

**APPENDIX Q**  
**HUMAN HEALTH RISK ASSESSMENT TABLES**

**Table Q-1. Summary of Site-Related Chemicals and COPC Screening for Load Line 1 Groundwater**

Analysis Type	Analyte <sup>a</sup>	CAS Number	Results > Detection Units	Average <sup>b</sup> Result	Minimum Detect	Maximum Detect	95% UCL of Mean	Exposure Concentration	Site Background Criteria <sup>c</sup>	SRC?	1/10th	Max Detect >	Ohio	
											Region 9 Tap Water Criteria	Tap Water Criteria?	Drinking Water Standard <sup>d</sup>	COPC?
<i>Load Line 1 Building Area</i>														
Explosives	1,3,5-Trinitrobenzene	99-35-4	µg/L	6/ 18	1.98E+00	1.10E-01	1.20E+01	3.45E+00	3.45E+00	Yes	1.09E+02	No	No	
Explosives	1,3-Dinitrobenzene	99-65-0	µg/L	10/ 18	2.97E-01	4.50E-02	1.30E+00	4.62E-01	4.62E-01	Yes	3.65E-01	Yes	Yes	
Explosives	2,4,6-Trinitrotoluene	118-96-7	µg/L	8/ 18	3.11E+00	8.50E-02	1.60E+01	5.38E+00	5.38E+00	Yes	2.24E-01	Yes	Yes	
Explosives	2,4-Dinitrotoluene	121-14-2	µg/L	8/ 18	1.35E+00	6.00E-02	7.90E+00	2.36E+00	2.36E+00	Yes	9.89E-03	Yes	Yes	
Explosives	2,6-Dinitrotoluene	606-20-2	µg/L	1/ 18	9.14E-01	3.80E+00	3.80E+00	1.52E+00	1.52E+00	Yes	9.89E-03	Yes	Yes	
Explosives	2-Amino-4,6-dinitrotoluene	35572-78-2	µg/L	5/ 9	6.94E+00	3.00E-01	2.90E+01	1.36E+01	1.36E+01	Yes		None	Yes	
Explosives	3-Nitrotoluene	99-08-1	µg/L	2/ 18	2.02E-01	1.40E-01	1.60E-01	2.94E-01	1.60E-01	Yes	6.08E+00	No	No	
Explosives	4-Amino-2,6-dinitrotoluene	19406-51-0	µg/L	5/ 9	6.70E+00	3.00E-01	2.50E+01	1.31E+01	1.31E+01	Yes		None	Yes	
Explosives	HMX	2691-41-0	µg/L	2/ 18	1.39E+00	9.20E-01	1.20E+01	2.55E+00	2.55E+00	Yes	1.82E+02	No	No	
Explosives	Nitroglycerin	55-63-0	µg/L	2/ 18	5.04E+00	4.20E+00	2.70E+01	8.59E+00	8.59E+00	Yes	4.80E-01	Yes	Yes	
Explosives	RDX	121-82-4	µg/L	8/ 18	5.49E+00	1.50E-01	8.80E+01	1.39E+01	1.39E+01	Yes	6.11E-02	Yes	Yes	
Explosives	Tetryl	479-45-8	µg/L	2/ 18	1.92E-01	1.20E-01	1.40E-01	2.85E-01	1.40E-01	Yes	3.65E+01	No	No	
Metals	Aluminum	7429-90-5	µg/L	6/ 16	3.95E+02	9.60E+01	2.50E+03	7.14E+02	7.14E+02	Yes	3.65E+03	No	50 to 200 <sup>f</sup>	
Metals	Antimony	7440-36-0	µg/L	1/ 18	2.48E+00	2.20E+00	2.20E+00	2.51E+00	2.20E+00	Yes	1.46E+00	Yes	6	
Metals	Arsenic	7440-38-2	µg/L	4/ 18	5.51E+00	4.40E+00	2.60E+01	7.84E+00	7.84E+00	Yes	4.48E-03	Yes	50	
Metals	Barium	7440-39-3	µg/L	18/ 18	2.64E+01	3.80E+00	7.50E+01	4.32E+01	4.32E+01	2.56E+02	No	2.55E+02	No	2000
Metals	Cadmium	7440-43-9	µg/L	2/ 18	2.45E+00	1.10E+00	3.00E+00	2.60E+00	2.60E+00	Yes	1.82E+00	Yes	5	
Metals	Calcium	7440-70-2	µg/L	18/ 18	6.72E+04	1.85E+04	3.99E+05	1.04E+05	1.04E+05	5.31E+04	No	None	No	
Metals	Cobalt	7440-48-4	µg/L	12/ 18	3.66E+01	1.60E+00	2.60E+02	1.25E+02	1.25E+02	Yes	2.19E+02	Yes	Yes	
Metals	Copper	7440-50-8	µg/L	1/ 18	1.27E+01	1.80E+01	1.80E+01	1.33E+01	1.33E+01	Yes	1.36E+02	No	1300 <sup>g</sup>	
Metals	Cyanide	57-12-5	µg/L	1/ 17	5.04E+00	5.10E+00	5.10E+00	5.09E+00	5.09E+00	Yes	6.20E-01	Yes	200	
Metals	Iron	7439-89-6	µg/L	10/ 18	1.22E+03	6.70E+01	9.00E+03	2.13E+03	2.13E+03	1.43E+03	No	1.09E+03	Yes	300 <sup>f</sup>
Metals	Magnesium	7439-95-4	µg/L	18/ 18	1.27E+04	2.90E+03	2.58E+04	1.85E+04	1.85E+04	1.50E+04	No	None	No	
Metals	Manganese	7439-96-5	µg/L	18/ 18	1.14E+03	6.10E+01	4.80E+03	3.05E+03	3.05E+03	1.34E+03	Yes	8.76E+01	Yes	50 <sup>f</sup>
Metals	Nickel	7440-02-0	µg/L	17/ 18	4.12E+01	4.90E+00	1.30E+02	8.27E+01	8.27E+01	8.34E+01	Yes	7.30E+01	Yes	100
Metals	Potassium	7440-09-7	µg/L	18/ 18	3.13E+03	1.20E+03	8.80E+03	4.03E+03	4.03E+03	5.77E+03	No	None	No	
Metals	Selenium	7782-49-2	µg/L	1/ 18	2.59E+00	4.10E+00	4.10E+00	2.74E+00	2.74E+00	Yes	1.82E+01	No	50	
Metals	Sodium	7440-23-5	µg/L	18/ 18	6.98E+03	9.80E+02	3.73E+04	1.12E+04	1.12E+04	5.14E+04	No	None	No	
Metals	Thallium	6533-73-9	µg/L	1/ 18	9.78E-01	6.00E-01	6.00E-01	1.02E+00	6.00E-01	Yes	2.41E-01	Yes	2	
Metals	Zinc	7440-66-6	µg/L	13/ 18	1.47E+02	1.30E+01	6.20E+02	6.49E+02	6.20E+02	5.23E+01	Yes	1.09E+03	No	5000 <sup>f</sup>
Organics-Pesticide/PCB	4,4'-DDE	72-55-9	µg/L	1/ 11	1.25E+00	1.30E+01	1.30E+01	3.38E+00	3.38E+00	Yes	1.98E-02	Yes	Yes	
Organics-Semivolatile	Bis(2-ethylhexyl)phthalate	117-81-7	µg/L	1/ 11	4.87E+00	3.60E+00	3.60E+00	5.10E+00	3.60E+00	Yes	4.80E-01	Yes	6	
Organics-Volatile	Chloroform	67-66-3	µg/L	1/ 11	2.38E+00	1.20E+00	1.20E+00	2.60E+00	1.20E+00	Yes	1.65E-02	Yes	80 <sup>e</sup>	
Organics-Volatile	Methylene chloride	75-09-2	µg/L	6/ 11	2.41E+00	2.10E+00	2.70E+00	2.51E+00	2.51E+00	Yes	4.28E-01	Yes	Yes	
Organics-Volatile	Toluene	108-88-3	µg/L	1/ 11	2.34E+00	7.70E-01	7.70E-01	2.63E+00	7.70E-01	Yes	7.23E+01	No	1000	
<i>North and South of Criggy's Pond</i>														
Metals	Arsenic	7440-38-2	µg/L	2/ 4	3.38E+00	3.80E+00	4.70E+00	4.64E+00	4.64E+00	1.17E+01	No	4.48E-03	Yes	50
Metals	Barium	7440-39-3	µg/L	4/ 4	5.65E+01	4.90E+01	6.20E+01	6.37E+01	6.20E+01	8.21E+01	No	2.55E+02	No	2000
Metals	Calcium	7440-70-2	µg/L	4/ 4	6.85E+04	5.90E+04	7.76E+04	9.14E+04	7.76E+04	1.15E+05	No	None	No	
Metals	Cobalt	7440-48-4	µg/L	1/ 4	1.91E+01	1.50E+00	1.50E+00	3.30E+01	1.50E+00	Yes	2.19E+02	No	No	
Metals	Iron	7439-89-6	µg/L	3/ 4	4.15E+02	2.50E+02	7.10E+02	8.04E+02	7.10E+02	2.79E+02	No	1.09E+03	No	300 <sup>f</sup>
Metals	Magnesium	7439-95-4	µg/L	4/ 4	1.33E+04	9.40E+03	1.76E+04	1.86E+04	1.76E+04	4.33E+04	No	None	No	

**Table Q-1. Summary of Site-Related Chemicals and COPC Screening for Load Line 1 Groundwater (continued)**

Analysis Type	Analyte <sup>a</sup>	CAS Number	Units	Results > Detection		Average <sup>b</sup> Result	Minimum Detect	Maximum Detect	95% UCL of Mean	Exposure Concentration	Site Background		1/10th Region 9 Tap Water Criteria	Max Detect > Tap Water Criteria?	Ohio Drinking Water Standard <sup>d</sup>	COPC?
				Limit	Limit						Criteria <sup>c</sup>	SRC?				
Metals	Manganese	7439-96-5	µg/L	4/ 4	2.53E+02	1.40E+02	4.20E+02	4.14E+02	4.14E+02	1.02E+03	No	8.76E+01	Yes	50 <sup>f</sup>	No	
Metals	Potassium	7440-09-7	µg/L	3/ 4	8.38E+02	6.90E+02	1.20E+03	1.22E+03	1.20E+03	2.89E+03	No		None		No	
Metals	Sodium	7440-23-5	µg/L	4/ 4	7.58E+03	4.90E+03	1.00E+04	2.42E+04	1.00E+04	4.57E+04	No		None		No	
Metals	Zinc	7440-66-6	µg/L	1/ 3	7.33E+01	2.00E+02	2.00E+02	2.58E+02	2.00E+02	6.09E+01	Yes	1.09E+03	No	5000 <sup>f</sup>	No	
Organics-Volatile	Methylene chloride	75-09-2	µg/L	1/ 2	2.40E+00	2.30E+00	2.30E+00	3.03E+00	2.30E+00		Yes	4.28E-01	Yes		Yes	

<sup>a</sup> Only analytes with detected concentrations are shown in this summary.

<sup>b</sup> In some cases the average result may exceed the maximum detect because one-half of the laboratory reporting limit was used as a surrogate value in calculation of summary statistics.

<sup>c</sup> Metals that were never detected in background samples have been assigned a background criterion of 0 µg/L. Site background criteria for the LL1 Building Area are for filtered bedrock samples.

Site background criteria for the Criggy's Pond area are for filtered unconsolidated samples.

<sup>d</sup> Public drinking water standards for Ohio [Ohio Administrative Code (OAC) 3745-81-11 and 3745-81-12, Revision Date: March 1, 2002].

<sup>e</sup> Value for total trihalomethanes including chloroform.

<sup>f</sup> Value is a Secondary MCL.

<sup>g</sup> Value may not be exceeded by more than 10% of tap water samples.

SRC = site-related chemical.

COPC = chemical of potential concern.

Table Q-2. Summary of Site-Related Chemicals and COPC Screening for Load Line 1 Surface Water

Analysis Type	Analyte <sup>a</sup>	CAS Number	Units	Results >			95% UCL			Site Background Criteria <sup>c</sup>	SRC?	1/10th	Max. Detect >	
				Detection Limit	Average Result <sup>b</sup>	Minimum Detect	Maximum Detect	of Mean	Exposure Concentration			Region 9 Tap Water	Criteria	Criteria?
<i>Off-AOC</i>														
Explosives	1,3-Dinitrobenzene	99-65-0	µg/L	1/ 12	9.75E-02	7.00E-02	7.00E-02	1.02E-01	7.00E-02		Yes	3.65E-01	No	No
Explosives	2,4,6-Trinitrotoluene	118-96-7	µg/L	2/ 12	1.03E-01	6.80E-02	1.10E-01	1.13E-01	1.10E-01		Yes	2.24E-01	No	No
Explosives	2,4-Dinitrotoluene	121-14-2	µg/L	2/ 12	8.79E-02	1.00E-01	2.70E-01	1.19E-01	1.19E-01		Yes	9.89E-03	Yes	Yes
Explosives	2,6-Dinitrotoluene	606-20-2	µg/L	1/ 12	7.17E-02	1.10E-01	1.10E-01	7.98E-02	7.98E-02		Yes	9.89E-03	Yes	Yes
Explosives	2-Amino-4,6-Dinitrotoluene	35572-78-2	µg/L	2/ 12	1.25E-01	2.20E-01	2.20E-01	1.49E-01	1.49E-01		Yes		None	Yes
Explosives	2-Nitrotoluene	88-72-2	µg/L	1/ 12	1.14E-01	2.10E-01	2.10E-01	1.32E-01	1.32E-01		Yes	6.08E+00	No	No
Explosives	3-Nitrotoluene	99-08-1	µg/L	1/ 12	1.08E-01	1.40E-01	1.40E-01	1.18E-01	1.18E-01		Yes	6.08E+00	No	No
Explosives	4-Amino-2,6-Dinitrotoluene	19406-51-0	µg/L	3/ 12	1.21E-01	1.00E-01	2.00E-01	1.42E-01	1.42E-01		Yes		None	Yes
Explosives	4-Nitrotoluene	99-99-0	µg/L	3/ 12	1.20E-01	1.00E-01	2.70E-01	1.46E-01	1.46E-01		Yes	6.08E+00	No	No
Explosives	RDX	121-82-4	µg/L	1/ 12	2.54E-01	1.60E-01	1.60E-01	2.80E-01	1.60E-01		Yes	6.11E-02	Yes	Yes
Explosives	Tetryl	479-45-8	µg/L	1/ 12	1.07E-01	1.30E-01	1.30E-01	1.16E-01	1.16E-01		Yes	3.65E+01	No	No
Metals	Aluminum	7429-90-5	µg/L	3/ 12	2.15E+02	4.00E+02	9.50E+02	3.72E+02	3.72E+02	3.37E+03	No	3.65E+03	No	No
Metals	Arsenic	7440-38-2	µg/L	9/ 12	6.32E+00	4.40E+00	1.10E+01	7.99E+00	7.99E+00	3.20E+00	Yes	4.48E-03	Yes	Yes
Metals	Barium	7440-39-3	µg/L	12/ 12	4.18E+01	2.20E+01	5.80E+01	4.72E+01	4.72E+01	4.75E+01	Yes	2.55E+02	No	No
Metals	Calcium	7440-70-2	µg/L	12/ 12	5.20E+04	2.42E+04	9.09E+04	6.36E+04	6.36E+04	4.14E+04	No		None	No
Metals	Cobalt	7440-48-4	µg/L	3/ 12	1.97E+01	2.60E+00	4.60E+00	2.47E+01	4.60E+00	0.00E+00	Yes	2.19E+02	No	No
Metals	Iron	7439-89-6	µg/L	12/ 12	1.98E+03	5.30E+02	4.90E+03	3.63E+03	3.63E+03	2.56E+03	No	1.09E+03	Yes	No
Metals	Lead	7439-92-1	µg/L	1/ 12	1.58E+00	2.50E+00	2.50E+00	1.73E+00	1.73E+00	0.00E+00	Yes		None	Yes
Metals	Magnesium	7439-95-4	µg/L	12/ 12	1.34E+04	4.80E+03	2.12E+04	1.65E+04	1.65E+04	1.08E+04	No		None	No
Metals	Manganese	7439-96-5	µg/L	12/ 12	8.96E+02	1.30E+02	3.30E+03	1.79E+03	1.79E+03	3.91E+02	Yes	8.76E+01	Yes	Yes
Metals	Nickel	7440-02-0	µg/L	2/ 12	1.20E+01	2.40E+00	9.60E+00	1.65E+01	9.60E+00	0.00E+00	Yes	7.30E+01	No	No
Metals	Potassium	7440-09-7	µg/L	10/ 12	2.64E+03	1.80E+03	5.00E+03	3.19E+03	3.19E+03	3.17E+03	No		None	No
Metals	Sodium	7440-23-5	µg/L	10/ 12	4.39E+03	3.20E+03	6.70E+03	5.27E+03	5.27E+03	2.13E+04	No		None	No
Metals	Vanadium	7440-62-2	µg/L	3/ 12	1.91E+01	1.10E+00	2.00E+00	2.46E+01	2.00E+00	0.00E+00	Yes	2.55E+01	No	No
Metals	Zinc	7440-66-6	µg/L	4/ 12	2.13E+01	1.70E+01	7.10E+01	3.33E+01	3.33E+01	4.20E+01	Yes	1.09E+03	No	No
Organics-Semivolatile	Bis(2-ethylhexyl)phthalate	117-81-7	µg/L	1/ 2	8.50E+00	1.20E+01	1.20E+01	3.06E+01	1.20E+01		Yes	4.80E-01	Yes	Yes
<i>Outlet C and Charlie's Pond</i>														
Explosives	3-Nitrotoluene	99-08-1	µg/L	1/ 1	1.70E-01	1.70E-01	1.70E-01		1.70E-01		Yes	6.08E+00	No	No
Metals	Aluminum	7429-90-5	µg/L	1/ 1	1.30E+03	1.30E+03	1.30E+03		1.30E+03	3.37E+03	No	3.65E+03	No	No
Metals	Arsenic	7440-38-2	µg/L	1/ 1	3.10E+01	3.10E+01	3.10E+01		3.10E+01	3.20E+00	Yes	4.48E-03	Yes	Yes
Metals	Barium	7440-39-3	µg/L	1/ 1	4.90E+01	4.90E+01	4.90E+01		4.90E+01	4.75E+01	Yes	2.55E+02	No	No
Metals	Calcium	7440-70-2	µg/L	1/ 1	1.39E+04	1.39E+04	1.39E+04		1.39E+04	4.14E+04	No		None	No
Metals	Chromium	7440-47-3	µg/L	1/ 1	2.40E+00	2.40E+00	2.40E+00		2.40E+00	0.00E+00	Yes	1.09E+01	No	No
Metals	Iron	7439-89-6	µg/L	1/ 1	1.04E+04	1.04E+04	1.04E+04		1.04E+04	2.56E+03	No	1.09E+03	Yes	No
Metals	Lead	7439-92-1	µg/L	1/ 1	3.10E+00	3.10E+00	3.10E+00		3.10E+00	0.00E+00	Yes		None	Yes
Metals	Magnesium	7439-95-4	µg/L	1/ 1	3.60E+03	3.60E+03	3.60E+03		3.60E+03	1.08E+04	No		None	No
Metals	Manganese	7439-96-5	µg/L	1/ 1	5.10E+02	5.10E+02	5.10E+02		5.10E+02	3.91E+02	Yes	8.76E+01	Yes	Yes
Metals	Nickel	7440-02-0	µg/L	1/ 1	4.20E+00	4.20E+00	4.20E+00		4.20E+00	0.00E+00	Yes	7.30E+01	No	No
Metals	Potassium	7440-09-7	µg/L	1/ 1	3.70E+03	3.70E+03	3.70E+03		3.70E+03	3.17E+03	No		None	No
Metals	Sodium	7440-23-5	µg/L	1/ 1	2.60E+03	2.60E+03	2.60E+03		2.60E+03	2.13E+04	No		None	No
Metals	Vanadium	7440-62-2	µg/L	1/ 1	2.60E+00	2.60E+00	2.60E+00		2.60E+00	0.00E+00	Yes	2.55E+01	No	No
Metals	Zinc	7440-66-6	µg/L	1/ 1	2.90E+01	2.90E+01	2.90E+01		2.90E+01	4.20E+01	No	1.09E+03	No	No

Table Q-2. Summary of Site-Related Chemicals and COPC Screening for Load Line 1 Surface Water (continued)

Analysis Type	Analyte <sup>a</sup>	CAS Number	Units	Results > Detection		Average Result <sup>b</sup>	Minimum Detect	Maximum Detect	95% UCL of Mean	Exposure Concentration	Site Background Criteria <sup>c</sup>	SRC?	1/10th	Max. Detect > Tap Water Criteria?	COPC?
				Limit	Tap Water Criteria										
<i>Outlets D,E,F and Criggy's Pond</i>															
Metals	Arsenic	7440-38-2	µg/L	1/ 1	5.10E+00	5.10E+00	5.10E+00	5.10E+00	5.10E+00	3.20E+00	Yes	4.48E-03	Yes	Yes	
Metals	Barium	7440-39-3	µg/L	1/ 1	2.70E+01	2.70E+01	2.70E+01	2.70E+01	2.70E+01	4.75E+01	No	2.55E+02	No	No	
Metals	Calcium	7440-70-2	µg/L	1/ 1	1.74E+04	1.74E+04	1.74E+04	1.74E+04	1.74E+04	4.14E+04	No		None	No	
Metals	Iron	7439-89-6	µg/L	1/ 1	3.20E+02	3.20E+02	3.20E+02	3.20E+02	3.20E+02	2.56E+03	No	1.09E+03	No	No	
Metals	Magnesium	7439-95-4	µg/L	1/ 1	4.60E+03	4.60E+03	4.60E+03	4.60E+03	4.60E+03	1.08E+04	No		None	No	
Metals	Manganese	7439-96-5	µg/L	1/ 1	1.70E+02	1.70E+02	1.70E+02	1.70E+02	1.70E+02	3.91E+02	No	8.76E+01	Yes	No	
Metals	Potassium	7440-09-7	µg/L	1/ 1	2.50E+03	2.50E+03	2.50E+03	2.50E+03	2.50E+03	3.17E+03	No		None	No	
Metals	Sodium	7440-23-5	µg/L	1/ 1	2.70E+03	2.70E+03	2.70E+03	2.70E+03	2.70E+03	2.13E+04	No		None	No	
<i>Sewer Lines</i>															
Explosives	2,4,6-Trinitrotoluene	118-96-7	µg/L	1/ 2	3.96E+01	7.90E+01	7.90E+01	2.89E+02	7.90E+01		Yes	2.24E-01	Yes	Yes	
Explosives	2-Amino-4,6-Dinitrotoluene	35572-78-2	µg/L	1/ 2	1.31E+01	2.60E+01	2.60E+01	9.48E+01	2.60E+01		Yes		None	Yes	
Explosives	4-Amino-2,6-Dinitrotoluene	19406-51-0	µg/L	1/ 2	2.31E+01	4.60E+01	4.60E+01	1.68E+02	4.60E+01		Yes		None	Yes	
Explosives	HMX	2691-41-0	µg/L	1/ 2	5.75E-01	9.00E-01	9.00E-01	2.63E+00	9.00E-01		Yes	1.82E+02	No	No	
Explosives	RDX	121-82-4	µg/L	1/ 2	3.98E+00	7.70E+00	7.70E+00	2.75E+01	7.70E+00		Yes	6.11E-02	Yes	Yes	
Metals	Aluminum	7429-90-5	µg/L	2/ 2	1.75E+03	1.70E+03	1.80E+03	2.07E+03	1.80E+03	3.37E+03	No	3.65E+03	No	No	
Metals	Antimony	7440-36-0	µg/L	1/ 2	3.15E+00	3.80E+00	3.80E+00	7.25E+00	3.80E+00	0.00E+00	Yes	1.46E+00	Yes	Yes	
Metals	Barium	7440-39-3	µg/L	2/ 2	6.85E+01	5.60E+01	8.10E+01	1.47E+02	8.10E+01	4.75E+01	Yes	2.55E+02	No	No	
Metals	Calcium	7440-70-2	µg/L	2/ 2	7.16E+04	4.70E+04	9.62E+04	2.27E+05	9.62E+04	4.14E+04	No		None	No	
Metals	Chromium	7440-47-3	µg/L	2/ 2	2.35E+00	1.90E+00	2.80E+00	5.19E+00	2.80E+00	0.00E+00	Yes	1.09E+01	No	No	
Metals	Cobalt	7440-48-4	µg/L	1/ 2	1.37E+01	2.30E+00	2.30E+00	8.53E+01	2.30E+00	0.00E+00	Yes	2.19E+02	No	No	
Metals	Copper	7440-50-8	µg/L	1/ 2	1.38E+01	1.50E+01	1.50E+01	2.16E+01	1.50E+01	7.90E+00	Yes	1.36E+02	No	No	
Metals	Iron	7439-89-6	µg/L	2/ 2	8.95E+03	1.80E+03	1.61E+04	5.41E+04	1.61E+04	2.56E+03	No	1.09E+03	Yes	No	
Metals	Lead	7439-92-1	µg/L	2/ 2	1.05E+01	9.00E+00	1.20E+01	2.00E+01	1.20E+01	0.00E+00	Yes		None	Yes	
Metals	Magnesium	7439-95-4	µg/L	2/ 2	4.45E+03	3.50E+03	5.40E+03	1.05E+04	5.40E+03	1.08E+04	No		None	No	
Metals	Manganese	7439-96-5	µg/L	2/ 2	4.55E+02	1.20E+02	7.90E+02	2.57E+03	7.90E+02	3.91E+02	Yes	8.76E+01	Yes	Yes	
Metals	Nickel	7440-02-0	µg/L	2/ 2	5.55E+00	2.50E+00	8.60E+00	2.48E+01	8.60E+00	0.00E+00	Yes	7.30E+01	No	No	
Metals	Potassium	7440-09-7	µg/L	2/ 2	4.70E+03	4.20E+03	5.20E+03	7.86E+03	5.20E+03	3.17E+03	No		None	No	
Metals	Selenium	7782-49-2	µg/L	1/ 2	4.50E+00	6.50E+00	6.50E+00	1.71E+01	6.50E+00	0.00E+00	Yes	1.82E+01	No	No	
Metals	Sodium	7440-23-5	µg/L	2/ 2	4.10E+03	3.70E+03	4.50E+03	6.63E+03	4.50E+03	2.13E+04	No		None	No	
Metals	Vanadium	7440-62-2	µg/L	2/ 2	4.55E+00	4.10E+00	5.00E+00	7.39E+00	5.00E+00	0.00E+00	Yes	2.55E+01	No	No	
Metals	Zinc	7440-66-6	µg/L	2/ 2	4.05E+01	2.40E+01	5.70E+01	1.45E+02	5.70E+01	4.20E+01	Yes	1.09E+03	No	No	
Organics-Semivolatiles	Bis(2-ethylhexyl)phthalate	117-81-7	µg/L	1/ 2	4.10E+00	3.20E+00	3.20E+00	9.78E+00	3.20E+00		Yes	4.80E-01	Yes	Yes	
Organics-Semivolatiles	Chrysene	218-01-9	µg/L	1/ 2	3.05E+00	1.10E+00	1.10E+00	1.54E+01	1.10E+00		Yes	9.21E-01	Yes	Yes	
Organics-Semivolatiles	Fluoranthene	206-44-0	µg/L	1/ 2	3.45E+00	1.90E+00	1.90E+00	1.32E+01	1.90E+00		Yes	1.46E+02	No	No	
Organics-Semivolatiles	Pyrene	129-00-0	µg/L	1/ 2	3.20E+00	1.40E+00	1.40E+00	1.46E+01	1.40E+00		Yes	1.83E+01	No	No	

<sup>a</sup> Only analytes with detected concentrations are shown in this summary.

<sup>b</sup> In some cases the average result may exceed the maximum detect because one-half of the laboratory reporting limit was used as a surrogate value in calculation of summary statistics.

<sup>c</sup> Metals that were never detected in background samples have been assigned a background criterion of 0 µg/L.

SRC = site-related chemical.

COPC = chemical of potential concern.

**Table Q-3. Summary of Site-Related Chemicals and COPC Screening for Load Line 1 Sediment**

Analysis Type	Analyte <sup>d</sup>	CAS Number	Units	Results >			95% UCL			Site Background Criteria <sup>c</sup>	SRC?	1/10th Region 9		1/10th Region 9		COPC?
				Detection Limit	Average Result <sup>b</sup>	Minimum Detect	Maximum Detect	of Exposure Concentration	Mean			Resid. Soil	Max. Detect > Resid. Soil	Resid. Soil	Max. Detect > Ind. Soil	
<i>North Area</i>																
Metals	Aluminum	7429-90-5	mg/kg	1/ 1	1.23E+04	1.23E+04	1.23E+04		1.23E+04	1.39E+04	No	7.61E+03	Yes	1.00E+04	Yes	No
Metals	Arsenic	7440-38-2	mg/kg	1/ 1	8.50E+00	8.50E+00	8.50E+00		8.50E+00	1.95E+01	No	3.90E-02	Yes	2.73E-01	Yes	No
Metals	Barium	7440-39-3	mg/kg	1/ 1	1.33E+02	1.33E+02	1.33E+02		1.33E+02	1.23E+02	Yes	5.37E+02	No	1.00E+04	No	No
Metals	Beryllium	7440-41-7	mg/kg	1/ 1	8.40E-01	8.40E-01	8.40E-01		8.40E-01	3.80E-01	Yes	1.54E+01	No	2.24E+02	No	No
Metals	Cadmium	7440-43-9	mg/kg	1/ 1	4.40E-01	4.40E-01	4.40E-01		4.40E-01	0.00E+00	Yes	3.70E+00	No	8.09E+01	No	No
Metals	Calcium	7440-70-2	mg/kg	1/ 1	2.64E+03	2.64E+03	2.64E+03		2.64E+03	5.51E+03	No		None		None	No
Metals	Chromium	7440-47-3	mg/kg	1/ 1	1.64E+01	1.64E+01	1.64E+01		1.64E+01	1.81E+01	No	3.01E+00	Yes	6.40E+00	Yes	No
Metals	Cobalt	7440-48-4	mg/kg	1/ 1	1.01E+01	1.01E+01	1.01E+01		1.01E+01	9.10E+00	Yes	4.69E+02	No	1.00E+04	No	No
Metals	Copper	7440-50-8	mg/kg	1/ 1	1.83E+01	1.83E+01	1.83E+01		1.83E+01	2.76E+01	No	2.91E+02	No	7.59E+03	No	No
Metals	Iron	7439-89-6	mg/kg	1/ 1	1.98E+04	1.98E+04	1.98E+04		1.98E+04	2.82E+04	No	2.35E+03	Yes	1.00E+04	Yes	No
Metals	Lead	7439-92-1	mg/kg	1/ 1	2.77E+01	2.77E+01	2.77E+01		2.77E+01	2.74E+01	Yes	4.00E+01	No	7.50E+01	No	No
Metals	Magnesium	7439-95-4	mg/kg	1/ 1	2.09E+03	2.09E+03	2.09E+03		2.09E+03	2.76E+03	No		None		None	No
Metals	Manganese	7439-96-5	mg/kg	1/ 1	7.55E+02	7.55E+02	7.55E+02		7.55E+02	1.95E+03	No	1.76E+02	Yes	3.23E+03	No	No
Metals	Mercury	7439-97-6	mg/kg	1/ 1	9.00E-02	9.00E-02	9.00E-02		9.00E-02	5.90E-02	Yes	2.30E+00	No	6.10E+01	No	No
Metals	Nickel	7440-02-0	mg/kg	1/ 1	2.48E+01	2.48E+01	2.48E+01		2.48E+01	1.77E+01	Yes	1.56E+02	No	4.09E+03	No	No
Metals	Potassium	7440-09-7	mg/kg	1/ 1	1.20E+03	1.20E+03	1.20E+03		1.20E+03	1.95E+03	No		None		None	No
Metals	Selenium	7782-49-2	mg/kg	1/ 1	1.60E+00	1.60E+00	1.60E+00		1.60E+00	1.70E+00	No	3.91E+01	No	1.02E+03	No	No
Metals	Thallium	7440-28-0	mg/kg	1/ 1	7.00E-01	7.00E-01	7.00E-01		7.00E-01	8.90E-01	No	5.20E-01	Yes	1.30E+01	No	No
Metals	Vanadium	7440-62-2	mg/kg	1/ 1	2.18E+01	2.18E+01	2.18E+01		2.18E+01	2.61E+01	No	5.47E+01	No	1.43E+03	No	No
Metals	Zinc	7440-66-6	mg/kg	1/ 1	2.20E+02	2.20E+02	2.20E+02		2.20E+02	5.32E+02	No	2.35E+03	No	1.00E+04	No	No
ORTOC	Total Organic Carbon	N997	mg/kg	1/ 1	1.80E+04	1.80E+04	1.80E+04		1.80E+04		Yes		None		None	Yes
<i>Off-AOC</i>																
Explosives	1,3-Dinitrobenzene	99-65-0	mg/kg	1/ 3	1.00E-01	5.10E-02	5.10E-02	1.72E-01	5.10E-02		Yes	6.11E-01	No	8.81E+00	No	No
Explosives	2,4-Dinitrotoluene	121-14-2	mg/kg	1/ 3	9.93E-02	4.80E-02	4.80E-02	1.74E-01	4.80E-02		Yes	7.20E-02	No	3.60E-01	No	No
Explosives	4-Amino-2,6-Dinitrotoluene	19406-51-0	mg/kg	1/ 3	1.17E-01	1.00E-01	1.00E-01	1.41E-01	1.00E-01		Yes		None		None	Yes
Explosives	Nitrobenzene	98-95-3	mg/kg	1/ 3	1.20E-01	1.10E-01	1.10E-01	1.35E-01	1.10E-01		Yes	1.96E+00	No	1.14E+01	No	No
Explosives	Nitrocellulose	9004-70-0	mg/kg	1/ 3	2.57E+00	5.70E+00	5.70E+00	7.14E+00	5.70E+00		Yes		None		None	Yes
Explosives	Nitroguanidine	556-88-7	mg/kg	1/ 3	1.09E-01	7.60E-02	7.60E-02	1.56E-01	7.60E-02		Yes	6.11E+02	No	8.81E+03	No	No
Explosives	RDX	121-82-4	mg/kg	1/ 3	2.27E-01	1.80E-01	1.80E-01	2.95E-01	1.80E-01		Yes	4.42E-01	No	2.24E+00	No	No

**Table Q-3. Summary of Site-Related Chemicals and COPC Screening for Load Line 1 Sediment (continued)**

Analysis Type	Analyte <sup>a</sup>	CAS Number	Units	Results >		95% UCL			Site		1/10th Region 9		1/10th Max. Detect >		COPC?	
				Detection Limit	Average Result <sup>b</sup>	Minimum Detect	Maximum Detect	of Mean	Exposure Concentration	Background Criteria <sup>c</sup>	SRC?	Resid. Soil Criteria	Resid. Soil Criteria?	Ind. Soil Criteria		Ind. Soil Criteria?
Metals	Aluminum	7429-90-5	mg/kg	15/ 15	5.50E+03	2.32E+03	9.89E+03	7.25E+03	7.25E+03	1.39E+04	No	7.61E+03	Yes	1.00E+04	No	No
Metals	Arsenic	7440-38-2	mg/kg	15/ 15	1.51E+01	4.80E+00	3.79E+01	2.11E+01	2.11E+01	1.95E+01	Yes	3.90E-02	Yes	2.73E-01	Yes	Yes
Metals	Barium	7440-39-3	mg/kg	15/ 15	4.56E+01	2.11E+01	9.53E+01	5.96E+01	5.96E+01	1.23E+02	No	5.37E+02	No	1.00E+04	No	No
Metals	Beryllium	7440-41-7	mg/kg	3/ 15	2.13E-01	4.00E-01	7.00E-01	2.93E-01	2.93E-01	3.80E-01	Yes	1.54E+01	No	2.24E+02	No	No
Metals	Cadmium	7440-43-9	mg/kg	15/ 15	2.98E-01	1.10E-01	7.20E-01	4.20E-01	4.20E-01	0.00E+00	Yes	3.70E+00	No	8.09E+01	No	No
Metals	Calcium	7440-70-2	mg/kg	15/ 15	2.58E+03	8.06E+02	8.21E+03	3.64E+03	3.64E+03	5.51E+03	No		None		None	No
Metals	Chromium	7440-47-3	mg/kg	15/ 15	1.03E+01	3.70E+00	3.34E+01	1.45E+01	1.45E+01	1.81E+01	Yes	3.01E+00	Yes	6.40E+00	Yes	Yes
Metals	Cobalt	7440-48-4	mg/kg	15/ 15	6.91E+00	2.20E+00	1.56E+01	9.20E+00	9.20E+00	9.10E+00	Yes	4.69E+02	No	1.00E+04	No	No
Metals	Copper	7440-50-8	mg/kg	15/ 15	2.82E+01	3.50E+00	2.27E+02	5.40E+01	5.40E+01	2.76E+01	Yes	2.91E+02	No	7.59E+03	No	No
Metals	Iron	7439-89-6	mg/kg	15/ 15	2.29E+04	6.88E+03	8.76E+04	3.31E+04	3.31E+04	2.82E+04	No	2.35E+03	Yes	1.00E+04	Yes	No
Metals	Lead	7439-92-1	mg/kg	14/ 14	1.31E+01	3.90E+00	2.50E+01	1.62E+01	1.62E+01	2.74E+01	No	4.00E+01	No	7.50E+01	No	No
Metals	Magnesium	7439-95-4	mg/kg	15/ 15	1.51E+03	4.91E+02	2.66E+03	1.80E+03	1.80E+03	2.76E+03	No		None		None	No
Metals	Manganese	7439-96-5	mg/kg	15/ 15	3.14E+02	1.22E+02	5.43E+02	3.99E+02	3.99E+02	1.95E+03	No	1.76E+02	Yes	3.23E+03	No	No
Metals	Mercury	7439-97-6	mg/kg	10/ 15	4.77E-02	1.40E-02	8.20E-02	7.32E-02	7.32E-02	5.90E-02	Yes	2.30E+00	No	6.10E+01	No	No
Metals	Nickel	7440-02-0	mg/kg	15/ 15	1.51E+01	4.10E+00	5.30E+01	2.20E+01	2.20E+01	1.77E+01	Yes	1.56E+02	No	4.09E+03	No	No
Metals	Potassium	7440-09-7	mg/kg	15/ 15	6.04E+02	1.77E+02	1.22E+03	8.39E+02	8.39E+02	1.95E+03	No		None		None	No
Metals	Selenium	7782-49-2	mg/kg	10/ 15	7.52E-01	4.70E-01	2.20E+00	1.00E+00	1.00E+00	1.70E+00	Yes	3.91E+01	No	1.02E+03	No	No
Metals	Thallium	7440-28-0	mg/kg	12/ 15	4.64E-01	2.20E-01	7.60E-01	5.50E-01	5.50E-01	8.90E-01	No	5.20E-01	Yes	1.30E+01	No	No
Metals	Vanadium	7440-62-2	mg/kg	15/ 15	1.13E+01	4.90E+00	2.67E+01	1.57E+01	1.57E+01	2.61E+01	Yes	5.47E+01	No	1.43E+03	No	No
Metals	Zinc	7440-66-6	mg/kg	15/ 15	7.89E+01	2.20E+01	3.03E+02	1.08E+02	1.08E+02	5.32E+02	No	2.35E+03	No	1.00E+04	No	No
ORTOC	Total Organic Carbon	N997	mg/kg	15/ 15	1.10E+04	2.50E+03	2.30E+04	1.30E+04	1.30E+04		Yes		None		None	Yes
Organics-Volatile	2-Butanone	78-93-3	mg/kg	2/ 2	9.15E-03	9.00E-03	9.30E-03	1.01E-02	9.30E-03		Yes	7.33E+02	No	2.77E+03	No	No
Organics-Volatile	Acetone	67-64-1	mg/kg	2/ 2	3.40E-02	3.30E-02	3.50E-02	4.03E-02	3.50E-02		Yes	1.57E+02	No	6.22E+02	No	No
<i>Outlet C and Charlie's Pond</i>																
Explosives	2,4,6-Trinitrotoluene	118-96-7	mg/kg	2/ 5	2.57E-01	3.70E-01	5.40E-01	4.39E-01	4.39E-01		Yes	1.62E+00	No	8.22E+00	No	No
Explosives	2,6-Dinitrotoluene	606-20-2	mg/kg	1/ 5	1.28E-01	1.40E-01	1.40E-01	1.34E-01	1.34E-01		Yes	7.20E-02	Yes	3.60E-01	No	Yes
Explosives	2-Amino-4,6-Dinitrotoluene	35572-78-2	mg/kg	2/ 5	2.01E-01	1.90E-01	4.40E-01	3.31E-01	3.31E-01		Yes		None		None	Yes
Explosives	4-Amino-2,6-Dinitrotoluene	19406-51-0	mg/kg	2/ 5	2.39E-01	3.70E-01	4.50E-01	3.90E-01	3.90E-01		Yes		None		None	Yes
Metals	Aluminum	7429-90-5	mg/kg	8/ 8	9.44E+03	5.33E+03	1.36E+04	1.26E+04	1.26E+04	1.39E+04	No	7.61E+03	Yes	1.00E+04	Yes	No
Metals	Antimony	7440-36-0	mg/kg	1/ 8	8.19E-01	1.20E+00	1.20E+00	9.45E-01	9.45E-01	0.00E+00	Yes	3.13E+00	No	8.18E+01	No	No

**Table Q-3. Summary of Site-Related Chemicals and COPC Screening for Load Line 1 Sediment (continued)**

Analysis Type	Analyte <sup>a</sup>	CAS Number	Units	Results >		95% UCL			Site		1/10th	1/10th		COPC?		
				Detection Limit	Average Result <sup>b</sup>	Minimum Detect	Maximum Detect	of Mean	Exposure Concentration	Background Criteria <sup>c</sup>	Region 9 Resid. Soil	Max. Detect > Resid. Soil	Region 9 Ind. Soil		Max. Detect > Ind. Soil	
Metals	Arsenic	7440-38-2	mg/kg	8/ 8	1.54E+01	7.60E+00	5.05E+01	2.50E+01	2.50E+01	1.95E+01	Yes	3.90E-02	Yes	2.73E-01	Yes	Yes
Metals	Barium	7440-39-3	mg/kg	8/ 8	8.75E+01	5.79E+01	1.51E+02	1.09E+02	1.09E+02	1.23E+02	Yes	5.37E+02	No	1.00E+04	No	No
Metals	Beryllium	7440-41-7	mg/kg	7/ 8	6.08E-01	4.90E-01	9.40E-01	7.58E-01	7.58E-01	3.80E-01	Yes	1.54E+01	No	2.24E+02	No	No
Metals	Cadmium	7440-43-9	mg/kg	7/ 8	6.99E-01	1.40E-01	1.40E+00	1.04E+00	1.04E+00	0.00E+00	Yes	3.70E+00	No	8.09E+01	No	No
Metals	Calcium	7440-70-2	mg/kg	8/ 8	3.94E+03	8.81E+02	8.45E+03	1.05E+04	8.45E+03	5.51E+03	No		None		None	No
Metals	Chromium	7440-47-3	mg/kg	8/ 8	1.31E+01	9.50E+00	2.13E+01	1.62E+01	1.62E+01	1.81E+01	Yes	3.01E+00	Yes	6.40E+00	Yes	Yes
Metals	Cobalt	7440-48-4	mg/kg	8/ 8	8.21E+00	6.00E+00	1.10E+01	9.87E+00	9.87E+00	9.10E+00	Yes	4.69E+02	No	1.00E+04	No	No
Metals	Copper	7440-50-8	mg/kg	8/ 8	1.55E+01	1.34E+01	2.03E+01	1.72E+01	1.72E+01	2.76E+01	No	2.91E+02	No	7.59E+03	No	No
Metals	Iron	7439-89-6	mg/kg	8/ 8	1.79E+04	1.24E+04	2.46E+04	2.10E+04	2.10E+04	2.82E+04	No	2.35E+03	Yes	1.00E+04	Yes	No
Metals	Lead	7439-92-1	mg/kg	8/ 8	2.92E+01	1.83E+01	5.57E+01	3.96E+01	3.96E+01	2.74E+01	Yes	4.00E+01	Yes	7.50E+01	No	Yes
Metals	Magnesium	7439-95-4	mg/kg	7/ 8	1.49E+03	1.12E+03	2.33E+03	1.86E+03	1.86E+03	2.76E+03	No		None		None	No
Metals	Manganese	7439-96-5	mg/kg	7/ 7	9.31E+02	2.37E+02	2.35E+03	3.06E+03	2.35E+03	1.95E+03	Yes	1.76E+02	Yes	3.23E+03	No	Yes
Metals	Mercury	7439-97-6	mg/kg	8/ 8	7.28E-02	3.10E-02	8.80E-02	8.52E-02	8.52E-02	5.90E-02	Yes	2.30E+00	No	6.10E+01	No	No
Metals	Nickel	7440-02-0	mg/kg	8/ 8	1.86E+01	1.32E+01	2.84E+01	2.29E+01	2.29E+01	1.77E+01	Yes	1.56E+02	No	4.09E+03	No	No
Metals	Potassium	7440-09-7	mg/kg	8/ 8	9.10E+02	6.79E+02	1.50E+03	1.13E+03	1.13E+03	1.95E+03	No		None		None	No
Metals	Selenium	7782-49-2	mg/kg	7/ 8	1.35E+00	5.50E-01	3.60E+00	2.46E+00	2.46E+00	1.70E+00	Yes	3.91E+01	No	1.02E+03	No	No
Metals	Sodium	7440-23-5	mg/kg	1/ 8	3.42E+02	8.43E+01	8.43E+01	4.22E+02	8.43E+01	1.12E+02	No		None		None	No
Metals	Thallium	7440-28-0	mg/kg	7/ 8	6.21E-01	5.30E-01	8.70E-01	7.44E-01	7.44E-01	8.90E-01	No	5.20E-01	Yes	1.30E+01	No	No
Metals	Vanadium	7440-62-2	mg/kg	8/ 8	1.87E+01	1.32E+01	2.60E+01	2.31E+01	2.31E+01	2.61E+01	No	5.47E+01	No	1.43E+03	No	No
Metals	Zinc	7440-66-6	mg/kg	8/ 8	1.43E+02	7.14E+01	2.15E+02	1.75E+02	1.75E+02	5.32E+02	No	2.35E+03	No	1.00E+04	No	No
ORTOC	Total Organic Carbon	N997	mg/kg	9/ 9	2.20E+04	9.30E+03	3.50E+04	2.78E+04	2.78E+04		Yes		None		None	Yes
Organics-Pesticide/PCB	4,4'-DDE	72-55-9	mg/kg	1/ 2	1.16E-02	2.20E-02	2.20E-02	7.73E-02	2.20E-02		Yes	1.72E-01	No	1.21E+00	No	No
Organics-Pesticide/PCB	PCB-1254	11097-69-1	mg/kg	1/ 2	4.47E-01	8.70E-01	8.70E-01	3.12E+00	8.70E-01		Yes	2.22E-02	Yes	1.00E-01	Yes	Yes
Organics-Semivolatile	Benz(a)anthracene	56-55-3	mg/kg	2/ 2	6.65E-02	5.60E-02	7.70E-02	1.33E-01	7.70E-02		Yes	6.21E-02	Yes	2.89E-01	No	Yes
Organics-Semivolatile	Benzo(a)pyrene	50-32-8	mg/kg	2/ 2	7.00E-02	5.60E-02	8.40E-02	1.58E-01	8.40E-02		Yes	6.21E-03	Yes	2.89E-02	Yes	Yes
Organics-Semivolatile	Benzo(b)fluoranthene	205-99-2	mg/kg	2/ 2	1.26E-01	7.10E-02	1.80E-01	4.70E-01	1.80E-01		Yes	6.21E-02	Yes	2.89E-01	No	Yes
Organics-Semivolatile	Benzo(ghi)perylene	191-24-2	mg/kg	1/ 2	1.47E-01	5.80E-02	5.80E-02	7.05E-01	5.80E-02		Yes		None		None	Yes
Organics-Semivolatile	Benzo(k)fluoranthene	207-08-9	mg/kg	1/ 2	1.45E-01	5.40E-02	5.40E-02	7.16E-01	5.40E-02		Yes	6.21E-01	No	2.89E+00	No	No
Organics-Semivolatile	Chrysene	218-01-9	mg/kg	1/ 2	1.83E-01	1.30E-01	1.30E-01	5.14E-01	1.30E-01		Yes	6.21E+00	No	2.89E+01	No	No
Organics-Semivolatile	Fluoranthene	206-44-0	mg/kg	2/ 2	1.07E-01	7.30E-02	1.40E-01	3.18E-01	1.40E-01		Yes	2.29E+02	No	3.01E+03	No	No



**Table Q-3. Summary of Site-Related Chemicals and COPC Screening for Load Line 1 Sediment (continued)**

Analysis Type	Analyte <sup>d</sup>	CAS Number	Units	Results >		95% UCL			Exposure Concentration	Site Background Criteria <sup>c</sup>	SRC?	1/10th	Max. Detect >	1/10th	Max. Detect >	COPC?
				Detection Limit	Average Result <sup>b</sup>	Minimum Detect	Maximum Detect	of Mean				Region 9 Resid. Soil	Resid. Soil Criteria?	Region 9 Ind. Soil	Ind. Soil Criteria?	
Organics-Semivolatile	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	1/ 2	1.56E-01	7.60E-02	7.60E-02	6.57E-01	7.60E-02	Yes	6.21E-02	Yes	2.89E-01	No	Yes	
Organics-Semivolatile	Phenanthrene	85-01-8	mg/kg	1/ 2	1.47E-01	5.90E-02	5.90E-02	7.03E-01	5.90E-02	Yes		None		None	Yes	
Organics-Semivolatile	Pyrene	129-00-0	mg/kg	1/ 2	1.93E-01	1.50E-01	1.50E-01	4.61E-01	1.50E-01	Yes	2.31E+02	No	5.42E+03	No	No	
Organics-Volatile	1,2-Dichloroethene	549-59-0	mg/kg	1/ 2	6.80E-03	1.00E-02	1.00E-02	2.70E-02	1.00E-02	Yes		None		None	Yes	
Organics-Volatile	Acetone	67-64-1	mg/kg	1/ 2	8.05E-03	9.60E-03	9.60E-03	1.78E-02	9.60E-03	Yes	1.57E+02	No	6.22E+02	No	No	
<i>Outlets A and B</i>																
Explosives	1,3,5-Trinitrobenzene	99-35-4	mg/kg	1/ 4	1.39E-01	1.80E-01	1.80E-01	1.71E-01	1.71E-01	Yes	1.83E+02	No	2.64E+03	No	No	
Explosives	2,4,6-Trinitrotoluene	118-96-7	mg/kg	1/ 4	2.31E-01	5.50E-01	5.50E-01	4.81E-01	4.81E-01	Yes	1.62E+00	No	8.22E+00	No	No	
Explosives	2,4-Dinitrotoluene	121-14-2	mg/kg	2/ 4	6.60E-01	3.90E-01	2.00E+00	2.19E+06	2.00E+00	Yes	7.20E-02	Yes	3.60E-01	Yes	Yes	
Explosives	2-Amino-4,6-Dinitrotoluene	35572-78-2	mg/kg	1/ 4	2.71E-01	7.10E-01	7.10E-01	6.15E-01	6.15E-01	Yes		None		None	Yes	
Explosives	2-Nitrotoluene	88-72-2	mg/kg	1/ 4	1.41E-01	1.90E-01	1.90E-01	1.80E-01	1.80E-01	Yes	3.67E+01	No	1.00E+02	No	No	
Explosives	4-Amino-2,6-Dinitrotoluene	19406-51-0	mg/kg	1/ 4	2.96E-01	8.10E-01	8.10E-01	6.99E-01	6.99E-01	Yes		None		None	Yes	
Explosives	HMX	2691-41-0	mg/kg	1/ 4	3.30E-01	5.70E-01	5.70E-01	5.18E-01	5.18E-01	Yes	3.06E+02	No	4.40E+03	No	No	
Explosives	Nitrocellulose	9004-70-0	mg/kg	3/ 4	1.01E+02	4.20E+00	3.33E+02	3.83E+28	3.33E+02	Yes		None		None	Yes	
Metals	Aluminum	7429-90-5	mg/kg	9/ 9	1.06E+04	3.85E+03	1.57E+04	1.31E+04	1.31E+04	1.39E+04	Yes	7.61E+03	Yes	1.00E+04	Yes	Yes
Metals	Antimony	7440-36-0	mg/kg	6/ 9	1.99E+00	8.20E-01	7.40E+00	5.20E+00	5.20E+00	0.00E+00	Yes	3.13E+00	Yes	8.18E+01	No	Yes
Metals	Arsenic	7440-38-2	mg/kg	9/ 9	1.40E+01	9.40E+00	2.87E+01	1.75E+01	1.75E+01	1.95E+01	Yes	3.90E-02	Yes	2.73E-01	Yes	Yes
Metals	Barium	7440-39-3	mg/kg	9/ 9	1.01E+02	3.55E+01	1.53E+02	1.23E+02	1.23E+02	1.23E+02	Yes	5.37E+02	No	1.00E+04	No	No
Metals	Beryllium	7440-41-7	mg/kg	5/ 9	6.42E-01	4.50E-01	1.10E+00	8.54E-01	8.54E-01	3.80E-01	Yes	1.54E+01	No	2.24E+02	No	No
Metals	Cadmium	7440-43-9	mg/kg	8/ 9	2.81E+00	1.50E-01	1.50E+01	3.19E+01	1.50E+01	0.00E+00	Yes	3.70E+00	Yes	8.09E+01	No	Yes
Metals	Calcium	7440-70-2	mg/kg	9/ 9	6.12E+03	1.39E+03	1.14E+04	1.82E+04	1.14E+04	5.51E+03	No		None		None	No
Metals	Chromium	7440-47-3	mg/kg	9/ 9	3.30E+01	9.40E+00	1.54E+02	6.16E+01	6.16E+01	1.81E+01	Yes	3.01E+00	Yes	6.40E+00	Yes	Yes
Metals	Chromium, hexavalent	18540-29-9	mg/kg	1/ 2	3.13E+00	5.40E+00	5.40E+00	1.75E+01	5.40E+00		Yes	3.01E+00	Yes	6.40E+00	No	Yes
Metals	Cobalt	7440-48-4	mg/kg	9/ 9	1.00E+01	5.20E+00	1.75E+01	1.35E+01	1.35E+01	9.10E+00	Yes	4.69E+02	No	1.00E+04	No	No
Metals	Copper	7440-50-8	mg/kg	9/ 9	7.19E+01	1.54E+01	4.34E+02	1.56E+02	1.56E+02	2.76E+01	Yes	2.91E+02	Yes	7.59E+03	No	Yes
Metals	Iron	7439-89-6	mg/kg	9/ 9	2.44E+04	1.58E+04	4.63E+04	3.17E+04	3.17E+04	2.82E+04	No	2.35E+03	Yes	1.00E+04	Yes	No
Metals	Lead	7439-92-1	mg/kg	9/ 9	2.63E+02	3.29E+01	1.14E+03	5.08E+02	5.08E+02	2.74E+01	Yes	4.00E+01	Yes	7.50E+01	Yes	Yes
Metals	Magnesium	7439-95-4	mg/kg	9/ 9	3.33E+03	9.49E+02	1.59E+04	6.29E+03	6.29E+03	2.76E+03	No		None		None	No
Metals	Manganese	7439-96-5	mg/kg	9/ 9	1.06E+03	2.77E+02	1.84E+03	1.38E+03	1.38E+03	1.95E+03	No	1.76E+02	Yes	3.23E+03	No	No
Metals	Mercury	7439-97-6	mg/kg	9/ 9	1.65E-01	3.30E-02	5.40E-01	4.47E-01	4.47E-01	5.90E-02	Yes	2.30E+00	No	6.10E+01	No	No

**Table Q-3. Summary of Site-Related Chemicals and COPC Screening for Load Line 1 Sediment (continued)**

Analysis Type	Analyte <sup>d</sup>	CAS Number	Units	Results >		95% UCL			Site		1/10th Region 9		1/10th Max. Detect >		COPC?	
				Detection Limit	Average Result <sup>b</sup>	Minimum Detect	Maximum Detect	of Mean	Exposure Concentration	Background Criteria <sup>c</sup>	SRC?	Resid. Soil Criteria	Resid. Soil Criteria?	Ind. Soil Criteria		Ind. Soil Criteria?
Metals	Nickel	7440-02-0	mg/kg	9/ 9	2.89E+01	1.32E+01	1.04E+02	4.65E+01	4.65E+01	1.77E+01	Yes	1.56E+02	No	4.09E+03	No	No
Metals	Potassium	7440-09-7	mg/kg	9/ 9	1.09E+03	2.94E+02	1.95E+03	1.42E+03	1.42E+03	1.95E+03	No		None		None	No
Metals	Selenium	7782-49-2	mg/kg	7/ 9	1.77E+00	1.20E+00	3.80E+00	2.61E+00	2.61E+00	1.70E+00	Yes	3.91E+01	No	1.02E+03	No	No
Metals	Sodium	7440-23-5	mg/kg	4/ 9	2.55E+02	1.08E+02	5.40E+02	3.57E+02	3.57E+02	1.12E+02	No		None		None	No
Metals	Thallium	7440-28-0	mg/kg	9/ 9	7.20E-01	4.10E-01	1.10E+00	8.99E-01	8.99E-01	8.90E-01	Yes	5.20E-01	Yes	1.30E+01	No	Yes
Metals	Vanadium	7440-62-2	mg/kg	9/ 9	2.47E+01	1.38E+01	3.39E+01	2.85E+01	2.85E+01	2.61E+01	Yes	5.47E+01	No	1.43E+03	No	No
Metals	Zinc	7440-66-6	mg/kg	9/ 9	5.10E+02	8.56E+01	2.61E+03	1.00E+03	1.00E+03	5.32E+02	Yes	2.35E+03	Yes	1.00E+04	No	Yes
ORTOC	Total Organic Carbon	N997	mg/kg	9/ 9	4.00E+04	6.90E+03	1.20E+05	2.37E+05	1.20E+05		Yes		None		None	Yes
Organics-Pesticide/PCB	Endrin	72-20-8	mg/kg	1/ 2	3.50E-02	5.40E-02	5.40E-02	1.55E-01	5.40E-02		Yes	1.83E+00	No	2.64E+01	No	No
Organics-Pesticide/PCB	PCB-1254	11097-69-1	mg/kg	2/ 2	3.51E-01	9.20E-02	6.10E-01	1.99E+00	6.10E-01		Yes	2.22E-02	Yes	1.00E-01	Yes	Yes
Organics-Pesticide/PCB	gamma-Chlordane	5103-74-2	mg/kg	1/ 2	2.33E-02	3.20E-02	3.20E-02	7.85E-02	3.20E-02		Yes	1.62E-01	No	1.07E+00	No	No
Organics-Semivolatiles	Acenaphthene	83-32-9	mg/kg	1/ 2	5.05E-01	7.00E-01	7.00E-01	1.74E+00	7.00E-01		Yes	3.68E+02	No	3.84E+03	No	No
Organics-Semivolatiles	Anthracene	120-12-7	mg/kg	1/ 2	1.26E+00	2.20E+00	2.20E+00	7.22E+00	2.20E+00		Yes	2.19E+03	No	1.00E+04	No	No
Organics-Semivolatiles	Benz(a)anthracene	56-55-3	mg/kg	2/ 2	4.65E+00	9.90E-02	9.20E+00	3.34E+01	9.20E+00		Yes	6.21E-02	Yes	2.89E-01	Yes	Yes
Organics-Semivolatiles	Benzo(a)pyrene	50-32-8	mg/kg	2/ 2	4.80E+00	9.80E-02	9.50E+00	3.45E+01	9.50E+00		Yes	6.21E-03	Yes	2.89E-02	Yes	Yes
Organics-Semivolatiles	Benzo(b)fluoranthene	205-99-2	mg/kg	2/ 2	6.07E+00	1.40E-01	1.20E+01	4.35E+01	1.20E+01		Yes	6.21E-02	Yes	2.89E-01	Yes	Yes
Organics-Semivolatiles	Benzo(ghi)perylene	191-24-2	mg/kg	1/ 2	2.91E+00	5.50E+00	5.50E+00	1.93E+01	5.50E+00		Yes		None		None	Yes
Organics-Semivolatiles	Benzo(k)fluoranthene	207-08-9	mg/kg	1/ 2	2.86E+00	5.40E+00	5.40E+00	1.89E+01	5.40E+00		Yes	6.21E-01	Yes	2.89E+00	Yes	Yes
Organics-Semivolatiles	Carbazole	86-74-8	mg/kg	1/ 2	9.55E-01	1.60E+00	1.60E+00	5.03E+00	1.60E+00		Yes	2.43E+00	No	1.23E+01	No	No
Organics-Semivolatiles	Chrysene	218-01-9	mg/kg	2/ 2	4.77E+00	1.40E-01	9.40E+00	3.40E+01	9.40E+00		Yes	6.21E+00	Yes	2.89E+01	No	Yes
Organics-Semivolatiles	Di-n-butyl phthalate	84-74-2	mg/kg	1/ 2	5.10E-01	7.10E-01	7.10E-01	1.77E+00	7.10E-01		Yes	6.11E+02	No	8.81E+03	No	No
Organics-Semivolatiles	Dibenz(a,h)anthracene	53-70-3	mg/kg	1/ 2	1.01E+00	1.70E+00	1.70E+00	5.39E+00	1.70E+00		Yes	6.21E-03	Yes	2.89E-02	Yes	Yes
Organics-Semivolatiles	Dibenzofuran	132-64-9	mg/kg	1/ 2	3.60E-01	4.10E-01	4.10E-01	6.76E-01	4.10E-01		Yes	2.91E+01	No	5.06E+02	No	No
Organics-Semivolatiles	Fluoranthene	206-44-0	mg/kg	2/ 2	1.26E+01	1.90E-01	2.50E+01	9.09E+01	2.50E+01		Yes	2.29E+02	No	3.01E+03	No	No
Organics-Semivolatiles	Fluorene	86-73-7	mg/kg	1/ 2	7.05E-01	1.10E+00	1.10E+00	3.20E+00	1.10E+00		Yes	2.64E+02	No	3.31E+03	No	No
Organics-Semivolatiles	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	1/ 2	3.51E+00	6.70E+00	6.70E+00	2.37E+01	6.70E+00		Yes	6.21E-02	Yes	2.89E-01	Yes	Yes
Organics-Semivolatiles	Naphthalene	91-20-3	mg/kg	1/ 2	3.50E-01	3.90E-01	3.90E-01	6.03E-01	3.90E-01		Yes	5.59E+00	No	1.89E+01	No	No
Organics-Semivolatiles	Phenanthrene	85-01-8	mg/kg	1/ 2	6.16E+00	1.20E+01	1.20E+01	4.31E+01	1.20E+01		Yes		None		None	Yes
Organics-Semivolatiles	Pyrene	129-00-0	mg/kg	2/ 2	7.58E+00	1.60E-01	1.50E+01	5.44E+01	1.50E+01		Yes	2.31E+02	No	5.42E+03	No	No
Organics-Volatile	1,2-Dichloroethene	549-59-0	mg/kg	2/ 2	4.90E-03	2.20E-03	7.60E-03	2.20E-02	7.60E-03		Yes		None		None	Yes

**Table Q-3. Summary of Site-Related Chemicals and COPC Screening for Load Line 1 Sediment (continued)**

Analysis Type	Analyte <sup>d</sup>	CAS Number	Units	Results >		95% UCL			Exposure Concentration	Site Background Criteria <sup>c</sup>	SRC?	1/10th	Max. Detect >	1/10th	Max. Detect >	COPC?
				Detection Limit	Average Result <sup>b</sup>	Minimum Detect	Maximum Detect	of Mean				Region 9 Resid. Soil Criteria	Region 9 Resid. Soil Criteria?	Region 9 Ind. Soil Criteria	Region 9 Ind. Soil Criteria?	
Organics-Volatile	Toluene	108-88-3	mg/kg	1/ 2	3.35E-03	2.50E-03	2.50E-03	8.72E-03	2.50E-03	Yes	5.20E+01	No	5.20E+01	No	No	
Organics-Volatile	Trichloroethene	79-01-6	mg/kg	1/ 2	8.10E-03	1.20E-02	1.20E-02	3.27E-02	1.20E-02	Yes	2.77E-01	No	6.12E-01	No	No	
<i>Outlets D,E,F and Criggy's Pond</i>																
Explosives	2,4-Dinitrotoluene	121-14-2	mg/kg	1/ 2	9.75E-02	7.00E-02	7.00E-02	2.71E-01	7.00E-02	Yes	7.20E-02	No	3.60E-01	No	No	
Explosives	Nitrobenzene	98-95-3	mg/kg	1/ 2	1.33E-01	1.40E-01	1.40E-01	1.80E-01	1.40E-01	Yes	1.96E+00	No	1.14E+01	No	No	
Metals	Aluminum	7429-90-5	mg/kg	6/ 6	8.91E+03	5.26E+03	1.33E+04	1.12E+04	1.12E+04	No	7.61E+03	Yes	1.00E+04	Yes	No	
Metals	Antimony	7440-36-0	mg/kg	4/ 6	1.99E+02	2.00E+00	1.18E+03	5.94E+02	5.94E+02	Yes	3.13E+00	Yes	8.18E+01	Yes	Yes	
Metals	Arsenic	7440-38-2	mg/kg	6/ 6	1.46E+01	9.50E+00	2.10E+01	2.15E+01	2.10E+01	Yes	3.90E-02	Yes	2.73E-01	Yes	Yes	
Metals	Barium	7440-39-3	mg/kg	6/ 6	1.11E+02	6.43E+01	1.68E+02	1.77E+02	1.68E+02	Yes	5.37E+02	No	1.00E+04	No	No	
Metals	Beryllium	7440-41-7	mg/kg	3/ 6	5.20E-01	5.50E-01	1.10E+00	1.28E+00	1.10E+00	Yes	1.54E+01	No	2.24E+02	No	No	
Metals	Cadmium	7440-43-9	mg/kg	6/ 6	1.55E+00	6.90E-01	2.40E+00	2.91E+00	2.40E+00	Yes	3.70E+00	No	8.09E+01	No	No	
Metals	Calcium	7440-70-2	mg/kg	6/ 6	3.91E+03	9.85E+02	6.17E+03	5.38E+03	5.38E+03	No		None		None	No	
Metals	Chromium	7440-47-3	mg/kg	6/ 6	3.87E+01	1.14E+01	1.24E+02	2.86E+02	1.24E+02	Yes	3.01E+00	Yes	6.40E+00	Yes	Yes	
Metals	Chromium, hexavalent	18540-29-9	mg/kg	1/ 1	1.10E+01	1.10E+01	1.10E+01		1.10E+01	Yes	3.01E+00	Yes	6.40E+00	Yes	Yes	
Metals	Cobalt	7440-48-4	mg/kg	6/ 6	1.24E+01	6.10E+00	1.70E+01	1.53E+01	1.53E+01	Yes	4.69E+02	No	1.00E+04	No	No	
Metals	Copper	7440-50-8	mg/kg	6/ 6	3.09E+02	9.50E+00	1.02E+03	3.24E+05	1.02E+03	Yes	2.91E+02	Yes	7.59E+03	No	Yes	
Metals	Iron	7439-89-6	mg/kg	6/ 6	2.62E+04	1.77E+04	3.22E+04	3.10E+04	3.10E+04	No	2.35E+03	Yes	1.00E+04	Yes	No	
Metals	Lead	7439-92-1	mg/kg	6/ 6	2.45E+02	2.15E+01	1.21E+03	2.64E+04	1.21E+03	Yes	4.00E+01	Yes	7.50E+01	Yes	Yes	
Metals	Magnesium	7439-95-4	mg/kg	6/ 6	1.50E+03	9.22E+02	2.35E+03	2.25E+03	2.25E+03	No		None		None	No	
Metals	Manganese	7439-96-5	mg/kg	6/ 6	1.74E+03	4.96E+02	3.38E+03	7.30E+03	3.38E+03	Yes	1.76E+02	Yes	3.23E+03	Yes	Yes	
Metals	Mercury	7439-97-6	mg/kg	6/ 6	2.11E-01	4.10E-02	4.00E-01	3.28E-01	3.28E-01	Yes	2.30E+00	No	6.10E+01	No	No	
Metals	Nickel	7440-02-0	mg/kg	6/ 6	2.81E+01	1.67E+01	4.34E+01	4.47E+01	4.34E+01	Yes	1.56E+02	No	4.09E+03	No	No	
Metals	Potassium	7440-09-7	mg/kg	6/ 6	7.82E+02	5.89E+02	1.12E+03	9.88E+02	9.88E+02	No		None		None	No	
Metals	Selenium	7782-49-2	mg/kg	4/ 6	1.36E+00	1.50E+00	2.20E+00	1.99E+00	1.99E+00	Yes	3.91E+01	No	1.02E+03	No	No	
Metals	Sodium	7440-23-5	mg/kg	2/ 6	2.72E+02	7.14E+01	8.48E+01	4.57E+02	8.48E+01	No		None		None	No	
Metals	Thallium	7440-28-0	mg/kg	6/ 6	6.42E-01	5.80E-01	6.90E-01	6.82E-01	6.82E-01	No	5.20E-01	Yes	1.30E+01	No	No	
Metals	Vanadium	7440-62-2	mg/kg	6/ 6	2.12E+01	1.34E+01	3.18E+01	3.08E+01	3.08E+01	Yes	5.47E+01	No	1.43E+03	No	No	
Metals	Zinc	7440-66-6	mg/kg	6/ 6	4.59E+02	8.08E+01	8.05E+02	6.57E+02	6.57E+02	Yes	2.35E+03	No	1.00E+04	No	No	
ORTOC	Total Organic Carbon	N997	mg/kg	6/ 6	3.87E+04	1.10E+04	7.50E+04	5.67E+04	5.67E+04	Yes		None		None	Yes	

**Table Q-3. Summary of Site-Related Chemicals and COPC Screening for Load Line 1 Sediment (continued)**

Analysis Type	Analyte <sup>a</sup>	CAS Number	Units	Results >		95% UCL				Site Background Criteria <sup>c</sup>	SRC?	1/10th	Max. Detect >	1/10th	Max. Detect >	COPC?
				Detection Limit	Average Result <sup>b</sup>	Minimum Detect	Maximum Detect	of Mean	Exposure Concentration			Region 9 Resid. Soil Criteria	Region 9 Resid. Soil Criteria?	Region 9 Ind. Soil Criteria	Region 9 Ind. Soil Criteria?	
<i>Sewer Lines</i>																
Explosives	1,3,5-Trinitrobenzene	99-35-4	mg/kg	2/ 5	1.18E-01	9.30E-02	1.20E-01	1.31E-01	1.20E-01		Yes	1.83E+02	No	2.64E+03	No	No
Explosives	1,3-Dinitrobenzene	99-65-0	mg/kg	2/ 5	1.28E-01	5.40E-02	2.10E-01	1.81E-01	1.81E-01		Yes	6.11E-01	No	8.81E+00	No	No
Explosives	2,4,6-Trinitrotoluene	118-96-7	mg/kg	3/ 5	8.72E-01	1.10E-01	2.80E+00	6.15E+02	2.80E+00		Yes	1.62E+00	Yes	8.22E+00	No	Yes
Explosives	2,4-Dinitrotoluene	121-14-2	mg/kg	1/ 5	1.63E-01	3.10E-01	3.10E-01	2.41E-01	2.41E-01		Yes	7.20E-02	Yes	3.60E-01	No	Yes
Explosives	2,6-Dinitrotoluene	606-20-2	mg/kg	1/ 5	1.45E-01	1.30E-01	1.30E-01	1.85E-01	1.30E-01		Yes	7.20E-02	Yes	3.60E-01	No	Yes
Explosives	2-Amino-4,6-Dinitrotoluene	35572-78-2	mg/kg	2/ 5	4.63E-01	4.40E-01	1.50E+00	1.03E+00	1.03E+00		Yes		None		None	Yes
Explosives	4-Amino-2,6-Dinitrotoluene	19406-51-0	mg/kg	2/ 5	5.65E-01	7.50E-01	1.70E+00	1.22E+00	1.22E+00		Yes		None		None	Yes
Explosives	Nitrobenzene	98-95-3	mg/kg	1/ 5	1.46E-01	2.30E-01	2.30E-01	1.91E-01	1.91E-01		Yes	1.96E+00	No	1.14E+01	No	No
Explosives	Nitrocellulose	9004-70-0	mg/kg	4/ 5	2.92E+00	4.80E-01	5.80E+00	3.98E+01	5.80E+00		Yes		None		None	Yes
Explosives	Tetryl	479-45-8	mg/kg	1/ 5	3.74E-01	5.70E-01	5.70E-01	4.79E-01	4.79E-01		Yes	6.11E+01	No	8.81E+02	No	No
Metals	Aluminum	7429-90-5	mg/kg	5/ 5	6.16E+03	5.41E+03	7.43E+03	7.13E+03	7.13E+03	1.39E+04	No	7.61E+03	No	1.00E+04	No	No
Metals	Antimony	7440-36-0	mg/kg	1/ 5	3.79E+01	1.85E+02	1.85E+02	1.16E+02	1.16E+02	0.00E+00	Yes	3.13E+00	Yes	8.18E+01	Yes	Yes
Metals	Arsenic	7440-38-2	mg/kg	5/ 5	1.90E+01	7.90E+00	3.90E+01	6.51E+01	3.90E+01	1.95E+01	Yes	3.90E-02	Yes	2.73E-01	Yes	Yes
Metals	Barium	7440-39-3	mg/kg	5/ 5	1.37E+02	4.55E+01	2.76E+02	4.81E+02	2.76E+02	1.23E+02	Yes	5.37E+02	No	1.00E+04	No	No
Metals	Beryllium	7440-41-7	mg/kg	1/ 5	1.90E-01	4.60E-01	4.60E-01	3.38E-01	3.38E-01	3.80E-01	Yes	1.54E+01	No	2.24E+02	No	No
Metals	Cadmium	7440-43-9	mg/kg	5/ 5	2.23E+00	4.70E-01	3.50E+00	3.50E+00	3.50E+00	0.00E+00	Yes	3.70E+00	No	8.09E+01	No	No
Metals	Calcium	7440-70-2	mg/kg	5/ 5	1.26E+04	5.57E+03	1.85E+04	1.78E+04	1.78E+04	5.51E+03	No		None		None	No
Metals	Chromium	7440-47-3	mg/kg	5/ 5	4.23E+01	1.66E+01	7.28E+01	6.60E+01	6.60E+01	1.81E+01	Yes	3.01E+00	Yes	6.40E+00	Yes	Yes
Metals	Cobalt	7440-48-4	mg/kg	5/ 5	9.12E+00	6.40E+00	1.11E+01	1.09E+01	1.09E+01	9.10E+00	Yes	4.69E+02	No	1.00E+04	No	No
Metals	Copper	7440-50-8	mg/kg	5/ 5	2.14E+02	4.16E+01	6.38E+02	6.24E+03	6.38E+02	2.76E+01	Yes	2.91E+02	Yes	7.59E+03	No	Yes
Metals	Iron	7439-89-6	mg/kg	5/ 5	7.99E+04	2.00E+04	1.22E+05	1.24E+05	1.22E+05	2.82E+04	No	2.35E+03	Yes	1.00E+04	Yes	No
Metals	Lead	7439-92-1	mg/kg	5/ 5	1.81E+02	2.80E+01	3.06E+02	2.89E+02	2.89E+02	2.74E+01	Yes	4.00E+01	Yes	7.50E+01	Yes	Yes
Metals	Magnesium	7439-95-4	mg/kg	5/ 5	2.03E+03	1.36E+03	2.94E+03	2.90E+03	2.90E+03	2.76E+03	No		None		None	No
Metals	Manganese	7439-96-5	mg/kg	5/ 5	9.04E+02	4.31E+02	1.26E+03	1.19E+03	1.19E+03	1.95E+03	No	1.76E+02	Yes	3.23E+03	No	No
Metals	Mercury	7439-97-6	mg/kg	5/ 5	3.94E-01	1.30E-01	1.30E+00	8.77E-01	8.77E-01	5.90E-02	Yes	2.30E+00	No	6.10E+01	No	No
Metals	Nickel	7440-02-0	mg/kg	5/ 5	4.76E+01	1.87E+01	9.36E+01	1.30E+02	9.36E+01	1.77E+01	Yes	1.56E+02	No	4.09E+03	No	No
Metals	Potassium	7440-09-7	mg/kg	4/ 5	7.09E+02	5.83E+02	1.03E+03	9.54E+02	9.54E+02	1.95E+03	No		None		None	No
Metals	Selenium	7782-49-2	mg/kg	3/ 5	1.71E+00	7.50E-01	3.00E+00	2.66E+00	2.66E+00	1.70E+00	Yes	3.91E+01	No	1.02E+03	No	No
Metals	Silver	7440-22-4	mg/kg	3/ 5	1.21E+00	1.90E-01	3.00E+00	4.72E+01	3.00E+00	0.00E+00	Yes	3.91E+01	No	1.02E+03	No	No

**Table Q-3. Summary of Site-Related Chemicals and COPC Screening for Load Line 1 Sediment (continued)**

Analysis Type	Analyte <sup>a</sup>	CAS Number	Units	Results >		95% UCL			Exposure Concentration	Site Background Criteria <sup>c</sup>	SRC?	1/10th	Max. Detect >	1/10th	Max. Detect >	COPC?
				Detection Limit	Average Result <sup>b</sup>	Minimum Detect	Maximum Detect	of Mean				Region 9 Resid. Soil Criteria	Region 9 Resid. Soil Criteria?	Region 9 Ind. Soil Criteria	Region 9 Ind. Soil Criteria?	
Metals	Sodium	7440-23-5	mg/kg	1/ 5	3.45E+02	1.60E+02	1.60E+02	6.96E+02	1.60E+02	1.12E+02	No		None		None	No
Metals	Thallium	7440-28-0	mg/kg	5/ 5	6.26E-01	3.50E-01	8.00E-01	8.01E-01	8.00E-01	8.90E-01	No	5.20E-01	Yes	1.30E+01	No	No
Metals	Vanadium	7440-62-2	mg/kg	5/ 5	2.40E+01	1.48E+01	4.95E+01	5.70E+01	4.95E+01	2.61E+01	Yes	5.47E+01	No	1.43E+03	No	No
Metals	Zinc	7440-66-6	mg/kg	5/ 5	9.94E+02	1.72E+02	2.48E+03	1.08E+05	2.48E+03	5.32E+02	Yes	2.35E+03	Yes	1.00E+04	No	Yes
Organics-Pesticide/PCB	Endrin aldehyde	7421-93-4	mg/kg	1/ 1	2.70E-02	2.70E-02	2.70E-02		2.70E-02		Yes	1.83E+00	No	2.64E+01	No	No
Organics-Pesticide/PCB	PCB-1254	11097-69-1	mg/kg	1/ 1	2.10E+00	2.10E+00	2.10E+00		2.10E+00		Yes	2.22E-02	Yes	1.00E-01	Yes	Yes
Organics-Semivolatile	Benz(a)anthracene	56-55-3	mg/kg	1/ 1	9.00E-02	9.00E-02	9.00E-02		9.00E-02		Yes	6.21E-02	Yes	2.89E-01	No	Yes
Organics-Semivolatile	Benzo(a)pyrene	50-32-8	mg/kg	1/ 1	1.20E-01	1.20E-01	1.20E-01		1.20E-01		Yes	6.21E-03	Yes	2.89E-02	Yes	Yes
Organics-Semivolatile	Benzo(b)fluoranthene	205-99-2	mg/kg	1/ 1	1.80E-01	1.80E-01	1.80E-01		1.80E-01		Yes	6.21E-02	Yes	2.89E-01	No	Yes
Organics-Semivolatile	Benzo(ghi)perylene	191-24-2	mg/kg	1/ 1	1.10E-01	1.10E-01	1.10E-01		1.10E-01		Yes		None		None	Yes
Organics-Semivolatile	Benzo(k)fluoranthene	207-08-9	mg/kg	1/ 1	6.60E-02	6.60E-02	6.60E-02		6.60E-02		Yes	6.21E-01	No	2.89E+00	No	No
Organics-Semivolatile	Chrysene	218-01-9	mg/kg	1/ 1	1.10E-01	1.10E-01	1.10E-01		1.10E-01		Yes	6.21E+00	No	2.89E+01	No	No
Organics-Semivolatile	Fluoranthene	206-44-0	mg/kg	1/ 1	2.40E-01	2.40E-01	2.40E-01		2.40E-01		Yes	2.29E+02	No	3.01E+03	No	No
Organics-Semivolatile	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	1/ 1	9.80E-02	9.80E-02	9.80E-02		9.80E-02		Yes	6.21E-02	Yes	2.89E-01	No	Yes
Organics-Semivolatile	Phenanthrene	85-01-8	mg/kg	1/ 1	1.00E-01	1.00E-01	1.00E-01		1.00E-01		Yes		None		None	Yes
Organics-Semivolatile	Pyrene	129-00-0	mg/kg	1/ 1	1.60E-01	1.60E-01	1.60E-01		1.60E-01		Yes	2.31E+02	No	5.42E+03	No	No
Organics-Volatile	1,2-Dichloroethene	549-59-0	mg/kg	1/ 1	6.80E-03	6.80E-03	6.80E-03		6.80E-03		Yes		None		None	Yes
Organics-Volatile	Methylene chloride	75-09-2	mg/kg	1/ 1	3.70E-03	3.70E-03	3.70E-03		3.70E-03		Yes	8.88E-01	No	2.05E+00	No	No
Organics-Volatile	Toluene	108-88-3	mg/kg	1/ 1	1.70E-02	1.70E-02	1.70E-02		1.70E-02		Yes	5.20E+01	No	5.20E+01	No	No

<sup>a</sup> Only analytes with detected concentrations are shown in this summary.

<sup>b</sup> In some cases the average result may exceed the maximum detect because one-half of the laboratory limit was used as a surrogate value in calculation of summary statistics.

<sup>c</sup> Metals that were never detected in background samples have been assigned a background criterion of 0 mg/kg.

SRC = Site-related chemical.

COPC = Chemical of potential concern.

Table Q-4. Summary of Site-Related Chemicals and COPC Screening for Load Line 1 Surface Soil

Analysis Type	Analyte <sup>d</sup>	CAS Number	Units	Results >		95% UCL			Site		1/10th	Max Detect >	1/10th	Max Detect >		
				Detection Limit	Average <sup>b</sup> Result	Minimum Detect	Maximum Detect	of Mean	Exposure Concentration	Background Criteria <sup>f</sup>	SRC?	Region 9 Residential Soil	Residential Soil Criteria?	Region 9 Industrial Soil	Industrial Soil Criteria?	COPC?
<i>CB-13 and CB-10</i>																
Explosives	2,4,6-Trinitrotoluene	118-96-7	mg/kg	17/ 26	1.02E+01	5.50E-02	2.30E+02	2.52E+01	2.52E+01		Yes	1.62E+00	Yes	8.22E+00	Yes	Yes
Explosives	2,4-Dinitrotoluene	121-14-2	mg/kg	5/ 26	7.89E-01	2.10E-01	9.30E+00	1.49E+00	1.49E+00		Yes	7.20E-02	Yes	3.60E-01	Yes	Yes
Explosives	2,6-Dinitrotoluene	606-20-2	mg/kg	5/ 26	3.95E-01	1.10E-01	6.00E-01	7.80E-01	6.00E-01		Yes	7.20E-02	Yes	3.60E-01	Yes	Yes
Explosives	2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	9/ 26	6.68E-01	9.10E-02	8.70E+00	1.24E+00	1.24E+00		Yes		None		None	Yes
Explosives	4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	5/ 26	5.94E-01	2.00E-01	1.90E+00	1.01E+00	1.01E+00		Yes		None		None	Yes
Explosives	4-Nitrotoluene	99-99-0	mg/kg	1/ 26	3.88E-01	2.00E-01	2.00E-01	7.73E-01	2.00E-01		Yes	3.67E+01	No	1.00E+02	No	No
Explosives	HMX	2691-41-0	mg/kg	2/ 26	8.45E-01	7.80E-01	2.20E+00	1.65E+00	1.65E+00		Yes	3.06E+02	No	4.40E+03	No	No
Explosives	Nitrocellulose	9004-70-0	mg/kg	8/ 26	1.08E+01	6.50E+00	1.03E+02	1.82E+01	1.82E+01		Yes		None		None	Yes
Explosives	RDX	121-82-4	mg/kg	1/ 26	1.79E+00	2.70E+01	2.70E+01	3.69E+00	3.69E+00		Yes	4.42E-01	Yes	2.24E+00	Yes	Yes
Metals	Aluminum	7429-90-5	mg/kg	50/ 50	1.11E+04	3.40E+03	2.58E+04	1.30E+04	1.30E+04	1.77E+04	Yes	7.61E+03	Yes	1.00E+04	Yes	Yes
Metals	Antimony	7440-36-0	mg/kg	16/ 50	9.47E-01	5.50E-01	9.10E+00	1.26E+00	1.26E+00	9.60E-01	Yes	3.13E+00	Yes	8.80E+01	No	Yes
Metals	Arsenic	7440-38-2	mg/kg	50/ 50	1.03E+01	3.10E+00	1.83E+01	1.11E+01	1.11E+01	1.54E+01	Yes	3.90E-02	Yes	2.73E-01	Yes	Yes
Metals	Barium	7440-39-3	mg/kg	50/ 50	1.10E+02	2.36E+01	4.10E+02	1.38E+02	1.38E+02	8.84E+01	Yes	5.37E+02	No	1.00E+04	No	No
Metals	Beryllium	7440-41-7	mg/kg	25/ 50	7.36E-01	3.70E-01	3.40E+00	9.68E-01	9.68E-01	8.80E-01	Yes	1.54E+02	No	2.24E+02	No	No
Metals	Cadmium	7440-43-9	mg/kg	39/ 50	3.19E+00	6.20E-02	4.82E+01	6.49E+00	6.49E+00		Yes	3.70E+00	Yes	8.09E+01	No	Yes
Metals	Calcium	7440-70-2	mg/kg	50/ 50	2.78E+04	2.17E+02	1.62E+05	3.99E+04	3.99E+04	1.58E+04	No		None		None	No
Metals	Chromium	7440-47-3	mg/kg	50/ 50	2.47E+01	5.20E+00	3.12E+02	3.52E+01	3.52E+01	1.74E+01	Yes	3.01E+00	Yes	6.40E+00	Yes	Yes
Metals	Cobalt	7440-48-4	mg/kg	50/ 50	8.71E+00	2.20E+00	3.20E+01	9.97E+00	9.97E+00	1.04E+01	Yes	4.69E+02	No	1.00E+04	No	No
Metals	Copper	7440-50-8	mg/kg	50/ 50	1.10E+02	5.30E+00	2.39E+03	1.92E+02	1.92E+02	1.77E+01	Yes	2.91E+02	Yes	7.59E+03	No	Yes
Metals	Cyanide	57-12-5	mg/kg	4/ 24	3.80E-01	6.70E-01	1.00E+00	4.56E-01	4.56E-01		Yes	1.08E+00	No	3.54E+00	No	No
Metals	Iron	7439-89-6	mg/kg	50/ 50	1.99E+04	5.19E+03	5.80E+04	2.26E+04	2.26E+04	2.31E+04	No	2.35E+03	Yes	1.00E+04	Yes	No
Metals	Lead	7439-92-1	mg/kg	50/ 50	1.71E+02	9.40E+00	1.77E+03	2.53E+02	2.53E+02	2.61E+01	Yes	4.00E+01	Yes	7.50E+01	Yes	Yes
Metals	Magnesium	7439-95-4	mg/kg	50/ 50	5.13E+03	7.95E+02	2.02E+04	6.49E+03	6.49E+03	3.03E+03	No		None		None	No
Metals	Manganese	7439-96-5	mg/kg	50/ 50	1.04E+03	2.26E+02	3.65E+03	1.31E+03	1.31E+03	1.45E+03	Yes	1.76E+02	Yes	3.23E+03	Yes	Yes
Metals	Mercury	7487-94-6	mg/kg	46/ 50	7.09E-02	1.20E-02	4.10E-01	9.12E-02	9.12E-02	3.60E-02	Yes	2.30E+00	No	6.10E+01	No	No
Metals	Nickel	7440-02-0	mg/kg	50/ 50	1.82E+01	3.30E+00	6.24E+01	2.09E+01	2.09E+01	2.11E+01	Yes	1.56E+02	No	4.09E+03	No	No
Metals	Potassium	7440-09-7	mg/kg	50/ 50	1.14E+03	4.02E+02	3.61E+03	1.30E+03	1.30E+03	9.27E+02	No		None		None	No
Metals	Selenium	7782-49-2	mg/kg	19/ 50	6.65E-01	3.90E-01	3.60E+00	8.27E-01	8.27E-01	1.40E+00	Yes	3.91E+01	No	1.02E+03	No	No
Metals	Silver	7440-22-4	mg/kg	2/ 50	5.94E-01	2.10E-01	2.30E-01	6.27E-01	2.30E-01		No	3.91E+01	No	1.02E+03	No	No
Metals	Sodium	7440-23-5	mg/kg	25/ 50	3.16E+02	6.26E+01	1.44E+03	3.84E+02	3.84E+02	1.23E+02	No		None		None	No
Metals	Thallium	6533-73-9	mg/kg	47/ 50	4.53E-01	2.40E-01	7.80E-01	4.87E-01	4.87E-01		Yes	5.20E-01	Yes	1.30E+01	No	Yes
Metals	Vanadium	7440-62-2	mg/kg	50/ 50	1.52E+01	5.80E+00	3.82E+01	1.69E+01	1.69E+01	3.11E+01	Yes	5.47E+01	No	1.43E+03	No	No
Metals	Zinc	7440-66-6	mg/kg	50/ 50	3.36E+02	2.00E+01	2.06E+03	4.57E+02	4.57E+02	6.18E+01	Yes	2.35E+03	No	1.00E+04	No	No
Organics-Pesticide/PCB	4,4'-DDE	72-55-9	mg/kg	3/ 6	2.95E-02	2.20E-02	8.20E-02	2.56E+03	8.20E-02		Yes	1.72E-01	No	1.21E+00	No	No
Organics-Pesticide/PCB	4,4'-DDT	50-29-3	mg/kg	1/ 6	6.31E-03	1.50E-02	1.50E-02	1.09E-02	1.09E-02		Yes	1.72E-01	No	1.21E+00	No	No
Organics-Pesticide/PCB	Endrin aldehyde	7421-93-4	mg/kg	3/ 6	2.10E-02	1.50E-02	5.30E-02	9.12E+01	5.30E-02		Yes	1.83E+00	No	2.64E+01	No	No
Organics-Pesticide/PCB	gamma-Chlordane	5103-74-2	mg/kg	2/ 6	1.02E-02	1.40E-02	3.50E-02	2.10E-02	2.10E-02		Yes	1.62E-01	No	1.07E+00	No	No
Organics-Pesticide/PCB	Heptachlor	76-44-8	mg/kg	1/ 6	8.48E-03	2.80E-02	2.80E-02	1.69E-02	1.69E-02		Yes	1.08E-02	Yes	5.48E-02	No	Yes
Organics-Pesticide/PCB	PCB-1254	11097-69-1	mg/kg	3/ 6	8.59E-01	1.00E+00	2.40E+00	1.70E+00	1.70E+00		Yes	2.22E-02	Yes	1.00E-01	Yes	Yes
Organics-Semivolatile	2-Methylnaphthalene	91-57-6	mg/kg	1/ 6	1.83E-01	1.40E-01	1.40E-01	2.02E-01	1.40E-01		Yes		None		None	Yes
Organics-Semivolatile	Anthracene	120-12-7	mg/kg	1/ 6	1.70E-01	7.30E-02	7.30E-02	2.10E-01	7.30E-02		Yes	2.19E+03	No	1.00E+04	No	No
Organics-Semivolatile	Benz(a)anthracene	56-55-3	mg/kg	3/ 6	1.82E-01	6.10E-02	4.10E-01	5.94E-01	4.10E-01		Yes	6.21E-02	Yes	2.89E-01	Yes	Yes
Organics-Semivolatile	Benzo(a)pyrene	50-32-8	mg/kg	3/ 6	1.80E-01	8.10E-02	3.70E-01	4.31E-01	3.70E-01		Yes	6.21E-03	Yes	2.89E-02	Yes	Yes
Organics-Semivolatile	Benzo(b)fluoranthene	205-99-2	mg/kg	3/ 6	2.06E-01	1.10E-01	4.70E-01	4.52E-01	4.52E-01		Yes	6.21E-02	Yes	2.89E-01	Yes	Yes
Organics-Semivolatile	Benzo(ghi)perylene	191-24-2	mg/kg	3/ 6	1.57E-01	5.70E-02	2.40E-01	2.12E-01	2.12E-01		Yes		None		None	Yes
Organics-Semivolatile	Benzo(k)fluoranthene	207-08-9	mg/kg	1/ 6	1.93E-01	2.10E-01	2.10E-01	2.04E-01	2.04E-01		Yes	6.21E-01	No	2.89E+00	No	No
Organics-Semivolatile	Carbazole	86-74-8	mg/kg	1/ 6	1.70E-01	7.20E-02	7.20E-02	2.10E-01	7.20E-02		Yes	2.43E+00	No	1.23E+01	No	No
Organics-Semivolatile	Chrysene	218-01-9	mg/kg	3/ 6	1.99E-01	6.90E-02	4.80E-01	6.04E-01	4.80E-01		Yes	6.21E+00	No	2.89E+01	No	No
Organics-Semivolatile	Di-n-butyl phthalate	84-74-2	mg/kg	1/ 6	2.38E-01	4.70E-01	4.70E-01	3.32E-01	3.32E-01		Yes	6.11E+02	No	8.81E+03	No	No
Organics-Semivolatile	Fluoranthene	206-44-0	mg/kg	3/ 6	3.03E-01	1.20E-01	1.00E+00	5.84E-01	5.84E-01		Yes	2.29E+02	No	3.01E+03	No	No
Organics-Semivolatile	Fluorene	86-73-7	mg/kg	1/ 6	1.64E-01	4.10E-02	4.10E-02	2.15E-01	4.10E-02		Yes	2.64E+02	No	3.31E+03	No	No
Organics-Semivolatile	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	3/ 6	1.59E-01	5.60E-02	2.60E-01	2.19E-01	2.19E-01		Yes	6.21E-02	Yes	2.89E-01	No	Yes
Organics-Semivolatile	Naphthalene	91-20-3	mg/kg	1/ 6	1.76E-01	1.00E-01	1.00E-01	2.08E-01	1.00E-01		Yes	5.59E+00	No	1.89E+01	No	No

Table Q-4. Summary of Site-Related Chemicals and COPC Screening for Load Line 1 Surface Soil (continued)

Analysis Type	Analyte <sup>c</sup>	CAS Number	Results >		Minimum Detect	Maximum Detect	95% UCL of Exposure		Site Background		1/10th	Max Detect >	1/10th	Max Detect >	
			Detection Limit	Average <sup>b</sup> Result			Mean	Concentration <sup>f</sup>	Criteria <sup>f</sup>	Soil SRC?	Residential Soil	Residential Soil Criteria?	Industrial Soil	Industrial Soil Criteria?	COPC?
Organics-Semivolatiles	Phenanthrene	85-01-8	mg/kg	2/ 6	2.18E-01	1.10E-01	4.50E-01	3.15E-01	3.15E-01		Yes	None		None	Yes
Organics-Semivolatiles	Pyrene	129-00-0	mg/kg	3/ 6	2.58E-01	9.40E-02	7.90E-01	9.80E-01	7.90E-01		Yes	2.31E+02		5.42E+03	No
Organics-Volatile	1,2-Dichloroethene	549-59-0	mg/kg	5/ 6	3.76E-03	1.80E-03	7.20E-03	7.17E-03	7.17E-03		Yes	None		None	Yes
Organics-Volatile	Acetone	67-64-1	mg/kg	1/ 6	5.67E-03	5.00E-03	5.00E-03	6.00E-03	5.00E-03		Yes	1.57E+02		6.22E+02	No
Organics-Volatile	Methylene chloride	75-09-2	mg/kg	1/ 6	2.81E-03	2.20E-03	2.20E-03	3.09E-03	2.20E-03		Yes	8.88E-01		2.05E+00	No
Organics-Volatile	Toluene	108-88-3	mg/kg	2/ 6	3.13E-03	3.10E-03	4.40E-03	3.66E-03	3.66E-03		Yes	5.20E+01		5.20E+01	No
Organics-Volatile	Trichloroethene	79-01-6	mg/kg	3/ 6	2.76E-03	1.80E-03	3.30E-03	3.19E-03	3.19E-03		Yes	2.77E-01		6.12E-01	No
<b>CB-14, CB-17, and CA-15</b>															
Explosives	2,4,6-Trinitrotoluene	118-96-7	mg/kg	2/ 4	1.28E+00	3.70E-01	4.50E+00	8.25E+09	4.50E+00		Yes	1.62E+00	Yes	8.22E+00	No
Explosives	2,4-Dinitrotoluene	121-14-2	mg/kg	2/ 4	2.90E-01	3.80E-01	5.30E-01	5.26E-01	5.26E-01		Yes	7.20E-02	Yes	3.60E-01	Yes
Explosives	4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	2/ 4	2.53E-01	1.40E-01	6.20E-01	5.41E-01	5.41E-01		Yes	None		None	Yes
Explosives	HMX	2691-41-0	mg/kg	2/ 4	8.80E-01	3.20E-01	2.70E+00	2.31E+00	2.31E+00		Yes	3.06E+02	No	4.40E+03	No
Explosives	Nitrocellulose	9004-70-0	mg/kg	2/ 4	3.54E+01	4.95E+01	9.00E+01	8.60E+01	8.60E+01		Yes	None		None	Yes
Explosives	RDX	121-82-4	mg/kg	1/ 4	8.69E+00	3.40E+01	3.40E+01	2.85E+01	2.85E+01		Yes	4.42E-01	Yes	2.24E+00	Yes
Metals	Aluminum	7429-90-5	mg/kg	26/ 26	1.41E+04	6.10E+03	9.73E+04	1.99E+04	1.99E+04	1.77E+04	Yes	7.61E+03	Yes	1.00E+04	Yes
Metals	Antimony	7440-36-0	mg/kg	2/ 26	7.29E-01	5.50E-01	6.40E-01	9.86E-01	6.40E-01	9.60E-01	No	3.13E+00	No	8.18E+01	No
Metals	Arsenic	7440-38-2	mg/kg	26/ 26	1.47E+01	4.50E+00	1.12E+02	2.14E+01	2.14E+01	1.54E+01	Yes	3.90E-02	Yes	2.73E-01	Yes
Metals	Barium	7440-39-3	mg/kg	26/ 26	9.92E+01	3.06E+01	5.72E+02	1.35E+02	8.84E+01	8.84E+01	Yes	5.37E+02	Yes	1.00E+04	No
Metals	Beryllium	7440-41-7	mg/kg	25/ 26	6.69E-01	2.40E-01	3.30E+00	9.36E-01	9.36E-01	8.80E-01	Yes	1.54E+01	No	2.24E+02	No
Metals	Cadmium	7440-43-9	mg/kg	11/ 26	1.17E+00	5.00E-02	1.16E+01	2.07E+00	2.07E+00		Yes	3.70E+00	Yes	8.09E+01	No
Metals	Calcium	7440-70-2	mg/kg	26/ 26	1.45E+04	4.13E+02	1.33E+05	3.50E+04	3.50E+04	1.58E+04	No	None		None	Yes
Metals	Chromium	7440-47-3	mg/kg	26/ 26	1.99E+01	8.40E+00	1.28E+02	2.76E+01	2.76E+01	1.74E+01	Yes	3.01E+00	Yes	6.40E+00	Yes
Metals	Cobalt	7440-48-4	mg/kg	26/ 26	1.04E+01	2.60E+00	7.23E+01	1.46E+01	1.46E+01	1.04E+01	Yes	4.69E+02	No	1.00E+04	No
Metals	Copper	7440-50-8	mg/kg	26/ 26	3.45E+01	8.00E+00	1.99E+02	4.93E+01	4.93E+01	1.77E+01	Yes	2.91E+02	No	7.59E+03	No
Metals	Cyanide	57-12-5	mg/kg	1/ 11	6.58E-01	2.40E+00	2.40E+00	1.11E+00	1.11E+00		Yes	1.08E+00	Yes	3.54E+00	No
Metals	Iron	7439-89-6	mg/kg	26/ 26	2.84E+04	9.80E+03	1.98E+05	4.02E+04	4.02E+04	2.31E+04	No	2.35E+03	Yes	1.00E+04	Yes
ORTOC	Total Organic Carbon	N997	mg/kg	1/ 1	2.60E+03	2.60E+03	2.60E+03	2.60E+03	2.40E+04	2.40E+04	No	None		None	No
Metals	Lead	7439-92-1	mg/kg	26/ 26	7.03E+01	1.28E+01	6.02E+02	1.11E+02	1.11E+02	2.61E+01	Yes	4.00E+01	Yes	7.50E+01	Yes
Metals	Magnesium	7439-95-4	mg/kg	26/ 26	4.15E+03	1.42E+03	2.31E+04	6.00E+03	6.00E+03	3.03E+03	No	None		None	No
Metals	Manganese	7439-96-5	mg/kg	26/ 26	8.63E+02	2.15E+02	4.70E+03	1.18E+03	1.18E+03	1.45E+03	Yes	1.76E+02	Yes	3.23E+03	Yes
Metals	Mercury	7487-94-6	mg/kg	26/ 26	5.65E-02	1.80E-02	3.70E-01	8.14E-02	8.14E-02	3.60E-02	Yes	2.30E+00	No	6.10E+01	No
Metals	Nickel	7440-02-0	mg/kg	26/ 26	2.23E+01	7.30E+00	1.60E+02	3.18E+01	3.18E+01	2.11E+01	Yes	1.56E+02	Yes	4.09E+03	No
Metals	Potassium	7440-09-7	mg/kg	26/ 26	1.47E+03	5.87E+02	1.16E+04	2.17E+03	2.17E+03	9.27E+02	No	None		None	No
Metals	Selenium	7782-49-2	mg/kg	6/ 26	5.38E-01	5.50E-01	1.10E+00	6.70E-01	6.70E-01	1.40E+00	No	3.91E+01	No	1.02E+03	No
Metals	Silver	7440-22-4	mg/kg	3/ 26	6.84E-01	2.00E-01	2.10E-01	9.48E-01	2.10E-01		Yes	3.91E+01	No	1.02E+03	No
Metals	Sodium	7440-23-5	mg/kg	9/ 26	2.48E+02	6.31E+01	1.63E+03	3.55E+02	3.55E+02	1.23E+02	No	None		None	No
Metals	Thallium	6533-73-9	mg/kg	26/ 26	6.40E-01	3.40E-01	4.60E+00	9.12E-01	9.12E-01		Yes	5.20E-01	Yes	1.30E+01	No
Metals	Vanadium	7440-62-2	mg/kg	26/ 26	2.43E+01	8.60E+00	1.79E+02	3.50E+01	3.50E+01	3.11E+01	Yes	5.47E+01	Yes	1.43E+03	No
Metals	Zinc	7440-66-6	mg/kg	26/ 26	1.51E+02	3.92E+01	8.81E+02	2.19E+02	2.19E+02	6.18E+01	Yes	2.35E+03	No	1.00E+04	No
Organics-Pesticide/PCB	4,4'-DDE	72-55-9	mg/kg	3/ 3	7.43E-02	1.00E-02	2.00E-01	5.26E+10	2.00E-01		Yes	1.72E-01	Yes	1.21E+00	No
Organics-Pesticide/PCB	alpha-Chlordane	5103-71-9	mg/kg	1/ 3	8.45E-03	4.90E-03	4.90E-03	2.49E-02	4.90E-03		Yes	1.62E-01	No	1.07E+00	No
Organics-Pesticide/PCB	beta-BHC	319-85-7	mg/kg	1/ 3	8.03E-03	2.80E-03	2.80E-03	2.48E-02	2.80E-03		Yes	3.16E-02	No	2.08E-01	No
Organics-Pesticide/PCB	Endrin aldehyde	7421-93-4	mg/kg	3/ 3	1.06E-01	8.30E-03	3.00E-01	3.89E-01	3.00E-01		Yes	1.83E+00	No	2.64E+01	No
Organics-Pesticide/PCB	Endrin ketone	53494-70-5	mg/kg	1/ 3	8.18E-03	4.10E-03	4.10E-03	2.49E-02	4.10E-03		Yes	1.83E+00	No	2.64E+01	No
Organics-Pesticide/PCB	gamma-Chlordane	5103-74-2	mg/kg	3/ 3	4.63E-02	4.40E-03	1.30E-01	1.69E-01	1.30E-01		Yes	1.62E-01	No	1.07E+00	No
Organics-Pesticide/PCB	Methoxychlor	72-43-5	mg/kg	1/ 3	1.49E-02	3.70E-03	3.70E-03	4.79E-02	3.70E-03		Yes	3.06E+01	No	4.40E+02	No
Organics-Pesticide/PCB	PCB-1254	11097-69-1	mg/kg	3/ 3	2.01E+00	6.00E-01	4.70E+00	1.16E+06	4.70E+00		Yes	2.22E-02	Yes	1.00E-01	Yes
Organics-Semivolatiles	2-Methylnaphthalene	91-57-6	mg/kg	2/ 4	1.45E-01	3.80E-02	1.70E-01	2.29E-01	1.70E-01		Yes	None		None	Yes
Organics-Semivolatiles	Acenaphthene	83-32-9	mg/kg	1/ 4	1.57E-01	6.90E-02	6.90E-02	2.27E-01	6.90E-02		Yes	3.68E+02	No	3.84E+03	No
Organics-Semivolatiles	Anthracene	120-12-7	mg/kg	2/ 4	1.60E-01	1.10E-01	1.60E-01	2.02E-01	1.60E-01		Yes	2.19E+03	No	1.00E+04	No
Organics-Semivolatiles	Benz(a)anthracene	56-55-3	mg/kg	2/ 4	3.53E-01	4.00E-01	6.40E-01	9.27E+00	6.40E-01		Yes	6.21E-02	Yes	2.89E-01	Yes
Organics-Semivolatiles	Benzo(a)pyrene	50-32-8	mg/kg	3/ 4	3.99E-01	3.70E-02	8.40E-01	8.22E-01	8.22E-01		Yes	6.21E-03	Yes	2.89E-02	Yes
Organics-Semivolatiles	Benzo(b)fluoranthene	205-99-2	mg/kg	3/ 4	5.28E-01	7.30E-02	1.10E+00	1.02E+06	1.10E+00		Yes	6.21E-02	Yes	2.89E-01	Yes
Organics-Semivolatiles	Benzo(ghi)perylene	191-24-2	mg/kg	2/ 4	3.20E-01	3.00E-01	6.10E-01	4.21E+00	6.10E-01		Yes	None		None	Yes

Table Q-4. Summary of Site-Related Chemicals and COPC Screening for Load Line 1 Surface Soil (continued)

Analysis Type	Analyte <sup>d</sup>	CAS Number	Units	Results >		95% UCL			Site Exposure Background Criteria <sup>f</sup>	SRC?	1/10th	Max Detect >	1/10th	Max Detect >		
				Detection	Average <sup>b</sup>	Minimum	Maximum	of			Region 9	Residential	Region 9	Industrial		
				Limit	Result	Defect	Defect	Mean	Concentration <sup>e</sup>		Soil	Soil	Soil	Soil		
Organics-Semivolatiles	Benzo(k)fluoranthene	207-08-9	mg/kg	2/ 4	2.33E-01	2.60E-01	3.00E-01	3.00E-01	3.00E-01	Yes	6.21E-01	No	2.89E+00	No	No	
Organics-Semivolatiles	Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	1/ 4	1.71E-01	1.40E-01	1.40E-01	1.97E-01	1.40E-01	Yes	3.47E+00	No	1.76E+01	No	No	
Organics-Semivolatiles	Carbazole	86-74-8	mg/kg	2/ 4	1.44E-01	9.50E-02	1.10E-01	4.17E-01	1.10E-01	Yes	2.43E+00	No	1.23E+01	No	No	
Organics-Semivolatiles	Chrysene	218-01-9	mg/kg	2/ 4	3.93E-01	5.60E-01	6.40E-01	6.77E-01	6.40E-01	Yes	6.21E+00	No	2.89E+01	No	No	
Organics-Semivolatiles	Dibenz(a,h)anthracene	53-70-3	mg/kg	2/ 4	1.59E-01	8.60E-02	1.80E-01	2.17E-01	1.80E-01	Yes	6.21E-03	Yes	2.89E-02	Yes	Yes	
Organics-Semivolatiles	Dibenzofuran	132-64-9	mg/kg	1/ 4	1.48E-01	4.50E-02	4.50E-02	2.28E-01	4.50E-02	Yes	2.91E+01	No	5.06E+02	No	No	
Organics-Semivolatiles	Di-n-butyl phthalate	84-74-2	mg/kg	3/ 4	2.81E-01	9.30E-02	7.20E-01	2.87E+02	7.20E-01	Yes	6.11E+02	No	8.81E+03	No	No	
Organics-Semivolatiles	Fluoranthene	206-44-0	mg/kg	3/ 4	6.47E-01	8.90E-02	1.40E+00	2.12E+06	1.40E+00	Yes	2.29E+02	No	3.01E+03	No	No	
Organics-Semivolatiles	Fluorene	86-73-7	mg/kg	1/ 4	1.54E-01	5.70E-02	5.70E-02	2.31E-01	5.70E-02	Yes	2.64E+02	No	3.31E+03	No	No	
Organics-Semivolatiles	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	2/ 4	3.25E-01	2.90E-01	6.40E-01	4.70E+00	6.40E-01	Yes	6.21E-02	Yes	2.89E-01	Yes	Yes	
Organics-Semivolatiles	Naphthalene	91-20-3	mg/kg	2/ 4	1.31E-01	4.50E-02	1.10E-01	2.11E-01	1.10E-01	Yes	5.59E+00	No	1.89E+01	No	No	
Organics-Semivolatiles	Phenanthrene	85-01-8	mg/kg	2/ 4	3.73E-01	4.50E-01	6.70E-01	6.48E-01	6.48E-01	Yes		None		None	Yes	
Organics-Semivolatiles	Pyrene	129-00-0	mg/kg	3/ 4	5.56E-01	6.30E-02	1.00E+00	3.36E+06	1.00E+00	Yes	2.31E+02	No	5.42E+03	No	No	
Organics-Volatile	1,2-Dichloroethene	549-59-0	mg/kg	4/ 4	2.38E-03	1.60E-03	3.10E-03	6.76E-03	3.10E-03	Yes		None		None	Yes	
Organics-Volatile	Methylene chloride	75-09-2	mg/kg	2/ 4	2.44E-03	1.90E-03	2.10E-03	4.08E-03	2.10E-03	Yes	8.88E-01	No	2.05E+00	No	No	
Organics-Volatile	Toluene	108-88-3	mg/kg	1/ 4	2.50E-03	1.70E-03	1.70E-03	3.14E-03	1.70E-03	Yes	5.20E+01	No	5.20E+01	No	No	
<i>CB-3/CB-801</i>																
Explosives	1,3,5-Trinitrobenzene	99-35-4	mg/kg	3/ 13	1.21E-01	9.80E-02	1.20E-01	1.25E-01	1.20E-01	Yes	1.83E+02	No	2.64E+03	No	No	
Explosives	2,4,6-Trinitrotoluene	118-96-7	mg/kg	6/ 13	2.20E-01	8.00E-02	1.20E+00	3.69E-01	3.69E-01	Yes	1.62E+00	No	8.22E+00	No	No	
Explosives	2,4-Dinitrotoluene	121-14-2	mg/kg	1/ 13	1.27E-01	1.50E-01	1.50E-01	1.30E-01	1.30E-01	Yes	7.20E-02	Yes	3.60E-01	No	Yes	
Explosives	2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	1/ 13	1.23E-01	9.70E-02	9.70E-02	1.27E-01	9.70E-02	Yes		None		None	Yes	
Explosives	2-Nitrotoluene	88-72-2	mg/kg	1/ 13	1.47E-01	2.20E-01	2.20E-01	1.76E-01	1.76E-01	Yes	3.67E+01	No	1.00E+02	No	No	
Explosives	4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	5/ 13	1.35E-01	9.10E-02	2.30E-01	1.52E-01	1.52E-01	Yes		None		None	Yes	
Explosives	Nitrobenzene	98-95-3	mg/kg	3/ 13	1.30E-01	9.50E-02	2.30E-01	1.45E-01	1.45E-01	Yes	1.96E+00	No	1.14E+01	No	No	
Explosives	Nitrocellulose	9004-70-0	mg/kg	5/ 13	2.60E+00	5.20E-01	1.49E+01	4.54E+00	4.54E+00	Yes		None		None	Yes	
Explosives	RDX	121-82-4	mg/kg	1/ 13	2.53E-01	2.90E-01	2.90E-01	2.59E-01	2.59E-01	Yes	4.42E-01	No	2.24E+00	No	No	
Metals	Aluminum	7429-90-5	mg/kg	22/ 22	9.78E+03	4.12E+03	2.32E+04	1.20E+04	1.20E+04	1.77E+04	Yes	7.61E+03	Yes	1.00E+04	Yes	Yes
Metals	Antimony	7440-36-0	mg/kg	10/ 22	5.04E+01	7.10E-01	6.48E+02	1.10E+02	1.10E+02	9.60E-01	Yes	3.13E+00	Yes	8.18E+01	Yes	Yes
Metals	Arsenic	7440-38-2	mg/kg	22/ 22	1.16E+01	5.30E+00	1.90E+01	1.29E+01	1.54E+01	Yes	3.90E-02	Yes	2.73E-01	Yes	Yes	
Metals	Barium	7440-39-3	mg/kg	22/ 22	1.07E+02	2.05E+01	3.47E+02	1.54E+02	1.54E+02	8.84E+01	Yes	5.37E+02	No	1.00E+04	No	No
Metals	Beryllium	7440-41-7	mg/kg	11/ 22	5.57E-01	3.30E-01	2.50E+00	9.49E-01	9.49E-01	8.80E-01	Yes	1.54E+01	No	2.24E+02	No	No
Metals	Cadmium	7440-43-9	mg/kg	20/ 22	2.62E+00	7.40E-02	2.73E+01	6.28E+00	6.28E+00	Yes	3.70E+00	Yes	8.09E+01	No	Yes	
Metals	Calcium	7440-70-2	mg/kg	22/ 22	3.05E+04	3.00E+02	2.21E+05	1.99E+05	1.99E+05	1.58E+04	No		None		None	No
Metals	Chromium	7440-47-3	mg/kg	22/ 22	3.01E+01	6.80E+00	1.74E+02	4.38E+01	4.38E+01	1.74E+01	Yes	3.01E+00	Yes	6.40E+00	Yes	Yes
Metals	Chromium, hexavalent	18540-29-9	mg/kg	1/ 2	1.00E+00	1.40E+00	1.40E+00	3.53E+00	1.40E+00	Yes	3.01E+00	No	6.40E+00	No	No	
Metals	Cobalt	7440-48-4	mg/kg	22/ 22	7.49E+00	3.40E+00	1.09E+01	8.24E+00	8.24E+00	1.04E+01	Yes	4.69E+02	No	1.00E+04	No	No
Metals	Copper	7440-50-8	mg/kg	22/ 22	3.84E+01	5.90E+00	1.91E+02	5.60E+01	5.60E+01	1.77E+01	Yes	2.91E+02	No	7.59E+03	No	No
Metals	Cyanide	57-12-5	mg/kg	2/ 9	4.01E-01	5.80E-01	1.00E+00	5.53E-01	5.53E-01	Yes	1.08E+00	No	3.54E+00	No	No	
Metals	Iron	7439-89-6	mg/kg	22/ 22	2.40E+04	8.83E+03	9.00E+04	3.02E+04	3.02E+04	2.31E+04	No	2.35E+03	Yes	1.00E+04	Yes	No
Metals	Lead	7439-92-1	mg/kg	22/ 22	2.45E+02	1.60E+01	1.62E+03	6.06E+02	6.06E+02	2.61E+01	Yes	4.00E+01	Yes	7.50E+01	Yes	Yes
Metals	Magnesium	7439-95-4	mg/kg	22/ 22	4.05E+03	1.30E+03	1.70E+04	5.55E+03	5.55E+03	3.03E+03	No		None		None	No
Metals	Manganese	7439-96-5	mg/kg	22/ 22	9.15E+02	3.15E+02	4.07E+03	1.26E+03	1.26E+03	1.45E+03	Yes	1.76E+02	Yes	3.23E+03	Yes	Yes
Metals	Mercury	7487-94-6	mg/kg	20/ 22	8.51E-02	1.60E-02	4.20E-01	1.41E-01	1.41E-01	3.60E-02	Yes	2.30E+00	No	6.10E+01	No	No
Metals	Nickel	7440-02-0	mg/kg	22/ 22	1.90E+01	7.80E+00	6.05E+01	2.27E+01	2.27E+01	2.11E+01	Yes	1.56E+02	No	4.09E+03	No	No
Metals	Potassium	7440-09-7	mg/kg	22/ 22	1.07E+03	5.68E+02	1.79E+03	1.24E+03	1.24E+03	9.27E+02	No		None		None	No
Metals	Selenium	7782-49-2	mg/kg	10/ 22	5.54E-01	3.90E-01	1.80E+00	6.92E-01	6.92E-01	1.40E+00	Yes	3.91E+01	No	1.02E+03	No	No
Metals	Silver	7440-22-4	mg/kg	3/ 22	5.68E-01	2.10E-01	4.60E-01	6.24E-01	6.24E-01	Yes	3.91E+01	No	1.02E+03	No	No	
Metals	Sodium	7440-23-5	mg/kg	7/ 22	2.28E+02	6.95E+01	9.26E+02	3.00E+02	3.00E+02	1.23E+02	No		None		None	No
Metals	Thallium	6533-73-9	mg/kg	22/ 22	5.60E-01	4.30E-01	8.00E-01	6.01E-01	6.01E-01	Yes	5.20E-01	Yes	1.30E+01	No	Yes	
Metals	Vanadium	7440-62-2	mg/kg	22/ 22	1.55E+01	7.80E+00	2.74E+01	1.79E+01	1.79E+01	3.11E+01	No	5.47E+01	No	1.43E+03	No	No
Metals	Zinc	7440-66-6	mg/kg	22/ 22	1.94E+02	7.21E+01	6.74E+02	2.60E+02	2.60E+02	6.18E+01	Yes	2.35E+03	No	1.00E+04	No	No
Organics-Pesticide/PCB	4,4'-DDE	72-55-9	mg/kg	2/ 4	5.19E-02	4.80E-02	1.20E-01	1.95E+01	1.20E-01	Yes	1.72E-01	No	1.21E+00	No	No	
Organics-Pesticide/PCB	4,4'-DDT	50-29-3	mg/kg	1/ 4	2.51E-02	4.10E-02	4.10E-02	3.76E-02	3.76E-02	Yes	1.72E-01	No	1.21E+00	No	No	
Organics-Pesticide/PCB	beta-BHC	319-85-7	mg/kg	2/ 4	6.94E-02	1.80E-02	2.20E-01	1.88E-01	1.88E-01	Yes	3.16E-02	Yes	2.08E-01	Yes	Yes	



Table Q-4. Summary of Site-Related Chemicals and COPC Screening for Load Line 1 Surface Soil (continued)

Analysis Type	Analyte <sup>c</sup>	CAS Number	Units	Results >		Minimum Detect	Maximum Detect	95% UCL of Exposure Concentration <sup>f</sup>		Site Background Criteria <sup>f</sup>	SRC?	1/10th	Max Detect >	1/10th	Max Detect >	
				Detection Limit	Average <sup>b</sup> Result			Residential Soil	Residential Soil Criteria?			Industrial Soil	Industrial Soil Criteria?	COPC?		
Organics-Pesticide/PCB	Dieldrin	60-57-1	mg/kg	1/ 4	2.39E-02	3.60E-02	3.60E-02	3.34E-02	3.34E-02		Yes	3.04E-03	Yes	1.54E-02	Yes	Yes
Organics-Pesticide/PCB	Endrin aldehyde	7421-93-4	mg/kg	2/ 4	8.06E-02	7.30E-02	2.10E-01	4.61E+03	2.10E-01		Yes	1.83E+00	No	2.64E+01	No	No
Organics-Pesticide/PCB	Endrin ketone	53494-70-5	mg/kg	1/ 4	3.14E-02	8.10E-02	8.10E-02	7.12E-02	7.12E-02		Yes	1.83E+00	No	2.64E+01	No	No
Organics-Pesticide/PCB	gamma-Chlordane	5103-74-2	mg/kg	2/ 4	3.29E-02	4.00E-02	5.20E-02	5.16E-02	5.16E-02		Yes	1.62E-01	No	1.07E+00	No	No
Organics-Pesticide/PCB	Methoxychlor	72-43-5	mg/kg	1/ 4	3.55E-02	2.60E-02	2.60E-02	4.30E-02	2.60E-02		Yes	3.06E+01	No	4.40E+02	No	No
Organics-Pesticide/PCB	PCB-1254	11097-69-1	mg/kg	4/ 4	1.76E+00	3.30E-01	4.30E+00	7.55E+04	4.30E+00		Yes	2.22E-02	Yes	1.00E-01	Yes	Yes
Organics-Semivolatile	2-Methylnaphthalene	91-57-6	mg/kg	2/ 5	6.01E-01	5.00E-02	1.20E-01	1.59E+00	1.20E-01		Yes		None		None	Yes
Organics-Semivolatile	Acenaphthene	83-32-9	mg/kg	1/ 5	6.92E-01	2.40E+00	2.40E+00	1.61E+00	1.61E+00		Yes	3.68E+02	No	3.84E+03	No	No
Organics-Semivolatile	Anthracene	120-12-7	mg/kg	2/ 5	1.32E+00	2.10E-01	5.80E+00	3.71E+00	3.71E+00		Yes	2.19E+03	No	1.00E+04	No	No
Organics-Semivolatile	Benz(a)anthracene	56-55-3	mg/kg	5/ 5	3.08E+00	7.10E-02	1.40E+01	1.46E+06	1.40E+01		Yes	6.21E-02	Yes	2.89E-01	Yes	Yes
Organics-Semivolatile	Benzo(a)pyrene	50-32-8	mg/kg	5/ 5	2.94E+00	7.30E-02	1.30E+01	1.45E+06	1.30E+01		Yes	6.21E-03	Yes	2.89E-02	Yes	Yes
Organics-Semivolatile	Benzo(b)fluoranthene	205-99-2	mg/kg	5/ 5	3.63E+00	1.00E-01	1.50E+01	1.57E+06	1.50E+01		Yes	6.21E-02	Yes	2.89E-01	Yes	Yes
Organics-Semivolatile	Benzo(ghi)perylene	191-24-2	mg/kg	5/ 5	2.00E+00	5.40E-02	8.20E+00	1.16E+06	8.20E+00		Yes		None		None	Yes
Organics-Semivolatile	Benzo(k)fluoranthene	207-08-9	mg/kg	3/ 5	1.38E+00	1.30E-01	5.70E+00	9.01E+02	5.70E+00		Yes	6.21E-01	Yes	2.89E+00	Yes	Yes
Organics-Semivolatile	Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	2/ 5	6.54E-01	9.50E-02	3.40E-01	1.62E+00	1.15E+00		Yes	3.47E+00	No	1.76E+01	No	No
Organics-Semivolatile	Carbazole	86-74-8	mg/kg	2/ 5	9.68E-01	1.60E-01	4.10E+00	2.64E+00	2.64E+00		Yes	2.43E+00	Yes	1.23E+01	No	Yes
Organics-Semivolatile	Chrysene	218-01-9	mg/kg	5/ 5	3.45E+00	8.90E-02	1.50E+01	1.40E+06	1.50E+01		Yes	6.21E+00	Yes	2.89E+01	No	Yes
Organics-Semivolatile	Dibenz(a,h)anthracene	53-70-3	mg/kg	2/ 5	5.20E-01	3.20E-01	1.70E+00	1.15E+00	1.15E+00		Yes	6.21E-03	Yes	2.89E-02	Yes	Yes
Organics-Semivolatile	Dibenzofuran	132-64-9	mg/kg	1/ 5	4.72E-01	1.30E+00	1.30E+00	9.29E-01	9.29E-01		Yes	2.91E+01	No	5.06E+02	No	No
Organics-Semivolatile	Di-n-butyl phthalate	84-74-2	mg/kg	1/ 5	7.06E-01	5.00E-01	5.00E-01	1.64E+00	5.00E-01		Yes	6.11E+02	No	8.11E+03	No	No
Organics-Semivolatile	Fluoranthene	206-44-0	mg/kg	5/ 5	8.37E+00	1.40E-01	3.90E+01	7.02E+06	3.90E+01		Yes	2.29E+02	No	3.01E+03	No	No
Organics-Semivolatile	Fluorene	86-73-7	mg/kg	1/ 5	6.72E-01	2.30E+00	2.30E+00	1.55E+00	1.55E+00		Yes	2.64E+02	No	3.31E+03	No	No
Organics-Semivolatile	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	5/ 5	2.02E+00	5.30E-02	8.70E+00	9.44E+05	8.70E+00		Yes	6.21E-02	Yes	2.89E+01	Yes	Yes
Organics-Semivolatile	Naphthalene	91-20-3	mg/kg	1/ 5	6.72E-01	4.60E-02	4.60E-02	1.63E+00	4.60E-02		Yes	5.59E+00	No	1.89E+01	No	No
Organics-Semivolatile	Pentachlorophenol	87-86-5	mg/kg	1/ 5	1.63E+00	8.30E-02	8.30E-02	3.99E+00	8.30E-02		Yes	2.98E-01	No	1.11E+00	No	No
Organics-Semivolatile	Phenanthrene	85-01-8	mg/kg	5/ 5	6.27E+00	7.20E-02	3.00E+01	8.05E+06	3.00E+01		Yes		None		None	Yes
Organics-Semivolatile	Phenol	108-95-2	mg/kg	1/ 5	6.72E-01	4.50E-02	4.50E-02	1.63E+00	4.50E-02		Yes	3.67E+03	No	1.00E+04	No	No
Organics-Semivolatile	Pyrene	129-00-0	mg/kg	5/ 5	8.70E+00	1.40E-01	4.10E+01	8.83E+06	4.10E+01		Yes	2.31E+02	No	5.42E+03	No	No
Organics-Volatile	1,2-Dichloroethene	549-59-0	mg/kg	5/ 5	4.66E-03	7.20E-04	7.90E-03	7.14E-03	7.14E-03		Yes		None		None	Yes
Organics-Volatile	Methylene chloride	75-09-2	mg/kg	1/ 5	2.94E-03	3.00E-03	3.00E-03	2.98E-03	2.98E-03		Yes	8.88E-01	No	2.05E+00	No	No
Organics-Volatile	Trichloroethene	79-01-6	mg/kg	1/ 5	3.23E-03	4.40E-03	4.40E-03	3.85E-03	3.85E-03		Yes	2.77E-01	No	6.12E-01	No	No
<i>CB-4/A and CA-6/6A</i>																
Explosives	1,3,5-Trinitrobenzene	99-35-4	mg/kg	5/ 82	3.18E+00	1.20E-01	1.10E+02	5.90E+00	5.90E+00		Yes	1.83E+02	No	2.64E+03	No	No
Explosives	1,3-Dinitrobenzene	99-65-0	mg/kg	4/ 82	3.18E+00	3.40E-02	1.10E+02	5.90E+00	5.90E+00		Yes	6.11E-01	Yes	8.81E+00	Yes	Yes
Explosives	2,4,6-Trinitrotoluene	118-96-7	mg/kg	60/ 82	1.60E+02	5.20E-02	4.80E+03	2.97E+02	2.97E+02		Yes	1.62E+00	Yes	8.22E+00	Yes	Yes
Explosives	2,4-Dinitrotoluene	121-14-2	mg/kg	9/ 82	3.36E+00	4.60E-02	2.30E-01	6.33E+00	2.30E-01		Yes	7.20E-02	Yes	3.60E-01	No	Yes
Explosives	2,6-Dinitrotoluene	606-20-2	mg/kg	7/ 82	3.39E+00	9.30E-02	8.60E-01	6.35E+00	8.60E-01		Yes	7.20E-02	Yes	3.60E-01	Yes	Yes
Explosives	2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	43/ 82	3.96E+00	1.00E-01	1.10E+01	6.92E+00	6.92E+00		Yes		None		None	Yes
Explosives	2-Nitrotoluene	88-72-2	mg/kg	2/ 82	3.37E+00	1.80E-01	6.90E-01	6.34E+00	6.90E-01		Yes	3.67E+01	No	1.00E+02	No	No
Explosives	3-Nitrotoluene	99-08-1	mg/kg	5/ 82	3.37E+00	1.40E-01	1.80E-01	6.34E+00	1.80E-01		Yes	3.67E+01	No	1.00E+02	No	No
Explosives	4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	20/ 82	9.33E+00	1.30E-01	5.90E+00	1.86E+01	5.90E+00		Yes		None		None	Yes
Explosives	4-Nitrotoluene	99-99-0	mg/kg	5/ 82	3.37E+00	1.10E-01	2.00E-01	6.34E+00	2.00E-01		Yes	3.67E+01	No	1.00E+02	No	No
Explosives	HMX	2691-41-0	mg/kg	13/ 82	8.42E+00	2.50E-01	2.60E+02	1.57E+01	1.57E+01		Yes	3.06E+02	No	4.40E+03	No	No
Explosives	Nitrobenzene	98-95-3	mg/kg	8/ 82	3.36E+00	4.80E-02	5.90E-01	6.32E+00	5.90E-01		Yes	1.96E+00	No	1.14E+01	No	No
Explosives	Nitrocellulose	9004-70-0	mg/kg	50/ 82	1.13E+01	3.00E-01	3.88E+02	1.95E+01	1.95E+01		Yes		None		None	Yes
Explosives	Nitroglycerin	55-63-0	mg/kg	1/ 82	3.38E+01	7.40E+00	7.40E+00	6.34E+01	7.40E+00		Yes	3.47E+00	Yes	1.76E+01	No	Yes
Explosives	Nitroguanidine	556-88-7	mg/kg	1/ 82	2.50E-01	3.50E-02	3.50E-02	3.77E-01	3.50E-02		Yes	6.11E+02	No	8.81E+03	No	No
Explosives	RDX	121-82-4	mg/kg	17/ 82	4.79E+01	2.20E-01	2.30E+03	1.00E+02	1.00E+02		Yes	4.42E-01	Yes	2.24E+00	Yes	Yes
Metals	Aluminum	7429-90-5	mg/kg	160/ 160	9.40E+03	7.56E+02	4.61E+04	1.01E+04	1.01E+04	1.77E+04	Yes	7.61E+03	Yes	1.00E+04	Yes	Yes
Metals	Antimony	7440-36-0	mg/kg	21/ 160	6.96E-01	5.90E-01	3.00E+00	7.50E-01	7.50E-01	9.60E-01	Yes	3.13E+00	No	8.18E+01	No	No
Metals	Arsenic	7440-38-2	mg/kg	160/ 160	1.03E+01	1.80E+00	5.56E+01	1.09E+01	1.09E+01	1.54E+01	Yes	3.90E-02	Yes	2.73E-01	Yes	Yes
Metals	Barium	7440-39-3	mg/kg	160/ 160	1.10E+02	1.33E+01	1.97E+02	1.39E+02	1.39E+02	8.84E+01	Yes	5.37E+02	Yes	1.00E+04	No	Yes
Metals	Beryllium	7440-41-7	mg/kg	96/ 160	4.04E-01	2.20E-01	2.60E+00	4.60E-01	4.60E-01	8.80E-01	Yes	1.54E+01	No	2.24E+02	No	No
Metals	Cadmium	7440-43-9	mg/kg	128/ 160	1.42E+00	5.30E-02	2.73E+01	1.81E+00	1.81E+00		Yes	3.70E+00	Yes	8.09E+01	No	Yes

Table Q-4. Summary of Site-Related Chemicals and COPC Screening for Load Line 1 Surface Soil (continued)

Analysis Type	Analyte <sup>c</sup>	CAS Number	Units	Results >		Minimum Detect	Maximum Detect	95% UCL of Exposure Concentrator		Site Background Criteria <sup>f</sup>	SRC?	1/10th	Max Detect >	1/10th	Max Detect >
				Detection Limit	Average <sup>b</sup> Result			Residential Soil	Residential Soil Criteria?			Industrial Soil	Industrial Soil Criteria?		
Metals	Calcium	7440-70-2	mg/kg	159/ 160	7.36E+03	1.23E+02	1.21E+05	9.71E+03	9.71E+03	1.58E+04	No	None	None	None	No
Metals	Chromium	7440-47-3	mg/kg	160/ 160	2.04E+01	2.10E+00	4.00E+02	2.49E+01	2.49E+01	1.74E+01	Yes	3.01E+00	Yes	6.40E+00	Yes
Metals	Cobalt	7440-48-4	mg/kg	159/ 160	8.19E+00	8.80E-01	4.93E+01	8.88E+00	8.88E+00	1.04E+01	Yes	4.69E+02	No	1.00E+04	No
Metals	Copper	7440-50-8	mg/kg	160/ 160	6.21E+01	2.40E+00	3.68E+03	1.06E+02	1.06E+02	1.77E+01	Yes	2.91E+02	Yes	7.59E+03	No
Metals	Cyanide	57-12-5	mg/kg	10/ 75	4.57E-01	5.70E-01	3.80E+00	5.54E-01	5.54E-01		Yes	1.08E+00	Yes	3.54E+00	Yes
Metals	Iron	7439-89-6	mg/kg	160/ 160	2.10E+04	2.49E+03	1.11E+05	2.25E+04	2.25E+04	2.31E+04	No	2.35E+03	Yes	1.00E+04	Yes
Metals	Lead	7439-92-1	mg/kg	160/ 160	1.99E+02	1.01E+01	7.13E+03	2.84E+02	2.84E+02	2.61E+01	Yes	4.00E+01	Yes	7.50E+01	Yes
Metals	Magnesium	7439-95-4	mg/kg	160/ 160	2.36E+03	1.12E+02	1.53E+04	2.67E+03	2.67E+03	3.03E+03	No	None	None	None	No
Metals	Manganese	7439-96-5	mg/kg	160/ 160	6.39E+02	7.95E+01	3.50E+03	7.01E+02	7.01E+02	1.45E+03	Yes	1.76E+02	Yes	3.23E+03	Yes
Metals	Mercury	7487-94-6	mg/kg	146/ 160	2.16E-01	1.00E-02	9.70E+00	3.42E-01	3.42E-01	3.60E-02	Yes	2.30E+00	Yes	6.10E+01	No
Metals	Nickel	7440-02-0	mg/kg	159/ 160	1.62E+01	3.50E+00	1.01E+02	1.76E+01	1.76E+01	2.11E+01	Yes	1.56E+02	No	4.09E+03	No
Metals	Potassium	7440-09-7	mg/kg	159/ 160	9.28E-02	1.99E-02	5.70E+02	9.97E+02	9.97E+02	9.27E+02	No	None	None	None	No
Metals	Selenium	7782-49-2	mg/kg	102/ 160	7.14E-01	3.40E-01	5.30E+00	7.86E-01	7.86E-01	1.40E+00	Yes	3.91E+01	No	1.02E+03	No
Metals	Silver	7440-22-4	mg/kg	5/ 160	5.94E-01	1.70E-01	8.80E-01	6.19E-01	6.19E-01		No	3.91E+01	No	1.02E+03	No
Metals	Sodium	7440-23-5	mg/kg	25/ 160	2.55E+02	5.99E+01	8.88E+02	2.79E+02	2.79E+02	1.23E+02	No	None	None	None	No
Metals	Thallium	6533-73-9	mg/kg	152/ 160	5.03E-01	1.70E-01	2.50E+00	5.35E-01	5.35E-01		Yes	5.20E-01	Yes	1.30E+01	No
Metals	Vanadium	7440-62-2	mg/kg	160/ 160	1.77E+01	1.80E+00	7.79E+01	1.91E+01	1.91E+01	3.11E+01	Yes	5.47E+01	Yes	1.43E+03	No
Metals	Zinc	7440-66-6	mg/kg	160/ 160	1.60E+02	1.50E+01	1.69E+03	1.92E+02	1.92E+02	6.18E+01	Yes	2.35E+03	No	1.00E+04	No
Organics-Pesticide/PCB	4,4'-DDE	72-55-9	mg/kg	12/ 17	5.07E-01	3.00E-03	6.70E+00	1.19E+00	1.19E+00		Yes	1.72E-01	Yes	1.21E+00	Yes
Organics-Pesticide/PCB	4,4'-DDT	50-29-3	mg/kg	2/ 17	2.13E-02	5.30E-03	4.10E-02	4.12E-02	4.10E-02		Yes	1.72E-01	No	1.21E+00	No
Organics-Pesticide/PCB	alpha-Chlordane	5103-71-9	mg/kg	1/ 17	3.33E-02	4.40E-01	4.40E-01	7.80E-02	7.80E-02		Yes	1.62E-01	Yes	1.07E+00	No
Organics-Pesticide/PCB	beta-BHC	319-85-7	mg/kg	1/ 17	1.92E-02	9.70E-03	9.70E-03	3.91E-02	9.70E-03		Yes	3.16E-02	No	2.08E-01	No
Organics-Pesticide/PCB	Dieldrin	60-57-1	mg/kg	3/ 17	4.26E-02	1.40E-02	5.50E-01	9.85E-02	9.85E-02		Yes	3.04E-03	Yes	1.54E-02	Yes
Organics-Pesticide/PCB	Endrin aldehyde	7421-93-4	mg/kg	10/ 17	3.15E-01	3.80E-03	4.40E+00	6.44E+00	4.40E+00		Yes	1.83E+00	Yes	2.64E+01	No
Organics-Pesticide/PCB	Endrin ketone	53494-70-5	mg/kg	1/ 17	1.95E-02	1.40E-02	1.40E-02	3.93E-02	1.40E-02		Yes	1.83E+00	No	2.64E+01	No
Organics-Pesticide/PCB	gamma-Chlordane	5103-74-2	mg/kg	5/ 17	3.46E-01	6.00E-03	5.30E+00	8.88E-01	8.88E-01		Yes	1.62E-01	Yes	1.67E+00	Yes
Organics-Pesticide/PCB	Heptachlor	76-44-8	mg/kg	2/ 17	3.51E-02	7.20E-03	3.20E-01	7.19E-02	7.19E-02		Yes	1.08E-02	Yes	5.48E-02	Yes
Organics-Pesticide/PCB	Heptachlor epoxide	1024-57-3	mg/kg	1/ 17	2.05E-02	3.10E-02	3.10E-02	4.04E-02	3.10E-02		Yes	5.34E-03	Yes	2.71E-02	Yes
Organics-Pesticide/PCB	Methoxychlor	72-43-5	mg/kg	1/ 17	3.77E-02	1.40E-02	1.40E-02	7.65E-02	1.40E-02		Yes	3.06E+01	No	4.40E+02	No
Organics-Pesticide/PCB	PCB-1016	12674-11-2	mg/kg	1/ 17	2.42E+00	1.40E-01	1.40E-01	6.31E+00	1.40E-01		Yes	3.93E-01	No	2.87E+00	No
Organics-Pesticide/PCB	PCB-1254	11097-69-1	mg/kg	15/ 17	6.99E+01	5.30E-02	1.10E+03	4.03E+03	1.10E+03		Yes	2.22E-02	Yes	1.00E-01	Yes
Organics-Semivolatile	2-Methylnaphthalene	91-57-6	mg/kg	2/ 18	3.58E-01	4.10E-02	7.70E-02	5.43E-01	7.70E-02		Yes	None	None	None	Yes
Organics-Semivolatile	Acenaphthene	83-32-9	mg/kg	1/ 18	3.75E-01	2.30E-01	2.30E-01	5.56E-01	2.30E-01		Yes	3.68E+02	No	3.84E+03	No
Organics-Semivolatile	Anthracene	120-12-7	mg/kg	2/ 18	3.60E-01	2.10E-01	5.50E-01	5.37E-01	5.37E-01		Yes	2.19E+03	No	1.00E+04	No
Organics-Semivolatile	Benz(a)anthracene	56-55-3	mg/kg	4/ 18	4.33E-01	6.10E-02	1.20E+00	6.41E-01	6.41E-01		Yes	6.21E-02	Yes	2.89E-01	Yes
Organics-Semivolatile	Benzo(a)pyrene	50-32-8	mg/kg	4/ 18	4.13E-01	6.00E-02	1.00E+00	6.09E-01	6.09E-01		Yes	6.21E-03	Yes	2.89E-02	Yes
Organics-Semivolatile	Benzo(b)fluoranthene	205-99-2	mg/kg	6/ 18	4.40E-01	4.20E-02	1.40E+00	6.62E-01	6.62E-01		Yes	6.21E-02	Yes	2.89E-01	Yes
Organics-Semivolatile	Benzo(ghi)perylene	191-24-2	mg/kg	3/ 18	3.66E-01	7.40E-02	5.50E-01	5.44E-01	5.44E-01		Yes	None	None	None	Yes
Organics-Semivolatile	Benzo(k)fluoranthene	207-08-9	mg/kg	3/ 18	3.72E-01	5.30E-02	5.80E-01	5.51E-01	5.51E-01		Yes	6.21E-01	No	2.89E+00	No
Organics-Semivolatile	Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	4/ 18	3.51E-01	7.90E-02	1.10E-01	5.38E-01	1.10E-01		Yes	3.47E+00	No	1.76E+01	No
Organics-Semivolatile	Butyl benzyl phthalate	85-68-7	mg/kg	1/ 18	3.66E-01	5.00E-02	5.00E-02	5.49E-01	5.00E-02		Yes	1.22E+03	No	1.00E+04	No
Organics-Semivolatile	Carbazole	86-74-8	mg/kg	1/ 18	3.83E-01	3.80E-01	3.80E-01	5.64E-01	3.80E-01		Yes	2.43E+00	No	1.23E+01	No
Organics-Semivolatile	Chrysene	218-01-9	mg/kg	4/ 18	4.30E-01	9.50E-02	1.10E+00	6.34E-01	6.34E-01		Yes	6.21E+00	No	2.89E+01	No
Organics-Semivolatile	Dibenz(a,h)anthracene	53-70-3	mg/kg	1/ 18	3.68E-01	9.60E-02	9.60E-02	5.50E-01	9.60E-02		Yes	6.21E-03	Yes	2.89E-02	Yes
Organics-Semivolatile	Dibenzofuran	132-64-9	mg/kg	1/ 18	3.73E-01	1.90E-01	1.90E-01	5.54E-01	1.90E-01		Yes	2.91E+01	No	5.06E+02	No
Organics-Semivolatile	Fluoranthene	206-44-0	mg/kg	8/ 18	5.49E-01	5.60E-02	2.90E+00	9.07E-01	9.07E-01		Yes	2.29E+02	No	3.01E+03	No
Organics-Semivolatile	Fluorene	86-73-7	mg/kg	1/ 18	3.79E-01	3.10E-01	3.10E-01	5.60E-01	3.10E-01		Yes	2.64E+02	No	3.31E+03	No
Organics-Semivolatile	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	3/ 18	3.73E-01	7.60E-02	6.20E-01	5.52E-01	5.52E-01		Yes	6.21E-02	Yes	2.89E-01	Yes
Organics-Semivolatile	Naphthalene	91-20-3	mg/kg	1/ 18	3.74E-01	2.20E-01	2.20E-01	5.56E-01	2.20E-01		Yes	5.59E+00	No	1.89E+01	No
Organics-Semivolatile	Phenanthrene	85-01-8	mg/kg	5/ 18	4.90E-01	4.60E-02	2.50E+00	7.69E-01	7.69E-01		Yes	None	None	None	Yes
Organics-Semivolatile	Phenol	108-95-2	mg/kg	1/ 18	3.65E-01	5.00E-02	5.00E-02	5.49E-01	5.00E-02		Yes	3.67E+03	No	1.00E+04	No
Organics-Semivolatile	Pyrene	129-00-0	mg/kg	5/ 18	5.39E-01	7.00E-02	2.30E+00	8.33E-01	8.33E-01		Yes	2.31E+02	No	5.42E+03	No
Organics-Volatile	1,2-Dichloroethene	549-59-0	mg/kg	17/ 18	6.29E-03	7.00E-04	1.80E-02	1.21E-02	1.21E-02		Yes	None	None	None	Yes
Organics-Volatile	Acetone	67-64-1	mg/kg	2/ 18	6.95E-03	8.60E-03	1.10E-02	8.06E-03	8.06E-03		Yes	1.57E+02	No	6.22E+02	No

Table Q-4. Summary of Site-Related Chemicals and COPC Screening for Load Line 1 Surface Soil (continued)

Analysis Type	Analyte <sup>a</sup>	CAS Number	Results > Detection		Average <sup>b</sup> Result	Minimum Detect	Maximum Detect	95% UCL of Exposure Concentration <sup>c</sup>		Site Background Criteria <sup>d</sup>	SRC?	1/10th Residential Region 9	Max Detect > Residential Soil Criteria?	1/10th Industrial Region 9	Max Detect > Industrial Soil Criteria?	COPC?
			Units	Limit				Mean	Concentration			Soil	Soil	Soil	Soil	
Organics-Volatile	Methylene chloride	75-09-2	mg/kg	2/ 18	3.03E-03	1.70E-03	3.30E-03	3.41E-03	3.30E-03		Yes	8.88E-01	No	2.05E+00	No	No
Organics-Volatile	Trichloroethene	79-01-6	mg/kg	2/ 18	3.26E-03	2.60E-03	6.70E-03	3.77E-03	3.77E-03		Yes	2.77E-01	No	6.12E-01	No	No
<i>Change Houses (CB-12, -23, -8, -22)</i>																
Metals	Aluminum	7429-90-5	mg/kg	21/ 21	6.92E+03	3.65E+03	1.68E+04	8.41E+03	8.41E+03	1.77E+04	No	7.61E+03	Yes	1.00E+04	Yes	No
Metals	Antimony	7440-36-0	mg/kg	3/ 21	1.25E+00	9.00E-01	1.29E+01	2.26E+00	2.26E+00	9.60E-01	Yes	3.13E+00	Yes	8.18E+01	No	Yes
Metals	Arsenic	7440-38-2	mg/kg	21/ 21	1.04E+01	2.50E+00	2.78E+01	1.22E+01	1.22E+01	1.54E+01	Yes	3.90E-02	Yes	2.73E-01	Yes	Yes
Metals	Barium	7440-39-3	mg/kg	21/ 21	5.74E+01	1.80E+01	1.83E+02	7.09E+01	7.09E+01	8.84E+01	Yes	5.37E+02	No	1.00E+04	No	No
Metals	Beryllium	7440-41-7	mg/kg	3/ 21	2.55E-01	4.50E-01	1.20E+00	3.53E-01	3.53E-01	8.80E-01	Yes	1.54E+01	No	2.24E+02	No	No
Metals	Cadmium	7440-43-9	mg/kg	15/ 21	1.63E+00	1.40E-01	1.11E+01	3.29E+00	3.29E+00		Yes	3.70E+00	Yes	8.09E+01	No	Yes
Metals	Calcium	7440-70-2	mg/kg	21/ 21	1.05E+04	3.58E+02	1.79E+05	2.51E+04	2.51E+04	1.58E+04	No		None		None	No
Metals	Chromium	7440-47-3	mg/kg	21/ 21	1.28E+01	6.40E+00	2.65E+01	1.51E+01	1.51E+01	1.74E+01	Yes	3.01E+00	Yes	6.40E+00	Yes	Yes
Metals	Cobalt	7440-48-4	mg/kg	21/ 21	6.23E+00	1.90E+00	1.51E+01	7.22E+00	7.22E+00	1.04E+01	Yes	4.69E+02	No	1.00E+04	No	No
Metals	Copper	7440-50-8	mg/kg	21/ 21	1.98E+01	5.70E+00	5.11E+01	2.52E+01	2.52E+01	1.77E+01	Yes	2.91E+02	No	7.59E+03	No	No
Metals	Cyanide	57-12-5	mg/kg	1/ 21	4.49E-01	3.00E+00	3.00E+00	6.69E-01	6.69E-01		No	1.08E+00	Yes	3.54E+00	No	No
Metals	Iron	7439-89-6	mg/kg	21/ 21	1.61E+04	3.19E+03	2.85E+04	1.83E+04	1.83E+04	2.31E+04	No	2.35E+03	Yes	1.00E+04	Yes	No
Metals	Lead	7439-92-1	mg/kg	21/ 21	1.15E+02	1.69E+01	5.32E+02	1.90E+02	1.90E+02	2.61E+01	Yes	4.00E+01	Yes	7.50E+01	Yes	Yes
Metals	Magnesium	7439-95-4	mg/kg	21/ 21	1.92E+03	7.71E+02	1.18E+04	2.79E+03	2.79E+03	3.03E+03	No		None		None	No
Metals	Manganese	7439-96-5	mg/kg	21/ 21	6.69E+02	6.78E+01	2.04E+03	8.30E+02	8.30E+02	1.45E+03	Yes	1.76E+02	Yes	3.23E+03	No	Yes
Metals	Mercury	7487-94-6	mg/kg	8/ 15	8.43E-02	2.80E-02	2.90E-01	1.24E-01	1.24E-01	3.60E-02	Yes	2.30E+00	No	6.10E+01	No	No
Metals	Nickel	7440-02-0	mg/kg	21/ 21	1.42E+01	3.50E+00	2.31E+01	1.58E+01	1.58E+01	2.11E+01	Yes	1.56E+02	No	4.09E+03	No	No
Metals	Potassium	7440-09-7	mg/kg	21/ 21	8.48E+02	5.13E+02	1.49E+03	9.70E+02	9.70E+02	9.27E+02	No		None		None	No
Metals	Selenium	7782-49-2	mg/kg	7/ 21	4.76E-01	5.30E-01	1.30E+00	5.84E-01	5.84E-01	1.40E+00	No	3.91E+01	No	1.02E+03	No	No
Metals	Silver	7440-22-4	mg/kg	1/ 21	6.29E-01	3.50E-01	3.50E-01	6.59E-01	6.59E-01		No	3.91E+01	No	1.02E+03	No	No
Metals	Sodium	7440-23-5	mg/kg	1/ 21	3.04E+02	4.26E+02	4.26E+02	3.40E+02	3.40E+02	1.23E+02	No		None		None	No
Metals	Thallium	6533-73-9	mg/kg	5/ 21	3.08E-01	2.90E-01	7.30E-01	4.32E-01	4.32E-01		Yes	5.20E-01	Yes	1.30E+01	No	Yes
Metals	Vanadium	7440-62-2	mg/kg	21/ 21	1.28E+01	5.10E+00	3.93E+01	1.57E+01	1.57E+01	3.11E+01	Yes	5.47E+01	No	1.43E+03	No	No
Metals	Zinc	7440-66-6	mg/kg	21/ 21	2.69E+02	3.43E+01	1.59E+03	4.31E+02	4.31E+02	6.18E+01	Yes	2.35E+03	No	1.00E+04	No	No
Organics-Pesticide/PCB	4,4'-DDE	72-55-9	mg/kg	1/ 2	1.33E-03	1.60E-03	1.60E-03	3.06E-03	1.60E-03		Yes	1.72E-01	No	1.21E+00	No	No
Organics-Pesticide/PCB	Endrin aldehyde	7421-93-4	mg/kg	1/ 1	1.40E-03	1.40E-03	1.40E-03	1.40E-03	1.40E-03		Yes	1.83E+00	No	2.64E+01	No	No
Organics-Pesticide/PCB	PCB-1254	11097-69-1	mg/kg	2/ 2	7.65E-02	4.30E-02	1.10E-01	2.88E-01	1.10E-01		Yes	2.22E-02	Yes	1.00E-01	Yes	Yes
Organics-Semivolatile	Benzo(a)anthracene	56-55-3	mg/kg	2/ 2	6.10E-02	5.00E-02	7.20E-02	1.31E-01	7.20E-02		Yes	6.21E-02	Yes	2.89E-01	No	Yes
Organics-Semivolatile	Benzo(a)pyrene	50-32-8	mg/kg	2/ 2	7.60E-02	6.00E-02	9.20E-02	1.77E-01	9.20E-02		Yes	6.21E-03	Yes	2.89E-02	Yes	Yes
Organics-Semivolatile	Benzo(b)fluoranthene	205-99-2	mg/kg	2/ 2	1.17E-01	8.40E-02	1.50E-01	3.25E-01	1.50E-01		Yes	6.21E-02	Yes	2.89E-01	No	Yes
Organics-Semivolatile	Benzo(ghi)perylene	191-24-2	mg/kg	1/ 2	1.52E-01	7.40E-02	7.40E-02	6.45E-01	7.40E-02		Yes		None		None	Yes
Organics-Semivolatile	Benzo(k)fluoranthene	207-08-9	mg/kg	1/ 2	1.48E-01	6.50E-02	6.50E-02	6.68E-01	6.50E-02		Yes	6.21E-01	No	2.89E+00	No	No
Organics-Semivolatile	Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	1/ 2	1.44E-01	5.70E-02	5.70E-02	6.90E-01	5.70E-02		Yes	3.47E+00	No	1.76E+01	No	No
Organics-Semivolatile	Chrysene	218-01-9	mg/kg	2/ 2	8.60E-02	6.20E-02	1.10E-01	2.38E-01	1.10E-01		Yes	6.21E+00	No	2.89E+01	No	No
Organics-Semivolatile	Fluoranthene	206-44-0	mg/kg	2/ 2	1.32E-01	9.30E-02	1.70E-01	3.75E-01	1.70E-01		Yes	2.29E+02	No	3.01E+03	No	No
Organics-Semivolatile	Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	1/ 2	1.53E-01	7.50E-02	7.50E-02	6.42E-01	7.50E-02		Yes	6.21E-02	Yes	2.89E-01	No	Yes
Organics-Semivolatile	Phenanthrene	85-01-8	mg/kg	2/ 2	7.80E-02	4.60E-02	1.10E-01	2.80E-01	1.10E-01		Yes		None		None	Yes
Organics-Semivolatile	Pyrene	129-00-0	mg/kg	2/ 2	9.50E-02	7.00E-02	1.20E-01	2.53E-01	1.20E-01		Yes	2.31E+02	No	5.42E+03	No	No
Organics-Volatile	Methylene chloride	75-09-2	mg/kg	2/ 2	1.45E-03	1.00E-03	1.90E-03	4.29E-03	1.90E-03		Yes	8.88E-01	No	2.05E+00	No	No
Organics-Volatile	Toluene	108-88-3	mg/kg	2/ 2	2.30E-03	1.50E-03	3.10E-03	7.35E-03	3.10E-03		Yes	5.20E+01	No	5.20E+01	No	No
<i>Perimeter Area</i>																
Metals	Aluminum	7429-90-5	mg/kg	26/ 26	1.31E+04	8.84E+03	2.13E+04	1.41E+04	1.41E+04	1.77E+04	Yes	7.61E+03	Yes	1.00E+04	Yes	Yes
Metals	Antimony	7440-36-0	mg/kg	2/ 26	6.31E-01	7.40E-01	8.10E-01	6.50E-01	6.50E-01	9.60E-01	No	3.13E+00	No	8.18E+01	No	No
Metals	Arsenic	7440-38-2	mg/kg	26/ 26	1.14E+01	7.50E+00	2.46E+01	1.26E+01	1.26E+01	1.54E+01	Yes	3.90E-02	Yes	2.73E-01	Yes	Yes
Metals	Barium	7440-39-3	mg/kg	26/ 26	8.31E+01	5.18E+01	1.44E+02	9.19E+01	9.19E+01	8.84E+01	Yes	5.37E+02	No	1.00E+04	No	No
Metals	Beryllium	7440-41-7	mg/kg	20/ 26	4.33E-01	2.70E-01	8.20E-01	5.00E-01	5.00E-01	8.80E-01	No	1.54E+01	No	2.24E+02	No	No
Metals	Cadmium	7440-43-9	mg/kg	10/ 26	2.37E-01	5.20E-02	3.20E-01	2.71E-01	2.71E-01		Yes	3.70E+00	No	8.09E+01	No	No
Metals	Calcium	7440-70-2	mg/kg	22/ 26	2.02E+03	1.18E+02	3.39E+04	4.22E+03	4.22E+03	1.58E+04	No		None		None	No
Metals	Chromium	7440-47-3	mg/kg	26/ 26	1.56E+01	1.08E+01	2.52E+01	1.68E+01	1.68E+01	1.74E+01	Yes	3.01E+00	Yes	6.40E+00	Yes	Yes
Metals	Chromium, hexavalent	18540-29-9	mg/kg	1/ 5	8.10E-01	1.50E+00	1.50E+00	1.18E+00	1.18E+00		Yes	3.01E+00	No	6.40E+00	No	No
Metals	Cobalt	7440-48-4	mg/kg	26/ 26	9.85E+00	4.90E+00	2.05E+01	1.13E+01	1.13E+01	1.04E+01	Yes	4.69E+02	No	1.00E+04	No	No

Table Q-4. Summary of Site-Related Chemicals and COPC Screening for Load Line 1 Surface Soil (continued)

Analysis Type	Analyte <sup>a</sup>	CAS Number	Units	Results >		Minimum Detect	Maximum Detect	95% UCL		Site Background		1/10th Region 9 Residential Soil	Max Detect > Residential Soil Criteria?	1/10th Region 9 Industrial Soil	Max Detect > Industrial Soil Criteria?	COPC?
				Detection Limit	Average <sup>b</sup> Result			Mean	Exposure Concentrator	Criteria <sup>c</sup>	SRC?					
Metals	Copper	7440-50-8	mg/kg	26/ 26	1.08E+01	5.10E+00	1.96E+01	1.22E+01	1.22E+01	1.77E+01	Yes	2.91E+02	No	7.59E+03	No	No
Metals	Cyanide	57-12-5	mg/kg	3/ 24	4.30E-01	7.50E-01	1.70E+00	5.56E-01	5.56E-01		Yes	1.08E+00	Yes	3.54E+00	No	Yes
Metals	Iron	7439-89-6	mg/kg	26/ 26	2.21E+04	1.49E+04	3.34E+04	2.40E+04	2.40E+04	2.31E+04	No	2.35E+03	Yes	1.00E+04	Yes	No
Metals	Lead	7439-92-1	mg/kg	26/ 26	1.92E+01	1.27E+01	3.45E+01	2.10E+01	2.10E+01	2.61E+01	Yes	4.00E+01	No	7.50E+01	No	No
Metals	Magnesium	7439-95-4	mg/kg	26/ 26	1.78E+03	9.19E+02	3.16E+03	1.94E+03	1.94E+03	3.03E+03	No		None		None	No
Metals	Manganese	7439-96-5	mg/kg	26/ 26	9.15E+02	9.90E+01	2.34E+03	1.41E+03	1.41E+03	1.45E+03	Yes	1.76E+02	Yes	3.23E+03	No	Yes
Metals	Mercury	7487-94-6	mg/kg	26/ 26	5.41E-02	1.90E-02	9.30E-02	6.14E-02	6.14E-02	3.60E-02	Yes	2.30E+00	No	6.10E+01	No	No
Metals	Nickel	7440-02-0	mg/kg	26/ 26	1.46E+01	8.90E+00	2.28E+01	1.58E+01	1.58E+01	2.11E+01	Yes	1.56E+02	No	4.09E+03	No	No
Metals	Potassium	7440-09-7	mg/kg	26/ 26	8.87E+02	3.69E+02	1.45E+03	1.01E+03	1.01E+03	9.27E+02	No		None		None	No
Metals	Selenium	7782-49-2	mg/kg	13/ 26	6.44E-01	4.60E-01	1.70E+00	7.90E-01	7.90E-01	1.40E+00	Yes	3.91E+01	No	1.02E+03	No	No
Metals	Thallium	6533-73-9	mg/kg	26/ 26	5.95E-01	4.00E-01	8.60E-01	6.43E-01	6.43E-01		Yes	5.20E-01	Yes	1.30E+01	No	Yes
Metals	Vanadium	7440-62-2	mg/kg	26/ 26	2.66E+01	1.98E+01	4.63E+01	2.88E+01	2.88E+01	3.11E+01	Yes	5.47E+01	No	1.43E+03	No	No
Metals	Zinc	7440-66-6	mg/kg	26/ 26	5.84E+01	3.74E+01	7.83E+01	6.17E+01	6.17E+01	6.18E+01	Yes	2.35E+03	No	1.00E+04	No	No
Organics-Semivolatile	Benzo(b)fluoranthene	205-99-2	mg/kg	1/ 2	1.24E-01	4.20E-02	4.20E-02	6.38E-01	4.20E-02		Yes	6.21E-02	No	2.89E-01	No	No
Organics-Semivolatile	Fluoranthene	206-44-0	mg/kg	1/ 2	1.31E-01	5.70E-02	5.70E-02	5.98E-01	5.70E-02		Yes	2.29E+02	No	3.01E+03	No	No
Organics-Volatile	1,2-Dichloroethene	549-59-0	mg/kg	2/ 2	3.50E-03	2.90E-03	4.10E-03	7.29E-03	4.10E-03		Yes		None		None	Yes
Organics-Volatile	Trichloroethene	79-01-6	mg/kg	2/ 2	4.50E-03	2.40E-03	6.60E-03	1.78E-02	6.60E-03		Yes	2.77E-01	No	6.12E-01	No	No
<i>Water Tower</i>																
Metals	Aluminum	7429-90-5	mg/kg	5/ 5	1.13E+04	7.24E+03	1.33E+04	1.36E+04	1.33E+04	1.77E+04	No	7.61E+03	Yes	1.00E+04	Yes	No
Metals	Antimony	7440-36-0	mg/kg	1/ 5	8.40E-01	1.90E+00	1.90E+00	1.41E+00	1.41E+00	9.60E-01	Yes	3.13E+00	No	8.18E+01	No	No
Metals	Arsenic	7440-38-2	mg/kg	5/ 5	1.26E+01	1.15E+01	1.40E+01	1.39E+01	1.39E+01	1.54E+01	No	3.90E-02	Yes	2.73E-01	Yes	No
Metals	Barium	7440-39-3	mg/kg	5/ 5	7.03E+01	6.47E+01	7.73E+01	7.58E+01	7.58E+01	8.84E+01	No	5.37E+02	No	1.00E+04	No	No
Metals	Beryllium	7440-41-7	mg/kg	5/ 5	6.38E-01	4.20E-01	9.20E-01	9.91E-01	9.20E-01	8.80E-01	Yes	1.54E+01	No	2.24E+02	No	No
Metals	Cadmium	7440-43-9	mg/kg	4/ 5	2.32E-01	1.10E-01	2.90E-01	3.09E-01	2.90E-01		Yes	3.70E+00	No	8.09E+01	No	No
Metals	Calcium	7440-70-2	mg/kg	5/ 5	2.45E+03	1.40E+03	3.32E+03	3.24E+03	3.24E+03	1.58E+04	No		None		None	No
Metals	Chromium	7440-47-3	mg/kg	5/ 5	9.65E+01	1.79E+01	3.85E+02	2.50E+02	2.50E+02	1.74E+01	Yes	3.01E+00	Yes	6.40E+00	Yes	Yes
Metals	Cobalt	7440-48-4	mg/kg	5/ 5	1.25E+01	8.70E+00	1.82E+01	1.74E+01	1.74E+01	1.04E+01	Yes	4.69E+02	No	1.00E+04	No	No
Metals	Copper	7440-50-8	mg/kg	5/ 5	2.70E+01	1.23E+01	5.13E+01	6.40E+01	5.13E+01	1.77E+01	Yes	2.91E+02	No	7.59E+03	No	No
Metals	Iron	7439-89-6	mg/kg	5/ 5	2.97E+04	2.18E+04	4.85E+04	4.56E+04	4.56E+04	2.31E+04	No	2.35E+03	Yes	1.00E+04	Yes	No
Metals	Lead	7439-92-1	mg/kg	5/ 5	6.09E+02	1.84E+01	2.51E+03	6.83E+06	2.51E+03	2.61E+01	Yes	4.00E+01	Yes	7.50E+01	Yes	Yes
Metals	Magnesium	7439-95-4	mg/kg	5/ 5	2.30E+03	1.82E+03	2.88E+03	2.80E+03	2.80E+03	3.03E+03	No		None		None	No
Metals	Manganese	7439-96-5	mg/kg	5/ 5	5.05E+02	4.08E+02	6.87E+02	6.28E+02	6.28E+02	1.45E+03	No	1.76E+02	Yes	3.23E+03	No	No
Metals	Mercury	7487-94-6	mg/kg	3/ 5	3.88E-02	3.70E-02	5.70E-02	6.19E-02	5.70E-02	3.60E-02	Yes	2.30E+00	No	6.10E+01	No	No
Metals	Nickel	7440-02-0	mg/kg	5/ 5	2.66E+01	1.68E+01	3.24E+01	3.28E+01	3.24E+01	2.11E+01	Yes	1.56E+02	No	4.09E+03	No	No
Metals	Potassium	7440-09-7	mg/kg	5/ 5	1.61E+03	1.34E+03	2.32E+03	2.13E+03	2.13E+03	9.27E+02	No		None		None	No
Metals	Sodium	7440-23-5	mg/kg	1/ 5	1.06E+02	1.08E+02	1.08E+02	2.12E+02	1.08E+02	1.23E+02	No		None		None	No
Metals	Thallium	6533-73-9	mg/kg	5/ 5	5.78E-01	4.90E-01	6.70E-01	6.45E-01	6.45E-01		Yes	5.20E-01	Yes	1.30E+01	No	Yes
Metals	Vanadium	7440-62-2	mg/kg	5/ 5	2.00E+01	1.41E+01	2.39E+01	2.36E+01	2.36E+01	3.11E+01	No	5.47E+01	No	1.43E+03	No	No
Metals	Zinc	7440-66-6	mg/kg	5/ 5	2.42E+02	5.41E+01	9.33E+02	6.11E+02	6.11E+02	6.18E+01	Yes	2.35E+03	No	1.00E+04	No	No

<sup>a</sup> Only analytes with detected concentrations are shown in this summary.

<sup>b</sup> In some cases the average result may exceed the maximum detect because one-half of the laboratory reporting limit was used as a surrogate value in calculation of summary statistics.

<sup>c</sup> Metals that were never detected in background samples have been assigned a background criterion of 0 mg/kg.

SRC = Site-related chemical.

COPC = Chemical of potential concern.

Table Q-5. Summary of Site-Related Chemicals and COPC Screening for Load Line 1 Subsurface Soil

Analysis Type	Analyte <sup>e</sup>	CAS Number	Units	Results >		95% UCL			Site		1/10th	Max Detect >	1/10th	Max Detect >		
				Detection Limit	Average <sup>b</sup> Result	Minimum Detect	Maximum Detect	of Mean	Exposure Concentration	Background Criteria <sup>c</sup>	SRC?	Region 9 Residential Soil	Residential Soil Criteria?	Region 9 Industrial Soil	Industrial Soil Criteria?	COPC?
<i>CB-13 and CB-10</i>																
Explosives	2,4-Dinitrotoluene	121-14-2	mg/kg	1/ 2	1.06E-01	8.60E-02	8.60E-02	2.29E-01	8.60E-02		Yes	7.20E-02	Yes	3.60E-01	No	Yes
Explosives	Nitrocellulose	9004-70-0	mg/kg	1/ 2	1.52E+01	2.93E+01	2.93E+01	1.05E+02	2.93E+01		Yes	7.20E-02	None		None	Yes
Metals	Aluminum	7429-90-5	mg/kg	5/ 5	9.31E+03	5.76E+03	1.60E+04	1.40E+04	1.40E+04	1.95E+04	No	7.61E+03	Yes	1.00E+04	Yes	No
Metals	Antimony	7440-36-0	mg/kg	1/ 5	2.01E+01	9.81E+01	9.81E+01	6.17E+01	6.17E+01	9.60E-01	Yes	3.13E+03	Yes	8.18E+01	Yes	Yes
Metals	Arsenic	7440-38-2	mg/kg	5/ 5	1.10E+01	9.10E+00	1.36E+01	1.32E+01	1.32E+01	1.98E+01	No	3.90E-02	Yes	2.73E-01	Yes	No
Metals	Barium	7440-39-3	mg/kg	5/ 5	7.81E+01	3.33E+01	1.53E+02	2.09E+02	1.53E+02	1.24E+02	Yes	5.37E+02	No	1.00E+04	No	No
Metals	Beryllium	7440-41-7	mg/kg	4/ 5	3.97E-01	2.70E-01	6.30E-01	5.83E-01	5.83E-01	8.80E-01	No	1.54E+01	No	2.24E+02	No	No
Metals	Cadmium	7440-43-9	mg/kg	5/ 5	5.38E+00	7.80E-02	2.62E+01	1.65E+01	1.65E+01		Yes	3.70E+00	Yes	8.09E+01	No	Yes
Metals	Calcium	7440-70-2	mg/kg	5/ 5	1.06E+04	6.14E+03	1.49E+04	1.43E+04	1.43E+04	3.55E+04	No		None		None	No
Metals	Chromium	7440-47-3	mg/kg	5/ 5	2.90E+01	7.60E+00	8.58E+01	3.52E+02	8.58E+01	2.72E+01	Yes	3.01E+00	Yes	6.40E+00	Yes	Yes
Metals	Cobalt	7440-48-4	mg/kg	5/ 5	7.14E+00	5.00E+00	9.90E+00	9.14E+00	9.14E+00	2.32E+01	No	4.69E+02	No	1.00E+04	No	No
Metals	Copper	7440-50-8	mg/kg	5/ 5	4.83E+01	1.38E+01	1.75E+02	1.16E+02	1.16E+02	3.23E+01	Yes	2.91E+02	No	7.59E+03	No	No
Metals	Iron	7439-89-6	mg/kg	5/ 5	2.05E+04	1.49E+04	2.52E+04	2.50E+04	2.50E+04	3.52E+04	No	2.35E+03	Yes	1.00E+04	Yes	No
Metals	Lead	7439-92-1	mg/kg	5/ 5	1.47E+02	1.09E+01	6.80E+02	4.31E+02	4.31E+02	1.91E+01	Yes	4.00E+01	Yes	7.50E+01	Yes	Yes
Metals	Magnesium	7439-95-4	mg/kg	5/ 5	3.35E+03	2.80E+03	3.85E+03	3.72E+03	3.72E+03	8.79E+03	No		None		None	No
Metals	Manganese	7439-96-5	mg/kg	5/ 5	5.80E+02	3.09E+02	8.81E+02	7.83E+02	7.83E+02	3.03E+03	No	1.76E+02	Yes	3.23E+03	No	No
Metals	Mercury	7487-94-6	mg/kg	4/ 5	4.26E-02	9.30E-03	1.40E-01	1.02E+00	1.40E-01	4.40E-02	Yes	2.30E+00	No	6.10E+01	No	No
Metals	Nickel	7440-02-0	mg/kg	5/ 5	1.75E+01	1.13E+01	2.64E+01	2.35E+01	2.35E+01	6.07E+01	No	1.56E+02	No	4.09E+03	No	No
Metals	Potassium	7440-09-7	mg/kg	5/ 5	1.44E+03	7.61E+02	2.82E+03	3.43E+03	2.82E+03	3.35E+03	No		None		None	No
Metals	Selenium	7782-49-2	mg/kg	2/ 5	6.09E-01	4.20E-01	1.80E+00	1.25E+00	1.25E+00	1.50E+00	Yes	3.91E+01	No	1.02E+03	No	No
Metals	Silver	7440-22-4	mg/kg	1/ 5	5.64E-01	5.20E-01	5.20E-01	5.97E-01	5.20E-01		Yes	3.91E+01	No	1.02E+03	No	No
Metals	Sodium	7440-23-5	mg/kg	2/ 5	9.92E+01	7.22E+01	8.10E+01	1.73E+02	8.10E+01	1.45E+02	No		None		None	No
Metals	Thallium	6533-73-9	mg/kg	5/ 5	4.86E-01	1.90E-01	7.30E-01	6.91E-01	6.91E-01	9.10E-01	No	5.20E-01	Yes	1.30E+01	No	No
Metals	Vanadium	7440-62-2	mg/kg	5/ 5	1.61E+01	8.20E+00	3.16E+01	4.12E+01	3.16E+01	3.76E+01	No	5.47E+01	No	1.43E+03	No	No
Metals	Zinc	7440-66-6	mg/kg	5/ 5	8.84E+02	5.53E+01	4.16E+03	2.63E+03	2.63E+03	9.33E+01	Yes	2.35E+03	Yes	1.00E+04	No	Yes
<i>CB-14, CB-17, and CA-15</i>																
Explosives	2,4,6-Trinitrotoluene	118-96-7	mg/kg	1/ 1	8.80E-02	8.80E-02	8.80E-02		8.80E-02		Yes	1.62E+00	No	8.22E+00	No	No
Explosives	2,4-Dinitrotoluene	121-14-2	mg/kg	1/ 1	1.30E-01	1.30E-01	1.30E-01		1.30E-01		Yes	7.20E-02	Yes	3.60E-01	No	Yes
Explosives	Nitrocellulose	9004-70-0	mg/kg	1/ 1	8.80E+00	8.80E+00	8.80E+00		8.80E+00		Yes		None		None	Yes
Metals	Aluminum	7429-90-5	mg/kg	2/ 2	8.36E+03	1.61E+03	1.51E+04	5.09E+04	1.51E+04	1.95E+04	No	7.61E+03	Yes	1.00E+04	Yes	No
Metals	Arsenic	7440-38-2	mg/kg	2/ 2	1.04E+01	5.90E+00	1.49E+01	3.88E+01	1.49E+01	1.98E+01	No	3.90E-02	Yes	2.73E-01	Yes	No
Metals	Barium	7440-39-3	mg/kg	2/ 2	5.63E+01	3.60E+01	7.65E+01	1.84E+02	7.65E+01	1.24E+02	No	5.37E+02	No	1.00E+04	No	No
Metals	Beryllium	7440-41-7	mg/kg	1/ 2	2.70E-01	4.80E-01	4.80E-01	1.60E+00	4.80E-01	8.80E-01	No	1.54E+01	No	2.24E+02	No	No
Metals	Cadmium	7440-43-9	mg/kg	1/ 2	1.55E+00	2.80E+00	2.80E+00	9.46E+00	2.80E+00		Yes	3.70E+00	No	8.09E+01	No	No
Metals	Calcium	7440-70-2	mg/kg	2/ 2	8.32E+02	5.43E+02	1.12E+03	2.65E+03	1.12E+03	3.55E+04	No		None		None	No
Metals	Chromium	7440-47-3	mg/kg	2/ 2	1.37E+01	8.30E+00	1.90E+01	4.74E+01	1.90E+01	2.72E+01	No	3.01E+00	Yes	6.40E+00	Yes	No
Metals	Cobalt	7440-48-4	mg/kg	2/ 2	6.65E+00	3.20E+00	1.01E+01	2.84E+01	1.01E+01	2.32E+01	No	4.69E+02	No	1.00E+04	No	No
Metals	Copper	7440-50-8	mg/kg	2/ 2	1.73E+01	1.68E+01	1.77E+01	2.01E+01	1.77E+01	3.23E+01	No	2.91E+02	No	7.59E+03	No	No
Metals	Iron	7439-89-6	mg/kg	2/ 2	1.97E+04	1.11E+04	2.82E+04	7.36E+04	2.82E+04	3.52E+04	No	2.35E+03	Yes	1.00E+04	Yes	No
Metals	Lead	7439-92-1	mg/kg	2/ 2	2.87E+02	1.52E+01	5.58E+02	2.00E+03	5.58E+02	1.91E+01	Yes	4.00E+01	Yes	7.50E+01	Yes	Yes
Metals	Magnesium	7439-95-4	mg/kg	2/ 2	1.57E+03	4.23E+02	2.71E+03	8.79E+03	2.71E+03	8.79E+03	No		None		None	No
Metals	Manganese	7439-96-5	mg/kg	2/ 2	4.67E+02	4.63E+02	4.71E+02	4.92E+02	4.71E+02	3.03E+03	No	1.76E+02	Yes	3.23E+03	No	No
Metals	Mercury	7487-94-6	mg/kg	1/ 2	2.58E-02	3.00E-02	3.00E-02	5.26E-02	3.00E-02	4.40E-02	No	2.30E+00	No	6.10E+01	No	No
Metals	Nickel	7440-02-0	mg/kg	2/ 2	1.39E+01	8.20E+00	1.96E+01	4.99E+01	1.96E+01	6.07E+01	No	1.56E+02	No	4.09E+03	No	No
Metals	Potassium	7440-09-7	mg/kg	2/ 2	8.31E+02	2.92E+02	1.37E+03	4.23E+03	1.37E+03	3.35E+03	No		None		None	No
Metals	Selenium	7782-49-2	mg/kg	1/ 2	3.68E-01	4.40E-01	4.40E-01	8.25E-01	4.40E-01	1.50E+00	No	3.91E+01	No	1.02E+03	No	No
Metals	Thallium	6533-73-9	mg/kg	2/ 2	5.30E-01	3.80E-01	6.80E-01	1.48E+00	6.80E-01	9.10E-01	No	5.20E-01	Yes	1.30E+01	No	No
Metals	Vanadium	7440-62-2	mg/kg	2/ 2	1.69E+01	5.60E+00	2.81E+01	8.79E+01	2.81E+01	3.76E+01	No	5.47E+01	No	1.43E+03	No	No
Metals	Zinc	7440-66-6	mg/kg	2/ 2	1.07E+02	5.83E+01	1.55E+02	4.12E+02	1.55E+02	9.33E+01	Yes	2.35E+03	No	1.00E+04	No	No
<i>CB-4/4A and CA-6/6A</i>																
Explosives	1,3,5-Trinitrobenzene	99-35-4	mg/kg	1/ 13	6.86E+00	1.10E+01	1.10E+01	1.71E+01	1.10E+01		Yes	1.83E+02	No	2.64E+03	No	No
Explosives	2,4,6-Trinitrotoluene	118-96-7	mg/kg	12/ 13	3.91E+02	7.10E-02	4.50E+03	1.01E+03	1.01E+03		Yes	1.62E+00	Yes	8.22E+00	Yes	Yes
Explosives	2,6-Dinitrotoluene	606-20-2	mg/kg	1/ 13	6.97E+00	1.40E-01	1.40E-01	1.72E+01	1.40E-01		Yes	7.20E-02	Yes	3.60E-01	No	Yes
Explosives	2-Amino-4,6-dinitrotoluene	35572-78-2	mg/kg	8/ 13	7.06E+00	1.00E-01	2.00E+00	1.73E+01	2.00E+00		Yes		None		None	Yes

**Table Q-5. Summary of Site-Related Chemicals and COPC Screening for Load Line 1 Subsurface Soil (continued)**

Analysis Type	Analyte <sup>a</sup>	CAS Number	Units	Results >		Minimum Detect	Maximum Detect	95% UCL of Exposure Concentration		Site Background Criteria <sup>c</sup>		1/10th Region 9 Residential Soil	Max Detect > Residential Soil	1/10th Region 9 Industrial Soil	Max Detect > Industrial Soil	COPC?
				Detection Limit	Average <sup>b</sup> Result			Mean	Maximum	Criteria <sup>c</sup>	SRC?	Criteria?	Criteria?			
Explosives	4-Amino-2,6-dinitrotoluene	19406-51-0	mg/kg	6/ 13	7.92E+00	1.50E-01	8.40E-01	1.81E+01	8.40E-01		Yes		None	None	None	Yes
Explosives	HMX	2691-41-0	mg/kg	2/ 13	1.43E+01	6.20E-01	8.10E+00	3.48E+01	8.10E+00		Yes	3.06E+02	No	4.40E+03	No	No
Explosives	Nitrocellulose	9004-70-0	mg/kg	7/ 12	4.50E+00	7.00E-01	2.93E+01	8.73E+00	8.73E+00		Yes		None	None	None	Yes
Explosives	RDX	121-82-4	mg/kg	4/ 13	1.87E+01	2.70E-01	5.80E+01	3.99E+01	3.99E+01		Yes	4.42E-01	Yes	2.24E+00	Yes	Yes
GENERA	Chromium, hexavalent	18540-29-9	mg/kg	1/ 15	1.45E+00	1.36E+01	1.36E+01	2.98E+00	2.98E+00		Yes	3.01E+00	Yes	6.40E+00	Yes	Yes
Metals	Aluminum	7429-90-5	mg/kg	21/ 21	9.42E+03	4.92E+02	1.66E+04	1.13E+04	1.13E+04	1.95E+04	No	7.61E+03	Yes	1.00E+04	Yes	No
Metals	Antimony	7440-36-0	mg/kg	1/ 21	5.98E-01	6.60E-01	6.60E-01	6.15E-01	6.15E-01	9.60E-01	No	3.13E+00	No	8.18E+01	No	No
Metals	Arsenic	7440-38-2	mg/kg	21/ 21	1.02E+01	2.40E+00	1.66E+01	1.16E+01	1.16E+01	1.98E+01	No	3.90E-02	Yes	2.73E-01	Yes	No
Metals	Barium	7440-39-3	mg/kg	21/ 21	7.21E+01	7.10E+00	2.52E+02	1.15E+02	1.15E+02	1.24E+02	Yes	5.37E+02	No	1.00E+04	No	No
Metals	Beryllium	7440-41-7	mg/kg	13/ 21	4.19E-01	3.00E-01	1.50E+00	1.06E+00	1.06E+00	8.80E-01	Yes	1.54E+01	No	2.24E+02	No	No
Metals	Cadmium	7440-43-9	mg/kg	8/ 21	1.35E+00	1.50E-01	9.90E+00	2.41E+00	2.41E+00		Yes	3.70E+00	Yes	8.09E+01	No	Yes
Metals	Calcium	7440-70-2	mg/kg	21/ 21	7.84E+03	2.84E+02	5.38E+04	2.87E+04	2.87E+04	3.55E+04	No		None		None	No
Metals	Chromium	7440-47-3	mg/kg	21/ 21	1.52E+01	1.50E+00	6.74E+01	2.01E+01	2.01E+01	2.72E+01	Yes	3.01E+00	Yes	6.40E+00	Yes	Yes
Metals	Cobalt	7440-48-4	mg/kg	21/ 21	6.53E+00	5.50E-01	5.50E+01	8.03E+00	8.03E+00	2.32E+01	No	4.69E+02	No	1.00E+04	No	No
Metals	Copper	7440-50-8	mg/kg	21/ 21	4.32E+01	2.50E+00	4.16E+02	7.89E+01	7.89E+01	3.23E+01	Yes	2.91E+02	Yes	7.59E+03	No	Yes
Metals	Cyanide	57-12-5	mg/kg	2/ 14	3.83E-01	6.30E-01	1.20E+00	5.02E-01	5.02E-01		Yes	1.08E+00	Yes	3.54E+00	No	Yes
Metals	Iron	7439-89-6	mg/kg	21/ 21	1.91E+04	2.45E+03	4.23E+04	2.28E+04	2.28E+04	3.52E+04	No	2.35E+03	Yes	1.00E+04	Yes	No
Metals	Lead	7439-92-1	mg/kg	21/ 21	6.00E+01	8.40E+00	2.54E+02	1.23E+02	1.23E+02	1.91E+01	Yes	4.00E+01	Yes	7.50E+01	Yes	Yes
Metals	Magnesium	7439-95-4	mg/kg	21/ 21	2.38E+03	1.10E+02	8.79E+03	5.21E+03	5.21E+03	8.79E+03	No		None		None	No
Metals	Manganese	7439-96-5	mg/kg	21/ 21	4.80E+02	5.09E+01	1.29E+03	8.19E+02	8.19E+02	3.03E+03	No	1.76E+02	Yes	3.23E+03	No	No
Metals	Mercury	7487-94-6	mg/kg	17/ 21	8.94E-02	1.50E-02	7.80E-01	1.53E-01	1.53E-01	4.40E-02	Yes	2.30E+00	No	6.10E+01	No	No
Metals	Nickel	7440-02-0	mg/kg	21/ 21	1.48E+01	1.40E+00	4.98E+01	1.86E+01	1.86E+01	6.07E+01	No	1.56E+02	No	4.09E+03	No	No
Metals	Potassium	7440-09-7	mg/kg	20/ 21	8.69E+02	1.99E+02	1.69E+03	1.04E+03	1.04E+03	3.35E+03	No		None		None	No
Metals	Selenium	7782-49-2	mg/kg	7/ 21	6.00E-01	5.30E-01	1.70E+00	8.00E-01	8.00E-01	1.50E+00	Yes	3.91E+01	No	1.02E+03	No	No
Metals	Sodium	7440-23-5	mg/kg	3/ 21	1.94E+02	7.92E+01	3.70E+02	2.45E+02	2.45E+02	1.45E+02	No		None		None	No
Metals	Vanadium	7440-62-2	mg/kg	21/ 21	1.63E+01	1.20E+00	3.36E+01	1.98E+01	1.98E+01	3.76E+01	No	5.47E+01	No	1.43E+03	No	No
Metals	Zinc	7440-66-6	mg/kg	20/ 20	1.21E+02	1.86E+01	3.95E+02	2.00E+02	2.00E+02	9.33E+01	Yes	2.35E+03	No	1.00E+04	No	No
<i>Perimeter Area</i>																
Metals	Aluminum	7429-90-5	mg/kg	1/ 1	1.84E+04	1.84E+04	1.84E+04	1.84E+04	1.84E+04	1.95E+04	No	7.61E+03	Yes	1.00E+04	Yes	No
Metals	Arsenic	7440-38-2	mg/kg	1/ 1	1.30E+01	1.30E+01	1.30E+01	1.30E+01	1.30E+01	1.98E+01	No	3.90E-02	Yes	2.73E-01	Yes	No
Metals	Barium	7440-39-3	mg/kg	1/ 1	7.39E+01	7.39E+01	7.39E+01	7.39E+01	7.39E+01	1.24E+02	No	5.37E+02	No	1.00E+04	No	No
Metals	Beryllium	7440-41-7	mg/kg	1/ 1	5.50E-01	5.50E-01	5.50E-01	5.50E-01	5.50E-01	8.80E-01	No	1.54E+01	No	2.24E+02	No	No
Metals	Calcium	7440-70-2	mg/kg	1/ 1	4.96E+02	4.96E+02	4.96E+02	4.96E+02	4.96E+02	3.55E+04	No		None		None	No
Metals	Chromium	7440-47-3	mg/kg	1/ 1	2.31E+01	2.31E+01	2.31E+01	2.31E+01	2.31E+01	2.72E+01	No	3.01E+00	Yes	6.40E+00	Yes	No
Metals	Cobalt	7440-48-4	mg/kg	1/ 1	7.20E+00	7.20E+00	7.20E+00	7.20E+00	7.20E+00	2.32E+01	No	4.69E+02	No	1.00E+04	No	No
Metals	Copper	7440-50-8	mg/kg	1/ 1	1.85E+01	1.85E+01	1.85E+01	1.85E+01	1.85E+01	3.23E+01	No	2.91E+02	No	7.59E+03	No	No
Metals	Iron	7439-89-6	mg/kg	1/ 1	2.93E+04	2.93E+04	2.93E+04	2.93E+04	2.93E+04	3.52E+04	No	2.35E+03	Yes	1.00E+04	Yes	No
Metals	Lead	7439-92-1	mg/kg	1/ 1	1.31E+01	1.31E+01	1.31E+01	1.31E+01	1.31E+01	1.91E+01	No	4.00E+01	No	7.50E+01	No	No
Metals	Magnesium	7439-95-4	mg/kg	1/ 1	3.13E+03	3.13E+03	3.13E+03	3.13E+03	3.13E+03	8.79E+03	No		None		None	No
Metals	Manganese	7439-96-5	mg/kg	1/ 1	1.69E+02	1.69E+02	1.69E+02	1.69E+02	1.69E+02	3.03E+03	No	1.76E+02	No	3.23E+03	No	No
Metals	Nickel	7440-02-0	mg/kg	1/ 1	2.12E+01	2.12E+01	2.12E+01	2.12E+01	2.12E+01	6.07E+01	No	1.56E+02	No	4.09E+03	No	No
Metals	Potassium	7440-09-7	mg/kg	1/ 1	2.30E+03	2.30E+03	2.30E+03	2.30E+03	2.30E+03	3.35E+03	No		None		None	No
Metals	Thallium	6533-73-9	mg/kg	1/ 1	6.40E-01	6.40E-01	6.40E-01	6.40E-01	6.40E-01	9.10E-01	No	5.20E-01	Yes	1.30E+01	No	No
Metals	Vanadium	7440-62-2	mg/kg	1/ 1	3.09E+01	3.09E+01	3.09E+01	3.09E+01	3.09E+01	3.76E+01	No	5.47E+01	No	1.43E+03	No	No
Metals	Zinc	7440-66-6	mg/kg	1/ 1	5.46E+01	5.46E+01	5.46E+01	5.46E+01	5.46E+01	9.33E+01	No	2.35E+03	No	1.00E+04	No	No

<sup>a</sup> Only analytes with detected concentrations are shown in this summary.

<sup>b</sup> In some cases the average result may exceed the maximum detect because one-half of the laboratory reporting limit was used as a surrogate value in calculation of summary statistics.

<sup>c</sup> Metals that were never detected in background samples have been assigned a background criterion of 0 mg/kg.

SRC = Site-related chemical.

COPC = Chemical of potential concern.

Table Q-6. Summary of Chemicals of Potential Concern (COPC)

Chemical	Groundwater	Surface Water	Sediment	Surface Soil	Subsurface Soil
<i>Quantitative COPCs</i>					
<b>Metals</b>					
Antimony	LL1		A, E	3, 13, CH	13
Arsenic	LL1	C, OA	A, C, E	3, 4, 13, 14, CH, P	
Barium				4, 14	
Cadmium	LL1		A	3, 4, 13, 14, CH	4, 13
Chromium			A, C, E	3, 4, 13, 14, CH, P, W	4, 13
Chromium, hexavalent			E		4
Cyanide	LL1			4, 14, P	4
Manganese	LL1	C, OA	C, E	3, 4, 13, 14, CH, P	
Mercury				4	
Nickel	LL1			14	
Thallium	LL1		A	3, 4, 13, 14, CH, P, W	
Vanadium				4, 14	
Zinc			A		13
<b>Explosives</b>					
1,3-Dinitrobenzene	LL1			4	
2,4,6-Trinitrotoluene	LL1			4, 13, 14	4
2,4-Dinitrotoluene	LL1	C, OA	A, E	3, 4, 13, 14	13, 14
2,6-Dinitrotoluene	LL1	C	C	4, 13	4
RDX	LL1	A		4, 13, 14	4
<b>Polynuclear Aromatic Hydrocarbons (PAHs)</b>					
Benz(a)anthracene			A, C	3, 4, 13, 14, CH	
Benzo(a)pyrene			A, C	3, 4, 13, 14, CH	
Benzo(b)fluoranthene			A, C	3, 4, 13, 14, CH	
Benzo(k)fluoranthene				3	
Chrysene				3	
Dibenz(a,h)anthracene				3, 4, 14	
Indeno(1,2,3-cd)pyrene			C	3, 4, 13, 14, CH	
<b>Pesticides and PCBs</b>					
4,4'-DDE	LL1			4, 14	
alpha-Chlordane				4	
beta-BHC				3	
Dieldrin				3, 4	
Endrin aldehyde				4	
gamma-Chlordane				4	
Heptachlor				4, 13	
Heptachlor epoxide				4	
PCB-1254			A, C	3, 4, 13, 14, CH	
<b>Volatile Organic Chemicals (VOCs)</b>					
1,2-Dichloroethene			A, C	3, 4, 13, 14, P	
Chloroform	LL1				
Methylene chloride	LL1, GP				
<b>Other Semivolatile Organic Chemicals (SVOCs)</b>					
Bis(2-ethylhexyl)phthalate	LL1	OA			
Carbazole				3	

**Table Q-6. Summary of Chemicals of Potential Concern (COPC) (continued)**

<b>Chemical</b>	<b>Groundwater</b>	<b>Surface Water</b>	<b>Sediment</b>	<b>Surface Soil</b>	<b>Subsurface Soil</b>
<i>Qualitative COPCs</i>					
<b>Metals</b>					
Aluminum			A	3, 4, 13, 14, P	
Cobalt	LL1				
Copper			A, E	4, 13	4
Lead <sup>a</sup>		C, OA	A, C, E	3, 4, 13, 14, CH, W	4, 13, 14
<b>Explosives</b>					
2-Amino-4,6-dinitrotoluene	LL1	A	A, C	3, 4, 13	4
4-Amino-2,6-dinitrotoluene	LL1	A, OA	A, C, OA	3, 4, 13, 14	4
Nitrocellulose			A, E, OA	3, 4, 13, 14	4, 13, 14
Nitroglycerin	LL1			4	
<b>Polynuclear Aromatic Hydrocarbons (PAHs)</b>					
2-Methylnaphthalene				3, 4, 13, 14	
Benzo(ghi)perylene			C	3, 4, 13, 14, CH	
Phenanthrene			C	3, 4, 13, 14, CH	

<sup>a</sup> Lead is evaluated semi-quantitatively using the the Interim Adult Lead Methodology (ALM).

Groundwater

LL1 = Monitoring wells in Load Line 1 Building Area.  
 GP = Monitoring wells north and south of Griggy's Pond.

Surface Water and Sediment Exposure Units

A = Outlet A Channel.  
 C = Outlet C Channel, Charlie's pond, and Griggy's pond.  
 E = Outlet E/F Channel.  
 OA = Off-AOC.

Soil Exposure Units

3 = CB-3 and CB-801.  
 4 = CB-4/4A and CA-6/6A.  
 13 = CB-13 and CB-10.  
 14 = CB-14, CB-17, and CA-15.  
 CH = Change Houses.  
 P = Perimeter Area.  
 W = Water Tower.



Table Q-7. Chemical-Specific Exposure Parameters

COPC	Dermal Absorption <sup>a</sup>	Permeability Constant <sup>b</sup> (cm/hr)	Volatilization Factor <sup>c</sup> (m <sup>3</sup> /kg)	Biotransfer Factor <sup>b</sup>				
				Soil/Plant (kg/kg)		Beef	Milk	Fish
				Dry	Wet	(d/kg)	(d/kg)	(L/kg)
Antimony	0.001	1.00E-03		5.00E-02	1.00E-02	4.00E-05	2.50E-05	1.00E+02
Arsenic	0.03	1.00E-03		4.00E-02	1.00E-02	2.00E-03	6.00E-05	
Barium	0.001	1.00E-03		1.00E-01	3.00E-03	2.00E-04	4.80E-04	4.00E+00
Cadmium	0.001	1.00E-03		5.50E-01	1.40E-01	4.00E-04	1.00E-03	2.00E+02
Chromium	0.001	1.00E-03		4.00E-02	1.00E-04	9.00E-03	1.00E-05	2.00E+02
Chromium, hexavalent	0.001	1.00E-03		4.00E-02	1.00E-04	9.00E-03	1.00E-05	2.00E+02
Cyanide	0.001	7.50E-03		8.70E+00	1.80E+00	3.10E-07	9.90E-08	4.00E+00
Manganese	0.001	1.00E-03		6.80E-01	6.90E-02	5.00E-04	3.00E-05	4.00E+02
Mercury	0.001	1.00E-03		1.00E+00	1.00E-03	1.00E-02	4.70E-04	1.00E+03
Nickel	0.001	1.00E-03		1.80E-01	5.00E-02	5.00E-03	1.60E-02	1.00E+02
Thallium	0.001	1.00E-03		4.00E-03	1.00E-03	4.00E-02	2.00E-03	
Vanadium	0.001	1.00E-03		5.50E-03	1.40E-03	2.50E-03	2.00E-05	1.00E+01
Zinc	0.001	1.00E-03		9.90E-01	2.60E-01	1.00E-01	1.00E-02	1.00E+03
1,2-Dichloroethene	0.01	1.10E-03		2.00E+01	4.10E+00	7.50E-08	2.40E-08	1.40E+00
1,3-Dinitrobenzene	0.1	2.40E-03	2.22E+04	4.50E+00	9.10E-01	1.00E-06	3.10E-07	9.70E+00
2,4,6-Trinitrotoluene	0.1	3.40E-03	5.61E+04	1.80E+00	3.60E-01	5.00E-06	1.60E-06	3.30E+01
2,4-Dinitrotoluene	0.1	3.80E-03	4.24E+05	2.60E+00	5.30E-01	2.50E-06	7.90E-07	1.90E+01
2,6-Dinitrotoluene	0.1	2.50E-03	3.45E+05	3.90E+00	8.00E-01	1.30E-06	4.00E-07	1.20E+01
4,4'-DDE	0.1	2.40E-01	2.97E+07	1.90E-02	3.80E-03	1.30E-02	4.00E-03	
Benz(a)anthracene	0.13	8.10E-01	1.13E+07	1.90E-02	3.80E-03	1.30E-02	4.00E-03	1.30E+04
Benzo(a)pyrene	0.13	1.20E+00	2.93E+07	1.10E-02	2.20E-03	3.10E-02	9.90E-03	2.50E+04
Benzo(b)fluoranthene	0.13	1.20E+00	5.54E+06	1.10E-02	2.20E-03	3.10E-02	9.90E-03	2.50E+04
Benzo(k)fluoranthene	0.13	6.00E-01	4.71E+07	4.30E-03	8.80E-04	1.60E-01	5.00E-02	8.70E+04
Bis(2-ethylhexyl)phthalate	0.1	2.30E-02	2.59E+08	5.50E-02	1.10E-02	2.00E-03	6.30E-04	3.10E+03
Carbazole	0.1	9.10E-02	3.20E+06	2.40E-01	4.80E-02	1.60E-04	5.00E-05	4.50E+02
Chloroform	0.01	8.90E-03	3.19E+03	2.60E+00	5.30E-01	2.50E-06	7.90E-07	1.90E+01
Chrysene	0.13	8.10E-01	3.26E+06	1.90E-02	3.80E-03	1.30E-02	4.00E-03	1.30E+04
Dibenz(a,h)anthracene	0.13	2.70E+00	1.25E+08	4.30E-03	8.80E-04	1.60E-01	5.00E-02	8.70E+04
Dieldrin	0.1	1.60E-02	2.58E+06	8.20E-02	1.70E-02	1.00E-03	3.10E-04	1.80E+03
Endrin aldehyde	0.1	1.60E-02	2.69E+06	8.20E-02	1.70E-02	1.00E-03	3.10E-04	1.80E+03
Heptachlor	0.1	1.10E-02	2.70E+06	1.20E-01	2.50E-02	5.00E-04	1.60E-04	1.10E+03
Heptachlor epoxide	0.1	5.50E-02	6.17E+06	2.80E-02	5.70E-03	6.30E-03	2.00E-03	7.50E+03
Indeno(1,2,3-cd)pyrene	0.13	1.90E+00	6.83E+07	5.60E-03	1.10E-03	1.00E-01	3.10E-02	6.10E+04
Methylene chloride	0.01	4.50E-03	2.98E+03	6.70E+00	1.40E+00	5.00E-07	1.60E-07	5.70E+00

Table Q-7. Chemical-Specific Exposure Parameters (continued)

COPC	Dermal Absorption <sup>a</sup>	Permeability Constant <sup>b</sup> (cm/hr)	Volatilization Factor <sup>c</sup> (m <sup>3</sup> /kg)	Biotransfer Factor <sup>b</sup>				
				Soil/Plant (kg/kg)		Beef (d/kg)	Milk (d/kg)	Fish (L/kg)
				Dry	Wet			
PCB-1254	0.14	3.50E-01	6.36E+05	1.30E-02	2.50E-03	2.50E-02	7.90E-03	2.10E+04
RDX	0.1	1.90E-02		4.60E-01	9.40E-02	5.00E-05	1.60E-05	1.90E+02
alpha-Chlordane	0.04	5.20E-02	3.60E+06	2.50E-02	5.00E-03	7.90E-03	2.50E-03	8.90E+03
beta-BHC	0.1	2.20E-02	1.59E+06	1.80E-01	3.70E-02	2.50E-04	7.90E-05	6.50E+02
gamma-Chlordane	0.04	5.20E-02	3.60E+06	2.50E-02	5.00E-03	7.90E-03	2.50E-03	8.90E+03

<sup>a</sup> Chemical-specific absorption factor values from EPA Region V (EPA, 2000). When chemical-specific values are not available the following default values are used: SVOCs = 0.1, VOCs = 0.01, inorganics = 0.001 per USEPA Region 4 Supplemental Guidance to RAGs.

<sup>b</sup> From Risk Assessment Information System (RAIS) [http://risk.lsd.ornl.gov/tox\\_values.shtml](http://risk.lsd.ornl.gov/tox_values.shtml).

<sup>c</sup> Volatilization factors (VFs) calculated using the 1996 EPA Soil Screening Guidance methodology, using site-specific parameter values for Cleveland Ohio. VFs are used in the inhalation pathway for soil/sediment only for volatile organic compounds.

**Table Q-8 Noncarcinogenic Reference Doses**

COPC	Oral Chronic (mg/(kg-d))	Confidence Level	% GI absorption <sup>a</sup>	Dermal Chronic (mg/(kg-d))	Inhalation Chronic (mg/(kg-d))	RfD basis (vehicle)	Critical Effect	Uncertainty/Modifying Factor
Antimony	4.0E-04	Low	0.15	6.0E-05		Oral, oral-water	Gastrointestinal, liver, cardiovascular, and developmental toxicity	(O) UF=1000
Arsenic	3.0E-04	Medium	0.95	2.9E-04		Oral, oral-water	Hyperpigmentation and keritosis and possible vascular complication	(O) UF=3
Barium	7.0E-02	Medium	0.07	4.9E-03	1.4E-04	Oral, oral-water, inhalation	(O) increased blood pressure (human) (I) baritosis (human)	(O) UF=3 (I) UF=1000
Cadmium (food)	1.0E-03	High	0.025	2.5E-05		Oral, oral-water	Renal toxicity, osteomalacia, osteoporosis, and significant proteinuria	(O) UF=1000
Cadmium (soil)	1.0E-03	High	0.025	2.5E-05		Oral, oral-water	Renal toxicity, osteomalacia, osteoporosis, and significant proteinuria	(O) UF=1000
Cadmium (water)	5.0E-04	High	0.05	2.5E-05		Oral, oral-water	Renal toxicity, osteomalacia, osteoporosis, and significant proteinuria	(O) UF=1000
Chromium (as CrIII)	1.5E+00	Low (O)	0.013	2.0E-02		Oral (rat)	Reduced liver/spleen weight	(O) UF=100
Chromium, hexavalent	3.0E-03	Low (O)	0.025	7.5E-05	2.9E-05	Oral	(O) local gastrointestinal effects at very high doses (animals) (I) respiratory effects (human)	(O) UF=1000 UF=500
Cyanide	2.0E-02	Medium	0.47	9.4E-03		Oral (rat)	Weight loss, throid effects, myelin degeneration	(O) UF=100
Manganese (food)	1.4E-01	NA	0.04	5.6E-03	1.4E-05	Oral: water, inhalation	(O) lethargy, tremors, mental disturbance, muscle tonus, and central nervous system effects	(O) UF=1 (O) MF=3
Manganese (soil and water)	4.6E-02	NA	0.04	1.8E-03	1.4E-05	Oral: water, inhalation	(O) lethargy, tremors, mental disturbance, muscle tonus, and central nervous system effects	(O) UF=1 (O) MF=3
Mercury	3.0E-04	Low (O) Medium (I)	0.07	2.1E-05		Oral: diet (mouse) Inahaltion: (human)	(O) None (I) Neurotoxicity (human)	(O) UF=300 (I) UF=30
Nickel	2.0E-02	Medium	0.04	8.0E-04		Oral: diet (rat)	Decreased body & major organ weights (rat)	UF=100
Thallium (as Thallium carbomate)	8.0E-05	Low	1	8.0E-05		Oral (rat)	Increased levels of SGOT and LDH	UF=3000
Vanadium	7.0E-03	Low	0.026	1.8E-04		Oral (rat)	Decreased hair cystine	UF=100
Zinc	3.0E-01	Medium	0.3	9.0E-02		Oral	(O) copper deficiency & hypochromic microcytic anemia (human) (I) pulmonary & gastrointestinal effects (human)	UF=100
1,2-Dichloroethene	9.0E-03	NA	1	9.0E-03		Oral, oral-water	Liver lesions (rat)	(O) UF=1000
1,3-Dinitrobenzene	1.0E-04	Low	1	1.0E-04		Oral (rat)	Increased spleen weight	UF=3000
2,4,6-Trinitrotoluene	5.0E-04	Medium	1	5.0E-04		Oral (dog)	Liver effects	UF=1000
2,4-Dinitrotoluene	2.0E-03	High	1	2.0E-03		Oral (dog)	Neurotoxicity, biliary tract hyperplasia	UF=100
2,6-Dinitrotoluene	1.0E-03	High	1	1.0E-03		Oral (dog)	Neurotoxicity, biliary tract hyperplasia	UF=100
Bis(2-ethylhexyl)phthalate	2.0E-02	Medium	1	2.0E-02		Oral	Increased relative liver weight (guinea pig)	(O) UF=1000
Chloroform	1.0E-02	Medium	1	1.0E-02		Oral	Liver fatty cyst formation (dog)	(O) UF=1000
Dieldrin	5.0E-05	Medium	1	5.0E-05		Oral: diet (rat)	Liver lesions (rat)	UF=100
Endrin aldehyde (as Endrin)	3.0E-04	Medium	1	3.0E-04		Oral (dog)	Histological liver lesions	UF=100
Heptachlor	5.0E-04	Low	1	5.0E-04		Oral (rat)	Liver weight increase	UF=300
Heptachlor epoxide	1.3E-05	Low	1	1.3E-05		Oral (dog)	Increased liver weight	UF=1000
Methylene chloride	6.0E-02	Medium	1	6.0E-02	8.6E-01	Oral, oral-water, inhalation	(O) liver toxicity (rat)	(O) UF=100
PCB-1254	2.0E-05	NA	0.8	1.6E-05		Oral: capsule (monkey)	Immune system toxicity (monkey)	UF=300
RDX	3.0E-03	High (O)	1	3.0E-03		Oral (rat)	Inflamed prostate	UF=100
alpha-Chlordane (as Chlordane)	5.0E-04	Medium	0.8	4.0E-04	2.0E-04	Oral (mouse)	Liver hypertrophy	(O) UF=300
gamma-Chlordane (as Chlordane)	5.0E-04	Medium	0.8	4.0E-04	2.0E-04	Oral (mouse)	Liver hypertrophy	(O) UF=300

<sup>a</sup> % GI absorption values from EPA 2000

NA = Not Available

(O) indicates oral (I) indicates inhalation

MF = Modifying Factor (the default modifying factor is 1)

UF = Uncertainty Factor

**Table Q-9 Cancer Slope Factors**

COPC	Oral Slope Factor (mg/kg-day) <sup>11</sup>	% GI absorption <sup>a</sup>	Dermal Slope Factor (mg/kg-day) <sup>11</sup>	Inhalation Slope Factor (mg/kg-day) <sup>11</sup>	EPA Class	TEF	Type of Cancer
Arsenic	1.5E+00	0.95	1.6E+00	1.5E+01	A		Respiratory system tumors
Cadmium (soil)		0.025		6.3E+00	B1		Respiratory tract and lung tumors
Cadmium (water)		0.05		6.3E+00	B1		Respiratory tract and lung tumors
Chromium, hexavalent		0.025		4.2E+01	A		Lung tumors
2,4,6-Trinitrotoluene	3.0E-02	1	3.0E-02		C		Bladder transitional cell papilloma
2,4-Dinitrotoluene	6.8E-01	1	6.8E-01		B2		Liver carcinoma, mammary adenomas, fibromas (mouse)
2,6-Dinitrotoluene	6.8E-01	1	6.8E-01		B2		Liver carcinoma, mammary adenomas, fibromas (mouse)
4,4'-DDE	3.4E-01	1	3.4E-01		B2		Hepatocellular carcinoma (mouse)
Benz(a)anthracene	7.3E-01	0.58	1.3E+00	3.1E-01	B2	0.1	Stomach tumors (mouse)
Benzo(a)pyrene	7.3E+00	0.58	1.3E+01	3.1E+00	B2		Stomach, nasal cavity, larynx, trachea, and pharynx
Benzo(b)fluoranthene	7.3E-01	0.58	1.3E+00	3.1E-01	B2	0.1	Tumors
Benzo(k)fluoranthene	7.3E-02	0.58	1.3E-01	3.1E-02	B2	0.01	Tumors (mouse)
Bis(2-ethylhexyl)phthalate	1.4E-02	1	1.4E-02		B2		Liver neoplastic nodule and hepatocellular carcinoma (mouse)
Carbazole	2.0E-02	1	2.0E-02		B2		Liver tumors (mouse)
Chloroform	6.1E-03	1	6.1E-03	8.1E-02	B2		Colon, rectum, bladder, and liver carcinoma (mouse)
Chrysene	7.3E-03	0.58	1.3E-02	3.1E-03	B2	0.001	Carcinomas and malignant lymphoma (mouse)
Dibenz(a,h)anthracene	7.3E+00	0.58	1.3E+01	3.1E+00	B2	1.0	Immunodepressive effects (mouse)
Dieldrin	1.6E+01	1	1.6E+01	1.6E+01	B2		Liver carcinoma (mouse)
Heptachlor	4.5E+00	1	4.5E+00	4.6E+00	B2		Hepatocellular carcinoma (mouse)
Heptachlor epoxide	9.1E+00	1	9.1E+00	9.1E+00	B2		Hepatocellular carcinoma (mouse)
Indeno(1,2,3-cd)pyrene	7.3E-01	0.58	1.3E+00	3.1E-01	B2	0.1	Tumors
Methylene chloride	7.5E-03	1	7.5E-03	1.7E-03	B2		Hepatocellular carcinoma, adenomas (mouse)
PCB-1254	2.0E+00	0.8	2.5E+00	2.0E+00	B2		Liver hepatocellular adenomas, carcinomas, cholangiomas, or cholangiocarcinomas (rat)
RDX	1.1E-01	1	1.1E-01		C		Liver hepatocellular carcinomas/adenomas (mouse)
alpha-Chlordane (as Chlordane)	3.5E-01	0.8	4.4E-01	3.5E-01	B2		Hepatocellular carcinoma (mouse)
beta-BHC	1.8E+00	1	1.8E+00	1.9E+00	C		Hepatic nodules, hepatocellular carcinoma
gamma-Chlordane (as Chlordane)	3.5E-01	0.8	4.4E-01	3.5E-01	B2		Hepatocellular carcinoma (mouse)

<sup>a</sup> % GI absorption values from EPA 2000

TEF = Toxicity Equivalence Factor - based on the relative potency of each carcinogenic PAH relative to that of benzo(a)pyrene.

**Table Q-10. Calculations of Blood Lead Concentrations (PbBs) Sediment - Outlet C and Charlie's Pond Adult Receptors**

U.S. EPA Technical Review Workgroup for Lead, Adult Lead Committee

Exposure Variable	PbB Equation <sup>a</sup>		Description of Exposure Variable	Units	Child	Hunter/	National	Recreator	Resident	Child	Hunter/	National	Recreator	Resident
	1*	2**			Trespasser	Trapper	Guard	Farmer Adult	Trespasser	Trapper	Guard	Recreator	Farmer Adult	
					GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1
PbS	X	X	Soil lead concentration	µg/g or ppm	39.64	39.64	39.64	39.64	39.64	39.64	39.64	39.64	39.64	39.64
R <sub>fetal/maternal</sub>	X	X	Fetal/maternal PbB ratio	--	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
BKSF	X	X	Biokinetic Slope Factor	µg/dL per µg/day	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
GSD <sub>1</sub>	X	X	Geometric standard deviation PbB	--	1.8	1.8	1.8	1.8	1.8	2.1	2.1	2.1	2.1	2.1
PbB <sub>0</sub>	X	X	Baseline PbB	µg/dL	2.2	2.2	2.2	2.2	2.2	2.2	1.7	1.7	1.7	1.7
IR <sub>S</sub>	X		Soil ingestion rate (including soil-derived indoor dust)	g/day	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
IR <sub>S+D</sub>		X	Total ingestion rate of outdoor soil and indoor dust	g/day	--	--	--	--	--	--	--	--	--	--
W <sub>S</sub>		X	Weighting factor; fraction of IR <sub>S+D</sub> ingested as outdoor soil	--	--	--	--	--	--	--	--	--	--	--
K <sub>SD</sub>		X	Mass fraction of soil in dust	--	--	--	--	--	--	--	--	--	--	--
AF <sub>S,D</sub>	X	X	Absorption fraction (same for soil and dust)	--	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
EF <sub>S,D</sub>	X	X	Exposure frequency (same for soil and dust)	days/yr	50	90	28	75	350	50	90	28	75	350
AT <sub>S,D</sub>	X	X	Averaging time (same for soil and dust)	days/yr	365	365	365	365	365	365	365	365	365	365
<b>PbB<sub>adult</sub></b>	<b>PbB of adult receptor, geometric mean</b>			<b>µg/dL</b>	<b>2.3</b>	<b>2.2</b>	<b>2.2</b>	<b>2.2</b>	<b>2.4</b>	<b>1.8</b>	<b>1.7</b>	<b>1.7</b>	<b>1.7</b>	<b>1.9</b>
<b>PbB<sub>fetal, 0.95</sub></b>	<b>95th percentile PbB among fetuses of adult workers</b>			<b>µg/dL</b>	<b>5.3</b>	<b>5.3</b>	<b>5.2</b>	<b>5.3</b>	<b>5.6</b>	<b>5.3</b>	<b>5.3</b>	<b>5.2</b>	<b>5.3</b>	<b>5.7</b>
<b>PbB<sub>t</sub></b>	<b>Target PbB level of concern (e.g., 10 µg/dL)</b>			<b>µg/dL</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>
<b>P(PbB &gt; PbB<sub>t</sub>)</b>	<b>Probability that PbB &gt; PbB<sub>t</sub>, assuming lognormal distribution</b>			<b>%</b>	<b>0.3%</b>	<b>0.3%</b>	<b>0.3%</b>	<b>0.3%</b>	<b>0.4%</b>	<b>0.6%</b>	<b>0.6%</b>	<b>0.6%</b>	<b>0.6%</b>	<b>0.8%</b>

<sup>a</sup> Equation 1 does not apportion exposure between soil and dust ingestion (excludes  $\frac{1}{2} K_{SD}$ ).

When IR<sub>S</sub> = IR<sub>S+D</sub> and W<sub>S</sub> = 1.0, the equations yield the same PbB<sub>fetal,0.95</sub>.

\*Equation 1, based on Eq. 1, 2 in USEPA (1996).

<b>PbB<sub>adult</sub></b> =	$(PbS * BKSF * IR_{S+D} * AF_{S,D} * EF_{S,D} / AT_{S,D}) + PbB_0$
<b>PbB<sub>fetal, 0.95</sub></b> =	$PbB_{adult} * (GSD_1)^{1.645} * R$

**Table Q-11. Calculations of Blood Lead Concentrations (PbBs) Sediment - Outlets A and B Adult Receptors**  
U.S. EPA Technical Review Workgroup for Lead, Adult Lead Committee

Exposure Variable	PbB Equation <sup>a</sup>		Description of Exposure Variable	Units	Child	Hunter/	National	Recreator	Resident	Child	Hunter/	National	Recreator	Resident
	1*	2**			Trespasser	Trapper	Guard	Recreator	Farmer Adult	Trespasser	Trapper	Guard	Recreator	Farmer Adult
					GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1
PbS	X	X	Soil lead concentration	µg/g or ppm	508	508	508	508	508	508	508	508	508	508
R <sub>fetal/maternal</sub>	X	X	Fetal/maternal PbB ratio	--	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
BKSF	X	X	Biokinetic Slope Factor	µg/dL per µg/day	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
GSD <sub>i</sub>	X	X	Geometric standard deviation PbB	--	1.8	1.8	1.8	1.8	1.8	2.1	2.1	2.1	2.1	2.1
PbB <sub>0</sub>	X	X	Baseline PbB	µg/dL	2.2	2.2	2.2	2.2	2.2	2.2	1.7	1.7	1.7	1.7
IR <sub>S</sub>	X		Soil ingestion rate (including soil-derived indoor dust)	g/day	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
IR <sub>S+D</sub>		X	Total ingestion rate of outdoor soil and indoor dust	g/day	--	--	--	--	--	--	--	--	--	--
W <sub>S</sub>		X	Weighting factor: fraction of IR <sub>S+D</sub> ingested as outdoor soil	--	--	--	--	--	--	--	--	--	--	--
K <sub>SD</sub>		X	Mass fraction of soil in dust	--	--	--	--	--	--	--	--	--	--	--
AF <sub>S,D</sub>	X	X	Absorption fraction (same for soil and dust)	--	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
EF <sub>S,D</sub>	X	X	Exposure frequency (same for soil and dust)	days/yr	50	90	28	75	350	50	90	28	75	350
AT <sub>S,D</sub>	X	X	Averaging time (same for soil and dust)	days/yr	365	365	365	365	365	365	365	365	365	365
<b>PbB<sub>adult</sub></b>			<b>PbB of adult receptor, geometric mean</b>	<b>µg/dL</b>	<b>2.9</b>	<b>2.8</b>	<b>2.4</b>	<b>2.7</b>	<b>4.5</b>	<b>2.4</b>	<b>2.3</b>	<b>1.9</b>	<b>2.2</b>	<b>4.0</b>
<b>PbB<sub>fetal,0.95</sub></b>			<b>95th percentile PbB among fetuses of adult workers</b>	<b>µg/dL</b>	<b>6.8</b>	<b>6.6</b>	<b>5.6</b>	<b>6.4</b>	<b>10.7</b>	<b>7.2</b>	<b>7.0</b>	<b>5.8</b>	<b>6.7</b>	<b>12.3</b>
<b>PbB<sub>t</sub></b>			<b>Target PbB level of concern (e.g., 10 µg/dL)</b>	<b>µg/dL</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>
<b>P(PbB &gt; PbB<sub>t</sub>)</b>			<b>Probability that PbB &gt; PbB<sub>t</sub>, assuming lognormal distribution</b>	<b>%</b>	<b>1.1%</b>	<b>1.0%</b>	<b>0.4%</b>	<b>0.8%</b>	<b>6.4%</b>	<b>1.9%</b>	<b>1.7%</b>	<b>0.8%</b>	<b>1.5%</b>	<b>8.6%</b>

<sup>a</sup> Equation 1 does not apportion exposure between soil and dust ingestion (excludes Ψ K<sub>SD</sub>).  
When IR<sub>S</sub> = IR<sub>S+D</sub> and W<sub>S</sub> = 1.0, the equations yield the same PbB<sub>fetal,0.95</sub>.

\*Equation 1, based on Eq. 1, 2 in USEPA (1996).

<b>PbB<sub>adult</sub></b> =	$(PbS * BKSF * IR_{S+D} * AF_{S,D} * EF_S / AT_{S,D}) + PbB_0$
<b>PbB<sub>fetal,0.95</sub></b> =	$PbB_{adult} * (GSD_1^{1.645} * R)$

**Table Q-12. Calculations of Blood Lead Concentrations (PbBs) Sediment - Outlets D,E,F and Criggy's Pond Adult Receptors**

U.S. EPA Technical Review Workgroup for Lead, Adult Lead Committee

Exposure Variable	PbB Equation <sup>a</sup>		Description of Exposure Variable	Units	Child	Hunter/	National	Recreator	Resident	Child	Hunter/	National	Recreator	Resident
	1*	2**			Trespasser	Trapper	Guard	Recreator	Farmer Adult	Trespasser	Trapper	Guard	Recreator	Farmer Adult
					GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1
PbS	X	X	Soil lead concentration	µg/g or ppm	1210	1210	1210	1210	1210	1210	1210	1210	1210	1210
R <sub>fetal/maternal</sub>	X	X	Fetal/maternal PbB ratio	--	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
BKSF	X	X	Biokinetic Slope Factor	µg/dL per µg/day	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
GSD <sub>i</sub>	X	X	Geometric standard deviation PbB	--	1.8	1.8	1.8	1.8	1.8	2.1	2.1	2.1	2.1	2.1
PbB <sub>0</sub>	X	X	Baseline PbB	µg/dL	2.2	2.2	2.2	2.2	2.2	2.2	1.7	1.7	1.7	1.7
IR <sub>S</sub>	X		Soil ingestion rate (including soil-derived indoor dust)	g/day	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
IR <sub>S+D</sub>		X	Total ingestion rate of outdoor soil and indoor dust	g/day	--	--	--	--	--	--	--	--	--	--
W <sub>S</sub>		X	Weighting factor; fraction of IR <sub>S+D</sub> ingested as outdoor soil	--	--	--	--	--	--	--	--	--	--	--
K <sub>SD</sub>		X	Mass fraction of soil in dust	--	--	--	--	--	--	--	--	--	--	--
AF <sub>S,D</sub>	X	X	Absorption fraction (same for soil and dust)	--	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
EF <sub>S,D</sub>	X	X	Exposure frequency (same for soil and dust)	days/yr	50	90	28	75	350	50	90	28	75	350
AT <sub>S,D</sub>	X	X	Averaging time (same for soil and dust)	days/yr	365	365	365	365	365	365	365	365	365	365
<b>PbB<sub>adult</sub></b>			<b>PbB of adult receptor, geometric mean</b>	<b>µg/dL</b>	<b>3.8</b>	<b>3.6</b>	<b>2.6</b>	<b>3.4</b>	<b>7.8</b>	<b>3.3</b>	<b>3.1</b>	<b>2.1</b>	<b>2.9</b>	<b>7.3</b>
<b>PbB<sub>fetal,0.95</sub></b>			<b>95th percentile PbB among fetuses of adult workers</b>	<b>µg/dL</b>	<b>9.0</b>	<b>8.6</b>	<b>6.3</b>	<b>8.0</b>	<b>18.4</b>	<b>10.0</b>	<b>9.6</b>	<b>6.5</b>	<b>8.8</b>	<b>22.2</b>
<b>PbB<sub>t</sub></b>			<b>Target PbB level of concern (e.g., 10 µg/dL)</b>	<b>µg/dL</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>
<b>P(PbB &gt; PbB<sub>t</sub>)</b>			<b>Probability that PbB &gt; PbB<sub>t</sub>, assuming lognormal distribution</b>	<b>%</b>	<b>3.4%</b>	<b>2.9%</b>	<b>0.7%</b>	<b>2.2%</b>	<b>27.1%</b>	<b>5.1%</b>	<b>4.4%</b>	<b>1.3%</b>	<b>3.5%</b>	<b>28.4%</b>

<sup>a</sup> Equation 1 does not apportion exposure between soil and dust ingestion (excludes  $\Psi$ , K<sub>SD</sub>).

When IR<sub>S</sub> = IR<sub>S+D</sub> and W<sub>S</sub> = 1.0, the equations yield the same PbB<sub>fetal,0.95</sub>.

\*Equation 1, based on Eq. 1, 2 in USEPA (1996).

<b>PbB<sub>adult</sub></b> =	(PbS*BKSF*IR <sub>S+D</sub> *AF <sub>S,D</sub> *EF <sub>S,D</sub> /AT <sub>S,D</sub> ) + PbB <sub>0</sub>
<b>PbB<sub>fetal,0.95</sub></b> =	PbB <sub>adult</sub> * (GSD <sub>i</sub> <sup>1.645</sup> * R)

**Table Q-13. Calculations of Blood Lead Concentrations (PbBs) Surface Soil - CB-13 and CB-10 Adult Receptors**  
U.S. EPA Technical Review Workgroup for Lead, Adult Lead Committee

Exposure Variable	PbB Equation <sup>a</sup>		Description of Exposure Variable	Units	Child	Hunter/	National	Industrial	Recreator	Resident	Sec. Guard/	Child	Hunter/	National	Industrial	Recreator	Resident	Sec. Guard/
	1*	2**			Trespasser	Trapper	Guard	Worker	Farmer Adult	Maint. Worker	Trespasser	Trapper	Guard	Worker	Recreator	Farmer Adult	Maint. Worker	
					GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1
PbS	X	X	Soil lead concentration	µg/g or ppm	253.3	253.3	253.3	253.3	253.3	253.3	253.3	253.3	253.3	253.3	253.3	253.3	253.3	253.3
R <sub>fetal/maternal</sub>	X	X	Fetal/maternal PbB ratio	--	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
BKSF	X	X	Biokinetic Slope Factor	µg/dL per µg/day	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
GSD <sub>i</sub>	X	X	Geometric standard deviation PbB	--	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.1	2.1	2.1	2.1	2.1	2.1	2.1
PbB <sub>0</sub>	X	X	Baseline PbB	µg/dL	2.2	2.2	2.2	2.2	2.2	2.2	2.2	1.7	1.7	1.7	1.7	1.7	1.7	1.7
IR <sub>S</sub>	X		Soil ingestion rate (including soil-derived indoor dust)	g/day	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1
IR <sub>S+D</sub>		X	Total ingestion rate of outdoor soil and indoor dust	g/day	--	--	--	--	--	--	--	--	--	--	--	--	--	--
W <sub>S</sub>		X	Weighting factor; fraction of IR <sub>S+D</sub> ingested as outdoor soil	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
K <sub>SD</sub>		X	Mass fraction of soil in dust	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AF <sub>S,D</sub>	X	X	Absorption fraction (same for soil and dust)	--	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
EF <sub>S,D</sub>	X	X	Exposure frequency (same for soil and dust)	days/yr	50	90	180	250	75	350	250	50	90	180	250	75	350	250
AT <sub>S,D</sub>	X	X	Averaging time (same for soil and dust)	days/yr	365	365	365	365	365	365	365	365	365	365	365	365	365	365
<b>PbB<sub>adult</sub></b>	<b>PbB of adult receptor, geometric mean</b>			<b>µg/dL</b>	<b>2.5</b>	<b>2.5</b>	<b>2.8</b>	<b>3.0</b>	<b>2.4</b>	<b>3.4</b>	<b>3.0</b>	<b>2.0</b>	<b>2.0</b>	<b>2.3</b>	<b>2.5</b>	<b>1.9</b>	<b>2.9</b>	<b>2.5</b>
<b>PbB<sub>fetal, 0.95</sub></b>	<b>95th percentile PbB among fetuses of adult workers</b>			<b>µg/dL</b>	<b>6.0</b>	<b>5.9</b>	<b>6.6</b>	<b>7.2</b>	<b>5.8</b>	<b>8.0</b>	<b>7.2</b>	<b>6.2</b>	<b>6.1</b>	<b>7.0</b>	<b>7.7</b>	<b>5.9</b>	<b>8.7</b>	<b>7.7</b>
<b>PbB<sub>i</sub></b>	<b>Target PbB level of concern (e.g., 10 µg/dL)</b>			<b>µg/dL</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>
<b>P(PbB &gt; PbB<sub>i</sub>)</b>	<b>Probability that PbB &gt; PbB<sub>i</sub>, assuming lognormal distribution</b>			<b>%</b>	<b>0.6%</b>	<b>0.6%</b>	<b>1.0%</b>	<b>1.4%</b>	<b>0.5%</b>	<b>2.1%</b>	<b>1.4%</b>	<b>1.1%</b>	<b>1.0%</b>	<b>1.7%</b>	<b>2.3%</b>	<b>1.0%</b>	<b>3.4%</b>	<b>2.3%</b>

<sup>a</sup> Equation 1 does not apportion exposure between soil and dust ingestion (excludes W<sub>S</sub>, K<sub>SD</sub>).  
When IR<sub>S</sub> = IR<sub>S+D</sub> and W<sub>S</sub> = 1.0, the equations yield the same PbB<sub>fetal,0.95</sub>.

<sup>\*</sup>Equation 1, based on Eq. 1, 2 in USEPA (1996).

<b>PbB<sub>adult</sub></b> =	$(PbS * BKSF * IR_{S+D} * AF_{S,D} * EF_{S,D} / AT_{S,D}) + PbB_0$
<b>PbB<sub>fetal, 0.95</sub></b> =	$PbB_{adult} * (GSD_i^{1.645} * R)$



**Table Q-14. Calculations of Blood Lead Concentrations (PbBs) Surface Soil - CB-14, CB-17, and CA-15 Adult Receptors**  
U.S. EPA Technical Review Workgroup for Lead, Adult Lead Committee

Exposure Variable	PbB Equation <sup>f</sup>		Description of Exposure Variable	Units	Child Trespasser	Hunter/Trapper	National Guard	Industrial Worker	Recreator	Resident Farmer Adult	Sec. Guard/Maint. Worker	Child Trespasser	Hunter/Trapper	National Guard	Industrial Worker	Recreator	Resident Farmer Adult	Sec. Guard/Maint. Worker
	1*	2**			GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1
PbS	X	X	Soil lead concentration	µg/g or ppm	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8
R <sub>fetal/maternal</sub>	X	X	Fetal/maternal PbB ratio	--	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
BKSF	X	X	Biokinetic Slope Factor	µg/dL per µg/day	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
GSD <sub>i</sub>	X	X	Geometric standard deviation PbB	--	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.1	2.1	2.1	2.1	2.1	2.1	2.1
PbB <sub>0</sub>	X	X	Baseline PbB	µg/dL	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	1.7	1.7	1.7	1.7	1.7	1.7
IR <sub>S</sub>	X		Soil ingestion rate (including soil-derived indoor dust)	g/day	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1
IR <sub>S+D</sub>		X	Total ingestion rate of outdoor soil and indoor dust	g/day	--	--	--	--	--	--	--	--	--	--	--	--	--	--
W <sub>S</sub>		X	Weighting factor; fraction of IR <sub>S+D</sub> ingested as outdoor soil	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
K <sub>SD</sub>		X	Mass fraction of soil in dust	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AF <sub>S,D</sub>	X	X	Absorption fraction (same for soil and dust)	--	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
EF <sub>S,D</sub>	X	X	Exposure frequency (same for soil and dust)	days/yr	50	90	180	250	75	350	250	50	90	180	250	75	350	250
AT <sub>S,D</sub>	X	X	Averaging time (same for soil and dust)	days/yr	365	365	365	365	365	365	365	365	365	365	365	365	365	365
<b>PbB<sub>adult</sub></b>	<b>PbB of adult receptor, geometric mean</b>			<b>µg/dL</b>	<b>2.3</b>	<b>2.3</b>	<b>2.5</b>	<b>2.6</b>	<b>2.3</b>	<b>2.7</b>	<b>2.6</b>	<b>1.8</b>	<b>1.8</b>	<b>2.0</b>	<b>2.1</b>	<b>1.8</b>	<b>2.2</b>	<b>2.1</b>
<b>PbB<sub>fetal, 0.95</sub></b>	<b>95th percentile PbB among fetuses of adult workers</b>			<b>µg/dL</b>	<b>5.6</b>	<b>5.5</b>	<b>5.8</b>	<b>6.1</b>	<b>5.5</b>	<b>6.4</b>	<b>6.1</b>	<b>5.6</b>	<b>5.6</b>	<b>6.0</b>	<b>6.3</b>	<b>5.5</b>	<b>6.7</b>	<b>6.3</b>
<b>PbB<sub>i</sub></b>	<b>Target PbB level of concern (e.g., 10 µg/dL)</b>			<b>µg/dL</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>
<b>P(PbB &gt; PbB<sub>i</sub>)</b>	<b>Probability that PbB &gt; PbB<sub>i</sub>, assuming lognormal distribution</b>			<b>%</b>	<b>0.4%</b>	<b>0.4%</b>	<b>0.5%</b>	<b>0.6%</b>	<b>0.4%</b>	<b>0.8%</b>	<b>0.6%</b>	<b>0.8%</b>	<b>0.8%</b>	<b>1.0%</b>	<b>1.2%</b>	<b>0.7%</b>	<b>1.5%</b>	<b>1.2%</b>

<sup>f</sup> Equation 1 does not apportion exposure between soil and dust ingestion (excludes W<sub>S</sub>, K<sub>SD</sub>).  
When IR<sub>S</sub> = IR<sub>S+D</sub> and W<sub>S</sub> = 1.0, the equations yield the same PbB<sub>fetal,0.95</sub>.

<sup>g</sup>Equation 1, based on Eq. 1, 2 in USEPA (1996).

<b>PbB<sub>adult</sub></b> =	$(PbS * BKSF * IR_{S+D} * AF_{S,D} * EF_{S,D} / AT_{S,D}) + PbB_0$
<b>PbB<sub>fetal, 0.95</sub></b> =	$PbB_{adult} * (GSD_i^{1.645} * R)$

**Table Q-15. Calculations of Blood Lead Concentrations (PbBs) Surface Soil - CB-3/CB-801 Adult Receptors**

U.S. EPA Technical Review Workgroup for Lead, Adult Lead Committee

Exposure Variable	PbB Equation <sup>a</sup>		Description of Exposure Variable	Units	Child Trespasser	Hunter/Trapper	National Guard	Industrial Worker	Recreator	Resident Farmer Adult	Sec. Guard/Maint. Worker	Child Trespasser	Hunter/Trapper	National Guard	Industrial Worker	Recreator	Resident Farmer Adult	Sec. Guard/Maint. Worker
	1*	2**			GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1
PbS	X	X	Soil lead concentration	µg/g or ppm	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5	605.5
R <sub>fetal/maternal</sub>	X	X	Fetal/maternal PbB ratio	--	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
BKSF	X	X	Biokinetic Slope Factor	µg/dL per µg/day	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
GSD <sub>i</sub>	X	X	Geometric standard deviation PbB	--	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.1	2.1	2.1	2.1	2.1	2.1	2.1
PbB <sub>0</sub>	X	X	Baseline PbB	µg/dL	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	1.7	1.7	1.7	1.7	1.7	1.7
IR <sub>S</sub>	X		Soil ingestion rate (including soil-derived indoor dust)	g/day	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1
IR <sub>S-D</sub>		X	Total ingestion rate of outdoor soil and indoor dust	g/day	--	--	--	--	--	--	--	--	--	--	--	--	--	--
W <sub>S</sub>		X	Weighting factor; fraction of IR <sub>S-D</sub> ingested as outdoor soil	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
K <sub>SD</sub>		X	Mass fraction of soil in dust	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AF <sub>S,D</sub>	X	X	Absorption fraction (same for soil and dust)	--	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
EF <sub>S,D</sub>	X	X	Exposure frequency (same for soil and dust)	days/yr	50	90	180	250	75	350	250	50	90	180	250	75	350	250
AT <sub>S,D</sub>	X	X	Averaging time (same for soil and dust)	days/yr	365	365	365	365	365	365	365	365	365	365	365	365	365	365
PbB <sub>adult</sub>	PbB of adult receptor, geometric mean			µg/dL	3.0	2.9	3.6	4.2	2.8	5.0	4.2	2.5	2.4	3.1	3.7	2.3	4.5	3.7
PbB <sub>fetal, 0.95</sub>	95th percentile PbB among fetuses of adult workers			µg/dL	7.1	6.9	8.6	9.9	6.6	11.8	9.9	7.6	7.4	9.6	11.3	7.0	13.7	11.3
PbB <sub>c</sub>	Target PbB level of concern (e.g., 10 µg/dL)			µg/dL	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
P(PbB > PbB <sub>c</sub> )	Probability that PbB > PbB <sub>c</sub> assuming lognormal distribution			%	1.3%	1.1%	2.9%	4.9%	0.9%	8.6%	4.9%	2.2%	2.0%	4.4%	6.9%	1.7%	11.1%	6.9%

<sup>a</sup> Equation 1 does not apportion exposure between soil and dust ingestion (excludes W<sub>S</sub>, K<sub>SD</sub>).  
When IR<sub>S</sub> = IR<sub>S-D</sub> and W<sub>S</sub> = 1.0, the equations yield the same PbB<sub>fetal,0.95</sub>.

\*Equation 1, based on Eq. 1.2 in USEPA (1996).

$PbB_{adult} =$	$(PbS * BKSF + IR_{S-D} * AF_{S,D} * EF_{S,D} / AT_{S,D}) + PbB_0$
$PbB_{fetal, 0.95} =$	$PbB_{adult} * (GSD_i^{1.645} * R)$

**Table Q-16. Calculations of Blood Lead Concentrations (PbBs) Surface Soil - CB-4/4A and CA-6/6A Adult Receptors**  
U.S. EPA Technical Review Workgroup for Lead, Adult Lead Committee

Exposure Variable	PbB Equation <sup>a</sup>		Description of Exposure Variable	Units	Child Trespasser	Hunter/Trapper	National Guard	Industrial Worker	Recreator	Resident Farmer Adult	Sec. Guard/Maint. Worker	Child Trespasser	Hunter/Trapper	National Guard	Industrial Worker	Recreator	Resident Farmer Adult	Sec. Guard/Maint. Worker
	1*	2**			GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1
PbS	X	X	Soil lead concentration	µg/g or ppm	283.5	283.5	283.5	283.5	283.5	283.5	283.5	283.5	283.5	283.5	283.5	283.5	283.5	283.5
R <sub> fetal/maternal</sub>	X	X	Fetal/maternal PbB ratio	--	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
BKSF	X	X	Biokinetic Slope Factor	µg/dL per µg/day	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
GSD <sub>1</sub>	X	X	Geometric standard deviation PbB	--	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.1	2.1	2.1	2.1	2.1	2.1	2.1
PbB <sub>0</sub>	X	X	Baseline PbB	µg/dL	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	1.7	1.7	1.7	1.7	1.7	1.7
IR <sub>S</sub>	X		Soil ingestion rate (including soil-derived indoor dust)	g/day	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1
IR <sub>S,D</sub>	X		Total ingestion rate of outdoor soil and indoor dust	g/day	--	--	--	--	--	--	--	--	--	--	--	--	--	--
W <sub>S</sub>	X		Weighting factor; fraction of IR <sub>S,D</sub> ingested as outdoor soil	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
K <sub>SD</sub>	X		Mass fraction of soil in dust	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AF <sub>S,D</sub>	X	X	Absorption fraction (same for soil and dust)	--	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
EF <sub>S,D</sub>	X	X	Exposure frequency (same for soil and dust)	days/yr	50	90	180	250	75	350	250	50	90	180	250	75	350	250
AT <sub>S,D</sub>	X	X	Averaging time (same for soil and dust)	days/yr	365	365	365	365	365	365	365	365	365	365	365	365	365	365
<b>PbB<sub>adult</sub></b>	<b>PbB of adult receptor, geometric mean</b>			<b>µg/dL</b>	<b>2.6</b>	<b>2.5</b>	<b>2.9</b>	<b>3.1</b>	<b>2.5</b>	<b>3.5</b>	<b>3.1</b>	<b>2.1</b>	<b>2.0</b>	<b>2.4</b>	<b>2.6</b>	<b>2.0</b>	<b>3.0</b>	<b>2.6</b>
<b>PbB<sub>fetal, 0.95</sub></b>	<b>95th percentile PbB among fetuses of adult workers</b>			<b>µg/dL</b>	<b>6.1</b>	<b>6.0</b>	<b>6.8</b>	<b>7.4</b>	<b>5.9</b>	<b>8.3</b>	<b>7.4</b>	<b>6.3</b>	<b>6.2</b>	<b>7.2</b>	<b>8.0</b>	<b>6.0</b>	<b>9.2</b>	<b>8.0</b>
<b>PbB<sub>1</sub></b>	<b>Target PbB level of concern (e.g., 10 µg/dL)</b>			<b>µg/dL</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>
<b>P(PbB &gt; PbB<sub>1</sub>)</b>	<b>Probability that PbB &gt; PbB<sub>1</sub>, assuming lognormal distribution</b>			<b>%</b>	<b>0.6%</b>	<b>0.6%</b>	<b>1.1%</b>	<b>1.6%</b>	<b>0.5%</b>	<b>2.5%</b>	<b>1.6%</b>	<b>1.2%</b>	<b>1.1%</b>	<b>1.9%</b>	<b>2.6%</b>	<b>1.0%</b>	<b>3.9%</b>	<b>2.6%</b>

<sup>a</sup> Equation 1 does not apportion exposure between soil and dust ingestion (excludes W<sub>S</sub>, K<sub>SD</sub>).  
When IR<sub>S</sub> = IR<sub>S,D</sub> and W<sub>S</sub> = 1.0, the equations yield the same PbB<sub>adult,0.95</sub>.

\*Equation 1, based on Eq. 1, 2 in USEPA (1996).

<b>PbB<sub>adult</sub></b> =	$(PbS * BKSF * IR_{S,D} * AF_{S,D} * EF_{S,D} / AT_{S,D}) + PbB_0$
<b>PbB<sub>fetal, 0.95</sub></b> =	$PbB_{adult} * (GSD_1^{1.645} * R)$

Table Q-17. Calculations of Blood Lead Concentrations (PbBs) Surface Soil - Change Houses (CB-12, -23, -8, -22) Adult Receptors  
U.S. EPA Technical Review Workgroup for Lead, Adult Lead Committee

Exposure Variable	PbB Equation <sup>a</sup>		Description of Exposure Variable	Units	Child	Hunter/	National	Industrial	Recreator	Resident	Sec. Guard/	Child	Hunter/	National	Industrial	Recreator	Resident	Sec. Guard/
	1*	2**			Trespasser	Trapper	Guard	Worker	Farmer Adult	Maint. Worker	Trespasser	Trapper	Guard	Worker	Recreator	Farmer Adult	Maint. Worker	
					GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1
PbS	X	X	Soil lead concentration	µg/g or ppm	189.6	189.6	189.6	189.6	189.6	189.6	189.6	189.6	189.6	189.6	189.6	189.6	189.6	189.6
R <sub>fetal/maternal</sub>	X	X	Fetal/maternal PbB ratio	--	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
BKSF	X	X	Biokinetic Slope Factor	µg/dL per µg/day	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
GSD <sub>i</sub>	X	X	Geometric standard deviation PbB	--	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.1	2.1	2.1	2.1	2.1	2.1	2.1
PbB <sub>0</sub>	X	X	Baseline PbB	µg/dL	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	1.7	1.7	1.7	1.7	1.7	1.7
IR <sub>s</sub>	X		Soil ingestion rate (including soil-derived indoor dust)	g/day	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1
IR <sub>s,D</sub>		X	Total ingestion rate of outdoor soil and indoor dust	g/day	--	--	--	--	--	--	--	--	--	--	--	--	--	--
W <sub>s</sub>		X	Weighting factor: fraction of IR <sub>s</sub> ingested as outdoor soil	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
K <sub>SD</sub>		X	Mass fraction of soil in dust	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AF <sub>S,D</sub>	X	X	Absorption fraction (same for soil and dust)	--	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
EF <sub>S,D</sub>	X	X	Exposure frequency (same for soil and dust)	days/yr	50	90	180	250	75	350	250	50	90	180	250	75	350	250
AT <sub>S,D</sub>	X	X	Averaging time (same for soil and dust)	days/yr	365	365	365	365	365	365	365	365	365	365	365	365	365	365
<b>PbB<sub>adult</sub></b>	<b>PbB of adult receptor, geometric mean</b>			<b>µg/dL</b>	<b>2.4</b>	<b>2.4</b>	<b>2.6</b>	<b>2.8</b>	<b>2.4</b>	<b>2.4</b>	<b>2.8</b>	<b>1.9</b>	<b>1.9</b>	<b>2.1</b>	<b>2.3</b>	<b>1.9</b>	<b>2.6</b>	<b>2.3</b>
<b>PbB<sub>fetal,0.95</sub></b>	<b>95th percentile PbB among fetuses of adult workers</b>			<b>µg/dL</b>	<b>5.8</b>	<b>5.7</b>	<b>6.3</b>	<b>6.7</b>	<b>5.6</b>	<b>6.7</b>	<b>5.9</b>	<b>5.9</b>	<b>6.6</b>	<b>7.1</b>	<b>5.8</b>	<b>7.8</b>	<b>7.1</b>	<b>7.1</b>
<b>PbB<sub>i</sub></b>	<b>Target PbB level of concern (e.g., 10 µg/dL)</b>			<b>µg/dL</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>
<b>P(PbB &gt; PbB<sub>i</sub>)</b>	<b>Probability that PbB &gt; PbB<sub>i</sub>, assuming lognormal distribution</b>			<b>%</b>	<b>0.5%</b>	<b>0.5%</b>	<b>0.7%</b>	<b>1.0%</b>	<b>0.4%</b>	<b>0.4%</b>	<b>1.0%</b>	<b>0.9%</b>	<b>0.9%</b>	<b>1.3%</b>	<b>1.7%</b>	<b>0.8%</b>	<b>2.4%</b>	<b>1.7%</b>

<sup>a</sup> Equation 1 does not apportion exposure between soil and dust ingestion (excludes W<sub>s</sub>, K<sub>SD</sub>).  
When IR<sub>s</sub> = IR<sub>s,D</sub> and W<sub>s</sub> = 1.0, the equations yield the same PbB<sub>total,0.95</sub>.

\*Equation 1, based on Eq. 1, 2 in USEPA (1996).

<b>PbB<sub>adult</sub></b> =	$(PbS * BKSF * IR_{s,D} * AF_{S,D} * EF_{S,D} / AT_{S,D}) + PbB_0$
<b>PbB<sub>fetal,0.95</sub></b> =	$PbB_{adult,0.95} * (GSD^{1.645} * R)$

**Table Q-18. Calculations of Blood Lead Concentrations (PbBs) Surface Soil - Water Tower Adult Receptors**  
U.S. EPA Technical Review Workgroup for Lead, Adult Lead Committee

Exposure Variable	PbB Equation <sup>d</sup>		Description of Exposure Variable	Units	Child	Hunter/	National	Industrial	Recreator	Resident	Sec. Guard/	Child	Hunter/	National	Industrial	Recreator	Resident	Sec. Guard/
	1 <sup>a</sup>	2 <sup>a*</sup>			Trespasser	Trapper	Guard	Worker	Farmer Adult	Maint. Worker	Trespasser	Trapper	Guard	Worker	Recreator	Farmer Adult	Maint. Worker	
					GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1
PbS	X	X	Soil lead concentration	µg/g or ppm	2510	2510	2510	2510	2510	2510	2510	2510	2510	2510	2510	2510	2510	2510
R <sub>fetal/maternal</sub>	X	X	Fetal/maternal PbB ratio	--	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
BKSF	X	X	Biokinetic Slope Factor	µg/dL per µg/day	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
GSD <sub>i</sub>	X	X	Geometric standard deviation PbB	--	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.1	2.1	2.1	2.1	2.1	2.1	2.1
PbB <sub>0</sub>	X	X	Baseline PbB	µg/dL	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	1.7	1.7	1.7	1.7	1.7	1.7
IR <sub>s</sub>	X		Soil ingestion rate (including soil-derived indoor dust)	g/day	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1
IR <sub>s,D</sub>		X	Total ingestion rate of outdoor soil and indoor dust	g/day	--	--	--	--	--	--	--	--	--	--	--	--	--	--
W <sub>s</sub>		X	Weighting factor; fraction of IR <sub>s,D</sub> ingested as outdoor soil	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
K <sub>SD</sub>		X	Mass fraction of soil in dust	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AF <sub>s,D</sub>	X	X	Absorption fraction (same for soil and dust)	--	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
EF <sub>s,D</sub>	X	X	Exposure frequency (same for soil and dust)	days/yr	50	90	180	250	75	350	250	50	90	180	250	75	350	250
AT <sub>s,D</sub>	X	X	Averaging time (same for soil and dust)	days/yr	365	365	365	365	365	365	365	365	365	365	365	365	365	365
<b>PbB<sub>adult</sub></b>	<b>PbB of adult receptor, geometric mean</b>			<b>µg/dL</b>	<b>5.5</b>	<b>5.2</b>	<b>8.1</b>	<b>10.5</b>	<b>4.7</b>	<b>13.8</b>	<b>10.5</b>	<b>5.0</b>	<b>4.7</b>	<b>7.6</b>	<b>10.0</b>	<b>4.2</b>	<b>13.3</b>	<b>10.0</b>
<b>PbB<sub>fetal, 0.95</sub></b>	<b>95th percentile PbB among fetuses of adult workers</b>			<b>µg/dL</b>	<b>13.0</b>	<b>12.2</b>	<b>19.3</b>	<b>24.7</b>	<b>11.1</b>	<b>32.6</b>	<b>24.7</b>	<b>15.3</b>	<b>14.2</b>	<b>23.3</b>	<b>30.4</b>	<b>12.7</b>	<b>40.4</b>	<b>30.4</b>
<b>PbB<sub>t</sub></b>	<b>Target PbB level of concern (e.g., 10 µg/dL)</b>			<b>µg/dL</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>
<b>P(PbB &gt; PbB<sub>t</sub>)</b>	<b>Probability that PbB &gt; PbB<sub>t</sub>, assuming lognormal distribution</b>			<b>%</b>	<b>11.6%</b>	<b>9.7%</b>	<b>29.8%</b>	<b>45.9%</b>	<b>7.0%</b>	<b>64.2%</b>	<b>45.9%</b>	<b>14.1%</b>	<b>12.1%</b>	<b>30.7%</b>	<b>44.1%</b>	<b>9.4%</b>	<b>59.4%</b>	<b>44.1%</b>

<sup>a</sup> Equation 1 does not apportion exposure between soil and dust ingestion (excludes W<sub>s</sub>, K<sub>SD</sub>).  
When IR<sub>s</sub> = IR<sub>s,D</sub> and W<sub>s</sub> = 1.0, the equations yield the same PbB<sub>fetal,0.95</sub>.

\*Equation 1, based on Eq. 1, 2 in USEPA (1996).

<b>PbB<sub>adult</sub></b> =	$(PbS * BKSF * IR_{s,D} * AF_{s,D} * EF_{s,D} / AT_{s,D}) + PbB_0$
<b>PbB<sub>fetal, 0.95</sub></b> =	$PbB_{adult} * (GSD_i)^{1.645} * R$

Table Q-19. Calculations of Blood Lead Concentrations (PbB) Subsurface Soil - CB-13 and CE-10 Adult Receptors  
U.S. EPA Technical Review Workshop for Lead, Adult Lead Calculations

Exposure Variable	PbB Equation		Description of Exposure Variable	Units	National	Industrial	Resident	National	Industrial	Resident
	1*	2**			General	Worker	Farmer/Adult	General	Worker	Farmer/Adult
					GSMB ± 1.8	GSMB ± 1.8	GSMB ± 1.8	GSMB ± 2.1	GSMB ± 2.1	GSMB ± 2.1
PbB <sub>soil</sub>	X	X	Soil lead concentration	µg/g	2000	2000	2000	2000	2000	2000
PbB <sub>inhalation</sub>	X	X	Inhalation of Pb from soil	µg/g	0.9	0.9	0.9	0.9	0.9	0.9
IRCF <sup>1</sup>	X	X	Inhalation rate	m <sup>3</sup> /day	0.4	0.4	0.4	0.4	0.4	0.4
GSMB <sub>inhalation</sub>	X	X	Stochastic multiplier distribution PbB		1.8	1.8	1.8	2.1	2.1	2.1
PbB <sub>ingestion</sub>	X	X	Ingestion of Pb	µg/day	2.2	2.2	2.2	1.7	1.7	1.7
IR <sub>ingestion</sub>	X	X	Ingestion rate (for children and adults)	g/day	0.1	0.1	0.1	0.1	0.1	0.1
IRCF <sub>ingestion</sub>	X	X	Ingestion rate of children and adults	g/day	0.1	0.1	0.1	0.1	0.1	0.1
W <sub>soil</sub>	X	X	Weight fraction of Pb <sub>soil</sub> ingested or inhaled		-	-	-	-	-	-
K <sub>soil</sub>	X	X	Retention fraction of soil in diet		-	-	-	-	-	-
AFI <sub>soil</sub>	X	X	Absorption fraction from soil and diet		0.12	0.12	0.12	0.12	0.12	0.12
RF <sub>soil</sub>	X	X	Retention fraction from soil and diet	days	28	280	280	28	280	280
AT <sub>soil</sub>	X	X	Absorption fraction from soil and diet	days	365	365	365	365	365	365
PbB <sub>total</sub>			PbB of adult receptor, geometric mean	µg/dL	2.4	3.4	4.2	2.8	3.7	4.7
PbB <sub>total,GM</sub>			PbB geometric mean among fraction of adult receptors	µg/dL	3.4	4.4	5.2	3.8	4.7	5.7
PbB <sub>total,95th</sub>			Target PbB level of concern (i.e., 10 µg/dL)	µg/dL	10.0	10.0	10.0	10.0	10.0	10.0
AT <sub>soil</sub>	X	X	Retention fraction from soil and diet	days	365	365	365	365	365	365

\*Equation 1 does not apply to children because of the different equation (includes W<sub>soil</sub>, K<sub>soil</sub>)  
\*\*When W<sub>soil</sub> = 0, K<sub>soil</sub> = 1, the equation gives the same PbB<sub>total,GM</sub>

Equation 3 based on Eq. 7.16 USEPA (1996)

$$PbB_{total,GM} = \frac{PbB_{soil} \cdot IRCF \cdot IR_{ingestion} \cdot W_{soil} \cdot K_{soil} \cdot AFI_{soil} \cdot RF_{soil} \cdot AT_{soil}}{PbB_{total,GM} + IRCF \cdot IR_{inhalation} \cdot W_{soil} \cdot K_{soil} \cdot AFI_{soil} \cdot RF_{soil} \cdot AT_{soil} + IRCF \cdot IR_{inhalation} \cdot W_{soil} \cdot K_{soil} \cdot AFI_{soil} \cdot RF_{soil} \cdot AT_{soil}}$$

Table Q-20. Calculations of Blood Lead Concentrations (PbB) Subsurface Soil - CB-14, CB-17, and CA-15 Adult Receptors  
U.S. EPA Technical Review Workshop for Lead, Adult Lead Comments

Exposure Variable	PbB Equation*		Description of Exposure Variable	Units	National Guard	Industrial Worker	Resident Farmer/Adult	National Guard	Industrial Worker	Resident Farmer/Adult
	1 <sup>st</sup>	2 <sup>nd</sup>			GSD = 1.8	GSD = 1.8	GSD = 1.8	GSD = 2.1	GSD = 2.1	GSD = 2.1
PbS	X	X	Soil lead concentration	µg/l or ppm	558	558	558	558	558	558
Resuspension	X	X	Soil resuspended Pb concentration	µg/m <sup>3</sup>	0.9	0.9	0.9	0.9	0.9	0.9
BKSF	X	X	Biokinetic Shape Factor	µg/dl per µg/m <sup>3</sup>	0.4	0.4	0.4	0.4	0.4	0.4
GSD	X	X	Geometric standard deviation PbB	---	1.8	1.8	1.8	2.1	2.1	2.1
PbB <sub>soil</sub>	X	X	Soil PbB	µg/dl	2.2	2.2	2.2	2.7	2.7	2.7
IR <sub>soil</sub>	X	X	Soil ingestion rate including non-dietary indoor dust	µg/d	0.1	0.1	0.1	0.1	0.1	0.1
IR <sub>ind</sub>	X	X	Food ingestion rate of outdoor soil and indoor dust	µg/d	---	---	---	---	---	---
IR <sub>ind</sub>	X	X	Resuspension factor: fraction of PbB in suspended in outdoor soil	---	---	---	---	---	---	---
IR <sub>ind</sub>	X	X	Soil ingestion rate of soil dust	---	---	---	---	---	---	---
AF <sub>d</sub>	X	X	Absorption fraction (soil for soil and dust)	---	0.12	0.12	0.12	0.12	0.12	0.12
AF <sub>ind</sub>	X	X	Absorption fraction (soil for soil and dust)	---	26	26	26	26	26	26
AT <sub>d</sub>	X	X	Target PbB level (soil for soil and dust)	µg/dl	305	305	305	305	305	305
PbB <sub>soil</sub>	PbB of which receptor geometric mean			µg/dl	2.4	2.8	4.8	1.8	3.2	3.1
PbB <sub>soil, 95%</sub>	95th percentile PbB among classes of adult workers			µg/dl	2.7	3.2	11.3	2.8	11.8	11.8
PbB <sub>soil, 95%</sub>	Target PbB level of concern (e.g., for µg/dl)			µg/dl	10.0	10.0	10.0	10.0	10.0	10.0
PbB <sub>soil, 95%</sub>	Probability that PbB > PbB <sub>soil, 95%</sub> , assuming lognormal distribution			%	0.2%	0.2%	7.2%	0.9%	4.4%	9.9%

\*Equation 1 does not equate receptor between soil and dust ingestion (includes IR<sub>soil</sub>, IR<sub>ind</sub>)  
When IR<sub>soil</sub> = IR<sub>ind</sub> and W<sub>1</sub> = 1.0, the equations yield the same PbB<sub>soil, 95%</sub>

\*Equation 1, based on Eq. 1, 2 in USEPA (1996).

$$PbB_{soil, 95\%} = \frac{PbS \cdot BKSF \cdot IR_{soil} \cdot AF_d \cdot AT_d + IR_{ind} \cdot IR_{ind} \cdot AF_{ind} \cdot AT_{ind}}{PbB_{soil, 95\%} \cdot (GSD)^{1.645} \cdot R}$$

**Table Q-21. Calculations of Blood Lead Concentrations (PbBs) Subsurface Soil - CB-4/4A and CA-6/6A Adult Receptors**  
U.S. EPA Technical Review Workgroup for Lead, Adult Lead Committee

Exposure Variable	PbB Equation <sup>a</sup>		Description of Exposure Variable	Units	National Guard	Industrial Worker	Resident Farmer Adult	National Guard	Industrial Worker	Resident Farmer Adult
	1*	2**			GSDi = 1.8	GSDi = 1.8	GSDi = 1.8	GSDi = 2.1	GSDi = 2.1	GSDi = 2.1
PbS	X	X	Soil lead concentration	µg/g or ppm	122.7	122.7	122.7	122.7	122.7	122.7
R <sub>fetal/maternal</sub>	X	X	Fetal/maternal PbB ratio	--	0.9	0.9	0.9	0.9	0.9	0.9
BKSF	X	X	Biokinetic Slope Factor	µg/dL per µg/day	0.4	0.4	0.4	0.4	0.4	0.4
GSD <sub>i</sub>	X	X	Geometric standard deviation PbB	--	1.8	1.8	1.8	2.1	2.1	2.1
PbB <sub>0</sub>	X	X	Baseline PbB	µg/dL	2.2	2.2	2.2	1.7	1.7	1.7
IR <sub>S</sub>	X		Soil ingestion rate (including soil-derived indoor dust)	g/day	0.1	0.1	0.1	0.1	0.1	0.1
IR <sub>S+D</sub>		X	Total ingestion rate of outdoor soil and indoor dust	g/day	--	--	--	--	--	--
W <sub>S</sub>		X	Weighting factor; fraction of IR <sub>S+D</sub> ingested as outdoor soil	--	--	--	--	--	--	--
K <sub>SD</sub>		X	Mass fraction of soil in dust	--	--	--	--	--	--	--
AF <sub>S,D</sub>	X	X	Absorption fraction (same for soil and dust)	--	0.12	0.12	0.12	0.12	0.12	0.12
EF <sub>S,D</sub>	X	X	Exposure frequency (same for soil and dust)	days/yr	28	250	350	28	250	350
AT <sub>S,D</sub>	X	X	Averaging time (same for soil and dust)	days/yr	365	365	365	365	365	365
<b>PbB<sub>adult</sub></b>	<b>PbB of adult receptor, geometric mean</b>			<b>µg/dL</b>	<b>2.2</b>	<b>2.6</b>	<b>2.8</b>	<b>1.7</b>	<b>2.1</b>	<b>2.3</b>
<b>PbB<sub>fetal,0.95</sub></b>	<b>95th percentile PbB among fetuses of adult workers</b>			<b>µg/dL</b>	<b>5.3</b>	<b>6.2</b>	<b>6.5</b>	<b>5.3</b>	<b>6.4</b>	<b>6.9</b>
<b>PbB<sub>t</sub></b>	<b>Target PbB level of concern (e.g., 10 µg/dL)</b>			<b>µg/dL</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>	<b>10.0</b>
<b>P(PbB &gt; PbB<sub>t</sub>)</b>	<b>Probability that PbB &gt; PbB<sub>t</sub>, assuming lognormal distribution</b>			<b>%</b>	<b>0.3%</b>	<b>0.7%</b>	<b>0.9%</b>	<b>0.6%</b>	<b>1.2%</b>	<b>1.6%</b>

<sup>a</sup> Equation 1 does not apportion exposure between soil and dust ingestion (excludes W<sub>S</sub>, K<sub>SD</sub>).

When IR<sub>S</sub> = IR<sub>S+D</sub> and W<sub>S</sub> = 1.0, the equations yield the same PbB<sub>fetal,0.95</sub>.

\*Equation 1, based on Eq. 1, 2 in USEPA (1996).

$PbB_{adult} =$	$(PbS * BKSF * IR_{S+D} * AF_{S,D} * EF_{S,D} / AT_{S,D}) + PbB_0$
$PbB_{fetal,0.95} =$	$PbB_{adult} * (GSD)^{1.645} * R$



**Table Q-22. Calculations of Blood Lead Concentrations (PbBs) Sediment - Outlet C and Charlie's Pond Child Receptor**

<b>Exposure Variable</b>	<b>Description of Exposure Variable</b>	<b>Units</b>	<b>Resident Farmer Child</b>
PbS	Soil lead concentration	µg/g or ppm	39.64
GSD <sub>i</sub>	Geometric standard deviation PbB	--	1.6
<b>PbB</b>	<b>PbB geometric mean</b>	<b>µg/dL</b>	<b>1.959</b>
<b>PbB<sub>t</sub></b>	<b>Target PbB level of concern (e.g., 10 µg/dL)</b>	<b>µg/dL</b>	<b>10.0</b>
<b>P(PbB &gt; PbB<sub>t</sub>)</b>	<b>Probability that PbB &gt; PbB<sub>t</sub>, assuming lognormal distribution</b>	<b>%</b>	<b>0.026</b>

Child receptor uses the IEUBK win 32 Lead Model Version 1.0 (Build 252) to calculate the PbB concentration and the probability that PbB > PbB<sub>t</sub> assuming a soil/dust ingestion weighting factor of 100%.

**Table Q-23. Calculations of Blood Lead Concentrations (PbBs) Sediment - Outlets A and B Child Receptor**

<b>Exposure Variable</b>	<b>Description of Exposure Variable</b>	<b>Units</b>	<b>Resident Farmer Child</b>
PbS	Soil lead concentration	µg/g or ppm	508
GSD <sub>i</sub>	Geometric standard deviation PbB	--	1.6
<b>PbB</b>	<b>PbB geometric mean</b>	<b>µg/dL</b>	<b>6.7</b>
<b>PbB<sub>t</sub></b>	<b>Target PbB level of concern (e.g., 10 µg/dL)</b>	<b>µg/dL</b>	<b>10.0</b>
<b>P(PbB &gt; PbB<sub>t</sub>)</b>	<b>Probability that PbB &gt; PbB<sub>t</sub>, assuming lognormal distribution</b>	<b>%</b>	<b>19.4</b>

Child receptor uses the IEUBK win 32 Lead Model Version 1.0 (Build 252) to calculate the PbB concentration and the probability that  $PbB > PbB_t$ , assuming a soil/dust ingestion weighting factor of 100%.

**Table Q-24. Calculations of Blood Lead Concentrations (PbBs) Sediment - Outlets D,E,F and Criggy's Pond Child Receptor**

<b>Exposure Variable</b>	<b>Description of Exposure Variable</b>	<b>Units</b>	<b>Resident Farmer Child</b>
PbS	Soil lead concentration	µg/g or ppm	1210
GSD <sub>i</sub>	Geometric standard deviation PbB	--	1.6
<b>PbB</b>	<b>PbB geometric mean</b>	<b>µg/dL</b>	<b>12.2</b>
<b>PbB<sub>t</sub></b>	<b>Target PbB level of concern (e.g., 10 µg/dL)</b>	<b>µg/dL</b>	<b>10.0</b>
<b>P(PbB &gt; PbB<sub>t</sub>)</b>	<b>Probability that PbB &gt; PbB<sub>t</sub>, assuming lognormal distribution</b>	<b>%</b>	<b>66.2</b>

Child receptor uses the IEUBK win 32 Lead Model Version 1.0 (Build 252) to calculate the PbB concentration and the probability that  $PbB > PbB_t$ , assuming a soil/dust ingestion weighting factor of 100%.

**Table Q-25. Calculations of Blood Lead Concentrations (PbBs) Surface Soil - CB-13 and CB-10 Child Receptor**

<b>Exposure Variable</b>	<b>Description of Exposure Variable</b>	<b>Units</b>	<b>Resident Farmer Child</b>
PbS	Soil lead concentration	µg/g or ppm	253.3
GSD <sub>i</sub>	Geometric standard deviation PbB	--	1.6
<b>PbB</b>	<b>PbB geometric mean</b>	<b>µg/dL</b>	<b>4.2</b>
<b>PbB<sub>t</sub></b>	<b>Target PbB level of concern (e.g., 10 µg/dL)</b>	<b>µg/dL</b>	<b>10.0</b>
<b>P(PbB &gt; PbB<sub>t</sub>)</b>	<b>Probability that PbB &gt; PbB<sub>t</sub>, assuming lognormal distribution</b>	<b>%</b>	<b>3.4</b>

Child receptor uses the IEUBK win 32 Lead Model Version 1.0 (Build 252) to calculate the PbB concentration and the probability that PbB > PbB<sub>t</sub> assuming a soil/dust ingestion weighting factor of 100%.

**Table Q-26. Calculations of Blood Lead Concentrations (PbBs) Surface Soil - CB-14, CB-17, and CA-15 Child Receptor**

<b>Exposure Variable</b>	<b>Description of Exposure Variable</b>	<b>Units</b>	<b>Resident Farmer Child</b>
PbS	Soil lead concentration	µg/g or ppm	110.8
GSD <sub>i</sub>	Geometric standard deviation PbB	--	1.6
<b>PbB</b>	<b>PbB geometric mean</b>	<b>µg/dL</b>	<b>2.7</b>
<b>PbB<sub>t</sub></b>	<b>Target PbB level of concern (e.g., 10 µg/dL)</b>	<b>µg/dL</b>	<b>10.0</b>
<b>P(PbB &gt; PbB<sub>t</sub>)</b>	<b>Probability that PbB &gt; PbB<sub>t</sub>, assuming lognormal distribution</b>	<b>%</b>	<b>0.3</b>

Child receptor uses the IEUBK win 32 Lead Model Version 1.0 (Build 252) to calculate the PbB concentration and the probability that PbB > PbB<sub>t</sub> assuming a soil/dust ingestion weighting factor of 100%.

**Table Q-27. Calculations of Blood Lead Concentrations (PbBs) Surface Soil - CB-3/CB-801 Child Receptor**

<b>Exposure Variable</b>	<b>Description of Exposure Variable</b>	<b>Units</b>	<b>Resident Farmer Child</b>
PbS	Soil lead concentration	µg/g or ppm	605.5
GSD <sub>i</sub>	Geometric standard deviation PbB	--	1.6
<b>PbB</b>	<b>PbB geometric mean</b>	<b>µg/dL</b>	<b>7.5</b>
<b>PbB<sub>t</sub></b>	<b>Target PbB level of concern (e.g., 10 µg/dL)</b>	<b>µg/dL</b>	<b>10.0</b>
<b>P(PbB &gt; PbB<sub>t</sub>)</b>	<b>Probability that PbB &gt; PbB<sub>t</sub>, assuming lognormal distribution</b>	<b>%</b>	<b>27.2</b>

Child receptor uses the IEUBK win 32 Lead Model Version 1.0 (Build 252) to calculate the PbB concentration and the probability that PbB > PbB<sub>t</sub> assuming a soil/dust ingestion weighting factor of 100%.

**Table Q-28. Calculations of Blood Lead Concentrations (PbBs) Surface Soil - CB-4/4A and CA-6/6A Child Receptor**

<b>Exposure Variable</b>	<b>Description of Exposure Variable</b>	<b>Units</b>	<b>Resident Farmer Child</b>
PbS	Soil lead concentration	µg/g or ppm	283.5
GSD <sub>i</sub>	Geometric standard deviation PbB	--	1.6
<b>PbB</b>	<b>PbB geometric mean</b>	<b>µg/dL</b>	<b>4.5</b>
<b>PbB<sub>t</sub></b>	<b>Target PbB level of concern (e.g., 10 µg/dL)</b>	<b>µg/dL</b>	<b>10.0</b>
<b>P(PbB &gt; PbB<sub>t</sub>)</b>	<b>Probability that PbB &gt; PbB<sub>t</sub>, assuming lognormal distribution</b>	<b>%</b>	<b>4.7</b>

Child receptor uses the IEUBK win 32 Lead Model Version 1.0 (Build 252) to calculate the PbB concentration and the probability that PbB > PbB<sub>t</sub> assuming a soil/dust ingestion weighting factor of 100%.

**Table Q-29. Calculations of Blood Lead Concentrations (PbBs) Surface Soil - Change Houses (CB-12, -23, -8, -22) Child Receptor**

<b>Exposure Variable</b>	<b>Description of Exposure Variable</b>	<b>Units</b>	<b>Resident Farmer Child</b>
PbS	Soil lead concentration	µg/g or ppm	189.6
GSD <sub>i</sub>	Geometric standard deviation PbB	--	1.6
<b>PbB</b>	<b>PbB geometric mean</b>	<b>µg/dL</b>	<b>3.6</b>
<b>PbB<sub>t</sub></b>	<b>Target PbB level of concern (e.g., 10 µg/dL)</b>	<b>µg/dL</b>	<b>10.0</b>
<b>P(PbB &gt; PbB<sub>t</sub>)</b>	<b>Probability that PbB &gt; PbB<sub>t</sub>, assuming lognormal distribution</b>	<b>%</b>	<b>1.5</b>

Child receptor uses the IEUBK win 32 Lead Model Version 1.0 (Build 252) to calculate the PbB concentration and the probability that PbB > PbB<sub>t</sub> assuming a soil/dust ingestion weighting factor of 100%.



**Table Q-30. Calculations of Blood Lead Concentrations (PbBs) Surface Soil - Water Tower Child Receptor**

<b>Exposure Variable</b>	<b>Description of Exposure Variable</b>	<b>Units</b>	<b>Resident Farmer Child</b>
PbS	Soil lead concentration	µg/g or ppm	2510
GSD <sub>i</sub>	Geometric standard deviation PbB	--	1.6
<b>PbB</b>	<b>PbB geometric mean</b>	<b>µg/dL</b>	<b>19.7</b>
<b>PbB<sub>t</sub></b>	<b>Target PbB level of concern (e.g., 10 µg/dL)</b>	<b>µg/dL</b>	<b>10.0</b>
<b>P(PbB &gt; PbB<sub>t</sub>)</b>	<b>Probability that PbB &gt; PbB<sub>t</sub>, assuming lognormal distribution</b>	<b>%</b>	<b>92.6</b>

Child receptor uses the IEUBK win 32 Lead Model Version 1.0 (Build 252) to calculate the PbB concentration and the probability that PbB > PbB<sub>t</sub> assuming a soil/dust ingestion weighting factor of 100%.

**Table Q-31. Calculations of Blood Lead Concentrations (PbBs) Subsurface Soil - CB-13 and CB-10 Child Receptor**

<b>Exposure Variable</b>	<b>Description of Exposure Variable</b>	<b>Units</b>	<b>Resident Farmer Child</b>
PbS	Soil lead concentration	µg/g or ppm	430.9
GSD <sub>i</sub>	Geometric standard deviation PbB	--	1.6
<b>PbB</b>	<b>PbB geometric mean</b>	<b>µg/dL</b>	<b>6.0</b>
<b>PbB<sub>t</sub></b>	<b>Target PbB level of concern (e.g., 10 µg/dL)</b>	<b>µg/dL</b>	<b>10.0</b>
<b>P(PbB &gt; PbB<sub>t</sub>)</b>	<b>Probability that PbB &gt; PbB<sub>t</sub>, assuming lognormal distribu</b>	<b>%</b>	<b>13.6</b>

Child receptor uses the IEUBK win 32 Lead Model Version 1.0 (Build 252) to calculate the PbB concentration and the probability that PbB > PbB<sub>t</sub> assuming a soil/dust ingestion weighting factor of 100%.

**Table Q-32. Calculations of Blood Lead Concentrations (PbBs) Subsurface Soil - CB-14, CB-17, and CA-15 Child Receptor**

<b>Exposure Variable</b>	<b>Description of Exposure Variable</b>	<b>Units</b>	<b>Resident Farmer Child</b>
PbS	Soil lead concentration	µg/g or ppm	558
GSD <sub>i</sub>	Geometric standard deviation PbB	--	1.6
<b>PbB</b>	<b>PbB geometric mean</b>	<b>µg/dL</b>	<b>7.1</b>
<b>PbB<sub>t</sub></b>	<b>Target PbB level of concern (e.g., 10 µg/dL)</b>	<b>µg/dL</b>	<b>10.0</b>
<b>P(PbB &gt; PbB<sub>t</sub>)</b>	<b>Probability that PbB &gt; PbB<sub>t</sub>, assuming lognormal distribu</b>	<b>%</b>	<b>23.4</b>

Child receptor uses the IEUBK win 32 Lead Model Version 1.0 (Build 252) to calculate the PbB concentration and the probability that PbB > PbB<sub>t</sub> assuming a soil/dust ingestion weighting factor of 100%.

**Table Q-33. Calculations of Blood Lead Concentrations (PbBs) Subsurface Soil - CB-4/4A and CA-6/6A Child Receptor**

<b>Exposure Variable</b>	<b>Description of Exposure Variable</b>	<b>Units</b>	<b>Resident Farmer Child</b>
PbS	Soil lead concentration	µg/g or ppm	122.7
GSD <sub>i</sub>	Geometric standard deviation PbB	--	1.6
<b>PbB</b>	<b>PbB geometric mean</b>	<b>µg/dL</b>	<b>2.9</b>
<b>PbB<sub>t</sub></b>	<b>Target PbB level of concern (e.g., 10 µg/dL)</b>	<b>µg/dL</b>	<b>10.0</b>
<b>P(PbB &gt; PbB<sub>t</sub>)</b>	<b>Probability that PbB &gt; PbB<sub>t</sub>, assuming lognormal distribu</b>	<b>%</b>	<b>0.4</b>

Child receptor uses the IEUBK win 32 Lead Model Version 1.0 (Build 252) to calculate the PbB concentration and the probability that PbB > PbB<sub>t</sub> assuming a soil/dust ingestion weighting factor of 100%.

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