Table 3
Region 4 Ecological Technical Advisory Group Soil Screening Values for Hazardous Waste Sites.

CHEMICAL	CAS	Bioaccumulative	Screening Level (mg/kg)	Ref.	Receptor	Plants	Ref.	Soil Invertebrates (mg/kg)	Ref.	Mammalian	Ref.	Avian	Ref.	Multiple Receptors	Ref.
Inorganic Compounds															
Metals															
Aluminum	7429-90-5	No	Narrative	a	All	-	-	Narrative	a	-	-	-	-	-	-
Antimony	7440-36-0	No	0.27	a	All	5	b	78	a	0.27	a	-	-	-	-
Arsenic	7440-38-2	No	18	a	All	18	a	60	b	46	a	43	a	-	-
Barium	7440-39-3	No	330	a	All	500	b	330	a	2,000	a	-	-	-	-
Beryllium	7440-41-7	No	10	b	All	10	b	40	a	21		-	-	4	f
Boron	7440-42-8	No	2	c	All	36	c	-	-	56	c	2	c	2	f
Cadmium	7440-43-9	No	0.36	a	All	32	a	140	a	0.36	a	0.77	a	-	-
Chromium - Total	7440-47-3	No	28	c	All	-	-	-	-	45	c	28	c	-	-
Chromium III	16065-83-1	No	18	a	All	-	-	18	a	34	a	26	a	-	-
Chromium VI	18540-29-9	No	0.4	f	All	0.35	c	7.8	a	81	a	190	c	0.4	f
Cobalt	7440-48-4	No	13	a	All	13	a	-	-	230	a	120	a	-	-
Copper	7440-50-8	No	28	a	All	70	a	80	a	49	a	28	a	-	-
Iron	7439-89-6	No	Narrative	a	All	-	-	Narrative	a	-	-	-	-	-	-
Lead	7439-92-1	No	11	a	All	120	a	1,700	a	56	a	11	a	-	-
Lithium	7439-93-2	No	2	b	P, M	2	b	-	-	38	c	-	-	-	-
Manganese	7439-96-5	No	220	a	All	220	a	450	a	4,000	a	4,300	a	-	-
Mercury (total)	7439-97-6	No	0.1	b	All	0.3	b	0.1	b	1.7	c	0.013	c	-	-
Methylmercury	22967-92-6	Yes	0.00051	b	All	0.3	b	0.1	b	0.00051	b	-	b	-	-
Molybdenum	7439-98-7	No	2	b	All	2	b	19	g	4.8	b	-	b	5	f
Nickel	7440-02-0	No	38	a	All	38	a	280	a	130	a	210	a	-	-
Selenium	7782-49-2	No	0.52	a	All	0.52	a	4.1	a	0.63	a	1.2	a	-	-
Silver	7440-22-4	No	4.2	a	All	560	a	-	-	14	a	4.2	a	-	-
Strontium	7440-24-6	No	96	c	M	-	-	-	-	96	c	-	-	-	-
Technetium	7440-26-8	No	0.2	b	P	0.2	b	-	-	-	-	-	-	-	-
Thallium	7440-28-0	No	1	f	All	1	b	1	g	2.1	b	-	-	1	f
Tin	7440-31-5	No	50	f	SI, P	50	b	125	g	-	-	-	-	50	f
Uranium	7440-61-1	No	23	f	All	25	c	-	-	750	c	1,600	c	23	f
Vanadium	7440-62-2	No	7.8	a	All	60	c	12.5	g	280	a	7.8	a	-	-
Zinc	7440-66-6	No	46	a	All	160	a	120	a	79	a	46	a	-	-
Other Inorganics															
Ammonia	7664-41-7														
Bromine (total)	7726-95-6	No	10	b	P	10	b	-	-	-	-	-	-	-	-
Cyanide (free)	57-12-5	No	0.1	c	SI, A	-	-	0.9	f	-	-	0.1	c	-	-
Fluoride	16984-48-8	No	32	c	M, A	-	-	-	-	120	c	32	c	-	-
Fluorine[†]	7782-41-4	No	200	f	All	200	b	200	e	-	-	-	-	200	f
Iodine	7553-56-2	No	4	b	P	4	b	-	-	-	-	-	-	-	-
Sulfur (elemental)	7704-34-9	No	500	f	All	-	-	-	-	-	-	-	-	500	f
Volatile Organic Compounds (VOCs)															
Chlorinated Alkanes															
1,1,1,2-Tetrachloroethane	630-20-6	No	1.2	d	SI	-	-	1.2	d	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	79-34-5	No	6.4	d	SI	-	-	6.4	d	-	-	-	-	-	-
1,1,1-Trichloroethane	71-55-6	No	1.3	f	All	-	-	1.3	d	260	c	-	-	0.1	f
1,1,2-Trichloroethane	79-00-5	No	0.1	f	All	-	-	4.0	d	-	-	-	-	0.1	f
1,1-Dichloroethane	75-34-3	No	0.1	f	All	-	-	4.5	d	210	c	-	-	0.1	f
1,2-Dichloroethane	107-06-2	No	0.85	c	All	-	-	2.6	d	27	c	0.85	c	0.1	f
1,2-Dichloropropane	78-87-5	No	0.1	f	All	-	-	2.4	d	-	-	-	-	0.1	f
Dichloromethane (Methylene chloride)	75-09-2	No	0.1	f	All	1,600	c	5.5	d	2.6	c	-	-	0.1	f
Trichloromethane (chloroform)	67-66-3	No	8.8	d	M	-	-	8.8	d	8	c	-	-	0.1	f
Tetrachloromethane (Carbon tetrachloride)	56-23-5	No	0.1	f	All	-	-	2.6	d	-	-	-	-	0.1	f

Table 3
Region 4 Ecological Technical Advisory Group Soil Screening Values for Hazardous Waste Sites.

CHEMICAL	CAS	Bioaccumulative	Screening Level (mg/kg)	Ref.	Receptor	Plants	Ref.	Soil Invertebrates (mg/kg)	Ref.	Mammalian	Ref.	Avian	Ref.	Multiple Receptors	Ref.
Chlorinated Alkenes															
1,1-Dichloroethene/ethylene	75-35-4	No	0.06	d	All	-	-	0.06	d	11	c	-	-	0.1	f
1,2-Dichloroethene (cis and trans)	540-59-0	No	0.06	d	All	-	-	0.06	d	23	c	-	-	0.1	f
1,2-cis-Dichloroethyene	156-59-2	No	0.06	d	All	-	-	0.06	d	-	-	-	-	-	-
1,2-trans-Dichloroethylene	156-60-5	No	0.06	d	All	-	-	0.06	d	-	-	-	-	-	-
1,3-Dichloropropene	542-75-6	No	0.07	d	All	-	-	0.07	d	-	-	-	-	-	-
Tetrachloroethene	127-18-4	No	0.10	d	All	-	-	0.10	d	0.18	c	-	-	0.01	e
1,1,2-Trichloroethylene (TCE)	79-01-6	No	0.07	d	All	-	-	0.07	d	42	c	-	-	0.1	f
Vinyl chloride	75-01-4	No	0.05	d	All	-	-	0.05	d	0.12	c	-	-	-	-
Chlorobenzenes															
Chlorobenzene	108-90-7	No	0.1	f	All	-	-	4.3	d	43	c	-	-	0.1	f
1,2-Dichlorobenzene	95-50-1	Yes	0.1	f	All	-	-	2.9	d	0.92	c	-	-	0.1	f
1,3-Dichlorobenzene	541-73-1	Yes	0.73	c	SI	-	-	2.9	d	0.73	c	-	-	-	-
1,4-Dichlorobenzene	106-46-7	Yes	0.1	f	All	-	-	2.9	d	0.88	c	-	-	0.1	f
1,2,3-Trichlorobenzene	87-61-6	No	0.05	f	All	-	-	4.2	d	-	-	-	-	0.05	f
1,2,4-Trichlorobenzene	120-82-1	No	0.05	f	All	-	-	4.1	d	0.27	c	-	-	0.05	f
1,3,5-Trichlorobenzene	108-70-3	No	0.05	f	All	-	-	4.0	d	-	-	-	-	0.05	f
Monoaromatic Hydrocarbons															
1,2,4-Trimethylbenzene	95-63-6	No	2.1	d	SI	-	-	2.1	d	-	-	-	-	-	-
1,3,5-Trimethylbenzene	108-67-8	No	2.1	d	SI	-	-	2.1	d	-	-	-	-	-	-
Benzene	71-43-2	No	1	h	SI, M	-	-	3.2	d	24	c	-	-	1	h
Cymene, p- (4-Isopropyltoluene)	99-87-6	No	2.3	d	SI	-	-	2.3	d	-	-	-	-	-	-
Ethylbenzene	100-41-4	No	3.8	d	SI	-	-	3.8	d	-	-	-	-	5	h
Isopropylbenzene (Cumene)	98-82-8	No	3.3	d	SI	-	-	3.3	d	-	-	-	-	-	-
Styrene (Vinyl benzene)	100-42-5	No	3.2	c	SI, P	3.2	c	3.9	d	-	-	-	-	0.1	f
Toluene	108-88-3	No	3	h	SI, M, P	200	c	4.2	d	23	c	-	-	3	h
m-Xylene	108-38-3	No	See total	-	-	-	-	2.9	d	-	-	-	-	-	-
Xylenes (total)	1330-20-7	No	1.4	c	All	100	c	2.9	d	1.4	c	41	c	-	-
Ketones															
2-Butanone (Methyl Ethyl Ketone)	78-93-3	No	12	d	SI, M	-	-	12	d	360	c	-	-	-	-
2-Hexanone	591-78-6	No	0.36	c	SI, M, A	-	-	5.0	d	5.4	c	0.36	c	-	-
Acetone	67-64-1	No	1.2	c	SI, M, A	-	-	20	d	1.2	c	7.5	c	-	-
Other VOCs															
Tribromomethane (Bromoform)	75-25-2	No	30	d	SI	-	-	7.7	d	-	-	-	-	-	e
Bromomethane (methyl bromide)	74-83-9	No	5.6	d	SI	-	-	5.6	d	-	-	-	-	-	-
Carbon Disulfide	75-15-0	No	0.82	c	SI, M	-	-	1.9	d	0.82	c	-	-	-	-
Ethylene glycol	107-21-1	No	90	g	All	-	-	90	g	-	-	-	-	960	f
Hexachloroethane	67-72-1	No	0.7	d	SI	-	-	0.7	d	-	-	-	-	-	-
Hexane	110-54-3	No	7.2	d	SI	-	-	7.2	d	-	-	-	-	-	-
Tert-butyl methyl ether (MTBE)	1634-04-4	No	12.5	c	SI	-	-	12.5	c	-	-	-	-	-	-

Table 3
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CHEMICAL	CAS	Bioaccumulative	Screening Level (mg/kg)	Ref.	Receptor	Plants	Ref.	Soil Invertebrates (mg/kg)	Ref.	Mammalian	Ref.	Avian	Ref.	Multiple Receptors	Ref.
Semivolatile Organic Compounds (SVOCs)															
Chloroanilines															
3-Chloroaniline	108-42-9	No	20	b	SI, P	20	b	30	b	-	-	-	-	-	-
4-Chloroaniline	106-47-8	No	1.0	c	SI, P	1.0	c	1.8	c	-	-	-	-	-	-
3,4-Dichloroaniline	95-76-1	No	20	b	SI	-	-	20	b	-	-	-	-	-	-
2,4,5-Trichloroaniline	636-30-6	No	20	b	SI, P	20	b	20	b	-	-	-	-	-	-
Pentachloroaniline	527-20-8	No	0.59	d	SI	-	-	0.59	g	-	-	-	-	-	-
Chlorobenzenes															
1,3-Dichlorobenzene	99-65-0	No	0.1	f	All	-	-	2.4	d	0.73	c	-	-	0.1	f
1,2,3-Trichlorobenzene	87-61-6	No	4.2	d	SI	-	-	4.2	d	-	-	-	-	-	-
1,2,3,4-Tetrachlorobenzene	634-66-2	No	0.05	f	All	-	-	2.6	d	-	-	-	-	0.05	f
1,2,4,5-Tetrachlorobenzene	95-94-3	No	0.05	f	All	-	-	-	-	-	-	-	-	0.05	f
Hexachlorobenzene	118-74-1	Yes	0.079	c	All	10	c	0.7	d	0.2	c	0.079	c	0.05	f
Pentachlorobenzene	608-93-5	Yes	0.05	f	All	-	-	1.4	d	-	-	-	-	0.05	f
Dichlorophenols															
2,3-Dichlorophenol	576-24-9	No	0.01	e	All	-	-	-	-	-	-	-	-	0.01	e
2,4-Dichlorophenol	120-83-2	No	0.01	e	All	-	-	2.9	d	-	-	-	-	0.01	e
2,5-Dichlorophenol	583-78-8	No	0.01	e	All	-	-	-	-	-	-	-	-	0.01	e
2,6-Dichlorophenol	87-65-0	No	0.01	e	All	-	-	-	-	-	-	-	-	0.01	e
3,4-Dichlorophenol	95-77-2	No	0.01	e	All	20	b	20	b	-	-	-	-	0.01	e
3,5-Dichlorophenol	591-35-5	No	0.01	e	All	-	-	-	-	-	-	-	-	0.01	e
Dichlorophenols (total)	SEQ NO-35-8	No	0.05	f	All	-	-	-	-	-	-	-	-	0.05	f
Trichlorophenols															
2,3,4-Trichlorophenol	15950-66-0	No	0.01	e	All	-	-	-	-	-	-	-	-	0.01	e
2,3,6-Trichlorophenol	933-75-5	No	0.01	e	All	-	-	-	-	-	-	-	-	0.01	e
2,4,5-Trichlorophenol	95-95-4	No	0.01	e	All	4	b	5.3	d	-	-	-	-	0.01	e
2,4,6-Trichlorophenol	88-06-2	No	0.05	f	All	-	-	5.3	d	-	-	-	-	0.05	f
3,4,5-Trichlorophenol	609-19-8	No	0.01	e	All	-	-	-	-	-	-	-	-	0.01	e
Trichlorophenols (total)	-	No	0.05	f	All	-	-	-	-	-	-	-	-	0.05	f
Tetrachlorophenols															
2,3,4,5-Tetrachlorophenol	4901-51-3	No	0.01	e	All	-	-	20	b	-	-	-	-	0.01	e
2,3,4,6-Tetrachlorophenol	58-90-2	No	0.05	f	All	-	-	4.2	d	-	-	-	-	0.05	f
2,3,5,6-Tetrachlorophenol	935-95-5	No	0.01	e	All	-	-	-	-	-	-	-	-	0.01	e
Tetrachlorophenols (total)	-	No	0.05	f	All	-	-	2.1	d	-	-	-	-	0.05	f
Other Phenols															
2-Chlorophenol	95-57-8	No	0.01	e	All	-	-	2.1	d	0.54	c	0.39	c	0.01	e
3-Chlorophenol	108-43-0	No	0.01	e	All	7	b	10	b	-	-	-	-	0.01	e
4-Chlorophenol	106-48-9	No	0.01	e	All	-	-	-	-	-	-	-	-	0.01	e
Monochlorophenols (total)	-	No	0.05	f	All	-	-	-	-	-	-	-	-	0.05	f
2,4-Dimethylphenol	105-67-9	No	1.4	d		-	-	1.4	d	-	-	-	-	-	-
2,4-Dinitrophenol	51-28-5	No	20	b	P	20	b	-	-	-	-	-	-	-	-
4-Nitrophenol	100-02-7	No	7	b	SI	-	-	7	b	-	-	-	-	-	-
2-Methylphenol (Cresol, o-)	95-48-7	No	0.1	f	-	0.67	c	1.6	d	590	c	-	-	0.1	f
3-Methylphenol (Cresol, m-)	108-39-4	No	0.1	f	-	0.69	c	-	-	-	-	-	-	0.1	f
4-Methylphenol (Cresol, p-)	106-44-5	No	0.1	f	-	-	-	1.6	d	-	-	-	-	0.1	f
Cresols (total)	-	No	0.1	f	All	-	-	-	-	-	-	-	-	0.1	f
Nonylphenol	25154-52-3	No	1.1	d	SI	-	-	1.1	d	-	-	-	-	-	-
Pentachlorophenol (PCP)	87-86-5	Yes	2.1	a	All	5	a	31	a	2.8	a	2.1	a	-	-
Phenol	108-95-2	No	1.7	d	All	70	b	1.7	d	38	c	-	-	-	-

Table 3
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CHEMICAL	CAS	Bioaccumulative	Screening Level (mg/kg)	Ref.	Receptor	Plants	Ref.	Soil Invertebrates (mg/kg)	Ref.	Mammalian	Ref.	Avian	Ref.	Multiple Receptors	Ref.
Energetic SVOCs															
2-Amino-4,6-dinitrotoluene	35572-78-2	No	14	c	SI, M, P	14	c	43	c	15	c	-	-	-	-
4-Amino-2,6-dinitrotoluene	19406-51-0	No	12	c	SI, M, P	33	c	18	c	12	c	-	-	-	-
1,3- Dinitrobenzene	99-65-0	No	0.073	c	M, A	-	-	-	-	0.073	c	0.15	c	-	-
2,4-Dinitrotoluene	121-14-2	No	6	c	SI, M, P	6	c	18	c	13	c	-	-	-	-
2,6-Dinitrotoluene	606-20-2	No	4.1	c	All	-	-	30	c	4.1	c	52	c	-	-
HMX (Octahydro-tetranitro-1,3,5,7-tetrazocine)	2691-41-0	No	16	c	SI, M, P	2,700	c	16	c	300	c	-	-	-	-
Nitroglycerine	55-63-0	No	71	c	M	-	-	13	c	71	c	-	-	-	-
2-Nitrotoluene	88-72-2	No	9.9	c	M	-	-	-	-	9.9	c	-	-	-	-
3-Nitrotoluene	99-08-1	No	12	c	M	-	-	-	-	12	c	-	-	-	-
4-Nitrotoluene	99-99-0	No	22	c	M	-	-	-	-	22	c	-	-	-	-
PRTN (Pentaerythrite-tetranitrate)	78-11-5	No	100	c	M	-	-	-	-	100	c	-	-	-	-
RDX (Hexahydro-1,3,5-trinitro-1,3,5-triazine)	121-82-4	No	8.4	c	All	-	-	8.4	c	16	c	2.3	c	-	-
Tetryl (Methyl-2,4,6-trinitrophenylnitroamine)	479-45-8	No	1.,5	c	M	-	-	-	-	1.5	c	-	-	-	-
1,3,5-Trinitrobenzene	99-35-4	No	10	c	SI, M	-	-	10	c	120	c	-	-	-	-
2,4,6-Trinitrotoluene	118-96-7	No	7.6	c	All	62	c	32	c	96	c	7.6	c	-	-
Other SVOCs															
1,1'-Biphenyl	92-52-4	No	10	d	SI, P	60	b	10	d	-	-	-	-	-	-
3,3'- Dichlorobenzidine	91-94-1	No	0.09	d	SI			0.09	d	-	-	-	-	-	-
Benzoic acid	65-85-0	No	1.0	c	SI, M	-	-	21	d	1.0	c	-	-	-	-
Benzyl Alcohol	100-51-6	No	4.3	d	SI, M	-	-	4.3	d	120	c	-	-	-	-
Carbazole	86-74-8	No	16	d	SI, M	-	-	16	d	80	c	-	-	-	-
Dibenzofuran	132-64-9	No	6.1	c	SI, P	6.1	c	15	d	-	-	-	-	-	-
Hexachlorobutadiene	87-68-3	No	0.1	d	SI	-	-	0.1	d	-	-	-	-	-	-
Hexachlorocyclopentadiene	77-47-4	No	10	b	P	10	b	-	-	-	-	-	-	-	-
N-Nitrosodiphenylamine	86-30-6	No	0.1	d	SI	-	-	0.1	d	-	-	-	-	-	-
Nitrobenzene	98-95-3	No	2.2	c	SI, M	-	-	2.2	c	4.9	c	-	-	-	-
Pentachloroethane	76-01-7	No	2.1	d	SI	-	-	2.1	d	-	-	-	-	-	-
Pentachloronitrobenzene	82-68-8	No	0.7	c	M, A	-	-	-	-	11	c	0.7	c	-	-
Phthalates															
Bis(2-ethylhexyl) phthalate	117-81-7	Yes	0.02	c	All	-	-	0.23	d	0.59	c	0.02	c	-	-
Butylbenzyl phthalate	85-68-7	No	1.0	d	SI, M	-	-	1.0	d	90	c	-	-	-	-
Diethylphthalate	84-66-2	No	1.0	d	SI, P	100	b	1.0	d	3,600	c	-	-	-	-
Dimethylphthalate	131-11-3	No	1.5	d	SI, M	-	-	1.5	d	38	c	-	-	-	-
Di-n-butyl phthalate	84-74-2	No	0.011	c	All	160	c	0.6	d	180	c	0.011	c	-	-
Di-n-octyl phthalate	117-84-0	No	0.2	d	SI, M	-	-	0.2	d	0.91	c	-	-	-	-

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Polycyclic Aromatic Hydrocarbons (PAHs)															
Low Molecular Weight PAHs															
Acenaphthene	83-32-9	No	See Total	-	-	0.25	c	4.4	d	120	c	-	-	-	-
Acenaphthylene	208-96-8	No	See Total	-	-	-	-	6.5	d	120	c	-	-	-	-
Anthracene	120-12-7	No	See Total	-	-	6.8	c	24	d	210	c	-	-	-	-
Fluorene	86-73-7	No	See Total	-	-	-	-	10	d	3.7	c	-	-	-	-
C1-Fluorenes	-	No	See Total	-	-	-	-	14	d	-	-	-	-	-	-
C2-Fluorenes	-	No	See Total	-	-	-	-	11	d	-	-	-	-	-	-
C3-Fluorenes	-	No	See Total	-	-	-	-	8.3	d	-	-	-	-	-	-
1-Methyl naphthalene	90-12-0	No	See Total	-	-	-	-	8.6	d	-	-	-	-	-	-
2-Methylnaphthalene	91-57-6	No	See Total	-	-	-	-	7.6	d	16	c	-	-	-	-
2,6-Dimethyl naphthalene	581-42-0	No	See Total	-	-	-	-	5.8	d	-	-	-	-	-	-
2,3,5-Trimethylnaphthalene	2245-38-7	No	See Total	-	-	-	-	3.7	d	-	-	-	-	-	-
Naphthalene	91-20-3	No	See Total	-	-	1.0	c	6.0	d	9.7	c	3.4	c	-	-
C1-Naphthalenes	-	No	See Total	-	-	-	-	8.6	d	-	-	-	-	-	-
C2-Naphthalenes	-	No	See Total	-	-	-	-	7.7	d	-	-	-	-	-	-
C3-Naphthalenes	-	No	See Total	-	-	-	-	3.7	d	-	-	-	-	-	-
C4-Naphthalenes	-	No	See Total	-	-	-	-	2.3	d	-	-	-	-	-	-
1-Methyl phenanthrene	832-69-9	Yes	See Total	-	-	-	-	14	d	-	-	-	-	-	-
Phenanthrene	85-01-8	Yes	See Total	-	-	-	-	24	d	10	c	-	-	-	-
C1-Phenatherene/anthracenes	-	Yes	See Total	-	-	-	-	14	d	-	-	-	-	-	-
C2-Phenatherene/anthracenes	-	Yes	See Total	-	-	-	-	11	d	-	-	-	-	-	-
C3-Phenatherene/anthracenes	-	Yes	See Total	-	-	-	-	7.8	d	-	-	-	-	-	-
C4-Phenatherene/anthracenes	-	Yes	See Total	-	-	-	-	4.7	d	-	-	-	-	-	-
Total LMWPAHs	-	No	**29**	a	All	-	-	29	a	100	a	-	-	-	-
Thiophenes															
Benzothiophene	11095-43-5	No	See Total	-	-	-	-	5.8	d	-	-	-	-	-	-
Dibenzothiophene	132-65-0	No	See Total	-	-	-	-	19	d	-	-	-	-	-	-
C1-Dibenzothiophenes	-	No	See Total	-	-	-	-	11	d	-	-	-	-	-	-
C2-Dibenzothiophenes	-	No	See Total	-	-	-	-	9.0	d	-	-	-	-	-	-
C3-Dibenzothiophenes	-	No	See Total	-	-	-	-	6.6	d	-	-	-	-	-	-
C4-Dibenzothiophenes	-	Yes	See Total	-	-	-	-	4.7	d	-	-	-	-	-	-
Naphthothiophene	233-02-3	No	See Total	-	-	-	-	18	d	-	-	-	-	-	-
High Molecular Weight PAHs															
Benzo(a)anthracene	56-55-3	Yes	See Total	-	-	18	c	34	d	3	c	0.8	c	-	-
C1-Benzanthracene/chrysenes	-	Yes	See Total	-	-	-	-	10	d	-	-	-	-	-	-
C2-Benzanthracene/chrysenes	-	Yes	See Total	-	-	-	-	10	d	-	-	-	-	-	-
C3-Benzanthracene/chrysenes	-	Yes	See Total	-	-	-	-	11	d	-	-	-	-	-	-
C4-Benzanthracene/chrysenes	-	Yes	See Total	-	-	-	-	12	d	-	-	-	-	-	-
Benzo(b)fluoranthene	205-99-2	Yes	See Total	-	-	18	c	36	d	38	c	-	-	-	-
Benzo(k)fluoranthene	207-08-9	Yes	See Total	-	-	-	-	35	d	62	c	-	-	-	-
Benzo(ghi)perylene	191-24-2	Highly	See Total	-	-	-	-	39	d	24	c	-	-	-	-
Benzo(a)pyrene	50-32-8	Highly	See Total	-	-	-	-	13	d	53	c	-	-	-	-
Benzo(e)pyrene	192-97-2	Yes	See Total	-	-	-	-	23	d	-	-	-	-	-	-
Chrysene	218-01-9	Yes	See Total	-	-	-	-	21	d	2.4	c	-	-	-	-
C1-Chrysenes	-	Yes	See Total	-	-	-	-	20	d	-	-	-	-	-	-
C2-Chrysenes	-	Yes	See Total	-	-	-	-	17	d	-	-	-	-	-	-
C3-Chrysenes	-	Yes	See Total	-	-	-	-	11	d	-	-	-	-	-	-
C4-Chrysenes	-	Yes	See Total	-	-	-	-	7.3	d	-	-	-	-	-	-
Dibenzo(a,h)anthracene	53-70-3	Highly	See Total	-	-	-	-	38	d	12	c	-	-	-	-
Fluoranthene	206-44-0	Yes	See Total	-	-	-	-	16	d	10	c	-	-	-	-
C1-Fluoranthene/pyrenes	-	Yes	See Total	-	-	-	-	17	d	-	-	-	-	-	-
C2-Fluoranthene/pyrenes	-	Yes	See Total	-	-	-	-	13	d	-	-	-	-	-	-
C3-Fluoranthene/pyrenes	-	Yes	See Total	-	-	-	-	7.3	d	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	193-39-5	Highly	See Total	-	-	-	-	69	d	62	c	-	-	-	-
Perylene	198-55-0	Yes	See Total	-	-	-	-	16	d	-	-	-	-	-	-
Pyrene	129-00-0	No	See Total	-	-	-	-	8.9	d	22	c	34	c	-	-
Total HMWPAHs	-	Yes	**1.1**	a	M	-	-	18	a	1.1	a	-	-	-	-

Table 3
Region 4 Ecological Technical Advisory Group Soil Screening Values for Hazardous Waste Sites.

CHEMICAL	CAS	Bioaccumulative	Screening Level (mg/kg)	Ref.	Receptor	Plants	Ref.	Soil Invertebrates (mg/kg)	Ref.	Mammalian	Ref.	Avian	Ref.	Multiple Receptors	Ref.
Pesticides/Herbicides															
Acrolein	107-02-8	No	0.002	d	SI			0.002	d	-	-	-	-	-	-
Aldrin	309-00-2	Highly	0.037	c	SI, M	-	-	0.05	d	0.037	c	-	-	-	-
Atrazine	1912-24-9	No	0.1	d	SI	-	-	0.1	d	-	-	-	-	-	-
BHC - alpha	319-84-6	No	7.7	d	SI, M	-	-	7.7	d	58	c	-	-	-	-
BHC - beta	319-85-7	No	0.27	c	All	-	-	7.7	d	0.27	c	14	c	-	-
BHC-delta	319-86-8	No	7.7	d	SI	-	-	7.7	d	-	-	-	-	-	-
BHC - gamma (Lindane)	58-89-9	No	0.01	f	All	-	-	7.7	d	0.0094	c	0.21	c	0.01	f
Carbaryl	63-25-2	No	0.003	d	SI	-	-	0.003	d	-	-	-	-	-	-
Carbofuran	1563-66-2	No	0.02	d	SI	-	-	0.02	d	-	-	-	-	-	-
Chlorobenzilate	510-15-6	No	1.8	d	SI	-	-	1.8	d	-	-	-	-	-	-
Chlordane - alpha	5103-71-9	Highly	0.1	e	All	2.2	c	0.1	e	0.27	c	0.28	c	-	-
Chlordane - beta	5103-74-2	Highly	0.1	e	SI	-	-	0.1	e	-	-	-	-	-	-
Chlordane - gamma	12789-03-6	Highly	0.1	e	All	2.2	c	0.1	e	2.2	c	2.3	c	-	-
Chlordane (sum)	57-74-9	Highly	0.54	d	SI	-	-	0.2	d	-	-	-	-	-	-
Chloropyrifos	2921-88-2	No	0.0045	d	SI	-	-	0.0045	d	-	-	-	-	-	-
Dinoseb	88-85-7	No	8.5	d	SI	-	-	8.5	d	-	-	-	-	-	-
DDD (sum 4,4- & 2,4-DDD)	50-29-3	Highly	0.044	c	All	-	-	3.4	d	0.044	c	0.36	c	-	-
DDE (sum 4,4- & 2,4-DDE)	72-55-9	Highly	0.11	c	All	-	-	0.48	d	3.7	-	0.11	c	-	-
DDT (sum 4,4- & 2,4-DDT)	72-54-8	Yes	0.0063	c	All	-	-	15.3	d	4.1	c	0.0063	c	-	-
DDT/DDE/DDD (total)	--	Highly	0.021	a	M, A	-	-	-	-	0.021	a	0.093	a	-	-
Diazinon	333-41-5	No	0.002	d	SI	-	-	0.002	d	-	-	-	-	-	-
Dieldrin	60-57-1	Yes	0.0049	a	All	0.2	c	0.1	d	0.0049	a	0.021	a	-	-
Endosulfan - alpha	959-98-8	No	0.64	c	All	-	-	2.1	d	0.64	c	15	c	-	-
Endosulfan (alpha and beta)	115-29-7	No	2.1	d	SI	-	-	2.1	d	-	-	-	-	-	-
Endosulfan-beta	33213-65-9	No	2.10	d	SI	-	-	2.1	d	-	-	-	-	-	-
Endosulfan sulfate	1031-07-8	No	1.6	d	SI	-	-	1.6	d	-	-	-	-	-	-
Endrin	72-20-8	Yes	0.0014	c	All	0.0034	c	0.1	d	0.023	c	0.0014	c	-	-
Endrin ketone	53494-70-5	No	6.7	d	SI	-	-	6.7	d	-	-	-	-	-	-
Guthion	86-50-0	No	0.0006	d	SI	-	-	0.0006	d	-	-	-	-	-	-
Heptachlor	76-44-8	Yes	0.059	c	All	0.4	c	0.3	d	0.059	c	0.3	c	-	-
Heptachlor epoxide	1024-57-3	No	1.1	d	SI	-	-	1.1	d	-	-	-	-	-	-
Hexachlorocyclopentadiene	77-47-4	No	0.2	d	SI	-	-	0.2	d	-	-	-	-	-	-
Kepone (Chlordecone)	143-50-0	Yes	0.021	c	M, A	-	-	17	d	0.021	c	1.3	c	-	-
Malathion	121-75-5	No	0.001	d	SI	-	-	0.001	d	-	-	-	-	-	-
Methoxychlor (4,4')	72-43-5	Yes	1.5	d	SI, M, A	-	-	1.5	d	5	c	18	c	-	-
Mirex	2385-85-5	Highly	7.1	d	SI	-	-	7.1	d	-	-	-	-	-	-
Parathion	56-38-2	No	0.001	d	SI	-	-	0.001	d	-	-	-	-	-	-
Phorate	298-02-2	No	0.001	d	SI	-	-	0.001	d	-	-	-	-	-	-
2,4,5-Trichlorphenoxyacetic acid	93-76-5	No	16	d	SI	-	-	16	d	-	-	-	-	-	-
2,4,5-TP (Silvex)	93-72-1	No	13	d	SI	-	-	13	d	-	-	-	-	-	-
Simazine	122-34-9	No	0.06	d	SI	-	-	0.06	d	-	-	-	-	-	-
Toxaphene	8001-35-2	Yes	2.3	d	SI, M, A	-	-	2.3	d	5.9	c	4.1	c	-	-
Trifluralin	1582-09-8	Yes	0.50	d	SI	-	-	0.5	d	-	-	-	-	-	-

Table 3
Region 4 Ecological Technical Advisory Group Soil Screening Values for Hazardous Waste Sites.

CHEMICAL	CAS	Bioaccumulative	Screening Level (mg/kg)	Ref.	Receptor	Plants	Ref.	Soil Invertebrates (mg/kg)	Ref.	Mammalian	Ref.	Avian	Ref.	Multiple Receptors	Ref.
Polychlorinated Biphenyls (PCBs) and Dioxins/Furans															
PCDDs, PCDFs (ΣTEQ)	1746-01-6	Highly	4 ng/kg	f	All	-	-	1.1	d	-	-	-	-	4 ng/kg	f
PCBs (sum)	1336-36-3	Highly	0.5	f	All	40	b	1.8	d	-	-	-	-	0.5	f
Aroclor-1016	12674-11-2	Highly	1.0	c	All	-	-	-	-	1.0	c	-	-	-	-
Aroclor-1242	53469-21-9	Highly	0.014	c	All	-	-	-	-	0.38	c	0.041	c	-	-
Aroclor-1248	12672-29-6	Highly	0.0072	c	All	-	-	-	-	0.0072	c	0.041	c	-	-
Aroclor-1254	11097-69-1	Highly	0.014	c	All	160	c	-	-	0.88	c	0.041	c	-	-
Aroclor-1260	11096-82-5	Highly	0.14	c	All	-	-	-	-	0.14	c	0.88	c	-	-
Other															
2-Nitroaniline	88-74-4	No	5.4	c	M	-	-	-	-	5.4	c	-	-	-	-
Diphenylamine	122-39-4	No	10	c	M, A	-	-	-	-	10	c	73	c	-	-
Tetrahydrothiophene	110-01-0	No	0.1	e	All	-	-	0.88	g	-	-	-	-	0.1	e
Trichlorofluoromethane	75-69-4	No	52	c	M	-	-	-	-	52	c	-	-	-	-
Organotins (total)	-	No	1.2	g	SI	-	-	1.2	g	-	-	-	-	-	-

All - ESV for protection of all receptors
A - ESV for protection of Avians
M - ESV for protection of Mammals
P - ESV for protection of Plants
SI - ESV for protection of soil invertebrates

LMWPAHs have less than 4 rings
HMWPAHs have 4 or more rings

Table 3 Sources:

a - USEPA (2007): Ecological Soil Screening Levels. http://www.epa.gov/ecotox/ecossl/

b - Oak Ridge National Laboratory:

Efroymson, R.A., M.E. Will, and G.W. Suter. 1997a. Toxicological Benchmarks for Screening Contaminants of Potential Concern for Effects on Soil and Litter Invertebrates and Heterotrophic
Efroymson, R.A., M.E. Will, G.W. Suter, and A.C. Wooten. 1997b. Toxicological Benchmarks for Screening Contaminants of Potential Concern for Effects on Terrestrial Plants: 1997 Revision. Oak
Efroymson, R.A., G.W. Suter, II, B.E. Sample, and D.S. Jones. 1997. Preliminary Remediation Goals for Ecological Endpoints. Oak Ridge National Laboratory, Oak Ridge, TN. 50 pp. ES/ER/TM-162/R2

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http://www.lanl.gov/community-environment/environmental-stewardship/protection/eco-risk-assessment.php

d - ECOSAR & Region 4 soil model

e - Beyer, W. N. 1990. Evaluating Soil Contamination, United States Fish and Wildlife Service, Biological Report 90 (2). July 1990.

f - CCME. 2002. Canadian Environmental Quality Guidelines. Canadian Counsil of Ministers of the Environment, Winnipeg, Manitoba. http://st-ts.ccme.ca/

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h - Australia Department of Environment and Conservation. Assessment Levels for Soil, Sediment and Water. Contaminated Sites Management Series. February 2010.