

# Table 4a

20-Feb-2024

## Calculated Tier 2\*\* Soil RBSLs\* for Direct Contact Residential Receptor 0 - 2 feet bgs

Effects c: carcinogenic n: non-carcinogenic	Tier 1 Soil RBSLs, mg/kg Direct Contact Residential Receptor		Calculated Tier 2 RBSLs for Surface Soil Exceedances of Tier 1 RBSLs, mg/kg											
	Chemical / Analyte / Compound	0 - 2 feet bgs	Tier 2 RBSL = Tier 1 RBSL X 10 / (number of Non-Carcinogenic Analytes >Tier 1 RBSLs)						Tier 2 RBSL = Tier 1 RBSL X 10 / (number of Carcinogenic Analytes >Tier 1 RBSLs)					
			Number of Non-Carcinogenic Analytes >Tier 1 RBSLs						Number of Carcinogenic Analytes >Tier 1 RBSLs					
			1	2	3	4	5	6	1	2	3	4	5	6
<b>For Gasoline &amp; Light Hydrocarbons measured using the Montana Method for Volatile Petroleum Hydrocarbons (VPH)</b>														
c	MTBE	67	---	---	---	---	---	---	670	335	223	168	134	112
c	Benzene	1.7	---	---	---	---	---	---	17	8.5	5.7	4.3	3.4	2.8
n	Toluene	630	6,300	3,150	2,100	1,575	1,260	1,050	---	---	---	---	---	---
c	Ethylbenzene	8.4	---	---	---	---	---	---	84	42	28	21	16.8	14
n	Xylenes	75	750	375	250	188	150	125	---	---	---	---	---	---
c	Naphthalene	2.9	---	---	---	---	---	---	29	15	9.7	7.3	5.8	4.8
n	C9-C10 Aromatics	60	600	300	200	150	120	100	---	---	---	---	---	---
n	C5-C8 Aliphatics	90	900	450	300	225	180	150	---	---	---	---	---	---
n	C9-C12 Aliphatics	160	1,600	800	533	400	320	267	---	---	---	---	---	---
<b>Lead Scavengers</b>														
c	1,2-Dichloroethane (DCA)	0.67	---	---	---	---	---	---	6.7	3.4	2.23	1.68	1.34	1.12
c	1,2-Dibromoethane (EDB)	0.05	---	---	---	---	---	---	0.5	0.3	0.17	0.13	0.10	0.08
<b>For Diesel &amp; Heavy Hydrocarbons measured using Montana Method for Extractable Petroleum Hydrocarbons (EPH)</b>														
n	C9-C18 Aliphatics	290	2,900	1,450	967	725	580	483	---	---	---	---	---	---
n	C19-C36 Aliphatics	25,000	250,000	125,000	83,333	62,500	50,000	41,667	---	---	---	---	---	---
n	C11-C22 Aromatics	540	5,400	2,700	1,800	1,350	1,080	900	---	---	---	---	---	---
n	Acenaphthene	470	4,700	2,350	1,567	1,175	940	783	---	---	---	---	---	---
n	Anthracene	2,300	23,000	11,500	7,667	5,750	4,600	3,833	---	---	---	---	---	---
c	Benz(a)anthracene	1.6	---	---	---	---	---	---	16	8.0	5.3	4.0	3.2	2.7
c	Benzo(a)pyrene	0.17	---	---	---	---	---	---	1.7	0.85	0.57	0.43	0.34	0.28
c	Benzo(b)fluoranthene	1.7	---	---	---	---	---	---	17	8.5	5.7	4.3	3.4	2.8
c	Benzo(k)fluoranthene	17	---	---	---	---	---	---	170	85	57	43	34	28
c	Chrysene	170	---	---	---	---	---	---	1,700	850	567	425	340	283
c	Dibenzo(a,h)anthracene	0.17	---	---	---	---	---	---	1.7	0.85	0.57	0.43	0.34	0.28
n	Fluoranthene	310	3,100	1,550	1,033	775	620	517	---	---	---	---	---	---
n	Fluorene	310	3,100	1,550	1,033	775	620	517	---	---	---	---	---	---
c	Indeno(1,2,3-cd)pyrene	1.7	---	---	---	---	---	---	17	8.5	5.7	4.3	3.4	2.8
c	Naphthalene	2.9	---	---	---	---	---	---	29	15	9.7	7.3	5.8	4.8
n	Pyrene	230	2,300	1,150	767	575	460	383	---	---	---	---	---	---
c	1-Methylnaphthalene	25	---	---	---	---	---	---	250	125	83.3	62.5	50	41.7
n	2-Methylnaphthalene	31	310	155	103	78	62	52	---	---	---	---	---	---

\*Refer to RBCA Guidance Appendix B for derivation of Risk-Based Screening Levels (RBSLs)

mg/kg = milligrams per kilogram

\*\*Refer to RBCA Guidance Section 4.0 for details of Tier 2 Evaluation Process and calculation of Tier 2 RBSLs

bgs = below ground surface