5.9E-06	2.7E+02	4.1E-01	4.1E-01	2.8E+02	2.1E+00	2.1E+00	1.2E+03
Thallium	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Toluene	V	L	No Value	3.0E+02	3.1E+02	No Value	3.1E+02	1.3E+03	No Value	1.3E+03
Toxaphene	NV	S	3.4E-04	No Value	7.2E-03	7.2E-03	No Value	3.6E-02	3.6E-02	No Value
TPH gasoline	V	L	No Value	5.7E+02	5.9E+02	No Value	5.9E+02	2.5E+03	No Value	2.5E+03
TPH diesel	V	L	No Value	1.3E+02	1.4E+02	No Value	1.4E+02	5.7E+02	No Value	5.7E+02
TPH motor oil	NV	L/S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
1,2,4-Trichlorobenzene	V	L	No Value	4.0E+00	4.2E+00	No Value	4.2E+00	1.8E+01	No Value	1.8E+01
1,1,1-Trichloroethane	V	L	No Value	5.0E+03	5.2E+03	No Value	5.2E+03	2.2E+04	No Value	2.2E+04
1,1,2-Trichloroethane	V	L	1.6E-05	No Value	1.5E-01	1.5E-01	No Value	7.7E-01	7.7E-01	No Value
Trichloroethene	V	L	4.1E-06	2.0E+00	5.9E-01	5.9E-01	2.1E+00	3.0E+00	3.0E+00	8.8E+00
2,4,5-Trichlorophenol	V	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
2,4,6-Trichlorophenol	NV	S	3.1E-06	No Value	7.8E-01	7.8E-01	No Value	4.0E+00	4.0E+00	No Value
Vanadium	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value
Vinyl chloride	V	G	7.8E-05	1.0E+02	3.1E-02	3.1E-02	1.0E+02	1.6E-01	1.6E-01	4.4E+02
Xylenes	V	L	No Value	1.0E+02	1.0E+02	No Value	1.0E+02	4.4E+02	No Value	4.4E+02
Zinc	NV	S	No Value	No Value	No Value	No Value	No Value	No Value	No Value	No Value

Notes:

Physical state of chemical at ambient conditions (V - volatile, NV - nonvolatile, S - solid, L - liquid, G - gas).

Chemical considered to be volatile if Henry's Law constant (atm m^3/mole) $>10^{-5}$ and molecular weight <200

Dibromochloromethane, dibromochloropropane and pyrene considered volatile

Table F-1a. Groundwater Screening Levels
(groundwater is a current or potential drinking water resource)
(µg/L)

Chemical	Final Groundwater Screening Level	Basis	Groundwater Ceiling Value (Table I-1)	Drinking Water (Table F-3)	Vapor Intrusion (Fine-Coarse Mix only) (Table E-1)	Estuary Aquatic Habitat Goal (Table F-4a)
Acenaphthene	2.0E+01	Ceiling Value	2.0E+01	2.0E+01	No Value	2.3E+01
Acenaphthylene	3.0E+01	Aquatic Habitat Goal	2.0E+03	2.0E+03	No Value	3.0E+01
Acetone	1.5E+03	Aquatic Habitat Goal	2.0E+04	1.2E+04	1.3E+08	1.5E+03
Aldrin	2.0E-03	Drinking Water	8.5E+00	2.0E-03	No Value	1.3E-01
Anthracene	7.3E-01	Aquatic Habitat Goal	2.2E+01	2.2E+01	No Value	7.3E-01
Antimony	6.0E+00	Drinking Water	5.0E+04	6.0E+00	No Value	3.0E+01
Arsenic	1.0E+01	Drinking Water	5.0E+04	1.0E+01	No Value	3.6E+01
Barium	1.0E+03	Drinking Water	5.0E+04	1.0E+03	No Value	1.0E+03
Benzene	1.0E+00	Drinking Water	1.7E+02	1.0E+00	2.7E+01	4.6E+01
Benzo(a)anthracene	2.7E-02	Aquatic Habitat Goal	5.0E+00	5.6E-02	No Value	2.7E-02
Benzo(b)fluoranthene	5.6E-02	Drinking Water	7.0E+00	5.6E-02	No Value	5.6E-02
Benzo(k)fluoranthene	5.6E-02	Drinking Water	4.0E-01	5.6E-02	No Value	3.7E+00
Benzo(g,h,i)perylene	1.0E-01	Aquatic Habitat Goal	1.3E-01	1.3E-01	No Value	1.0E-01
Benzo(a)pyrene	1.4E-02	Aquatic Habitat Goal	1.9E+00	2.0E-01	No Value	1.4E-02
Beryllium	5.3E-01	Aquatic Habitat Goal	5.0E+04	4.0E+00	No Value	5.3E-01
1,1-Biphenyl	5.0E-01	Ceiling Value	5.0E-01	5.0E-01	No Value	1.4E+01
Bis(2-chloroethyl) ether	5.5E-03	Drinking Water	3.6E+02	5.5E-03	No Value	1.2E+01
Bis(2-chloroisopropyl) ether	1.2E+01	Aquatic Habitat Goal	3.2E+02	3.2E+02	No Value	1.2E+01
Bis(2-ethylhexyl) phthalate	4.0E+00	Drinking Water	6.5E+02	4.0E+00	No Value	3.2E+01
Boron	1.6E+00	Aquatic Habitat Goal	5.0E+04	1.0E+03	No Value	1.6E+00
Bromodichloromethane	8.0E+01	Drinking Water	5.0E+04	8.0E+01	No Value	1.1E+03
Bromoform (Tribromomethane)	8.0E+01	Drinking Water	5.1E+02	8.0E+01	No Value	1.1E+03
Bromomethane	7.1E+00	Drinking Water	5.0E+04	7.1E+00	1.5E+03	1.6E+02
Cadmium (water)	2.5E-01	Aquatic Habitat Goal	5.0E+04	5.0E+00	No Value	2.5E-01
Cadmium (soil)	No Value	No Value	No Value	1.6E+01	No Value	No Value
Carbon tetrachloride	5.0E-01	Drinking Water	5.2E+02	5.0E-01	4.8E+00	9.8E+00
Chlordane	4.0E-03	Aquatic Habitat Goal	2.5E+00	1.0E-01	No Value	4.0E-03
p-Chloroaniline	5.0E+00	Aquatic Habitat Goal	5.0E+04	6.3E+01	No Value	5.0E+00
Chlorobenzene	2.5E+01	Aquatic Habitat Goal	5.0E+01	7.0E+01	Sample Soil Gas	2.5E+01
Chloroethane	1.6E+01	Ceiling Value	1.6E+01	1.6E+01	2.3E+06	1.6E+01
Chloroform	8.0E+01	Drinking Water	2.4E+03	8.0E+01	1.7E+02	6.2E+02
Chloromethane	1.3E+02	Drinking Water	5.0E+04	1.3E+02	1.3E+04	1.1E+03
2-Chlorophenol	1.8E-01	Ceiling Value	1.8E-01	1.8E-01	No Value	4.4E+02
Chromium (total)	5.0E+01	Drinking Water	5.0E+04	5.0E+01	No Value	1.8E+02
Chromium III	1.8E+02	Aquatic Habitat Goal	5.0E+04	2.3E+04	No Value	1.8E+02
Chromium VI	2.0E-02	Drinking Water	5.0E+04	2.0E-02	No Value	1.1E+01
Chrysene	3.5E-01	Aquatic Habitat Goal	8.0E-01	5.6E-01	No Value	3.5E-01
Cobalt	3.0E+00	Aquatic Habitat Goal	5.0E+04	4.7E+00	No Value	3.0E+00
Copper	3.1E+00	Aquatic Habitat Goal	1.0E+03	1.0E+03	No Value	3.1E+00
Cyanide	1.0E+00	Aquatic Habitat Goal	1.7E+02	1.5E+02	No Value	1.0E+00
Dibenz(a,h)anthracene	1.6E-02	Drinking Water	2.5E-01	1.6E-02	No Value	7.5E+00
Dibromochloromethane	8.0E+01	Drinking Water	5.0E+04	8.0E+01	No Value	1.1E+03
1,2-dibromo-3-chloropropane	2.0E-01	Drinking Water	1.0E+01	2.0E-01	No Value	2.0E-01
1,2-Dibromoethane	5.0E-02	Drinking Water	5.0E+04	5.0E-02	7.7E+01	1.4E+03
1,2-Dichlorobenzene	1.0E+01	Ceiling Value	1.0E+01	6.0E+02	1.9E+02	1.4E+01
1,3-Dichlorobenzene	6.5E+01	Aquatic Habitat Goal	5.0E+04	6.0E+02	No Value	6.5E+01
1,4-Dichlorobenzene	5.0E+00	Ceiling Value	5.0E+00	5.0E+00	1.8E+02	1.5E+01
3,3-Dichlorobenzidine	5.6E-02	Drinking Water	1.6E+03	5.6E-02	No Value	2.5E+02
Dichlorodiphenyldichloroethane (DDD)	1.0E-03	Aquatic Habitat Goal	8.0E+01	2.8E-01	No Value	1.0E-03
Dichlorodiphenyldichloroethene (DDE)	1.0E-03	Aquatic Habitat Goal	2.0E+01	2.0E-01	No Value	1.0E-03
Dichlorodiphenyltrichloroethane (DDT)	1.0E-03	Aquatic Habitat Goal	1.5E+00	2.0E-01	No Value	1.0E-03
1,1-Dichloroethane	5.0E+00	Drinking Water	5.0E+04	5.0E+00	No Value	4.7E+01
1,2-Dichloroethane	5.0E-01	Drinking Water	7.0E+03	5.0E-01	1.0E+02	2.0E+03
1,1-Dichloroethene	6.0E+00	Drinking Water	1.5E+03	6.0E+00	1.6E+04	2.5E+01
cis-1,2-Dichloroethene	6.0E+00	Drinking Water	5.0E+04	6.0E+00	3.1E+03	5.9E+02
trans-1,2-Dichloroethene	1.0E+01	Drinking Water	2.6E+02	1.0E+01	1.4E+04	5.9E+02
2,4-Dichlorophenol	3.0E-01	Ceiling Value	3.0E-01	3.0E-01	No Value	3.7E+01
1,2-Dichloropropane	5.0E+00	Drinking Water	1.0E+01	5.0E+00	1.4E+02	1.5E+03

Table F-1a. Groundwater Screening Levels
(groundwater is a current or potential drinking water resource)
(µg/L)

Chemical	Final Groundwater Screening Level	Basis	Groundwater Ceiling Value (Table I-1)	Drinking Water (Table F-3)	Vapor Intrusion (Fine-Coarse Mix only) (Table E-1)	Estuary Aquatic Habitat Goal (Table F-4a)
1,3-Dichloropropene	5.0E-01	Drinking Water	5.0E+04	5.0E-01	2.6E+01	2.4E+01
Dieldrin	1.9E-03	Aquatic Habitat Goal	4.1E+01	2.0E-03	No Value	1.9E-03
Diethyl phthalate	1.5E+00	Aquatic Habitat Goal	5.0E+04	1.3E+04	No Value	1.5E+00
Dimethyl phthalate	1.5E+00	Aquatic Habitat Goal	5.0E+04	5.0E+04	No Value	1.5E+00
2,4-Dimethylphenol	1.0E+02	Drinking Water	4.0E+02	1.0E+02	No Value	1.1E+02
2,4-Dinitrophenol	1.5E+01	Aquatic Habitat Goal	5.0E+04	3.1E+01	No Value	1.5E+01
2,4-Dinitrotoluene	9.9E-02	Drinking Water	5.0E+04	9.9E-02	No Value	1.2E+02
1,4-Dioxane	2.5E+00	Drinking Water	5.0E+04	2.5E+00	No Value	3.4E+05
Dioxin (2,3,7,8-TCDD)	1.0E-06	Aquatic Habitat Goal	7.0E+03	3.0E-05	No Value	1.0E-06
Endosulfan	8.7E-03	Aquatic Habitat Goal	7.5E+01	7.5E+01	No Value	8.7E-03
Endrin	2.3E-03	Aquatic Habitat Goal	4.1E+01	2.0E+00	No Value	2.3E-03
Ethylbenzene	3.0E+01	Ceiling Value	3.0E+01	3.0E+02	3.1E+02	4.3E+01
Fluoranthene	8.0E+00	Aquatic Habitat Goal	1.3E+02	1.3E+02	No Value	8.0E+00
Fluorene	3.9E+00	Aquatic Habitat Goal	9.5E+02	6.3E+02	No Value	3.9E+00
Heptachlor	3.6E-03	Aquatic Habitat Goal	2.0E+01	1.0E-02	No Value	3.6E-03
Heptachlor epoxide	3.6E-03	Aquatic Habitat Goal	1.8E+02	1.0E-02	No Value	3.6E-03
Hexachlorobenzene	1.0E+00	Drinking Water	5.5E+01	1.0E+00	No Value	3.7E+00
Hexachlorobutadiene	8.6E-01	Drinking Water	6.0E+00	8.6E-01	No Value	9.3E-01
γ-Hexachlorocyclohexane (Lindane)	1.6E-02	Aquatic Habitat Goal	3.5E+03	2.0E-01	No Value	1.6E-02
Hexachloroethane	1.7E+00	Drinking Water	1.0E+01	1.7E+00	No Value	1.2E+01
Indeno(1,2,3-c,d)pyrene	5.6E-02	Drinking Water	2.7E-01	5.6E-02	No Value	5.6E-02
Lead	2.5E+00	Aquatic Habitat Goal	5.0E+04	1.5E+01	No Value	2.5E+00
Mercury (elemental)	2.5E-02	Aquatic Habitat Goal	5.0E+04	2.0E+00	No Value	2.5E-02
Methoxychlor	3.0E-03	Aquatic Habitat Goal	2.0E+01	3.0E+01	No Value	3.0E-03
Methylene chloride	5.0E+00	Drinking Water	9.1E+03	5.0E+00	2.6E+03	2.2E+03
Methyl ethyl ketone	4.9E+03	Drinking Water	8.4E+03	4.9E+03	2.3E+07	1.4E+04
Methyl isobutyl ketone	1.2E+02	Drinking Water	1.3E+03	1.2E+02	1.1E+07	1.7E+02
Methyl mercury	3.0E-03	Aquatic Habitat Goal	5.0E+04	1.6E+00	No Value	3.0E-03
2-Methylnaphthalene	2.1E+00	Aquatic Habitat Goal	1.0E+01	1.0E+01	No Value	2.1E+00
tert-Butyl methyl ether	5.0E+00	Ceiling Value	5.0E+00	5.0E+00	9.9E+03	8.0E+03
Molybdenum	7.8E+01	Drinking Water	5.0E+04	7.8E+01	No Value	2.4E+02
Naphthalene	6.1E+00	Drinking Water	2.1E+01	6.1E+00	1.6E+02	2.4E+01
Nickel	8.2E+00	Aquatic Habitat Goal	5.0E+04	1.0E+02	No Value	8.2E+00
Pentachlorophenol	1.0E+00	Drinking Water	3.0E+01	1.0E+00	No Value	7.9E+00
Perchlorate	6.0E+00	Drinking Water	5.0E+04	6.0E+00	No Value	6.0E+02
Phenanthrene	4.6E+00	Aquatic Habitat Goal	4.1E+02	4.1E+02	No Value	4.6E+00
Phenol	5.0E+00	Ceiling Value	5.0E+00	5.0E+00	No Value	2.6E+02
Polychlorinated biphenyls (PCBs)	1.4E-02	Aquatic Habitat Goal	1.6E+01	5.0E-01	No Value	1.4E-02
Pyrene	2.0E+00	Aquatic Habitat Goal	6.8E+01	6.8E+01	No Value	2.0E+00
Selenium	5.0E+00	Aquatic Habitat Goal	5.0E+04	5.0E+01	No Value	5.0E+00
Silver	1.9E-01	Aquatic Habitat Goal	1.0E+02	1.0E+02	No Value	1.9E-01
Styrene	1.0E+01	Ceiling Value	1.0E+01	1.0E+02	Sample Soil Gas	1.0E+02
tert-Butyl alcohol	1.2E+01	Drinking Water	5.0E+04	1.2E+01	No Value	1.8E+04
1,1,1,2-Tetrachloroethane	5.1E-01	Drinking Water	5.0E+04	5.1E-01	No Value	9.3E+02
1,1,2,2-Tetrachloroethane	1.0E+00	Drinking Water	5.0E+02	1.0E+00	No Value	2.4E+02
Tetrachloroethene	5.0E+00	Drinking Water	1.7E+02	5.0E+00	6.3E+01	1.2E+02
Thallium	2.0E+00	Drinking Water	5.0E+04	2.0E+00	No Value	4.0E+00
Toluene	4.0E+01	Ceiling Value	4.0E+01	1.5E+02	9.5E+04	1.3E+02
Toxaphene	2.0E-04	Aquatic Habitat Goal	1.4E+02	3.0E+00	No Value	2.0E-04
TPH gasoline	1.0E+02	Ceiling Value	1.0E+02	1.0E+02	No Value	5.0E+02
TPH diesel	1.0E+02	Ceiling Value	1.0E+02	1.0E+02	No Value	6.4E+02
TPH motor oil	1.0E+02	Ceiling Value	1.0E+02	1.0E+02	No Value	6.4E+02
1,2,4-Trichlorobenzene	5.0E+00	Drinking Water	3.0E+03	5.0E+00	7.3E+03	2.5E+01
1,1,1-Trichloroethane	6.2E+01	Aquatic Habitat Goal	9.7E+02	2.0E+02	7.2E+05	6.2E+01
1,1,2-Trichloroethane	5.0E+00	Drinking Water	5.0E+04	5.0E+00	No Value	9.4E+02
Trichloroethene	5.0E+00	Drinking Water	3.1E+02	5.0E+00	1.3E+02	3.6E+02
2,4,5-Trichlorophenol	1.1E+01	Aquatic Habitat Goal	2.0E+02	2.0E+02	No Value	1.1E+01

Table F-1a. Groundwater Screening Levels
(groundwater is a current or potential drinking water resource)
(µg/L)

Chemical	Final Groundwater Screening Level	Basis	Groundwater Ceiling Value (Table I-1)	Drinking Water (Table F-3)	Vapor Intrusion (Fine-Coarse Mix only) (Table E-1)	Estuary Aquatic Habitat Goal (Table F-4a)
2,4,6-Trichlorophenol	1.6E+00	Drinking Water	1.0E+02	1.6E+00	No Value	9.7E+01
Vanadium	1.9E+01	Aquatic Habitat Goal	5.0E+04	5.0E+01	No Value	1.9E+01
Vinyl chloride	5.0E-01	Drinking Water	3.4E+03	5.0E-01	1.8E+00	7.8E+02
Xylenes	2.0E+01	Ceiling Value	2.0E+01	1.8E+03	3.7E+04	1.0E+02
Zinc	8.1E+01	Aquatic Habitat Goal	5.0E+03	5.0E+03	No Value	8.1E+01

Notes:

Lowest of Ceiling Value, Drinking Water (toxicity) goal, Vapor Intrusion (Fine-Coarse Mix only) and Aquatic Habitat Goal Used to develop soil leaching levels for protection of groundwater quality

sol - solubility threshold

Ceiling Level: Odor threshold, 1/2 solubility or 50,000 µg/L maximum, whichever is lower. Intended to limit nuisances and resource degradation.

Odor-thresholds assume no dilution.

Human Toxicity: Based on primary maximum concentration levels (MCLs), or equivalent. Considered protective of human health.

Vapor Intrusion addresses potential volatilizatuion from groundwater to indoor air.

Aquatic Habitat Goal: Addresses potential discharge of groundwater to surface waterbody and subsequent effect on aquatic life;

Potential dilution upon discharge to surface water not considered.

Background concentrations may replace final screening level as appropriate.

Table F-1b. Groundwater Screening Levels
(groundwater is not a current or potential drinking water resource)
(µg/L)

Chemical	Final Groundwater Screening Level	Basis	Gross Contamination/Ceiling Value (Odors, etc.) (Table I-2)	Vapor Intrusion (Fine-Coarse Mix only) (Table E-1)	Aquatic Habitat Goal (Table F-4a)
Acenaphthene	2.3E+01	Aquatic Habitat Goal	2.0E+02	No Value	2.3E+01
Acenaphthylene	3.0E+01	Aquatic Habitat Goal	2.0E+03	No Value	3.0E+01
Acetone	1.5E+03	Aquatic Habitat Goal	5.0E+04	1.3E+08	1.5E+03
Aldrin	1.3E-01	Aquatic Habitat Goal	8.5E+00	No Value	1.3E-01
Anthracene	7.3E-01	Aquatic Habitat Goal	2.2E+01	No Value	7.3E-01
Antimony	3.0E+01	Aquatic Habitat Goal	5.0E+04	No Value	3.0E+01
Arsenic	3.6E+01	Aquatic Habitat Goal	5.0E+04	No Value	3.6E+01
Barium	1.0E+03	Aquatic Habitat Goal	5.0E+04	No Value	1.0E+03
Benzene	2.7E+01	Vapor Intrusion	2.0E+04	2.7E+01	4.6E+01
Benzo(a)anthracene	2.7E-02	Aquatic Habitat Goal	5.0E+00	No Value	2.7E-02
Benzo(b)fluoranthene	5.6E-02	Aquatic Habitat Goal	7.0E+00	No Value	5.6E-02
Benzo(k)fluoranthene	4.0E-01	Ceiling Value	4.0E-01	No Value	3.7E+00
Benzo(g,h,i)perylene	1.0E-01	Aquatic Habitat Goal	1.3E-01	No Value	1.0E-01
Benzo(a)pyrene	1.4E-02	Aquatic Habitat Goal	1.9E+00	No Value	1.4E-02
Beryllium	5.3E-01	Aquatic Habitat Goal	5.0E+04	No Value	5.3E-01
1,1-Biphenyl	5.0E+00	Ceiling Value	5.0E+00	No Value	1.4E+01
Bis(2-chloroethyl) ether	1.2E+01	Aquatic Habitat Goal	3.6E+03	No Value	1.2E+01
Bis(2-chloroisopropyl) ether	1.2E+01	Aquatic Habitat Goal	3.2E+03	No Value	1.2E+01
Bis(2-ethylhexyl) phthalate	3.2E+01	Aquatic Habitat Goal	6.5E+02	No Value	3.2E+01
Boron	1.6E+00	Aquatic Habitat Goal	5.0E+04	No Value	1.6E+00
Bromodichloromethane	1.1E+03	Aquatic Habitat Goal	5.0E+04	No Value	1.1E+03
Bromoform (Tribromomethane)	1.1E+03	Aquatic Habitat Goal	5.1E+03	No Value	1.1E+03
Bromomethane	1.6E+02	Aquatic Habitat Goal	5.0E+04	1.5E+03	1.6E+02
Cadmium (soil)		Vapor Intrusion	No Value		
Cadmium (water)	2.5E-01	Aquatic Habitat Goal	5.0E+04	No Value	2.5E-01
Carbon tetrachloride	4.8E+00	Vapor Intrusion	5.2E+03	4.8E+00	9.8E+00
Chlordane	4.0E-03	Aquatic Habitat Goal	2.5E+01	No Value	4.0E-03
p-Chloroaniline	5.0E+00	Aquatic Habitat Goal	5.0E+04	No Value	5.0E+00
Chlorobenzene	2.5E+01	Aquatic Habitat Goal	5.0E+02	Sample Soil Gas	2.5E+01
Chloroethane	1.6E+01	Aquatic Habitat Goal	1.6E+02	2.3E+06	1.6E+01
Chloroform	1.7E+02	Vapor Intrusion	2.4E+04	1.7E+02	6.2E+02
Chloromethane	1.1E+03	Aquatic Habitat Goal	5.0E+04	1.3E+04	1.1E+03
2-Chlorophenol	1.8E+00	Ceiling Value	1.8E+00	No Value	4.4E+02
Chromium (total)	1.8E+02	Aquatic Habitat Goal	5.0E+04	No Value	1.8E+02
Chromium III	1.8E+02	Aquatic Habitat Goal	5.0E+04	No Value	1.8E+02
Chromium VI	1.1E+01	Aquatic Habitat Goal	5.0E+04	No Value	1.1E+01
Chrysene	3.5E-01	Aquatic Habitat Goal	8.0E-01	No Value	3.5E-01
Cobalt	3.0E+00	Aquatic Habitat Goal	5.0E+04	No Value	3.0E+00
Copper	3.1E+00	Aquatic Habitat Goal	5.0E+04	No Value	3.1E+00
Cyanide	1.0E+00	Aquatic Habitat Goal	1.7E+03	No Value	1.0E+00
Dibenz(a,h)anthracene	2.5E-01	Ceiling Value	2.5E-01	No Value	7.5E+00
Dibromochloromethane	1.1E+03	Aquatic Habitat Goal	5.0E+04	No Value	1.1E+03
1,2-dibromo-3-chloropropane	2.0E-01	Aquatic Habitat Goal	1.0E+02	No Value	2.0E-01
1,2-Dibromoethane	7.7E+01	Vapor Intrusion	5.0E+04	7.7E+01	1.4E+03
1,2-Dichlorobenzene	1.4E+01	Aquatic Habitat Goal	1.0E+02	1.9E+02	1.4E+01
1,3-Dichlorobenzene	6.5E+01	Aquatic Habitat Goal	5.0E+04	No Value	6.5E+01
1,4-Dichlorobenzene	1.5E+01	Aquatic Habitat Goal	1.1E+02	1.8E+02	1.5E+01
3,3-Dichlorobenzidine	2.5E+02	Aquatic Habitat Goal	1.6E+03	No Value	2.5E+02
Dichlorodiphenyldichloroethane (DDD)	1.0E-03	Aquatic Habitat Goal	8.0E+01	No Value	1.0E-03
Dichlorodiphenyldichloroethene (DDE)	1.0E-03	Aquatic Habitat Goal	2.0E+01	No Value	1.0E-03
Dichlorodiphenyltrichloroethane (DDT)	1.0E-03	Aquatic Habitat Goal	1.5E+00	No Value	1.0E-03
1,1-Dichloroethane	4.7E+01	Aquatic Habitat Goal	5.0E+04	No Value	4.7E+01
1,2-Dichloroethane	1.0E+02	Vapor Intrusion	5.0E+04	1.0E+02	2.0E+03
1,1-Dichloroethene	2.5E+01	Aquatic Habitat Goal	1.5E+04	1.6E+04	2.5E+01
cis-1,2-Dichloroethene	5.9E+02	Aquatic Habitat Goal	5.0E+04	3.1E+03	5.9E+02
trans-1,2-Dichloroethene	5.9E+02	Aquatic Habitat Goal	2.6E+03	1.4E+04	5.9E+02
2,4-Dichlorophenol	3.0E+00	Ceiling Value	3.0E+00	No Value	3.7E+01
1,2-Dichloropropane	1.0E+02	Ceiling Value	1.0E+02	1.4E+02	1.5E+03
1,3-Dichloropropene	2.4E+01	Aquatic Habitat Goal	5.0E+04	2.6E+01	2.4E+01
Dieldrin	1.9E-03	Aquatic Habitat Goal	9.3E+01	No Value	1.9E-03
Diethyl phthalate	1.5E+00	Aquatic Habitat Goal	5.0E+04	No Value	1.5E+00
Dimethyl phthalate	1.5E+00	Aquatic Habitat Goal	5.0E+04	No Value	1.5E+00
2,4-Dimethylphenol	1.1E+02	Aquatic Habitat Goal	4.0E+03	No Value	1.1E+02
2,4-Dinitrophenol	1.5E+01	Aquatic Habitat Goal	5.0E+04	No Value	1.5E+01
2,4-Dinitrotoluene	1.2E+02	Aquatic Habitat Goal	5.0E+04	No Value	1.2E+02
1,4-Dioxane	5.0E+04	Ceiling Value	5.0E+04	No Value	3.4E+05
Dioxin (2,3,7,8-TCDD)	1.0E-06	Aquatic Habitat Goal	7.0E+03	No Value	1.0E-06
Endosulfan	8.7E-03	Aquatic Habitat Goal	7.5E+01	No Value	8.7E-03
Endrin	2.3E-03	Aquatic Habitat Goal	1.3E+02	No Value	2.3E-03
Ethylbenzene	4.3E+01	Aquatic Habitat Goal	3.0E+02	3.1E+02	4.3E+01
Fluoranthene	8.0E+00	Aquatic Habitat Goal	1.3E+02	No Value	8.0E+00
Fluorene	3.9E+00	Aquatic Habitat Goal	9.5E+02	No Value	3.9E+00

Table F-1b. Groundwater Screening Levels
(groundwater is not a current or potential drinking water resource)
(µg/L)

Chemical	Final Groundwater Screening Level	Basis	Gross Contamination/Ceiling Value (Odors, etc.) (Table I-2)	Vapor Intrusion (Fine-Coarse Mix only) (Table E-1)	Aquatic Habitat Goal (Table F-4a)
Heptachlor	3.6E-03	Aquatic Habitat Goal	2.8E+01	No Value	3.6E-03
Heptachlor epoxide	3.6E-03	Aquatic Habitat Goal	1.8E+02	No Value	3.6E-03
Hexachlorobenzene	3.7E+00	Aquatic Habitat Goal	5.5E+01	No Value	3.7E+00
Hexachlorobutadiene	9.3E-01	Aquatic Habitat Goal	6.0E+01	No Value	9.3E-01
γ-Hexachlorocyclohexane (Lindane)	1.6E-02	Aquatic Habitat Goal	3.5E+03	No Value	1.6E-02
Hexachloroethane	1.2E+01	Aquatic Habitat Goal	1.0E+02	No Value	1.2E+01
Indeno(1,2,3-c,d)pyrene	5.6E-02	Aquatic Habitat Goal	2.7E-01	No Value	5.6E-02
Lead	2.5E+00	Aquatic Habitat Goal	5.0E+04	No Value	2.5E+00
Mercury (elemental)	2.5E-02	Aquatic Habitat Goal	5.0E+04	No Value	2.5E-02
Methoxychlor	3.0E-03	Aquatic Habitat Goal	2.0E+01	No Value	3.0E-03
Methylene chloride	2.2E+03	Aquatic Habitat Goal	5.0E+04	2.6E+03	2.2E+03
Methyl ethyl ketone	1.4E+04	Aquatic Habitat Goal	5.0E+04	2.3E+07	1.4E+04
Methyl isobutyl ketone	1.7E+02	Aquatic Habitat Goal	1.3E+04	1.1E+07	1.7E+02
Methyl mercury	3.0E-03	Aquatic Habitat Goal	5.0E+04	No Value	3.0E-03
2-Methylnaphthalene	2.1E+00	Aquatic Habitat Goal	1.0E+02	No Value	2.1E+00
tert-Butyl methyl ether	1.8E+03	Ceiling Value	1.8E+03	9.9E+03	8.0E+03
Molybdenum	2.4E+02	Aquatic Habitat Goal	5.0E+04	No Value	2.4E+02
Naphthalene	2.4E+01	Aquatic Habitat Goal	2.1E+02	1.6E+02	2.4E+01
Nickel	8.2E+00	Aquatic Habitat Goal	5.0E+04	No Value	8.2E+00
Pentachlorophenol	7.9E+00	Aquatic Habitat Goal	5.9E+03	No Value	7.9E+00
Perchlorate	6.0E+02	Aquatic Habitat Goal	5.0E+04	No Value	6.0E+02
Phenanthrene	4.6E+00	Aquatic Habitat Goal	4.1E+02	No Value	4.6E+00
Phenol	2.6E+02	Aquatic Habitat Goal	5.0E+04	No Value	2.6E+02
Polychlorinated biphenyls (PCBs)	1.4E-02	Aquatic Habitat Goal	1.6E+01	No Value	1.4E-02
Pyrene	2.0E+00	Aquatic Habitat Goal	6.8E+01	No Value	2.0E+00
Selenium	5.0E+00	Aquatic Habitat Goal	5.0E+04	No Value	5.0E+00
Silver	1.9E-01	Aquatic Habitat Goal	5.0E+04	No Value	1.9E-01
Styrene	1.0E+02	Aquatic Habitat Goal	1.1E+02	Sample Soil Gas	1.0E+02
tert-Butyl alcohol	1.8E+04	Aquatic Habitat Goal	5.0E+04	No Value	1.8E+04
1,1,1,2-Tetrachloroethane	9.3E+02	Aquatic Habitat Goal	5.0E+04	No Value	9.3E+02
1,1,2,2-Tetrachloroethane	2.4E+02	Aquatic Habitat Goal	5.0E+03	No Value	2.4E+02
Tetrachloroethene	6.3E+01	Vapor Intrusion	3.0E+03	6.3E+01	1.2E+02
Thallium	4.0E+00	Aquatic Habitat Goal	5.0E+04	No Value	4.0E+00
Toluene	1.3E+02	Aquatic Habitat Goal	4.0E+02	9.5E+04	1.3E+02
Toxaphene	2.0E-04	Aquatic Habitat Goal	1.4E+02	No Value	2.0E-04
TPH gasoline	5.0E+02	Aquatic Habitat Goal	5.0E+03	No Value	5.0E+02
TPH diesel	6.4E+02	Aquatic Habitat Goal	2.5E+03	No Value	6.4E+02
TPH motor oil	6.4E+02	Aquatic Habitat Goal	2.5E+03	No Value	6.4E+02
1,2,4-Trichlorobenzene	2.5E+01	Aquatic Habitat Goal	3.0E+04	7.3E+03	2.5E+01
1,1,1-Trichloroethane	6.2E+01	Aquatic Habitat Goal	5.0E+04	7.2E+05	6.2E+01
1,1,2-Trichloroethane	9.4E+02	Aquatic Habitat Goal	5.0E+04	No Value	9.4E+02
Trichloroethene	1.3E+02	Vapor Intrusion	5.0E+04	1.3E+02	3.6E+02
2,4,5-Trichlorophenol	1.1E+01	Aquatic Habitat Goal	2.0E+03	No Value	1.1E+01
2,4,6-Trichlorophenol	9.7E+01	Aquatic Habitat Goal	1.0E+03	No Value	9.7E+01
Vanadium	1.9E+01	Aquatic Habitat Goal	5.0E+04	No Value	1.9E+01
Vinyl chloride	1.8E+00	Vapor Intrusion	3.4E+04	1.8E+00	7.8E+02
Xylenes	1.0E+02	Aquatic Habitat Goal	5.3E+03	3.7E+04	1.0E+02
Zinc	8.1E+01	Aquatic Habitat Goal	5.0E+04	No Value	8.1E+01

Notes:

Lowest of groundwater Ceiling Value,Vapor Intrusion (Fine-Coarse Mix only), and Aquatic Habitat Goal used to develop soil leaching levels for protection of groundwater quality
sol - solubility threshold
Category includes groundwater that does not meet drinking water quality requirements under natural conditions
and/or situated in strata that lack adequate aquifer characteristics and is not likely to otherwise directly contaminate a source of drinking water.
Ceiling Level: Odor threshold, 1/2 solubility or 50000µg/L maximum, whichever is lower. Intended to limit nuisances and general resource degradatior
Odor-thresholds assume ten-fold dilution of groundwater upon mixing with surface water.
Indoor Air: Addresses potential emission of volatile chemicals from groundwater and subsequent volatilization to indoor air.
Aquatic Life Protection: Addresses potential discharge of groundwater to surface waterbody and subsequent effect
on aquatic life; screening levels assume no dilution upon discharge to surface water unless otherwise note(

Table F-2a. Surface Water Screening Levels
Fresh Water Habitats
(µg/L)

Chemical	Final Surface Water Screening Level	Basis	Ceiling Value (Table I-3)	Drinking Water (Table F-3)	Fresh Water Aquatic Habitat Goal (Table F-4a)	Bioaccumulation and Human Consumption (Table F-4d)
Acenaphthene	2.0E+01	Ceiling Value	2.0E+01	2.0E+01	2.3E+01	2.7E+03
Acenaphthylene	3.0E+01	Aquatic Habitat	2.0E+03	2.0E+03	3.0E+01	No Value
Acetone	1.5E+03	Aquatic Habitat Goal	2.0E+04	1.2E+04	1.5E+03	No Value
Aldrin	1.4E-04	Bioaccumulation/Human Consumption	8.5E+00	2.0E-03	3.0E-01	1.4E-04
Anthracene	7.3E-01	Aquatic Habitat Goal	2.2E+01	2.2E+01	7.3E-01	1.1E+05
Antimony	6.0E+00	Drinking Water Toxicity	5.0E+04	6.0E+00	3.0E+01	4.3E+03
Arsenic	1.4E-01	Bioaccumulation/Human Consumption	5.0E+04	1.0E+01	1.5E+02	1.4E-01
Barium	1.0E+03	Drinking Water Toxicity	5.0E+04	1.0E+03	1.0E+03	No Value
Benzene	1.0E+00	Drinking Water Toxicity	1.7E+02	1.0E+00	4.6E+01	7.1E+01
Benzo(a)anthracene	2.7E-02	Aquatic Habitat Goal	5.0E+00	5.6E-02	2.7E-02	4.9E-02
Benzo(b)fluoranthene	4.9E-02	Bioaccumulation/Human Consumption	7.0E+00	5.6E-02	5.6E-02	4.9E-02
Benzo(k)fluoranthene	4.9E-02	Bioaccumulation/Human Consumption	4.0E-01	5.6E-02	3.7E+00	4.9E-02
Benzo(g,h,i)perylene	1.0E-01	Aquatic Habitat Goal	1.3E-01	1.3E-01	1.0E-01	No Value
Benzo(a)pyrene	1.4E-02	Aquatic Habitat Goal	1.9E+00	2.0E-01	1.4E-02	4.9E-02
Beryllium	2.7E+00	Aquatic Habitat Goal	5.0E+04	4.0E+00	2.7E+00	No Value
1,1-Biphenyl	5.0E-01	Ceiling Value	5.0E-01	5.0E-01	1.4E+01	No Value
Bis(2-chloroethyl) ether	5.5E-03	Drinking Water Toxicity	3.6E+02	5.5E-03	6.1E+01	1.4E+00
Bis(2-chloroisopropyl) ether	6.1E+01	Aquatic Habitat Goal	3.2E+02	3.2E+02	6.1E+01	1.7E+05
Bis(2-ethylhexyl) phthalate	4.0E+00	Drinking Water Toxicity	6.5E+02	4.0E+00	3.2E+01	5.9E+00
Boron	1.6E+00	Aquatic Habitat Goal	5.0E+04	1.0E+03	1.6E+00	No Value
Bromodichloromethane	8.0E+01	Drinking Water Toxicity	5.0E+04	8.0E+01	1.1E+03	No Value
Bromoform (Tribromomethane)	8.0E+01	Drinking Water Toxicity	5.1E+02	8.0E+01	1.1E+03	3.6E+02
Bromomethane	7.1E+00	Drinking Water Toxicity	5.0E+04	7.1E+00	1.6E+02	4.0E+03
Cadmium (soil)		Ceiling Value				
Cadmium (water)	2.5E-01	Aquatic Habitat Goal	5.0E+04	5.0E+00	2.5E-01	No Value
Carbon tetrachloride	5.0E-01	Drinking Water Toxicity	5.2E+02	5.0E-01	9.8E+00	4.4E+00
Chlordane	5.9E-04	Bioaccumulation/Human Consumption	2.5E+00	1.0E-01	4.3E-03	5.9E-04
p-Chloroaniline	5.0E+00	Aquatic Habitat Goal	5.0E+04	6.3E+01	5.0E+00	No Value
Chlorobenzene	2.5E+01	Aquatic Habitat Goal	5.0E+01	7.0E+01	2.5E+01	2.1E+04
Chloroethane	1.6E+01	Ceiling Value	1.6E+01	1.6E+01	1.6E+01	No Value
Chloroform	8.0E+01	Drinking Water Toxicity	2.4E+03	8.0E+01	6.2E+02	4.7E+02
Chloromethane	1.3E+02	Drinking Water Toxicity	5.0E+04	1.3E+02	1.1E+03	No Value
2-Chlorophenol	1.8E-01	Ceiling Value	1.8E-01	1.8E-01	4.4E+02	4.0E+02
Chromium (total)	5.0E+01	Drinking Water Toxicity	5.0E+04	5.0E+01	1.8E+02	No Value
Chromium III	1.8E+02	Aquatic Habitat Goal	5.0E+04	2.3E+04	1.8E+02	No Value
Chromium VI	2.0E-02	Drinking Water Toxicity	5.0E+04	2.0E-02	1.1E+01	No Value
Chrysene	4.9E-02	Bioaccumulation/Human Consumption	8.0E-01	5.6E-01	3.5E-01	4.9E-02
Cobalt	3.0E+00	Aquatic Habitat Goal	5.0E+04	4.7E+00	3.0E+00	No Value
Copper	9.0E+00	Aquatic Habitat Goal	1.0E+03	1.0E+03	9.0E+00	No Value
Cyanide	5.2E+00	Aquatic Habitat Goal	1.7E+02	1.5E+02	5.2E+00	2.2E+05
Dibenz(a,h)anthracene	1.6E-02	Drinking Water Toxicity	2.5E-01	1.6E-02	7.5E+00	4.9E-02
Dibromochloromethane	4.6E+01	Bioaccumulation/Human Consumption	5.0E+04	8.0E+01	1.1E+03	4.6E+01
1,2-dibromo-3-chloropropane	2.0E-01	Drinking Water Toxicity	1.0E+01	2.0E-01	2.0E-01	No Value
1,2-Dibromoethane	5.0E-02	Drinking Water Toxicity	5.0E+04	5.0E-02	1.4E+03	No Value
1,2-Dichlorobenzene	1.0E+01	Ceiling Value	1.0E+01	6.0E+02	1.4E+01	1.7E+04
1,3-Dichlorobenzene	7.1E+01	Aquatic Habitat Goal	5.0E+04	6.0E+02	7.1E+01	2.6E+03
1,4-Dichlorobenzene	5.0E+00	Ceiling Value	5.0E+00	5.0E+00	1.5E+01	2.6E+03
3,3-Dichlorobenzidine	5.6E-02	Drinking Water Toxicity	1.6E+03	5.6E-02	2.5E+02	7.7E-02
Dichlorodiphenyldichloroethane (DDD)	8.4E-04	Bioaccumulation/Human Consumption	8.0E+01	2.8E-01	1.0E-03	8.4E-04
Dichlorodiphenyldichloroethene (DDE)	5.9E-04	Bioaccumulation/Human Consumption	2.0E+01	2.0E-01	1.0E-03	5.9E-04
Dichlorodiphenyltrichloroethane (DDT)	5.9E-04	Bioaccumulation/Human Consumption	1.5E+00	2.0E-01	1.0E-03	5.9E-04
1,1-Dichloroethane	5.0E+00	Drinking Water Toxicity	5.0E+04	5.0E+00	4.7E+01	No Value
1,2-Dichloroethane	5.0E-01	Drinking Water Toxicity	7.0E+03	5.0E-01	1.0E+04	9.9E+01
1,1-Dichloroethene	3.2E+00	Bioaccumulation/Human Consumption	1.5E+03	6.0E+00	2.5E+01	3.2E+00
cis-1,2-Dichloroethene	6.0E+00	Drinking Water Toxicity	5.0E+04	6.0E+00	5.9E+02	No Value
trans-1,2-Dichloroethene	1.0E+01	Drinking Water Toxicity	2.6E+02	1.0E+01	5.9E+02	1.4E+05
2,4-Dichlorophenol	3.0E-01	Ceiling Value	3.0E-01	3.0E-01	1.8E+02	7.9E+02
1,2-Dichloropropane	5.0E+00	Drinking Water Toxicity	1.0E+01	5.0E+00	2.9E+03	3.9E+01
1,3-Dichloropropene	5.0E-01	Drinking Water Toxicity	5.0E+04	5.0E-01	1.2E+02	1.7E+03
Dieldrin	1.4E-04	Bioaccumulation/Human Consumption	4.1E+01	2.0E-03	5.6E-02	1.4E-04
Diethyl phthalate	1.5E+00	Aquatic Habitat Goal	5.0E+04	1.3E+04	1.5E+00	1.2E+54
Dimethyl phthalate	1.5E+00	Aquatic Habitat Goal	5.0E+04	5.0E+04	1.5E+00	2.9E+06
2,4-Dimethylphenol	1.0E+02	Drinking Water Toxicity	4.0E+02	1.0E+02	5.3E+02	2.3E+03
2,4-Dinitrophenol	3.1E+01	Drinking Water Toxicity	5.0E+04	3.1E+01	7.5E+01	1.4E+04
2,4-Dinitrotoluene	9.9E-02	Drinking Water Toxicity	5.0E+04	9.9E-02	1.2E+02	9.1E+00
1,4-Dioxane	2.5E+00	Drinking Water Toxicity	5.0E+04	2.5E+00	3.4E+05	No Value
Dioxin (2,3,7,8-TCDD)	1.4E-08	Bioaccumulation/Human Consumption	7.0E+03	3.0E-05	5.0E-06	1.4E-08
Endosulfan	5.6E-02	Aquatic Habitat Goal	7.5E+01	7.5E+01	5.6E-02	2.4E+02
Endrin	3.6E-02	Aquatic Habitat Goal	4.1E+01	2.0E+00	3.6E-02	8.1E-01
Ethylbenzene	3.0E+01	Ceiling Value	3.0E+01	3.0E+02	2.9E+02	2.9E+04
Fluoranthene	8.1E+00	Aquatic Habitat Goal	1.3E+02	1.3E+02	8.1E+00	3.7E+02
Fluorene	3.9E+00	Aquatic Habitat Goal	9.5E+02	6.3E+02	3.9E+00	1.4E+04
Heptachlor	2.1E-04	Bioaccumulation/Human Consumption	2.0E+01	1.0E-02	3.8E-03	2.1E-04
Heptachlor epoxide	1.1E-04	Bioaccumulation/Human Consumption	1.8E+02	1.0E-02	3.8E-03	1.1E-04
Hexachlorobenzene	7.7E-04	Bioaccumulation/Human Consumption	5.5E+01	1.0E+00	3.7E+00	7.7E-04

Table F-2a. Surface Water Screening Levels
Fresh Water Habitats
(µg/L)

Chemical	Final Surface Water Screening Level	Basis	Ceiling Value (Table I-3)	Drinking Water (Table F-3)	Fresh Water Aquatic Habitat Goal (Table F-4a)	Bioaccumulation and Human Consumption (Table F-4d)
Hexachlorobutadiene	8.6E-01	Drinking Water Toxicity	6.0E+00	8.6E-01	4.7E+00	5.0E+01
γ-Hexachlorocyclohexane (Lindane)	6.3E-02	Bioaccumulation/Human Consumption	3.5E+03	2.0E-01	8.0E-02	6.3E-02
Hexachloroethane	1.7E+00	Drinking Water Toxicity	1.0E+01	1.7E+00	1.2E+01	8.9E+00
Indeno(1,2,3-c,d)pyrene	4.9E-02	Bioaccumulation/Human Consumption	2.7E-01	5.6E-02	5.6E-02	4.9E-02
Lead	2.5E+00	Aquatic Habitat Goal	5.0E+04	1.5E+01	2.5E+00	No Value
Mercury (elemental)	2.5E-02	Aquatic Habitat Goal	5.0E+04	2.0E+00	2.5E-02	5.1E-02
Methoxychlor	1.9E-02	Aquatic Habitat Goal	2.0E+01	3.0E+01	1.9E-02	No Value
Methylene chloride	5.0E+00	Drinking Water Toxicity	9.1E+03	5.0E+00	2.2E+03	1.6E+03
Methyl ethyl ketone	4.9E+03	Drinking Water Toxicity	8.4E+03	4.9E+03	1.4E+04	No Value
Methyl isobutyl ketone	1.2E+02	Drinking Water Toxicity	1.3E+03	1.2E+02	1.7E+02	No Value
Methyl mercury	3.0E-03	Aquatic Habitat Goal	5.0E+04	1.6E+00	3.0E-03	No Value
2-Methylnaphthalene	2.1E+00	Aquatic Habitat Goal	1.0E+01	1.0E+01	2.1E+00	No Value
tert-Butyl methyl ether	5.0E+00	Ceiling Value	5.0E+00	5.0E+00	6.6E+04	No Value
Molybdenum	7.8E+01	Drinking Water Toxicity	5.0E+04	7.8E+01	2.4E+02	No Value
Naphthalene	6.1E+00	Drinking Water Toxicity	2.1E+01	6.1E+00	2.4E+01	No Value
Nickel	5.2E+01	Aquatic Habitat Goal	5.0E+04	1.0E+02	5.2E+01	4.6E+03
Pentachlorophenol	1.0E+00	Drinking Water Toxicity	3.0E+01	1.0E+00	1.5E+01	8.2E+00
Perchlorate	6.0E+00	Drinking Water Toxicity	5.0E+04	6.0E+00	6.0E+02	No Value
Phenanthrene	6.3E+00	Aquatic Habitat Goal	4.1E+02	4.1E+02	6.3E+00	No Value
Phenol	5.0E+00	Ceiling Value	5.0E+00	5.0E+00	1.3E+03	4.6E+06
Polychlorinated biphenyls (PCBs)	1.7E-04	Bioaccumulation/Human Consumption	1.6E+01	5.0E-01	1.4E-02	1.7E-04
Pyrene	2.0E+00	Aquatic Habitat Goal	6.8E+01	6.8E+01	2.0E+00	1.1E+04
Selenium	5.0E+00	Aquatic Habitat Goal	5.0E+04	5.0E+01	5.0E+00	No Value
Silver	3.4E-01	Aquatic Habitat Goal	1.0E+02	1.0E+02	3.4E-01	No Value
Styrene	1.0E+01	Ceiling Value	1.0E+01	1.0E+02	1.0E+02	No Value
tert-Butyl alcohol	1.2E+01	Drinking Water Toxicity	5.0E+04	1.2E+01	1.8E+04	No Value
1,1,1,2-Tetrachloroethane	5.1E-01	Drinking Water Toxicity	5.0E+04	5.1E-01	9.3E+02	No Value
1,1,2,2-Tetrachloroethane	1.0E+00	Drinking Water Toxicity	5.0E+02	1.0E+00	4.2E+02	1.1E+01
Tetrachloroethene	5.0E+00	Drinking Water Toxicity	1.7E+02	5.0E+00	1.2E+02	8.9E+00
Thallium	2.0E+00	Drinking Water Toxicity	5.0E+04	2.0E+00	2.0E+01	6.3E+00
Toluene	4.0E+01	Ceiling Value	4.0E+01	1.5E+02	1.3E+02	2.0E+05
Toxaphene	2.0E-04	Aquatic Habitat Goal	1.4E+02	3.0E+00	2.0E-04	7.5E-04
TPH gasoline	1.0E+02	Ceiling Value	1.0E+02	1.0E+02	5.0E+02	No Value
TPH diesel	1.0E+02	Ceiling Value	1.0E+02	1.0E+02	6.4E+02	No Value
TPH motor oil	1.0E+02	Ceiling Value	1.0E+02	1.0E+02	6.4E+02	No Value
1,2,4-Trichlorobenzene	5.0E+00	Drinking Water Toxicity	3.0E+03	5.0E+00	2.5E+01	No Value
1,1,1-Trichloroethane	6.2E+01	Aquatic Habitat Goal	9.7E+02	2.0E+02	6.2E+01	No Value
1,1,2-Trichloroethane	5.0E+00	Drinking Water Toxicity	5.0E+04	5.0E+00	4.7E+03	4.2E+01
Trichloroethene	5.0E+00	Drinking Water Toxicity	3.1E+02	5.0E+00	3.6E+02	8.1E+01
2,4,5-Trichlorophenol	6.3E+01	Aquatic Habitat Goal	2.0E+02	2.0E+02	6.3E+01	3.6E+03
2,4,6-Trichlorophenol	1.6E+00	Drinking Water Toxicity	1.0E+02	1.6E+00	4.9E+02	6.5E+00
Vanadium	1.9E+01	Aquatic Habitat Goal	5.0E+04	5.0E+01	1.9E+01	No Value
Vinyl chloride	5.0E-01	Drinking Water Toxicity	3.4E+03	5.0E-01	7.8E+02	5.3E+02
Xylenes	2.0E+01	Ceiling Value	2.0E+01	1.8E+03	1.0E+02	No Value
Zinc	1.2E+02	Aquatic Habitat Goal	5.0E+03	5.0E+03	1.2E+02	No Value

Notes:
Lowest of ceiling value, drinking water goal, aquatic habitat goal, and bioaccumulation goal.
Ceiling Level: Odor threshold, 1/2 solubility or 50000 µg/L maximum, whichever is lower. Intended to limit nuisances and general resource degradation.

Table F-2b. Surface Water Screening Levels
Marine Habitats
(µg/L)

Chemical	Final Surface Water Screening Level	Basis	Gross Contamination/Ceiling Value (Table I-4)	Marine Aquatic Habitat Goal (Table F-4a)	Bioaccumulation and Human Consumption (Table F-4d)
Acenaphthene	2.0E+01	Ceiling Level	2.0E+01	4.0E+01	2.7E+03
Acenaphthylene	3.0E+01	Aquatic Habitat Goal	2.0E+03	3.0E+01	No Value
Acetone	1.5E+03	Aquatic Habitat Goal	2.0E+04	1.5E+03	No Value
Aldrin	1.4E-04	Bioaccumulation/Human Consumption	8.5E+00	1.3E-01	1.4E-04
Anthracene	7.3E-01	Aquatic Habitat Goal	2.2E+01	7.3E-01	1.1E+05
Antimony	5.0E+02	Aquatic Habitat Goal	5.0E+04	5.0E+02	4.3E+03
Arsenic	1.4E-01	Bioaccumulation/Human Consumption	5.0E+04	3.6E+01	1.4E-01
Barium	1.0E+03	Aquatic Habitat Goal	5.0E+04	1.0E+03	No Value
Benzene	7.1E+01	Bioaccumulation/Human Consumption	2.0E+03	3.5E+02	7.1E+01
Benzo(a)anthracene	2.7E-02	Aquatic Habitat Goal	5.0E+00	2.7E-02	4.9E-02
Benzo(b)fluoranthene	4.9E-02	Bioaccumulation/Human Consumption	7.0E+00	5.6E-02	4.9E-02
Benzo(k)fluoranthene	4.9E-02	Bioaccumulation/Human Consumption	4.0E-01	3.7E+00	4.9E-02
Benzo(g,h,i)perylene	1.0E-01	Aquatic Habitat Goal	1.3E-01	1.0E-01	No Value
Benzo(a)pyrene	1.4E-02	Aquatic Habitat Goal	1.9E+00	1.4E-02	4.9E-02
Beryllium	5.3E-01	Aquatic Habitat Goal	5.0E+04	5.3E-01	No Value
1,1-Biphenyl	5.0E-01	Ceiling Level	5.0E-01	1.4E+01	No Value
Bis(2-chloroethyl) ether	1.4E+00	Bioaccumulation/Human Consumption	3.6E+02	1.2E+01	1.4E+00
Bis(2-chloroisopropyl) ether	1.2E+01	Aquatic Habitat Goal	3.2E+02	1.2E+01	1.7E+05
Bis(2-ethylhexyl) phthalate	5.9E+00	Bioaccumulation/Human Consumption	6.5E+02	3.2E+01	5.9E+00
Boron	1.6E+00	Aquatic Habitat Goal	5.0E+04	1.6E+00	No Value
Bromodichloromethane	3.2E+03	Aquatic Habitat Goal	5.0E+04	3.2E+03	No Value
Bromoform (Tribromomethane)	3.6E+02	Bioaccumulation/Human Consumption	5.1E+02	3.2E+03	3.6E+02
Bromomethane	3.2E+03	Aquatic Habitat Goal	5.0E+04	3.2E+03	4.0E+03
Cadmium (soil)		Ceiling Level			
Cadmium (water)	9.3E+00	Aquatic Habitat Goal	5.0E+04	9.3E+00	No Value
Carbon tetrachloride	4.4E+00	Bioaccumulation/Human Consumption	5.2E+02	3.2E+03	4.4E+00
Chlordane	5.9E-04	Bioaccumulation/Human Consumption	2.5E+00	4.0E-03	5.9E-04
p-Chloroaniline	5.0E+00	Aquatic Habitat Goal	5.0E+04	5.0E+00	No Value
Chlorobenzene	5.0E+01	Ceiling Level	5.0E+01	6.5E+01	2.1E+04
Chloroethane	1.6E+01	Ceiling Level	1.6E+01	1.6E+01	No Value
Chloroform	4.7E+02	Bioaccumulation/Human Consumption	2.4E+03	3.2E+03	4.7E+02
Chloromethane	3.2E+03	Aquatic Habitat Goal	5.0E+04	3.2E+03	No Value
2-Chlorophenol	1.8E-01	Ceiling Level	1.8E-01	4.4E+02	4.0E+02
Chromium (total)	1.8E+02	Aquatic Habitat Goal	5.0E+04	1.8E+02	No Value
Chromium III	1.0E+03	Aquatic Habitat Goal	5.0E+04	1.0E+03	No Value
Chromium VI	5.0E+01	Aquatic Habitat Goal	5.0E+04	5.0E+01	No Value
Chrysene	4.9E-02	Bioaccumulation/Human Consumption	8.0E-01	3.5E-01	4.9E-02
Cobalt	3.0E+00	Aquatic Habitat Goal	5.0E+04	3.0E+00	No Value
Copper	3.1E+00	Aquatic Habitat Goal	5.0E+04	3.1E+00	No Value
Cyanide	1.0E+00	Aquatic Habitat Goal	1.7E+02	1.0E+00	2.2E+05
Dibenz(a,h)anthracene	4.9E-02	Bioaccumulation/Human Consumption	2.5E-01	7.5E+00	4.9E-02
Dibromochloromethane	4.6E+01	Bioaccumulation/Human Consumption	5.0E+04	3.2E+03	4.6E+01
1,2-dibromo-3-chloropropane	2.0E-01	Aquatic Habitat Goal	1.0E+01	2.0E-01	No Value
1,2-Dibromoethane	1.4E+03	Aquatic Habitat Goal	5.0E+04	1.4E+03	No Value
1,2-Dichlorobenzene	1.0E+01	Ceiling Level	1.0E+01	6.5E+01	1.7E+04
1,3-Dichlorobenzene	6.5E+01	Aquatic Habitat Goal	5.0E+04	6.5E+01	2.6E+03
1,4-Dichlorobenzene	1.1E+01	Ceiling Level	1.1E+01	6.5E+01	2.6E+03
3,3-Dichlorobenzidine	7.7E-02	Bioaccumulation/Human Consumption	1.6E+03	2.5E+02	7.7E-02
Dichlorodiphenyldichloroethane (DDD)	8.4E-04	Bioaccumulation/Human Consumption	8.0E+01	1.0E-03	8.4E-04
Dichlorodiphenyldichloroethene (DDE)	5.9E-04	Bioaccumulation/Human Consumption	2.0E+01	1.0E-03	5.9E-04
Dichlorodiphenyltrichloroethane (DDT)	5.9E-04	Bioaccumulation/Human Consumption	1.5E+00	1.0E-03	5.9E-04
1,1-Dichloroethane	4.7E+01	Aquatic Habitat Goal	5.0E+04	4.7E+01	No Value
1,2-Dichloroethane	9.9E+01	Bioaccumulation/Human Consumption	2.0E+04	2.0E+03	9.9E+01
1,1-Dichloroethene	3.2E+00	Bioaccumulation/Human Consumption	1.5E+03	2.2E+04	3.2E+00
cis-1,2-Dichloroethene	2.2E+04	Aquatic Habitat Goal	5.0E+04	2.2E+04	No Value
trans-1,2-Dichloroethene	2.6E+02	Ceiling Level	2.6E+02	2.2E+04	1.4E+05
2,4-Dichlorophenol	3.0E-01	Ceiling Level	3.0E-01	3.7E+01	7.9E+02
1,2-Dichloropropane	1.0E+01	Ceiling Level	1.0E+01	1.5E+03	3.9E+01
1,3-Dichloropropene	2.4E+01	Aquatic Habitat Goal	5.0E+04	2.4E+01	1.7E+03
Dieldrin	1.4E-04	Bioaccumulation/Human Consumption	4.1E+01	1.9E-03	1.4E-04
Diethyl phthalate	1.7E+00	Aquatic Habitat Goal	5.0E+04	1.7E+00	1.2E+54
Dimethyl phthalate	1.7E+00	Aquatic Habitat Goal	5.0E+04	1.7E+00	2.9E+06
2,4-Dimethylphenol	1.1E+02	Aquatic Habitat Goal	4.0E+02	1.1E+02	2.3E+03
2,4-Dinitrophenol	1.5E+01	Aquatic Habitat Goal	5.0E+04	1.5E+01	1.4E+04
2,4-Dinitrotoluene	9.1E+00	Bioaccumulation/Human Consumption	5.0E+04	1.9E+02	9.1E+00
1,4-Dioxane	5.0E+04	Ceiling Level	5.0E+04	5.0E+05	No Value
Dioxin (2,3,7,8-TCDD)	1.4E-08	Bioaccumulation/Human Consumption	7.0E+03	1.0E-06	1.4E-08
Endosulfan	8.7E-03	Aquatic Habitat Goal	7.5E+01	8.7E-03	2.4E+02
Endrin	2.3E-03	Aquatic Habitat Goal	4.1E+01	2.3E-03	8.1E-01
Ethylbenzene	3.0E+01	Ceiling Level	3.0E+01	4.3E+01	2.9E+04
Fluoranthene	8.0E+00	Aquatic Habitat Goal	1.3E+02	8.0E+00	3.7E+02
Fluorene	3.0E+01	Aquatic Habitat Goal	9.5E+02	3.0E+01	1.4E+04
Heptachlor	2.1E-04	Bioaccumulation/Human Consumption	2.0E+01	3.6E-03	2.1E-04

Table F-2b. Surface Water Screening Levels
Marine Habitats
(µg/L)

Chemical	Final Surface Water Screening Level	Basis	Gross Contamination/Ceiling Value (Table I-4)	Marine Aquatic Habitat Goal (Table F-4a)	Bioaccumulation and Human Consumption (Table F-4d)
Heptachlor epoxide	1.1E-04	Bioaccumulation/Human Consumption	1.8E+02	3.6E-03	1.1E-04
Hexachlorobenzene	7.7E-04	Bioaccumulation/Human Consumption	5.5E+01	6.5E+01	7.7E-04
Hexachlorobutadiene	9.3E-01	Aquatic Habitat Goal	6.0E+00	9.3E-01	5.0E+01
γ-Hexachlorocyclohexane (Lindane)	1.6E-02	Aquatic Habitat Goal	3.5E+03	1.6E-02	6.3E-02
Hexachloroethane	8.9E+00	Bioaccumulation/Human Consumption	1.0E+01	5.4E+01	8.9E+00
Indeno(1,2,3-c,d)pyrene	4.9E-02	Bioaccumulation/Human Consumption	2.7E-01	5.6E-02	4.9E-02
Lead	8.1E+00	Aquatic Habitat Goal	5.0E+04	8.1E+00	No Value
Mercury (elemental)	2.5E-02	Aquatic Habitat Goal	5.0E+04	2.5E-02	5.1E-02
Methoxychlor	3.0E-03	Aquatic Habitat Goal	2.0E+01	3.0E-03	No Value
Methylene chloride	1.6E+03	Bioaccumulation/Human Consumption	9.1E+03	3.2E+03	1.6E+03
Methyl ethyl ketone	8.4E+03	Ceiling Level	8.4E+03	1.4E+04	No Value
Methyl isobutyl ketone	1.7E+02	Aquatic Habitat Goal	1.3E+03	1.7E+02	No Value
Methyl mercury	3.0E-03	Aquatic Habitat Goal	5.0E+04	3.0E-03	No Value
2-Methylnaphthalene	1.0E+01	Ceiling Level	1.0E+01	3.0E+01	No Value
tert-Butyl methyl ether	1.8E+02	Ceiling Level	1.8E+02	8.0E+03	No Value
Molybdenum	2.4E+02	Aquatic Habitat Goal	5.0E+04	2.4E+02	No Value
Naphthalene	2.1E+01	Ceiling Level	2.1E+01	6.2E+01	No Value
Nickel	8.2E+00	Aquatic Habitat Goal	5.0E+04	8.2E+00	4.6E+03
Pentachlorophenol	7.9E+00	Aquatic Habitat Goal	5.9E+02	7.9E+00	8.2E+00
Perchlorate	6.0E+02	Aquatic Habitat Goal	5.0E+04	6.0E+02	No Value
Phenanthrene	4.6E+00	Aquatic Habitat Goal	4.1E+02	4.6E+00	No Value
Phenol	2.6E+02	Aquatic Habitat Goal	7.9E+03	2.6E+02	4.6E+06
Polychlorinated biphenyls (PCBs)	1.7E-04	Bioaccumulation/Human Consumption	1.6E+01	3.0E-02	1.7E-04
Pyrene	2.0E+00	Aquatic Habitat Goal	6.8E+01	2.0E+00	1.1E+04
Selenium	7.1E+01	Aquatic Habitat Goal	5.0E+04	7.1E+01	No Value
Silver	1.9E-01	Aquatic Habitat Goal	5.0E+04	1.9E-01	No Value
Styrene	1.1E+01	Ceiling Level	1.1E+01	1.0E+02	No Value
tert-Butyl alcohol	1.8E+04	Aquatic Habitat Goal	5.0E+04	1.8E+04	No Value
1,1,1,2-Tetrachloroethane	9.3E+02	Aquatic Habitat Goal	5.0E+04	9.3E+02	No Value
1,1,2,2-Tetrachloroethane	1.1E+01	Bioaccumulation/Human Consumption	5.0E+02	2.4E+02	1.1E+01
Tetrachloroethene	8.9E+00	Bioaccumulation/Human Consumption	3.0E+02	2.3E+02	8.9E+00
Thallium	4.0E+00	Aquatic Habitat Goal	5.0E+04	4.0E+00	6.3E+00
Toluene	4.0E+01	Ceiling Level	4.0E+01	2.5E+03	2.0E+05
Toxaphene	2.0E-04	Aquatic Habitat Goal	1.4E+02	2.0E-04	7.5E-04
TPH gasoline	3.7E+03	Aquatic Habitat Goal	5.0E+03	3.7E+03	No Value
TPH diesel	6.4E+02	Aquatic Habitat Goal	1.5E+03	6.4E+02	No Value
TPH motor oil	6.4E+02	Aquatic Habitat Goal	1.5E+03	6.4E+02	No Value
1,2,4-Trichlorobenzene	6.5E+01	Aquatic Habitat Goal	3.0E+03	6.5E+01	No Value
1,1,1-Trichloroethane	3.1E+03	Aquatic Habitat Goal	5.0E+04	3.1E+03	No Value
1,1,2-Trichloroethane	4.2E+01	Bioaccumulation/Human Consumption	5.0E+04	9.4E+02	4.2E+01
Trichloroethene	8.1E+01	Bioaccumulation/Human Consumption	1.0E+04	2.2E+03	8.1E+01
2,4,5-Trichlorophenol	1.1E+01	Aquatic Habitat Goal	2.0E+02	1.1E+01	3.6E+03
2,4,6-Trichlorophenol	6.5E+00	Bioaccumulation/Human Consumption	1.0E+02	9.7E+01	6.5E+00
Vanadium	1.9E+01	Aquatic Habitat Goal	5.0E+04	1.9E+01	No Value
Vinyl chloride	5.3E+02	Bioaccumulation/Human Consumption	3.4E+03	7.8E+02	5.3E+02
Xylenes	1.0E+02	Aquatic Habitat Goal	5.3E+02	1.0E+02	No Value
Zinc	8.1E+01	Aquatic Habitat Goal	5.0E+04	8.1E+01	No Value

Notes:
Lowest of Ceiling Value, aquatic habitat goal, and bioaccumulation goal.
Ceiling Level: Odor threshold, 1/2 solubility or 50000 µg/L maximum, whichever is lower. Intended to limit nuisances and general resource degradation.

Table F-2c. Surface Water Screening Levels
Estuary Habitats
(µg/L)

Chemical	Final Surface Water Screening Level	Basis	Gross Contamination/Ceiling Value Table I-4	Estuary Aquatic Habitat Goal Table F-4a	Bioaccumulation and Human Consumption Table F-4d
Acenaphthene	2.0E+01	Ceiling Level	2.0E+01	2.3E+01	2.7E+03
Acenaphthylene	3.0E+01	Aquatic Habitat Goal	2.0E+03	3.0E+01	No Value
Acetone	1.5E+03	Aquatic Habitat Goal	2.0E+04	1.5E+03	No Value
Aldrin	1.4E-04	Bioaccumulation/Human Consumption	8.5E+00	1.3E-01	1.4E-04
Anthracene	7.3E-01	Aquatic Habitat Goal	2.2E+01	7.3E-01	1.1E+05
Antimony	3.0E+01	Aquatic Habitat Goal	5.0E+04	3.0E+01	4.3E+03
Arsenic	1.4E-01	Bioaccumulation/Human Consumption	5.0E+04	3.6E+01	1.4E-01
Barium	1.0E+03	Aquatic Habitat Goal	5.0E+04	1.0E+03	No Value
Benzene	4.6E+01	Aquatic Habitat Goal	2.0E+03	4.6E+01	7.1E+01
Benzo(a)anthracene	2.7E-02	Aquatic Habitat Goal	5.0E+00	2.7E-02	4.9E-02
Benzo(b)fluoranthene	4.9E-02	Bioaccumulation/Human Consumption	7.0E+00	5.6E-02	4.9E-02
Benzo(k)fluoranthene	4.9E-02	Bioaccumulation/Human Consumption	4.0E-01	3.7E+00	4.9E-02
Benzo(g,h,i)perylene	1.0E-01	Aquatic Habitat Goal	1.3E-01	1.0E-01	No Value
Benzo(a)pyrene	1.4E-02	Aquatic Habitat Goal	1.9E+00	1.4E-02	4.9E-02
Beryllium	5.3E-01	Aquatic Habitat Goal	5.0E+04	5.3E-01	No Value
1,1-Biphenyl	5.0E-01	Ceiling Level	5.0E-01	1.4E+01	No Value
Bis(2-chloroethyl) ether	1.4E+00	Bioaccumulation/Human Consumption	3.6E+02	1.2E+01	1.4E+00
Bis(2-chloroisopropyl) ether	1.2E+01	Aquatic Habitat Goal	3.2E+02	1.2E+01	1.7E+05
Bis(2-ethylhexyl) phthalate	5.9E+00	Bioaccumulation/Human Consumption	6.5E+02	3.2E+01	5.9E+00
Boron	1.6E+00	Aquatic Habitat Goal	5.0E+04	1.6E+00	No Value
Bromodichloromethane	1.1E+03	Aquatic Habitat Goal	5.0E+04	1.1E+03	No Value
Bromoform (Tribromomethane)	3.6E+02	Bioaccumulation/Human Consumption	5.1E+02	1.1E+03	3.6E+02
Bromomethane	1.6E+02	Aquatic Habitat Goal	5.0E+04	1.6E+02	4.0E+03
Cadmium (water)	2.5E-01	Aquatic Habitat Goal	5.0E+04	2.5E-01	No Value
Cadmium (soil)		Ceiling Level			
Carbon tetrachloride	4.4E+00	Bioaccumulation/Human Consumption	5.2E+02	9.8E+00	4.4E+00
Chlordane	5.9E-04	Bioaccumulation/Human Consumption	2.5E+00	4.0E-03	5.9E-04
p-Chloroaniline	5.0E+00	Aquatic Habitat Goal	5.0E+04	5.0E+00	No Value
Chlorobenzene	2.5E+01	Aquatic Habitat Goal	5.0E+01	2.5E+01	2.1E+04
Chloroethane	1.6E+01	Ceiling Level	1.6E+01	1.6E+01	No Value
Chloroform	4.7E+02	Bioaccumulation/Human Consumption	2.4E+03	6.2E+02	4.7E+02
Chloromethane	1.1E+03	Aquatic Habitat Goal	5.0E+04	1.1E+03	No Value
2-Chlorophenol	1.8E-01	Ceiling Level	1.8E-01	4.4E+02	4.0E+02
Chromium (total)	1.8E+02	Aquatic Habitat Goal	5.0E+04	1.8E+02	No Value
Chromium III	1.8E+02	Aquatic Habitat Goal	5.0E+04	1.8E+02	No Value
Chromium VI	1.1E+01	Aquatic Habitat Goal	5.0E+04	1.1E+01	No Value
Chrysene	4.9E-02	Bioaccumulation/Human Consumption	8.0E-01	3.5E-01	4.9E-02
Cobalt	3.0E+00	Aquatic Habitat Goal	5.0E+04	3.0E+00	No Value
Copper	3.1E+00	Aquatic Habitat Goal	5.0E+04	3.1E+00	No Value
Cyanide	1.0E+00	Aquatic Habitat Goal	1.7E+02	1.0E+00	2.2E+05
Dibenz(a,h)anthracene	4.9E-02	Bioaccumulation/Human Consumption	2.5E-01	7.5E+00	4.9E-02
Dibromochloromethane	4.6E+01	Bioaccumulation/Human Consumption	5.0E+04	1.1E+03	4.6E+01
1,2-dibromo-3-chloropropane	2.0E-01	Aquatic Habitat Goal	1.0E+01	2.0E-01	No Value
1,2-Dibromoethane	1.4E+03	Aquatic Habitat Goal	5.0E+04	1.4E+03	No Value
1,2-Dichlorobenzene	1.0E+01	Ceiling Level	1.0E+01	1.4E+01	1.7E+04
1,3-Dichlorobenzene	6.5E+01	Aquatic Habitat Goal	5.0E+04	6.5E+01	2.6E+03
1,4-Dichlorobenzene	1.1E+01	Ceiling Level	1.1E+01	1.5E+01	2.6E+03
3,3-Dichlorobenzidine	7.7E-02	Bioaccumulation/Human Consumption	1.6E+03	2.5E+02	7.7E-02
Dichlorodiphenyldichloroethane (DDD)	8.4E-04	Bioaccumulation/Human Consumption	8.0E+01	1.0E-03	8.4E-04
Dichlorodiphenyldichloroethene (DDE)	5.9E-04	Bioaccumulation/Human Consumption	2.0E+01	1.0E-03	5.9E-04
Dichlorodiphenyltrichloroethane (DDT)	5.9E-04	Bioaccumulation/Human Consumption	1.5E+00	1.0E-03	5.9E-04
1,1-Dichloroethane	4.7E+01	Aquatic Habitat Goal	5.0E+04	4.7E+01	No Value
1,2-Dichloroethane	9.9E+01	Bioaccumulation/Human Consumption	2.0E+04	2.0E+03	9.9E+01
1,1-Dichloroethene	3.2E+00	Bioaccumulation/Human Consumption	1.5E+03	2.5E+01	3.2E+00
cis-1,2-Dichloroethene	5.9E+02	Aquatic Habitat Goal	5.0E+04	5.9E+02	No Value
trans-1,2-Dichloroethene	2.6E+02	Ceiling Level	2.6E+02	5.9E+02	1.4E+05
2,4-Dichlorophenol	3.0E-01	Ceiling Level	3.0E-01	3.7E+01	7.9E+02
1,2-Dichloropropane	1.0E+01	Ceiling Level	1.0E+01	1.5E+03	3.9E+01
1,3-Dichloropropene	2.4E+01	Aquatic Habitat Goal	5.0E+04	2.4E+01	1.7E+03
Dieldrin	1.4E-04	Bioaccumulation/Human Consumption	4.1E+01	1.9E-03	1.4E-04
Diethyl phthalate	1.5E+00	Aquatic Habitat Goal	5.0E+04	1.5E+00	1.2E+54
Dimethyl phthalate	1.5E+00	Aquatic Habitat Goal	5.0E+04	1.5E+00	2.9E+06
2,4-Dimethylphenol	1.1E+02	Aquatic Habitat Goal	4.0E+02	1.1E+02	2.3E+03
2,4-Dinitrophenol	1.5E+01	Aquatic Habitat Goal	5.0E+04	1.5E+01	1.4E+04
2,4-Dinitrotoluene	9.1E+00	Bioaccumulation/Human Consumption	5.0E+04	1.2E+02	9.1E+00
1,4-Dioxane	5.0E+04	Ceiling Level	5.0E+04	3.4E+05	No Value
Dioxin (2,3,7,8-TCDD)	1.4E-08	Bioaccumulation/Human Consumption	7.0E+03	1.0E-06	1.4E-08
Endosulfan	8.7E-03	Aquatic Habitat Goal	7.5E+01	8.7E-03	2.4E+02
Endrin	2.3E-03	Aquatic Habitat Goal	4.1E+01	2.3E-03	8.1E-01
Ethylbenzene	3.0E+01	Ceiling Level	3.0E+01	4.3E+01	2.9E+04
Fluoranthene	8.0E+00	Aquatic Habitat Goal	1.3E+02	8.0E+00	3.7E+02
Fluorene	3.9E+00	Aquatic Habitat Goal	9.5E+02	3.9E+00	1.4E+04

Table F-2c. Surface Water Screening Levels
Estuary Habitats
(µg/L)

Chemical	Final Surface Water Screening Level	Basis	Gross Contamination/Ceiling Value Table I-4	Estuary Aquatic Habitat Goal Table F-4a	Bioaccumulation and Human Consumption Table F-4d
Heptachlor	2.1E-04	Bioaccumulation/Human Consumption	2.0E+01	3.6E-03	2.1E-04
Heptachlor epoxide	1.1E-04	Bioaccumulation/Human Consumption	1.8E+02	3.6E-03	1.1E-04
Hexachlorobenzene	7.7E-04	Bioaccumulation/Human Consumption	5.5E+01	3.7E+00	7.7E-04
Hexachlorobutadiene	9.3E-01	Aquatic Habitat Goal	6.0E+00	9.3E-01	5.0E+01
γ-Hexachlorocyclohexane (Lindane)	1.6E-02	Aquatic Habitat Goal	3.5E+03	1.6E-02	6.3E-02
Hexachloroethane	8.9E+00	Bioaccumulation/Human Consumption	1.0E+01	1.2E+01	8.9E+00
Indeno(1,2,3-c,d)pyrene	4.9E-02	Bioaccumulation/Human Consumption	2.7E-01	5.6E-02	4.9E-02
Lead	2.5E+00	Aquatic Habitat Goal	5.0E+04	2.5E+00	No Value
Mercury (elemental)	2.5E-02	Aquatic Habitat Goal	5.0E+04	2.5E-02	5.1E-02
Methoxychlor	3.0E-03	Aquatic Habitat Goal	2.0E+01	3.0E-03	No Value
Methylene chloride	1.6E+03	Bioaccumulation/Human Consumption	9.1E+03	2.2E+03	1.6E+03
Methyl ethyl ketone	8.4E+03	Ceiling Level	8.4E+03	1.4E+04	No Value
Methyl isobutyl ketone	1.7E+02	Aquatic Habitat Goal	1.3E+03	1.7E+02	No Value
Methyl mercury	3.0E-03	Aquatic Habitat Goal	5.0E+04	3.0E-03	No Value
2-Methylnaphthalene	2.1E+00	Aquatic Habitat Goal	1.0E+01	2.1E+00	No Value
tert-Butyl methyl ether	1.8E+02	Ceiling Level	1.8E+02	8.0E+03	No Value
Molybdenum	2.4E+02	Aquatic Habitat Goal	5.0E+04	2.4E+02	No Value
Naphthalene	2.1E+01	Ceiling Level	2.1E+01	2.4E+01	No Value
Nickel	8.2E+00	Aquatic Habitat Goal	5.0E+04	8.2E+00	4.6E+03
Pentachlorophenol	7.9E+00	Aquatic Habitat Goal	5.9E+02	7.9E+00	8.2E+00
Perchlorate	6.0E+02	Aquatic Habitat Goal	5.0E+04	6.0E+02	No Value
Phenanthrene	4.6E+00	Aquatic Habitat Goal	4.1E+02	4.6E+00	No Value
Phenol	2.6E+02	Aquatic Habitat Goal	7.9E+03	2.6E+02	4.6E+06
Polychlorinated biphenyls (PCBs)	1.7E-04	Bioaccumulation/Human Consumption	1.6E+01	1.4E-02	1.7E-04
Pyrene	2.0E+00	Aquatic Habitat Goal	6.8E+01	2.0E+00	1.1E+04
Selenium	5.0E+00	Aquatic Habitat Goal	5.0E+04	5.0E+00	No Value
Silver	1.9E-01	Aquatic Habitat Goal	5.0E+04	1.9E-01	No Value
Styrene	1.1E+01	Ceiling Level	1.1E+01	1.0E+02	No Value
tert-Butyl alcohol	1.8E+04	Aquatic Habitat Goal	5.0E+04	1.8E+04	No Value
1,1,1,2-Tetrachloroethane	9.3E+02	Aquatic Habitat Goal	5.0E+04	9.3E+02	No Value
1,1,2,2-Tetrachloroethane	1.1E+01	Bioaccumulation/Human Consumption	5.0E+02	2.4E+02	1.1E+01
Tetrachloroethene	8.9E+00	Bioaccumulation/Human Consumption	3.0E+02	1.2E+02	8.9E+00
Thallium	4.0E+00	Aquatic Habitat Goal	5.0E+04	4.0E+00	6.3E+00
Toluene	4.0E+01	Ceiling Level	4.0E+01	1.3E+02	2.0E+05
Toxaphene	2.0E-04	Aquatic Habitat Goal	1.4E+02	2.0E-04	7.5E-04
TPH gasoline	5.0E+02	Aquatic Habitat Goal	5.0E+03	5.0E+02	No Value
TPH diesel	6.4E+02	Aquatic Habitat Goal	1.5E+03	6.4E+02	No Value
TPH motor oil	6.4E+02	Aquatic Habitat Goal	1.5E+03	6.4E+02	No Value
1,2,4-Trichlorobenzene	2.5E+01	Aquatic Habitat Goal	3.0E+03	2.5E+01	No Value
1,1,1-Trichloroethane	6.2E+01	Aquatic Habitat Goal	5.0E+04	6.2E+01	No Value
1,1,2-Trichloroethane	4.2E+01	Bioaccumulation/Human Consumption	5.0E+04	9.4E+02	4.2E+01
Trichloroethene	8.1E+01	Bioaccumulation/Human Consumption	1.0E+04	3.6E+02	8.1E+01
2,4,5-Trichlorophenol	1.1E+01	Aquatic Habitat Goal	2.0E+02	1.1E+01	3.6E+03
2,4,6-Trichlorophenol	6.5E+00	Bioaccumulation/Human Consumption	1.0E+02	9.7E+01	6.5E+00
Vanadium	1.9E+01	Aquatic Habitat Goal	5.0E+04	1.9E+01	No Value
Vinyl chloride	5.3E+02	Bioaccumulation/Human Consumption	3.4E+03	7.8E+02	5.3E+02
Xylenes	1.0E+02	Aquatic Habitat Goal	5.3E+02	1.0E+02	No Value
Zinc	8.1E+01	Aquatic Habitat Goal	5.0E+04	8.1E+01	No Value

Notes:
Estuary Habitats: Mixed freshwater/marine water habitats.
Lowest of Ceiling Value, aquatic habitat goal, and bioaccumulation goal.
Ceiling Level: Odor threshold, 1/2 solubility or 50000µg/L maximum, whichever is lower. Intended to limit nuisances and general resource degradation

Table F-3. Summary of Drinking Water Screening Levels
(µg/L)

Chemical	Final Screening Level MCL Priority	Final Screening Level - risk based	Basis for Final Screening Level - risk based	Cal MCL	Other Criteria	Reference	Risk-Based Goals	Basis	Ceiling Value
Acenaphthene	2.0E+01	2.0E+01	Ceiling Value				9.4E+02	nc	2.0E+01
Acenaphthylene	2.0E+03	2.0E+03	Ceiling Value						2.0E+03
Acetone	1.2E+04	1.2E+04	Risk-based				1.2E+04	nc	2.0E+04
Aldrin	2.0E-03	2.0E-03	CDPH AAL		2.0E-03	CDPH AAL	4.0E-03	ca	8.5E+00
Anthracene	2.2E+01	2.2E+01	Ceiling Value				4.7E+03	nc	2.2E+01
Antimony	6.0E+00	6.3E+00	Risk-based	6.0E+00	2.0E+01	OEHHA PHG	6.3E+00	nc	5.0E+04
Arsenic	1.0E+01	4.0E-03	OEHHA PHG	1.0E+01	4.0E-03	OEHHA PHG	4.5E-02	ca	5.0E+04
Barium	1.0E+03	2.0E+03	OEHHA PHG	1.0E+03	2.0E+03	OEHHA PHG	3.1E+03	nc	5.0E+04
Benzene	1.0E+00	1.3E-01	Risk-based	1.0E+00	1.5E-01	OEHHA PHG	1.3E-01	ca	1.7E+02
Benzo(a)anthracene	5.6E-02	5.6E-02	Risk-based				5.6E-02	ca	5.0E+00
Benzo(b)fluoranthene	5.6E-02	5.6E-02	Risk-based				5.6E-02	ca	7.0E+00
Benzo(k)fluoranthene	5.6E-02	5.6E-02	Risk-based				5.6E-02	ca	4.0E-01
Benzo(g,h,i)perylene	1.3E-01	1.3E-01	Ceiling Value						1.3E-01
Benzo(a)pyrene	2.0E-01	5.6E-03	Risk-based	2.0E-01	7.0E-03	OEHHA PHG	5.6E-03	ca	1.9E+00
Beryllium	4.0E+00	1.0E+00	OEHHA PHG	4.0E+00	1.0E+00	OEHHA PHG	3.1E+01	nc	5.0E+04
1,1-Biphenyl	5.0E-01	5.0E-01	Ceiling Value				7.8E+02	nc	5.0E-01
Bis(2-chloroethyl) ether	5.5E-03	5.5E-03	Risk-based				5.5E-03	ca	3.6E+02
Bis(2-chloroisopropyl) ether	3.2E+02	3.2E+02	Ceiling Value						3.2E+02
Bis(2-ethylhexyl) phthalate	4.0E+00	2.2E+01	Risk-based	4.0E+00			2.2E+01	ca	6.5E+02
Boron	1.0E+03	1.0E+03	CDPH NL		1.0E+03	CDPH NL	3.1E+03	nc	5.0E+04
Bromodichloromethane	8.0E+01	1.0E-01	Risk-based	8.0E+01	8.0E-01	OEHHA PHG	1.0E-01	ca	5.0E+04
Bromoform (Tribromomethane)	8.0E+01	8.0E-01	CDPH NL	8.0E+01	8.0E-01	CDPH NL	6.1E+00	ca	5.1E+02
Bromomethane	7.1E+00	7.1E+00	Risk-based				7.1E+00	nc	5.0E+04
Cadmium (soil)	1.6E+01	1.6E+01	Risk-based				1.6E+01	nc	No Value
Cadmium (water)	5.0E+00	4.0E-02	OEHHA PHG	5.0E+00	4.0E-02	OEHHA PHG	7.8E+00	nc	5.0E+04
Carbon tetrachloride	5.0E-01	9.2E-02	Risk-based	5.0E-01	1.0E-01	OEHHA PHG	9.2E-02	ca	5.2E+02
Chlordane	1.0E-01	3.0E-02	OEHHA PHG	1.0E-01	3.0E-02	OEHHA PHG	5.2E-02	ca	2.5E+00
p -Chloroaniline	6.3E+01	6.3E+01	Risk-based				6.3E+01	nc	5.0E+04
Chlorobenzene	7.0E+01	5.0E+01	Ceiling Value	7.0E+01	2.0E+02	OEHHA PHG	2.7E+02	nc	5.0E+01
Chloroethane	1.6E+01	1.6E+01	Ceiling Value						1.6E+01
Chloroform	8.0E+01	6.5E-01	Risk-based	8.0E+01	8.0E-01	OEHHA PHG	6.5E-01	ca	2.4E+03
Chloromethane	1.3E+02	1.3E+02	Risk-based				1.3E+02	nc	5.0E+04
2-Chlorophenol	1.8E-01	1.8E-01	Ceiling Value				7.8E+01	nc	1.8E-01
Chromium (total)	5.0E+01	5.0E+04	Ceiling Value	5.0E+01					5.0E+04
Chromium III	2.3E+04	2.3E+04	Risk-based				2.3E+04	nc	5.0E+04
Chromium VI	2.0E-02	2.0E-02	OEHHA PHG		2.0E-02	OEHHA PHG	4.7E+01	nc	5.0E+04
Chrysene	5.6E-01	5.6E-01	Risk-based				5.6E-01	ca	8.0E-01
Cobalt	4.7E+00	4.7E+00	Risk-based				4.7E+00	nc	5.0E+04
Copper	1.0E+03	3.0E+02	OEHHA PHG	1.0E+03	3.0E+02	OEHHA PHG	6.3E+02	nc	1.0E+03
Cyanide	1.5E+02	9.4E+00	Risk-based	1.5E+02	1.5E+02	OEHHA PHG	9.4E+00	nc	1.7E+02
Dibenz(a,h)anthracene	1.6E-02	1.6E-02	Risk-based				1.6E-02	ca	2.5E-01
Dibromochloromethane	8.0E+01	8.0E-01	OEHHA PHG	8.0E+01	8.0E-01	OEHHA PHG	8.0E-01	ca	5.0E+04
1,2-dibromo-3-chloropropane	2.0E-01	1.7E-03	OEHHA PHG	2.0E-01	1.7E-03	OEHHA PHG	1.9E-03	ca	1.0E+01
1,2-Dibromoethane	5.0E-02	1.5E-02	Risk-based	5.0E-02			1.5E-02	ca	5.0E+04
1,2-Dichlorobenzene	6.0E+02	1.0E+01	Ceiling Value	6.0E+02	6.0E+02	OEHHA PHG	3.2E+02	nc	1.0E+01
1,3-Dichlorobenzene	6.0E+02	6.0E+02	CDPH AAL		6.0E+02	CDPH AAL			5.0E+04
1,4-Dichlorobenzene	5.0E+00	4.3E-01	Risk-based	5.0E+00	6.0E+00	OEHHA PHG	4.3E-01	ca	5.0E+00
3,3-Dichlorobenzidine	5.6E-02	5.6E-02	Risk-based				5.6E-02	ca	1.6E+03
Dichlorodiphenyldichloroethane (DDD)	2.8E-01	2.8E-01	Risk-based				2.8E-01	ca	8.0E+01
Dichlorodiphenyldichloroethene (DDE)	2.0E-01	2.0E-01	Risk-based				2.0E-01	ca	2.0E+01
Dichlorodiphenyltrichloroethane (DDT)	2.0E-01	2.0E-01	Risk-based				2.0E-01	ca	1.5E+00
1,1-Dichloroethane	5.0E+00	2.4E+00	Risk-based	5.0E+00	3.0E+00	OEHHA PHG	2.4E+00	ca	5.0E+04
1,2-Dichloroethane	5.0E-01	2.2E-01	Risk-based	5.0E-01	4.0E-01	OEHHA PHG	2.2E-01	ca	7.0E+03
1,1-Dichloroethene	6.0E+00	1.0E+01	OEHHA PHG	6.0E+00	1.0E+01	OEHHA PHG	2.7E+02	nc	1.5E+03
cis -1,2-Dichloroethene	6.0E+00	1.0E+01	Risk-based	6.0E+00	1.0E+02	OEHHA PHG	1.0E+01	nc	5.0E+04
trans -1,2-Dichloroethene	1.0E+01	6.0E+01	OEHHA PHG	1.0E+01	6.0E+01	OEHHA PHG	8.9E+01	nc	2.6E+02
2,4-Dichlorophenol	3.0E-01	3.0E-01	Ceiling Value				4.7E+01	nc	3.0E-01
1,2-Dichloropropane	5.0E+00	3.9E-01	Risk-based	5.0E+00	5.0E-01	OEHHA PHG	3.9E-01	ca	1.0E+01
1,3-Dichloropropene	5.0E-01	2.0E-01	OEHHA PHG	5.0E-01	2.0E-01	OEHHA PHG	2.3E-01	ca	5.0E+04
Dieldrin	2.0E-03	2.0E-03	CDPH AAL		2.0E-03	CDPH AAL	4.2E-03	ca	4.1E+01
Diethyl phthalate	1.3E+04	1.3E+04	Risk-based				1.3E+04	nc	5.0E+04
Dimethyl phthalate	5.0E+04	5.0E+04	Ceiling Value				1.6E+05	nc	5.0E+04
2,4-Dimethylphenol	1.0E+02	1.0E+02	CDPH AAL		1.0E+02	CDPH AAL	3.1E+02	nc	4.0E+02
2,4-Dinitrophenol	3.1E+01	3.1E+01	Risk-based				3.1E+01	nc	5.0E+04
2,4-Dinitrotoluene	9.9E-02	9.9E-02	Risk-based				9.9E-02	ca	5.0E+04
1,4-Dioxane	2.5E+00	2.5E+00	Risk-based		3.0E+00	OEHHA PHG	2.5E+00	ca	5.0E+04
Dioxin (2,3,7,8-TCDD)	3.0E-05	5.0E-08	OEHHA PHG	3.0E-05	5.0E-08	OEHHA PHG	5.2E-07	ca	7.0E+03
Endosulfan	7.5E+01	7.5E+01	Ceiling Value				9.4E+01	nc	7.5E+01
Endrin	2.0E+00	1.8E+00	OEHHA PHG	2.0E+00	1.8E+00	OEHHA PHG	4.7E+00	nc	4.1E+01
Ethylbenzene	3.0E+02	1.5E+00	Risk-based	3.0E+02	3.0E+02	OEHHA PHG	1.5E+00	ca	3.0E+01
Fluoranthene	1.3E+02	1.3E+02	Ceiling Value				6.3E+02	nc	1.3E+02
Fluorene	6.3E+02	6.3E+02	Risk-based				6.3E+02	nc	9.5E+02
Heptachlor	1.0E-02	8.0E-03	OEHHA PHG	1.0E-02	8.0E-03	OEHHA PHG	1.6E-02	ca	2.0E+01
Heptachlor epoxide	1.0E-02	6.0E-03	OEHHA PHG	1.0E-02	6.0E-03	OEHHA PHG	7.4E-03	ca	1.8E+02
Hexachlorobenzene	1.0E+00	3.0E-02	OEHHA PHG	1.0E+00	3.0E-02	OEHHA PHG	3.7E-02	ca	5.5E+01
Hexachlorobutadiene	8.6E-01	8.6E-01	Risk-based				8.6E-01	ca	6.0E+00
γ-Hexachlorocyclohexane (Lindane)	2.0E-01	3.2E-02	OEHHA PHG	2.0E-01	3.2E-02	OEHHA PHG	4.7E+00	nc	3.5E+03
Hexachloroethane	1.7E+00	1.7E+00	Risk-based				1.7E+00	ca	1.0E+01
Indeno(1,2,3-c,d)pyrene	5.6E-02	5.6E-02	Risk-based				5.6E-02	ca	2.7E-01
Lead	1.5E+01	2.0E-01	OEHHA PHG	1.5E+01	2.0E-01	OEHHA PHG			5.0E+04
Mercury (elemental)	2.0E+00	6.0E-02	Risk-based	2.0E+00	1.2E+00	OEHHA PHG	6.0E-02	nc	5.0E+04
Methoxychlor	3.0E+01	9.0E-02	OEHHA PHG	3.0E+01	9.0E-02	OEHHA PHG	7.8E+01	nc	2.0E+01

Table F-3. Summary of Drinking Water Screening Levels
(µg/L)

Chemical	Final Screening Level MCL Priority	Final Screening Level - risk based	Basis for Final Screening Level - risk based	Cal MCL	Other Criteria	Reference	Risk-Based Goals	Basis	Ceiling Value
Methylene chloride	5.0E+00	3.3E+00	Risk-based	5.0E+00	4.0E+00	OEHHA PHG	3.3E+00	ca	9.1E+03
Methyl ethyl ketone	4.9E+03	4.9E+03	Risk-based				4.9E+03	nc	8.4E+03
Methyl isobutyl ketone	1.2E+02	1.2E+02	CDPH NL		1.2E+02	CDPH NL	4.3E+03	nc	1.3E+03
Methyl mercury	1.6E+00	1.6E+00	Risk-based				1.6E+00	nc	5.0E+04
2-Methylnaphthalene	1.0E+01	1.0E+01	Ceiling Value				6.3E+01	nc	1.0E+01
tert-Butyl methyl ether	5.0E+00	5.0E+00	Cal MCL	5.0E+00	1.3E+01	OEHHA PHG	1.2E+01	ca	5.0E+00
Molybdenum	7.8E+01	7.8E+01	Risk-based				7.8E+01	nc	5.0E+04
Naphthalene	6.1E+00	6.1E+00	Risk-based		1.7E+01	CDPH NL	6.1E+00	nc	2.1E+01
Nickel	1.0E+02	1.2E+01	OEHHA PHG	1.0E+02	1.2E+01	OEHHA PHG	3.1E+02	nc	5.0E+04
Pentachlorophenol	1.0E+00	3.0E-01	OEHHA PHG	1.0E+00	3.0E-01	OEHHA PHG	5.6E-01	ca	3.0E+01
Perchlorate	6.0E+00	6.0E+00	Cal MCL	6.0E+00	6.0E+00	OEHHA PHG	1.1E+01	nc	5.0E+04
Phenanthrene	4.1E+02	4.1E+02	Ceiling Value						4.1E+02
Phenol	5.0E+00	5.0E+00	Ceiling Value		4.2E+03	CDPH AAL	4.7E+03	nc	5.0E+00
Polychlorinated biphenyls (PCBs)	5.0E-01	3.4E-02	Risk-based	5.0E-01	9.0E-02	OEHHA PHG	3.4E-02	ca	1.6E+01
Pyrene	6.8E+01	6.8E+01	Ceiling Value				9.4E+02	nc	6.8E+01
Selenium	5.0E+01	3.0E+01	OEHHA PHG	5.0E+01	3.0E+01	OEHHA PHG	7.8E+01	nc	5.0E+04
Silver	1.0E+02	7.8E+01	Risk-based	1.0E+02			7.8E+01	nc	1.0E+02
Styrene	1.0E+02	5.0E-01	OEHHA PHG	1.0E+02	5.0E-01	OEHHA PHG	1.2E+03	nc	1.0E+01
tert-Butyl alcohol	1.2E+01	1.2E+01	CDPH NL		1.2E+01	CDPH NL			5.0E+04
1,1,1,2-Tetrachloroethane	5.1E-01	5.1E-01	Risk-based				5.1E-01	ca	5.0E+04
1,1,2,2-Tetrachloroethane	1.0E+00	6.3E-02	Risk-based	1.0E+00	1.0E-01	OEHHA PHG	6.3E-02	ca	5.0E+02
Tetrachloroethene	5.0E+00	6.0E-02	OEHHA PHG	5.0E+00	6.0E-02	OEHHA PHG	1.1E-01	ca	1.7E+02
Thallium	2.0E+00	1.0E-01	OEHHA PHG	2.0E+00	1.0E-01	OEHHA PHG	1.6E-01	nc	5.0E+04
Toluene	1.5E+02	4.0E+01	Ceiling Value	1.5E+02	1.5E+02	OEHHA PHG	4.2E+02	nc	4.0E+01
Toxaphene	3.0E+00	3.0E-02	OEHHA PHG	3.0E+00	3.0E-02	OEHHA PHG	5.6E-02	ca	1.4E+02
TPH gasoline	1.0E+02	1.0E+02	Ceiling Value				4.0E+02	nc	1.0E+02
TPH diesel	1.0E+02	1.0E+02	Ceiling Value				1.5E+02	nc	1.0E+02
TPH motor oil	1.0E+02	1.0E+02	Ceiling Value				2.7E+03	nc	1.0E+02
1,2,4-Trichlorobenzene	5.0E+00	5.0E+00	Cal MCL	5.0E+00	5.0E+00	OEHHA PHG	7.9E+00	nc	3.0E+03
1,1,1-Trichloroethane	2.0E+02	9.7E+02	Ceiling Value	2.0E+02	1.0E+03	OEHHA PHG	7.8E+03	nc	9.7E+02
1,1,2-Trichloroethane	5.0E+00	2.3E-01	Risk-based	5.0E+00	3.0E-01	OEHHA PHG	2.3E-01	ca	5.0E+04
Trichloroethene	5.0E+00	6.6E-01	Risk-based	5.0E+00	1.7E+00	OEHHA PHG	6.6E-01	ca	3.1E+02
2,4,5-Trichlorophenol	2.0E+02	2.0E+02	Ceiling Value				1.6E+03	nc	2.0E+02
2,4,6-Trichlorophenol	1.6E+00	1.6E+00	Risk-based				1.6E+00	nc	1.0E+02
Vanadium	5.0E+01	5.0E+01	CDPH NL		5.0E+01	CDPH NL	7.8E+01	nc	5.0E+04
Vinyl chloride	5.0E-01	5.0E-02	Risk-based	5.0E-01	5.0E-02	OEHHA PHG	5.0E-02	ca	3.4E+03
Xylenes	1.8E+03	2.0E+01	Ceiling Value	1.75E+03	1.8E+03	OEHHA PHG	2.0E+02	nc	2.0E+01
Zinc	5.0E+03	4.7E+03	Risk-based	5.0E+03			4.7E+03	nc	5.0E+03

Notes:
Used for development of groundwater and soil screening levels.
Final health-based screening level for drinking water: Cal EPA Primary MCL or Public Health Goal, DHS Action Level and risk-based goal.
Cal MCL: California Maximum Concentration Level - Includes both primary and secondary
OEHHA PHG: California Office of Environmental Health Hazard Assessment Public Health Goal.
CDPH AAL: California Department of Public Health Archived Advisory Level based on toxicity to humans.
CDPH NL: California Department of Public Health Notification Level

Table F-4a. Summary of Selected Aquatic Habitat Goals
(µg/L)

	Aquatic Habitat Goals					
Chemical	**Lowest Estuary Aquatic Habitat Goal**	**Basis**	**Lowest Freshwater Aquatic Habitat Goal**	**Basis**	**Lowest Marine Aquatic Habitat Goal**	**Basis**
Acenaphthene	2.3E+01	US EPA Ecotox FW Chronic	2.3E+01	US EPA Ecotox FW Chronic	4.0E+01	US EPA Ecotox SW Chronic
Acenaphthylene	3.0E+01	10% US EPA SW Acute LOEL	3.0E+01	10% US EPA SW Acute LOEL	3.0E+01	10% US EPA SW Acute LOEL
Acetone	1.5E+03	USDOE FW Chronic PRG	1.5E+03	USDOE FW Chronic PRG	1.5E+03	USDOE FW Chronic PRG
Aldrin	1.3E-01	10% CTR SW CMC	3.0E-01	10% CTR FW CMC	1.3E-01	10% CTR SW CMC
Anthracene	7.3E-01	USDOE FW Chronic PRG	7.3E-01	USDOE FW Chronic PRG	7.3E-01	USDOE FW Chronic PRG
Antimony	3.0E+01	US EPA FW CCC	3.0E+01	US EPA FW CCC	5.0E+02	US EPA SW CCC
Arsenic	3.6E+01	CTR SW CCC	1.5E+02	CTR FW CCC	3.6E+01	CTR SW CCC
Barium	1.0E+03	=Drinking Water Goal (Table F-3)	1.0E+03	=Drinking Water Goal (Table F-3)	1.0E+03	=Drinking Water Goal (Table F-3)
Benzene	4.6E+01	US EPA Ecotox FW Chronic	4.6E+01	US EPA Ecotox FW Chronic	3.5E+02	50% US EPA SW Chronic LOEL
Benzo(a)anthracene	2.7E-02	USDOE FW Chronic PRG	2.7E-02	USDOE FW Chronic PRG	2.7E-02	USDOE FW Chronic PRG
Benzo(b)fluoranthene	5.6E-02	=Drinking Water Goal (Table F-3)	5.6E-02	=Drinking Water Goal (Table F-3)	5.6E-02	=Drinking Water Goal (Table F-3)
Benzo(k)fluoranthene	3.7E+00	50% MOEE FW Chronic LOEL	3.7E+00	50% MOEE FW Chronic LOEL	3.7E+00	50% MOEE FW Chronic LOEL
Benzo(g,h,i)perylene	1.0E-01	50% MOEE FW Chronic LOEL	1.0E-01	50% MOEE FW Chronic LOEL	1.0E-01	50% MOEE FW Chronic LOEL
Benzo(a)pyrene	1.4E-02	US EPA Ecotox FW Chronic	1.4E-02	US EPA Ecotox FW Chronic	1.4E-02	US EPA Ecotox FW Chronic
Beryllium	5.3E-01	10% US EPA SW Acute LOEL	2.7E+00	50% US EPA FW Chronic LOEL	5.3E-01	10% US EPA SW Acute LOEL
1,1-Biphenyl	1.4E+01	US EPA Ecotox FW Chronic	1.4E+01	US EPA Ecotox FW Chronic	1.4E+01	US EPA Ecotox FW Chronic
Bis(2-chloroethyl) ether	1.2E+01	10% US EPA SW Acute LOEL	6.1E+01	50% US EPA FW Chronic LOEL	1.2E+01	10% US EPA SW Acute LOEL
Bis(2-chloroisopropyl) ether	1.2E+01	10% US EPA SW Acute LOEL	6.1E+01	50% US EPA FW Chronic LOEL	1.2E+01	10% US EPA SW Acute LOEL
Bis(2-ethylhexyl) phthalate	3.2E+01	US EPA Ecotox FW Chronic	3.2E+01	US EPA Ecotox FW Chronic	3.2E+01	US EPA Ecotox FW Chronic
Boron	1.6E+00	USDOE FW Chronic PRG	1.6E+00	USDOE FW Chronic PRG	1.6E+00	USDOE FW Chronic PRG
Bromodichloromethane	1.1E+03	10% US EPA FW Acute LOEL	1.1E+03	10% US EPA FW Acute LOEL	3.2E+03	50% US EPA SW Chronic LOEL
Bromoform (Tribromomethane)	1.1E+03	10% US EPA FW Acute LOEL	1.1E+03	10% US EPA FW Acute LOEL	3.2E+03	50% US EPA SW Chronic LOEL
Bromomethane	1.6E+02	50% MOEE FW Chronic LOEL	1.6E+02	50% MOEE FW Chronic LOEL	3.2E+03	50% US EPA SW Chronic LOEL
Cadmium (soil)						
Cadmium (water)	2.5E-01	US EPA FW CCC	2.5E-01	US EPA FW CCC	9.3E+00	CTR SW CCC
Carbon tetrachloride	9.8E+00	USDOE FW Chronic PRG	9.8E+00	USDOE FW Chronic PRG	3.2E+03	50% US EPA SW Chronic LOEL
Chlordane	4.0E-03	CTR SW CCC	4.3E-03	CTR FW CCC	4.0E-03	CTR SW CCC
p-Chloroaniline	5.0E+00	50% MOEE FW Chronic LOEL	5.0E+00	50% MOEE FW Chronic LOEL	5.0E+00	50% MOEE FW Chronic LOEL
Chlorobenzene	2.5E+01	50% US EPA FW Chronic LOEL	2.5E+01	50% US EPA FW Chronic LOEL	6.5E+01	50% US EPA SW Chronic LOEL
Chloroethane	1.6E+01	=Drinking Water Goal (Table F-3)	1.6E+01	=Drinking Water Goal (Table F-3)	1.6E+01	=Drinking Water Goal (Table F-3)
Chloroform	6.2E+02	50% US EPA FW Chronic LOEL	6.2E+02	50% US EPA FW Chronic LOEL	3.2E+03	50% US EPA SW Chronic LOEL
Chloromethane	1.1E+03	10% US EPA FW Acute LOEL	1.1E+03	10% US EPA FW Acute LOEL	3.2E+03	50% US EPA SW Chronic LOEL
2-Chlorophenol	4.4E+02	10% US EPA FW Acute LOEL	4.4E+02	10% US EPA FW Acute LOEL	4.4E+02	10% US EPA FW Acute LOEL
Chromium (total)	1.8E+02	CTR FW CCC	1.8E+02	CTR FW CCC	1.8E+02	CTR FW CCC
Chromium III	1.8E+02	CTR FW CCC	1.8E+02	CTR FW CCC	1.0E+03	10% US EPA SW Acute LOEL
Chromium VI	1.1E+01	CTR FW CCC	1.1E+01	CTR FW CCC	5.0E+01	CTR SW CCC
Chrysene	3.5E-01	50% MOEE FW Chronic LOEL	3.5E-01	50% MOEE FW Chronic LOEL	3.5E-01	50% MOEE FW Chronic LOEL
Cobalt	3.0E+00	US EPA Ecotox FW Chronic	3.0E+00	US EPA Ecotox FW Chronic	3.0E+00	US EPA Ecotox FW Chronic
Copper	3.1E+00	CTR SW CCC	9.0E+00	CTR FW CCC	3.1E+00	CTR SW CCC
Cyanide	1.0E+00	CTR SW CCC	5.2E+00	CTR FW CCC	1.0E+00	CTR SW CCC
Dibenz(a,h)anthracene	7.5E+00	50% MOEE FW Chronic LOEL	7.5E+00	50% MOEE FW Chronic LOEL	7.5E+00	50% MOEE FW Chronic LOEL
Dibromochloromethane	1.1E+03	10% US EPA FW Acute LOEL	1.1E+03	10% US EPA FW Acute LOEL	3.2E+03	50% US EPA SW Chronic LOEL
1,2-dibromo-3-chloropropane	2.0E-01	=Drinking Water Goal (Table F-3)	2.0E-01	=Drinking Water Goal (Table F-3)	2.0E-01	=Drinking Water Goal (Table F-3)
1,2-Dibromoethane	1.4E+03	50% MOEE FW Chronic AWQC	1.4E+03	50% MOEE FW Chronic AWQC	1.4E+03	50% MOEE FW Chronic AWQC
1,2-Dichlorobenzene	1.4E+01	US EPA Ecotox FW Chronic	1.4E+01	US EPA Ecotox FW Chronic	6.5E+01	50% US EPA SW Chronic LOEL
1,3-Dichlorobenzene	6.5E+01	50% US EPA SW Chronic LOEL	7.1E+01	US EPA Ecotox FW Chronic	6.5E+01	50% US EPA SW Chronic LOEL
1,4-Dichlorobenzene	1.5E+01	US EPA Ecotox FW Chronic	1.5E+01	US EPA Ecotox FW Chronic	6.5E+01	50% US EPA SW Chronic LOEL
3,3-Dichlorobenzidine	2.5E+02	50% MOEE FW Chronic LOEL	2.5E+02	50% MOEE FW Chronic LOEL	2.5E+02	50% MOEE FW Chronic LOEL
Dichlorodiphenyldichloroethane (DDD)	1.0E-03	=DDT	1.0E-03	=DDT	1.0E-03	=DDT
Dichlorodiphenyldichloroethene (DDE)	1.0E-03	=DDT	1.0E-03	=DDT	1.0E-03	=DDT
Dichlorodiphenyltrichloroethane (DDT)	1.0E-03	CTR FW CCC	1.0E-03	CTR FW CCC	1.0E-03	CTR SW CCC
1,1-Dichloroethane	4.7E+01	US EPA Ecotox FW Chronic	4.7E+01	US EPA Ecotox FW Chronic	4.7E+01	US EPA Ecotox FW Chronic
1,2-Dichloroethane	2.0E+03	10% US EPA SW Acute LOEL	1.0E+04	50% US EPA FW Chronic LOEL	2.0E+03	10% US EPA SW Acute LOEL
1,1-Dichloroethene	2.5E+01	USDOE FW Chronic PRG	2.5E+01	USDOE FW Chronic PRG	2.2E+04	10% US EPA SW Acute LOEL
cis-1,2-Dichloroethene	5.9E+02	USDOE FW Chronic PRG	5.9E+02	USDOE FW Chronic PRG	2.2E+04	10% US EPA SW Acute LOEL
trans-1,2-Dichloroethene	5.9E+02	USDOE FW Chronic PRG	5.9E+02	USDOE FW Chronic PRG	2.2E+04	10% US EPA SW Acute LOEL
2,4-Dichlorophenol	3.7E+01	10% US EPA SW Acute LOEL	1.8E+02	50% US EPA FW Chronic LOEL	3.7E+01	10% US EPA SW Acute LOEL
1,2-Dichloropropane	1.5E+03	50% US EPA SW Chronic LOEL	2.9E+03	50% US EPA FW Chronic LOEL	1.5E+03	50% US EPA SW Chronic LOEL
1,3-Dichloropropene	2.4E+01	10% US EPA SW Acute LOEL	1.2E+02	50% US EPA FW Chronic LOEL	2.4E+01	10% US EPA SW Acute LOEL
Dieldrin	1.9E-03	CTR SW CCC	5.6E-02	CTR FW CCC	1.9E-03	CTR SW CCC
Diethyl phthalate	1.5E+00	50% US EPA FW Chronic LOEL	1.5E+00	50% US EPA FW Chronic LOEL	1.7E+00	50% US EPA SW Chronic LOEL
Dimethyl phthalate	1.5E+00	50% US EPA FW Chronic LOEL	1.5E+00	50% US EPA FW Chronic LOEL	1.7E+00	50% US EPA SW Chronic LOEL
2,4-Dimethylphenol	1.1E+02	US EPA SW CCC	5.3E+02	US EPA FW CCC	1.1E+02	US EPA SW CCC
2,4-Dinitrophenol	1.5E+01	10% US EPA SW Acute LOEL	7.5E+01	50% US EPA FW Chronic LOEL	1.5E+01	10% US EPA SW Acute LOEL
2,4-Dinitrotoluene	1.2E+02	50% US EPA FW Chronic LOEL	1.2E+02	50% US EPA FW Chronic LOEL	1.9E+02	50% US EPA SW Chronic LOEL
1,4-Dioxane	3.4E+05	5% Acute FW LC50	3.4E+05	5% Acute FW LC50	5.0E+05	5% acute FW LC 50
Dioxin (2,3,7,8-TCDD)	1.0E-06	10% US EPA SW Acute LOEL	5.0E-06	50% US EPA FW Chronic LOEL	1.0E-06	10% US EPA SW Acute LOEL
Endosulfan	8.7E-03	CTR SW CCC	5.6E-02	CTR FW CCC	8.7E-03	CTR SW CCC
Endrin	2.3E-03	CTR SW CCC	3.6E-02	CTR FW CCC	2.3E-03	CTR SW CCC
Ethylbenzene	4.3E+01	10% US EPA SW Acute LOEL	2.9E+02	US EPA Ecotox FW Chronic	4.3E+01	10% US EPA SW Acute LOEL
Fluoranthene	8.0E+00	50% US EPA SW Chronic LOEL	8.1E+00	US EPA Ecotox FW Chronic	8.0E+00	50% US EPA SW Chronic LOEL
Fluorene	3.9E+00	US EPA Ecotox FW Chronic	3.9E+00	US EPA Ecotox FW Chronic	3.0E+01	10% US EPA SW Acute LOEL
Heptachlor	3.6E-03	CTR SW CCC	3.8E-03	CTR FW CCC	3.6E-03	CTR SW CCC
Heptachlor epoxide	3.6E-03	CTR SW CCC	3.8E-03	CTR FW CCC	3.6E-03	CTR SW CCC
Hexachlorobenzene	3.7E+00	US EPA FW CCC	3.7E+00	US EPA FW CCC	6.5E+01	50% US EPA SW Chronic LOEL
Hexachlorobutadiene	9.3E-01	10% US EPA SW Acute LOEL	4.7E+00	50% US EPA FW Chronic LOEL	9.3E-01	10% US EPA SW Acute LOEL
γ-Hexachlorocyclohexane (Lindane)	1.6E-02	10% CTR SW CMC	8.0E-02	US EPA Ecotox FW Chronic	1.6E-02	10% CTR SW CMC
Hexachloroethane	1.2E+01	US EPA Ecotox FW Chronic	1.2E+01	US EPA Ecotox FW Chronic	5.4E+01	10% US EPA SW Acute LOEL
Indeno(1,2,3-c,d)pyrene	5.6E-02	=Drinking Water Goal (Table F-3)	5.6E-02	=Drinking Water Goal (Table F-3)	5.6E-02	=Drinking Water Goal (Table F-3)
Lead	2.5E+00	CTR FW CCC	2.5E+00	CTR FW CCC	8.1E+00	CTR SW CCC
Mercury (elemental)	2.5E-02	Basin Plan	2.5E-02	Basin Plan	2.5E-02	Basin Plan
Methoxychlor	3.0E-03	10% US EPA SW CMC	1.9E-02	US EPA Ecotox FW Chronic	3.0E-03	10% US EPA SW CMC
Methylene chloride	2.2E+03	USDOE FW Chronic PRG	2.2E+03	USDOE FW Chronic PRG	3.2E+03	50% US EPA SW Chronic LOEL
Methyl ethyl ketone	1.4E+04	USDOE FW Chronic PRG	1.4E+04	USDOE FW Chronic PRG	1.4E+04	USDOE FW Chronic PRG
Methyl isobutyl ketone	1.7E+02	USDOE FW Chronic PRG	1.7E+02	USDOE FW Chronic PRG	1.7E+02	USDOE FW Chronic PRG

Table F-4a. Summary of Selected Aquatic Habitat Goals
(µg/L)

	Aquatic Habitat Goals					
Chemical	**Lowest Estuary Aquatic Habitat Goal**	**Basis**	**Lowest Freshwater Aquatic Habitat Goal**	**Basis**	**Lowest Marine Aquatic Habitat Goal**	**Basis**
Methyl mercury	3.0E-03	US EPA Ecotox FW Chronic	3.0E-03	US EPA Ecotox FW Chronic	3.0E-03	US EPA Ecotox FW Chronic
2-Methylnaphthalene	2.1E+00	USDOE FW Chronic PRG	2.1E+00	USDOE FW Chronic PRG	3.0E+01	10% US EPA SW Acute LOEL
tert-Butyl methyl ether	8.0E+03	CTR SW CCC	6.6E+04	CTR FW CCC	8.0E+03	CTR SW CCC
Molybdenum	2.4E+02	US EPA Ecotox FW Chronic	2.4E+02	US EPA Ecotox FW Chronic	2.4E+02	US EPA Ecotox FW Chronic
Naphthalene	2.4E+01	US EPA Ecotox FW Chronic	2.4E+01	US EPA Ecotox FW Chronic	6.2E+01	10% US EPA SW Acute LOEL
Nickel	8.2E+00	CTR SW CCC	5.2E+01	CTR FW CCC	8.2E+00	CTR SW CCC
Pentachlorophenol	7.9E+00	CTR SW CCC	1.5E+01	CTR FW CCC	7.9E+00	CTR SW CCC
Perchlorate	6.0E+02	US EPA Ecotox FW Chronic	6.0E+02	US EPA Ecotox FW Chronic	6.0E+02	US EPA Ecotox FW Chronic
Phenanthrene	4.6E+00	US EPA SW CCC	6.3E+00	US EPA FW CCC	4.6E+00	US EPA SW CCC
Phenol	2.6E+02	10% US EPA SW Acute LOEL	1.3E+03	50% US EPA FW Chronic LOEL	2.6E+02	10% US EPA SW Acute LOEL
Polychlorinated biphenyls (PCBs)	1.4E-02	CTR FW CCC	1.4E-02	CTR FW CCC	3.0E-02	CTR SW CCC
Pyrene	2.0E+00	50% MOEE FW Chronic LOEL	2.0E+00	50% MOEE FW Chronic LOEL	2.0E+00	50% MOEE FW Chronic LOEL
Selenium	5.0E+00	CTR FW CCC	5.0E+00	CTR FW CCC	7.1E+01	CTR SW CCC
Silver	1.9E-01	10% CTR SW CMC	3.4E-01	10% CTR FW CMC	1.9E-01	10% CTR SW CMC
Styrene	1.0E+02	=Drinking Water Goal (Table F-3)	1.0E+02	=Drinking Water Goal (Table F-3)	1.0E+02	=Drinking Water Goal (Table F-3)
tert-Butyl alcohol	1.8E+04	10% Acute FW LC50	1.8E+04	10% Acute FW LC50	1.8E+04	10% Acute FW LC50
1,1,1,2-Tetrachloroethane	9.3E+02	10% US EPA FW Acute LOEL	9.3E+02	10% US EPA FW Acute LOEL	9.3E+02	10% US EPA FW Acute LOEL
1,1,2,2-Tetrachloroethane	2.4E+02	10% US EPA SW Acute LOEL	4.2E+02	US EPA Ecotox FW Chronic	2.4E+02	10% US EPA SW Acute LOEL
Tetrachloroethene	1.2E+02	US EPA Ecotox FW Chronic	1.2E+02	US EPA Ecotox FW Chronic	2.3E+02	50% US EPA SW Chronic LOEL
Thallium	4.0E+00	10% US EPA SW Acute LOEL	2.0E+01	50% US EPA FW Chronic LOEL	4.0E+00	10% US EPA SW Acute LOEL
Toluene	1.3E+02	US EPA Ecotox FW Chronic	1.3E+02	US EPA Ecotox FW Chronic	2.5E+03	50% US EPA SW Chronic LOEL
Toxaphene	2.0E-04	CTR FW CCC	2.0E-04	CTR FW CCC	2.0E-04	CTR SW CCC
TPH gasoline	5.0E+02	SFRWQCB, 1998a	5.0E+02	SFRWQCB, 1998a	3.7E+03	SFRWQCB,1999b
TPH diesel	6.4E+02	SFRWQCB, 1999b	6.4E+02	SFRWQCB, 1999b	6.4E+02	SFRWQCB,1999b
TPH motor oil	6.4E+02	SFRWQCB, 1999b	6.4E+02	SFRWQCB, 1999b	6.4E+02	SFRWQCB,1999b
1,2,4-Trichlorobenzene	2.5E+01	50% US EPA FW Chronic LOEL	2.5E+01	50% US EPA FW Chronic LOEL	6.5E+01	50% US EPA SW Chronic LOEL
1,1,1-Trichloroethane	6.2E+01	US EPA Ecotox FW Chronic	6.2E+01	US EPA Ecotox FW Chronic	3.1E+03	10% US EPA SW Acute LOEL
1,1,2-Trichloroethane	9.4E+02	10% US EPA SW Acute LOEL	4.7E+03	50% US EPA FW Chronic LOEL	9.4E+02	10% US EPA SW Acute LOEL
Trichloroethene	3.6E+02	US EPA Ecotox FW Chronic	3.6E+02	US EPA Ecotox FW Chronic	2.2E+03	10% US EPA SW Acute LOEL
2,4,5-Trichlorophenol	1.1E+01	US EPA SW CCC	6.3E+01	US EPA FW CCC	1.1E+01	US EPA SW CCC
2,4,6-Trichlorophenol	9.7E+01	10% US EPA SW Acute LOEL	4.9E+02	50% US EPA FW Chronic LOEL	9.7E+01	10% US EPA SW Acute LOEL
Vanadium	1.9E+01	US EPA Ecotox FW Chronic	1.9E+01	US EPA Ecotox FW Chronic	1.9E+01	US EPA Ecotox FW Chronic
Vinyl chloride	7.8E+02	USDOE FW Chronic PRG	7.8E+02	USDOE FW Chronic PRG	7.8E+02	USDOE FW Chronic PRG
Xylenes	1.0E+02	5% acute SW LC 50	1.0E+02	5% acute SW LC 50	1.0E+02	5% acute SW LC 50
Zinc	8.1E+01	CTR SW CCC	1.2E+02	CTR FW CCC	8.1E+01	CTR SW CCC

Notes:
Lowest Estuary Goal = Lowest of Freshwater vs Marine chronic goals. Used for development of groundwater and soil screening levels.
Aquatic Habitat Goals: Addresses potential impact on freshwater or marine aquatic habitats. Final screening levels are lowest of marine and freshwater criteria
See text for prioritization and selection of surface water quality screening levels. CTR HH criteria for potential bioaccumulation of chemicals
in aquatic life considered in surface water screening levels only.
Drinking water goal substituted as aqautic habitat goal if later was not available.
Review of aquatic ecotoxicty data for ethanol underway. Based on preliminary review of available data, chronic toxicity screening levels likely to be
significantly greater than ceiling level of 50,000 ug/L (see Table I series). Refer to USEPA 2003b, ECOTOX database).
tert-Butyl methyl ether: Interim salt water CCC proposed by Region 2 Water Quality Control Board
AWQC: Aquatic Water Quality Criteria
CCC: Criterion Continuous Concentration
CMC: Criterion Maximum Concentration
CTR: California (interim) Toxics Rule (in RWQCBCV 2000 and Federal Register 2000)
FCV: Final Chronic Value
FW: Freshwater
LOEL: Lowest Observed Effects Level
MOEE: Ontario Ministry of Environment and Energy (MOEE 1996)
PRG: USDOE Preliminary Remediation Goal for ecological concerns.
SW: Saltwater
USDOE: U. S. Department of Energy
USEPA: U.S. Environmental Protection Agency

Table F-4b. Summary of California EPA Continuous and Maximum Aquatic Habitat Goals (µg/L)

	Freshwater			Saltwater		
Chemical	Criterion Continuous Concentration	Criteria Maximum Concentration	Other Criteria[1]	Criterion Continuous Concentration	Criteria Maximum Concentration	Other Criteria[1]
Acenaphthene						
Acenaphthylene						
Acetone						
Aldrin		3.0E+00			1.3E+00	
Anthracene						
Antimony						
Arsenic	1.5E+02	3.4E+02	1.9E+02	3.6E+01	6.9E+01	3.6E+01
Barium						
Benzene						
Benzo(a)anthracene						
Benzo(b)fluoranthene						
Benzo(k)fluoranthene						
Benzo(g,h,i)perylene						
Benzo(a)pyrene						
Beryllium						
1,1-Biphenyl						
Bis(2-chloroethyl) ether						
Bis(2-chloroisopropyl) ether						
Bis(2-ethylhexyl) phthalate						
Boron						
Bromodichloromethane						
Bromoform (Tribromomethane)						
Bromomethane						
Cadmium (water)		3.9E+00	1.1E+00	9.3E+00	4.2E+01	9.3E+00
Cadmium (soil)						
Carbon tetrachloride						
Chlordane	4.3E-03	2.4E+00		4.0E-03	9.0E-02	
p-Chloroaniline						
Chlorobenzene						
Chloroethane						
Chloroform						
Chloromethane						
2-Chlorophenol						
Chromium (total)	1.8E+02	5.5E+02				
Chromium III	1.8E+02	5.5E+02				
Chromium VI	1.1E+01	1.6E+01	1.1E+01	5.0E+01	1.1E+03	5.0E+01
Chrysene						
Cobalt						
Copper	9.0E+00	1.3E+01	9.0E+00	3.1E+00	4.8E+00	
Cyanide	5.2E+00	2.2E+01		1.0E+00	1.0E+00	
Dibenz(a,h)anthracene						
Dibromochloromethane						
1,2-dibromo-3-chloropropane						
1,2-Dibromoethane						
1,2-Dichlorobenzene						
1,3-Dichlorobenzene						
1,4-Dichlorobenzene						
3,3-Dichlorobenzidine						
Dichlorodiphenyldichloroethane (DDD)						
Dichlorodiphenyldichloroethene (DDE)						
Dichlorodiphenyltrichloroethane (DDT)	1.0E-03	1.1E+00		1.0E-03	1.3E-01	
1,1-Dichloroethane						
1,2-Dichloroethane						
1,1-Dichloroethene						
cis-1,2-Dichloroethene						
trans-1,2-Dichloroethene						
2,4-Dichlorophenol						
1,2-Dichloropropane						
1,3-Dichloropropene						
Dieldrin	5.6E-02	2.4E-01		1.9E-03	7.1E-01	
Diethyl phthalate						
Dimethyl phthalate						
2,4-Dimethylphenol						
2,4-Dinitrophenol						
2,4-Dinitrotoluene						
1,4-Dioxane						
Dioxin (2,3,7,8-TCDD)						
Endosulfan	5.6E-02	2.2E-01		8.7E-03	3.4E-02	
Endrin	3.6E-02	8.6E-02		2.3E-03	3.7E-02	

Table F-4b. Summary of California EPA Continuous and Maximum Aquatic Habitat Goals (µg/L)

	Freshwater			Saltwater		
Chemical	**Criterion Continuous Concentration**	**Criteria Maximum Concentration**	**Other Criteria[1]**	**Criterion Continuous Concentration**	**Criteria Maximum Concentration**	**Other Criteria[1]**
Ethylbenzene						
Fluoranthene						
Fluorene						
Heptachlor	3.8E-03	5.2E-02		3.6E-03	5.3E-02	
Heptachlor epoxide	3.8E-03	5.2E-02		3.6E-03	5.3E-02	
Hexachlorobenzene						
Hexachlorobutadiene						
γ-Hexachlorocyclohexane (Lindane)		9.5E-01			1.6E-01	
Hexachloroethane						
Indeno(1,2,3-c,d)pyrene						
Lead	2.5E+00	6.5E+01	2.5E+00	8.1E+00	2.1E+02	
Mercury (elemental)			2.5E-02			2.5E-02
Methoxychlor						
Methylene chloride						
Methyl ethyl ketone						
Methyl isobutyl ketone						
Methyl mercury						
2-Methylnaphthalene						
tert-Butyl methyl ether	6.6E+04	1.2E+05		8.0E+03	1.4E+04	
Molybdenum						
Naphthalene						
Nickel	5.2E+01	4.7E+02	4.7E+02	8.2E+00	7.4E+01	
Pentachlorophenol	1.5E+01	1.9E+01		7.9E+00	1.3E+01	
Perchlorate						
Phenanthrene						
Phenol						
Polychlorinated biphenyls (PCBs)	1.4E-02			3.0E-02		
Pyrene						
Selenium	5.0E+00			7.1E+01	2.9E+02	
Silver		3.4E+00			1.9E+00	
Styrene						
tert-Butyl alcohol						
1,1,1,2-Tetrachloroethane						
1,1,2,2-Tetrachloroethane						
Tetrachloroethene						
Thallium						
Toluene						
Toxaphene	2.0E-04	7.3E-01		2.0E-04	2.1E-01	
TPH gasoline			5.0E+02			3.7E+03
TPH diesel			6.4E+02			6.4E+02
TPH motor oil			6.4E+02			6.4E+02
1,2,4-Trichlorobenzene						
1,1,1-Trichloroethane						
1,1,2-Trichloroethane						
Trichloroethene						
2,4,5-Trichlorophenol						
2,4,6-Trichlorophenol						
Vanadium						
Vinyl chloride						
Xylenes						
Zinc	1.2E+02	1.2E+02	1.2E+02	8.1E+01	9.0E+01	

Notes:
1 - Values from the Basin Plan, with the exception of TPH. Gasoline freshwater screening level based on studies carried out for Presidio of San Francisco. Gasoline screening level for saltwater and diesel and residual fuels screening levels in general based on studies carried out for San Francisco Airport.
Criteria for potential bioaccumulation of chemicals in aquatic organism and subsequent human consumption considered separately (refer to Table F-4d and main text).
CCC: Criterion for Continuous Concentration
CMC: Criterion for Maximum Concentration
Cadmium: CTR CMC value removed in 2004. Value shown is acute freshwater goal for cadmium presented in 1995 Basin Plan.
tert-Butyl Methyl Ether: Interim aquatic surface water criteria proposed by Region 2 Water Quality Control Board.

Table F-4c. Summary of US EPA and Other Published Aquatic Habitat Goals
(µg/L)

	Freshwater							Marine					Other	
Chemcial	USEPA CCC	USEPA Chronic LOEL	USEPA CMC	USEPA Acute LOEL	Ecotox Chronic Threshold (AWQC, FCV Or Tier II)	Other	Basis	USEPA CCC	USEPA Chronic LOEL	USEPA CMC	USEPA Acute LOEL	Ecotox Chronic Threshold (AWQC, FCV Or Tier II)	Value	Basis
Acenaphthene		5.2E+02		1.7E+03	2.3E+01				7.1E+02		9.7E+02	4.0E+01		
Acenaphthylene											3.0E+02			
Acetone						1.5E+03	USDOE FW Chronic PRG							
Aldrin			3.0E+00							1.3E+00				
Anthracene						7.3E-01	USDOE FW Chronic PRG							
Antimony	3.0E+01		8.8E+01					5.0E+02		1.5E+03				
Arsenic	1.5E+02		3.4E+02		1.9E+02			3.6E+01		6.9E+01		3.6E+01		
Barium														
Benzene				5.3E+03	4.6E+01				7.0E+02		5.1E+03			
Benzo(a)anthracene						2.7E-02	USDOE FW Chronic PRG							
Benzo(b)fluoranthene														
Benzo(k)fluoranthene						3.7E+00	50% MOEE FW Chronic LOEL							
Benzo(g,h,i)perylene						1.0E-01	50% MOEE FW Chronic LOEL							
Benzo(a)pyrene					1.4E-02									
Beryllium		5.3E+00		1.3E+02	5.1E+00									
1,1-Biphenyl					1.4E+01									
Bis(2-chloroethyl) ether		1.2E+02		2.4E+05										
Bis(2-chloroisopropyl) ether		1.2E+02		2.4E+05										
Bis(2-ethylhexyl) phthalate					3.2E+01									
Boron						1.6E+00	USDOE FW Chronic PRG							
Bromodichloromethane				1.1E+04					6.4E+03		1.2E+04			
Bromoform (Tribromomethane)				1.1E+04					6.4E+03		1.2E+04			
Bromomethane				1.1E+04		1.6E+02	50% MOEE FW Chronic LOEL		6.4E+03		1.2E+04			
Cadmium (water)	2.5E-01		2.0E+00		1.0E+00			8.8E+00		4.0E+01		9.3E+00		
Cadmium (soil)														
Carbon tetrachloride				3.5E+04		9.8E+00	USDOE FW Chronic PRG		6.4E+03		5.0E+04			
Chlordane	4.3E-03		2.4E+00					4.0E-03		9.0E-02				
p-Chloroaniline						5.0E+00	50% MOEE FW Chronic LOEL							
Chlorobenzene		5.0E+01		2.5E+02	1.3E+02				1.3E+02		1.6E+02			
Chloroethane														
Chloroform		1.2E+03		2.9E+04		2.8E+01	USDOE FW Chronic PRG		6.4E+03		1.2E+04			
Chloromethane				1.1E+04					6.4E+03		1.2E+04			
2-Chlorophenol				4.4E+03										
Chromium (total)														
Chromium III	7.4E+01		5.7E+02		1.8E+02						1.0E+04			
Chromium VI	1.1E+01		1.6E+01		1.0E+01			5.0E+01		1.1E+03				
Chrysene						3.5E-01	50% MOEE FW Chronic LOEL							
Cobalt					3.0E+00									
Copper	9.0E+00		1.3E+01		1.1E+01			3.1E+00		4.8E+00		2.4E+00		
Cyanide	5.2E+00		2.2E+01		5.2E+00					1.0E+00		1.0E+00		
Dibenz(a,h)anthracene						7.5E+00	50% MOEE FW Chronic LOEL							
Dibromochloromethane				1.1E+04					6.4E+03		1.2E+04			
1,2-dibromo-3-chloropropane														
1,2-Dibromoethane						1.4E+03	50% MOEE FW Chronic AWQC							
1,2-Dichlorobenzene		7.6E+02		1.1E+03	1.4E+01				1.3E+02		2.0E+03			
1,3-Dichlorobenzene		7.6E+02		1.1E+03	7.1E+01				1.3E+02		2.0E+03			
1,4-Dichlorobenzene		7.6E+02		1.1E+03	1.5E+01				1.3E+02		2.0E+03			
3,3-Dichlorobenzidine						2.5E+02	50% MOEE FW Chronic LOEL							
Dichlorodiphenyldichloroethane (DDD)				6.0E-01		1.0E-03	=DDT				3.6E+00		1.0E-03	=DDT
Dichlorodiphenyldichloroethene (DDE)				1.1E+03		1.0E-03	=DDT				1.4E+01		1.0E-03	=DDT
Dichlorodiphenyltrichloroethane (DDT)	1.0E-03		1.1E+00		1.3E-02			1.0E-03		1.3E-01				
1,1-Dichloroethane					4.7E+01									
1,2-Dichloroethane		2.0E+04		1.2E+05		9.1E+02	USDOE FW Chronic PRG				1.1E+05			
1,1-Dichloroethene				1.2E+04		2.5E+01	USDOE FW Chronic PRG				2.2E+05			
cis-1,2-Dichloroethene				1.2E+04		5.9E+02	USDOE FW Chronic PRG				2.2E+05			
trans-1,2-Dichloroethene				1.2E+04		5.9E+02	USDOE FW Chronic PRG				2.2E+05			
2,4-Dichlorophenol		3.7E+02		2.0E+03										
1,2-Dichloropropane		5.7E+03		2.3E+04					3.0E+03		1.0E+04			
1,3-Dichloropropene		2.4E+02		6.1E+03							7.9E+02			
Dieldrin	5.6E-02		2.4E-01		6.2E-02			1.9E-03		7.1E-01		1.1E-01		
Diethyl phthalate		3.0E+00		9.4E+02	2.2E+02				3.4E+00		2.9E+03			
Dimethyl phthalate		3.0E+00		9.4E+02					3.4E+00		2.9E+03			
2,4-Dimethylphenol	5.3E+02		1.3E+03					1.1E+02		2.7E+02				
2,4-Dinitrophenol		1.5E+02		2.3E+02							4.9E+03			
2,4-Dinitrotoluene		2.3E+02		3.3E+02					3.7E+02		5.9E+02			
1,4-Dioxane						3.4E+05	5% Acute FW LC50						5.0E+05	5% acute FW LC 50
Dioxin (2,3,7,8-TCDD)		1.0E-05		1.0E-02										
Endosulfan	5.6E-02		2.2E-01		5.6E-02			8.7E-03		3.4E-02				
Endrin	3.6E-02		8.6E-02		6.1E-02			2.3E-03		3.7E-02		1.0E-02		
Ethylbenzene				3.2E+04	2.9E+02						4.3E+02			
Fluoranthene				4.0E+03	8.1E+00				1.6E+01		4.0E+01	1.1E+01		
Fluorene					3.9E+00						3.0E+02			
Heptachlor	3.8E-03		5.2E-01		6.9E-03			3.6E-03		5.3E-02				
Heptachlor epoxide	3.8E-03		5.2E-01					3.6E-03		5.3E-02				
Hexachlorobenzene	3.7E+00		6.0E+00						1.3E+02		1.6E+02			
Hexachlorobutadiene		9.3E+00		9.0E+01							3.2E+01			
γ-Hexachlorocyclohexane (Lindane			9.5E-01		8.0E-02					1.6E-01				
Hexachloroethane		5.4E+02		9.8E+02	1.2E+01						9.4E+02			
Indeno(1,2,3-c,d)pyrene														
Lead	2.5E+00		6.5E+01		2.5E+00			8.1E+00		2.1E+02		8.1E+00		
Mercury (elemental)	7.7E-01		1.4E+00		1.3E+00			9.4E-01		1.8E+00		1.1E+00		
Methoxychlor			3.0E-02		1.9E-02					3.0E-02				
Methylene chloride				1.1E+04		2.2E+03	USDOE FW Chronic PRG		6.4E+03		1.2E+04			
Methyl ethyl ketone						1.4E+04	USDOE FW Chronic PRG							
Methyl isobutyl ketone						1.7E+02	USDOE FW Chronic PRG							
Methyl mercury					3.0E-03									
2-Methylnaphthalene						2.1E+00	USDOE FW Chronic PRG				3.0E+02			
tert-Butyl methyl ether														
Molybdenum					2.4E+02									
Naphthalene		6.2E+02		2.3E+03	2.4E+01						2.4E+03			
Nickel	5.2E+01		4.7E+02		1.6E+02			8.2E+00		7.4E+01		8.2E+00		
Pentachlorophenol	1.5E+01		1.9E+01		1.3E+01			7.9E+00		1.3E+01		7.9E+00		
Perchlorate					6.0E+02									
Phenanthrene	6.3E+00		3.0E+01		6.3E+00			4.6E+00		7.7E+00		8.3E+00		
Phenol		2.6E+03		1.0E+04							5.8E+03			
Polychlorinated biphenyls (PCBs)	1.4E-02				1.9E-01			3.0E-02						
Pyrene						2.0E+00	50% MOEE FW Chronic LOEL							
Selenium	5.0E+00				5.0E+00			7.1E+01		2.9E+02		7.1E+01		
Silver			3.2E+00							1.9E+00				
Styrene														
tert-Butyl alcoho						1.8E+04	10% Acute FW LC50							
1,1,1,2-Tetrachloroethane				9.3E+03										
1,1,2,2-Tetrachloroethane		2.4E+03		9.3E+03	4.2E+02						9.0E+03			
Tetrachloroethene		8.4E+02		5.3E+03	1.2E+02				4.5E+02		1.0E+04			
Thallium		4.0E+01		1.4E+03							2.1E+03			
Toluene				1.8E+04	1.3E+02				5.0E+03		6.3E+03			
Toxaphene	2.0E-04		7.3E-01		1.1E-02			2.0E-04		2.1E-01		2.1E-01		
TPH gasoline														
TPH diesel														

Table F-4c. Summary of US EPA and Other Published Aquatic Habitat Goals
(µg/L)

	Freshwater							Marine					Other	
Chemcial	**USEPA CCC**	**USEPA Chronic LOEL**	**USEPA CMC**	**USEPA Acute LOEL**	**Ecotox Chronic Threshold (AWQC, FCV Or Tier II)**	**Other**	**Basis**	**USEPA CCC**	**USEPA Chronic LOEL**	**USEPA CMC**	**USEPA Acute LOEL**	**Ecotox Chronic Threshold (AWQC, FCV Or Tier II)**	**Value**	**Basis**
TPH motor oil														
1,2,4-Trichlorobenzene		5.0E+01		2.5E+02	1.1E+02				1.3E+02		1.6E+02			
1,1,1-Trichloroethane				1.8E+04	6.2E+01						3.1E+04			
1,1,2-Trichloroethane		9.4E+03		1.8E+04										
Trichloroethene		2.2E+04		4.5E+04	3.6E+02						2.0E+03			
2,4,5-Trichlorophenol	6.3E+01		1.0E+02					1.1E+01		2.4E+02				
2,4,6-Trichlorophenol		9.7E+02												
Vanadium					1.9E+01									
Vinyl chloride						7.82E+02	USDOE FW Chronic PRG							
Xylenes													1.0E+02	5% acute SW LC 50
Zinc	1.2E+02		1.2E+02		1.0E+02			8.1E+01		9.0E+01		8.1E+01		

Notes:
Used for development of groundwater and soil screening levels.
See text for prioritization and selection of surface water quality screening levels.
Lowest Chronic Aquatic Habitat Goal: Addresses potential effect on freshwater or marine aquatic life.
Acute LOEL and CMC criteria divided by a factor of ten if selected as lowest screening level. LC_{50} divided by factor of twenty.
Barium aquatic habitat goal presented in USEPA Ecotox document not considered for screening of groundwater due to low confidence in goals and elevated background concentrations of barium in Bay area groundwater.
tert-Butyl Alcohol (TBA): Chronic aquatic goal based on in-house review of USEPA ECOTOX database for TBA (USEPA 2003b). Ten percent of LC_{50} concentration for Lepomis macrochirus (Bluegill) selected as most conservative goal of data presented.
Xylenes: Acute saltwater screening level based on review on data in UK Marine SAC summary and marine LC_{50} of 2.0 mg/L (Cole et al., 1999). Confidence in USDOE PRG and USEPA Ecotox goals low.
AWQC: Aquatic Water Quality Criteria
CCC: Criterion Continuous Concentration
CMC: Criterion Maximum Concentration
FCV: Final Chronic Value
FW: Freshwater
LOEL: Lowest Observed Effects Level
MOEE: Ontario Ministry of Environment and Energy (MOEE 1996)
PRG: USDOE Preliminary Remediation Goal for ecological concerns.
SW: Saltwater
USDOE: U. S. Department of Energy
USEPA: U.S. Environmental Protection Agency

Table F-4d. Surface Water Quality Standards for Bioaccumulation and Human Consumption of Aquatic Organisms (µg/L)

Chemical	Selected Criteria	California Toxics Rule	USEPA NWQC
Acenaphthene	2.7E+03	2.7E+03	9.9E+02
Acenaphthylene	No Value		
Acetone	No Value		
Aldrin	1.4E-04	1.4E-04	5.0E-05
Anthracene	1.1E+05	1.1E+05	4.0E+04
Antimony	4.3E+03	4.3E+03	6.4E+02
Arsenic	1.4E-01		1.4E-01
Barium	No Value		
Benzene	7.1E+01	7.1E+01	5.1E+01
Benzo(a)anthracene	4.9E-02	4.9E-02	1.8E-02
Benzo(b)fluoranthene	4.9E-02	4.9E-02	1.8E-02
Benzo(k)fluoranthene	4.9E-02	4.9E-02	1.8E-02
Benzo(g,h,i)perylene	No Value		
Benzo(a)pyrene	4.9E-02	4.9E-02	1.8E-02
Beryllium	No Value		
1,1-Biphenyl	No Value		
Bis(2-chloroethyl) ether	1.4E+00	1.4E+00	5.3E-01
Bis(2-chloroisopropyl) ether	1.7E+05	1.7E+05	6.5E+04
Bis(2-ethylhexyl) phthalate	5.9E+00	5.9E+00	2.2E+00
Boron	No Value		
Bromodichloromethane	No Value		
Bromoform (Tribromomethane)	3.6E+02	3.6E+02	1.4E+02
Bromomethane	4.0E+03	4.0E+03	1.5E+03
Cadmium (water)	No Value		
Cadmium (soil)			
Carbon tetrachloride	4.4E+00	4.4E+00	1.6E+00
Chlordane	5.9E-04	5.9E-04	8.1E-04
p-Chloroaniline	No Value		
Chlorobenzene	2.1E+04	2.1E+04	2.1E+04
Chloroethane	No Value		
Chloroform	4.7E+02	4.7E+02	4.7E+02
Chloromethane	No Value		
2-Chlorophenol	4.0E+02	4.0E+02	1.5E+02
Chromium (total)	No Value		
Chromium III	No Value		
Chromium VI	No Value		
Chrysene	4.9E-02	4.9E-02	1.8E-02
Cobalt	No Value		
Copper	No Value		
Cyanide	2.2E+05	2.2E+05	2.2E+05
Dibenz(a,h)anthracene	4.9E-02	4.9E-02	1.8E-02
Dibromochloromethane	4.6E+01	4.6E+01	1.3E+01
1,2-dibromo-3-chloropropane	No Value		
1,2-Dibromoethane	No Value		
1,2-Dichlorobenzene	1.7E+04	1.7E+04	1.7E+04
1,3-Dichlorobenzene	2.6E+03	2.6E+03	9.6E+02
1,4-Dichlorobenzene	2.6E+03	2.6E+03	2.6E+03
3,3-Dichlorobenzidine	7.7E-02	7.7E-02	2.8E-02
Dichlorodiphenyldichloroethane (DDD)	8.4E-04	8.4E-04	3.1E-04
Dichlorodiphenyldichloroethene (DDE)	5.9E-04	5.9E-04	2.2E-04
Dichlorodiphenyltrichloroethane (DDT)	5.9E-04	5.9E-04	2.2E-04
1,1-Dichloroethane	No Value		
1,2-Dichloroethane	9.9E+01	9.9E+01	3.7E+01
1,1-Dichloroethene	3.2E+00	3.2E+00	3.2E+00
cis-1,2-Dichloroethene	No Value		

Table F-4d. Surface Water Quality Standards for Bioaccumulation and Human Consumption of Aquatic Organisms (µg/L)

Chemical	Selected Criteria	California Toxics Rule	USEPA NWQC
trans-1,2-Dichloroethene	1.4E+05	1.4E+05	1.4E+05
2,4-Dichlorophenol	7.9E+02	7.9E+02	2.9E+02
1,2-Dichloropropane	3.9E+01	3.9E+01	1.5E+01
1,3-Dichloropropene	1.7E+03	1.7E+03	1.7E+03
Dieldrin	1.4E-04	1.4E-04	5.4E-05
Diethyl phthalate	1.2E+54	1.2E+54	4.4E+04
Dimethyl phthalate	2.9E+06	2.9E+06	1.1E+06
2,4-Dimethylphenol	2.3E+03	2.3E+03	8.5E+02
2,4-Dinitrophenol	1.4E+04	1.4E+04	5.3E+03
2,4-Dinitrotoluene	9.1E+00	9.1E+00	3.4E+00
1,4-Dioxane	No Value		
Dioxin (2,3,7,8-TCDD)	1.4E-08	1.4E-08	5.1E-09
Endosulfan	2.4E+02	2.4E+02	8.9E+01
Endrin	8.1E-01	8.1E-01	8.1E-01
Ethylbenzene	2.9E+04	2.9E+04	2.9E+04
Fluoranthene	3.7E+02	3.7E+02	1.4E+02
Fluorene	1.4E+04	1.4E+04	5.3E+03
Heptachlor	2.1E-04	2.1E-04	7.9E-05
Heptachlor epoxide	1.1E-04	1.1E-04	3.9E-05
Hexachlorobenzene	7.7E-04	7.7E-04	2.9E-04
Hexachlorobutadiene	5.0E+01	5.0E+01	1.8E+01
γ-Hexachlorocyclohexane (Lindane)	6.3E-02	6.3E-02	6.3E-02
Hexachloroethane	8.9E+00	8.9E+00	3.3E+00
Indeno(1,2,3-c,d)pyrene	4.9E-02	4.9E-02	1.8E-02
Lead	No Value		
Mercury (elemental)	5.1E-02	5.1E-02	3.0E-01
Methoxychlor	No Value		
Methylene chloride	1.6E+03	1.6E+03	5.9E+02
Methyl ethyl ketone	No Value		
Methyl isobutyl ketone	No Value		
Methyl mercury	No Value		
2-Methylnaphthalene	No Value		
tert-Butyl methyl ether	No Value		
Molybdenum	No Value		
Naphthalene	No Value		
Nickel	4.6E+03	4.6E+03	4.6E+03
Pentachlorophenol	8.2E+00	8.2E+00	3.0E+00
Perchlorate	No Value		
Phenanthrene	No Value		
Phenol	4.6E+06	4.6E+06	1.7E+06
Polychlorinated biphenyls (PCBs)	1.7E-04	1.7E-04	6.4E-05
Pyrene	1.1E+04	1.1E+04	4.0E+03
Selenium	No Value		
Silver	No Value		
Styrene	No Value		
tert-Butyl alcohol	No Value		
1,1,1,2-Tetrachloroethane	No Value		
1,1,2,2-Tetrachloroethane	1.1E+01	1.1E+01	4.0E+00
Tetrachloroethene	8.9E+00	8.9E+00	3.3E+00
Thallium	6.3E+00	6.3E+00	6.3E+00
Toluene	2.0E+05	2.0E+05	2.0E+05
Toxaphene	7.5E-04	7.5E-04	2.8E-04
TPH gasoline	No Value		
TPH diesel	No Value		
TPH motor oil	No Value		

Table F-4d. Surface Water Quality Standards for Bioaccumulation and Human Consumption of Aquatic Organisms (µg/L)

Chemical	Selected Criteria	California Toxics Rule	USEPA NWQC
1,2,4-Trichlorobenzene	No Value		
1,1,1-Trichloroethane	No Value		
1,1,2-Trichloroethane	4.2E+01	4.2E+01	1.6E+01
Trichloroethene	8.1E+01	8.1E+01	3.0E+01
2,4,5-Trichlorophenol	3.6E+03		3.6E+03
2,4,6-Trichlorophenol	6.5E+00	6.5E+00	
Vanadium	No Value		
Vinyl chloride	5.3E+02	5.3E+02	5.3E+02
Xylenes	No Value		
Zinc	No Value		

Notes:
California CTR goals considered for surface water if available.
Addresses potential accumulation of chemical in aquatic organisms and subsequent consumption by humans.

Table F-5. Agricultural Water Quality Goals (µg/L)

Chemical	Agricultural Water Quality Goals
Acenaphthene	-
Acenaphthylene	-
Acetone	-
Aldrin	-
Anthracene	-
Antimony	-
Arsenic	1.0E+02
Barium	-
Benzene	-
Benzo(a)anthracene	-
Benzo(b)fluoranthene	-
Benzo(k)fluoranthene	-
Benzo(g,h,i)perylene	-
Benzo(a)pyrene	-
Beryllium	1.0E+02
1,1-Biphenyl	-
Bis(2-chloroethyl) ether	-
Bis(2-chloroisopropyl) ether	-
Bis(2-ethylhexyl) phthalate	-
Boron	7.0E+02
Bromodichloromethane	-
Bromoform (Tribromomethane)	-
Bromomethane	-
Cadmium (soil)	
Cadmium (water)	1.0E+01
Carbon tetrachloride	-
Chlordane	-
p-Chloroaniline	-
Chlorobenzene	-
Chloroethane	-
Chloroform	-
Chloromethane	-
2-Chlorophenol	-
Chromium (total)	-
Chromium III	-
Chromium VI	1.0E+02
Chrysene	-
Cobalt	5.0E+01
Copper	2.0E+02
Cyanide	-
Dibenz(a,h)anthracene	-
Dibromochloromethane	-
1,2-dibromo-3-chloropropane	-
1,2-Dibromoethane	-
1,2-Dichlorobenzene	-
1,3-Dichlorobenzene	-
1,4-Dichlorobenzene	-
3,3-Dichlorobenzidine	-
Dichlorodiphenyldichloroethane (DDD)	-
Dichlorodiphenyldichloroethene (DDE)	-
Dichlorodiphenyltrichloroethane (DDT)	-
1,1-Dichloroethane	-
1,2-Dichloroethane	-
1,1-Dichloroethene	-
cis-1,2-Dichloroethene	-

Table F-5. Agricultural Water Quality Goals (µg/L)

Chemical	Agricultural Water Quality Goals
trans -1,2-Dichloroethene	-
2,4-Dichlorophenol	-
1,2-Dichloropropane	-
1,3-Dichloropropene	-
Dieldrin	-
Diethyl phthalate	-
Dimethyl phthalate	-
2,4-Dimethylphenol	-
2,4-Dinitrophenol	-
2,4-Dinitrotoluene	-
1,4-Dioxane	-
Dioxin (2,3,7,8-TCDD)	-
Endosulfan	-
Endrin	-
Ethylbenzene	-
Fluoranthene	-
Fluorene	-
Heptachlor	-
Heptachlor epoxide	-
Hexachlorobenzene	-
Hexachlorobutadiene	-
γ-Hexachlorocyclohexane (Lindane)	-
Hexachloroethane	-
Indeno(1,2,3-c,d)pyrene	-
Lead	-
Mercury (elemental)	-
Methoxychlor	-
Methylene chloride	-
Methyl ethyl ketone	-
Methyl isobutyl ketone	-
Methyl mercury	-
2-Methylnaphthalene	-
tert -Butyl methyl ether	-
Molybdenum	1.0E+01
Naphthalene	-
Nickel	2.0E+02
Pentachlorophenol	-
Perchlorate	-
Phenanthrene	-
Phenol	-
Polychlorinated biphenyls (PCBs)	-
Pyrene	-
Selenium	2.0E+01
Silver	-
Styrene	-
tert -Butyl alcohol	-
1,1,1,2-Tetrachloroethane	-
1,1,2,2-Tetrachloroethane	-
Tetrachloroethene	-
Thallium	-
Toluene	-
Toxaphene	-
TPH gasoline	-
TPH diesel	-
TPH motor oil	-

Table F-5. Agricultural Water Quality Goals (µg/L)

Chemical	Agricultural Water Quality Goals
1,2,4-Trichlorobenzene	-
1,1,1-Trichloroethane	-
1,1,2-Trichloroethane	-
Trichloroethene	-
2,4,5-Trichlorophenol	-
2,4,6-Trichlorophenol	-
Vanadium	1.0E+02
Vinyl chloride	-
Xylenes	-
Zinc	2.0E+03

Notes:
Addresses use of water (including groundwater) for agricultural/irrigation purposes.

Table F-6. US EPA Region 9
Tap Water Goals
(µg/L)

Chemical	Tap Water Goal (NonCarcinogenic Effects)	Tap Water Goal (Carcinogenic Effects)
Acenaphthene	1.1E+04	
Acenaphthylene		
Acetone	2.7E+04	
Aldrin	5.5E+00	4.0E-03
Anthracene	5.5E+04	
Antimony	7.3E+01	
Arsenic	5.5E+01	4.5E-02
Barium	3.7E+04	
Benzene	2.2E+02	1.1E-01
Benzo(a)anthracene		5.6E-02
Benzo(b)fluoranthene		5.6E-02
Benzo(k)fluoranthene		5.6E-02
Benzo(g,h,i)perylene		
Benzo(a)pyrene		5.6E-03
Beryllium	3.7E+02	
1,1-Biphenyl	9.1E+03	
Bis(2-chloroethyl) ether		8.1E-03
Bis(2-chloroisopropyl) ether		
Bis(2-ethylhexyl) phthalate	3.7E+03	2.2E+01
Boron	3.7E+04	
Bromodichloromethane	6.1E+02	5.2E-01
Bromoform (Tribromomethane)	3.7E+03	6.1E+00
Bromomethane	4.3E+01	
Cadmium (water)	9.1E+01	
Cadmium (soil)	1.8E+02	
Carbon tetrachloride	2.7E+02	2.8E-02
Chlordane	9.1E+01	5.2E-02
p -Chloroaniline	7.3E+02	
Chlorobenzene	2.7E+03	
Chloroethane		
Chloroform	1.2E+03	5.4E-01
Chloromethane	7.8E+02	
2-Chlorophenol	9.1E+02	
Chromium (total)		
Chromium III	2.7E+05	
Chromium VI	5.5E+02	
Chrysene		5.6E-01
Cobalt	5.5E+01	
Copper	7.3E+03	
Cyanide	1.1E+02	
Dibenz(a,h)anthracene		1.6E-02
Dibromochloromethane	3.7E+03	8.0E-01
1,2-dibromo-3-chloropropane	3.7E+01	9.6E-03
1,2-Dibromoethane	8.9E+01	4.8E-03
1,2-Dichlorobenzene	1.9E+03	
1,3-Dichlorobenzene		
1,4-Dichlorobenzene	3.3E+03	3.4E-01
3,3-Dichlorobenzidine		5.6E-02
Dichlorodiphenyldichloroethane (DDD)		2.8E-01
Dichlorodiphenyldichloroethene (DDE)		2.0E-01
Dichlorodiphenyltrichloroethane (DDT)	9.1E+01	2.0E-01
1,1-Dichloroethane	3.7E+04	2.0E+00
1,2-Dichloroethane	5.0E+01	1.4E-01
1,1-Dichloroethene	1.7E+03	
cis -1,2-Dichloroethene	1.8E+02	

Table F-6. US EPA Region 9
Tap Water Goals
(µg/L)

Chemical	Tap Water Goal (NonCarcinogenic Effects)	Tap Water Goal (Carcinogenic Effects)
trans-1,2-Dichloroethene	6.1E+02	
2,4-Dichlorophenol	5.5E+02	
1,2-Dichloropropane		3.2E-01
1,3-Dichloropropene	2.0E+02	1.9E-01
Dieldrin	9.1E+00	4.2E-03
Diethyl phthalate	1.5E+05	
Dimethyl phthalate	1.8E+06	
2,4-Dimethylphenol	3.7E+03	
2,4-Dinitrophenol	3.7E+02	
2,4-Dinitrotoluene	3.7E+02	9.9E-02
1,4-Dioxane		2.5E+00
Dioxin (2,3,7,8-TCDD)		5.2E-07
Endosulfan	1.1E+03	
Endrin	5.5E+01	
Ethylbenzene	6.6E+03	1.2E+00
Fluoranthene	7.3E+03	
Fluorene	7.3E+03	
Heptachlor	9.1E+01	1.6E-02
Heptachlor epoxide	2.4E+00	7.4E-03
Hexachlorobenzene	1.5E+02	3.7E-02
Hexachlorobutadiene	1.8E+02	8.6E-01
γ-Hexachlorocyclohexane (Lindane)	5.5E+01	
Hexachloroethane	1.8E+02	1.7E+00
Indeno(1,2,3-c,d)pyrene		5.6E-02
Lead		
Mercury (elemental)	1.6E+01	
Methoxychlor	9.1E+02	
Methylene chloride	3.0E+03	3.0E+00
Methyl ethyl ketone	3.5E+04	
Methyl isobutyl ketone	2.6E+04	
Methyl mercury	1.8E+01	
2-Methylnaphthalene	7.3E+02	
tert-Butyl methyl ether		1.1E+01
Molybdenum	9.1E+02	
Naphthalene	3.1E+01	
Nickel	3.7E+03	
Pentachlorophenol	5.5E+02	5.6E-01
Perchlorate	1.3E+02	
Phenanthrene	9.1E+02	
Phenol	5.5E+04	
Polychlorinated biphenyls (PCBs)	3.7E+00	3.4E-02
Pyrene	1.1E+04	
Selenium	9.1E+02	
Silver	9.1E+02	
Styrene	7.5E+03	
tert-Butyl alcohol		
1,1,1,2-Tetrachloroethane	5.5E+03	4.2E-01
1,1,2,2-Tetrachloroethane	1.1E+04	5.2E-02
Tetrachloroethene	1.3E+03	1.0E-01
Thallium	1.8E+00	
Toluene	2.6E+03	
Toxaphene		5.6E-02
TPH gasoline	7.1E+03	
TPH diesel	3.7E+03	
TPH motor oil	3.1E+04	

Table F-6. US EPA Region 9
Tap Water Goals
(µg/L)

Chemical	Tap Water Goal (NonCarcinogenic Effects)	Tap Water Goal (Carcinogenic Effects)
1,2,4-Trichlorobenzene	4.1E+01	1.9E+01
1,1,1-Trichloroethane	2.2E+04	
1,1,2-Trichloroethane	1.2E+02	1.9E-01
Trichloroethene	9.0E+01	8.3E-01
2,4,5-Trichlorophenol	1.8E+04	
2,4,6-Trichlorophenol	1.8E+01	6.1E+00
Vanadium	9.1E+02	
Vinyl chloride	3.6E+02	4.1E-02
Xylenes	1.0E+03	
Zinc	5.5E+04	

References:
Calculated using Tap Water equations in USEPA Region 9 Preliminary Remediation Goals document (USEPA 2004).
Notes:
Addresses use of water for drinking water and inhalation of volatile chemicals during showering.
Tap Water value for TBA calculated using PRG methodology (not in PRGs).
Target risk = 10^{-6}. Target HQ = 1. Adjusted to CalEPA CSFs. See Appendix 2 for equations.

Table G: Soil Screening Levels for Leaching Concerns

				Target Groundwater Concentrations			Soil Leaching Screening Levels	
Chemical	Organic Carbon Coefficient (K_{oc}) (cm^3/g)	Henry's Law Constant (H) (atm-m^3/mole-°K)	Dilution/ Attenuation Factor (DAF)	Saturation Limit (mg/kg)	Drinking Water Resource (Table F-1a) (µg/L)	Non-Drinking Water Resource (Table F-1b) (µg/L)	Drinking Water Resource (mg/kg)	Non-Drinking Water Resource (mg/kg)
Acenaphthene	4.90E+03	1.55E-04	8.14E+02	1.3E+02	2.0E+01	2.3E+01	1.6E+01	1.9E+01
Acenaphthylene	2.50E+03	1.45E-03	4.24E+02	5.9E+01	3.0E+01	3.0E+01	1.3E+01	1.3E+01
Acetone	5.75E-01	3.88E-05	3.36E-01	1.0E+05	1.5E+03	1.5E+03	5.0E-01	5.0E-01
Aldrin	4.90E+04	4.96E-05	8.13E+03	5.0E+00	2.0E-03	1.3E-01	5.0E+00	5.0E+00
Anthracene	2.35E+04	6.50E-05	3.90E+03	6.1E+00	7.3E-01	7.3E-01	2.8E+00	2.8E+00
Antimony	0.00E+00	0.00E+00		0.0E+00	6.0E+00	3.0E+01		
Arsenic	0.00E+00	0.00E+00		0.0E+00	1.0E+01	3.6E+01		
Barium	0.00E+00	0.00E+00		0.0E+00	1.0E+03	1.0E+03		
Benzene	5.90E+01	5.56E-03	4.43E+01	8.7E+02	1.0E+00	2.7E+01	4.4E-02	1.2E+00
Benzo(a)anthracene	2.00E+05	1.00E-06	3.32E+04	1.2E+01	2.7E-02	2.7E-02	1.2E+01	1.2E+01
Benzo(b)fluoranthene	5.50E+05	1.22E-05	9.13E+04	4.6E+01	5.6E-02	5.6E-02	4.6E+01	4.6E+01
Benzo(k)fluoranthene	5.50E+05	3.87E-05	9.13E+04	2.6E+00	5.6E-02	4.0E-01	5.1E+00	3.7E+01
Benzo(g,h,i)perylene	1.60E+06	1.44E-07	2.66E+05	2.5E+00	1.0E-01	1.0E-01	2.7E+01	2.7E+01
Benzo(a)pyrene	5.50E+06	4.90E-07	9.13E+05	1.3E+02	1.4E-02	1.4E-02	1.3E+02	1.3E+02
Beryllium	0.00E+00	0.00E+00		0.0E+00	5.3E-01	5.3E-01		
1,1-Biphenyl	7.76E+03	3.00E-04	1.29E+03	3.5E+02	5.0E-01	5.0E+00	6.5E-01	6.5E+00
Bis(2-chloroethyl) ether	7.60E+01	1.80E-05	1.27E+01	9.6E+03	5.5E-03	1.2E+01	7.0E-05	1.6E-01
Bis(2-chloroisopropyl) ether	6.10E+01	1.13E-04	1.08E+01	7.9E+02	1.2E+01	1.2E+01	1.3E-01	1.3E-01
Bis(2-ethylhexyl) phthalate	1.00E+05	3.00E-07	1.66E+04	7.8E+02	4.0E+00	3.2E+01	7.8E+02	7.8E+02
Boron	0.00E+00	0.00E+00		0.0E+00	1.6E+00	1.6E+00		
Bromodichloromethane	5.50E+01	1.60E-03	1.91E+01	3.0E+03	8.0E+01	1.1E+03	1.5E+00	2.1E+01
Bromoform (Tribromomethane)	1.10E+02	5.32E-04	2.16E+01	2.4E+03	8.0E+01	1.1E+03	1.7E+00	2.4E+01
Bromomethane	9.00E+00	6.24E-03	4.02E+01	3.1E+03	7.1E+00	1.6E+02	2.8E-01	6.4E+00
Cadmium (soil)	0.00E+00	0.00E+00		0.0E+00	No Value	0.0E+00		
Cadmium (water)	0.00E+00	0.00E+00	0.00E+00	0.0E+00	2.5E-01	2.5E-01		
Carbon tetrachloride	1.74E+02	3.04E-02	2.18E+02	1.1E+03	5.0E-01	4.8E+00	1.1E-01	1.0E+00
Chlordane	4.40E+04	4.79E-05	7.30E+03	1.5E+01	4.0E-03	4.0E-03	1.5E+01	1.5E+01
p-Chloroaniline	6.40E+01	3.31E-07	1.06E+01	1.3E+03	5.0E+00	5.0E+00	5.3E-02	5.3E-02
Chlorobenzene	2.19E+02	3.70E-03	5.93E+01	6.8E+02	2.5E+01	2.5E+01	1.5E+00	1.5E+00
Chloroethane	1.47E+01	1.10E-02	7.07E+01	1.6E+03	1.6E+01	1.6E+01	1.1E+00	1.1E+00
Chloroform	3.98E+01	3.67E-03	2.94E+01	2.9E+03	8.0E+01	1.7E+02	2.4E+00	5.0E+00
Chloromethane	3.50E+01	2.40E-02	1.55E+02	4.1E+03	1.3E+02	1.1E+03	2.0E+01	1.7E+02
2-Chlorophenol	3.98E+02	3.91E-04	6.85E+01	5.5E+04	1.8E-01	1.8E+00	1.2E-02	1.2E-01
Chromium (total)	0.00E+00	0.00E+00		0.0E+00	5.0E+01	1.8E+02		
Chromium III	0.00E+00	0.00E+00		0.0E+00	1.8E+02	1.8E+02		
Chromium VI	0.00E+00	0.00E+00		0.0E+00	2.0E-02	1.1E+01		
Chrysene	4.00E+05	9.46E-05	6.64E+04	3.8E+00	3.5E-01	3.5E-01	2.3E+01	2.3E+01
Cobalt	0.00E+00	0.00E+00		0.0E+00	3.0E+00	3.0E+00		
Copper	0.00E+00	0.00E+00		0.0E+00	3.1E+00	3.1E+00		
Cyanide	1.70E+01	1.30E-04	3.63E+00	2.0E+05	1.0E+00	1.0E+00	3.6E-03	3.6E-03
Dibenz(a,h)anthracene	3.30E+06	7.30E-08	5.48E+05	9.9E+00	1.6E-02	2.5E-01	9.9E+00	1.4E+02
Dibromochloromethane	4.68E+02	8.50E-04	8.30E+01	1.3E+04	8.0E+01	1.1E+03	6.6E+00	9.1E+01
1,2-dibromo-3-chloropropane	1.30E+02	1.47E-04	2.25E+01	1.1E+03	2.0E-01	2.0E-01	4.5E-03	4.5E-03
1,2-Dibromoethane	2.81E+01	3.20E-04	6.65E+00	9.2E+02	5.0E-02	7.7E+01	3.3E-04	5.1E-01
1,2-Dichlorobenzene	6.17E+02	1.90E-03	1.14E+02	6.0E+02	1.0E+01	1.4E+01	1.1E+00	1.6E+00
1,3-Dichlorobenzene	6.17E+02	1.90E-03	1.14E+02	6.0E+02	6.5E+01	6.5E+01	7.4E+00	7.4E+00
1,4-Dichlorobenzene	6.17E+02	2.43E-03	1.18E+02	2.8E+02	5.0E+00	1.5E+01	5.9E-01	1.8E+00
3,3-Dichlorobenzidine	1.60E+03	8.33E-07	2.66E+02	3.0E+01	5.6E-02	2.5E+02	1.5E-02	6.6E+01
Dichlorodiphenyldichloroethane (DDD)	7.80E+05	7.96E-06	1.29E+05	7.5E+02	1.0E-03	1.0E-03	7.5E+02	7.5E+02
Dichlorodiphenyldichloroethene (DDE)	4.40E+06	6.80E-05	7.30E+05	1.1E+03	1.0E-03	1.0E-03	1.1E+03	1.1E+03
Dichlorodiphenyltrichloroethane (DDT)	2.40E+05	3.89E-05	3.98E+04	4.3E+00	1.0E-03	1.0E-03	4.3E+00	4.3E+00
1,1-Dichloroethane	3.16E+01	5.62E-03	4.01E+01	1.7E+03	5.0E+00	4.7E+01	2.0E-01	1.9E+00
1,2-Dichloroethane	1.74E+01	9.79E-04	8.97E+00	1.8E+03	5.0E-01	1.0E+02	4.5E-03	9.1E-01
1,1-Dichloroethene	5.89E+01	2.61E-02	1.72E+02	1.5E+03	6.0E+00	2.5E+01	1.0E+00	4.3E+00
cis-1,2-Dichloroethene	3.55E+01	4.08E-03	3.12E+01	1.2E+03	6.0E+00	5.9E+02	1.9E-01	1.8E+01
trans-1,2-Dichloroethene	5.25E+01	9.38E-03	6.69E+01	3.1E+03	1.0E+01	5.9E+02	6.7E-01	3.9E+01
2,4-Dichlorophenol	6.00E+03	2.80E-06	9.96E+02	1.6E+05	3.0E-01	3.0E+00	3.0E-01	3.0E+00
1,2-Dichloropropane	4.37E+01	2.80E-03	2.46E+01	1.1E+03	5.0E+00	1.0E+02	1.2E-01	2.5E+00
1,3-Dichloropropene	4.57E+01	1.77E-02	1.17E+02	1.4E+03	5.0E-01	2.4E+01	5.9E-02	2.9E+00
Dieldrin	7.40E+03	5.84E-05	1.23E+03	8.3E+00	1.9E-03	1.9E-03	2.3E-03	2.3E-03
Diethyl phthalate	1.40E+02	1.14E-06	2.32E+01	8.4E+02	1.5E+00	1.5E+00	3.5E-02	3.5E-02
Dimethyl phthalate	1.40E+02	1.05E-07	2.32E+01	4.7E+03	1.5E+00	1.5E+00	3.5E-02	3.5E-02
2,4-Dimethylphenol	4.00E+01	1.70E-05	6.75E+00	2.7E+03	1.0E+02	1.1E+02	6.7E-01	7.4E-01
2,4-Dinitrophenol	1.70E+01	6.45E-10	2.82E+00	1.1E+03	1.5E+01	1.5E+01	4.2E-02	4.2E-02
2,4-Dinitrotoluene	4.50E+01	4.50E-06	7.50E+00	1.0E+02	9.9E-02	1.2E+02	7.4E-04	8.6E-01
1,4-Dioxane	3.50E+00	3.00E-06	6.00E-01	1.2E+05	2.5E+00	5.0E+04	1.5E-03	3.0E+01
Dioxin (2,3,7,8-TCDD)	1.30E+07	8.10E-05		1.1E+06	1.0E-06	1.0E-06		
Endosulfan	3.20E+03	1.00E-05	5.31E+02	2.9E+00	8.7E-03	8.7E-03	4.6E-03	4.6E-03
Endrin	1.70E+03	7.51E-06	2.82E+02	2.7E+00	2.3E-03	2.3E-03	6.5E-04	6.5E-04
Ethylbenzene	3.63E+02	7.88E-03	1.09E+02	4.0E+02	3.0E+01	4.3E+01	3.3E+00	4.7E+00
Fluoranthene	3.80E+04	6.50E-06	6.31E+03	6.0E+01	8.0E+00	8.0E+00	6.0E+01	6.0E+01
Fluorene	1.38E+04	7.70E-05	2.29E+03	1.6E+02	3.9E+00	3.9E+00	8.9E+00	8.9E+00
Heptachlor	2.20E+04	1.48E-03	3.66E+03	7.4E+00	3.6E-03	3.6E-03	1.3E-02	1.3E-02
Heptachlor epoxide	2.30E+04	3.16E-05	3.82E+03	4.8E+01	3.6E-03	3.6E-03	1.4E-02	1.4E-02
Hexachlorobenzene	1.20E+06	1.70E-03	1.99E+05	7.9E+02	1.0E+00	3.7E+00	7.9E+02	7.9E+02
Hexachlorobutadiene	2.90E+04	2.56E-02	4.97E+03	3.5E+02	8.6E-01	9.3E-01	4.3E+00	4.6E+00
γ-Hexachlorocyclohexane (Lindane)	3.70E+03	4.93E-07	6.14E+02	1.6E+02	1.6E-02	1.6E-02	9.8E-03	9.8E-03
Hexachloroethane	2.00E+04	9.85E-03	3.38E+03	6.0E+03	1.7E+00	1.2E+01	5.8E+00	4.1E+01
Indeno(1,2,3-c,d)pyrene	1.60E+06	6.95E-08	2.66E+05	5.1E+00	5.6E-02	5.6E-02	1.5E+01	1.5E+01

Table G: Soil Screening Levels for Leaching Concerns

Chemical	Organic Carbon Coefficient (K_{oc}) (cm^3/g)	Henry's Law Constant (H) (atm-m^3/mole-^oK)	Dilution/ Attenuation Factor (DAF)	Target Groundwater Concentrations: Saturation Limit (mg/kg)	Target Groundwater Concentrations: Drinking Water Resource (Table F-1a) (µg/L)	Target Groundwater Concentrations: Non-Drinking Water Resource (Table F-1b) (µg/L)	Soil Leaching Screening Levels: Drinking Water Resource (mg/kg)	Soil Leaching Screening Levels: Non-Drinking Water Resource (mg/kg)
Lead	0.00E+00	0.00E+00		0.0E+00	2.5E+00	2.5E+00		
Mercury (elemental)	0.00E+00	0.00E+00		0.0E+00	2.5E-02	2.5E-02		
Methoxychlor	7.90E+04	1.58E-05	1.31E+04	1.9E+01	3.0E-03	3.0E-03	1.9E+01	1.9E+01
Methylene chloride	1.11E+01	2.19E-03	1.54E+01	2.4E+03	5.0E+00	2.2E+03	7.7E-02	3.4E+01
Methyl ethyl ketone	4.50E+00	2.74E-05	9.17E-01	3.4E+04	4.9E+03	1.4E+04	4.5E+00	1.3E+01
Methyl isobutyl ketone	1.34E+02	1.40E-04	2.31E+01	1.7E+04	1.2E+02	1.7E+02	2.8E+00	3.9E+00
Methyl mercury	0.00E+00	0.00E+00		0.0E+00	3.0E-03	3.0E-03		
2-Methylnaphthalene	7.20E+02	2.90E-04	1.21E+02	1.1E+02	2.1E+00	2.1E+00	2.5E-01	2.5E-01
tert -Butyl methyl ether	6.00E+00	5.87E-04	4.64E+00	2.1E+04	5.0E+00	1.8E+03	2.3E-02	8.4E+00
Molybdenum	0.00E+00	0.00E+00		0.0E+00	7.8E+01	2.4E+02		
Naphthalene	1.19E+03	4.83E-04	2.01E+02	2.2E+02	6.1E+00	2.4E+01	1.2E+00	4.8E+00
Nickel	0.00E+00	0.00E+00		0.0E+00	8.2E+00	8.2E+00		
Pentachlorophenol	3.20E+04	2.80E-06	5.31E+03	2.7E+06	1.0E+00	7.9E+00	2.7E+06	2.7E+06
Perchlorate	0.00E+00	0.00E+00		2.0E+04	6.0E+00	6.0E+02		
Phenanthrene	1.40E+04	3.93E-05	2.32E+03	6.9E+01	4.6E+00	4.6E+00	1.1E+01	1.1E+01
Phenol	9.10E+01	1.30E-06	1.51E+01	5.2E+04	5.0E+00	2.6E+02	7.6E-02	3.9E+00
Polychlorinated biphenyls (PCBs)	3.30E+04	5.20E-04	5.48E+03	6.3E+00	1.4E-02	1.4E-02	6.3E+00	6.3E+00
Pyrene	1.05E+05	1.10E-05	1.74E+04	8.5E+01	2.0E+00	2.0E+00	8.5E+01	8.5E+01
Selenium	0.00E+00	0.00E+00		0.0E+00	5.0E+00	5.0E+00		
Silver	0.00E+00	0.00E+00		0.0E+00	1.9E-01	1.9E-01		
Styrene	7.76E+02	2.75E-03	1.46E+02	1.5E+03	1.0E+01	1.0E+02	1.5E+00	1.5E+01
tert -Butyl alcohol	3.70E+01	1.17E-05	6.21E+00	3.2E+05	1.2E+01	1.8E+04	7.5E-02	1.1E+02
1,1,1,2-Tetrachloroethane	9.37E+01	3.45E-04	1.77E+01	2.0E+03	5.1E-01	9.3E+02	9.1E-03	1.6E+01
1,1,2,2-Tetrachloroethane	9.37E+01	3.45E-04	1.77E+01	2.0E+03	1.0E+00	2.4E+02	1.8E-02	4.2E+00
Tetrachloroethene	1.55E+02	1.84E-02	1.40E+02	2.3E+02	5.0E+00	6.3E+01	7.0E-01	8.9E+00
Thallium	0.00E+00	0.00E+00		0.0E+00	2.0E+00	4.0E+00		
Toluene	1.82E+02	6.64E-03	7.14E+01	6.5E+02	4.0E+01	1.3E+02	2.9E+00	9.3E+00
Toxaphene	4.90E+03	2.10E-01	2.12E+03	9.3E+01	2.0E-04	2.0E-04	4.2E-04	4.2E-04
TPH gasoline	5.00E+03	1.10E+00	7.66E+03	9.3E+03	1.0E+02	5.0E+02	7.7E+02	3.8E+03
TPH diesel	5.00E+03	7.80E-01	5.67E+03	1.1E+02	1.0E+02	6.4E+02	5.7E+02	3.6E+03
TPH motor oil	5.00E+03	0.00E+00		9.0E+01	1.0E+02	6.4E+02		
1,2,4-Trichlorobenzene	1.78E+03	1.42E-03	3.04E+02	3.2E+03	5.0E+00	2.5E+01	1.5E+00	7.6E+00
1,1,1-Trichloroethane	1.10E+02	1.72E-02	1.25E+02	1.2E+03	6.2E+01	6.2E+01	7.8E+00	7.8E+00
1,1,2-Trichloroethane	5.01E+01	9.13E-04	1.40E+01	1.8E+03	5.0E+00	9.4E+02	7.0E-02	1.3E+01
Trichloroethene	1.66E+02	1.03E-02	9.15E+01	1.3E+03	5.0E+00	1.3E+02	4.6E-01	1.2E+01
2,4,5-Trichlorophenol	8.90E+01	2.18E-04	1.61E+01	7.6E+02	1.1E+01	1.1E+01	1.8E-01	1.8E-01
2,4,6-Trichlorophenol	2.00E+03	4.00E-06	3.32E+02	9.7E+03	1.6E+00	9.7E+01	5.2E-01	3.2E+01
Vanadium	0.00E+00	0.00E+00		0.0E+00	1.9E+01	1.9E+01		
Vinyl chloride	1.86E+01	2.70E-02	1.71E+02	1.2E+03	5.0E-01	1.8E+00	8.5E-02	3.1E-01
Xylenes	4.07E+02	7.34E-03	1.13E+02	4.2E+02	2.0E+01	1.0E+02	2.3E+00	1.1E+01
Zinc	0.00E+00	0.00E+00		0.0E+00	8.1E+01	8.1E+01		

Notes:

Soil leaching equation from Ontario MOEE guidance (see text).

Groundwater Category Drinking Water Resource - protective of groundwater that is a source of drinking water AND protective of discharge of groundwater to a surface water and subsequent effects on aquatic life.

Groundwater Category Non-Drinking Water Resource - protective of discharge of contaminated groundwater to surface water and subsequent effects on aquatic life.

theoretical soil saturation level ("sat") used in place of leaching model screening level if higher.

Physical-Chemical constants for chemicals from USEPA RSLs or Ontario MOEE (MOEE 1996) when not available unless otherwise noted (see also Table J-1).

Physical-Chemical constants for TPH (gasolines and middle distillates) based on constants developed for C11 to C22 aromatic carbon range fraction by Massachusetts DEP and used to develop RBSLs for leaching of TPH in general from soil (MADEP 1997). Soil leaching level rounded to nearest hundred.

Target groundwater concentrations from Table F-1a and F-1b.

Screening Levels for TPH (gasolines) and TPH (middle distilates) rounded to nearest 100 mg/kg.

Screening levels for perchlorate calculated using leaching equation in USEPA Soil Screening Guidance and assumed Dilution/Attenuation Factor of 20.

Table H-1. Criteria for Assignment of Ceiling Levels for Soil

Soil Category	Criteria	Ceiling Level (mg/kg)
Surface Soils		
Residential/Parkland/Agricultural	Odor Index ≥ 100 OR no Odor Index and Vapor Pressure ≥ 1 Torr OR no data	100
	0.1 ≤ Odor Index < 100 OR no Odor Index and Vapor Pressure < 1 Torr	500
	Odor Index < 0.1 OR non-odorous chemical	1000
Industrial/Commercial	Odor Index ≥ 100 OR no Odor Index and Vapor Pressure ≥ 1 Torr OR no data	500
	0.1 ≤ Odor Index < 100 OR no Odor Index and Vapor Pressure < 1 Torr	1000
	Odor Index < 0.1 OR non-odorous chemical	2500
Subsurface Soils		
Residential/Parkland/Agricultural	Odor Index ≥ 100 OR no Odor Index and Vapor Pressure ≥ 1 Torr OR no data	500
	0.1 ≤ Odor Index < 100 OR no Odor Index and Vapor Pressure < 1 Torr	1000
	Odor Index < 0.1 OR non-odorous chemical	2500
Industrial/Commercial	Odor Index ≥ 100 OR no Odor Index and Vapor Pressure ≥ 1 Torr OR no data	1000
	0.1 ≤ Odor Index < 100 OR no Odor Index and Vapor Pressure < 1 Torr	2500
	Odor Index < 0.1 OR non-odorous chemical	5000

Modified from Ontario Ministry of Environment and Energy (MOEE 1996) and Massachusetts Department of Environmental Protection (MADEP 1994).

Table H-2. Components for Ceiling Levels in Shallow Soil
(mg/kg)

Chemical	Residential Land Use	Commercial/Industrial Land Use	Soil Saturation Limit (mg/kg)	Vapor Pressure (VP) (Torr @ 20-30 °C)	50 Percentile Odor Recognition Threshold (ORT) (µg/m^3)	50 Percentile Odor Recognition Threshold (ORT) (ppmv)	Odor Index
Acenaphthene	1.0E+03	2.5E+03	N/A	4.5E-03	5.13E+02	8.00E-02	5.63E-02
Acenaphthylene	5.0E+02	1.0E+03	N/A	2.9E-02	-	-	-
Acetone	5.0E+02	1.0E+03	1.0E+05	2.7E+02	3.09E+04	1.30E+01	2.08E+01
Aldrin	1.0E+03	2.5E+03	N/A	2.3E-05	2.63E+02	1.70E-02	1.35E-03
Anthracene	5.0E+02	1.0E+03	N/A	1.7E-05	-	-	-
Antimony	1.0E+03	2.5E+03	N/A	-	-	-	-
Arsenic	1.0E+03	2.5E+03	N/A	-	-	-	-
Barium	1.0E+03	2.5E+03	N/A	-	-	-	-
Benzene	5.0E+02	8.7E+02	8.7E+02	9.5E+01	4.89E+03	1.50E+00	6.33E+01
Benzo(a)anthracene	5.0E+02	1.0E+03	N/A	2.2E-08	-	-	-
Benzo(b)fluoranthene	5.0E+02	1.0E+03	N/A	5.0E-07	-	-	-
Benzo(k)fluoranthene	5.0E+02	1.0E+03	N/A	9.6E-11	-	-	-
Benzo(g,h,i)perylene	5.0E+02	1.0E+03	N/A	1.1E-10	-	-	-
Benzo(a)pyrene	5.0E+02	1.0E+03	N/A	5.6E-09	-	-	-
Beryllium	1.0E+03	2.5E+03	N/A	-	-	-	-
1,1-Biphenyl	5.0E+02	1.0E+03	N/A	5.0E-03	6.00E+01	9.50E-03	5.26E-01
Bis(2-chloroethyl) ether	5.0E+02	1.0E+03	9.6E+03	7.1E-01	2.87E+02	4.90E-02	1.45E+01
Bis(2-chloroisopropyl) ether	5.0E+02	7.9E+02	7.9E+02	8.5E-01	2.24E+03	3.20E-01	2.66E+00
Bis(2-ethylhexyl) phthalate	5.0E+02	1.0E+03	N/A	6.2E-08	-	-	-
Boron	1.0E+03	2.5E+03	N/A	-	-	-	-
Bromodichloromethane	1.0E+03	2.5E+03	3.0E+03	5.0E+01	1.10E+07	1.68E+03	2.98E-02
Bromoform (Tribromomethane)	5.0E+02	1.0E+03	N/A	5.6E+00	1.35E+04	1.30E+00	4.31E+00
Bromomethane	5.0E+02	1.0E+03	3.1E+03	1.4E+03	8.00E+04	2.00E+01	7.10E+01
Cadmium (soil)	1.0E+03	2.5E+03	N/A	-	-	-	-
Cadmium (water)	-	-	-	-	-	-	-
Carbon tetrachloride	5.0E+02	1.0E+03	1.1E+03	1.1E+02	6.30E+04	1.00E+01	1.13E+01
Chlordane	1.0E+03	2.5E+03	N/A	1.0E-05	8.40E+00	4.92E-04	2.03E-02
p-Chloroaniline	5.0E+02	1.0E+03	N/A	1.0E-05	-	-	-
Chlorobenzene	5.0E+02	6.8E+02	6.8E+02	1.2E+01	1.00E+03	2.20E-01	5.36E+01
Chloroethane	5.0E+02	1.0E+03	1.6E+03	1.0E+03	3.80E+05	1.40E+02	7.20E+00
Chloroform	5.0E+02	1.0E+03	2.9E+03	1.6E+02	4.22E+05	8.50E+01	1.88E+00
Chloromethane	1.0E+02	5.0E+02	4.1E+03	4.3E+03	-	-	-
2-Chlorophenol	1.0E+02	5.0E+02	5.5E+04	1.4E+00	1.90E+01	3.60E-03	3.94E+02
Chromium (total)	1.0E+03	2.5E+03	N/A	-	-	-	-
Chromium III	1.0E+03	2.5E+03	N/A	-	-	-	-
Chromium VI	1.0E+03	2.5E+03	N/A	-	-	-	-
Chrysene	5.0E+02	1.0E+03	N/A	6.3E-07	-	-	-
Cobalt	1.0E+03	2.5E+03	N/A	-	-	-	-
Copper	1.0E+03	2.5E+03	N/A	-	-	-	-
Cyanide	1.0E+02	5.0E+02	N/A	6.2E+02	6.52E+02	5.80E-01	1.07E+03
Dibenz(a,h)anthracene	5.0E+02	1.0E+03	N/A	1.0E-10	-	-	-
Dibromochloromethane	1.0E+02	5.0E+02	N/A	7.6E+01	-	-	-
1,2-dibromo-3-chloropropane	5.0E+02	1.0E+03	N/A	8.0E-01	-	-	-
1,2-Dibromoethane	5.0E+02	1.0E+03	N/A	1.2E+01	2.00E+05	2.60E+01	4.62E-01
1,2-Dichlorobenzene	6.0E+02	6.0E+02	6.0E+02	1.5E+00	3.05E+05	5.00E+01	3.00E-02
1,3-Dichlorobenzene	1.0E+02	5.0E+02	6.0E+02	2.3E+00	-	-	-
1,4-Dichlorobenzene	5.0E+02	1.0E+03	N/A	1.8E+00	1.10E+03	1.80E-01	1.00E+01
3,3-Dichlorobenzidine	5.0E+02	1.0E+03	N/A	4.5E-09	-	-	-
Dichlorodiphenyldichloroethane (DDD)	5.0E+02	1.0E+03	N/A	1.0E-06	-	-	-
Dichlorodiphenyldichloroethene (DDE)	5.0E+02	1.0E+03	N/A	6.5E-06	-	-	-
Dichlorodiphenyltrichloroethane (DDT)	5.0E+02	1.0E+03	N/A	5.5E-06	-	-	-
1,1-Dichloroethane	5.0E+02	1.0E+03	1.7E+03	2.3E+02	1.25E+05	3.00E+01	7.80E+00
1,2-Dichloroethane	1.0E+02	5.0E+02	1.8E+03	7.9E+01	2.42E+03	5.90E-01	1.34E+02
1,1-Dichloroethene	5.0E+02	1.0E+03	1.5E+03	5.9E+02	2.00E+06	5.00E+02	1.18E+00
cis-1,2-Dichloroethene	1.0E+02	5.0E+02	1.2E+03	2.2E+02	-	-	-
trans-1,2-Dichloroethene	5.0E+02	1.0E+03	3.1E+03	3.3E+02	6.73E+04	1.70E+01	1.95E+01
2,4-Dichlorophenol	5.0E+02	1.0E+03	N/A	6.7E-02	1.40E+03	2.10E-01	3.19E-01
1,2-Dichloropropane	1.0E+02	5.0E+02	1.1E+03	4.2E+01	1.19E+03	2.50E-01	1.68E+02
1,3-Dichloropropene	5.0E+02	1.0E+03	1.4E+03	4.3E+01	4.16E+03	1.00E+00	4.30E+01
Dieldrin	5.0E+02	1.0E+03	N/A	1.8E-08	-	-	-
Diethyl phthalate	5.0E+02	1.0E+03	N/A	3.5E-04	-	-	-
Dimethyl phthalate	5.0E+02	1.0E+03	N/A	1.7E-03	-	-	-
2,4-Dimethylphenol	1.0E+02	5.0E+02	N/A	9.8E-02	1.00E+00	1.97E-04	4.97E+02
2,4-Dinitrophenol	5.0E+02	1.0E+03	N/A	1.5E-05	-	-	-
2,4-Dinitrotoluene	5.0E+02	1.0E+03	N/A	5.1E-03	-	-	-
1,4-Dioxane	5.0E+02	1.0E+03	N/A	3.7E+01	6.12E+05	1.70E+02	2.18E-01
Dioxin (2,3,7,8-TCDD)	no criteria	no criteria	N/A	-	-	-	-
Endosulfan	5.0E+02	1.0E+03	N/A	1.0E-05	-	-	-
Endrin	5.0E+02	1.0E+03	N/A	2.0E-07	-	-	-
Ethylbenzene	4.0E+02	4.0E+02	4.0E+02	1.0E+01	2.00E+03	4.50E-01	2.22E+01
Fluoranthene	5.0E+02	1.0E+03	N/A	5.0E-06	-	-	-
Fluorene	5.0E+02	1.0E+03	N/A	3.2E-04	-	-	-
Heptachlor	1.0E+03	2.5E+03	N/A	3.0E-04	3.00E+02	2.00E-02	1.50E-02
Heptachlor epoxide	1.0E+03	2.5E+03	N/A	2.6E-06	3.00E+02	1.90E-02	1.37E-04
Hexachlorobenzene	5.0E+02	1.0E+03	N/A	1.1E-05	-	-	-
Hexachlorobutadiene	5.0E+02	1.0E+03	N/A	1.5E-01	1.20E+04	1.10E+00	1.36E-01
γ-Hexachlorocyclohexane (Lindane)	5.0E+02	1.0E+03	N/A	9.4E-06	-	-	-
Hexachloroethane	5.0E+02	1.0E+03	N/A	2.1E-01	-	-	-
Indeno(1,2,3-c,d)pyrene	5.0E+02	1.0E+03	N/A	1.0E-06	-	-	-
Lead	1.0E+03	2.5E+03	N/A	-	-	-	-

Table H-2. Components for Ceiling Levels in Shallow Soil (mg/kg)

Chemical	Residential Land Use	Commercial/Industrial Land Use	Soil Saturation Limit (mg/kg)	Vapor Pressure (VP) (Torr @ 20-30 °C)	50 Percentile Odor Recognition Threshold (ORT) (µg/m^3)	50 Percentile Odor Recognition Threshold (ORT) (ppmv)	Odor Index
Mercury (elemental)	5.0E+02	1.0E+03	N/A	2.0E-03	-	-	-
Methoxychlor	5.0E+02	1.0E+03	N/A	1.4E-06	-	-	-
Methylene chloride	5.0E+02	1.0E+03	2.4E+03	4.3E+02	5.60E+05	1.60E+02	2.68E+00
Methyl ethyl ketone	5.0E+02	1.0E+03	3.4E+04	1.0E+02	3.20E+04	1.10E+01	9.09E+00
Methyl isobutyl ketone	1.0E+02	5.0E+02	1.7E+04	1.0E+01	4.20E+02	1.00E-01	1.00E+02
Methyl mercury	1.0E+02	5.0E+02	N/A	-	-	-	-
2-Methylnaphthalene	5.0E+02	1.0E+03	N/A	6.8E-02	6.80E+01	1.15E-02	5.91E+00
tert-Butyl methyl ether	1.0E+02	5.0E+02	2.1E+04	2.5E+02	5.30E+02	1.30E-01	1.88E+03
Molybdenum	1.0E+03	2.5E+03	N/A	-	-	-	-
Naphthalene	5.0E+02	1.0E+03	N/A	8.2E-02	4.40E+02	8.40E-02	9.76E-01
Nickel	1.0E+03	2.5E+03	N/A	-	-	-	-
Pentachlorophenol	5.0E+02	1.0E+03	N/A	1.1E-04	-	-	-
Perchlorate	1.0E+03	2.5E+03	N/A	-	-	-	-
Phenanthrene	5.0E+02	1.0E+03	N/A	9.6E-04	5.50E+01	7.42E-03	1.29E-01
Phenol	5.0E+02	1.0E+03	N/A	3.5E-01	1.56E+02	4.00E-02	8.75E+00
Polychlorinated biphenyls (PCBs)	5.0E+02	1.0E+03	N/A	4.9E-04 to 6.7E-03	-	-	-
Pyrene	5.0E+02	1.0E+03	N/A	2.5E-06	-	-	-
Selenium	1.0E+03	2.5E+03	N/A	-	-	-	-
Silver	1.0E+03	2.5E+03	N/A	-	-	-	-
Styrene	5.0E+02	1.0E+03	1.5E+03	5.0E+00	1.36E+03	3.00E-01	1.67E+01
tert-Butyl alcohol	1.0E+02	5.0E+02	3.2E+05	4.2E+01	-	-	-
1,1,1,2-Tetrachloroethane	1.0E+02	5.0E+02	2.0E+03	1.2E+01	-	-	-
1,1,2,2-Tetrachloroethane	5.0E+02	1.0E+03	2.0E+03	4.0E+00	1.05E+04	1.50E+00	2.67E+00
Tetrachloroethene	2.3E+02	2.3E+02	2.3E+02	1.9E+01	3.17E+04	4.68E+00	4.06E+00
Thallium	1.0E+03	2.5E+03	N/A	-	-	-	-
Toluene	5.0E+02	6.5E+02	6.5E+02	2.8E+01	3.00E+04	8.00E+00	3.50E+00
Toxaphene	5.0E+02	1.0E+03	N/A	4.0E-01	-	-	-
TPH gasoline	1.0E+02	5.0E+02	9.3E+03	3.0E+02	1.00E+02	2.20E-02	1.36E+04
TPH diesel	1.0E+02	1.1E+02	1.1E+02	5.0E+00	1.00E+03	1.41E-02	3.55E+02
TPH motor oil	1.0E+02	5.0E+02	N/A	-	-	-	-
1,2,4-Trichlorobenzene	1.0E+03	2.5E+03	N/A	2.9E-01	2.20E+04	2.96E+00	9.80E-02
1,1,1-Trichloroethane	5.0E+02	1.0E+03	1.2E+03	1.0E+02	6.51E+04	1.20E+01	8.33E+00
1,1,2-Trichloroethane	1.0E+02	5.0E+02	1.8E+03	2.3E+01	-	-	-
Trichloroethene	5.0E+02	1.0E+03	1.3E+03	7.7E+01	1.36E+06	2.49E+02	3.09E-01
2,4,5-Trichlorophenol	1.0E+02	5.0E+02	N/A	-	-	-	-
2,4,6-Trichlorophenol	1.0E+02	5.0E+02	N/A	1.2E-02	3.00E-01	3.60E-05	3.33E+02
Vanadium	1.0E+03	2.5E+03	N/A	-	-	-	-
Vinyl chloride	5.0E+02	1.0E+03	1.2E+03	2.6E+03	7.71E+05	2.94E+02	8.78E+00
Xylenes	4.2E+02	4.2E+02	4.2E+02	6.0E+00	4.41E+02	1.00E-01	6.00E+01
Zinc	1.0E+03	2.5E+03	N/A	-	-	-	-

Notes:
Residential Land Use screening levels generally considered adequate for other sensitive uses.
Odor Index = VP/ORT in ppmv
Physical-chemical constants: Ontario MOEE (MOEE 1996) except as noted.
Physical-chemical constants for cloroethane and chloromethane from ATSDR Toxicological Profiles (ATSDR 2001).
Odor Recognition Threshold in parts per million by volume (ppmv = (concentration in mg/m^3) x (24/molecular weight)).
Ceiling Level: Based on comparison of vapor pressure and odor index to Table H-1 or saturation limit, if lower.
Odor Threshold for ethanol of 10 ppmv from U.S. Coast Guard Chemical Hazards Response Information System (USCG 1999).
Odor Threshold of 0.13 ppmv for MtBE from information in CaEPA Public Health Goal for MtBE (CalEPA 1999).
TPH VP values from NIOSH (2005); ORT values from ATSDR (2001a).
Ceiling Levels for TPH after guidance from Massachusetts Department of Environmental Protection (MADEP 1997a).
References for vapor pressure and odor threshold data:
1. Ontario Ministry of Environment and Energy (MOEE 1996).
2. Massachusetts Department of Environmental Protection (MADEP 1994).
3. Agency for Toxic Substances and Disease Registry.
4. Vapor Pressure for 1,4 Dioxane from "Solvent Stabilizers - White Paper" (Mohr 2001). Odor Threshold from US Department of Health and Human Services, (USDHHS, 2001).

Table H-3. Components for Ceiling Levels in Deep Soil
(mg/kg)

Chemical	Residential Land Use	Commercial/ Industrial Land Use	Soil Saturation Limit (mg/kg)	Vapor Pressure (VP) (Torr @ 20-30 °C)	50 Percentile Odor RecognitionThreshold (µg/m^3)	50 Percentile Odor Recognition Threshold (ppmv)	Odor Index
Acenaphthene	2.5E+03	5.0E+03	N/A	4.5E-03	5.13E+02	8.00E-02	5.63E-02
Acenaphthylene	1.0E+03	2.5E+03	N/A	2.9E-02	-	-	-
Acetone	1.0E+03	2.5E+03	1.0E+05	2.7E+02	3.09E+04	1.30E+01	2.08E+01
Aldrin	2.5E+03	5.0E+03	N/A	2.3E-05	2.63E+02	1.70E-02	1.35E-03
Anthracene	1.0E+03	2.5E+03	N/A	1.7E-05	-	-	-
Antimony	2.5E+03	5.0E+03	N/A	-	-	-	-
Arsenic	2.5E+03	5.0E+03	N/A	-	-	-	-
Barium	2.5E+03	5.0E+03	N/A	-	-	-	-
Benzene	8.7E+02	8.7E+02	8.7E+02	9.5E+01	4.89E+03	1.50E+00	6.33E+01
Benzo(a)anthracene	1.0E+03	2.5E+03	N/A	2.2E-08	-	-	-
Benzo(b)fluoranthene	1.0E+03	2.5E+03	N/A	5.0E-07	-	-	-
Benzo(k)fluoranthene	1.0E+03	2.5E+03	N/A	9.6E-11	-	-	-
Benzo(g,h,i)perylene	1.0E+03	2.5E+03	N/A	1.1E-10	-	-	-
Benzo(a)pyrene	1.0E+03	2.5E+03	N/A	5.6E-09	-	-	-
Beryllium	2.5E+03	5.0E+03	N/A	-	-	-	-
1,1-Biphenyl	1.0E+03	2.5E+03	N/A	5.0E-03	6.00E+01	9.50E-03	5.26E-01
Bis(2-chloroethyl) ether	1.0E+03	2.5E+03	9.6E+03	7.1E-01	2.87E+02	4.90E-02	1.45E+01
Bis(2-chloroisopropyl) ether	7.9E+02	7.9E+02	7.9E+02	8.5E-01	2.24E+03	3.20E-01	2.66E+00
Bis(2-ethylhexyl) phthalate	1.0E+03	2.5E+03	N/A	6.2E-08	-	-	-
Boron	2.5E+03	5.0E+03	N/A	-	-	-	-
Bromodichloromethane	2.5E+03	3.0E+03	3.0E+03	5.0E+01	1.10E+07	1.68E+03	2.98E-02
Bromoform (Tribromomethane)	1.0E+03	2.5E+03	N/A	5.6E+00	1.35E+04	1.30E+00	4.31E+00
Bromomethane	1.0E+03	2.5E+03	3.1E+03	1.4E+03	8.00E+04	2.00E+01	7.10E+01
Cadmium (soil)	2.5E+03	5.0E+03	N/A	-	-	-	-
Cadmium (water)	-	-	-	-	-	-	-
Carbon tetrachloride	1.0E+03	1.1E+03	1.1E+03	1.1E+02	6.30E+04	1.00E+01	1.13E+01
Chlordane	2.5E+03	5.0E+03	N/A	1.0E-05	8.40E+00	4.92E-04	2.03E-02
p-Chloroaniline	1.0E+03	2.5E+03	N/A	1.0E-05	-	-	-
Chlorobenzene	6.8E+02	6.8E+02	6.8E+02	1.2E+01	1.00E+03	2.20E-01	5.36E+01
Chloroethane	1.0E+03	1.6E+03	1.6E+03	1.0E+03	3.80E+05	1.40E+02	7.20E+00
Chloroform	1.0E+03	2.5E+03	2.9E+03	1.6E+02	4.22E+05	8.50E+01	1.88E+00
Chloromethane	5.0E+02	1.0E+03	4.1E+03	4.3E+03	-	-	-
2-Chlorophenol	5.0E+02	1.0E+03	5.5E+04	1.4E+00	1.90E+01	3.60E-03	3.94E+02
Chromium (total)	2.5E+03	5.0E+03	N/A	-	-	-	-
Chromium III	2.5E+03	5.0E+03	N/A	-	-	-	-
Chromium VI	2.5E+03	5.0E+03	N/A	-	-	-	-
Chrysene	1.0E+03	2.5E+03	N/A	6.3E-07	-	-	-
Cobalt	2.5E+03	5.0E+03	N/A	-	-	-	-
Copper	2.5E+03	5.0E+03	N/A	-	-	-	-
Cyanide	5.0E+02	1.0E+03	N/A	6.2E+02	6.52E+02	5.80E-01	1.07E+03
Dibenz(a,h)anthracene	1.0E+03	2.5E+03	N/A	1.0E-10	-	-	-
Dibromochloromethane	5.0E+02	1.0E+03	N/A	7.6E+01	-	-	-
1,2-dibromo-3-chloropropane	1.0E+03	2.5E+03	N/A	8.0E-01	-	-	-
1,2-Dibromoethane	1.0E+03	2.5E+03	N/A	1.2E+01	2.00E+05	2.60E+01	4.62E-01
1,2-Dichlorobenzene	6.0E+02	6.0E+02	6.0E+02	1.5E+00	3.05E+05	5.00E+01	3.00E-02
1,3-Dichlorobenzene	5.0E+02	6.0E+02	6.0E+02	2.3E+00	-	-	-
1,4-Dichlorobenzene	1.0E+03	2.5E+03	N/A	1.8E+00	1.10E+03	1.80E-01	1.00E+01
3,3-Dichlorobenzidine	1.0E+03	2.5E+03	N/A	4.5E-09	-	-	-
Dichlorodiphenyldichloroethane (D	1.0E+03	2.5E+03	N/A	1.0E-06	-	-	-
Dichlorodiphenyldichloroethene (D	1.0E+03	2.5E+03	N/A	6.5E-06	-	-	-
Dichlorodiphenyltrichloroethane (D	1.0E+03	2.5E+03	N/A	5.5E-06	-	-	-
1,1-Dichloroethane	1.0E+03	1.7E+03	1.7E+03	2.3E+02	1.25E+05	3.00E+01	7.80E+00
1,2-Dichloroethane	5.0E+02	1.0E+03	1.8E+03	7.9E+01	2.42E+03	5.90E-01	1.34E+02
1,1-Dichloroethene	1.0E+03	1.5E+03	1.5E+03	5.9E+02	2.00E+06	5.00E+02	1.18E+00
cis-1,2-Dichloroethene	5.0E+02	1.0E+03	1.2E+03	2.2E+02	-	-	-
trans-1,2-Dichloroethene	1.0E+03	2.5E+03	3.1E+03	3.3E+02	6.73E+04	1.70E+01	1.95E+01
2,4-Dichlorophenol	1.0E+03	2.5E+03	N/A	6.7E-02	1.40E+03	2.10E-01	3.19E-01
1,2-Dichloropropane	5.0E+02	1.0E+03	1.1E+03	4.2E+01	1.19E+03	2.50E-01	1.68E+02
1,3-Dichloropropene	1.0E+03	1.4E+03	1.4E+03	4.3E+01	4.16E+03	1.00E+00	4.30E+01
Dieldrin	1.0E+03	2.5E+03	N/A	1.8E-08	-	-	-
Diethyl phthalate	1.0E+03	2.5E+03	N/A	3.5E-04	-	-	-
Dimethyl phthalate	1.0E+03	2.5E+03	N/A	1.7E-03	-	-	-
2,4-Dimethylphenol	5.0E+02	1.0E+03	N/A	9.8E-02	1.00E+00	1.97E-04	4.97E+02
2,4-Dinitrophenol	1.0E+03	2.5E+03	N/A	1.5E-05	-	-	-
2,4-Dinitrotoluene	1.0E+03	2.5E+03	N/A	5.1E-03	-	-	-
1,4-Dioxane	1.0E+03	2.5E+03	N/A	3.7E+01	6.12E+05	1.70E+02	2.18E-01
Dioxin (2,3,7,8-TCDD)	no criteria	no criteria	N/A	-	-	-	-
Endosulfan	1.0E+03	2.5E+03	N/A	1.0E-05	-	-	-
Endrin	1.0E+03	2.5E+03	N/A	2.0E-07	-	-	-
Ethylbenzene	4.0E+02	4.0E+02	4.0E+02	1.0E+01	2.00E+03	4.50E-01	2.22E+01
Fluoranthene	1.0E+03	2.5E+03	N/A	5.0E-06	-	-	-
Fluorene	1.0E+03	2.5E+03	N/A	3.2E-04	-	-	-
Heptachlor	2.5E+03	5.0E+03	N/A	3.0E-04	3.00E+02	2.00E-02	1.50E-02
Heptachlor epoxide	2.5E+03	5.0E+03	N/A	2.6E-06	3.00E+02	1.90E-02	1.37E-04
Hexachlorobenzene	1.0E+03	2.5E+03	N/A	1.1E-05	-	-	-
Hexachlorobutadiene	1.0E+03	2.5E+03	N/A	1.5E-01	1.20E+04	1.10E+00	1.36E-01
γ-Hexachlorocyclohexane (Lindane	1.0E+03	2.5E+03	N/A	9.4E-06	-	-	-
Hexachloroethane	1.0E+03	2.5E+03	N/A	2.1E-01	-	-	-
Indeno(1,2,3-c,d)pyrene	1.0E+03	2.5E+03	N/A	1.0E-06	-	-	-

Table H-3. Components for Ceiling Levels in Deep Soil
(mg/kg)

Chemical	Residential Land Use	Commercial/ Industrial Land Use	Soil Saturation Limit (mg/kg)	Vapor Pressure (VP) (Torr @ 20-30 °C)	50 Percentile Odor RecognitionThreshold (µg/m^3)	50 Percentile Odor Recognition Threshold (ppmv)	Odor Index
Lead	2.5E+03	5.0E+03	N/A	-	-	-	-
Mercury (elemental)	1.0E+03	2.5E+03	N/A	2.0E-03	-	-	-
Methoxychlor	1.0E+03	2.5E+03	N/A	1.4E-06	-	-	-
Methylene chloride	1.0E+03	2.4E+03	2.4E+03	4.3E+02	5.60E+05	1.60E+02	2.68E+00
Methyl ethyl ketone	1.0E+03	2.5E+03	3.4E+04	1.0E+02	3.20E+04	1.10E+01	9.09E+00
Methyl isobutyl ketone	5.0E+02	1.0E+03	1.7E+04	1.0E+01	4.20E+02	1.00E-01	1.00E+02
Methyl mercury	5.0E+02	1.0E+03	N/A	-	-	-	-
2-Methylnaphthalene	1.0E+03	2.5E+03	N/A	6.8E-02	6.80E+01	1.15E-02	5.91E+00
tert-Butyl methyl ether	5.0E+02	1.0E+03	2.1E+04	2.5E+02	5.30E+02	1.30E-01	1.88E+03
Molybdenum	2.5E+03	5.0E+03	N/A	-	-	-	-
Naphthalene	1.0E+03	2.5E+03	N/A	8.2E-02	4.40E+02	8.40E-02	9.76E-01
Nickel	2.5E+03	5.0E+03	N/A	-	-	-	-
Pentachlorophenol	1.0E+03	2.5E+03	N/A	1.1E-04	-	-	-
Perchlorate	2.5E+03	5.0E+03	N/A	-	-	-	-
Phenanthrene	1.0E+03	2.5E+03	N/A	9.6E-04	5.50E+01	7.42E-03	1.29E-01
Phenol	1.0E+03	2.5E+03	N/A	3.5E-01	1.56E+02	4.00E-02	8.75E+00
Polychlorinated biphenyls (PCBs)	1.0E+03	2.5E+03	N/A	4.9E-04 to 6.7E-03	-	-	-
Pyrene	1.0E+03	2.5E+03	N/A	2.5E-06	-	-	-
Selenium	2.5E+03	5.0E+03	N/A	-	-	-	-
Silver	2.5E+03	5.0E+03	N/A	-	-	-	-
Styrene	1.0E+03	1.5E+03	1.5E+03	5.0E+00	1.36E+03	3.00E-01	1.67E+01
tert-Butyl alcohol	5.0E+02	1.0E+03	3.2E+05	4.2E+01	-	-	-
1,1,1,2-Tetrachloroethane	5.0E+02	1.0E+03	2.0E+03	1.2E+01	-	-	-
1,1,2,2-Tetrachloroethane	1.0E+03	2.0E+03	2.0E+03	4.0E+00	1.05E+04	1.50E+00	2.67E+00
Tetrachloroethene	2.3E+02	2.3E+02	2.3E+02	1.9E+01	3.17E+04	4.68E+00	4.06E+00
Thallium	2.5E+03	5.0E+03	N/A	-	-	-	-
Toluene	6.5E+02	6.5E+02	6.5E+02	2.8E+01	3.00E+04	8.00E+00	3.50E+00
Toxaphene	1.0E+03	2.5E+03	N/A	4.0E-01	-	-	-
TPH gasoline	5.0E+02	1.0E+03	9.3E+03	3.0E+02	1.00E+02	2.20E-02	1.36E+04
TPH diesel	1.1E+02	1.1E+02	1.1E+02	5.0E+00	1.00E+03	1.41E-02	3.55E+02
TPH motor oil	5.0E+02	1.0E+03	N/A	-	-	-	-
1,2,4-Trichlorobenzene	2.5E+03	5.0E+03	N/A	2.9E-01	2.20E+04	2.96E+00	9.80E-02
1,1,1-Trichloroethane	1.0E+03	1.2E+03	1.2E+03	1.0E+02	6.51E+04	1.20E+01	8.33E+00
1,1,2-Trichloroethane	5.0E+02	1.0E+03	1.8E+03	2.3E+01	-	-	-
Trichloroethene	1.0E+03	1.3E+03	1.3E+03	7.7E+01	1.36E+06	2.49E+02	3.09E-01
2,4,5-Trichlorophenol	5.0E+02	1.0E+03	N/A	-	-	-	-
2,4,6-Trichlorophenol	5.0E+02	1.0E+03	N/A	1.2E-02	3.00E-01	3.60E-05	3.33E+02
Vanadium	2.5E+03	5.0E+03	N/A	-	-	-	-
Vinyl chloride	1.0E+03	1.2E+03	1.2E+03	2.6E+03	7.71E+05	2.94E+02	8.78E+00
Xylenes	4.2E+02	4.2E+02	4.2E+02	6.0E+00	4.41E+02	1.00E-01	6.00E+01
Zinc	2.5E+03	5.0E+03	N/A	-	-	-	-

Notes:
Residential Land Use screening levels generally considered adequate for other sensitive uses.

Odor Index = VP/ORT in ppm-v
Physical-chemical constants Ontario MOEE (MOEE 1996) except as noted.
Physical-chemical constants for cloroethane and chloromethane from ATSDR Toxicological Profiles (ATSDR 1999
Odor Recognition Threshold in parts per million by volume (ppmv = (concentration in mg/m^3) x (24/molecular weight)).
Ceiling Level: Based on comparison of vapor pressure and odor index to Table H-1 or saturation limit, if lower.
Saturation limits calculated using equation in USEPA RSL guidance (for chemicals that are liquid at ambient temperatures and pressures;
Odor Threshold for ethanol of 10 ppmv from U.S. Coast Guard Chemical Hazards Response Information System (USCG 1999).
Odor Threshold of 0.13 ppmv for MtBE from information in CaEPA Public Health Goal for MtBE (CalEPA 1999).
TPH VP values from NIOSH (2005); ORT values from ATSDR (2001a).
Ceiling Levels for TPH after guidance from Massachusetts Department of Environmental Protection (MADEP 1997a). Adjust as needed in field.
References for vapor pressure and odor threshold data:
1. Ontario Ministry of Environment and Energy (MOEE 1996).
2. Massachusetts Department of Environmental Protection (MADEP 1994).
3. Agency for Toxic Substances and Disease Registry (ATSDR 2001).
4. National Library of Medicine, Hazardous Substances Data Bank (NLM 2000).
5. U.S. Department of Health and Human Services (NIOSH 2005).

Table I-1. Groundwater Ceiling Levels
(groundwater is a current or potential source of drinking water)
(µg/L)

Chemical	Final Ceiling Level	Basis	Solubility (1/2)	Taste And Odor Threshold	Basis	Upper Limit
Acenaphthene	2.0E+01	Taste & Odors	2.1E+03	2.0E+01	Ontario MOEE	5.0E+04
Acenaphthylene	2.0E+03	Solubility	2.0E+03	-	-	5.0E+04
Acetone	2.0E+04	Taste & Odors	5.0E+08	2.0E+04	Amoore & Hautala	5.0E+04
Aldrin	8.5E+00	Solubility	8.5E+00	1.7E+01	Ontario MOEE	5.0E+04
Anthracene	2.2E+01	Solubility	2.2E+01	-	-	5.0E+04
Antimony	5.0E+04	Upper Limit		-	-	5.0E+04
Arsenic	5.0E+04	Upper Limit		-	-	5.0E+04
Barium	5.0E+04	Upper Limit		-	-	5.0E+04
Benzene	1.7E+02	Taste & Odors	8.8E+05	1.7E+02	Amoore & Hautala	5.0E+04
Benzo(a)anthracene	5.0E+00	Solubility	5.0E+00	-	-	5.0E+04
Benzo(b)fluoranthene	7.0E+00	Solubility	7.0E+00	-	-	5.0E+04
Benzo(k)fluoranthene	4.0E-01	Solubility	4.0E-01	-	-	5.0E+04
Benzo(g,h,i)perylene	1.3E-01	Solubility	1.3E-01	-	-	5.0E+04
Benzo(a)pyrene	1.9E+00	Solubility	1.9E+00	-	-	5.0E+04
Beryllium	5.0E+04	Upper Limit		-	-	5.0E+04
1,1-Biphenyl	5.0E-01	Taste & Odors	3.8E+03	5.0E-01	Amoore & Hautala	5.0E+04
Bis(2-chloroethyl) ether	3.6E+02	Taste & Odors	8.6E+06	3.6E+02	Amoore & Hautala	5.0E+04
Bis(2-chloroisopropyl) ether	3.2E+02	Taste & Odors	8.5E+05	3.2E+02	Ontario MOEE	5.0E+04
Bis(2-ethylhexyl) phthalate	6.5E+02	Solubility	6.5E+02	-	-	5.0E+04
Boron	5.0E+04	Upper Limit		-	-	5.0E+04
Bromodichloromethane	5.0E+04	Upper Limit	3.4E+06	-	-	5.0E+04
Bromoform (Tribromomethane)	5.1E+02	Taste & Odors	1.6E+06	5.1E+02	Amoore & Hautala	5.0E+04
Bromomethane	5.0E+04	Upper Limit	7.6E+06	-	-	5.0E+04
Cadmium (soil)	No Value	No Value	No Value	No Value	No Value	No Value
Cadmium (water)	5.0E+04	Upper Limit		-	-	5.0E+04
Carbon tetrachloride	5.2E+02	Taste & Odors	4.0E+05	5.2E+02	Amoore & Hautala	5.0E+04
Chlordane	2.5E+00	Taste & Odors	2.8E+01	2.5E+00	Ontario MOEE	5.0E+04
p-Chloroaniline	5.0E+04	Upper Limit	1.3E+06	-	-	5.0E+04
Chlorobenzene	5.0E+01	Taste & Odors	2.4E+05	5.0E+01	Amoore & Hautala	5.0E+04
Chloroethane	1.6E+01	Taste & Odors	2.9E+06	1.6E+01	Amoore & Hautala	5.0E+04
Chloroform	2.4E+03	Taste & Odors	4.0E+06	2.4E+03	Amoore & Hautala	5.0E+04
Chloromethane	5.0E+04	Upper Limit	4.1E+06		-	5.0E+04
2-Chlorophenol	1.8E-01	Taste & Odors	1.1E+07	1.8E-01	Ontario MOEE	5.0E+04
Chromium (total)	5.0E+04	Upper Limit		-	-	5.0E+04
Chromium III	5.0E+04	Upper Limit		-	-	5.0E+04
Chromium VI	5.0E+04	Upper Limit		-	-	5.0E+04
Chrysene	8.0E-01	Solubility	8.0E-01	-	-	5.0E+04
Cobalt	5.0E+04	Upper Limit		-	-	5.0E+04
Copper	1.0E+03	Taste & Odors		1.0E+03	CalDHS 2nd MCL	5.0E+04
Cyanide	1.7E+02	Taste & Odors	5.0E+08	1.7E+02	Amoore & Hautala	5.0E+04
Dibenz(a,h)anthracene	2.5E-01	Solubility	2.5E-01	-	-	5.0E+04
Dibromochloromethane	5.0E+04	Upper Limit	2.2E+06	-	-	5.0E+04
1,2-dibromo-3-chloropropane	1.0E+01	Taste & Odors	6.0E+05	1.0E+01	Amoore & Hautala	5.0E+04
1,2-Dibromoethane	5.0E+04	Upper Limit	1.7E+06	-	-	5.0E+04
1,2-Dichlorobenzene	1.0E+01	Taste & Odors	7.8E+04	1.0E+01	USEPA 2nd MCL	5.0E+04
1,3-Dichlorobenzene	5.0E+04	Upper Limit	7.8E+04	-	-	5.0E+04
1,4-Dichlorobenzene	5.0E+00	Taste & Odors	3.7E+04	5.0E+00	USEPA 2nd MCL	5.0E+04
3,3-Dichlorobenzidine	1.6E+03	Solubility	1.6E+03	-	-	5.0E+04
Dichlorodiphenyldichloroethane (DDD)	8.0E+01	Solubility	8.0E+01	-	-	5.0E+04
Dichlorodiphenyldichloroethene (DDE)	2.0E+01	Solubility	2.0E+01	-	-	5.0E+04
Dichlorodiphenyltrichloroethane (DDT)	1.5E+00	Solubility	1.5E+00	3.5E+02	Ontario MOEE	5.0E+04
1,1-Dichloroethane	5.0E+04	Upper Limit	2.5E+06	-	-	5.0E+04
1,2-Dichloroethane	7.0E+03	Taste & Odors	4.3E+06	7.0E+03	Amoore & Hautala	5.0E+04
1,1-Dichloroethene	1.5E+03	Taste & Odors	1.1E+06	1.5E+03	Amoore & Hautala	5.0E+04
cis-1,2-Dichloroethene	5.0E+04	Upper Limit	1.8E+06	-	-	5.0E+04
trans-1,2-Dichloroethene	2.6E+02	Taste & Odors	3.2E+06	2.6E+02	Amoore & Hautala	5.0E+04
2,4-Dichlorophenol	3.0E-01	Taste & Odors	2.3E+06	3.0E-01	Ontario MOEE	5.0E+04
1,2-Dichloropropane	1.0E+01	Taste & Odors	1.4E+06	1.0E+01	Ontario MOEE	5.0E+04
1,3-Dichloropropene	5.0E+04	Upper Limit	1.4E+06	-	-	5.0E+04
Dieldrin	4.1E+01	Taste & Odors	9.3E+01	4.1E+01	Ontario MOEE	5.0E+04
Diethyl phthalate	5.0E+04	Upper Limit	4.5E+05	-	-	5.0E+04
Dimethyl phthalate	5.0E+04	Upper Limit	2.5E+06	-	-	5.0E+04
2,4-Dimethylphenol	4.0E+02	Taste & Odors	3.9E+06	4.0E+02	Cal DHS AL	5.0E+04
2,4-Dinitrophenol	5.0E+04	Upper Limit	2.8E+06	-	-	5.0E+04
2,4-Dinitrotoluene	5.0E+04	Upper Limit	1.4E+05	-	-	5.0E+04
1,4-Dioxane	5.0E+04	Upper Limit	5.0E+08	2.3E+05	Amoore & Hautala	5.0E+04
Dioxin (2,3,7,8-TCDD)	7.0E+03	Solubility	7.0E+03	-	-	5.0E+04
Endosulfan	7.5E+01	Solubility	7.5E+01	-	-	5.0E+04
Endrin	4.1E+01	Taste & Odors	1.3E+02	4.1E+01	Ontario MOEE	5.0E+04
Ethylbenzene	3.0E+01	Taste & Odors	8.5E+04	3.0E+01	USEPA 2nd MCL	5.0E+04
Fluoranthene	1.3E+02	Solubility	1.3E+02	-	-	5.0E+04
Fluorene	9.5E+02	Solubility	9.5E+02	-	-	5.0E+04
Heptachlor	2.0E+01	Taste & Odors	2.8E+01	2.0E+01	Ontario MOEE	5.0E+04
Heptachlor epoxide	1.8E+02	Solubility	1.8E+02	-	-	5.0E+04
Hexachlorobenzene	5.5E+01	Solubility	5.5E+01	3.0E+03	Ontario MOEE	5.0E+04

Table I-1. Groundwater Ceiling Levels
(groundwater is a current or potential source of drinking water)
(µg/L)

Chemical	Final Ceiling Level	Basis	Solubility (1/2)	Taste And Odor Threshold	Basis	Upper Limit
Hexachlorobutadiene	6.0E+00	Taste & Odors	1.0E+03	6.0E+00	Ontario MOEE	5.0E+04
γ-Hexachlorocyclohexane (Lindane)	3.5E+03	Solubility	3.5E+03	1.2E+04	Ontario MOEE	5.0E+04
Hexachloroethane	1.0E+01	Taste & Odors	2.5E+04	1.0E+01	Amoore & Hautala	5.0E+04
Indeno(1,2,3-c,d)pyrene	2.7E-01	Solubility	2.7E-01	-	-	5.0E+04
Lead	5.0E+04	Upper Limit		-	-	5.0E+04
Mercury (elemental)	5.0E+04	Upper Limit		-	-	5.0E+04
Methoxychlor	2.0E+01	Solubility	2.0E+01	4.7E+03	Amoore & Hautala	5.0E+04
Methylene chloride	9.1E+03	Taste & Odors	6.6E+06	9.1E+03	Ontario MOEE	5.0E+04
Methyl ethyl ketone	8.4E+03	Taste & Odors	1.3E+08	8.4E+03	Amoore & Hautala	5.0E+04
Methyl isobutyl ketone	1.3E+03	Taste & Odors	9.5E+06	1.3E+03	Amoore & Hautala	5.0E+04
Methyl mercury	5.0E+04	Upper Limit		-	-	5.0E+04
2-Methylnaphthalene	1.0E+01	Taste & Odors	1.3E+04	1.0E+01	Ontario MOEE	5.0E+04
tert -Butyl methyl ether	5.0E+00	Taste & Odors	7.5E+07	5.0E+00	Cal DHS 2nd MCL	5.0E+04
Molybdenum	5.0E+04	Upper Limit		-	-	5.0E+04
Naphthalene	2.1E+01	Taste & Odors	1.6E+04	2.1E+01	Amoore & Hautala	5.0E+04
Nickel	5.0E+04	Upper Limit		-	-	5.0E+04
Pentachlorophenol	3.0E+01	Taste & Odors	7.0E+06	3.0E+01	Amoore & Hautala	5.0E+04
Perchlorate	5.0E+04	Upper Limit	1.0E+08	-	-	5.0E+04
Phenanthrene	4.1E+02	Solubility	4.1E+02	1.0E+03	Ontario MOEE	5.0E+04
Phenol	5.0E+00	Taste & Odors	4.0E+07	5.0E+00	Cal DHS AL	5.0E+04
Polychlorinated biphenyls (PCBs)	1.6E+01	Solubility	1.6E+01	-	-	5.0E+04
Pyrene	6.8E+01	Solubility	6.8E+01	-	-	5.0E+04
Selenium	5.0E+04	Upper Limit		-	-	5.0E+04
Silver	1.0E+02	Taste & Odors		1.0E+02	Cal DHS 2nd MCL	5.0E+04
Styrene	1.0E+01	Taste & Odors	1.6E+05	1.0E+01	USEPA 2nd MCL	5.0E+04
tert -Butyl alcohol	5.0E+04	Upper Limit	5.0E+08	-	-	5.0E+04
1,1,1,2-Tetrachloroethane	5.0E+04	Upper Limit	1.5E+06	-	-	5.0E+04
1,1,2,2-Tetrachloroethane	5.0E+02	Taste & Odors	1.5E+06	5.0E+02	Amoore & Hautala	5.0E+04
Tetrachloroethene	1.7E+02	Taste & Odors	1.0E+05	1.7E+02	Amoore & Hautala	5.0E+04
Thallium	5.0E+04	Upper Limit		-	-	5.0E+04
Toluene	4.0E+01	Taste & Odors	2.6E+05	4.0E+01	USEPA 2nd MCL	5.0E+04
Toxaphene	1.4E+02	Taste & Odors	1.5E+03	1.4E+02	USEPA 2nd MCL	5.0E+04
TPH gasoline	1.0E+02	Taste & Odors	1.2E+05	1.0E+02	USEPA SNARL	5.0E+04
TPH diesel	1.0E+02	Taste & Odors	1.5E+03	1.0E+02	USEPA SNARL	5.0E+04
TPH motor oil	1.0E+02	Taste & Odors	1.5E+03	1.0E+02	USEPA SNARL	5.0E+04
1,2,4-Trichlorobenzene	3.0E+03	Taste & Odors	1.5E+05	3.0E+03	USEPA (1995)	5.0E+04
1,1,1-Trichloroethane	9.7E+02	Taste & Odors	6.7E+05	9.7E+02	Amoore & Hautala	5.0E+04
1,1,2-Trichloroethane	5.0E+04	Upper Limit	2.2E+06	-	-	5.0E+04
Trichloroethene	3.1E+02	Taste & Odors	5.5E+05	3.1E+02	Amoore & Hautala	5.0E+04
2,4,5-Trichlorophenol	2.0E+02	Taste & Odors	6.0E+05	2.0E+02	Ontario MOEE	5.0E+04
2,4,6-Trichlorophenol	1.0E+02	Taste & Odors	4.0E+05	1.0E+02	Ontario MOEE	5.0E+04
Vanadium	5.0E+04	Upper Limit		-	-	5.0E+04
Vinyl chloride	3.4E+03	Taste & Odors	1.4E+06	3.4E+03	Amoore & Hautala	5.0E+04
Xylenes	2.0E+01	Taste & Odors	8.1E+04	2.0E+01	USEPA 2nd MCL	5.0E+04
Zinc	5.0E+03	Taste & Odors		5.0E+03	Cal DHS 2nd MCL	5.0E+04

Notes:
Ceiling Level: lowest of 1/2 solubility, taste and odor threshhold and 50,000 ug/L maximum level
TPH ceiling levels after Massachusetts DEP (MADEP 1997a).

Table I-2. Groundwater Ceiling Levels
(groundwater is not a current or potential source of drinking water)
(µg/L)

Chemical	Final Gross Contamination Ceiling Level	Basis	Solubility (1/2)	Nuisance Odor Threshold	Basis	Upper Limit
Acenaphthene	2.0E+02	Nuisance Odors	2.1E+03	2.0E+02	Ontario MOEE	5.0E+04
Acenaphthylene	2.0E+03	Solubility	2.0E+03	-	-	5.0E+04
Acetone	5.0E+04	Upper Limit	5.0E+08	2.0E+05	Ontario MOEE	5.0E+04
Aldrin	8.5E+00	Solubility	8.5E+00	1.7E+02	Ontario MOEE	5.0E+04
Anthracene	2.2E+01	Solubility	2.2E+01	-	-	5.0E+04
Antimony	5.0E+04	Upper Limit			-	5.0E+04
Arsenic	5.0E+04	Upper Limit		-	-	5.0E+04
Barium	5.0E+04	Upper Limit		-	-	5.0E+04
Benzene	2.0E+04	Nuisance Odors	8.8E+05	2.0E+04	Ontario MOEE	5.0E+04
Benzo(a)anthracene	5.0E+00	Solubility	5.0E+00	-	-	5.0E+04
Benzo(b)fluoranthene	7.0E+00	Solubility	7.0E+00	-	-	5.0E+04
Benzo(k)fluoranthene	4.0E-01	Solubility	4.0E-01	-	-	5.0E+04
Benzo(g,h,i)perylene	1.3E-01	Solubility	1.3E-01	-	-	5.0E+04
Benzo(a)pyrene	1.9E+00	Solubility	1.9E+00	-	-	5.0E+04
Beryllium	5.0E+04	Upper Limit		-	-	5.0E+04
1,1-Biphenyl	5.0E+00	Nuisance Odors	3.8E+03	5.0E+00	Amoore & Hautala	5.0E+04
Bis(2-chloroethyl) ether	3.6E+03	Nuisance Odors	8.6E+06	3.6E+03	Amoore & Hautala	5.0E+04
Bis(2-chloroisopropyl) ether	3.2E+03	Nuisance Odors	8.5E+05	3.2E+03	Ontario MOEE	5.0E+04
Bis(2-ethylhexyl) phthalate	6.5E+02	Solubility	6.5E+02	-	-	5.0E+04
Boron	5.0E+04	Upper Limit		-	-	5.0E+04
Bromodichloromethane	5.0E+04	Upper Limit	3.4E+06	-	-	5.0E+04
Bromoform (Tribromomethane)	5.1E+03	Nuisance Odors	1.6E+06	5.1E+03	Ontario MOEE	5.0E+04
Bromomethane	5.0E+04	Upper Limit	7.6E+06	-	-	5.0E+04
Cadmium (water)	5.0E+04	Upper Limit		-	-	5.0E+04
Cadmium (soil)	No Value	No Value	No Value	No Value	No Value	No Value
Carbon tetrachloride	5.2E+03	Nuisance Odors	4.0E+05	5.2E+03	Ontario MOEE	5.0E+04
Chlordane	2.5E+01	Nuisance Odors	2.8E+01	2.5E+01	Ontario MOEE	5.0E+04
p-Chloroaniline	5.0E+04	Upper Limit	1.3E+06	-	-	5.0E+04
Chlorobenzene	5.0E+02	Nuisance Odors	2.4E+05	5.0E+02	Ontario MOEE	5.0E+04
Chloroethane	1.6E+02	Nuisance Odors	2.9E+06	1.6E+02	Amoore & Hautala	5.0E+04
Chloroform	2.4E+04	Nuisance Odors	4.0E+06	2.4E+04	Ontario MOEE	5.0E+04
Chloromethane	5.0E+04	Upper Limit	4.1E+06	-	-	5.0E+04
2-Chlorophenol	1.8E+00	Nuisance Odors	1.1E+07	1.8E+00	Ontario MOEE	5.0E+04
Chromium (total)	5.0E+04	Upper Limit		-	-	5.0E+04
Chromium III	5.0E+04	Upper Limit		-	-	5.0E+04
Chromium VI	5.0E+04	Upper Limit		-	-	5.0E+04
Chrysene	8.0E-01	Solubility	8.0E-01	-	-	5.0E+04
Cobalt	5.0E+04	Upper Limit		-	-	5.0E+04
Copper	5.0E+04	Upper Limit		-	-	5.0E+04
Cyanide	1.7E+03	Nuisance Odors	5.0E+08	1.7E+03	Ontario MOEE	5.0E+04
Dibenz(a,h)anthracene	2.5E-01	Solubility	2.5E-01	-	-	5.0E+04
Dibromochloromethane	5.0E+04	Upper Limit	2.2E+06	-	-	5.0E+04
1,2-dibromo-3-chloropropane	1.0E+02	Nuisance Odors	6.0E+05	1.0E+02	Amoore & Hautala	5.0E+04
1,2-Dibromoethane	5.0E+04	Upper Limit	1.7E+06	-	-	5.0E+04
1,2-Dichlorobenzene	1.0E+02	Nuisance Odors	7.8E+04	1.0E+02	Ontario MOEE	5.0E+04
1,3-Dichlorobenzene	5.0E+04	Upper Limit	7.8E+04	-	-	5.0E+04
1,4-Dichlorobenzene	1.1E+02	Nuisance Odors	3.7E+04	1.1E+02	Ontario MOEE	5.0E+04
3,3-Dichlorobenzidine	1.6E+03	Solubility	1.6E+03	-	-	5.0E+04
Dichlorodiphenyldichloroethane (DDD)	8.0E+01	Solubility	8.0E+01	-	-	5.0E+04
Dichlorodiphenyldichloroethene (DDE)	2.0E+01	Solubility	2.0E+01	-	-	5.0E+04
Dichlorodiphenyltrichloroethane (DDT)	1.5E+00	Solubility	1.5E+00	3.5E+03	Ontario MOEE	5.0E+04
1,1-Dichloroethane	5.0E+04	Upper Limit	2.5E+06	-	-	5.0E+04
1,2-Dichloroethane	5.0E+04	Upper Limit	4.3E+06	2.0E+05	Ontario MOEE	5.0E+04
1,1-Dichloroethene	1.5E+04	Nuisance Odors	1.1E+06	1.5E+04	Amoore & Hautala	5.0E+04
cis-1,2-Dichloroethene	5.0E+04	Upper Limit	1.8E+06	-	-	5.0E+04
trans-1,2-Dichloroethene	2.6E+03	Nuisance Odors	3.2E+06	2.6E+03	Ontario MOEE	5.0E+04
2,4-Dichlorophenol	3.0E+00	Nuisance Odors	2.3E+06	3.0E+00	Ontario MOEE	5.0E+04
1,2-Dichloropropane	1.0E+02	Nuisance Odors	1.4E+06	1.0E+02	Ontario MOEE	5.0E+04
1,3-Dichloropropene	5.0E+04	Upper Limit	1.4E+06	-	-	5.0E+04
Dieldrin	9.3E+01	Solubility	9.3E+01	4.1E+02	Ontario MOEE	5.0E+04
Diethyl phthalate	5.0E+04	Upper Limit	4.5E+05	-	-	5.0E+04
Dimethyl phthalate	5.0E+04	Upper Limit	2.5E+06	-	-	5.0E+04
2,4-Dimethylphenol	4.0E+03	Nuisance Odors	3.9E+06	4.0E+03	Ontario MOEE	5.0E+04
2,4-Dinitrophenol	5.0E+04	Upper Limit	2.8E+06	-	-	5.0E+04
2,4-Dinitrotoluene	5.0E+04	Upper Limit	1.4E+05	-	-	5.0E+04
1,4-Dioxane	5.0E+04	Upper Limit	5.0E+08	-	-	5.0E+04
Dioxin (2,3,7,8-TCDD)	7.0E+03	Solubility	7.0E+03	-	-	5.0E+04
Endosulfan	7.5E+01	Solubility	7.5E+01	-	-	5.0E+04
Endrin	1.3E+02	Solubility	1.3E+02	4.1E+02	Ontario MOEE	5.0E+04
Ethylbenzene	3.0E+02	Nuisance Odors	8.5E+04	3.0E+02	USEPA 2nd MCL	5.0E+04
Fluoranthene	1.3E+02	Solubility	1.3E+02	-	-	5.0E+04
Fluorene	9.5E+02	Solubility	9.5E+02	-	-	5.0E+04
Heptachlor	2.8E+01	Solubility	2.8E+01	2.0E+02	Ontario MOEE	5.0E+04
Heptachlor epoxide	1.8E+02	Solubility	1.8E+02	-	-	5.0E+04

Table I-2. Groundwater Ceiling Levels
(groundwater is not a current or potential source of drinking water)
(µg/L)

Chemical	Final Gross Contamination Ceiling Level	Basis	Solubility (1/2)	Nuisance Odor Threshold	Basis	Upper Limit
Hexachlorobenzene	5.5E+01	Solubility	5.5E+01	3.0E+04	Ontario MOEE	5.0E+04
Hexachlorobutadiene	6.0E+01	Nuisance Odors	1.0E+03	6.0E+01	Ontario MOEE	5.0E+04
γ-Hexachlorocyclohexane (Lindane)	3.5E+03	Solubility	3.5E+03	1.2E+05	Ontario MOEE	5.0E+04
Hexachloroethane	1.0E+02	Nuisance Odors	2.5E+04	1.0E+02	Ontario MOEE	5.0E+04
Indeno(1,2,3-c,d)pyrene	2.7E-01	Solubility	2.7E-01	-	-	5.0E+04
Lead	5.0E+04	Upper Limit		-	-	5.0E+04
Mercury (elemental)	5.0E+04	Upper Limit		-	-	5.0E+04
Methoxychlor	2.0E+01	Solubility	2.0E+01	4.7E+04	Ontario MOEE	5.0E+04
Methylene chloride	5.0E+04	Upper Limit	6.6E+06	9.1E+04	Ontario MOEE	5.0E+04
Methyl ethyl ketone	5.0E+04	Upper Limit	1.3E+08	8.4E+04	Amoore & Hautala	5.0E+04
Methyl isobutyl ketone	1.3E+04	Nuisance Odors	9.5E+06	1.3E+04	Amoore & Hautala	5.0E+04
Methyl mercury	5.0E+04	Upper Limit		-	-	5.0E+04
2-Methylnaphthalene	1.0E+02	Nuisance Odors	1.3E+04	1.0E+02	Ontario MOEE	5.0E+04
tert-Butyl methyl ether	1.8E+03	Nuisance Odors	7.5E+07	1.8E+03	CalDHS	5.0E+04
Molybdenum	5.0E+04	Upper Limit		-	-	5.0E+04
Naphthalene	2.1E+02	Nuisance Odors	1.6E+04	2.1E+02	Ontario MOEE	5.0E+04
Nickel	5.0E+04	Upper Limit		-	-	5.0E+04
Pentachlorophenol	5.9E+03	Nuisance Odors	7.0E+06	5.9E+03	Ontario MOEE	5.0E+04
Perchlorate	5.0E+04	Upper Limit	1.0E+08	-	-	5.0E+04
Phenanthrene	4.1E+02	Solubility	4.1E+02	1.0E+04	Ontario MOEE	5.0E+04
Phenol	5.0E+04	Upper Limit	4.0E+07	7.9E+04	Ontario MOEE	5.0E+04
Polychlorinated biphenyls (PCBs)	1.6E+01	Solubility	1.6E+01	-	-	5.0E+04
Pyrene	6.8E+01	Solubility	6.8E+01	-	-	5.0E+04
Selenium	5.0E+04	Upper Limit		-	-	5.0E+04
Silver	5.0E+04	Upper Limit		-	-	5.0E+04
Styrene	1.1E+02	Nuisance Odors	1.6E+05	1.1E+02	Ontario MOEE	5.0E+04
tert-Butyl alcohol	5.0E+04	Upper Limit	5.0E+08	-	-	5.0E+04
1,1,1,2-Tetrachloroethane	5.0E+04	Upper Limit	1.5E+06	-	-	5.0E+04
1,1,2,2-Tetrachloroethane	5.0E+03	Nuisance Odors	1.5E+06	5.0E+03	Ontario MOEE	5.0E+04
Tetrachloroethene	3.0E+03	Nuisance Odors	1.0E+05	3.0E+03	Ontario MOEE	5.0E+04
Thallium	5.0E+04	Upper Limit		-	-	5.0E+04
Toluene	4.0E+02	Nuisance Odors	2.6E+05	4.0E+02	Ontario MOEE	5.0E+04
Toxaphene	1.4E+02	Nuisance Odors	1.5E+03	1.4E+02	USEPA 2nd MCL	5.0E+04
TPH gasoline	5.0E+03	Nuisance Odors	7.5E+04	5.0E+03	MADEP	5.0E+04
TPH diesel	2.5E+03	Solubility	2.5E+03	5.0E+03	MADEP	5.0E+04
TPH motor oil	2.5E+03	Solubility	2.5E+03	5.0E+03	MADEP	5.0E+04
1,2,4-Trichlorobenzene	3.0E+04	Nuisance Odors	1.5E+05	3.0E+04	USEPA (1995)	5.0E+04
1,1,1-Trichloroethane	5.0E+04	Upper Limit	6.7E+05	5.0E+05	Ontario MOEE	5.0E+04
1,1,2-Trichloroethane	5.0E+04	Upper Limit	2.2E+06	-	-	5.0E+04
Trichloroethene	5.0E+04	Upper Limit	5.5E+05	1.0E+05	Ontario MOEE	5.0E+04
2,4,5-Trichlorophenol	2.0E+03	Nuisance Odors	6.0E+05	2.0E+03	Ontario MOEE	5.0E+04
2,4,6-Trichlorophenol	1.0E+03	Nuisance Odors	4.0E+05	1.0E+03	Ontario MOEE	5.0E+04
Vanadium	5.0E+04	Upper Limit		-	-	5.0E+04
Vinyl chloride	3.4E+04	Nuisance Odors	1.4E+06	3.4E+04	Ontario MOEE	5.0E+04
Xylenes	5.3E+03	Nuisance Odors	8.1E+04	5.3E+03	Ontario MOEE	5.0E+04
Zinc	5.0E+04	Upper Limit		-	-	5.0E+04

Notes:
Nuisance Odor Thresholds assume ten-fold attenuation/dilution of chemical in groundwater upon discharge to surface water.
Ceiling Level: lowest of 1/2 solubility, odor/taste threshhold and 50,000 ug/L maximum level (intended to limit general groundwater resource degradation).

Table I-3. Surface Water Ceiling Levels
(surface water is a current or potential source of drinking water)
(µg/L)

Chemical	Final Ceiling Level	Basis	Solubility (1/2)	Taste And Odor Threshold	Basis	Upper Limit
Acenaphthene	2.0E+01	Taste & Odors	2.1E+03	2.0E+01	Ontario MOEE	5.0E+04
Acenaphthylene	2.0E+03	Solubility	2.0E+03	-	-	5.0E+04
Acetone	2.0E+04	Taste & Odors	5.0E+08	2.0E+04	Amoore & Hautala	5.0E+04
Aldrin	8.5E+00	Solubility	8.5E+00	1.7E+01	Ontario MOEE	5.0E+04
Anthracene	2.2E+01	Solubility	2.2E+01	-	-	5.0E+04
Antimony	5.0E+04	Upper Limit		-	-	5.0E+04
Arsenic	5.0E+04	Upper Limit		-	-	5.0E+04
Barium	5.0E+04	Upper Limit		-	-	5.0E+04
Benzene	1.7E+02	Taste & Odors	8.8E+05	1.7E+02	Amoore & Hautala	5.0E+04
Benzo(a)anthracene	5.0E+00	Solubility	5.0E+00	-	-	5.0E+04
Benzo(b)fluoranthene	7.0E+00	Solubility	7.0E+00	-	-	5.0E+04
Benzo(k)fluoranthene	4.0E-01	Solubility	4.0E-01	-	-	5.0E+04
Benzo(g,h,i)perylene	1.3E-01	Solubility	1.3E-01	-	-	5.0E+04
Benzo(a)pyrene	1.9E+00	Solubility	1.9E+00	-	-	5.0E+04
Beryllium	5.0E+04	Upper Limit		-	-	5.0E+04
1,1-Biphenyl	5.0E-01	Taste & Odors	3.8E+03	5.0E-01	Amoore & Hautala	5.0E+04
Bis(2-chloroethyl) ether	3.6E+02	Taste & Odors	8.6E+06	3.6E+02	Amoore & Hautala	5.0E+04
Bis(2-chloroisopropyl) ether	3.2E+02	Taste & Odors	8.5E+05	3.2E+02	Ontario MOEE	5.0E+04
Bis(2-ethylhexyl) phthalate	6.5E+02	Solubility	6.5E+02	-	-	5.0E+04
Boron	5.0E+04	Upper Limit		-	-	5.0E+04
Bromodichloromethane	5.0E+04	Upper Limit	3.4E+06	-	-	5.0E+04
Bromoform (Tribromomethane)	5.1E+02	Taste & Odors	1.6E+06	5.1E+02	Amoore & Hautala	5.0E+04
Bromomethane	5.0E+04	Upper Limit	7.6E+06	-	-	5.0E+04
Cadmium (water)	5.0E+04	Upper Limit		-	-	5.0E+04
Cadmium (soil)						
Carbon tetrachloride	5.2E+02	Taste & Odors	4.0E+05	5.2E+02	Amoore & Hautala	5.0E+04
Chlordane	2.5E+00	Taste & Odors	2.8E+01	2.5E+00	Ontario MOEE	5.0E+04
p -Chloroaniline	5.0E+04	Upper Limit	1.3E+06	-	-	5.0E+04
Chlorobenzene	5.0E+01	Taste & Odors	2.4E+05	5.0E+01	Amoore & Hautala	5.0E+04
Chloroethane	1.6E+01	Taste & Odors	2.9E+06	1.6E+01	Amoore & Hautala	5.0E+04
Chloroform	2.4E+03	Taste & Odors	4.0E+06	2.4E+03	Amoore & Hautala	5.0E+04
Chloromethane	5.0E+04	Upper Limit	4.1E+06		-	5.0E+04
2-Chlorophenol	1.8E-01	Taste & Odors	1.1E+07	1.8E-01	Ontario MOEE	5.0E+04
Chromium (total)	5.0E+04	Upper Limit		-	-	5.0E+04
Chromium III	5.0E+04	Upper Limit		-	-	5.0E+04
Chromium VI	5.0E+04	Upper Limit		-	-	5.0E+04
Chrysene	8.0E-01	Solubility	8.0E-01	-	-	5.0E+04
Cobalt	5.0E+04	Upper Limit		-	-	5.0E+04
Copper	1.0E+03	Taste & Odors		1.0E+03	CalDHS 2nd MCL	5.0E+04
Cyanide	1.7E+02	Taste & Odors	5.0E+08	1.7E+02	Amoore & Hautala	5.0E+04
Dibenz(a,h)anthracene	2.5E-01	Solubility	2.5E-01	-	-	5.0E+04
Dibromochloromethane	5.0E+04	Upper Limit	2.2E+06	-	-	5.0E+04
1,2-dibromo-3-chloropropane	1.0E+01	Taste & Odors	6.0E+05	1.0E+01	Amoore & Hautala	5.0E+04
1,2-Dibromoethane	5.0E+04	Upper Limit	1.7E+06	-	-	5.0E+04
1,2-Dichlorobenzene	1.0E+01	Taste & Odors	7.8E+04	1.0E+01	USEPA 2nd MCL	5.0E+04
1,3-Dichlorobenzene	5.0E+04	Upper Limit	7.8E+04	-	-	5.0E+04
1,4-Dichlorobenzene	5.0E+00	Taste & Odors	3.7E+04	5.0E+00	USEPA 2nd MCL	5.0E+04
3,3-Dichlorobenzidine	1.6E+03	Solubility	1.6E+03	-	-	5.0E+04
Dichlorodiphenyldichloroethane (DDD)	8.0E+01	Solubility	8.0E+01	-	-	5.0E+04
Dichlorodiphenyldichloroethene (DDE)	2.0E+01	Solubility	2.0E+01	-	-	5.0E+04
Dichlorodiphenyltrichloroethane (DDT)	1.5E+00	Solubility	1.5E+00	3.5E+02	Ontario MOEE	5.0E+04
1,1-Dichloroethane	5.0E+04	Upper Limit	2.5E+06	-	-	5.0E+04
1,2-Dichloroethane	7.0E+03	Taste & Odors	4.3E+06	7.0E+03	Amoore & Hautala	5.0E+04
1,1-Dichloroethene	1.5E+03	Taste & Odors	1.1E+06	1.5E+03	Amoore & Hautala	5.0E+04
cis -1,2-Dichloroethene	5.0E+04	Upper Limit	1.8E+06	-	-	5.0E+04
trans -1,2-Dichloroethene	2.6E+02	Taste & Odors	3.2E+06	2.6E+02	Amoore & Hautala	5.0E+04
2,4-Dichlorophenol	3.0E-01	Taste & Odors	2.3E+06	3.0E-01	Ontario MOEE	5.0E+04
1,2-Dichloropropane	1.0E+01	Taste & Odors	1.4E+06	1.0E+01	Ontario MOEE	5.0E+04
1,3-Dichloropropene	5.0E+04	Upper Limit	1.4E+06	-	-	5.0E+04
Dieldrin	4.1E+01	Taste & Odors	9.3E+01	4.1E+01	Ontario MOEE	5.0E+04
Diethyl phthalate	5.0E+04	Upper Limit	4.5E+05	-	-	5.0E+04
Dimethyl phthalate	5.0E+04	Upper Limit	2.5E+06	-	-	5.0E+04
2,4-Dimethylphenol	4.0E+02	Taste & Odors	3.9E+06	4.0E+02	Cal DHS AL	5.0E+04
2,4-Dinitrophenol	5.0E+04	Upper Limit	2.8E+06	-	-	5.0E+04
2,4-Dinitrotoluene	5.0E+04	Upper Limit	1.4E+05	-	-	5.0E+04
1,4-Dioxane	5.0E+04	Upper Limit	5.0E+08	2.3E+05	Amoore & Hautala	5.0E+04
Dioxin (2,3,7,8-TCDD)	7.0E+03	Solubility	7.0E+03	-	-	5.0E+04
Endosulfan	7.5E+01	Solubility	7.5E+01	-	-	5.0E+04
Endrin	4.1E+01	Taste & Odors	1.3E+02	4.1E+01	Ontario MOEE	5.0E+04
Ethylbenzene	3.0E+01	Taste & Odors	8.5E+04	3.0E+01	USEPA 2nd MCL	5.0E+04
Fluoranthene	1.3E+02	Solubility	1.3E+02	-	-	5.0E+04
Fluorene	9.5E+02	Solubility	9.5E+02	-	-	5.0E+04
Heptachlor	2.0E+01	Taste & Odors	2.8E+01	2.0E+01	Ontario MOEE	5.0E+04
Heptachlor epoxide	1.8E+02	Solubility	1.8E+02	-	-	5.0E+04
Hexachlorobenzene	5.5E+01	Solubility	5.5E+01	3.0E+03	Ontario MOEE	5.0E+04

Table I-3. Surface Water Ceiling Levels
(surface water is a current or potential source of drinking water)
(µg/L)

Chemical	Final Ceiling Level	Basis	Solubility (1/2)	Taste And Odor Threshold	Basis	Upper Limit
Hexachlorobutadiene	6.0E+00	Taste & Odors	1.0E+03	6.0E+00	Ontario MOEE	5.0E+04
γ-Hexachlorocyclohexane (Lindane)	3.5E+03	Solubility	3.5E+03	1.2E+04	Ontario MOEE	5.0E+04
Hexachloroethane	1.0E+01	Taste & Odors	2.5E+04	1.0E+01	Amoore & Hautala	5.0E+04
Indeno(1,2,3-c,d)pyrene	2.7E-01	Solubility	2.7E-01	-	-	5.0E+04
Lead	5.0E+04	Upper Limit		-	-	5.0E+04
Mercury (elemental)	5.0E+04	Upper Limit		-	-	5.0E+04
Methoxychlor	2.0E+01	Solubility	2.0E+01	4.7E+03	Amoore & Hautala	5.0E+04
Methylene chloride	9.1E+03	Taste & Odors	6.6E+06	9.1E+03	Ontario MOEE	5.0E+04
Methyl ethyl ketone	8.4E+03	Taste & Odors	1.3E+08	8.4E+03	Amoore & Hautala	5.0E+04
Methyl isobutyl ketone	1.3E+03	Taste & Odors	9.5E+06	1.3E+03	Amoore & Hautala	5.0E+04
Methyl mercury	5.0E+04	Upper Limit		-	-	5.0E+04
2-Methylnaphthalene	1.0E+01	Taste & Odors	1.3E+04	1.0E+01	Ontario MOEE	5.0E+04
tert -Butyl methyl ether	5.0E+00	Taste & Odors	7.5E+07	5.0E+00	Cal DHS 2nd MCL	5.0E+04
Molybdenum	5.0E+04	Upper Limit		-	-	5.0E+04
Naphthalene	2.1E+01	Taste & Odors	1.6E+04	2.1E+01	Amoore & Hautala	5.0E+04
Nickel	5.0E+04	Upper Limit		-	-	5.0E+04
Pentachlorophenol	3.0E+01	Taste & Odors	7.0E+06	3.0E+01	Amoore & Hautala	5.0E+04
Perchlorate	5.0E+04	Upper Limit	1.0E+08	-	-	5.0E+04
Phenanthrene	4.1E+02	Solubility	4.1E+02	1.0E+03	Ontario MOEE	5.0E+04
Phenol	5.0E+00	Taste & Odors	4.0E+07	5.0E+00	Cal DHS AL	5.0E+04
Polychlorinated biphenyls (PCBs)	1.6E+01	Solubility	1.6E+01	-	-	5.0E+04
Pyrene	6.8E+01	Solubility	6.8E+01	-	-	5.0E+04
Selenium	5.0E+04	Upper Limit		-	-	5.0E+04
Silver	1.0E+02	Taste & Odors		1.0E+02	Cal DHS 2nd MCL	5.0E+04
Styrene	1.0E+01	Taste & Odors	1.6E+05	1.0E+01	USEPA 2nd MCL	5.0E+04
tert -Butyl alcohol	5.0E+04	Upper Limit	5.0E+08	-	-	5.0E+04
1,1,1,2-Tetrachloroethane	5.0E+04	Upper Limit	1.5E+06	-	-	5.0E+04
1,1,2,2-Tetrachloroethane	5.0E+02	Taste & Odors	1.5E+06	5.0E+02	Amoore & Hautala	5.0E+04
Tetrachloroethene	1.7E+02	Taste & Odors	1.0E+05	1.7E+02	Amoore & Hautala	5.0E+04
Thallium	5.0E+04	Upper Limit		-	-	5.0E+04
Toluene	4.0E+01	Taste & Odors	2.6E+05	4.0E+01	USEPA 2nd MCL	5.0E+04
Toxaphene	1.4E+02	Taste & Odors	1.5E+03	1.4E+02	USEPA 2nd MCL	5.0E+04
TPH gasoline	1.0E+02	Taste & Odors	1.2E+05	1.0E+02	USEPA SNARL	5.0E+04
TPH diesel	1.0E+02	Taste & Odors	1.5E+03	1.0E+02	USEPA SNARL	5.0E+04
TPH motor oil	1.0E+02	Taste & Odors	1.5E+03	1.0E+02	USEPA SNARL	5.0E+04
1,2,4-Trichlorobenzene	3.0E+03	Taste & Odors	1.5E+05	3.0E+03	USEPA (1995)	5.0E+04
1,1,1-Trichloroethane	9.7E+02	Taste & Odors	6.7E+05	9.7E+02	Amoore & Hautala	5.0E+04
1,1,2-Trichloroethane	5.0E+04	Upper Limit	2.2E+06	-	-	5.0E+04
Trichloroethene	3.1E+02	Taste & Odors	5.5E+05	3.1E+02	Amoore & Hautala	5.0E+04
2,4,5-Trichlorophenol	2.0E+02	Taste & Odors	6.0E+05	2.0E+02	Ontario MOEE	5.0E+04
2,4,6-Trichlorophenol	1.0E+02	Taste & Odors	4.0E+05	1.0E+02	Ontario MOEE	5.0E+04
Vanadium	5.0E+04	Upper Limit		-	-	5.0E+04
Vinyl chloride	3.4E+03	Taste & Odors	1.4E+06	3.4E+03	Amoore & Hautala	5.0E+04
Xylenes	2.0E+01	Taste & Odors	8.1E+04	2.0E+01	USEPA 2nd MCL	5.0E+04
Zinc	5.0E+03	Taste & Odors		5.0E+03	Cal DHS 2nd MCL	5.0E+04

Notes:
Ceiling Level: lowest of 1/2 solubility, taste and odor threshhold and 50,000 ug/L maximum level
TPH ceiling levels after Massachusetts DEP (MADEP 1997a).
TPH Taste and Odor Thresholds based on USEPA Suggested-No-Adverse-reaction (SNARL) level for TPH diesel.

Table I-4. Surface Water Ceiling Levels
(surface water is not a current or potential source of drinking water)
(µg/L)

Chemical	Final Gross Contamination Ceiling Level	Basis	Solubility (1/2)	Nuisance Odor Threshold	Basis	Upper Limit
Acenaphthene	2.0E+01	Nuisance Odors	2.1E+03	2.0E+01	Ontario MOEE	5.0E+04
Acenaphthylene	2.0E+03	Solubility	2.0E+03	-	-	5.0E+04
Acetone	2.0E+04	Nuisance Odors	5.0E+08	2.0E+04	Ontario MOEE	5.0E+04
Aldrin	8.5E+00	Solubility	8.5E+00	1.7E+01	Ontario MOEE	5.0E+04
Anthracene	2.2E+01	Solubility	2.2E+01	-	-	5.0E+04
Antimony	5.0E+04	Upper Limit		-	-	5.0E+04
Arsenic	5.0E+04	Upper Limit		-	-	5.0E+04
Barium	5.0E+04	Upper Limit		-	-	5.0E+04
Benzene	2.0E+03	Nuisance Odors	8.8E+05	2.0E+03	Ontario MOEE	5.0E+04
Benzo(a)anthracene	5.0E+00	Solubility	5.0E+00	-	-	5.0E+04
Benzo(b)fluoranthene	7.0E+00	Solubility	7.0E+00	-	-	5.0E+04
Benzo(k)fluoranthene	4.0E-01	Solubility	4.0E-01	-	-	5.0E+04
Benzo(g,h,i)perylene	1.3E-01	Solubility	1.3E-01	-	-	5.0E+04
Benzo(a)pyrene	1.9E+00	Solubility	1.9E+00	-	-	5.0E+04
Beryllium	5.0E+04	Upper Limit		-	-	5.0E+04
1,1-Biphenyl	5.0E-01	Nuisance Odors	3.8E+03	5.0E-01	Amoore & Hautala	5.0E+04
Bis(2-chloroethyl) ether	3.6E+02	Nuisance Odors	8.6E+06	3.6E+02	Amoore & Hautala	5.0E+04
Bis(2-chloroisopropyl) ether	3.2E+02	Nuisance Odors	8.5E+05	3.2E+02	Ontario MOEE	5.0E+04
Bis(2-ethylhexyl) phthalate	6.5E+02	Solubility	6.5E+02	-	-	5.0E+04
Boron	5.0E+04	Upper Limit		-	-	5.0E+04
Bromodichloromethane	5.0E+04	Upper Limit	3.4E+06	-	-	5.0E+04
Bromoform (Tribromomethane)	5.1E+02	Nuisance Odors	1.6E+06	5.1E+02	Ontario MOEE	5.0E+04
Bromomethane	5.0E+04	Upper Limit	7.6E+06	-	-	5.0E+04
Cadmium (water)	5.0E+04	Upper Limit		-	-	5.0E+04
Cadmium (soil)						
Carbon tetrachloride	5.2E+02	Nuisance Odors	4.0E+05	5.2E+02	Ontario MOEE	5.0E+04
Chlordane	2.5E+00	Nuisance Odors	2.8E+01	2.5E+00	Ontario MOEE	5.0E+04
p-Chloroaniline	5.0E+04	Upper Limit	1.3E+06	-	-	5.0E+04
Chlorobenzene	5.0E+01	Nuisance Odors	2.4E+05	5.0E+01	Ontario MOEE	5.0E+04
Chloroethane	1.6E+01	Nuisance Odors	2.9E+06	1.6E+01	Amoore & Hautala	5.0E+04
Chloroform	2.4E+03	Nuisance Odors	4.0E+06	2.4E+03	Ontario MOEE	5.0E+04
Chloromethane	5.0E+04	Upper Limit	4.1E+06	-	-	5.0E+04
2-Chlorophenol	1.8E-01	Nuisance Odors	1.1E+07	1.8E-01	Ontario MOEE	5.0E+04
Chromium (total)	5.0E+04	Upper Limit		-	-	5.0E+04
Chromium III	5.0E+04	Upper Limit		-	-	5.0E+04
Chromium VI	5.0E+04	Upper Limit		-	-	5.0E+04
Chrysene	8.0E-01	Solubility	8.0E-01	-	-	5.0E+04
Cobalt	5.0E+04	Upper Limit		-	-	5.0E+04
Copper	5.0E+04	Upper Limit		-	-	5.0E+04
Cyanide	1.7E+02	Nuisance Odors	5.0E+08	1.7E+02	Ontario MOEE	5.0E+04
Dibenz(a,h)anthracene	2.5E-01	Solubility	2.5E-01	-	-	5.0E+04
Dibromochloromethane	5.0E+04	Upper Limit	2.2E+06	-	-	5.0E+04
1,2-dibromo-3-chloropropane	1.0E+01	Nuisance Odors	6.0E+05	1.0E+01	Amoore & Hautala	5.0E+04
1,2-Dibromoethane	5.0E+04	Upper Limit	1.7E+06	-	-	5.0E+04
1,2-Dichlorobenzene	1.0E+01	Nuisance Odors	7.8E+04	1.0E+01	Ontario MOEE	5.0E+04
1,3-Dichlorobenzene	5.0E+04	Upper Limit	7.8E+04	-	-	5.0E+04
1,4-Dichlorobenzene	1.1E+01	Nuisance Odors	3.7E+04	1.1E+01	Ontario MOEE	5.0E+04
3,3-Dichlorobenzidine	1.6E+03	Solubility	1.6E+03	-	-	5.0E+04
Dichlorodiphenyldichloroethane (DDD)	8.0E+01	Solubility	8.0E+01	-	-	5.0E+04
Dichlorodiphenyldichloroethene (DDE)	2.0E+01	Solubility	2.0E+01	-	-	5.0E+04
Dichlorodiphenyltrichloroethane (DDT)	1.5E+00	Solubility	1.5E+00	3.5E+02	Ontario MOEE	5.0E+04
1,1-Dichloroethane	5.0E+04	Upper Limit	2.5E+06	-	-	5.0E+04
1,2-Dichloroethane	2.0E+04	Nuisance Odors	4.3E+06	2.0E+04	Ontario MOEE	5.0E+04
1,1-Dichloroethene	1.5E+03	Nuisance Odors	1.1E+06	1.5E+03	Amoore & Hautala	5.0E+04
cis-1,2-Dichloroethene	5.0E+04	Upper Limit	1.8E+06	-	-	5.0E+04
trans-1,2-Dichloroethene	2.6E+02	Nuisance Odors	3.2E+06	2.6E+02	Ontario MOEE	5.0E+04
2,4-Dichlorophenol	3.0E-01	Nuisance Odors	2.3E+06	3.0E-01	Ontario MOEE	5.0E+04
1,2-Dichloropropane	1.0E+01	Nuisance Odors	1.4E+06	1.0E+01	Ontario MOEE	5.0E+04
1,3-Dichloropropene	5.0E+04	Upper Limit	1.4E+06	-	-	5.0E+04
Dieldrin	4.1E+01	Nuisance Odors	9.3E+01	4.1E+01	Ontario MOEE	5.0E+04
Diethyl phthalate	5.0E+04	Upper Limit	4.5E+05	-	-	5.0E+04
Dimethyl phthalate	5.0E+04	Upper Limit	2.5E+06	-	-	5.0E+04
2,4-Dimethylphenol	4.0E+02	Nuisance Odors	3.9E+06	4.0E+02	Ontario MOEE	5.0E+04
2,4-Dinitrophenol	5.0E+04	Upper Limit	2.8E+06	-	-	5.0E+04
2,4-Dinitrotoluene	5.0E+04	Upper Limit	1.4E+05	-	-	5.0E+04
1,4-Dioxane	5.0E+04	Upper Limit	5.0E+08	-	-	5.0E+04
Dioxin (2,3,7,8-TCDD)	7.0E+03	Solubility	7.0E+03	-	-	5.0E+04
Endosulfan	7.5E+01	Solubility	7.5E+01	-	-	5.0E+04
Endrin	4.1E+01	Nuisance Odors	1.3E+02	4.1E+01	Ontario MOEE	5.0E+04
Ethylbenzene	3.0E+01	Nuisance Odors	8.5E+04	3.0E+01	USEPA 2nd MCL	5.0E+04
Fluoranthene	1.3E+02	Solubility	1.3E+02	-	-	5.0E+04
Fluorene	9.5E+02	Solubility	9.5E+02	-	-	5.0E+04
Heptachlor	2.0E+01	Nuisance Odors	2.8E+01	2.0E+01	Ontario MOEE	5.0E+04
Heptachlor epoxide	1.8E+02	Solubility	1.8E+02	-	-	5.0E+04

Table I-4. Surface Water Ceiling Levels
(surface water is not a current or potential source of drinking water)
(µg/L)

Chemical	Final Gross Contamination Ceiling Level	Basis	Solubility (1/2)	Nuisance Odor Threshold	Basis	Upper Limit
Hexachlorobenzene	5.5E+01	Solubility	5.5E+01	3.0E+03	Ontario MOEE	5.0E+04
Hexachlorobutadiene	6.0E+00	Nuisance Odors	1.0E+03	6.0E+00	Ontario MOEE	5.0E+04
γ-Hexachlorocyclohexane (Lindane)	3.5E+03	Solubility	3.5E+03	1.2E+04	Ontario MOEE	5.0E+04
Hexachloroethane	1.0E+01	Nuisance Odors	2.5E+04	1.0E+01	Ontario MOEE	5.0E+04
Indeno(1,2,3-c,d)pyrene	2.7E-01	Solubility	2.7E-01	-	-	5.0E+04
Lead	5.0E+04	Upper Limit		-	-	5.0E+04
Mercury (elemental)	5.0E+04	Upper Limit		-	-	5.0E+04
Methoxychlor	2.0E+01	Solubility	2.0E+01	4.7E+03	Ontario MOEE	5.0E+04
Methylene chloride	9.1E+03	Nuisance Odors	6.6E+06	9.1E+03	Ontario MOEE	5.0E+04
Methyl ethyl ketone	8.4E+03	Nuisance Odors	1.3E+08	8.4E+03	Amoore & Hautala	5.0E+04
Methyl isobutyl ketone	1.3E+03	Nuisance Odors	9.5E+06	1.3E+03	Amoore & Hautala	5.0E+04
Methyl mercury	5.0E+04	Upper Limit		-	-	5.0E+04
2-Methylnaphthalene	1.0E+01	Nuisance Odors	1.3E+04	1.0E+01	Ontario MOEE	5.0E+04
tert-Butyl methyl ether	1.8E+02	Nuisance Odors	7.5E+07	1.8E+02	CalDHS	5.0E+04
Molybdenum	5.0E+04	Upper Limit		-	-	5.0E+04
Naphthalene	2.1E+01	Nuisance Odors	1.6E+04	2.1E+01	Ontario MOEE	5.0E+04
Nickel	5.0E+04	Upper Limit		-	-	5.0E+04
Pentachlorophenol	5.9E+02	Nuisance Odors	7.0E+06	5.9E+02	Ontario MOEE	5.0E+04
Perchlorate	5.0E+04	Upper Limit	1.0E+08	-	-	5.0E+04
Phenanthrene	4.1E+02	Solubility	4.1E+02	1.0E+03	Ontario MOEE	5.0E+04
Phenol	7.9E+03	Nuisance Odors	4.0E+07	7.9E+03	Ontario MOEE	5.0E+04
Polychlorinated biphenyls (PCBs)	1.6E+01	Solubility	1.6E+01	-	-	5.0E+04
Pyrene	6.8E+01	Solubility	6.8E+01	-	-	5.0E+04
Selenium	5.0E+04	Upper Limit		-	-	5.0E+04
Silver	5.0E+04	Upper Limit		-	-	5.0E+04
Styrene	1.1E+01	Nuisance Odors	1.6E+05	1.1E+01	Ontario MOEE	5.0E+04
tert-Butyl alcohol	5.0E+04	Upper Limit	5.0E+08	-	-	5.0E+04
1,1,1,2-Tetrachloroethane	5.0E+04	Upper Limit	1.5E+06	-	-	5.0E+04
1,1,2,2-Tetrachloroethane	5.0E+02	Nuisance Odors	1.5E+06	5.0E+02	Ontario MOEE	5.0E+04
Tetrachloroethene	3.0E+02	Nuisance Odors	1.0E+05	3.0E+02	Ontario MOEE	5.0E+04
Thallium	5.0E+04	Upper Limit		-	-	5.0E+04
Toluene	4.0E+01	Nuisance Odors	2.6E+05	4.0E+01	Ontario MOEE	5.0E+04
Toxaphene	1.4E+02	Nuisance Odors	1.5E+03	1.4E+02	USEPA 2nd MCL	5.0E+04
TPH gasoline	5.0E+03	Nuisance Odors	1.2E+05	5.0E+03	MADEP	5.0E+04
TPH diesel	1.5E+03	Solubility	1.5E+03	5.0E+03	MADEP	5.0E+04
TPH motor oil	1.5E+03	Solubility	1.5E+03	5.0E+03	MADEP	5.0E+04
1,2,4-Trichlorobenzene	3.0E+03	Nuisance Odors	1.5E+05	3.0E+03	USEPA (1995)	5.0E+04
1,1,1-Trichloroethane	5.0E+04	Nuisance Odors	6.7E+05	5.0E+04	Ontario MOEE	5.0E+04
1,1,2-Trichloroethane	5.0E+04	Upper Limit	2.2E+06	-	-	5.0E+04
Trichloroethene	1.0E+04	Nuisance Odors	5.5E+05	1.0E+04	Ontario MOEE	5.0E+04
2,4,5-Trichlorophenol	2.0E+02	Nuisance Odors	6.0E+05	2.0E+02	Ontario MOEE	5.0E+04
2,4,6-Trichlorophenol	1.0E+02	Nuisance Odors	4.0E+05	1.0E+02	Ontario MOEE	5.0E+04
Vanadium	5.0E+04	Upper Limit		-	-	5.0E+04
Vinyl chloride	3.4E+03	Nuisance Odors	1.4E+06	3.4E+03	Ontario MOEE	5.0E+04
Xylenes	5.3E+02	Nuisance Odors	8.1E+04	5.3E+02	Ontario MOEE	5.0E+04
Zinc	5.0E+04	Upper Limit		-	-	5.0E+04

Notes:
Nuisance Odor Thresholds assume no attenuation/dilution of chemical in surface water.
Ceiling Level: lowest of 1/2 solubility, odor/taste threshhold and 50,000 ug/L maximum level (intended to limit general groundwater resource degradation).
TPH ceiling level after Massachusetts DEP (MADEP 1997a).

Table J-1. Physical-Chemical Values

Chemical	State		Molecular Weight (g/mole)	Organic Carbon Partition Coefficient K_{oc} (cm^3/g)	Diffusivity in Air D_a (cm^2/s)	Diffusivity in Water D_w (cm^2/s)	Water Solubility S (mg/L)	Henry's Law Constant H (atm-m^3/mol)	Adjusted Henry's Law Constant H'	Infinite Source Volatilization Factor VF (m^3/kg)
Acenaphthene	V	S	154	4.9E+03	4.2E-02	7.7E-06	4.2E+00	1.6E-04	6.4E-03	1.8E+05
Acenaphthylene	V	S	152	2.5E+03	0.0E+00	0.0E+00	3.9E+00	1.5E-03	5.9E-02	N/A
Acetone	V	L	58	5.8E-01	1.2E-01	1.1E-05	1.0E+06	3.9E-05	1.6E-03	1.2E+04
Aldrin	NV	S	365	4.9E+04	0.0E+00	0.0E+00	1.7E-02	5.0E-05	2.0E-03	N/A
Anthracene	V	S	178	2.4E+04	3.2E-02	7.7E-06	4.3E-02	6.5E-05	2.7E-03	6.9E+05
Antimony	NV	S	122	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	N/A
Arsenic	NV	S	75	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	N/A
Barium	NV	S	137	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	N/A
Benzene	V	L	78	5.9E+01	8.8E-02	9.8E-06	1.8E+03	5.6E-03	2.3E-01	2.7E+03
Benzo(a)anthracene	NV	S	228	2.0E+05	0.0E+00	0.0E+00	1.0E-02	1.0E-06	4.1E-05	N/A
Benzo(b)fluoranthene	NV	S	252	5.5E+05	0.0E+00	0.0E+00	1.4E-02	1.2E-05	5.0E-04	N/A
Benzo(k)fluoranthene	NV	S	252	5.5E+05	0.0E+00	0.0E+00	8.0E-04	3.9E-05	1.6E-03	N/A
Benzo(g,h,i)perylene	NV	S	276	1.6E+06	0.0E+00	0.0E+00	2.6E-04	1.4E-07	5.9E-06	N/A
Benzo(a)pyrene	NV	S	252	5.5E+06	0.0E+00	0.0E+00	3.8E-03	4.9E-07	2.0E-05	N/A
Beryllium	NV	S	9	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	N/A
1,1-Biphenyl	V	S	150	7.8E+03	4.0E-02	8.2E-06	7.5E+00	3.0E-04	1.2E-02	1.7E+05
Bis(2-chloroethyl) ether	V	L	142	7.6E+01	6.9E-02	7.5E-06	1.7E+04	1.8E-05	7.4E-04	5.6E+04
Bis(2-chloroisopropyl) ether	V	L	171	6.1E+01	6.3E-02	6.4E-06	1.7E+03	1.1E-04	4.6E-03	2.2E+04
Bis(2-ethylhexyl) phthalate	NV	S	391	1.0E+05	0.0E+00	0.0E+00	1.3E+00	3.0E-07	1.2E-05	N/A
Boron	NV	S	11	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	N/A
Bromodichloromethane	V	L	164	5.5E+01	3.0E-02	1.1E-05	6.7E+03	1.6E-03	6.6E-02	8.2E+03
Bromoform (Tribromomethane)	NV	S	253	1.1E+02	0.0E+00	0.0E+00	3.2E+03	5.3E-04	2.2E-02	N/A
Bromomethane	V	G	95	9.0E+00	7.3E-02	1.2E-05	1.5E+04	6.2E-03	2.6E-01	1.8E+03
Cadmium (soil)	NV	S	112	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	N/A
Cadmium (water)	NV	S	112	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	N/A
Carbon tetrachloride	V	L	154	1.7E+02	7.8E-02	8.8E-06	7.9E+02	3.0E-02	1.2E+00	2.0E+03
Chlordane	NV	S	410	4.4E+04	0.0E+00	0.0E+00	5.6E-02	4.8E-05	2.0E-03	N/A
p -Chloroaniline	NV	S	128	6.4E+01	0.0E+00	0.0E+00	2.6E+03	3.3E-07	1.4E-05	N/A
Chlorobenzene	V	L	113	2.2E+02	7.3E-02	8.7E-06	4.7E+02	3.7E-03	1.5E-01	6.2E+03
Chloroethane	V	G	65	1.5E+01	1.0E-01	1.2E-05	5.7E+03	1.1E-02	4.5E-01	1.3E+03
Chloroform	V	L	119	4.0E+01	1.0E-01	1.0E-05	7.9E+03	3.7E-03	1.5E-01	2.6E+03
Chloromethane	V	G	51	3.5E+01	1.1E-01	6.5E-06	8.2E+03	2.4E-02	9.8E-01	1.2E+03
2-Chlorophenol	V	L	132	4.0E+02	5.0E-01	9.5E-06	2.2E+04	3.9E-04	1.6E-02	9.6E+03
Chromium (total)	NV	S	52	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	N/A
Chromium III	NV	S	52	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	N/A
Chromium VI	NV	S	52	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	N/A
Chrysene	NV	S	228	4.0E+05	2.5E-02	6.2E-06	1.6E-03	9.5E-05	3.9E-03	N/A
Cobalt	NV	S	59	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	N/A
Copper	NV	S	64	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	N/A
Cyanide	V	S	26	1.7E+01	1.8E-01	1.8E-05	1.0E+06	1.3E-04	5.3E-03	7.9E+03
Dibenz(a,h)anthracene	NV	S	278	3.3E+06	0.0E+00	0.0E+00	5.0E-04	7.3E-08	3.0E-06	N/A
Dibromochloromethane	V	S	208	4.7E+02	9.6E-02	1.0E-05	4.4E+03	8.5E-04	3.5E-02	N/A
1,2-dibromo-3-chloropropane	V	L	236	1.3E+02	2.1E-02	7.0E-06	1.2E+03	1.5E-04	6.0E-03	N/A
1,2-Dibromoethane	V	S	188	2.8E+01	7.3E-02	8.1E-06	3.4E+03	3.2E-04	1.3E-02	9.1E+03
1,2-Dichlorobenzene	V	L	147	6.2E+02	6.9E-02	7.9E-06	1.6E+02	1.9E-03	7.8E-02	1.4E+04
1,3-Dichlorobenzene	V	L	147	6.2E+02	6.9E-02	7.9E-06	1.6E+02	1.9E-03	7.8E-02	1.4E+04
1,4-Dichlorobenzene	V	S	147	6.2E+02	6.9E-02	7.9E-06	7.4E+01	2.4E-03	1.0E-01	1.3E+04
3,3-Dichlorobenzidine	NV	S	253	1.6E+03	0.0E+00	0.0E+00	3.1E+00	8.3E-07	3.4E-05	N/A
Dichlorodiphenyldichloroethane (DDD)	NV	S	331	7.8E+05	0.0E+00	0.0E+00	1.6E-01	8.0E-06	3.3E-04	N/A
Dichlorodiphenyldichloroethene (DDE)	NV	S	329	4.4E+06	0.0E+00	0.0E+00	4.0E-02	6.8E-05	2.8E-03	N/A
Dichlorodiphenyltrichloroethane (DDT)	NV	S	355	2.4E+05	0.0E+00	0.0E+00	3.0E-03	3.9E-05	1.6E-03	N/A
1,1-Dichloroethane	V	L	99	3.2E+01	7.4E-02	1.1E-05	5.1E+03	5.6E-03	2.3E-01	2.4E+03
1,2-Dichloroethane	V	L	99	1.7E+01	1.0E-01	9.9E-06	8.5E+03	9.8E-04	4.0E-02	3.9E+03
1,1-Dichloroethene	V	L	97	5.9E+01	9.0E-02	1.0E-05	2.3E+03	2.6E-02	1.1E+00	1.4E+03
cis -1,2-Dichloroethene	V	L	97	3.6E+01	7.4E-02	1.1E-05	3.5E+03	4.1E-03	1.7E-01	2.9E+03
trans -1,2-Dichloroethene	V	L	97	5.3E+01	7.1E-02	1.2E-05	6.3E+03	9.4E-03	3.8E-01	2.3E+03
2,4-Dichlorophenol	NV	S	163	6.0E+03	0.0E+00	0.0E+00	4.5E+03	2.8E-06	1.1E-04	N/A
1,2-Dichloropropane	V	L	113	4.4E+01	7.8E-02	8.7E-06	2.8E+03	2.8E-03	1.1E-01	3.5E+03
1,3-Dichloropropene	V	L	111	4.6E+01	6.3E-02	1.0E-05	2.8E+03	1.8E-02	7.3E-01	1.8E+03

Table J-1. Physical-Chemical Values

Chemical	State		Molecular Weight (g/mole)	Organic Carbon Partition Coefficient K_{oc} (cm^3/g)	Diffusivity in Air D_a (cm^2/s)	Diffusivity in Water D_w (cm^2/s)	Water Solubility S (mg/L)	Henry's Law Constant H (atm-m^3/mol)	Adjusted Henry's Law Constant H'	Infinite Source Volatilization Factor VF (m^3/kg)
Dieldrin	NV	S	381	7.4E+03	0.0E+00	0.0E+00	1.9E-01	5.8E-05	2.4E-03	N/A
Diethyl phthalate	NV	S	222	1.4E+02	0.0E+00	0.0E+00	9.0E+02	1.1E-06	4.7E-05	N/A
Dimethyl phthalate	NV	S	194	1.4E+02	0.0E+00	0.0E+00	5.0E+03	1.1E-07	4.3E-06	N/A
2,4-Dimethylphenol	V	S	122	4.0E+01	5.8E-02	8.7E-06	7.9E+03	1.7E-05	7.0E-04	4.9E+04
2,4-Dinitrophenol	NV	S	184	1.7E+01	0.0E+00	0.0E+00	5.6E+03	6.5E-10	2.6E-08	N/A
2,4-Dinitrotoluene	NV	S	182	4.5E+01	0.0E+00	0.0E+00	2.7E+02	4.5E-06	1.8E-04	N/A
1,4-Dioxane	NV	L	88	3.5E+00	0.0E+00	0.0E+00	1.0E+06	3.0E-06	1.2E-04	N/A
Dioxin (2,3,7,8-TCDD)	NV	S	322	1.3E+07	0.0E+00	0.0E+00	1.4E+01	8.1E-05	3.3E-03	N/A
Endosulfan	NV	S	407	3.2E+03	0.0E+00	0.0E+00	1.5E-01	1.0E-05	4.1E-04	N/A
Endrin	NV	S	381	1.7E+03	0.0E+00	0.0E+00	2.6E-01	7.5E-06	3.1E-04	N/A
Ethylbenzene	V	L	106	3.6E+02	7.5E-02	7.8E-06	1.7E+02	7.9E-03	3.2E-01	5.3E+03
Fluoranthene	NV	S	202	3.8E+04	0.0E+00	0.0E+00	2.7E-01	6.5E-06	2.7E-04	N/A
Fluorene	V	S	166	1.4E+04	6.1E-02	7.9E-06	1.9E+00	7.7E-05	3.2E-03	3.6E+05
Heptachlor	NV	S	373	2.2E+04	0.0E+00	0.0E+00	5.6E-02	1.5E-03	6.1E-02	N/A
Heptachlor epoxide	NV	S	389	2.3E+04	0.0E+00	0.0E+00	3.5E-01	3.2E-05	1.3E-03	N/A
Hexachlorobenzene	NV	S	285	1.2E+06	0.0E+00	0.0E+00	1.1E-01	1.7E-03	7.0E-02	N/A
Hexachlorobutadiene	NV	S	261	2.9E+04	0.0E+00	0.0E+00	2.0E+00	2.6E-02	1.0E+00	N/A
γ-Hexachlorocyclohexane (Lindane)	NV	S	291	3.7E+03	0.0E+00	0.0E+00	7.0E+00	4.9E-07	2.0E-05	N/A
Hexachloroethane	NV	S	237	2.0E+04	0.0E+00	0.0E+00	5.0E+01	9.9E-03	4.0E-01	N/A
Indeno(1,2,3-c,d)pyrene	NV	S	276	1.6E+06	0.0E+00	0.0E+00	5.3E-04	7.0E-08	2.8E-06	N/A
Lead	NV	S	207	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	N/A
Mercury (elemental)	V	S	201	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	N/A
Methoxychlor	NV	S	347	7.9E+04	0.0E+00	0.0E+00	4.0E-02	1.6E-05	6.5E-04	N/A
Methylene chloride	V	L	85	1.1E+01	1.0E-01	1.2E-05	1.3E+04	2.2E-03	9.0E-02	2.4E+03
Methyl ethyl ketone	V	L	72	4.5E+00	9.0E-02	9.8E-06	2.7E+05	2.7E-05	1.1E-03	1.9E+04
Methyl isobutyl ketone	V	L	100	1.3E+02	7.5E-02	7.8E-06	1.9E+04	1.4E-04	5.7E-03	2.5E+04
Methyl mercury	NV	S	216	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	N/A
2-Methylnaphthalene	V	S	142	7.2E+02	5.9E-02	7.5E-06	2.6E+01	2.9E-04	1.2E-02	4.3E+04
tert-Butyl methyl ether	V	L	88	6.0E+00	8.0E-02	1.0E-05	1.5E+05	5.9E-04	2.4E-02	4.6E+03
Molybdenum	NV	S	96	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	N/A
Naphthalene	V	S	128	1.2E+03	5.9E-02	7.5E-06	3.1E+01	4.8E-04	2.0E-02	4.3E+04
Nickel	NV	S	59	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	N/A
Pentachlorophenol	NV	S	266	3.2E+04	0.0E+00	0.0E+00	1.4E+04	2.8E-06	1.1E-04	N/A
Perchlorate	NV	S	100	0.0E+00	0.0E+00	0.0E+00	2.0E+05	0.0E+00	0.0E+00	N/A
Phenanthrene	V	S	178	1.4E+04	0.0E+00	0.0E+00	8.2E-01	3.9E-05	0.0E+00	N/A
Phenol	NV	S	94	9.1E+01	0.0E+00	0.0E+00	8.0E+04	1.3E-06	5.3E-05	N/A
Polychlorinated biphenyls (PCBs)	NV	S	327 (ave)	3.3E+04	0.0E+00	0.0E+00	3.2E-02	5.2E-04	2.1E-02	N/A
Pyrene	V	S	202	1.1E+05	2.7E-02	7.2E-06	1.4E-01	1.1E-05	4.5E-04	N/A
Selenium	NV	S	79	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	N/A
Silver	NV	S	47	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	N/A
Styrene	V	L	104	7.8E+02	7.1E-02	8.0E-06	3.1E+02	2.8E-03	1.1E-01	1.3E+04
tert-Butyl alcohol	V	L	74	3.7E+01	9.0E-02	9.1E-06	1.0E+06	1.2E-05	4.8E-04	4.6E+04
1,1,1,2-Tetrachloroethane	V	L	168	9.4E+01	7.1E-02	7.9E-06	3.0E+03	3.5E-04	1.4E-02	1.4E+04
1,1,2,2-Tetrachloroethane	V	L	168	9.4E+01	7.1E-02	7.9E-06	3.0E+03	3.5E-04	1.4E-02	1.4E+04
Tetrachloroethene	V	L	166	1.6E+02	7.2E-02	8.2E-06	2.0E+02	1.8E-02	7.5E-01	2.5E+03
Thallium	NV	S	204	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	N/A
Toluene	V	L	92	1.8E+02	8.7E-02	8.6E-06	5.3E+02	6.6E-03	2.7E-01	3.9E+03
Toxaphene	NV	S	414	4.9E+03	0.0E+00	0.0E+00	3.0E+00	2.1E-01	8.6E+00	N/A
TPH gasoline	V	L	108	5.0E+03	7.0E-02	1.0E-05	2.4E+02	1.1E+00	4.5E+01	1.9E+03
TPH diesel	V	L	170	5.0E+03	7.0E-02	1.0E-05	3.0E+00	7.8E-01	3.2E+01	2.2E+03
TPH motor oil	NV	L/S	0	5.0E+03	0.0E+00	0.0E+00	3.0E+00	0.0E+00	0.0E+00	N/A
1,2,4-Trichlorobenzene	V	S	180	1.8E+03	3.0E-02	8.2E-06	3.0E+02	1.4E-03	5.8E-02	4.3E+04
1,1,1-Trichloroethane	V	L	133	1.1E+02	7.8E-02	8.8E-06	1.3E+03	1.7E-02	7.1E-01	2.2E+03
1,1,2-Trichloroethane	V	L	133	5.0E+01	7.8E-02	8.8E-06	4.4E+03	9.1E-04	3.7E-02	6.4E+03
Trichloroethene	V	L	131	1.7E+02	7.9E-02	9.1E-06	1.1E+03	1.0E-02	4.2E-01	3.2E+03
2,4,5-Trichlorophenol	V	S	198	8.9E+01	2.9E-02	7.0E-06	1.2E+03	2.2E-04	8.9E-03	2.7E+04
2,4,6-Trichlorophenol	NV	S	198	2.0E+03	0.0E+00	0.0E+00	8.0E+02	4.0E-06	1.6E-04	N/A
Vanadium	NV	S	51	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	N/A
Vinyl chloride	V	G	63	1.9E+01	1.1E-01	1.2E-06	2.8E+03	2.7E-02	1.1E+00	1.0E+03

Table J-1. Physical-Chemical Values

Chemical	State		Molecular Weight (g/mole)	Organic Carbon Partition Coefficient K_{oc} (cm^3/g)	Diffusivity in Air D_a (cm^2/s)	Diffusivity in Water D_w (cm^2/s)	Water Solubility S (mg/L)	Henry's Law Constant H (atm-m^3/mol)	Adjusted Henry's Law Constant H'	Infinite Source Volatilization Factor VF (m^3/kg)
Xylenes	V	L	106	4.1E+02	7.0E-02	7.8E-06	1.6E+02	7.3E-03	3.0E-01	6.0E+03
Zinc	NV	S	65	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	N/A

Notes:

Physical state of chemical at ambient conditions (V - volatile, NV - nonvolatile, S - solid, L - liquid, G - gas).

Chemical considered to be "volatile" if Henry's Law constant (atm m^3/mole) >0.00001 and molecular weight <200.

Dibromochloromethane, dibromochloropropane and pyrene considered volatile for purposes of modeling (USEPA 2002).

Physical-chemical constants for polychlorinated biphenyls and toxaphene from ATSDR 2001a. PCB solubility from MOEE (1996).

Physical-chemical constants for 1,4 Dioxane from "Solvent Stabilizers - White Paper" (Mohr 2001).

Physical-chemical values for MtBE from *Assessment and Management of MtBE Impacted Sites* (RWQCB 2001).

Physical-chemicals and toxicity constants for xylenes based on *m* -xylene.

Diffusivity constants for methylnaphthalene not available. Constants presented based on naphthalene.

Table J-2. Toxicity Values

Chemical	SF_o $(mg/kg\text{-}day)^{-1}$	Reference	IUR $(\mu g/m^3)^{-1}$	Reference	RfD_o (mg/kg-day)	Reference	RfC $(\mu g/m^3)$	Reference	RAGS Part E GI ABS	RAGS Part E ABS
Acenaphthene	0.0E+00		0.0E+00		6.0E-02	IRIS	0.0E+00	0.0E+00	1.0E+00	1.3E-01
Acenaphthylene	0.0E+00		0.0E+00		0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E+00	1.3E-01
Acetone	0.0E+00		0.0E+00		9.0E-01	IRIS	3.1E+04	ATSDR	1.0E+00	0.0E+00
Aldrin	1.7E+01	IRIS	4.9E-03	OEHHA	3.0E-05	IRIS	0.0E+00		1.0E+00	5.0E-02
Anthracene	0.0E+00		0.0E+00		3.0E-01	IRIS	0.0E+00	0.0E+00	1.0E+00	1.3E-01
Antimony	0.0E+00		0.0E+00		4.0E-04	IRIS	0.0E+00	0.0E+00	1.5E-01	0.0E+00
Arsenic	1.5E+00	OEHHA	4.3E-03	IRIS	3.0E-04	IRIS	1.5E-02	OEHHA	1.0E+00	3.0E-02
Barium	0.0E+00		0.0E+00		2.0E-01	IRIS	5.0E-01	HEAST	7.0E-02	0.0E+00
Benzene	1.0E-01	OEHHA	2.9E-05	OEHHA	4.0E-03	IRIS	3.0E+01	IRIS	1.0E+00	0.0E+00
Benzo(a)anthracene	1.2E+00	OEHHA	1.1E-04	OEHHA	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E+00	0.13
Benzo(b)fluoranthene	1.2E+00	OEHHA	1.1E-04	OEHHA	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E+00	0.13
Benzo(k)fluoranthene	1.2E+00	OEHHA	1.1E-04	OEHHA	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E+00	0.13
Benzo(g,h,i)perylene	0.0E+00		0.0E+00		0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E+00	0.13
Benzo(a)pyrene	1.2E+01	OEHHA	1.1E-03	OEHHA	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E+00	0.13
Beryllium	0.0E+00		2.4E-03	IRIS	2.0E-03	IRIS	2.0E-02	IRIS	7.0E-03	0.0E+00
1,1-Biphenyl	0.0E+00		0.0E+00		5.0E-02	IRIS	0.0E+00	0.0E+00	1.0E+00	1.0E-01
Bis(2-chloroethyl) ether	2.5E+00	OEHHA	7.1E-04	OEHHA	0.0E+00		0.0E+00	0.0E+00	1.0E+00	0.0E+00
Bis(2-chloroisopropyl) ether	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E+00	0.0E+00
Bis(2-ethylhexyl) phthalate	3.0E-03	OEHHA	2.4E-06	OEHHA	2.0E-02	IRIS	0.0E+00	0.0E+00	1.0E+00	1.0E-01
Boron	0.0E+00		0.0E+00		2.0E-01	IRIS	0.0E+00	0.0E+00	1.0E+00	0.0E+00
Bromodichloromethane	1.3E-01	OEHHA	3.7E-05	OEHHA	2.0E-02	IRIS	0.0E+00	0.0E+00	1.0E+00	0.0E+00
Bromoform (Tribromomethane)	1.1E-02	OEHHA	1.1E-06	OEHHA	2.0E-02	IRIS	0.0E+00	0.0E+00	1.0E+00	0.0E+00
Bromomethane	0.0E+00		0.0E+00		1.4E-03	IRIS	5.0E+00	IRIS	1.0E+00	0.0E+00
Cadmium (soil)	0.0E+00	OEHHA	4.2E-03	OEHHA	1.0E-03	IRIS	0.0E+00	0.0E+00	2.5E-02	1.0E-03
Cadmium (water)	0.0E+00	OEHHA	4.2E-03	OEHHA	5.0E-04	IRIS	0.0E+00	0.0E+00	5.0E-02	0.001
Carbon tetrachloride	1.5E-01	OEHHA	4.2E-05	OEHHA	4.0E-03	IRIS	4.0E+01	OEHHA	1.0E+00	0.0E+00
Chlordane	1.3E+00	OEHHA	3.4E-04	OEHHA	5.0E-04	IRIS	7.0E-01	IRIS	1.0E+00	0.04
p-Chloroaniline	0.0E+00	0.0E+00	0.0E+00	0.0E+00	4.0E-03	IRIS	0.0E+00	0.0E+00	1.0E+00	0.0E+00
Chlorobenzene	0.0E+00		0.0E+00		2.0E-02	IRIS	1.0E+03	OEHHA	1.0E+00	0.0E+00
Chloroethane	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.0E+04	OEHHA	1.0E+00	0.0E+00
Chloroform	3.1E-02	OEHHA	5.3E-06	OEHHA	1.0E-02	IRIS	3.0E+02	OEHHA	1.0E+00	0.0E+00
Chloromethane	0.0E+00		0.0E+00		2.6E-02	0.0E+00	9.0E+01	IRIS	1.0E+00	0.0E+00
2-Chlorophenol	0.0E+00		0.0E+00		5.0E-03	IRIS	0.0E+00	0.0E+00	1.0E+00	0.0E+00
Chromium (total)	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E+00	
Chromium III	0.0E+00		0.0E+00		1.5E+00	IRIS	0.0E+00	0.0E+00	1.3E-02	0.0E+00
Chromium VI	0.0E+00		1.5E-01	OEHHA	3.0E-03	IRIS	1.0E-01	IRIS	2.5E-02	0.0E+00
Chrysene	1.2E-01	OEHHA	1.1E-05	OEHHA	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E+00	0.13
Cobalt	0.0E+00		9.0E-03	PPRTV	3.0E-04	PPRTV	6.0E-03	PPRTV	1.0E+00	0.0E+00
Copper	0.0E+00		0.0E+00		4.0E-02	HEAST	0.0E+00	0.0E+00	1.0E+00	0.0E+00
Cyanide	0.0E+00		0.0E+00		6.0E-04	IRIS	0.0E+00	0.0E+00	1.0E+00	1.0E-01
Dibenz(a,h)anthracene	4.1E+00	OEHHA	1.2E-03	OEHHA	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E+00	0.13
Dibromochloromethane	8.4E-02	IRIS	0.0E+00		2.0E-02	IRIS	0.0E+00	0.0E+00	1.0E+00	0.0E+00
1,2-dibromo-3-chloropropane	7.0E+00	OEHHA	2.0E-03	OEHHA	2.0E-04	PPRTV	2.0E-01	IRIS	1.0E+00	0.0E+00
1,2-Dibromoethane	3.6E+00	OEHHA	7.1E-05	OEHHA	9.0E-03	IRIS	9.0E+00	0.0E+00	1.0E+00	0.0E+00
1,2-Dichlorobenzene	0.0E+00		0.0E+00		9.0E-02	IRIS	2.0E+02	HEAST	1.0E+00	0.0E+00
1,3-Dichlorobenzene	0.0E+00		0.0E+00		0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E+00	0.0E+00
1,4-Dichlorobenzene	5.3E-03	OEHHA	1.1E-05	OEHHA	3.0E-02	NCEA	8.0E+02	IRIS	1.0E+00	0.0E+00
3,3-Dichlorobenzidine	1.2E+00	OEHHA	3.0E-04	OEHHA	0.0E+00		0.0E+00	0.0E+00	1.0E+00	0.0E+00
Dichlorodiphenyldichloroethane (DDD)	2.4E-01	OEHHA	6.9E-05	OEHHA	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E+00	3.0E-02
Dichlorodiphenyldichloroethene (DDE)	3.4E-01	OEHHA	9.7E-05	OEHHA	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E+00	3.0E-02
Dichlorodiphenyltrichloroethane (DDT)	3.4E-01	OEHHA	9.7E-05	OEHHA	5.0E-04	IRIS	0.0E+00	0.0E+00	1.0E+00	3.0E-02
1,1-Dichloroethane	5.7E-03	OEHHA	1.6E-06	OEHHA	2.0E-01	PPRTV	0.0E+00	0.0E+00	1.0E+00	0.0E+00
1,2-Dichloroethane	1.7E-02	IRIS	2.1E-05	OEHHA	2.0E-02	NCEA	2.4E+00	ATSDR	1.0E+00	0.0E+00
1,1-Dichloroethene	0.0E+00	0.0E+00	0.0E+00		5.0E-02	IRIS	2.0E+02	IRIS	1.0E+00	0.0E+00
cis-1,2-Dichloroethene	0.0E+00		0.0E+00		2.0E-03	IRIS	7.0E+00	DTSC	1.0E+00	0.0E+00
trans-1,2-Dichloroethene	0.0E+00		0.0E+00		2.0E-02	IRIS	6.0E+01	PPRTV	1.0E+00	0.0E+00
2,4-Dichlorophenol	0.0E+00		0.0E+00		3.0E-03	IRIS	0.0E+00	0.0E+00	1.0E+00	0.0E+00
1,2-Dichloropropane	3.6E-02	OEHHA	1.0E-05	OEHHA	0.0E+00	0.0E+00	4.0E+00	IRIS	1.0E+00	0.0E+00
1,3-Dichloropropene	7.1E-02	OEHHA	1.6E-05	OEHHA	3.0E-02	IRIS	2.0E+01	IRIS	1.0E+00	0.0E+00
Dieldrin	1.6E+01	IRIS	4.6E-03	IRIS	5.0E-05	IRIS	0.0E+00	0.0E+00	1.0E+00	5.0E-02
Diethyl phthalate	0.0E+00		0.0E+00		8.0E-01	IRIS	0.0E+00	0.0E+00	1.0E+00	1.0E-01
Dimethyl phthalate	0.0E+00		0.0E+00		1.0E+01	HEAST	0.0E+00	0.0E+00	1.0E+00	1.0E-01
2,4-Dimethylphenol	0.0E+00		0.0E+00		2.0E-02	IRIS	0.0E+00	0.0E+00	1.0E+00	0.0E+00
2,4-Dinitrophenol	0.0E+00		0.0E+00		2.0E-03	IRIS	0.0E+00	0.0E+00	1.0E+00	0.0E+00
2,4-Dinitrotoluene	6.8E-01	IRIS	8.9E-05	OEHHA	2.0E-03	IRIS	0.0E+00	0.0E+00	1.0E+00	0.0E+00
1,4-Dioxane	2.7E-02	OEHHA	7.7E-06	OEHHA	0.0E+00	0.0E+00	3.0E+03	OEHHA	1.0E+00	0.0E+00
Dioxin (2,3,7,8-TCDD)	1.3E+05	OEHHA	3.8E+01	OEHHA	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E+00	3.0E-02
Endosulfan	0.0E+00		0.0E+00		6.0E-03	IRIS	0.0E+00	0.0E+00	1.0E+00	5.0E-02
Endrin	0.0E+00		0.0E+00		3.0E-04	IRIS	0.0E+00	0.0E+00	1.0E+00	5.0E-02
Ethylbenzene	1.1E-02	OEHHA	2.5E-06	OEHHA	1.0E-01	IRIS	1.0E+03	IRIS	1.0E+00	0.0E+00
Fluoranthene	0.0E+00		0.0E+00		4.0E-02	IRIS	0.0E+00	0.0E+00	1.0E+00	0.13
Fluorene	0.0E+00		0.0E+00		4.0E-02	IRIS	0.0E+00	0.0E+00	1.0E+00	1.3E-01
Heptachlor	4.1E+00	OEHHA	1.2E-03	OEHHA	5.0E-04	IRIS	0.0E+00	0.0E+00	1.0E+00	5.0E-02
Heptachlor epoxide	9.1E+00	IRIS	2.6E-03	OEHHA	1.3E-05	IRIS	0.0E+00	0.0E+00	1.0E+00	5.0E-02
Hexachlorobenzene	1.8E+00	OEHHA	5.1E-04	OEHHA	8.0E-04	IRIS	0.0E+00	0.0E+00	1.0E+00	5.0E-02
Hexachlorobutadiene	7.8E-02	IRIS	0.0E+00		1.0E-03	PPRTV	0.0E+00	0.0E+00	1.0E+00	0.0E+00
γ-Hexachlorocyclohexane (Lindane)	0.0E+00		0.0E+00		3.0E-04	IRIS	0.0E+00	0.0E+00	1.0E+00	5.0E-02
Hexachloroethane	3.9E-02	OEHHA	1.1E-05	OEHHA	1.0E-03	IRIS	0.0E+00	0.0E+00	1.0E+00	1.0E-01

Table J-2. Toxicity Values

Chemical	SF_o $(mg/kg\text{-}day)^{-1}$	Reference	IUR $(\mu g/m^3)^{-1}$	Reference	RfD_o (mg/kg-day)	Reference	RfC $(\mu g/m^3)$	Reference	RAGS Part E GI ABS	RAGS Part E ABS
Indeno(1,2,3-c,d)pyrene	1.2E+00	OEHHA	1.1E-04	OEHHA	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E+00	0.13
Lead	0.0E+00		0.0E+00		0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E+00	0.0E+00
Mercury (elemental)	0.0E+00		0.0E+00		8.6E-05	IRIS	3.0E-02	OEHHA	1.0E+00	0.0E+00
Methoxychlor	0.0E+00		0.0E+00		5.0E-03	IRIS	0.0E+00	0.0E+00	1.0E+00	5.0E-02
Methylene chloride	1.4E-02	OEHHA	4.7E-07	IRIS	6.0E-02	IRIS	4.0E+02	OEHHA	1.0E+00	0.0E+00
Methyl ethyl ketone	0.0E+00		0.0E+00		6.0E-01	IRIS	5.0E+03	IRIS	1.0E+00	0.0E+00
Methyl isobutyl ketone	0.0E+00		0.0E+00		8.6E-01	0.0E+00	3.0E+03	IRIS	1.0E+00	0.0E+00
Methyl mercury	0.0E+00		0.0E+00		1.0E-04	IRIS	0.0E+00	0.0E+00	1.0E+00	1.0E-01
2-Methylnaphthalene	0.0E+00		0.0E+00		4.0E-03	IRIS	0.0E+00	0.0E+00	1.0E+00	1.3E-01
tert-Butyl methyl ether	1.8E-03	OEHHA	2.6E-07	OEHHA	0.0E+00	0.0E+00	3.0E+03	IRIS	1.0E+00	0.0E+00
Molybdenum	0.0E+00		0.0E+00		5.0E-03	HEAST	0.0E+00	0.0E+00	1.0E+00	0.0E+00
Naphthalene	0.0E+00		3.4E-05	OEHHA	2.0E-02	IRIS	3.0E+00	IRIS	1.0E+00	1.3E-01
Nickel	0.0E+00		0.0E+00		2.0E-02	IRIS	5.0E-02	OEHHA	4.0E-02	0.0E+00
Pentachlorophenol	1.2E-01	IRIS	5.1E-06	OEHHA	3.0E-03	IRIS	0.0E+00	0.0E+00	1.0E+00	0.25
Perchlorate	0.0E+00		0.0E+00		7.0E-04	IRIS	0.0E+00	0.0E+00	1.0E+00	0.0E+00
Phenanthrene	0.0E+00		0.0E+00		0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E+00	1.3E-01
Phenol	0.0E+00		0.0E+00		3.0E-01	IRIS	0.0E+00	0.0E+00	1.0E+00	0.0E+00
Polychlorinated biphenyls (PCBs)	2.0E+00	IRIS	1.0E-04	IRIS	2.0E-05	IRIS	0.0E+00	0.0E+00	1.0E+00	0.14
Pyrene	0.0E+00		0.0E+00		6.0E-02	IRIS	0.0E+00	0.0E+00	1.0E+00	1.3E-01
Selenium	0.0E+00		0.0E+00		5.0E-03	IRIS	0.0E+00	0.0E+00	1.0E+00	0.0E+00
Silver	0.0E+00		0.0E+00		5.0E-03	IRIS	0.0E+00	0.0E+00	4.0E-02	0.0E+00
Styrene	0.0E+00		0.0E+00		2.0E-01	IRIS	9.0E+02	OEHHA	1.0E+00	0.0E+00
tert-Butyl alcohol	0.0E+00		0.0E+00		0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.0E+00	0.0E+00
1,1,1,2-Tetrachloroethane	2.6E-02	IRIS	7.6E-06	IRIS	3.0E-02	IRIS	0.0E+00	0.0E+00	1.0E+00	0.0E+00
1,1,2,2-Tetrachloroethane	2.7E-01	OEHHA	5.8E-05	OEHHA	6.0E-02	PPRTV	0.0E+00	0.0E+00	1.0E+00	0.0E+00
Tetrachloroethene	5.4E-01	OEHHA	5.9E-06	OEHHA	1.0E-02	IRIS	2.7E+02	ATSDR	1.0E+00	0.0E+00
Thallium	0.0E+00		0.0E+00		1.0E-05	PPRTV	0.0E+00	0.0E+00	1.0E+00	0.0E+00
Toluene	0.0E+00		0.0E+00		8.0E-02	IRIS	3.0E+02	OEHHA	1.0E+00	0.0E+00
Toxaphene	1.2E+00	OEHHA	3.4E-04	OEHHA	0.0E+00		0.0E+00	0.0E+00	1.0E+00	5.0E-02
TPH gasoline	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.9E-02	weight	5.7E+02	weight	1.0E+00	1.0E-01
TPH diesel	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.0E-02	weight	1.3E+02	weight	1.0E+00	1.0E-01
TPH motor oil	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.7E-01	weight	0.0E+00	0.0E+00	1.0E+00	1.0E-01
1,2,4-Trichlorobenzene	3.6E-03	OEHHA	0.0E+00		1.0E-02	IRIS	4.0E+00	PPRTV	1.0E+00	0.0E+00
1,1,1-Trichloroethane	0.0E+00		0.0E+00		2.0E+00	IRIS	5.0E+03	IRIS	1.0E+00	0.0E+00
1,1,2-Trichloroethane	7.2E-02	OEHHA	1.6E-05	IRIS	4.0E-03	IRIS	0.0E+00	0.0E+00	1.0E+00	0.0E+00
Trichloroethene	4.6E-02	IRIS	4.1E-06	IRIS	5.0E-04	IRIS	2.0E+00	IRIS	1.0E+00	0.0E+00
2,4,5-Trichlorophenol	0.0E+00		0.0E+00		1.0E-01	IRIS	0.0E+00	0.0E+00	1.0E+00	0.0E+00
2,4,6-Trichlorophenol	1.1E-02	IRIS	3.1E-06	IRIS	1.0E-04	NCEA	0.0E+00	0.0E+00	1.0E+00	0.0E+00
Vanadium	0.0E+00		0.0E+00		5.0E-03	IRIS	0.0E+00	0.0E+00	2.6E-02	0.0E+00
Vinyl chloride	2.7E-01	OEHHA	7.8E-05	OEHHA	3.0E-03	IRIS	1.0E+02	IRIS	1.0E+00	0.0E+00
Xylenes	0.0E+00		0.0E+00		2.0E-01	IRIS	1.0E+02	IRIS	1.0E+00	0.0E+00
Zinc	0.0E+00		0.0E+00		3.0E-01	IRIS	0.0E+00	0.0E+00	1.0E+00	0.0E+00

SF_o - Cancer slope factor for oral exposure
IUR - Inhalation Unit Risk
RfD_o - Reference dose for oral exposure
RfC - Reference concentration
RAGS Part E - Risk Assessment Guidance for Superfund, Vol 1: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment) (EPA,
weight - Toxicity factors weighted by fraction composition. See cover letter for more information.

Table K-1. Direct Exposure Soil Screening Levels
Residential Exposure Scenario

Chemical	Final Screening Level (mg/kg)	Basis	Cancer Risk = 10^{-6} (mg/kg)	Noncancer HQ = 1 (mg/kg)	Soil Saturation Limit (mg/kg)
Acenaphthene	3.4E+03	nc	0.0E+00	3.4E+03	N/A
Acenaphthylene	No Value	nc	0.0E+00	0.0E+00	N/A
Acetone	6.0E+04	nc	0.0E+00	6.0E+04	1.0E+05
Aldrin	3.2E-02	ca	3.2E-02	2.1E+00	N/A
Anthracene	2.3E+04	nc	0.0E+00	2.3E+04	N/A
Antimony	3.1E+01	nc	0.0E+00	3.1E+01	N/A
Arsenic	3.9E-01	ca	3.9E-01	2.2E+01	N/A
Barium	1.5E+04	nc	0.0E+00	1.5E+04	N/A
Benzene	7.4E-01	ca	7.4E-01	6.7E+01	8.7E+02
Benzo(a)anthracene	3.8E-01	ca	3.8E-01	0.0E+00	N/A
Benzo(b)fluoranthene	3.8E-01	ca	3.8E-01	0.0E+00	N/A
Benzo(k)fluoranthene	3.8E-01	ca	3.8E-01	0.0E+00	N/A
Benzo(g,h,i)perylene	No Value	nc	0.0E+00	0.0E+00	N/A
Benzo(a)pyrene	3.8E-02	ca	3.8E-02	0.0E+00	N/A
Beryllium	1.6E+02	nc	1.3E+03	1.6E+02	N/A
1,1-Biphenyl	3.9E+03	nc	0.0E+00	3.9E+03	N/A
Bis(2-chloroethyl) ether	1.1E-01	ca	1.1E-01	0.0E+00	9.6E+03
Bis(2-chloroisopropyl) ether	No Value	nc	0.0E+00	0.0E+00	7.9E+02
Bis(2-ethylhexyl) phthalate	1.6E+02	ca	1.6E+02	1.2E+03	N/A
Boron	1.6E+04	nc	0.0E+00	1.6E+04	N/A
Bromodichloromethane	4.8E-01	ca	4.8E-01	1.6E+03	3.0E+03
Bromoform (Tribromomethane)	5.8E+01	ca	5.8E+01	1.6E+03	N/A
Bromomethane	8.6E+00	nc	0.0E+00	8.6E+00	3.1E+03
Cadmium (water)	3.9E+01	nc	7.6E+02	3.9E+01	N/A
Cadmium (soil)	7.8E+01	nc	7.6E+02	7.8E+01	N/A
Carbon tetrachloride	1.2E-01	ca	1.2E-01	6.7E+01	1.1E+03
Chlordane	4.4E-01	ca	4.4E-01	3.5E+01	N/A
p-Chloroaniline	3.1E+02	nc	0.0E+00	3.1E+02	N/A
Chlorobenzene	1.3E+03	nc	0.0E+00	1.3E+03	6.8E+02
Chloroethane	4.1E+04	nc	0.0E+00	4.1E+04	1.6E+03
Chloroform	1.1E+00	ca	1.1E+00	4.0E+02	2.9E+03
Chloromethane	1.0E+02	nc	0.0E+00	1.0E+02	4.1E+03
2-Chlorophenol	3.9E+02	nc	0.0E+00	3.9E+02	5.5E+04
Chromium (total)	No Value	nc	0.0E+00	0.0E+00	N/A
Chromium III	1.2E+05	nc	0.0E+00	1.2E+05	N/A
Chromium VI	2.1E+01	ca	2.1E+01	2.3E+02	N/A
Chrysene	3.8E+00	ca	3.8E+00	0.0E+00	N/A
Cobalt	2.3E+01	nc	3.6E+02	2.3E+01	N/A
Copper	3.1E+03	nc	0.0E+00	3.1E+03	N/A
Cyanide	3.7E+01	nc	0.0E+00	3.7E+01	N/A
Dibenz(a,h)anthracene	1.1E-01	ca	1.1E-01	0.0E+00	N/A
Dibromochloromethane	7.6E+00	ca	7.6E+00	1.6E+03	N/A
1,2-dibromo-3-chloropropane	9.1E-02	ca	9.1E-02	1.6E+01	N/A
1,2-Dibromoethane	1.1E-01	ca	1.1E-01	7.6E+01	N/A
1,2-Dichlorobenzene	2.1E+03	nc	0.0E+00	2.1E+03	6.0E+02
1,3-Dichlorobenzene	No Value	nc	0.0E+00	0.0E+00	6.0E+02
1,4-Dichlorobenzene	2.8E+00	ca	2.8E+00	1.9E+03	N/A
3,3-Dichlorobenzidine	5.3E-01	ca	5.3E-01	0.0E+00	N/A
Dichlorodiphenyldichloroethane (DDD)	2.4E+00	ca	2.4E+00	0.0E+00	N/A
Dichlorodiphenyldichloroethene (DDE)	1.7E+00	ca	1.7E+00	0.0E+00	N/A
Dichlorodiphenyltrichloroethane (DDT)	1.7E+00	ca	1.7E+00	3.6E+01	N/A
1,1-Dichloroethane	3.5E+00	ca	3.5E+00	1.6E+04	1.7E+03
1,2-Dichloroethane	4.4E-01	ca	4.4E-01	9.6E+00	1.8E+03
1,1-Dichloroethene	2.7E+02	nc	0.0E+00	2.7E+02	1.5E+03
cis-1,2-Dichloroethene	1.8E+01	nc	0.0E+00	1.8E+01	1.2E+03
trans-1,2-Dichloroethene	1.3E+02	nc	0.0E+00	1.3E+02	3.1E+03
2,4-Dichlorophenol	2.3E+02	nc	0.0E+00	2.3E+02	N/A
1,2-Dichloropropane	8.2E-01	ca	8.2E-01	1.5E+01	1.1E+03

Table K-1. Direct Exposure Soil Screening Levels
Residential Exposure Scenario

Chemical	Final Screening Level (mg/kg)	Basis	Cancer Risk = 10^{-6} (mg/kg)	Noncancer HQ = 1 (mg/kg)	Soil Saturation Limit (mg/kg)
1,3-Dichloropropene	2.7E-01	ca	2.7E-01	3.7E+01	1.4E+03
Dieldrin	3.4E-02	ca	3.4E-02	3.4E+00	N/A
Diethyl phthalate	4.9E+04	nc	0.0E+00	4.9E+04	N/A
Dimethyl phthalate	6.1E+05	nc	0.0E+00	6.1E+05	N/A
2,4-Dimethylphenol	1.6E+03	nc	0.0E+00	1.6E+03	N/A
2,4-Dinitrophenol	1.6E+02	nc	0.0E+00	1.6E+02	N/A
2,4-Dinitrotoluene	9.4E-01	ca	9.4E-01	1.6E+02	N/A
1,4-Dioxane	2.4E+01	ca	2.4E+01	4.1E+09	N/A
Dioxin (2,3,7,8-TCDD)	4.5E-06	ca	4.5E-06	0.0E+00	N/A
Endosulfan	4.7E+02	nc	0.0E+00	4.7E+02	N/A
Endrin	2.3E+01	nc	0.0E+00	2.3E+01	N/A
Ethylbenzene	4.8E+00	ca	4.8E+00	3.3E+03	4.0E+02
Fluoranthene	2.3E+03	nc	0.0E+00	2.3E+03	N/A
Fluorene	3.1E+03	nc	0.0E+00	3.1E+03	N/A
Heptachlor	1.3E-01	ca	1.3E-01	3.4E+01	N/A
Heptachlor epoxide	6.1E-02	ca	6.1E-02	8.9E-01	N/A
Hexachlorobenzene	3.1E-01	ca	3.1E-01	5.5E+01	N/A
Hexachlorobutadiene	8.2E+00	ca	8.2E+00	7.8E+01	N/A
γ-Hexachlorocyclohexane (Lindane)	2.1E+01	nc	0.0E+00	2.1E+01	N/A
Hexachloroethane	1.2E+01	ca	1.2E+01	6.1E+01	N/A
Indeno(1,2,3-c,d)pyrene	3.8E-01	ca	3.8E-01	0.0E+00	N/A
Lead	8.0E+01	nc	0.0E+00	8.0E+01	N/A
Mercury (elemental)	6.7E+00	nc	0.0E+00	6.7E+00	N/A
Methoxychlor	3.9E+02	nc	0.0E+00	3.9E+02	N/A
Methylene chloride	9.9E+00	ca	9.9E+00	8.4E+02	2.4E+03
Methyl ethyl ketone	3.2E+04	nc	0.0E+00	3.2E+04	3.4E+04
Methyl isobutyl ketone	3.6E+04	nc	0.0E+00	3.6E+04	1.7E+04
Methyl mercury	6.1E+00	nc	0.0E+00	6.1E+00	N/A
2-Methylnaphthalene	2.3E+02	nc	0.0E+00	2.3E+02	N/A
tert-Butyl methyl ether	3.9E+01	ca	3.9E+01	1.5E+04	2.1E+04
Molybdenum	3.9E+02	nc	0.0E+00	3.9E+02	N/A
Naphthalene	3.1E+00	ca	3.1E+00	1.2E+02	N/A
Nickel	1.5E+03	nc	0.0E+00	1.5E+03	N/A
Pentachlorophenol	3.0E+00	ca	3.0E+00	1.4E+02	N/A
Perchlorate	5.5E+01	nc	0.0E+00	5.5E+01	N/A
Phenanthrene	No Value	nc	0.0E+00	0.0E+00	N/A
Phenol	2.3E+04	nc	0.0E+00	2.3E+04	N/A
Polychlorinated biphenyls (PCBs)	2.2E-01	ca	2.2E-01	1.1E+00	N/A
Pyrene	3.4E+03	nc	0.0E+00	3.4E+03	N/A
Selenium	3.9E+02	nc	0.0E+00	3.9E+02	N/A
Silver	3.9E+02	nc	0.0E+00	3.9E+02	N/A
Styrene	6.9E+03	nc	0.0E+00	6.9E+03	1.5E+03
tert-Butyl alcohol	No Value	nc	0.0E+00	0.0E+00	3.2E+05
1,1,1,2-Tetrachloroethane	3.8E+00	ca	3.8E+00	2.3E+03	2.0E+03
1,1,2,2-Tetrachloroethane	4.7E-01	ca	4.7E-01	4.7E+03	2.0E+03
Tetrachloroethene	5.5E-01	ca	5.5E-01	3.7E+02	2.3E+02
Thallium	7.8E-01	nc	0.0E+00	7.8E-01	N/A
Toluene	1.0E+03	nc	0.0E+00	1.0E+03	6.5E+02
Toxaphene	4.6E-01	ca	4.6E-01	0.0E+00	N/A
TPH gasoline	7.7E+02	nc	0.0E+00	7.7E+02	9.3E+03
TPH diesel	2.4E+02	nc	0.0E+00	2.4E+02	1.1E+02
TPH motor oil	1.0E+04	nc	0.0E+00	1.0E+04	N/A
1,2,4-Trichlorobenzene	1.4E+02	nc	1.8E+02	1.4E+02	N/A
1,1,1-Trichloroethane	1.1E+04	nc	0.0E+00	1.1E+04	1.2E+03
1,1,2-Trichloroethane	8.8E-01	ca	8.8E-01	3.1E+02	1.8E+03
Trichloroethene	1.7E+00	ca	1.7E+00	5.7E+00	1.3E+03
2,4,5-Trichlorophenol	7.8E+03	nc	0.0E+00	7.8E+03	N/A
2,4,6-Trichlorophenol	7.8E+00	nc	5.8E+01	7.8E+00	N/A

Table K-1. Direct Exposure Soil Screening Levels
Residential Exposure Scenario

Chemical	Final Screening Level (mg/kg)	Basis	Cancer Risk = 10^{-6} (mg/kg)	Noncancer HQ = 1 (mg/kg)	Soil Saturation Limit (mg/kg)
Vanadium	3.9E+02	nc	0.0E+00	3.9E+02	N/A
Vinyl chloride	3.2E-02	ca	3.2E-02	7.4E+01	1.2E+03
Xylenes	6.0E+02	nc	0.0E+00	6.0E+02	4.2E+02
Zinc	2.3E+04	nc	0.0E+00	2.3E+04	N/A

Residential screening levels generally considered adequate for other sensitive uses.
Final screening level is lowest of individual screening levels for carcinogenic effects and noncarcinogenic effects (based on HQ=1).
Saturation: Theoretical soil saturation level.
Direct-exposure screening level for lead from OEHHA CHHSL for lead.

Table K-2. Direct Exposure Soil Screening Levels
Commerical/Industrial Worker Exposure Scenario

Chemical	Final Screening Level (mg/kg)	Basis	Cancer Risk = 10^{-6} (mg/kg)	Noncancer HQ = 1 (mg/kg)	Soil Saturation Limit (mg/kg)
Acenaphthene	1.5E+04	nc	0.0E+00	1.5E+04	N/A
Acenaphthylene	No Value	nc	0.0E+00	0.0E+00	N/A
Acetone	5.9E+05	nc	0.0E+00	5.9E+05	1.0E+05
Aldrin	1.3E-01	ca	1.3E-01	2.3E+01	N/A
Anthracene	1.7E+05	nc	0.0E+00	1.7E+05	N/A
Antimony	4.1E+02	nc	0.0E+00	4.1E+02	N/A
Arsenic	1.6E+00	ca	1.6E+00	2.6E+02	N/A
Barium	1.9E+05	nc	0.0E+00	1.9E+05	N/A
Benzene	3.7E+00	ca	3.7E+00	3.3E+02	8.7E+02
Benzo(a)anthracene	1.3E+00	ca	1.3E+00	0.0E+00	N/A
Benzo(b)fluoranthene	1.3E+00	ca	1.3E+00	0.0E+00	N/A
Benzo(k)fluoranthene	1.3E+00	ca	1.3E+00	0.0E+00	N/A
Benzo(g,h,i)perylene	No Value	nc	0.0E+00	0.0E+00	N/A
Benzo(a)pyrene	1.3E-01	ca	1.3E-01	0.0E+00	N/A
Beryllium	2.0E+03	nc	6.7E+03	2.0E+03	N/A
1,1-Biphenyl	3.1E+04	nc	0.0E+00	3.1E+04	N/A
Bis(2-chloroethyl) ether	5.2E-01	ca	5.2E-01	0.0E+00	9.6E+03
Bis(2-chloroisopropyl) ether	No Value	nc	0.0E+00	0.0E+00	7.9E+02
Bis(2-ethylhexyl) phthalate	5.7E+02	ca	5.7E+02	1.2E+04	N/A
Boron	2.0E+05	nc	0.0E+00	2.0E+05	N/A
Bromodichloromethane	2.4E+00	ca	2.4E+00	2.0E+04	3.0E+03
Bromoform (Tribromomethane)	2.6E+02	ca	2.6E+02	2.0E+04	N/A
Bromomethane	3.8E+01	nc	0.0E+00	3.8E+01	3.1E+03
Cadmium (water)	5.1E+02	nc	3.8E+03	5.1E+02	N/A
Cadmium (soil)	1.0E+03	nc	3.8E+03	1.0E+03	N/A
Carbon tetrachloride	5.8E-01	ca	5.8E-01	3.3E+02	1.1E+03
Chlordane	1.7E+00	ca	1.7E+00	4.0E+02	N/A
p -Chloroaniline	4.1E+03	nc	0.0E+00	4.1E+03	N/A
Chlorobenzene	1.2E+04	nc	0.0E+00	1.2E+04	6.8E+02
Chloroethane	1.7E+05	nc	0.0E+00	1.7E+05	1.6E+03
Chloroform	5.7E+00	ca	5.7E+00	2.6E+03	2.9E+03
Chloromethane	4.5E+02	nc	0.0E+00	4.5E+02	4.1E+03
2-Chlorophenol	5.1E+03	nc	0.0E+00	5.1E+03	5.5E+04
Chromium (total)	No Value	nc	0.0E+00	0.0E+00	N/A
Chromium III	1.5E+06	nc	0.0E+00	1.5E+06	N/A
Chromium VI	1.1E+02	ca	1.1E+02	3.0E+03	N/A
Chrysene	1.3E+01	ca	1.3E+01	0.0E+00	N/A
Cobalt	3.0E+02	nc	1.8E+03	3.0E+02	N/A
Copper	4.1E+04	nc	0.0E+00	4.1E+04	N/A
Cyanide	3.7E+02	nc	0.0E+00	3.7E+02	N/A
Dibenz(a,h)anthracene	3.8E-01	ca	3.8E-01	0.0E+00	N/A
Dibromochloromethane	3.4E+01	ca	3.4E+01	2.0E+04	N/A
1,2-dibromo-3-chloropropane	4.1E-01	ca	4.1E-01	0.0E+00	N/A
1,2-Dibromoethane	5.3E-01	ca	5.3E-01	3.5E+02	N/A
1,2-Dichlorobenzene	1.1E+04	nc	0.0E+00	1.1E+04	6.0E+02
1,3-Dichlorobenzene	No Value	nc	0.0E+00	0.0E+00	6.0E+02
1,4-Dichlorobenzene	1.4E+01	ca	1.4E+01	1.8E+04	N/A
3,3-Dichlorobenzidine	2.4E+00	ca	2.4E+00	0.0E+00	N/A
Dichlorodiphenyldichloroethane (DDD)	1.0E+01	ca	1.0E+01	0.0E+00	N/A
Dichlorodiphenyldichloroethene (DDE)	7.0E+00	ca	7.0E+00	0.0E+00	N/A
Dichlorodiphenyltrichloroethane (DDT)	7.0E+00	ca	7.0E+00	4.3E+02	N/A
1,1-Dichloroethane	1.8E+01	ca	1.8E+01	2.0E+05	1.7E+03
1,2-Dichloroethane	2.2E+00	ca	2.2E+00	4.1E+01	1.8E+03
1,1-Dichloroethene	1.2E+03	nc	0.0E+00	1.2E+03	1.5E+03
cis -1,2-Dichloroethene	8.4E+01	nc	0.0E+00	8.4E+01	1.2E+03
trans -1,2-Dichloroethene	5.9E+02	nc	0.0E+00	5.9E+02	3.1E+03
2,4-Dichlorophenol	3.1E+03	nc	0.0E+00	3.1E+03	N/A
1,2-Dichloropropane	4.1E+00	ca	4.1E+00	6.2E+01	1.1E+03
1,3-Dichloropropene	1.3E+00	ca	1.3E+00	1.6E+02	1.4E+03

Table K-2. Direct Exposure Soil Screening Levels
Commerical/Industrial Worker Exposure Scenario

Chemical	Final Screening Level (mg/kg)	Basis	Cancer Risk = 10^{-6} (mg/kg)	Noncancer HQ = 1 (mg/kg)	Soil Saturation Limit (mg/kg)
Dieldrin	1.3E-01	ca	1.3E-01	3.8E+01	N/A
Diethyl phthalate	4.9E+05	nc	0.0E+00	4.9E+05	N/A
Dimethyl phthalate	6.2E+06	nc	0.0E+00	6.2E+06	N/A
2,4-Dimethylphenol	2.0E+04	nc	0.0E+00	2.0E+04	N/A
2,4-Dinitrophenol	2.0E+03	nc	0.0E+00	2.0E+03	N/A
2,4-Dinitrotoluene	4.2E+00	ca	4.2E+00	2.0E+03	N/A
1,4-Dioxane	1.1E+02	ca	1.1E+02	1.7E+10	N/A
Dioxin (2,3,7,8-TCDD)	1.8E-05	ca	1.8E-05	0.0E+00	N/A
Endosulfan	4.6E+03	nc	0.0E+00	4.6E+03	N/A
Endrin	2.3E+02	nc	0.0E+00	2.3E+02	N/A
Ethylbenzene	2.4E+01	ca	2.4E+01	1.9E+04	4.0E+02
Fluoranthene	2.2E+04	nc	0.0E+00	2.2E+04	N/A
Fluorene	2.2E+04	nc	0.0E+00	2.2E+04	N/A
Heptachlor	5.2E-01	ca	5.2E-01	3.8E+02	N/A
Heptachlor epoxide	2.4E-01	ca	2.4E-01	1.0E+01	N/A
Hexachlorobenzene	1.2E+00	ca	1.2E+00	6.1E+02	N/A
Hexachlorobutadiene	3.7E+01	ca	3.7E+01	1.0E+03	N/A
γ-Hexachlorocyclohexane (Lindane)	2.3E+02	nc	0.0E+00	2.3E+02	N/A
Hexachloroethane	4.4E+01	ca	4.4E+01	6.2E+02	N/A
Indeno(1,2,3-c,d)pyrene	1.3E+00	ca	1.3E+00	0.0E+00	N/A
Lead	3.2E+02	nc	0.0E+00	3.2E+02	N/A
Mercury (elemental)	8.8E+01	nc	0.0E+00	8.8E+01	N/A
Methoxychlor	3.8E+03	nc	0.0E+00	3.8E+03	N/A
Methylene chloride	4.9E+01	ca	4.9E+01	4.0E+03	2.4E+03
Methyl ethyl ketone	2.5E+05	nc	0.0E+00	2.5E+05	3.4E+04
Methyl isobutyl ketone	2.4E+05	nc	0.0E+00	2.4E+05	1.7E+04
Methyl mercury	6.2E+01	nc	0.0E+00	6.2E+01	N/A
2-Methylnaphthalene	2.2E+03	nc	0.0E+00	2.2E+03	N/A
tert-Butyl methyl ether	1.9E+02	ca	1.9E+02	6.1E+04	2.1E+04
Molybdenum	5.1E+03	nc	0.0E+00	5.1E+03	N/A
Naphthalene	1.5E+01	ca	1.5E+01	5.3E+02	N/A
Nickel	1.9E+04	nc	0.0E+00	1.9E+04	N/A
Pentachlorophenol	9.0E+00	ca	9.0E+00	1.2E+03	N/A
Perchlorate	7.2E+02	nc	0.0E+00	7.2E+02	N/A
Phenanthrene	No Value	nc	0.0E+00	0.0E+00	N/A
Phenol	3.1E+05	nc	0.0E+00	3.1E+05	N/A
Polychlorinated biphenyls (PCBs)	7.4E-01	ca	7.4E-01	1.1E+01	N/A
Pyrene	3.3E+04	nc	0.0E+00	3.3E+04	N/A
Selenium	5.1E+03	nc	0.0E+00	5.1E+03	N/A
Silver	5.1E+03	nc	0.0E+00	5.1E+03	N/A
Styrene	4.2E+04	nc	0.0E+00	4.2E+04	1.5E+03
tert-Butyl alcohol	No Value	nc	0.0E+00	0.0E+00	3.2E+05
1,1,1,2-Tetrachloroethane	1.9E+01	ca	1.9E+01	3.1E+04	2.0E+03
1,1,2,2-Tetrachloroethane	2.3E+00	ca	2.3E+00	6.1E+04	2.0E+03
Tetrachloroethene	2.6E+00	ca	2.6E+00	2.3E+03	2.3E+02
Thallium	1.0E+01	nc	0.0E+00	1.0E+01	N/A
Toluene	4.9E+03	nc	0.0E+00	4.9E+03	6.5E+02
Toxaphene	1.8E+00	ca	1.8E+00	0.0E+00	N/A
TPH gasoline	4.0E+03	nc	0.0E+00	4.0E+03	9.3E+03
TPH diesel	1.1E+03	nc	0.0E+00	1.1E+03	1.1E+02
TPH motor oil	1.0E+05	nc	0.0E+00	1.0E+05	N/A
1,2,4-Trichlorobenzene	7.0E+02	nc	7.9E+02	7.0E+02	N/A
1,1,1-Trichloroethane	4.7E+04	nc	0.0E+00	4.7E+04	1.2E+03
1,1,2-Trichloroethane	4.4E+00	ca	4.4E+00	4.1E+03	1.8E+03
Trichloroethene	8.3E+00	ca	8.3E+00	2.7E+01	1.3E+03
2,4,5-Trichlorophenol	1.0E+05	nc	0.0E+00	1.0E+05	N/A
2,4,6-Trichlorophenol	1.0E+02	nc	2.6E+02	1.0E+02	N/A
Vanadium	5.1E+03	nc	0.0E+00	5.1E+03	N/A
Vinyl chloride	1.6E-01	ca	1.6E-01	3.9E+02	1.2E+03

Table K-2. Direct Exposure Soil Screening Levels
Commerical/Industrial Worker Exposure Scenario

Chemical	Final Screening Level (mg/kg)	Basis	Cancer Risk = 10^{-6} (mg/kg)	Noncancer HQ = 1 (mg/kg)	Soil Saturation Limit (mg/kg)
Xylenes	2.6E+03	nc	0.0E+00	2.6E+03	4.2E+02
Zinc	3.1E+05	nc	0.0E+00	3.1E+05	N/A

Residential screening levels generally considered adequate for other sensitive uses.
Final screening level is lowest of individual screening levels for carcinogenic effects and noncarcinogenic effects (based on HQ=1).
Saturation: Theoretical soil saturation level.
Direct-exposure screening level for lead from OEHHA CHHSL for lead.

Table K-3. Direct Exposure Soil Screening Levels
Construction/Trench Worker Exposure Scenario

Chemical	Final Screening Level (mg/kg)	Basis	Cancer Risk = 10^{-6} (mg/kg)	Noncancer HQ = 1 (mg/kg)	Soil Saturation Limit (mg/kg)
Acenaphthene	8.6E+03	nc	0.0E+00	8.6E+03	N/A
Acenaphthylene	No Value	nc	0.0E+00	0.0E+00	N/A
Acetone	2.4E+05	nc	0.0E+00	2.4E+05	1.0E+05
Aldrin	8.7E-01	ca	8.7E-01	6.4E+00	N/A
Anthracene	4.3E+04	nc	0.0E+00	4.3E+04	N/A
Antimony	1.2E+02	nc	0.0E+00	1.2E+02	N/A
Arsenic	1.0E+01	ca	1.0E+01	7.3E+01	N/A
Barium	6.1E+04	nc	0.0E+00	6.1E+04	N/A
Benzene	7.1E+01	ca	7.1E+01	2.8E+02	8.7E+02
Benzo(a)anthracene	8.3E+00	ca	8.3E+00	0.0E+00	N/A
Benzo(b)fluoranthene	8.3E+00	ca	8.3E+00	0.0E+00	N/A
Benzo(k)fluoranthene	8.3E+00	ca	8.3E+00	0.0E+00	N/A
Benzo(g,h,i)perylene	No Value	nc	0.0E+00	0.0E+00	N/A
Benzo(a)pyrene	8.3E-01	ca	8.3E-01	0.0E+00	N/A
Beryllium	1.8E+02	ca	1.8E+02	6.2E+02	N/A
1,1-Biphenyl	8.2E+03	nc	0.0E+00	8.2E+03	N/A
Bis(2-chloroethyl) ether	6.3E+00	ca	6.3E+00	0.0E+00	9.6E+03
Bis(2-chloroisopropyl) ether	No Value	nc	0.0E+00	0.0E+00	7.9E+02
Bis(2-ethylhexyl) phthalate	3.3E+03	nc	3.7E+03	3.3E+03	N/A
Boron	6.2E+04	nc	0.0E+00	6.2E+04	N/A
Bromodichloromethane	4.8E+01	ca	4.8E+01	6.2E+03	3.0E+03
Bromoform (Tribromomethane)	2.0E+03	ca	2.0E+03	6.2E+03	N/A
Bromomethane	3.6E+01	nc	0.0E+00	3.6E+01	3.1E+03
Cadmium (water)	1.1E+02	ca	1.1E+02	1.5E+02	N/A
Cadmium (soil)	1.1E+02	ca	1.1E+02	3.1E+02	N/A
Carbon tetrachloride	1.4E+01	ca	1.4E+01	2.8E+02	1.1E+03
Chlordane	1.2E+01	ca	1.2E+01	1.1E+02	N/A
p-Chloroaniline	1.2E+03	nc	0.0E+00	1.2E+03	N/A
Chlorobenzene	5.0E+03	nc	0.0E+00	5.0E+03	6.8E+02
Chloroethane	1.7E+05	nc	0.0E+00	1.7E+05	1.6E+03
Chloroform	1.2E+02	ca	1.2E+02	1.6E+03	2.9E+03
Chloromethane	4.3E+02	nc	0.0E+00	4.3E+02	4.1E+03
2-Chlorophenol	1.5E+03	nc	0.0E+00	1.5E+03	5.5E+04
Chromium (total)	No Value	nc	0.0E+00	0.0E+00	N/A
Chromium III	4.6E+05	nc	0.0E+00	4.6E+05	N/A
Chromium VI	2.9E+00	ca	2.9E+00	9.3E+02	N/A
Chrysene	8.3E+01	ca	8.3E+01	0.0E+00	N/A
Cobalt	4.9E+01	ca	4.9E+01	9.3E+01	N/A
Copper	1.2E+04	nc	0.0E+00	1.2E+04	N/A
Cyanide	9.8E+01	nc	0.0E+00	9.8E+01	N/A
Dibenz(a,h)anthracene	2.4E+00	ca	2.4E+00	0.0E+00	N/A
Dibromochloromethane	2.6E+02	ca	2.6E+02	6.2E+03	N/A
1,2-dibromo-3-chloropropane	-	-	0.0E+00	0.0E+00	N/A
1,2-Dibromoethane	5.2E+00	ca	5.2E+00	3.2E+02	N/A
1,2-Dichlorobenzene	8.7E+03	nc	0.0E+00	8.7E+03	6.0E+02
1,3-Dichlorobenzene	No Value	nc	0.0E+00	0.0E+00	6.0E+02
1,4-Dichlorobenzene	3.3E+02	ca	3.3E+02	7.7E+03	N/A
3,3-Dichlorobenzidine	1.8E+01	ca	1.8E+01	0.0E+00	N/A
Dichlorodiphenyldichloroethane (DDD)	7.0E+01	ca	7.0E+01	0.0E+00	N/A
Dichlorodiphenyldichloroethene (DDE)	5.0E+01	ca	5.0E+01	0.0E+00	N/A
Dichlorodiphenyltrichloroethane (DDT)	5.0E+01	ca	5.0E+01	1.2E+02	N/A
1,1-Dichloroethane	4.1E+02	ca	4.1E+02	6.2E+04	1.7E+03
1,2-Dichloroethane	4.0E+01	nc	5.4E+01	4.0E+01	1.8E+03
1,1-Dichloroethene	1.1E+03	nc	0.0E+00	1.1E+03	1.5E+03
cis-1,2-Dichloroethene	7.7E+01	nc	0.0E+00	7.7E+01	1.2E+03
trans-1,2-Dichloroethene	5.5E+02	nc	0.0E+00	5.5E+02	3.1E+03
2,4-Dichlorophenol	9.3E+02	nc	0.0E+00	9.3E+02	N/A
1,2-Dichloropropane	6.2E+01	nc	9.2E+01	6.2E+01	1.1E+03
1,3-Dichloropropene	3.1E+01	ca	3.1E+01	1.6E+02	1.4E+03
Dieldrin	9.3E-01	ca	9.3E-01	1.1E+01	N/A

Table K-3. Direct Exposure Soil Screening Levels
Construction/Trench Worker Exposure Scenario

Chemical	Final Screening Level (mg/kg)	Basis	Cancer Risk = 10^{-6} (mg/kg)	Noncancer HQ = 1 (mg/kg)	Soil Saturation Limit (mg/kg)
Diethyl phthalate	1.3E+05	nc	0.0E+00	1.3E+05	N/A
Dimethyl phthalate	1.6E+06	nc	0.0E+00	1.6E+06	N/A
2,4-Dimethylphenol	6.2E+03	nc	0.0E+00	6.2E+03	N/A
2,4-Dinitrophenol	6.2E+02	nc	0.0E+00	6.2E+02	N/A
2,4-Dinitrotoluene	3.2E+01	ca	3.2E+01	6.2E+02	N/A
1,4-Dioxane	7.9E+02	ca	7.9E+02	1.7E+10	N/A
Dioxin (2,3,7,8-TCDD)	1.3E-04	ca	1.3E-04	0.0E+00	N/A
Endosulfan	1.3E+03	nc	0.0E+00	1.3E+03	N/A
Endrin	6.4E+01	nc	0.0E+00	6.4E+01	N/A
Ethylbenzene	4.9E+02	ca	4.9E+02	1.3E+04	4.0E+02
Fluoranthene	5.7E+03	nc	0.0E+00	5.7E+03	N/A
Fluorene	5.7E+03	nc	0.0E+00	5.7E+03	N/A
Heptachlor	3.6E+00	ca	3.6E+00	1.1E+02	N/A
Heptachlor epoxide	1.6E+00	ca	1.6E+00	2.8E+00	N/A
Hexachlorobenzene	8.2E+00	ca	8.2E+00	1.7E+02	N/A
Hexachlorobutadiene	2.8E+02	ca	2.8E+02	3.1E+02	N/A
γ-Hexachlorocyclohexane (Lindane)	6.4E+01	nc	0.0E+00	6.4E+01	N/A
Hexachloroethane	1.6E+02	nc	2.9E+02	1.6E+02	N/A
Indeno(1,2,3-c,d)pyrene	8.3E+00	ca	8.3E+00	0.0E+00	N/A
Lead	3.2E+02	nc	0.0E+00	3.2E+02	N/A
Mercury (elemental)	2.7E+01	nc	0.0E+00	2.7E+01	N/A
Methoxychlor	1.1E+03	nc	0.0E+00	1.1E+03	N/A
Methylene chloride	7.8E+02	ca	7.8E+02	3.5E+03	2.4E+03
Methyl ethyl ketone	1.3E+05	nc	0.0E+00	1.3E+05	3.4E+04
Methyl isobutyl ketone	1.5E+05	nc	0.0E+00	1.5E+05	1.7E+04
Methyl mercury	1.6E+01	nc	0.0E+00	1.6E+01	N/A
2-Methylnaphthalene	5.7E+02	nc	0.0E+00	5.7E+02	N/A
tert-Butyl methyl ether	3.8E+03	ca	3.8E+03	6.1E+04	2.1E+04
Molybdenum	1.5E+03	nc	0.0E+00	1.5E+03	N/A
Naphthalene	3.7E+02	ca	3.7E+02	4.7E+02	N/A
Nickel	6.1E+03	nc	0.0E+00	6.1E+03	N/A
Pentachlorophenol	5.6E+01	ca	5.6E+01	2.9E+02	N/A
Perchlorate	2.2E+02	nc	0.0E+00	2.2E+02	N/A
Phenanthrene	No Value	nc	0.0E+00	0.0E+00	N/A
Phenol	9.3E+04	nc	0.0E+00	9.3E+04	N/A
Polychlorinated biphenyls (PCBs)	2.7E+00	nc	4.8E+00	2.7E+00	N/A
Pyrene	8.6E+03	nc	0.0E+00	8.6E+03	N/A
Selenium	1.5E+03	nc	0.0E+00	1.5E+03	N/A
Silver	1.5E+03	nc	0.0E+00	1.5E+03	N/A
Styrene	2.8E+04	nc	0.0E+00	2.8E+04	1.5E+03
tert-Butyl alcohol	No Value	nc	0.0E+00	0.0E+00	3.2E+05
1,1,1,2-Tetrachloroethane	3.3E+02	ca	3.3E+02	9.3E+03	2.0E+03
1,1,2,2-Tetrachloroethane	3.8E+01	ca	3.8E+01	1.9E+04	2.0E+03
Tetrachloroethene	3.1E+01	ca	3.1E+01	1.5E+03	2.3E+02
Thallium	3.1E+00	nc	0.0E+00	3.1E+00	N/A
Toluene	4.3E+03	nc	0.0E+00	4.3E+03	6.5E+02
Toxaphene	1.2E+01	ca	1.2E+01	0.0E+00	N/A
TPH gasoline	2.7E+03	nc	0.0E+00	2.7E+03	9.3E+03
TPH diesel	9.0E+02	nc	0.0E+00	9.0E+02	1.1E+02
TPH motor oil	2.8E+04	nc	0.0E+00	2.8E+04	N/A
1,2,4-Trichlorobenzene	6.0E+02	nc	6.0E+03	6.0E+02	N/A
1,1,1-Trichloroethane	4.4E+04	nc	0.0E+00	4.4E+04	1.2E+03
1,1,2-Trichloroethane	8.7E+01	ca	8.7E+01	1.2E+03	1.8E+03
Trichloroethene	2.4E+01	nc	1.6E+02	2.4E+01	1.3E+03
2,4,5-Trichlorophenol	3.1E+04	nc	0.0E+00	3.1E+04	N/A
2,4,6-Trichlorophenol	3.1E+01	nc	1.9E+03	3.1E+01	N/A
Vanadium	1.5E+03	nc	0.0E+00	1.5E+03	N/A
Vinyl chloride	3.8E+00	ca	3.8E+00	3.0E+02	1.2E+03
Xylenes	2.5E+03	nc	0.0E+00	2.5E+03	4.2E+02
Zinc	9.3E+04	nc	0.0E+00	9.3E+04	N/A

Table K-3. Direct Exposure Soil Screening Levels
Construction/Trench Worker Exposure Scenario

Chemical	Final Screening Level (mg/kg)	Basis	Cancer Risk = 10^{-6} (mg/kg)	Noncancer HQ = 1 (mg/kg)	Soil Saturation Limit (mg/kg)

Residential screening levels generally considered adequate for other sensitive uses.
Final screening level is lowest of individual screening levels for carcinogenic effects and noncarcinogenic effects (based on HQ=1).
Saturation: Theoretical soil saturation level.
Direct-exposure screening level for lead from OEHHA CHHSL for lead.

Table L. Target Organs and Chronic Health Effects
(For general reference only)

Chemical	Alimentary Tract	Cardiovascular	Developmental	Endocrine	Eye	Hematologic	Immune	Kidney	Nervous	Reproductive	Respiratory	Skin	Other
Acenaphthene	X						X					X	
Acenaphthylene						X	X					X	
Acetone	X					X		X					
Aldrin	6								X				
Anthracene							X					X	
Antimony		X			X	X				X	X		hair loss
Arsenic	X	X	X			X			X			X	
Barium		X				X		X		X			hypertension
Benzene	X		X			X	X		X				
Benzo(a)anthracene							X					X	
Benzo(b)fluoranthene							X					X	
Benzo(k)fluoranthene							X					X	
Benzo(g,h,i)perylene	X					X	X	X				X	
Benzo(a)pyrene							X			X		X	
Beryllium	X						X	X			X	X	
1,1-Biphenyl	X							X	X				
Bis(2-chloroethyl) ether									X	X			
Bis(2-chloroisopropyl) ether						X							
Bis(2-ethylhexyl) phthalate	X												
Boron										X	X		
Bromodichloromethane	X							X					
Bromoform (Tribromomethane)	X							X	X				
Bromomethane	X	X	X					X	X		X		
Cadmium								X			X		bone loss
Carbon tetrachloride	X		X					X	X				
Chlordane	X						X		X				
p-Chloroaniline	X						X	X				X	
Chlorobenzene	X					X		X	X	X			
Chloroethane	X		X										
Chloroform	X		X					X					
Chloromethane			X						X	X			
2-Chlorophenol	X		X							X			
Chromium (total)													
Chromium III												X	
Chromium VI						X				X	X		
Chrysene							X					X	
Cobalt		X									X	X	
Copper											X	X	
Cyanide		X		X		X			X		X		
Dibenz(a,h)anthracene							X					X	
Dibromochloromethane	X												
1,2-dibromo-3-chloropropane	X		X					X		X	X		
1,2-Dibromoethane			X							X	X		
1,2-Dichlorobenzene	X							X				X	
1,3-Dichlorobenzene	X							X					
1,4-Dichlorobenzene	X					X		X	X	X	X		
3,3-Dichlorobenzidine	X												
Dichlorodiphenyldichloroethane (DDD)													
Dichlorodiphenyldichloroethene (DDE)													
Dichlorodiphenyltrichloroethane (DDT)	X								X	X			
1,1-Dichloroethane	X							X					
1,2-Dichloroethane	X												
1,1-Dichloroethene	X							X	X		X		
cis-1,2-Dichloroethene	X					X							
trans-1,2-Dichloroethene	X					X					X		
2,4-Dichlorophenol							X						
1,2-Dichloropropane	X					X					X		
1,3-Dichloropropene	X										X		
Dieldrin	X								X				
Diethyl phthalate			X							X			
Dimethyl phthalate													
2,4-Dimethylphenol						X			X				
2,4-Dinitrophenol					X				X				
2,4-Dinitrotoluene	X	X				X			X				
1,4-Dioxane	X	X						X					
Dioxin (2,3,7,8-TCDD)	X		X	X		X	X			X	X	X	
Endosulfan	X		X			X	X	X	X	X			
Endrin	X		X					X	X				
Ethylbenzene	X		X	X				X	X	X		X	
Fluoranthene	X					X	X	X				X	
Fluorene						X	X					X	
Heptachlor	X								X				
Heptachlor epoxide	X								X				
Hexachlorobenzene	X			X		X	X	X	X	X			bones
Hexachlorobutadiene	X							X				X	
γ-Hexachlorocyclohexane (Lindane)	X							X					

Table L. Target Organs and Chronic Health Effects
(For general reference only)

Chemical	Alimentary Tract	Cardiovascular	Developmental	Endocrine	Eye	Hematologic	Immune	Kidney	Nervous	Reproductive	Respiratory	Skin	Other
Hexachloroethane	X							X					
Indeno(1,2,3-c,d)pyrene							X					X	
Lead	X	X	X			X	X	X	X	X			
Mercury (elemental)			X				X	X	X				
Methoxychlor	X		X					X	X	X			
Methylene chloride	X	X						X	X				
Methyl ethyl ketone			X							X			
Methyl isobutyl ketone									X				
Methyl mercury			X						X				
2-Methylnaphthalene						X	X					X	
tert-Butyl methyl ether	X				X			X					
Molybdenum						X							
Naphthalene					X	X	X				X	X	
Nickel	X					X		X			X	X	
Pentachlorophenol	X		X			X	X	X	X	X	X		
Perchlorate				X		X							
Phenanthrene						X	X					X	
Phenol	X	X	X					X	X	X			
Polychlorinated biphenyls (PCBs)	X		X	X	X	X	X			X		X	
Pyrene							X	X					
Selenium	X	X				X			X		X	X	Selenosis (4,6)
Silver												X	
Styrene	X					X			X		X	X	
tert-Butyl alcohol													No chronic toxicity factors.
1,1,1,2-Tetrachloroethane	X							X					
1,1,2,2-Tetrachloroethane	X								X				
Tetrachloroethene	X							X					
Thallium	X	X			X	X			X	X		X	
Toluene	X		X					X	X	X	X		
Toxaphene	X			X			X	X					
TPH gasoline													
TPH diesel													
TPH motor oil													
1,2,4-Trichlorobenzene				X									
1,1,1-Trichloroethane	X								X				
1,1,2-Trichloroethane	X					X						X	
Trichloroethene	X		X		X	X	X	X	X				
2,4,5-Trichlorophenol	X		X					X		X			
2,4,6-Trichlorophenol	X												
Vanadium	X							X			X		
Vinyl chloride	X		X			X	X		X	X		X	No chronic toxicity factors.
Xylenes									X		X		
Zinc		X		X		X					X		

Direct Exposure
Soil Screening Level Calculations

Assumes human exposure by ingestion, inhalation and dermal contact.
Based on California EPA Cancer Potency Factors
Does not address mass-balance or other site-specific issues.
Does not address potential nuisance concerns or potential impacts to groundwater, indoor air and ecological receptors.

[a]Site Parameters	DEFAULT
General	
Soil density (g/cm^3)	1.50
Particle density (g/cm^3)	2.65
Soil moisture content (ml/g)	0.10
Fraction organic carbon in soil	0.006

[a]Exposure Parameters			INPUT
Exposed surface area - adult resident	SAa	cm^2	5700
Exposed surface area - child resident	SAc	cm^2	2800
Exposed surface area - adult occupational worker	SAo	cm^2	3300
Exposed surface area - construction/trench worker	SAc/t	cm^2	5800
Adherence factor - adult resident	AFa	mg/cm^2	0.07
Adherence factor - child resident	AFc	mg/cm^2	0.2
Adherence factor - adult occupational worker	AFo	mg/cm^2	0.2
[a]Adherence factor - construction/trench worker	AFc/t	mg/cm^2	0.51
Skin absorption factor	ABS	unitless	chemical specific
Inhalation Rate - adult residents/workers	IRAa	m^3/day	20
Inhalation Rate - children	IRAc	m^3/day	10
Soil ingestion rate - adult residents	IRSa	mg/day	100
Soil ingestion rate - children	IRSc	mg/day	200
Soil ingestion rate - occupational worker	IRSo	mg/day	100
[a]Soil ingestion rate - construction/trench worker	IRSc/t	mg/day	330
Exposure frequency - residents	EFr	days/yr	350
Exposure frequency - occupational worker	EFo	days/yr	250
[a]Exposure frequency - construction/trench worker	EFc/t	days/yr	250
Exposure duration - residents total	EDr	yrs	30
Exposure duration - children	EDc	yrs	6
Exposure duration - occupational worker	EDo	yrs	25
Exposure time - residential	ETr	hrs/day	24
Exposure time - occupational worker	ETci	hrs/day	8
[a]Exposure duration - construction/trench worker	EDc	yrs	1
Body weight - adult	BWa	kg	70
Body weight - child	BWc	kg	15
Averaging time - cancer (years)	ATc	yrs	70
Averaging time - child noncancer (years)	ATn	yrs	6
Averaging time - adult noncancer (years)	ATnc	yrs	25
Days/year conversion		days/yr	365
Target Risk	TR		1.00E-06
Target Hazard Quotient	THQ		1

Other variables (fixed)			
[a]CALCULATIONS			
VARIOUS CALCULATIONS			
Ingestion exposure factor	IFS_{adj}	mg-yr/kg-day	114
Skin contact exposure factor	SFS_{adj}	mg-yr/kg-day	361
Inhalation exposure factor	$InhF_{adj}$	mg^3-yr/kg-day	11
Soils - General			
Soil porosity	Pt		0.43
Soil air-filled porosity	Pa	L_{air}/L_{soil}	0.28
Soil water-filled porosity	Pw	L_{water}/L_{soil}	0.15
VOLATILIZATION AND PEF FACTORS			
Surface soils - residential setting			
Infinite-source Volatilization Factor	VF_{SSGinf}	m^3/kg	N/A
Particulate emission factor	PEF	m^3/kg	1.36E+09
Surface soils - occupational setting			
Infinite-source Volatilization Factor	VF_{SSGinf}	m^3/kg	N/A
Particulate emission factor	PEF	m^3/kg	1.36E+09
Surface soils - occupational setting			
Infinite-source Volatilization Factor	VF_{SSGinf}	m^3/kg	N/A
Particulate emission factor	PEF	m^3/kg	1.44E+06

NOTES:
1. Default site parameter values from USEPA Region IX PRGs (USEPA 2002) unless otherwise noted.
2. Default human exposure parameter values from USEPA Region IX PRGs (USEPA 2002) unless otherwise noted.
3. Calculations based on direct exposure equations presented in EPA Region IX PRGs (USEPA, 2002).

REFERENCES:
U.S. EPA. 2002. *Region IX Preliminary Remediation Goals (PRGs) Novemnber 2002.* Technical Support Section, San Francisco, California.

TAP WATER SCREENING LEVELS

Assumes human exposure by ingestion of tap water and inhalation of VOCs (where applicable).
Based on California EPA Cancer Potency Factors
Does not address potential nuisance concerns or potential impacts to groundwater, indoor air and ecological receptors.

[a]Human Receptor Data (fixed)			INPUT
Inhalation Rate - adults	IRAa	m^3/day	20
Inhalation Rate - children	IRAc	m^3/day	10
Water ingestion rate - adult	IRWa	L/day	2
Water ingestion rate - children	IRWc	L/day	1
Exposure frequency - residents	EFr	day/yr	350
Exposure duration - residents	EDr	yrs	30
Exposure duration - childrer	EDc	yrs	6
Body weight - adult	BWa	kg	70
Body weight - child	BWc	kg	15
Averaging time (years)	AT	yrs	70
Days/year conversion		day/yr	365
Target Risk	TR		1E-06
Target Hazard Quotien	THQ		1

Other variables (fixed)			
[a]CALCULATIONS			
VARIOUS CALCULATIONS			
Ingestion Factor Water - adjusted	IFWadj	L-yr/kg-day	1.1
Inhalation Factor Air - adjusted	InhFadj	mg^3-yr/kg-day	11