

Attachment 3
TABLE 4A
Calculation of Dilution Attenuation Factors for Inorganics

Parameter of Interest	Chemical ¹	Hydraulic Conductivity K (ft/yr)	Gradient i	Infiltration Rate, I (ft/yr)	Average Aquifer Thickness, da (ft) ²	Mixing Zone, d (ft) ³	Source Length, L (ft) ⁴	DAF ⁵
Metals	Antimony	47,500	0.02	0.14	13.5	36	340	2.7E+02
	Arsenic	47,500	0.02	0.14	13.5	67	630	1.5E+02
	Barium	47,500	0.02	0.14	13.5	43	400	2.3E+02
	Boron	47,500	0.02	0.14	13.5	56	530	1.7E+02
	Cadmium	47,500	0.02	0.14	13.5	32	300	3.0E+02
	Chromium (Total)	47,500	0.02	0.14	13.5	221	2,100	4.5E+01
	Chromium (VI)	47,500	0.02	0.14	13.5	22	200	4.5E+02
	Cobalt	47,500	0.02	0.14	13.5	56	530	1.7E+02
	Lead	47,500	0.02	0.14	13.5	42	390	2.3E+02
	Magnesium	47,500	0.02	0.14	13.5	159	1,500	6.2E+01
	Manganese	47,500	0.02	0.14	13.5	138	1,300	7.1E+01
	Mercury	47,500	0.02	0.14	13.5	14	130	6.9E+02
	Molybdenum	47,500	0.02	0.14	13.5	21	200	4.7E+02
	Nickel	47,500	0.02	0.14	13.5	44	420	2.2E+02
	Thallium	47,500	0.02	0.14	13.5	29	280	3.3E+02
Perchlorate	Perchlorate	47,500	0.02	0.14	13.5	597	5,600	1.7E+01

Notes:

- 1 - DAF is calculated only for chemicals which had a detect greater than the LBCL (DAF=20).
- 2 - Average aquifer thickness defined as the mean of the measured values from the wells at the northern Site boundary (see Attachment 3, Table 1B).
- 3 - Aquifer mixing zone depth $d = (0.0112L^2)^{0.5} + da[1 - \exp(-LI/Kida)]$ (Equation 4 from BCL guidance).
If $d > da$, use aquifer thickness instead of mixing zone thickness.
- 4 - Source lengths measured based on Phase A and B soil samples that exceed LBCLs for DAF= 20, as discussed in Attachment 3.
- 5 - Dilution attenuation factor $DAF = 1 + Kid/IL$ (Equation 3 from BCL guidance).

Abbreviations:

DAF: Dilution attenuation factor
 RBGC: Risk-based groundwater concentration