

Attachment 3

TABLE 3B

**Organic Chemical Properties for Soil-Water Partition Equation
for Calculating Leaching-Based, Site-Specific Levels (LSSLs)**

Parameter of Interest	Chemical	RBGC (mg/L)	RBGC Key	Koc, Soil-Organic Carbon-Water Distribution coefficient (L/kg)	Koc Ref	Kd Distribution coefficient (L/kg) with $f_{oc}=0.001$	H' Henry's Law constant	H' Ref
Organic Acids	Benzenesulfonic acid	1.83E+01	N	--	--	--	--	--
	Diethyl phosphorodithioic acid	2.92E+00	N	--	--	--	1.52E-02	1
	Dimethyl phosphorodithioic acid	3.65E+00	N	--	--	--	8.61E-03	1
	Phthalic acid	3.65E+01	N	--	--	--	--	--
Organophosphate Pesticides	Stirphos	2.80E-03	--	--	--	--	--	--
Organochlorine Pesticides	4,4'-DDD	2.80E-04	C	1.00E+06	2	1.00E+03	1.64E-04	2
	4,4'-DDE	1.98E-04	C	4.47E+06	2	4.47E+03	8.61E-04	2
	4,4'-DDT	1.98E-04	C	2.63E+06	2	2.63E+03	3.32E-04	2
	Aldrin	3.95E-06	C	2.45E+06	2	2.45E+03	6.97E-03	2
	Alpha-BHC	1.07E-05	C	1.23E+03	2	1.23E+00	4.35E-04	2
	Beta-BHC	3.74E-05	C	1.26E+03	2	1.26E+00	3.05E-05	2
	Dieldrin	4.20E-06	C	2.14E+04	2	2.14E+01	6.19E-04	2
	Endrin	2.00E-03	M	1.23E+04	2	1.23E+01	3.08E-04	2
	Gamma-BHC (Lindane)	2.00E-04	M	1.07E+03	2	1.07E+00	5.74E-04	2
	Heptachlor Epoxide	2.00E-04	M	8.32E+04	2	8.32E+01	3.90E-04	2
	Methoxychlor	4.00E-02	M	9.77E+04	2	9.77E+01	6.48E-04	2
SVOCs	1,4-Dioxane	6.11E-03	C	1.70E+01	3	1.70E-02	1.97E+02	4
	Acenaphthene	2.19E+00	N	4.90E+03	1	4.90E+00	6.36E-03	1
	Acenaphthylene	1.10E+00	N	1.50E+03	1	1.50E+00	4.67E-03	1
	Anthracene	1.10E+01	N	2.35E+04	1	2.35E+01	2.67E-03	1
	Benz(a)anthracene	9.21E-05	C	3.98E+05	2	3.98E+02	1.37E-04	2
	Benzo(a)pyrene	2.00E-04	M	1.02E+06	2	1.02E+03	4.63E-05	2
	Benzo(b)fluoranthene	9.21E-05	C	1.23E+06	2	1.23E+03	4.55E-03	2
	Benzo(g,h,i)perylene	1.10E+00	N	--	--	--	--	--
	Benzo(k)fluoranthene	9.21E-04	C	1.23E+06	2	1.23E+03	3.40E-05	2
	bis(2-Ethylhexyl)phthalate	6.00E-03	M	1.51E+07	2	1.51E+04	4.18E-06	2
	Butyl benzyl phthalate	7.30E+00	N	1.38E+04	1	1.38E+01	7.94E-05	1
	Chrysene	9.21E-03	C	3.98E+05	1	3.98E+02	3.88E-03	1
	Dibenz(a,h)anthracene	9.21E-06	C	3.80E+06	2	3.80E+03	6.03E-07	2
	Diethyl phthalate	2.92E+01	N	2.88E+02	2	2.88E-01	1.85E-05	2
	Dimethyl phthalate	3.65E+02	N	--	--	--	--	--
	Di-N-Butyl phthalate	3.65E+00	N	3.39E+04	2	3.39E+01	3.85E-08	2
	Fluoranthene	1.46E+00	N	1.07E+05	2	1.07E+02	6.60E-04	2
	Fluorene	1.46E+00	N	7.90E+03	1	7.90E+00	3.16E-03	1
	Hexachlorobenzene	1.00E-03	M	5.50E+04	2	5.50E+01	5.41E-02	2
	Indeno(1,2,3-cd)pyrene	9.21E-05	C	3.47E+06	2	3.47E+03	6.56E-05	2
	Naphthalene-SVOC	4.29E-03	C	1.19E+03	1	1.19E+00	1.98E-02	1
Phenanthrene	1.10E+00	N	3.70E+03	1	3.70E+00	9.43E-04	1	
Pyrene	1.10E+00	N	6.80E+04	1	6.80E+01	4.51E-04	1	
VOCs	1,1,1-Trichloroethane	2.00E-01	M	1.35E+02	1	1.35E-01	7.05E-01	1
	1,1-Dichloroethane	1.18E-02	C	5.30E+01	1	5.30E-02	2.30E-01	1
	1,1-Dichloroethene	7.00E-03	M	6.50E+01	1	6.50E-02	1.07E+00	1
	1,2,3-Trichloropropane	3.36E-05	C	5.10E+01	1	5.10E-02	1.15E+00	1
	1,2,4-Trichlorobenzene	7.00E-02	M	1.66E+03	1	1.66E+00	5.82E-02	1
	1,2,4-Trimethylbenzene	5.11E-02	N	3.72E+03	1	3.72E+00	2.34E-01	1
	1,2-Dichlorobenzene	6.00E-01	M	3.79E+02	1	3.79E-01	7.79E-02	1
	1,2-Dichloroethane	5.00E-03	M	3.80E+01	1	3.80E-02	4.01E-02	1
	1,3,5-Trimethylbenzene	5.92E-01	N	8.19E+02	1	8.19E-01	3.16E-01	1
	1,3-Dichlorobenzene	1.10E-01	N	3.79E+02	1	3.79E-01	7.79E-02	1
	1,4-Dichlorobenzene	7.50E-02	M	6.16E+02	1	6.16E-01	9.96E-02	1
	2-Butanone	2.13E+01	N	4.50E+00	1	4.50E-03	1.12E-03	1
	2-Chlorotoluene	7.30E-01	N	1.60E+02	1	1.60E-01	1.44E-01	1

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for Calculating Leaching-Based, Site-Specific Levels (LSSLs)**

Parameter of Interest	Chemical	RBGC (mg/L)	RBGC Key	Koc, Soil-Organic Carbon-Water Distribution coefficient (L/kg)	Koc Ref	Kd Distribution coefficient (L/kg) with $f_{oc}=0.001$	H' Henry's Law constant	H' Ref
	4-Methyl-2-pentanone	2.90E+00	N	1.34E+02	1	1.34E-01	5.74E-03	1
	Acetone	3.26E+01	N	5.75E-01	1	5.75E-04	1.59E-03	1
	Benzene	5.00E-03	M	6.20E+01	1	6.20E-02	2.28E-01	1
	Bromodichloromethane	1.08E-03	C	1.00E+02	1	1.00E-01	6.56E-02	1
	Bromoform	8.51E-03	C	8.71E+01	2	8.71E-02	2.19E-02	2
	Carbon tetrachloride	5.00E-03	M	1.52E+02	1	1.52E-01	1.25E+00	1
	Chlorobenzene	1.00E-01	M	2.24E+02	1	2.24E-01	1.52E-01	1
	Chloroethane	2.32E-02	C	1.47E+01	1	1.47E-02	4.51E-01	1
	Chloroform	1.62E-03	C	5.30E+01	1	5.30E-02	1.50E-01	1
	Chloromethane	8.11E-02	C	3.50E+01	1	3.50E-02	9.84E-01	1
	cis-1,2-Dichloroethene	7.00E-02	M	3.55E+01	1	3.55E-02	1.67E-01	1
	Dibromochloromethane	6.97E-04	C	6.31E+01	1	6.31E-02	3.53E-02	1
	Dichlorodifluoromethane	5.84E+00	N	5.80E+01	1	5.80E-02	4.10E+00	1
	Ethylbenzene	7.00E-01	M	2.04E+02	1	2.04E-01	3.23E-01	1
	Hexachlorobutadiene	8.62E-04	C	5.37E+04	2	5.37E+01	3.34E-01	2
	Isopropylbenzene	3.44E+00	N	2.20E+02	1	2.20E-01	4.92E+01	1
	Methylene chloride	5.00E-03	M	1.00E+01	1	1.00E-02	8.98E-02	1
	Naphthalene-VOC	4.29E-03	C	1.19E+03	1	1.19E+00	1.98E-02	1
	N-Butylbenzene	3.65E-01	N	2.83E+03	1	2.83E+00	5.37E-01	1
	N-Propylbenzene	3.65E-01	N	2.83E+03	1	2.83E+00	5.37E-01	1
	o-Xylene	4.26E+01	N	2.41E+02	1	2.41E-01	2.13E-01	1
	sec-Butylbenzene	3.65E-01	N	2.15E+03	1	2.15E+00	7.67E-01	1
	Styrene	1.00E-01	M	9.12E+02	1	9.12E-01	1.13E-01	1
	tert-Butylbenzene	3.65E-01	N	2.15E+03	1	2.15E+00	5.17E-01	1
	Tetrachloroethene	5.00E-03	M	2.65E+02	1	2.65E-01	7.54E-01	1
	Toluene	1.00E+00	M	1.40E+02	1	1.40E-01	2.72E-01	1
	Trichloroethene	5.00E-03	M	9.43E+01	1	9.43E-02	4.22E-01	1
	Trichlorofluoromethane	9.89E+00	N	1.60E+02	1	1.60E-01	3.98E+00	1
	Vinyl Chloride	2.00E-03	M	1.86E+01	1	1.86E-02	1.11E+00	1

Notes:

-- = No Kd, Koc, or Henry's Law value available for this chemical
 Kd = Koc x f_{oc}; a site-specific value of 0.001 was used to calculate Kd

RBGC Key Notes:

Chemicals without a RBGC and chemicals without Site detections are not shown in this table.
 M = USEPA Maximum contaminant level (MCL)
 C = LBCL calculated using cancer endpoint (NDEP, 2009)
 N = LBCL calculated using noncancer endpoint (NDEP, 2009)
 sat = soil saturation
 max = risk-based value is greater than 100,000 mg/kg

References for Koc and H' values:

- 1 = NDEP November 2009 BCL Spreadsheet (Calculations Tab)
(accessed at http://ndep.nv.gov/bmi/docs/bcl_calculations_nov_2009.xlsx)
- 2 = USEPA Soil Screening Guidance: User's Guide, EPA Document Number: EPA540/R-96/018, July 1996., Attachment C, Table C-1,
(accessed at <http://www.epa.gov/superfund/health/conmedia/soil/pdfs/attachc.pdf>)
- 3 = EC 2002
- 4 = Park et al. 1987