

Attachment 3

TABLE 5B

Calculation of Leaching-Based Site Specific Levels (LSSLs) for Organics

Parameter of Interest	Chemical	Kd Distribution coefficient with $f_{oc}=0.001$ (L/kg)	H' Henry's Law constant (unitless)	RBGC (mg/L)	NDEP Worker BCL (mg/kg)	LBCL (DAF=1) ⁴ (mg/kg)	LBCL (DAF=20) ⁴ (mg/kg)	Quaternary Alluvium Average (13.5') Aquifer Thickness	
								DAF	LSSL ^{1,2,3} (mg/kg)
Organochlorine Pesticides	4,4'-DDE	4.5E+03	8.6E-04	2.0E-04	7.8E+00	3.0E+00	6.0E+01	6.3E+02	5.6E+02
	4,4'-DDT	2.6E+03	3.3E-04	2.0E-04	7.8E+00	2.0E+00	4.0E+01	6.3E+02	3.3E+02
	Aldrin	2.5E+03	7.0E-03	4.0E-06	1.1E-01	2.0E-02	4.0E-01	4.3E+02	4.2E+00
	Alpha-BHC	1.2E+00	4.4E-04	1.1E-05	4.0E-01	3.0E-05	6.0E-04	1.5E+02	2.2E-03
	Beta-BHC	1.3E+00	3.1E-05	3.7E-05	1.4E+00	1.0E-04	2.0E-03	3.3E+01	1.7E-03
	Dieldrin	2.1E+01	6.2E-04	4.2E-06	1.2E-01	2.0E-04	4.0E-03	7.2E+02	6.5E-02
	Gamma-BHC (Lindane)	1.1E+00	5.7E-04	2.0E-04	1.9E+00	5.0E-04	1.0E-02	1.4E+02	3.3E-02
SVOCs	Benzo(a)anthracene	4.0E+02	1.4E-04	9.2E-05	2.3E+00	8.0E-02	1.6E+00	7.2E+02	2.6E+01
	Benzo(b)fluoranthene	1.2E+03	4.6E-03	9.2E-05	2.3E+00	2.0E-01	4.0E+00	7.2E+02	8.2E+01
	Hexachlorobenzene	5.5E+01	5.4E-02	1.0E-03	1.2E+00	1.0E-01	2.0E+00	9.0E+01	4.9E+00
VOCs	1,2,3-Trichloropropane	5.1E-02	1.1E+00	3.4E-05	1.6E+00	2.0E-05	4.1E-04	6.7E+02	7.0E-03
	1,2,4-Trichlorobenzene	1.7E+00	5.8E-02	7.0E-02	2.4E+02	3.0E-01	6.0E+00	7.2E+02	9.1E+01
	Benzene	6.2E-02	2.3E-01	5.0E-03	1.4E+00	2.0E-03	4.0E-02	4.6E+02	5.1E-01
	Carbon tetrachloride	1.5E-01	1.2E+00	5.0E-03	5.3E-01	3.0E-03	6.0E-02	7.2E+02	1.5E+00
	Chloroform	5.3E-02	1.5E-01	1.6E-03	5.2E-01	3.0E-02	6.0E-01	1.8E+02	5.9E-02
	Methylene chloride	1.0E-02	9.0E-02	5.0E-03	2.1E+01	1.0E-03	2.0E-02	4.5E+02	3.5E-01

Notes:

- 1 - Leaching-based, site-specific levels (LSSLs) are calculated using dilution attenuation factors (DAFs) calculated in Attachment 3, Table 4B, and the following site-specific soil properties from Attachment 3, Table 1A: water-filled porosity, $\theta_w=0.22$; air-filled porosity, $\theta_a=0.18$; and dry bulk density, $\rho_b=1.61$ kg/L.
- 2 - $LSSL = RBGC * DAF * (K_d + (\theta_w + \theta_a * H) / \rho_b)$
- 3 - LSSL not calculated for chemicals without a detection above the LBCL (DAF=20) or without an RBGC.
- 4 - Generic LBCLs are used for chemicals without an LBCL (see Attachment 3 Table 2B)

Abbreviations:

- LSSL = Leaching-based, site-specific levels
- RBGC = Risk-based groundwater concentration
- DAF = Dilution attenuation factor
- NE = Value not established
- LBCL = Leaching-based basic comparison levels
- f_{oc} = fraction of organic carbon
- BCL = Basic comparison level