APPENDIX Q
HUMAN HEALTH RISK ASSESSMENT TABLES AND FIGURES

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Table Q-1. Summary of COPC Screening for Load Line 4 Groundwater

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Tap Water PRG	COPC?
All											
Inorganics											
Arsenic	7440-38-2	mg/L	2 / 8	6.5E-03	8.1E-03	1.3E-02	9.4E-03	9.4E-03	1.2E-02	4.5E-05	Yes
Barium	7440-39-3	mg/L	8 / 8	1.7E-02	4.8E-02	1.1E-01	8.6E-02	8.6E-02	8.2E-02	2.6E+00	No
Calcium	7440-70-2	mg/L	8 / 8	3.2E+01	1.2E+02	2.5E+02	2.1E+02	2.1E+02	1.2E+02	--	No
Iron	7439-89-6	mg/L	5 / 8	3.1E-01	1.9E+00	1.2E+01	4.7E+00	4.7E+00	2.8E-01	1.1E+01	No
Magnesium	7439-95-4	mg/L	8 / 8	1.4E+01	3.1E+01	6.8E+01	4.9E+01	4.9E+01	4.3E+01	--	No
Manganese	7439-96-5	mg/L	8 / 8	2.3E-01	9.8E-01	2.7E+00	2.8E+00	2.7E+00	1.0E+00	8.8E-01	Yes
Nickel	7440-02-0	mg/L	5 / 8	2.8E-03	8.6E-03	1.6E-02	2.0E-02	1.6E-02	--	7.3E-01	No
Potassium	7440-09-7	mg/L	8 / 8	9.3E-01	1.6E+00	2.6E+00	2.1E+00	2.1E+00	2.9E+00	--	No
Sodium	7440-23-5	mg/L	8 / 8	2.3E+00	7.8E+00	1.6E+01	1.9E+01	1.6E+01	4.6E+01	--	No
Zinc	7440-66-6	mg/L	1 / 8	1.6E-02	2.0E-02	1.6E-02	2.0E-02	1.6E-02	6.1E-02	1.1E+01	No
Organic Semivolatiles											
Bis(2-ethylhexyl)phthalate	117-81-7	mg/L	1 / 8	4.4E-03	4.9E-03	4.4E-03	5.1E-03	4.4E-03	--	4.8E-03	No
Organic Volatiles											
Carbon Disulfide	75-15-0	mg/L	1 / 8	2.0E-04	4.6E-04	2.0E-04	5.3E-04	2.0E-04	--	1.0E+00	No
Chloromethane	74-87-3	mg/L	1 / 8	1.3E-04	4.5E-04	1.3E-04	5.4E-04	1.3E-04	--	1.5E-03	No

CAS = Chemical Abstracts Service.
COPC = Chemical of potential concern.
EPC = Exposure point concentration.
PRG = Preliminary remediation goal.
UCL = Upper confidence limit on the mean.
-- Criteria not available or insufficient data to calculate the UCL.

Table Q-2. Summary of COPC Screening for Load Line 4 Surface Water

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Tap Water PRG	COPC?
Exit Drainage											
Inorganics											
Antimony	7440-36-0	mg/L	1 / 2	2.5E-03	3.8E-03	2.5E-03	1.2E-02	2.5E-03	--	1.5E-02	No
Barium	7440-39-3	mg/L	2 / 2	2.1E-02	3.2E-02	4.2E-02	9.8E-02	4.2E-02	4.8E-02	2.6E+00	No
Calcium	7440-70-2	mg/L	2 / 2	4.9E+01	5.1E+01	5.3E+01	6.3E+01	5.3E+01	4.1E+01	--	No
Iron	7439-89-6	mg/L	2 / 2	2.2E-01	8.6E-01	1.5E+00	4.9E+00	1.5E+00	2.6E+00	1.1E+01	No
Magnesium	7439-95-4	mg/L	2 / 2	7.3E+00	9.8E+00	1.2E+01	2.6E+01	1.2E+01	1.1E+01	--	No
Manganese	7439-96-5	mg/L	2 / 2	9.5E-02	2.2E-01	3.4E-01	9.9E-01	3.4E-01	3.9E-01	8.8E-01	No
Potassium	7440-09-7	mg/L	2 / 2	1.9E+00	2.4E+00	2.8E+00	5.2E+00	2.8E+00	3.2E+00	--	No
Sodium	7440-23-5	mg/L	2 / 2	2.2E+00	3.4E+00	4.6E+00	1.1E+01	4.6E+00	2.1E+01	--	No
Vanadium	7440-62-2	mg/L	1 / 2	1.4E-03	2.5E-03	1.4E-03	9.1E-03	1.4E-03	--	2.6E-01	No
Zinc	7440-66-6	mg/L	2 / 2	1.3E-02	1.3E-02	1.3E-02	1.3E-02	1.3E-02	4.2E-02	1.1E+01	No
Organic Volatiles											
Acetone	67-64-1	mg/L	1 / 1	1.2E-03	1.2E-03	1.2E-03	--	1.2E-03	--	6.1E-01	No
Main Stream Segment Upstream of Perimeter Road											
Inorganics											
Aluminum	7429-90-5	mg/L	1 / 2	4.5E-01	3.0E-01	4.5E-01	1.3E+00	4.5E-01	3.4E+00	3.6E+01	No
Arsenic	7440-38-2	mg/L	2 / 2	7.0E-03	7.1E-03	7.1E-03	7.4E-03	7.1E-03	3.2E-03	4.5E-05	Yes
Barium	7440-39-3	mg/L	2 / 2	5.2E-02	5.6E-02	5.9E-02	7.8E-02	5.9E-02	4.8E-02	2.6E+00	No
Cadmium	7440-43-9	mg/L	1 / 2	3.0E-04	1.4E-03	3.0E-04	8.3E-03	3.0E-04	--	1.8E-02	No
Calcium	7440-70-2	mg/L	2 / 2	3.5E+01	4.8E+01	6.2E+01	1.3E+02	6.2E+01	4.1E+01	--	No
Iron	7439-89-6	mg/L	2 / 2	1.2E+00	2.9E+00	4.6E+00	1.4E+01	4.6E+00	2.6E+00	1.1E+01	No
Magnesium	7439-95-4	mg/L	2 / 2	9.0E+00	1.3E+01	1.7E+01	3.7E+01	1.7E+01	1.1E+01	--	No
Manganese	7439-96-5	mg/L	2 / 2	3.2E+00	3.4E+00	3.6E+00	4.7E+00	3.6E+00	3.9E-01	8.8E-01	Yes
Mercury	7487-94-6	mg/L	1 / 2	7.8E-05	8.9E-05	7.8E-05	1.6E-04	7.8E-05	--	1.1E-02	No
Potassium	7440-09-7	mg/L	2 / 2	3.1E+00	3.2E+00	3.3E+00	3.8E+00	3.3E+00	3.2E+00	--	No
Sodium	7440-23-5	mg/L	2 / 2	5.1E+00	6.0E+00	6.8E+00	1.1E+01	6.8E+00	2.1E+01	--	No
Vanadium	7440-62-2	mg/L	1 / 2	9.9E-04	2.2E-03	9.9E-04	1.0E-02	9.9E-04	--	2.6E-01	No
Zinc	7440-66-6	mg/L	1 / 2	2.0E-02	2.0E-02	2.0E-02	2.0E-02	2.0E-02	4.2E-02	1.1E+01	No

Table Q-2. Summary of COPC Screening for Load Line 4 Surface Water

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Tap Water PRG	COPC?
Main Stream Segment and Settling Pond											
Inorganics											
Aluminum	7429-90-5	mg/L	1 / 5	1.1E+00	2.9E-01	1.1E+00	7.2E-01	7.2E-01	3.4E+00	3.6E+01	No
Barium	7440-39-3	mg/L	5 / 5	2.5E-02	3.1E-02	3.5E-02	3.5E-02	3.5E-02	4.8E-02	2.6E+00	No
Calcium	7440-70-2	mg/L	5 / 5	2.0E+01	2.2E+01	2.3E+01	2.3E+01	2.3E+01	4.1E+01	--	No
Iron	7439-89-6	mg/L	5 / 5	7.2E-01	1.1E+00	1.7E+00	1.7E+00	1.7E+00	2.6E+00	1.1E+01	No
Magnesium	7439-95-4	mg/L	5 / 5	6.9E+00	7.9E+00	8.2E+00	8.5E+00	8.2E+00	1.1E+01	--	No
Manganese	7439-96-5	mg/L	5 / 5	8.1E-02	3.2E-01	5.1E-01	4.9E-01	4.9E-01	3.9E-01	8.8E-01	No
Mercury	7487-94-6	mg/L	1 / 5	9.2E-05	9.8E-05	9.2E-05	1.0E-04	9.2E-05	--	1.1E-02	No
Potassium	7440-09-7	mg/L	4 / 5	8.7E-01	7.7E-01	9.2E-01	1.1E+00	9.2E-01	3.2E+00	--	No
Sodium	7440-23-5	mg/L	5 / 5	3.6E+00	3.9E+00	4.9E+00	4.4E+00	4.4E+00	2.1E+01	--	No
Vanadium	7440-62-2	mg/L	1 / 5	1.8E-03	3.2E-03	1.8E-03	3.9E-03	1.8E-03	--	2.6E-01	No
Zinc	7440-66-6	mg/L	2 / 5	1.6E-02	2.0E-02	2.6E-02	2.4E-02	2.4E-02	4.2E-02	1.1E+01	No
Organic Pesticides											
4,4'-DDT	50-29-3	mg/L	1 / 1	3.1E-04	3.1E-04	3.1E-04	--	3.1E-04	--	2.0E-04	Yes
Organic Volatiles											
Acetone	67-64-1	mg/L	1 / 1	3.1E-03	3.1E-03	3.1E-03	--	3.1E-03	--	6.1E-01	No

CAS = Chemical Abstracts Service.
COPC = Chemical of potential concern.
DDT = Dichlorodiphenyltrichloroethane.
EPC = Exposure point concentration.
PRG = Preliminary remediation goal.
UCL = Upper confidence limit on the mean.
-- Criteria not available or insufficient data to calculate the UCL.

Table Q-3. Summary of COPC Screening for Load Line 4 Sediment

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Residential PRG	Region 9 Industrial PRG	COPC?
Exit Drainage												
Inorganics												
Aluminum	7429-90-5	mg/kg	2 / 2	3.4E+03	4.0E+03	4.6E+03	7.7E+03	4.6E+03	1.4E+04	7.6E+03	9.2E+04	No
Arsenic	7440-38-2	mg/kg	2 / 2	5.8E+00	5.9E+00	5.9E+00	6.2E+00	5.9E+00	2.0E+01	3.9E-01	1.6E+00	No
Barium	7440-39-3	mg/kg	2 / 2	1.2E+01	2.1E+01	3.0E+01	7.8E+01	3.0E+01	1.2E+02	5.4E+02	6.7E+03	No
Beryllium	7440-41-7	mg/kg	1 / 2	3.0E-01	2.1E-01	3.0E-01	7.9E-01	3.0E-01	3.8E-01	1.5E+01	1.9E+02	No
Cadmium	7440-43-9	mg/kg	1 / 2	3.6E-01	3.4E-01	3.6E-01	4.5E-01	3.6E-01	--	3.7E+00	4.5E+01	No
Calcium	7440-70-2	mg/kg	2 / 2	1.5E+03	2.2E+03	2.9E+03	6.4E+03	2.9E+03	5.5E+03	--	--	No
Chromium	7440-47-3	mg/kg	2 / 2	5.1E+00	6.0E+00	6.9E+00	1.2E+01	6.9E+00	1.8E+01	2.1E+02	4.5E+02	No
Chromium, hexavalent	18540-29-9	mg/kg	1 / 2	1.4E+00	1.0E+00	1.4E+00	3.4E+00	1.4E+00	--	2.2E+01	6.4E+01	No
Cobalt	7440-48-4	mg/kg	2 / 2	4.4E+00	5.4E+00	6.3E+00	1.1E+01	6.3E+00	9.1E+00	1.4E+02	1.3E+03	No
Copper	7440-50-8	mg/kg	2 / 2	1.2E+01	1.2E+01	1.3E+01	1.4E+01	1.3E+01	2.8E+01	3.1E+02	4.1E+03	No
Iron	7439-89-6	mg/kg	2 / 2	1.2E+04	1.2E+04	1.2E+04	1.3E+04	1.2E+04	2.8E+04	2.3E+03	3.1E+04	No
Lead	7439-92-1	mg/kg	2 / 2	6.4E+00	9.5E+00	1.3E+01	2.9E+01	1.3E+01	2.7E+01	4.0E+02	7.5E+02	No
Magnesium	7439-95-4	mg/kg	2 / 2	1.6E+03	1.7E+03	1.9E+03	2.4E+03	1.9E+03	2.8E+03	--	--	No
Manganese	7439-96-5	mg/kg	2 / 2	2.1E+02	2.6E+02	3.2E+02	5.9E+02	3.2E+02	2.0E+03	1.8E+02	1.9E+03	No
Nickel	7440-02-0	mg/kg	2 / 2	9.8E+00	1.0E+01	1.1E+01	1.5E+01	1.1E+01	1.8E+01	1.6E+02	2.0E+03	No
Potassium	7440-09-7	mg/kg	2 / 2	3.1E+02	3.8E+02	4.6E+02	8.3E+02	4.6E+02	2.0E+03	--	--	No
Thallium	6533-73-9	mg/kg	2 / 2	1.8E-01	3.3E-01	4.7E-01	1.2E+00	4.7E-01	8.9E-01	5.2E-01	6.7E+00	No
Vanadium	7440-62-2	mg/kg	2 / 2	5.9E+00	7.0E+00	8.1E+00	1.4E+01	8.1E+00	2.6E+01	5.5E+01	7.2E+02	No
Zinc	7440-66-6	mg/kg	2 / 2	8.2E+01	1.0E+02	1.2E+02	2.2E+02	1.2E+02	5.3E+02	2.3E+03	3.1E+04	No
Organic PCBs												
PCB-1248	12672-29-6	mg/kg	1 / 2	9.0E-02	5.7E-02	9.0E-02	2.7E-01	9.0E-02	--	2.2E-01	7.4E-01	No
Main Stream Segment Upstream of Perimeter Road												
Inorganics												
Aluminum	7429-90-5	mg/kg	3 / 3	6.0E+03	7.9E+03	9.7E+03	1.1E+04	9.7E+03	1.4E+04	7.6E+03	9.2E+04	No
Arsenic	7440-38-2	mg/kg	3 / 3	4.8E+00	7.0E+00	1.0E+01	3.0E+01	1.0E+01	2.0E+01	3.9E-01	1.6E+00	No
Barium	7440-39-3	mg/kg	3 / 3	5.4E+01	6.4E+01	8.1E+01	1.2E+02	8.1E+01	1.2E+02	5.4E+02	6.7E+03	No
Beryllium	7440-41-7	mg/kg	1 / 2	5.6E-01	4.0E-01	5.6E-01	1.4E+00	5.6E-01	3.8E-01	1.5E+01	1.9E+02	No
Cadmium	7440-43-9	mg/kg	2 / 3	2.0E-01	1.8E-01	2.5E-01	3.2E-01	2.5E-01	--	3.7E+00	4.5E+01	No
Calcium	7440-70-2	mg/kg	2 / 2	8.3E+03	1.1E+04	1.4E+04	2.9E+04	1.4E+04	5.5E+03	--	--	No
Chromium	7440-47-3	mg/kg	3 / 3	8.0E+00	1.0E+01	1.2E+01	1.4E+01	1.2E+01	1.8E+01	2.1E+02	4.5E+02	No
Cobalt	7440-48-4	mg/kg	2 / 2	6.3E+00	7.0E+00	7.7E+00	1.1E+01	7.7E+00	9.1E+00	1.4E+02	1.3E+03	No

Table Q-3. Summary of COPC Screening for Load Line 4 Sediment

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Residential PRG	Region 9 Industrial PRG	COPC?
Copper	7440-50-8	mg/kg	2 / 2	1.1E+01	1.4E+01	1.7E+01	3.1E+01	1.7E+01	2.8E+01	3.1E+02	4.1E+03	No
Iron	7439-89-6	mg/kg	2 / 2	1.2E+04	1.5E+04	1.9E+04	3.6E+04	1.9E+04	2.8E+04	2.3E+03	3.1E+04	No
Lead	7439-92-1	mg/kg	3 / 3	1.1E+01	1.3E+01	1.4E+01	1.5E+01	1.4E+01	2.7E+01	4.0E+02	7.5E+02	No
Magnesium	7439-95-4	mg/kg	2 / 2	1.5E+03	2.8E+03	4.2E+03	1.1E+04	4.2E+03	2.8E+03	--	--	No
Manganese	7439-96-5	mg/kg	3 / 3	3.1E+02	4.3E+02	5.2E+02	6.1E+02	5.2E+02	2.0E+03	1.8E+02	1.9E+03	No
Mercury	7487-94-6	mg/kg	1 / 3	2.9E-02	4.8E-02	2.9E-02	1.1E-01	2.9E-02	5.9E-02	2.3E+00	3.1E+01	No
Nickel	7440-02-0	mg/kg	2 / 2	1.3E+01	1.4E+01	1.6E+01	2.3E+01	1.6E+01	1.8E+01	1.6E+02	2.0E+03	No
Potassium	7440-09-7	mg/kg	2 / 2	5.6E+02	7.0E+02	8.4E+02	1.6E+03	8.4E+02	2.0E+03	--	--	No
Selenium	7782-49-2	mg/kg	1 / 3	5.7E-01	1.3E+00	5.7E-01	2.4E+00	5.7E-01	1.7E+00	3.9E+01	5.1E+02	No
Thallium	6533-73-9	mg/kg	1 / 2	4.0E-01	3.9E-01	4.0E-01	4.8E-01	4.0E-01	8.9E-01	5.2E-01	6.7E+00	No
Vanadium	7440-62-2	mg/kg	2 / 2	1.0E+01	1.1E+01	1.2E+01	1.7E+01	1.2E+01	2.6E+01	5.5E+01	7.2E+02	No
Zinc	7440-66-6	mg/kg	3 / 3	6.4E+01	7.8E+01	9.1E+01	1.0E+02	9.1E+01	5.3E+02	2.3E+03	3.1E+04	No
Organic Explosives												
2,4,6-Trinitrotoluene	118-96-7	mg/kg	1 / 2	3.4E-01	2.3E-01	3.4E-01	9.1E-01	3.4E-01	--	3.1E+00	3.1E+01	No
Organic Volatiles												
2-Butanone	78-93-3	mg/kg	1 / 1	1.1E-02	1.1E-02	1.1E-02	--	1.1E-02	--	7.3E+02	2.7E+03	No
Acetone	67-64-1	mg/kg	1 / 1	3.9E-02	3.9E-02	3.9E-02	--	3.9E-02	--	1.6E+02	6.0E+02	No
Toluene	108-88-3	mg/kg	1 / 1	3.8E-03	3.8E-03	3.8E-03	--	3.8E-03	--	6.6E+01	2.2E+02	No
Main Stream Segment and Settling Pond												
Inorganics												
Aluminum	7429-90-5	mg/kg	6 / 6	6.3E+03	1.3E+04	1.7E+04	1.6E+04	1.6E+04	1.4E+04	7.6E+03	9.2E+04	Yes
Arsenic	7440-38-2	mg/kg	6 / 6	2.0E+00	1.1E+01	1.6E+01	1.5E+01	1.5E+01	2.0E+01	3.9E-01	1.6E+00	No
Barium	7440-39-3	mg/kg	6 / 6	4.5E+01	1.1E+02	1.6E+02	1.6E+02	1.6E+02	1.2E+02	5.4E+02	6.7E+03	No
Cadmium	7440-43-9	mg/kg	5 / 6	2.8E-01	6.9E-01	1.0E+00	9.5E-01	9.5E-01	--	3.7E+00	4.5E+01	No
Calcium	7440-70-2	mg/kg	5 / 5	9.8E+02	3.8E+03	6.7E+03	5.8E+03	5.8E+03	5.5E+03	--	--	No
Chromium	7440-47-3	mg/kg	6 / 6	9.2E+00	1.6E+01	2.2E+01	2.1E+01	2.1E+01	1.8E+01	2.1E+02	4.5E+02	No
Cobalt	7440-48-4	mg/kg	5 / 5	5.6E+00	1.4E+01	1.7E+01	1.8E+01	1.7E+01	9.1E+00	1.4E+02	1.3E+03	No
Copper	7440-50-8	mg/kg	5 / 5	7.5E+00	2.4E+01	3.1E+01	3.3E+01	3.1E+01	2.8E+01	3.1E+02	4.1E+03	No
Iron	7439-89-6	mg/kg	5 / 5	9.4E+03	3.1E+04	3.9E+04	4.3E+04	3.9E+04	2.8E+04	2.3E+03	3.1E+04	No
Lead	7439-92-1	mg/kg	6 / 6	1.2E+01	2.1E+01	2.8E+01	2.7E+01	2.7E+01	2.7E+01	4.0E+02	7.5E+02	No
Magnesium	7439-95-4	mg/kg	5 / 5	1.5E+03	3.3E+03	4.2E+03	4.4E+03	4.2E+03	2.8E+03	--	--	No
Manganese	7439-96-5	mg/kg	6 / 6	7.8E+01	5.4E+02	7.9E+02	7.9E+02	7.9E+02	2.0E+03	1.8E+02	1.9E+03	No
Mercury	7487-94-6	mg/kg	5 / 6	3.2E-02	5.8E-02	1.3E-01	1.2E-01	1.2E-01	5.9E-02	2.3E+00	3.1E+01	No

Table Q-3. Summary of COPC Screening for Load Line 4 Sediment

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Residential PRG	Region 9 Industrial PRG	COPC?
Nickel	7440-02-0	mg/kg	5 / 5	1.1E+01	2.6E+01	3.3E+01	3.5E+01	3.3E+01	1.8E+01	1.6E+02	2.0E+03	No
Potassium	7440-09-7	mg/kg	5 / 5	6.0E+02	1.3E+03	1.6E+03	1.6E+03	1.6E+03	2.0E+03	--	--	No
Selenium	7782-49-2	mg/kg	2 / 6	1.3E+00	3.1E+00	1.6E+00	4.6E+00	1.6E+00	1.7E+00	3.9E+01	5.1E+02	No
Thallium	6533-73-9	mg/kg	5 / 5	7.1E-01	1.6E+00	2.7E+00	4.0E+00	2.7E+00	8.9E-01	5.2E-01	6.7E+00	Yes
Vanadium	7440-62-2	mg/kg	5 / 5	1.1E+01	2.2E+01	2.7E+01	2.9E+01	2.7E+01	2.6E+01	5.5E+01	7.2E+02	No
Zinc	7440-66-6	mg/kg	6 / 6	4.8E+01	2.0E+02	3.1E+02	2.9E+02	2.9E+02	5.3E+02	2.3E+03	3.1E+04	No
Organic Explosives												
2,4,6-Trinitrotoluene	118-96-7	mg/kg	1 / 5	4.2E-01	1.8E-01	4.2E-01	3.1E-01	3.1E-01	--	3.1E+00	3.1E+01	No
Organic Volatiles												
2-Butanone	78-93-3	mg/kg	1 / 1	1.1E-01	1.1E-01	1.1E-01	--	1.1E-01	--	7.3E+02	2.7E+03	No
Acetone	67-64-1	mg/kg	1 / 1	4.1E-01	4.1E-01	4.1E-01	--	4.1E-01	--	1.6E+02	6.0E+02	No

CAS = Chemical Abstracts Service.
COPC = Chemical of potential concern.
EPC = Exposure point concentration.
PCB = Polychlorinated biphenyl.
PRG = Preliminary remediation goal.
UCL = Upper confidence limit on the mean.
-- Criteria not available or insufficient data to calculate the UCL.

Table Q-4. Summary of COPC Screening for Load Line 4 Shallow Surface Soil

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Residential PRG	Region 9 Industrial PRG	COPC?
Change Houses												
Inorganics												
Aluminum	7429-90-5	mg/kg	6 / 6	2.1E+03	8.3E+03	1.2E+04	1.1E+04	1.1E+04	1.8E+04	7.6E+03	9.2E+04	No
Arsenic	7440-38-2	mg/kg	6 / 6	3.6E+00	9.3E+00	1.3E+01	1.2E+01	1.2E+01	1.5E+01	3.9E-01	1.6E+00	No
Barium	7440-39-3	mg/kg	6 / 6	4.6E+01	6.7E+01	1.3E+02	9.5E+01	9.5E+01	8.8E+01	5.4E+02	6.7E+03	No
Beryllium	7440-41-7	mg/kg	5 / 6	4.6E-01	5.2E-01	8.1E-01	6.9E-01	6.9E-01	8.8E-01	1.5E+01	1.9E+02	No
Cadmium	7440-43-9	mg/kg	6 / 6	1.8E-01	6.0E-01	1.1E+00	2.1E+00	1.1E+00	--	3.7E+00	4.5E+01	No
Calcium	7440-70-2	mg/kg	6 / 6	1.7E+03	3.1E+04	1.6E+05	4.4E+06	1.6E+05	1.6E+04	--	--	No
Chromium	7440-47-3	mg/kg	6 / 6	5.9E+00	1.3E+01	2.6E+01	2.4E+01	2.4E+01	1.7E+01	2.1E+02	4.5E+02	No
Cobalt	7440-48-4	mg/kg	6 / 6	3.0E+00	6.8E+00	9.7E+00	8.8E+00	8.8E+00	1.0E+01	1.4E+02	1.3E+03	No
Copper	7440-50-8	mg/kg	6 / 6	1.4E+01	2.1E+01	3.6E+01	3.1E+01	3.1E+01	1.8E+01	3.1E+02	4.1E+03	No
Iron	7439-89-6	mg/kg	6 / 6	7.1E+03	1.8E+04	2.3E+04	2.3E+04	2.3E+04	2.3E+04	2.3E+03	3.1E+04	No
Lead	7439-92-1	mg/kg	6 / 6	2.0E+01	1.4E+02	4.0E+02	5.5E+03	4.0E+02	2.6E+01	4.0E+02	7.5E+02	No
Magnesium	7439-95-4	mg/kg	6 / 6	1.7E+03	2.9E+03	4.5E+03	4.1E+03	4.1E+03	3.0E+03	--	--	No
Manganese	7439-96-5	mg/kg	6 / 6	3.2E+02	5.0E+02	7.2E+02	7.4E+02	7.2E+02	1.5E+03	1.8E+02	1.9E+03	No
Mercury	7487-94-6	mg/kg	5 / 6	2.6E-02	3.0E-02	5.0E-02	4.2E-02	4.2E-02	3.6E-02	2.3E+00	3.1E+01	No
Nickel	7440-02-0	mg/kg	6 / 6	1.1E+01	1.7E+01	2.0E+01	1.9E+01	1.9E+01	2.1E+01	1.6E+02	2.0E+03	No
Potassium	7440-09-7	mg/kg	6 / 6	3.6E+02	6.5E+02	8.6E+02	7.8E+02	7.8E+02	9.3E+02	--	--	No
Selenium	7782-49-2	mg/kg	1 / 6	6.7E-01	1.1E+00	6.7E-01	1.2E+00	6.7E-01	1.4E+00	3.9E+01	5.1E+02	No
Sodium	7440-23-5	mg/kg	1 / 6	7.0E+01	2.6E+02	7.0E+01	3.3E+02	7.0E+01	1.2E+02	--	--	No
Thallium	6533-73-9	mg/kg	4 / 6	4.9E-01	5.1E-01	8.5E-01	7.5E-01	7.5E-01	--	5.2E-01	6.7E+00	Yes
Vanadium	7440-62-2	mg/kg	6 / 6	5.0E+00	1.3E+01	2.0E+01	1.8E+01	1.8E+01	3.1E+01	5.5E+01	7.2E+02	No
Zinc	7440-66-6	mg/kg	6 / 6	5.4E+01	1.1E+02	1.9E+02	1.9E+02	1.9E+02	6.2E+01	2.3E+03	3.1E+04	No
Organic PCBs												
PCB-1260	11096-82-5	mg/kg	1 / 4	5.9E-02	2.9E-02	5.9E-02	5.3E-02	5.3E-02	--	2.2E-01	7.4E-01	No
Organic Semivolatiles												
2-Methylnaphthalene	91-57-6	mg/kg	1 / 1	2.7E-01	2.7E-01	2.7E-01	--	2.7E-01	--	--	--	Yes
Anthracene	120-12-7	mg/kg	1 / 1	7.5E-02	7.5E-02	7.5E-02	--	7.5E-02	--	2.2E+03	2.4E+04	No
Benz(*a*)anthracene	56-55-3	mg/kg	1 / 1	5.3E-01	5.3E-01	5.3E-01	--	5.3E-01	--	6.2E-01	2.1E+00	No
Benzo(*a*)pyrene	50-32-8	mg/kg	1 / 1	5.0E-01	5.0E-01	5.0E-01	--	5.0E-01	--	6.2E-02	2.1E-01	Yes
Benzo(*b*)fluoranthene	205-99-2	mg/kg	1 / 1	6.7E-01	6.7E-01	6.7E-01	--	6.7E-01	--	6.2E-01	2.1E+00	Yes
Benzo(*g,h,i*)perylene	191-24-2	mg/kg	1 / 1	3.1E-01	3.1E-01	3.1E-01	--	3.1E-01	--	--	--	Yes

Table Q-4. Summary of COPC Screening for Load Line 4 Shallow Surface Soil

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Residential PRG	Region 9 Industrial PRG	COPC?
Benzo(*k*)fluoranthene	207-08-9	mg/kg	1 / 1	2.9E-01	2.9E-01	2.9E-01	--	2.9E-01	--	6.2E+00	2.1E+01	No
Carbazole	86-74-8	mg/kg	1 / 1	6.5E-02	6.5E-02	6.5E-02	--	6.5E-02	--	2.4E+01	8.6E+01	No
Chrysene	218-01-9	mg/kg	1 / 1	6.2E-01	6.2E-01	6.2E-01	--	6.2E-01	--	6.2E+01	2.1E+02	No
Dibenz(*a,h*)anthracene	53-70-3	mg/kg	1 / 1	8.5E-02	8.5E-02	8.5E-02	--	8.5E-02	--	6.2E-02	2.1E-01	Yes
Dibenzofuran	132-64-9	mg/kg	1 / 1	6.9E-02	6.9E-02	6.9E-02	--	6.9E-02	--	2.9E+01	3.1E+02	No
Fluoranthene	206-44-0	mg/kg	1 / 1	9.3E-01	9.3E-01	9.3E-01	--	9.3E-01	--	2.3E+02	2.2E+03	No
Indeno(1,2,3-*cd*)pyrene	193-39-5	mg/kg	1 / 1	3.0E-01	3.0E-01	3.0E-01	--	3.0E-01	--	6.2E-01	2.1E+00	No
Naphthalene	91-20-3	mg/kg	1 / 1	1.8E-01	1.8E-01	1.8E-01	--	1.8E-01	--	5.6E+00	1.9E+01	No
Phenanthrene	85-01-8	mg/kg	1 / 1	4.7E-01	4.7E-01	4.7E-01	--	4.7E-01	--	--	--	Yes
Pyrene	129-00-0	mg/kg	1 / 1	8.7E-01	8.7E-01	8.7E-01	--	8.7E-01	--	2.3E+02	2.9E+03	No
Organic Volatiles												
Benzene	71-43-2	mg/kg	1 / 1	2.6E-03	2.6E-03	2.6E-03	--	2.6E-03	--	6.0E-01	1.3E+00	No
Dimethylbenzene	1330-20-7	mg/kg	1 / 1	3.0E-03	3.0E-03	3.0E-03	--	3.0E-03	--	2.7E+01	9.0E+01	No
Toluene	108-88-3	mg/kg	1 / 1	5.6E-03	5.6E-03	5.6E-03	--	5.6E-03	--	6.6E+01	2.2E+02	No
Explosives Handling Areas												
Inorganics												
Aluminum	7429-90-5	mg/kg	70 / 70	4.2E+03	9.8E+03	3.9E+04	1.1E+04	1.1E+04	1.8E+04	7.6E+03	9.2E+04	Yes
Antimony	7440-36-0	mg/kg	1 / 36	2.2E+00	5.8E-01	2.2E+00	7.3E-01	7.3E-01	9.6E-01	3.1E+00	4.1E+01	No
Arsenic	7440-38-2	mg/kg	70 / 70	2.0E+00	8.8E+00	1.8E+01	9.5E+00	9.5E+00	1.5E+01	3.9E-01	1.6E+00	Yes
Barium	7440-39-3	mg/kg	70 / 70	1.7E+01	8.7E+01	7.5E+02	1.1E+02	1.1E+02	8.8E+01	5.4E+02	6.7E+03	Yes
Beryllium	7440-41-7	mg/kg	28 / 40	2.7E-01	8.8E-01	5.9E+00	1.2E+00	1.2E+00	8.8E-01	1.5E+01	1.9E+02	No
Cadmium	7440-43-9	mg/kg	61 / 70	4.0E-02	8.3E-01	1.3E+01	1.1E+00	1.1E+00	--	3.7E+00	4.5E+01	Yes
Calcium	7440-70-2	mg/kg	40 / 40	4.4E+02	1.7E+04	1.8E+05	2.8E+04	2.8E+04	1.6E+04	--	--	No
Chromium	7440-47-3	mg/kg	70 / 70	5.2E+00	1.3E+01	6.8E+01	1.5E+01	1.5E+01	1.7E+01	2.1E+02	4.5E+02	No
Chromium, hexavalent	18540-29-9	mg/kg	1 / 1	1.9E+00	1.9E+00	1.9E+00	--	1.9E+00	--	2.2E+01	6.4E+01	No
Cobalt	7440-48-4	mg/kg	40 / 40	1.8E+00	8.7E+00	7.8E+01	1.2E+01	1.2E+01	1.0E+01	1.4E+02	1.3E+03	No
Copper	7440-50-8	mg/kg	40 / 40	5.9E+00	2.1E+01	1.1E+02	2.5E+01	2.5E+01	1.8E+01	3.1E+02	4.1E+03	No
Cyanide	57-12-5	mg/kg	5 / 17	2.0E-01	2.4E-01	5.1E-01	2.9E-01	2.9E-01	--	1.2E+02	1.2E+03	No
Iron	7439-89-6	mg/kg	40 / 40	6.9E+03	1.9E+04	3.0E+04	2.0E+04	2.0E+04	2.3E+04	2.3E+03	3.1E+04	No
Lead	7439-92-1	mg/kg	70 / 70	7.2E+00	1.4E+02	5.8E+03	2.8E+02	2.8E+02	2.6E+01	4.0E+02	7.5E+02	Yes
Magnesium	7439-95-4	mg/kg	40 / 40	8.6E+02	4.8E+03	3.1E+04	6.8E+03	6.8E+03	3.0E+03	--	--	No
Manganese	7439-96-5	mg/kg	70 / 70	4.4E+01	7.0E+02	7.3E+03	9.6E+02	9.6E+02	1.5E+03	1.8E+02	1.9E+03	Yes

Table Q-4. Summary of COPC Screening for Load Line 4 Shallow Surface Soil

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Residential PRG	Region 9 Industrial PRG	COPC?
Mercury	7487-94-6	mg/kg	33 / 70	1.1E-02	3.7E-02	3.6E-01	4.6E-02	4.6E-02	3.6E-02	2.3E+00	3.1E+01	No
Nickel	7440-02-0	mg/kg	40 / 40	3.0E+00	1.6E+01	3.2E+01	1.7E+01	1.7E+01	2.1E+01	1.6E+02	2.0E+03	No
Potassium	7440-09-7	mg/kg	40 / 40	3.7E+02	8.9E+02	2.3E+03	1.0E+03	1.0E+03	9.3E+02	--	--	No
Selenium	7782-49-2	mg/kg	42 / 70	3.2E-01	9.7E-01	3.2E+00	1.1E+00	1.1E+00	1.4E+00	3.9E+01	5.1E+02	No
Sodium	7440-23-5	mg/kg	15 / 40	9.4E+01	3.0E+02	8.3E+02	3.4E+02	3.4E+02	1.2E+02	--	--	No
Thallium	6533-73-9	mg/kg	28 / 40	3.0E-01	9.1E-01	1.3E+01	1.5E+00	1.5E+00	--	5.2E-01	6.7E+00	Yes
Vanadium	7440-62-2	mg/kg	40 / 40	5.5E+00	1.4E+01	2.0E+01	1.5E+01	1.5E+01	3.1E+01	5.5E+01	7.2E+02	No
Zinc	7440-66-6	mg/kg	70 / 70	2.0E+01	1.6E+02	3.7E+03	2.6E+02	2.6E+02	6.2E+01	2.3E+03	3.1E+04	Yes
Organic Explosives												
2,4,6-Trinitrotoluene	118-96-7	mg/kg	10 / 52	9.6E-02	2.4E-01	2.2E+00	3.3E-01	3.3E-01	--	3.1E+00	3.1E+01	No
HMX	2691-41-0	mg/kg	2 / 52	1.0E+00	8.9E-01	3.6E+00	1.0E+00	1.0E+00	--	3.1E+02	3.1E+03	No
RDX	121-82-4	mg/kg	2 / 52	2.7E-01	8.0E-01	1.9E+01	1.4E+00	1.4E+00	--	4.4E+00	1.6E+01	Yes
Organic PCBs												
PCB-1254	11097-69-1	mg/kg	6 / 39	5.6E-02	3.4E-01	3.2E+00	5.5E-01	5.5E-01	--	1.1E-01	7.4E-01	Yes
PCB-1260	11096-82-5	mg/kg	13 / 36	1.8E-01	1.5E+00	2.8E+01	2.8E+00	2.8E+00	--	2.2E-01	7.4E-01	Yes
Organic Pesticides												
4,4'-DDD	72-54-8	mg/kg	2 / 17	9.8E-03	8.6E-03	1.0E-01	1.9E-02	1.9E-02	--	2.4E+00	1.0E+01	No
4,4'-DDE	72-55-9	mg/kg	3 / 17	1.8E-02	8.1E-03	4.9E-02	1.3E-02	1.3E-02	--	1.7E+00	7.0E+00	No
4,4'-DDT	50-29-3	mg/kg	4 / 17	8.7E-03	3.7E-02	2.9E-01	7.3E-02	7.3E-02	--	1.7E+00	7.0E+00	No
Aldrin	309-00-2	mg/kg	2 / 17	1.7E-02	6.4E-03	4.3E-02	1.1E-02	1.1E-02	--	2.9E-02	1.0E-01	Yes
Dieldrin	60-57-1	mg/kg	3 / 17	4.8E-03	7.8E-03	7.0E-02	1.5E-02	1.5E-02	--	3.0E-02	1.1E-01	Yes
Endosulfan II	3321-36-5	mg/kg	1 / 17	3.7E-02	5.4E-03	3.7E-02	9.4E-03	9.4E-03	--	3.7E+01	3.7E+02	No
Endrin	72-20-8	mg/kg	3 / 17	7.5E-03	5.1E-03	1.8E-02	7.5E-03	7.5E-03	--	1.8E+00	1.8E+01	No
Endrin Aldehyde	7421-93-4	mg/kg	3 / 17	4.5E-03	5.5E-02	8.4E-01	1.4E-01	1.4E-01	--	1.8E+00	1.8E+01	No
Endrin Ketone	53494-70-5	mg/kg	1 / 17	1.1E-02	3.7E-03	1.1E-02	5.8E-03	5.8E-03	--	1.8E+00	1.8E+01	No
Heptachlor	76-44-8	mg/kg	2 / 17	7.1E-03	4.1E-02	6.7E-01	1.1E-01	1.1E-01	--	1.1E-01	3.8E-01	Yes
Heptachlor Epoxide	1024-57-3	mg/kg	1 / 17	5.2E-02	4.8E-03	5.2E-02	1.0E-02	1.0E-02	--	5.3E-02	1.9E-01	No
Methoxychlor	72-43-5	mg/kg	2 / 17	1.8E-02	2.0E-02	2.1E-01	4.1E-02	4.1E-02	--	3.1E+01	3.1E+02	No
alpha-Chlordane	5103-71-9	mg/kg	3 / 17	5.6E-03	6.6E-03	3.4E-02	1.1E-02	1.1E-02	--	1.6E+00	6.5E+00	No
gamma-Chlordane	5103-74-2	mg/kg	5 / 17	1.6E-03	9.3E-03	8.3E-02	1.8E-02	1.8E-02	--	1.6E+00	6.5E+00	No
Organic Semivolatiles												
Acenaphthylene	208-96-8	mg/kg	2 / 19	2.7E-01	2.5E-01	5.6E-01	2.9E-01	2.9E-01	--	--	--	Yes

Table Q-4. Summary of COPC Screening for Load Line 4 Shallow Surface Soil

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Residential PRG	Region 9 Industrial PRG	COPC?
Anthracene	120-12-7	mg/kg	4 / 19	1.5E-01	3.1E-01	1.2E+00	4.1E-01	4.1E-01	--	2.2E+03	2.4E+04	No
Benz(*a*)anthracene	56-55-3	mg/kg	9 / 19	7.8E-02	4.5E-01	2.1E+00	6.6E-01	6.6E-01	--	6.2E-01	2.1E+00	Yes
Benzo(*a*)pyrene	50-32-8	mg/kg	9 / 19	4.0E-02	5.3E-01	2.7E+00	8.1E-01	8.1E-01	--	6.2E-02	2.1E-01	Yes
Benzo(b)fluoranthene	205-99-2	mg/kg	10 / 19	4.0E-02	1.1E+00	7.2E+00	1.9E+00	1.9E+00	--	6.2E-01	2.1E+00	Yes
Benzo(*g,h,i*)perylene	191-24-2	mg/kg	8 / 18	7.6E-02	5.8E-01	3.8E+00	9.6E-01	9.6E-01	--	--	--	Yes
Benzo(*k*)fluoranthene	207-08-9	mg/kg	8 / 19	1.0E-01	6.8E-01	5.0E+00	1.2E+00	1.2E+00	--	6.2E+00	2.1E+01	No
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	9 / 19	4.3E-02	1.9E-01	2.0E-01	2.3E-01	2.0E-01	--	3.5E+01	1.2E+02	No
Carbazole	86-74-8	mg/kg	3 / 19	1.2E-01	2.8E-01	1.4E+00	4.0E-01	4.0E-01	--	2.4E+01	8.6E+01	No
Chrysene	218-01-9	mg/kg	11 / 19	3.8E-02	8.7E-01	6.4E+00	2.2E+00	2.2E+00	--	6.2E+01	2.1E+02	No
Di-n-butyl phthalate	84-74-2	mg/kg	1 / 19	9.2E-01	2.9E-01	9.2E-01	3.5E-01	3.5E-01	--	6.1E+02	6.2E+03	No
Dibenz(*a,h*)anthracene	53-70-3	mg/kg	4 / 19	1.4E-01	3.2E-01	1.2E+00	4.2E-01	4.2E-01	--	6.2E-02	2.1E-01	Yes
Fluoranthene	206-44-0	mg/kg	14 / 19	3.8E-02	7.9E-01	8.1E+00	1.8E+00	1.8E+00	--	2.3E+02	2.2E+03	No
Fluorene	86-73-7	mg/kg	2 / 19	6.4E-02	2.3E-01	1.2E-01	2.6E-01	1.2E-01	--	2.7E+02	2.6E+03	No
Indeno(1,2,3-*cd*)pyrene	193-39-5	mg/kg	8 / 18	8.2E-02	5.5E-01	3.7E+00	9.2E-01	9.2E-01	--	6.2E-01	2.1E+00	Yes
Naphthalene	91-20-3	mg/kg	1 / 19	5.8E-02	2.4E-01	5.8E-02	2.8E-01	5.8E-02	--	5.6E+00	1.9E+01	No
Phenanthrene	85-01-8	mg/kg	4 / 19	1.4E-01	3.7E-01	2.3E+00	5.6E-01	5.6E-01	--	--	--	Yes
Pyrene	129-00-0	mg/kg	11 / 19	3.5E-02	7.1E-01	5.4E+00	1.6E+00	1.6E+00	--	2.3E+02	2.9E+03	No
Organic Volatiles												
Acetone	67-64-1	mg/kg	1 / 16	5.0E-02	1.1E-02	5.0E-02	1.6E-02	1.6E-02	--	1.6E+02	6.0E+02	No
Chloroform	67-66-3	mg/kg	1 / 19	2.0E-03	2.8E-03	2.0E-03	3.0E-03	2.0E-03	--	3.6E-01	1.2E+00	No
Toluene	108-88-3	mg/kg	3 / 19	8.6E-04	3.4E-03	1.2E-02	4.3E-03	4.3E-03	--	6.6E+01	2.2E+02	No
Melt-Pour Area Drainage Ditches												
Inorganics												
Aluminum	7429-90-5	mg/kg	15 / 15	2.7E+03	6.6E+03	1.3E+04	8.3E+03	8.3E+03	1.8E+04	7.6E+03	9.2E+04	No
Antimony	7440-36-0	mg/kg	1 / 7	2.0E+00	8.0E-01	2.0E+00	1.2E+00	1.2E+00	9.6E-01	3.1E+00	4.1E+01	No
Arsenic	7440-38-2	mg/kg	15 / 15	3.2E+00	9.1E+00	1.6E+01	1.1E+01	1.1E+01	1.5E+01	3.9E-01	1.6E+00	Yes
Barium	7440-39-3	mg/kg	15 / 15	1.7E+01	4.6E+01	8.4E+01	5.5E+01	5.5E+01	8.8E+01	5.4E+02	6.7E+03	No
Beryllium	7440-41-7	mg/kg	7 / 7	1.8E-01	3.5E-01	4.5E-01	4.3E-01	4.3E-01	8.8E-01	1.5E+01	1.9E+02	No
Cadmium	7440-43-9	mg/kg	12 / 15	4.0E-02	1.5E-01	3.2E-01	2.0E-01	2.0E-01	--	3.7E+00	4.5E+01	No
Calcium	7440-70-2	mg/kg	7 / 7	2.8E+03	4.2E+03	6.8E+03	5.8E+03	5.8E+03	1.6E+04	--	--	No
Chromium	7440-47-3	mg/kg	15 / 15	5.0E+00	9.5E+00	1.7E+01	1.1E+01	1.1E+01	1.7E+01	2.1E+02	4.5E+02	No
Cobalt	7440-48-4	mg/kg	7 / 7	3.7E+00	7.4E+00	9.9E+00	9.0E+00	9.0E+00	1.0E+01	1.4E+02	1.3E+03	No

Table Q-4. Summary of COPC Screening for Load Line 4 Shallow Surface Soil

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Residential PRG	Region 9 Industrial PRG	COPC?
Copper	7440-50-8	mg/kg	7 / 7	7.5E+00	1.4E+01	2.0E+01	1.7E+01	1.7E+01	1.8E+01	3.1E+02	4.1E+03	No
Cyanide	57-12-5	mg/kg	1 / 2	1.6E-01	2.5E-01	1.6E-01	7.8E-01	1.6E-01	--	1.2E+02	1.2E+03	No
Iron	7439-89-6	mg/kg	7 / 7	8.5E+03	1.7E+04	2.6E+04	2.2E+04	2.2E+04	2.3E+04	2.3E+03	3.1E+04	No
Lead	7439-92-1	mg/kg	15 / 15	7.8E+00	1.4E+01	2.7E+01	1.7E+01	1.7E+01	2.6E+01	4.0E+02	7.5E+02	No
Magnesium	7439-95-4	mg/kg	7 / 7	1.4E+03	2.6E+03	3.5E+03	3.2E+03	3.2E+03	3.0E+03	--	--	No
Manganese	7439-96-5	mg/kg	15 / 15	9.2E+01	4.2E+02	8.9E+02	6.4E+02	6.4E+02	1.5E+03	1.8E+02	1.9E+03	No
Mercury	7487-94-6	mg/kg	3 / 15	1.3E-02	3.0E-02	2.6E-02	4.0E-02	2.6E-02	3.6E-02	2.3E+00	3.1E+01	No
Nickel	7440-02-0	mg/kg	7 / 7	7.3E+00	1.5E+01	1.9E+01	1.8E+01	1.8E+01	2.1E+01	1.6E+02	2.0E+03	No
Potassium	7440-09-7	mg/kg	7 / 7	3.2E+02	6.2E+02	8.8E+02	7.8E+02	7.8E+02	9.3E+02	--	--	No
Selenium	7782-49-2	mg/kg	6 / 15	4.1E-01	7.0E-01	6.0E-01	9.3E-01	6.0E-01	1.4E+00	3.9E+01	5.1E+02	No
Sodium	7440-23-5	mg/kg	1 / 7	2.0E+02	3.2E+02	2.0E+02	3.7E+02	2.0E+02	1.2E+02	--	--	No
Thallium	6533-73-9	mg/kg	6 / 7	2.8E-01	4.6E-01	7.3E-01	7.7E-01	7.3E-01	--	5.2E-01	6.7E+00	Yes
Vanadium	7440-62-2	mg/kg	7 / 7	5.0E+00	9.9E+00	1.3E+01	1.2E+01	1.2E+01	3.1E+01	5.5E+01	7.2E+02	No
Zinc	7440-66-6	mg/kg	15 / 15	3.9E+01	7.2E+01	1.1E+02	8.0E+01	8.0E+01	6.2E+01	2.3E+03	3.1E+04	No
Organic Semivolatiles												
Fluoranthene	206-44-0	mg/kg	1 / 3	1.2E-01	2.5E-01	1.2E-01	5.0E-01	1.2E-01	--	2.3E+02	2.2E+03	No
Phenanthrene	85-01-8	mg/kg	1 / 3	1.6E-01	2.7E-01	1.6E-01	4.8E-01	1.6E-01	--	--	--	Yes
Pyrene	129-00-0	mg/kg	1 / 3	1.2E-01	2.5E-01	1.2E-01	5.0E-01	1.2E-01	--	2.3E+02	2.9E+03	No
Organic Volatiles												
Acetone	67-64-1	mg/kg	1 / 2	6.3E-03	1.0E-02	6.3E-03	3.4E-02	6.3E-03	--	1.6E+02	6.0E+02	No
Packaging and Shipping Areas												
Inorganics												
Aluminum	7429-90-5	mg/kg	11 / 11	3.9E+03	1.0E+04	1.5E+04	1.2E+04	1.2E+04	1.8E+04	7.6E+03	9.2E+04	No
Antimony	7440-36-0	mg/kg	3 / 7	6.8E-01	7.9E-01	1.5E+00	1.0E+00	1.0E+00	9.6E-01	3.1E+00	4.1E+01	No
Arsenic	7440-38-2	mg/kg	11 / 11	4.5E+00	8.3E+00	1.3E+01	9.7E+00	9.7E+00	1.5E+01	3.9E-01	1.6E+00	No
Barium	7440-39-3	mg/kg	11 / 11	2.5E+01	1.1E+02	2.7E+02	2.1E+02	2.1E+02	8.8E+01	5.4E+02	6.7E+03	No
Beryllium	7440-41-7	mg/kg	4 / 10	1.4E+00	8.3E-01	2.1E+00	1.3E+00	1.3E+00	8.8E-01	1.5E+01	1.9E+02	No
Cadmium	7440-43-9	mg/kg	7 / 11	1.9E-01	1.9E+00	9.1E+00	3.5E+00	3.5E+00	--	3.7E+00	4.5E+01	Yes
Calcium	7440-70-2	mg/kg	10 / 10	1.1E+03	2.2E+04	5.3E+04	3.3E+04	3.3E+04	1.6E+04	--	--	No
Chromium	7440-47-3	mg/kg	11 / 11	4.5E+00	1.2E+01	3.0E+01	1.8E+01	1.8E+01	1.7E+01	2.1E+02	4.5E+02	No
Cobalt	7440-48-4	mg/kg	10 / 10	3.2E+00	5.4E+00	8.5E+00	6.8E+00	6.8E+00	1.0E+01	1.4E+02	1.3E+03	No
Copper	7440-50-8	mg/kg	10 / 10	1.0E+01	2.5E+01	5.6E+01	3.9E+01	3.9E+01	1.8E+01	3.1E+02	4.1E+03	No

Table Q-4. Summary of COPC Screening for Load Line 4 Shallow Surface Soil

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Residential PRG	Region 9 Industrial PRG	COPC?
Iron	7439-89-6	mg/kg	10 / 10	7.9E+03	1.8E+04	3.8E+04	2.7E+04	2.7E+04	2.3E+04	2.3E+03	3.1E+04	No
Lead	7439-92-1	mg/kg	11 / 11	1.4E+01	9.6E+01	5.0E+02	1.8E+02	1.8E+02	2.6E+01	4.0E+02	7.5E+02	Yes
Magnesium	7439-95-4	mg/kg	10 / 10	9.7E+02	5.0E+03	1.3E+04	1.3E+04	1.3E+04	3.0E+03	--	--	No
Manganese	7439-96-5	mg/kg	11 / 11	1.5E+02	6.6E+02	1.9E+03	1.4E+03	1.4E+03	1.5E+03	1.8E+02	1.9E+03	Yes
Mercury	7487-94-6	mg/kg	6 / 11	1.2E-02	2.7E-02	7.8E-02	4.6E-02	4.6E-02	3.6E-02	2.3E+00	3.1E+01	No
Nickel	7440-02-0	mg/kg	10 / 10	7.4E+00	1.4E+01	2.6E+01	1.8E+01	1.8E+01	2.1E+01	1.6E+02	2.0E+03	No
Potassium	7440-09-7	mg/kg	10 / 10	3.0E+02	6.7E+02	1.4E+03	9.6E+02	9.6E+02	9.3E+02	--	--	No
Selenium	7782-49-2	mg/kg	7 / 11	3.6E-01	8.5E-01	1.4E+00	1.1E+00	1.1E+00	1.4E+00	3.9E+01	5.1E+02	No
Sodium	7440-23-5	mg/kg	5 / 10	1.0E+02	2.6E+02	3.3E+02	3.1E+02	3.1E+02	1.2E+02	--	--	No
Thallium	6533-73-9	mg/kg	5 / 10	2.9E-01	3.0E-01	5.8E-01	4.0E-01	4.0E-01	--	5.2E-01	6.7E+00	Yes
Vanadium	7440-62-2	mg/kg	10 / 10	5.2E+00	1.1E+01	2.4E+01	1.7E+01	1.7E+01	3.1E+01	5.5E+01	7.2E+02	No
Zinc	7440-66-6	mg/kg	11 / 11	4.9E+01	2.3E+02	8.4E+02	5.7E+02	5.7E+02	6.2E+01	2.3E+03	3.1E+04	No
Organic Explosives												
Nitrocellulose	9004-70-0	mg/kg	1 / 1	9.0E+00	9.0E+00	9.0E+00	--	9.0E+00	--	--	--	Yes
Organic PCBs												
PCB-1254	11097-69-1	mg/kg	3 / 10	2.7E-01	2.0E-01	7.5E-01	3.7E-01	3.7E-01	--	1.1E-01	7.4E-01	Yes
PCB-1260	11096-82-5	mg/kg	2 / 10	4.3E-02	1.6E-01	1.3E+00	3.9E-01	3.9E-01	--	2.2E-01	7.4E-01	Yes
Organic Pesticides												
4,4'-DDE	72-55-9	mg/kg	1 / 1	3.8E-02	3.8E-02	3.8E-02	--	3.8E-02	--	1.7E+00	7.0E+00	No
Dieldrin	60-57-1	mg/kg	1 / 1	1.4E-02	1.4E-02	1.4E-02	--	1.4E-02	--	3.0E-02	1.1E-01	No
Endrin Aldehyde	7421-93-4	mg/kg	1 / 1	5.7E-02	5.7E-02	5.7E-02	--	5.7E-02	--	1.8E+00	1.8E+01	No
Methoxychlor	72-43-5	mg/kg	1 / 1	2.5E-02	2.5E-02	2.5E-02	--	2.5E-02	--	3.1E+01	3.1E+02	No
alpha-Chlordane	5103-71-9	mg/kg	1 / 1	1.4E-02	1.4E-02	1.4E-02	--	1.4E-02	--	1.6E+00	6.5E+00	No
gamma-Chlordane	5103-74-2	mg/kg	1 / 1	1.1E-02	1.1E-02	1.1E-02	--	1.1E-02	--	1.6E+00	6.5E+00	No
Organic Semivolatiles												
Benz(*a*)anthracene	56-55-3	mg/kg	1 / 2	9.3E-02	1.5E-01	9.3E-02	5.0E-01	9.3E-02	--	6.2E-01	2.1E+00	No
Benzo(*a*)pyrene	50-32-8	mg/kg	1 / 2	1.0E-01	1.5E-01	1.0E-01	4.8E-01	1.0E-01	--	6.2E-02	2.1E-01	Yes
Benzo(*b*)fluoranthene	205-99-2	mg/kg	2 / 2	1.0E-01	1.2E-01	1.3E-01	2.1E-01	1.3E-01	--	6.2E-01	2.1E+00	No
Benzo(*g,h,i*)perylene	191-24-2	mg/kg	2 / 2	6.6E-02	8.3E-02	1.0E-01	1.9E-01	1.0E-01	--	--	--	Yes
Benzo(*k*)fluoranthene	207-08-9	mg/kg	1 / 2	8.0E-02	1.4E-01	8.0E-02	5.4E-01	8.0E-02	--	6.2E+00	2.1E+01	No
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	1 / 2	7.8E-02	1.4E-01	7.8E-02	5.4E-01	7.8E-02	--	3.5E+01	1.2E+02	No
Chrysene	218-01-9	mg/kg	2 / 2	8.7E-02	1.1E-01	1.4E-01	2.8E-01	1.4E-01	--	6.2E+01	2.1E+02	No

Table Q-4. Summary of COPC Screening for Load Line 4 Shallow Surface Soil

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Residential PRG	Region 9 Industrial PRG	COPC?
Fluoranthene	206-44-0	mg/kg	2 / 2	1.3E-01	2.1E-01	2.9E-01	7.2E-01	2.9E-01	--	2.3E+02	2.2E+03	No
Phenanthrene	85-01-8	mg/kg	1 / 2	1.7E-01	1.9E-01	1.7E-01	3.0E-01	1.7E-01	--	--	--	Yes
Pyrene	129-00-0	mg/kg	1 / 2	1.8E-01	1.9E-01	1.8E-01	2.7E-01	1.8E-01	--	2.3E+02	2.9E+03	No
Organic Volatiles												
Toluene	108-88-3	mg/kg	1 / 3	1.6E-03	2.5E-03	1.6E-03	3.9E-03	1.6E-03	--	6.6E+01	2.2E+02	No
Perimeter Area												
Inorganics												
Aluminum	7429-90-5	mg/kg	24 / 24	6.2E+03	1.1E+04	1.5E+04	1.1E+04	1.1E+04	1.8E+04	7.6E+03	9.2E+04	No
Arsenic	7440-38-2	mg/kg	24 / 24	2.3E+00	8.1E+00	1.2E+01	8.9E+00	8.9E+00	1.5E+01	3.9E-01	1.6E+00	No
Barium	7440-39-3	mg/kg	24 / 24	2.1E+01	5.7E+01	1.1E+02	6.5E+01	6.5E+01	8.8E+01	5.4E+02	6.7E+03	No
Beryllium	7440-41-7	mg/kg	3 / 20	5.3E-01	3.8E-01	1.5E+00	5.0E-01	5.0E-01	8.8E-01	1.5E+01	1.9E+02	No
Cadmium	7440-43-9	mg/kg	12 / 24	5.5E-02	2.2E-01	5.4E-01	2.7E-01	2.7E-01	--	3.7E+00	4.5E+01	No
Calcium	7440-70-2	mg/kg	20 / 20	1.6E+02	5.8E+03	5.3E+04	1.2E+04	1.2E+04	1.6E+04	--	--	No
Chromium	7440-47-3	mg/kg	24 / 24	6.2E+00	1.9E+01	1.2E+02	2.7E+01	2.7E+01	1.7E+01	2.1E+02	4.5E+02	No
Cobalt	7440-48-4	mg/kg	20 / 20	2.2E+00	6.8E+00	1.5E+01	8.0E+00	8.0E+00	1.0E+01	1.4E+02	1.3E+03	No
Copper	7440-50-8	mg/kg	20 / 20	4.8E+00	1.1E+01	1.6E+01	1.2E+01	1.2E+01	1.8E+01	3.1E+02	4.1E+03	No
Iron	7439-89-6	mg/kg	20 / 20	6.4E+03	1.6E+04	2.4E+04	1.8E+04	1.8E+04	2.3E+04	2.3E+03	3.1E+04	No
Lead	7439-92-1	mg/kg	24 / 24	7.8E+00	1.2E+02	1.3E+03	2.3E+02	2.3E+02	2.6E+01	4.0E+02	7.5E+02	Yes
Magnesium	7439-95-4	mg/kg	20 / 20	6.8E+02	2.2E+03	8.2E+03	2.9E+03	2.9E+03	3.0E+03	--	--	No
Manganese	7439-96-5	mg/kg	24 / 24	8.5E+01	4.3E+02	1.8E+03	6.6E+02	6.6E+02	1.5E+03	1.8E+02	1.9E+03	Yes
Mercury	7487-94-6	mg/kg	18 / 23	1.2E-02	4.4E-02	9.4E-02	5.9E-02	5.9E-02	3.6E-02	2.3E+00	3.1E+01	No
Nickel	7440-02-0	mg/kg	20 / 20	5.4E+00	1.2E+01	1.9E+01	1.4E+01	1.4E+01	2.1E+01	1.6E+02	2.0E+03	No
Potassium	7440-09-7	mg/kg	20 / 20	3.5E+02	6.5E+02	1.0E+03	7.3E+02	7.3E+02	9.3E+02	--	--	No
Selenium	7782-49-2	mg/kg	14 / 24	3.5E-01	8.8E-01	1.2E+00	1.0E+00	1.0E+00	1.4E+00	3.9E+01	5.1E+02	No
Sodium	7440-23-5	mg/kg	2 / 20	8.7E+01	2.8E+02	1.7E+02	3.0E+02	1.7E+02	1.2E+02	--	--	No
Thallium	6533-73-9	mg/kg	18 / 20	3.0E-01	4.3E-01	6.7E-01	4.9E-01	4.9E-01	--	5.2E-01	6.7E+00	Yes
Vanadium	7440-62-2	mg/kg	20 / 20	7.6E+00	1.6E+01	2.3E+01	1.8E+01	1.8E+01	3.1E+01	5.5E+01	7.2E+02	No
Zinc	7440-66-6	mg/kg	24 / 24	2.7E+01	5.7E+01	1.2E+02	6.8E+01	6.8E+01	6.2E+01	2.3E+03	3.1E+04	No
Organic Semivolatiles												
Benz(*a*)anthracene	56-55-3	mg/kg	1 / 5	1.1E-01	1.8E-01	1.1E-01	2.2E-01	1.1E-01	--	6.2E-01	2.1E+00	No
Benzo(*a*)pyrene	50-32-8	mg/kg	1 / 5	1.4E-01	1.9E-01	1.4E-01	2.1E-01	1.4E-01	--	6.2E-02	2.1E-01	Yes
Benzo(*b*)fluoranthene	205-99-2	mg/kg	1 / 5	1.6E-01	1.9E-01	1.6E-01	2.1E-01	1.6E-01	--	6.2E-01	2.1E+00	No

Table Q-4. Summary of COPC Screening for Load Line 4 Shallow Surface Soil

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Residential PRG	Region 9 Industrial PRG	COPC?
Benzo(*g,h,i*)perylene	191-24-2	mg/kg	1 / 5	1.2E-01	1.8E-01	1.2E-01	2.2E-01	1.2E-01	--	--	--	Yes
Benzo(*k*)fluoranthene	207-08-9	mg/kg	1 / 5	7.8E-02	1.7E-01	7.8E-02	2.3E-01	7.8E-02	--	6.2E+00	2.1E+01	No
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	4 / 5	1.2E-01	2.0E-01	3.1E-01	3.2E-01	3.1E-01	--	3.5E+01	1.2E+02	No
Chrysene	218-01-9	mg/kg	1 / 5	1.4E-01	1.9E-01	1.4E-01	2.1E-01	1.4E-01	--	6.2E+01	2.1E+02	No
Fluoranthene	206-44-0	mg/kg	2 / 5	8.5E-02	1.7E-01	1.8E-01	2.2E-01	1.8E-01	--	2.3E+02	2.2E+03	No
Indeno(1,2,3-*cd*)pyrene	193-39-5	mg/kg	1 / 5	9.9E-02	1.8E-01	9.9E-02	2.2E-01	9.9E-02	--	6.2E-01	2.1E+00	No
Pyrene	129-00-0	mg/kg	1 / 5	1.6E-01	1.9E-01	1.6E-01	2.1E-01	1.6E-01	--	2.3E+02	2.9E+03	No
Organic Volatiles												
Toluene	108-88-3	mg/kg	1 / 5	6.2E-04	2.5E-03	6.2E-04	3.5E-03	6.2E-04	--	6.6E+01	2.2E+02	No
Preparation and Receiving Areas												
Inorganics												
Aluminum	7429-90-5	mg/kg	17 / 17	2.3E+03	9.0E+03	1.6E+04	1.1E+04	1.1E+04	1.8E+04	7.6E+03	9.2E+04	No
Arsenic	7440-38-2	mg/kg	17 / 17	3.5E+00	1.0E+01	2.7E+01	1.4E+01	1.4E+01	1.5E+01	3.9E-01	1.6E+00	Yes
Barium	7440-39-3	mg/kg	17 / 17	2.5E+01	8.6E+01	2.0E+02	1.2E+02	1.2E+02	8.8E+01	5.4E+02	6.7E+03	No
Beryllium	7440-41-7	mg/kg	9 / 17	2.5E-01	5.2E-01	1.6E+00	7.5E-01	7.5E-01	8.8E-01	1.5E+01	1.9E+02	No
Cadmium	7440-43-9	mg/kg	14 / 17	1.2E-01	9.9E-01	4.6E+00	2.4E+00	2.4E+00	--	3.7E+00	4.5E+01	Yes
Calcium	7440-70-2	mg/kg	17 / 17	1.6E+03	3.6E+04	1.7E+05	1.8E+05	1.7E+05	1.6E+04	--	--	No
Chromium	7440-47-3	mg/kg	17 / 17	6.2E+00	2.0E+01	1.6E+02	3.5E+01	3.5E+01	1.7E+01	2.1E+02	4.5E+02	No
Cobalt	7440-48-4	mg/kg	17 / 17	2.7E+00	6.1E+00	1.4E+01	7.7E+00	7.7E+00	1.0E+01	1.4E+02	1.3E+03	No
Copper	7440-50-8	mg/kg	17 / 17	8.0E+00	4.9E+01	5.1E+02	1.0E+02	1.0E+02	1.8E+01	3.1E+02	4.1E+03	Yes
Cyanide	57-12-5	mg/kg	1 / 1	1.1E-01	1.1E-01	1.1E-01	--	1.1E-01	--	1.2E+02	1.2E+03	No
Iron	7439-89-6	mg/kg	17 / 17	7.5E+03	2.2E+04	1.0E+05	3.1E+04	3.1E+04	2.3E+04	2.3E+03	3.1E+04	No
Lead	7439-92-1	mg/kg	17 / 17	1.1E+01	1.4E+02	9.9E+02	3.9E+02	3.9E+02	2.6E+01	4.0E+02	7.5E+02	Yes
Magnesium	7439-95-4	mg/kg	17 / 17	9.6E+02	3.7E+03	8.8E+03	5.4E+03	5.4E+03	3.0E+03	--	--	No
Manganese	7439-96-5	mg/kg	17 / 17	9.2E+01	5.4E+02	1.8E+03	9.4E+02	9.4E+02	1.5E+03	1.8E+02	1.9E+03	Yes
Mercury	7487-94-6	mg/kg	15 / 17	1.1E-02	5.3E-01	7.4E+00	1.3E+00	1.3E+00	3.6E-02	2.3E+00	3.1E+01	Yes
Nickel	7440-02-0	mg/kg	17 / 17	7.8E+00	1.7E+01	4.8E+01	2.1E+01	2.1E+01	2.1E+01	1.6E+02	2.0E+03	No
Potassium	7440-09-7	mg/kg	17 / 17	3.6E+02	6.5E+02	1.2E+03	7.8E+02	7.8E+02	9.3E+02	--	--	No
Selenium	7782-49-2	mg/kg	5 / 17	4.8E-01	1.1E+00	1.2E+00	1.3E+00	1.2E+00	1.4E+00	3.9E+01	5.1E+02	No
Sodium	7440-23-5	mg/kg	5 / 17	7.4E+01	2.6E+02	1.8E+02	3.0E+02	1.8E+02	1.2E+02	--	--	No
Thallium	6533-73-9	mg/kg	15 / 17	2.6E-01	5.5E-01	1.2E+00	7.1E-01	7.1E-01	--	5.2E-01	6.7E+00	Yes
Vanadium	7440-62-2	mg/kg	17 / 17	5.5E+00	1.4E+01	4.1E+01	1.9E+01	1.9E+01	3.1E+01	5.5E+01	7.2E+02	No

Table Q-4. Summary of COPC Screening for Load Line 4 Shallow Surface Soil

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Residential PRG	Region 9 Industrial PRG	COPC?
Zinc	7440-66-6	mg/kg	17 / 17	4.3E+01	2.0E+02	7.5E+02	3.4E+02	3.4E+02	6.2E+01	2.3E+03	3.1E+04	No
Organic Explosives												
Nitrocellulose	9004-70-0	mg/kg	1 / 3	1.9E+01	7.6E+00	1.9E+01	2.4E+01	1.9E+01	--	--	--	Yes
Organic PCBs												
PCB-1254	11097-69-1	mg/kg	3 / 17	3.6E-01	2.9E+00	4.8E+01	7.8E+00	7.8E+00	--	1.1E-01	7.4E-01	Yes
PCB-1260	11096-82-5	mg/kg	1 / 16	5.7E+00	4.9E-01	5.7E+00	1.1E+00	1.1E+00	--	2.2E-01	7.4E-01	Yes
Organic Semivolatiles												
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	1 / 5	6.1E-02	1.9E-01	6.1E-02	2.7E-01	6.1E-02	--	3.5E+01	1.2E+02	No
Fluoranthene	206-44-0	mg/kg	1 / 5	7.0E-02	1.9E-01	7.0E-02	2.6E-01	7.0E-02	--	2.3E+02	2.2E+03	No
Phenanthrene	85-01-8	mg/kg	1 / 5	6.0E-02	1.9E-01	6.0E-02	2.6E-01	6.0E-02	--	--	--	Yes
Pyrene	129-00-0	mg/kg	1 / 5	6.9E-02	1.9E-01	6.9E-02	2.6E-01	6.9E-02	--	2.3E+02	2.9E+03	No
Organic Volatiles												
2-Butanone	78-93-3	mg/kg	1 / 5	1.3E-02	1.0E-02	1.3E-02	1.5E-02	1.3E-02	--	7.3E+02	2.7E+03	No
Acetone	67-64-1	mg/kg	2 / 4	1.2E-02	1.9E-02	4.2E-02	3.7E-02	3.7E-02	--	1.6E+02	6.0E+02	No
Toluene	108-88-3	mg/kg	3 / 5	6.6E-04	2.5E-03	5.1E-03	4.3E-03	4.3E-03	--	6.6E+01	2.2E+02	No

CAS = Chemical Abstracts Service.
COPC = Chemical of potential concern.
DDD = Dichlorodiphenyldichloroethane.
DDE = Dichlorodiphenyldichloroethylene.
DDT = Dichlorodiphenyltrichloroethane.
EPC = Exposure point concentration.
HMX = Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine.
PCB = Polychlorinated bipheynl.
RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine.
PRG = Preliminary remediation goal.
UCL = Upper confidence limit on the mean.
-- Criteria not available or insufficient data to calculate the UCL.

Table Q-5. Summary of COPC Screening for Load Line 4 Deep Surface Soil

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Residential PRG	Region 9 Industrial PRG	COPC?
Change Houses												
Inorganics												
Aluminum	7429-90-5	mg/kg	6 / 6	2.1E+03	8.3E+03	1.2E+04	1.1E+04	1.1E+04	1.8E+04	7.6E+03	9.2E+04	No
Arsenic	7440-38-2	mg/kg	6 / 6	3.6E+00	9.3E+00	1.3E+01	1.2E+01	1.2E+01	1.5E+01	3.9E-01	1.6E+00	No
Barium	7440-39-3	mg/kg	6 / 6	4.6E+01	6.7E+01	1.3E+02	9.5E+01	9.5E+01	8.8E+01	5.4E+02	6.7E+03	No
Beryllium	7440-41-7	mg/kg	5 / 6	4.6E-01	5.2E-01	8.1E-01	6.9E-01	6.9E-01	8.8E-01	1.5E+01	1.9E+02	No
Cadmium	7440-43-9	mg/kg	6 / 6	1.8E-01	6.0E-01	1.1E+00	2.1E+00	1.1E+00	--	3.7E+00	4.5E+01	No
Calcium	7440-70-2	mg/kg	6 / 6	1.7E+03	3.1E+04	1.6E+05	4.4E+06	1.6E+05	1.6E+04	--	--	No
Chromium	7440-47-3	mg/kg	6 / 6	5.9E+00	1.3E+01	2.6E+01	2.4E+01	2.4E+01	1.7E+01	2.1E+02	4.5E+02	No
Cobalt	7440-48-4	mg/kg	6 / 6	3.0E+00	6.8E+00	9.7E+00	8.8E+00	8.8E+00	1.0E+01	1.4E+02	1.3E+03	No
Copper	7440-50-8	mg/kg	6 / 6	1.4E+01	2.1E+01	3.6E+01	3.1E+01	3.1E+01	1.8E+01	3.1E+02	4.1E+03	No
Iron	7439-89-6	mg/kg	6 / 6	7.1E+03	1.8E+04	2.3E+04	2.3E+04	2.3E+04	2.3E+04	2.3E+03	3.1E+04	No
Lead	7439-92-1	mg/kg	6 / 6	2.0E+01	1.4E+02	4.0E+02	5.5E+03	4.0E+02	1.9E+01	4.0E+02	7.5E+02	No
Magnesium	7439-95-4	mg/kg	6 / 6	1.7E+03	2.9E+03	4.5E+03	4.1E+03	4.1E+03	3.0E+03	--	--	No
Manganese	7439-96-5	mg/kg	6 / 6	3.2E+02	5.0E+02	7.2E+02	7.4E+02	7.2E+02	1.5E+03	1.8E+02	1.9E+03	No
Mercury	7487-94-6	mg/kg	5 / 6	2.6E-02	3.0E-02	5.0E-02	4.2E-02	4.2E-02	3.6E-02	2.3E+00	3.1E+01	No
Nickel	7440-02-0	mg/kg	6 / 6	1.1E+01	1.7E+01	2.0E+01	1.9E+01	1.9E+01	2.1E+01	1.6E+02	2.0E+03	No
Potassium	7440-09-7	mg/kg	6 / 6	3.6E+02	6.5E+02	8.6E+02	7.8E+02	7.8E+02	9.3E+02	--	--	No
Selenium	7782-49-2	mg/kg	1 / 6	6.7E-01	1.1E+00	6.7E-01	1.2E+00	6.7E-01	1.4E+00	3.9E+01	5.1E+02	No
Sodium	7440-23-5	mg/kg	1 / 6	7.0E+01	2.6E+02	7.0E+01	3.3E+02	7.0E+01	1.2E+02	--	--	No
Thallium	6533-73-9	mg/kg	4 / 6	4.9E-01	5.1E-01	8.5E-01	7.5E-01	7.5E-01	--	5.2E-01	6.7E+00	Yes
Vanadium	7440-62-2	mg/kg	6 / 6	5.0E+00	1.3E+01	2.0E+01	1.8E+01	1.8E+01	3.1E+01	5.5E+01	7.2E+02	No
Zinc	7440-66-6	mg/kg	6 / 6	5.4E+01	1.1E+02	1.9E+02	1.9E+02	1.9E+02	6.2E+01	2.3E+03	3.1E+04	No
Organic PCBs												
PCB-1260	11096-82-5	mg/kg	1 / 4	5.9E-02	2.9E-02	5.9E-02	5.3E-02	5.3E-02	--	2.2E-01	7.4E-01	No
Organic Semivolatiles												
2-Methylnaphthalene	91-57-6	mg/kg	1 / 1	2.7E-01	2.7E-01	2.7E-01	--	2.7E-01	--	--	--	Yes
Anthracene	120-12-7	mg/kg	1 / 1	7.5E-02	7.5E-02	7.5E-02	--	7.5E-02	--	2.2E+03	2.4E+04	No
Benz(*a*)anthracene	56-55-3	mg/kg	1 / 1	5.3E-01	5.3E-01	5.3E-01	--	5.3E-01	--	6.2E-01	2.1E+00	No
Benzo(*a*)pyrene	50-32-8	mg/kg	1 / 1	5.0E-01	5.0E-01	5.0E-01	--	5.0E-01	--	6.2E-02	2.1E-01	Yes
Benzo(*b*)fluoranthene	205-99-2	mg/kg	1 / 1	6.7E-01	6.7E-01	6.7E-01	--	6.7E-01	--	6.2E-01	2.1E+00	Yes
Benzo(*g,h,i*)perylene	191-24-2	mg/kg	1 / 1	3.1E-01	3.1E-01	3.1E-01	--	3.1E-01	--	--	--	Yes
Benzo(*k*)fluoranthene	207-08-9	mg/kg	1 / 1	2.9E-01	2.9E-01	2.9E-01	--	2.9E-01	--	6.2E+00	2.1E+01	No

Table Q-5. Summary of COPC Screening for Load Line 4 Deep Surface Soil

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Residential PRG	Region 9 Industrial PRG	COPC?
Carbazole	86-74-8	mg/kg	1 / 1	6.5E-02	6.5E-02	6.5E-02	--	6.5E-02	--	2.4E+01	8.6E+01	No
Chrysene	218-01-9	mg/kg	1 / 1	6.2E-01	6.2E-01	6.2E-01	--	6.2E-01	--	6.2E+01	2.1E+02	No
Dibenz(*a,h*)anthracene	53-70-3	mg/kg	1 / 1	8.5E-02	8.5E-02	8.5E-02	--	8.5E-02	--	6.2E-02	2.1E-01	Yes
Dibenzofuran	132-64-9	mg/kg	1 / 1	6.9E-02	6.9E-02	6.9E-02	--	6.9E-02	--	2.9E+01	3.1E+02	No
Fluoranthene	206-44-0	mg/kg	1 / 1	9.3E-01	9.3E-01	9.3E-01	--	9.3E-01	--	2.3E+02	2.2E+03	No
Indeno(1,2,3-*cd*)pyrene	193-39-5	mg/kg	1 / 1	3.0E-01	3.0E-01	3.0E-01	--	3.0E-01	--	6.2E-01	2.1E+00	No
Naphthalene	91-20-3	mg/kg	1 / 1	1.8E-01	1.8E-01	1.8E-01	--	1.8E-01	--	5.6E+00	1.9E+01	No
Phenanthrene	85-01-8	mg/kg	1 / 1	4.7E-01	4.7E-01	4.7E-01	--	4.7E-01	--	--	--	Yes
Pyrene	129-00-0	mg/kg	1 / 1	8.7E-01	8.7E-01	8.7E-01	--	8.7E-01	--	2.3E+02	2.9E+03	No
Organic Volatiles												
Benzene	71-43-2	mg/kg	1 / 1	2.6E-03	2.6E-03	2.6E-03	--	2.6E-03	--	6.0E-01	1.3E+00	No
Dimethylbenzene	1330-20-7	mg/kg	1 / 1	3.0E-03	3.0E-03	3.0E-03	--	3.0E-03	--	2.7E+01	9.0E+01	No
Toluene	108-88-3	mg/kg	1 / 1	5.6E-03	5.6E-03	5.6E-03	--	5.6E-03	--	6.6E+01	2.2E+02	No
Explosives Handling Areas												
Inorganics												
Aluminum	7429-90-5	mg/kg	74 / 74	4.2E+03	1.0E+04	3.9E+04	1.1E+04	1.1E+04	1.8E+04	7.6E+03	9.2E+04	Yes
Antimony	7440-36-0	mg/kg	1 / 36	2.2E+00	5.8E-01	2.2E+00	7.3E-01	7.3E-01	9.6E-01	3.1E+00	4.1E+01	No
Arsenic	7440-38-2	mg/kg	74 / 74	2.0E+00	8.9E+00	1.8E+01	9.6E+00	9.6E+00	1.5E+01	3.9E-01	1.6E+00	Yes
Barium	7440-39-3	mg/kg	74 / 74	1.7E+01	8.9E+01	7.5E+02	1.1E+02	1.1E+02	8.8E+01	5.4E+02	6.7E+03	Yes
Beryllium	7440-41-7	mg/kg	30 / 44	2.7E-01	9.1E-01	5.9E+00	1.2E+00	1.2E+00	8.8E-01	1.5E+01	1.9E+02	No
Cadmium	7440-43-9	mg/kg	64 / 74	4.0E-02	8.4E-01	1.3E+01	1.2E+00	1.2E+00	--	3.7E+00	4.5E+01	Yes
Calcium	7440-70-2	mg/kg	44 / 44	4.4E+02	1.8E+04	1.8E+05	2.9E+04	2.9E+04	1.6E+04	--	--	No
Chromium	7440-47-3	mg/kg	74 / 74	5.2E+00	1.4E+01	6.8E+01	1.5E+01	1.5E+01	1.7E+01	2.1E+02	4.5E+02	No
Chromium, hexavalent	18540-29-9	mg/kg	1 / 1	1.9E+00	1.9E+00	1.9E+00	--	1.9E+00	--	2.2E+01	6.4E+01	No
Cobalt	7440-48-4	mg/kg	44 / 44	1.8E+00	8.5E+00	7.8E+01	1.1E+01	1.1E+01	1.0E+01	1.4E+02	1.3E+03	No
Copper	7440-50-8	mg/kg	44 / 44	5.9E+00	2.1E+01	1.1E+02	2.5E+01	2.5E+01	1.8E+01	3.1E+02	4.1E+03	No
Cyanide	57-12-5	mg/kg	5 / 17	2.0E-01	2.4E-01	5.1E-01	2.9E-01	2.9E-01	--	1.2E+02	1.2E+03	No
Iron	7439-89-6	mg/kg	44 / 44	6.9E+03	1.9E+04	3.0E+04	2.0E+04	2.0E+04	2.3E+04	2.3E+03	3.1E+04	No
Lead	7439-92-1	mg/kg	74 / 74	7.2E+00	1.3E+02	5.8E+03	2.6E+02	2.6E+02	1.9E+01	4.0E+02	7.5E+02	Yes
Magnesium	7439-95-4	mg/kg	44 / 44	8.6E+02	5.0E+03	3.1E+04	6.8E+03	6.8E+03	3.0E+03	--	--	No
Manganese	7439-96-5	mg/kg	74 / 74	4.4E+01	7.1E+02	7.3E+03	9.5E+02	9.5E+02	1.5E+03	1.8E+02	1.9E+03	Yes
Mercury	7487-94-6	mg/kg	36 / 74	1.1E-02	3.8E-02	3.6E-01	4.8E-02	4.8E-02	3.6E-02	2.3E+00	3.1E+01	No
Nickel	7440-02-0	mg/kg	44 / 44	3.0E+00	1.6E+01	3.2E+01	1.8E+01	1.8E+01	2.1E+01	1.6E+02	2.0E+03	No

Table Q-5. Summary of COPC Screening for Load Line 4 Deep Surface Soil

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Residential PRG	Region 9 Industrial PRG	COPC?
Potassium	7440-09-7	mg/kg	44 / 44	3.7E+02	9.3E+02	2.3E+03	1.1E+03	1.1E+03	9.3E+02	--	--	No
Selenium	7782-49-2	mg/kg	43 / 74	3.2E-01	9.8E-01	3.2E+00	1.1E+00	1.1E+00	1.4E+00	3.9E+01	5.1E+02	No
Sodium	7440-23-5	mg/kg	17 / 44	9.4E+01	3.0E+02	8.3E+02	3.3E+02	3.3E+02	1.2E+02	--	--	No
Thallium	6533-73-9	mg/kg	29 / 44	3.0E-01	8.5E-01	1.3E+01	1.3E+00	1.3E+00	--	5.2E-01	6.7E+00	Yes
Vanadium	7440-62-2	mg/kg	44 / 44	5.5E+00	1.4E+01	2.0E+01	1.5E+01	1.5E+01	3.1E+01	5.5E+01	7.2E+02	No
Zinc	7440-66-6	mg/kg	74 / 74	2.0E+01	1.6E+02	3.7E+03	2.5E+02	2.5E+02	6.2E+01	2.3E+03	3.1E+04	Yes
Organic Explosives												
2,4,6-Trinitrotoluene	118-96-7	mg/kg	10 / 53	9.6E-02	2.4E-01	2.2E+00	3.2E-01	3.2E-01	--	3.1E+00	3.1E+01	No
HMX	2691-41-0	mg/kg	2 / 53	1.0E+00	8.8E-01	3.6E+00	9.9E-01	9.9E-01	--	3.1E+02	3.1E+03	No
RDX	121-82-4	mg/kg	2 / 53	2.7E-01	7.9E-01	1.9E+01	1.4E+00	1.4E+00	--	4.4E+00	1.6E+01	Yes
Organic PCBs												
PCB-1254	11097-69-1	mg/kg	6 / 40	5.6E-02	3.3E-01	3.2E+00	5.3E-01	5.3E-01	--	1.1E-01	7.4E-01	Yes
PCB-1260	11096-82-5	mg/kg	13 / 37	1.8E-01	1.5E+00	2.8E+01	2.8E+00	2.8E+00	--	2.2E-01	7.4E-01	Yes
Organic Pesticides												
4,4'-DDD	72-54-8	mg/kg	2 / 17	9.8E-03	8.6E-03	1.0E-01	1.9E-02	1.9E-02	--	2.4E+00	1.0E+01	No
4,4'-DDE	72-55-9	mg/kg	3 / 17	1.8E-02	8.1E-03	4.9E-02	1.3E-02	1.3E-02	--	1.7E+00	7.0E+00	No
4,4'-DDT	50-29-3	mg/kg	4 / 17	8.7E-03	3.7E-02	2.9E-01	7.3E-02	7.3E-02	--	1.7E+00	7.0E+00	No
Aldrin	309-00-2	mg/kg	2 / 17	1.7E-02	6.4E-03	4.3E-02	1.1E-02	1.1E-02	--	2.9E-02	1.0E-01	Yes
Dieldrin	60-57-1	mg/kg	3 / 17	4.8E-03	7.8E-03	7.0E-02	1.5E-02	1.5E-02	--	3.0E-02	1.1E-01	Yes
Endosulfan II	3321-36-5	mg/kg	1 / 17	3.7E-02	5.4E-03	3.7E-02	9.4E-03	9.4E-03	--	3.7E+01	3.7E+02	No
Endrin	72-20-8	mg/kg	3 / 17	7.5E-03	5.1E-03	1.8E-02	7.5E-03	7.5E-03	--	1.8E+00	1.8E+01	No
Endrin Aldehyde	7421-93-4	mg/kg	3 / 17	4.5E-03	5.5E-02	8.4E-01	1.4E-01	1.4E-01	--	1.8E+00	1.8E+01	No
Endrin Ketone	53494-70-5	mg/kg	1 / 17	1.1E-02	3.7E-03	1.1E-02	5.8E-03	5.8E-03	--	1.8E+00	1.8E+01	No
Heptachlor	76-44-8	mg/kg	2 / 17	7.1E-03	4.1E-02	6.7E-01	1.1E-01	1.1E-01	--	1.1E-01	3.8E-01	Yes
Heptachlor Epoxide	1024-57-3	mg/kg	1 / 17	5.2E-02	4.8E-03	5.2E-02	1.0E-02	1.0E-02	--	5.3E-02	1.9E-01	No
Methoxychlor	72-43-5	mg/kg	2 / 17	1.8E-02	2.0E-02	2.1E-01	4.1E-02	4.1E-02	--	3.1E+01	3.1E+02	No
alpha-Chlordane	5103-71-9	mg/kg	3 / 17	5.6E-03	6.6E-03	3.4E-02	1.1E-02	1.1E-02	--	1.6E+00	6.5E+00	No
gamma-Chlordane	5103-74-2	mg/kg	5 / 17	1.6E-03	9.3E-03	8.3E-02	1.8E-02	1.8E-02	--	1.6E+00	6.5E+00	No
Organic Semivolatiles												
Acenaphthylene	208-96-8	mg/kg	2 / 19	2.7E-01	2.5E-01	5.6E-01	2.9E-01	2.9E-01	--	--	--	Yes
Anthracene	120-12-7	mg/kg	4 / 19	1.5E-01	3.1E-01	1.2E+00	4.1E-01	4.1E-01	--	2.2E+03	2.4E+04	No
Benz(*a*)anthracene	56-55-3	mg/kg	9 / 19	7.8E-02	4.5E-01	2.1E+00	6.6E-01	6.6E-01	--	6.2E-01	2.1E+00	Yes
Benzo(*a*)pyrene	50-32-8	mg/kg	9 / 19	4.0E-02	5.3E-01	2.7E+00	8.1E-01	8.1E-01	--	6.2E-02	2.1E-01	Yes

Table Q-5. Summary of COPC Screening for Load Line 4 Deep Surface Soil

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Residential PRG	Region 9 Industrial PRG	COPC?
Benzo(*b*)fluoranthene	205-99-2	mg/kg	10 / 19	4.0E-02	1.1E+00	7.2E+00	1.9E+00	1.9E+00	--	6.2E-01	2.1E+00	Yes
Benzo(*g,h,i*)perylene	191-24-2	mg/kg	8 / 18	7.6E-02	5.8E-01	3.8E+00	9.6E-01	9.6E-01	--	--	--	Yes
Benzo(*k*)fluoranthene	207-08-9	mg/kg	8 / 19	1.0E-01	6.8E-01	5.0E+00	1.2E+00	1.2E+00	--	6.2E+00	2.1E+01	No
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	9 / 19	4.3E-02	1.9E-01	2.0E-01	2.3E-01	2.0E-01	--	3.5E+01	1.2E+02	No
Carbazole	86-74-8	mg/kg	3 / 19	1.2E-01	2.8E-01	1.4E+00	4.0E-01	4.0E-01	--	2.4E+01	8.6E+01	No
Chrysene	218-01-9	mg/kg	11 / 19	3.8E-02	8.7E-01	6.4E+00	2.2E+00	2.2E+00	--	6.2E+01	2.1E+02	No
Di-n-butyl phthalate	84-74-2	mg/kg	1 / 19	9.2E-01	2.9E-01	9.2E-01	3.5E-01	3.5E-01	--	6.1E+02	6.2E+03	No
Dibenz(*a,h*)anthracene	53-70-3	mg/kg	4 / 19	1.4E-01	3.2E-01	1.2E+00	4.2E-01	4.2E-01	--	6.2E-02	2.1E-01	Yes
Fluoranthene	206-44-0	mg/kg	14 / 19	3.8E-02	7.9E-01	8.1E+00	1.8E+00	1.8E+00	--	2.3E+02	2.2E+03	No
Fluorene	86-73-7	mg/kg	2 / 19	6.4E-02	2.3E-01	1.2E-01	2.6E-01	1.2E-01	--	2.7E+02	2.6E+03	No
Indeno(1,2,3-*cd*)pyrene	193-39-5	mg/kg	8 / 18	8.2E-02	5.5E-01	3.7E+00	9.2E-01	9.2E-01	--	6.2E-01	2.1E+00	Yes
Naphthalene	91-20-3	mg/kg	1 / 19	5.8E-02	2.4E-01	5.8E-02	2.8E-01	5.8E-02	--	5.6E+00	1.9E+01	No
Phenanthrene	85-01-8	mg/kg	4 / 19	1.4E-01	3.7E-01	2.3E+00	5.6E-01	5.6E-01	--	--	--	Yes
Pyrene	129-00-0	mg/kg	11 / 19	3.5E-02	7.1E-01	5.4E+00	1.6E+00	1.6E+00	--	2.3E+02	2.9E+03	No
Organic Volatiles												
Acetone	67-64-1	mg/kg	1 / 16	5.0E-02	1.1E-02	5.0E-02	1.6E-02	1.6E-02	--	1.6E+02	6.0E+02	No
Chloroform	67-66-3	mg/kg	1 / 19	2.0E-03	2.8E-03	2.0E-03	3.0E-03	2.0E-03	--	3.6E-01	1.2E+00	No
Toluene	108-88-3	mg/kg	3 / 19	8.6E-04	3.4E-03	1.2E-02	4.3E-03	4.3E-03	--	6.6E+01	2.2E+02	No
Melt-Pour Area Drainage Ditches												
Inorganics												
Aluminum	7429-90-5	mg/kg	15 / 15	2.7E+03	6.6E+03	1.3E+04	8.3E+03	8.3E+03	1.8E+04	7.6E+03	9.2E+04	No
Antimony	7440-36-0	mg/kg	1 / 7	2.0E+00	8.0E-01	2.0E+00	1.2E+00	1.2E+00	9.6E-01	3.1E+00	4.1E+01	No
Arsenic	7440-38-2	mg/kg	15 / 15	3.2E+00	9.1E+00	1.6E+01	1.1E+01	1.1E+01	1.5E+01	3.9E-01	1.6E+00	Yes
Barium	7440-39-3	mg/kg	15 / 15	1.7E+01	4.6E+01	8.4E+01	5.5E+01	5.5E+01	8.8E+01	5.4E+02	6.7E+03	No
Beryllium	7440-41-7	mg/kg	7 / 7	1.8E-01	3.5E-01	4.5E-01	4.3E-01	4.3E-01	8.8E-01	1.5E+01	1.9E+02	No
Cadmium	7440-43-9	mg/kg	12 / 15	4.0E-02	1.5E-01	3.2E-01	2.0E-01	2.0E-01	--	3.7E+00	4.5E+01	No
Calcium	7440-70-2	mg/kg	7 / 7	2.8E+03	4.2E+03	6.8E+03	5.8E+03	5.8E+03	1.6E+04	--	--	No
Chromium	7440-47-3	mg/kg	15 / 15	5.0E+00	9.5E+00	1.7E+01	1.1E+01	1.1E+01	1.7E+01	2.1E+02	4.5E+02	No
Cobalt	7440-48-4	mg/kg	7 / 7	3.7E+00	7.4E+00	9.9E+00	9.0E+00	9.0E+00	1.0E+01	1.4E+02	1.3E+03	No
Copper	7440-50-8	mg/kg	7 / 7	7.5E+00	1.4E+01	2.0E+01	1.7E+01	1.7E+01	1.8E+01	3.1E+02	4.1E+03	No
Cyanide	57-12-5	mg/kg	1 / 2	1.6E-01	2.5E-01	1.6E-01	7.8E-01	1.6E-01	--	1.2E+02	1.2E+03	No
Iron	7439-89-6	mg/kg	7 / 7	8.5E+03	1.7E+04	2.6E+04	2.2E+04	2.2E+04	2.3E+04	2.3E+03	3.1E+04	No
Lead	7439-92-1	mg/kg	15 / 15	7.8E+00	1.4E+01	2.7E+01	1.7E+01	1.7E+01	1.9E+01	4.0E+02	7.5E+02	No

Table Q-5. Summary of COPC Screening for Load Line 4 Deep Surface Soil

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Residential PRG	Region 9 Industrial PRG	COPC?
Magnesium	7439-95-4	mg/kg	7 / 7	1.4E+03	2.6E+03	3.5E+03	3.2E+03	3.2E+03	3.0E+03	--	--	No
Manganese	7439-96-5	mg/kg	15 / 15	9.2E+01	4.2E+02	8.9E+02	6.4E+02	6.4E+02	1.5E+03	1.8E+02	1.9E+03	No
Mercury	7487-94-6	mg/kg	3 / 15	1.3E-02	3.0E-02	2.6E-02	4.0E-02	2.6E-02	3.6E-02	2.3E+00	3.1E+01	No
Nickel	7440-02-0	mg/kg	7 / 7	7.3E+00	1.5E+01	1.9E+01	1.8E+01	1.8E+01	2.1E+01	1.6E+02	2.0E+03	No
Potassium	7440-09-7	mg/kg	7 / 7	3.2E+02	6.2E+02	8.8E+02	7.8E+02	7.8E+02	9.3E+02	--	--	No
Selenium	7782-49-2	mg/kg	6 / 15	4.1E-01	7.0E-01	6.0E-01	9.3E-01	6.0E-01	1.4E+00	3.9E+01	5.1E+02	No
Sodium	7440-23-5	mg/kg	1 / 7	2.0E+02	3.2E+02	2.0E+02	3.7E+02	2.0E+02	1.2E+02	--	--	No
Thallium	6533-73-9	mg/kg	6 / 7	2.8E-01	4.6E-01	7.3E-01	7.7E-01	7.3E-01	--	5.2E-01	6.7E+00	Yes
Vanadium	7440-62-2	mg/kg	7 / 7	5.0E+00	9.9E+00	1.3E+01	1.2E+01	1.2E+01	3.1E+01	5.5E+01	7.2E+02	No
Zinc	7440-66-6	mg/kg	15 / 15	3.9E+01	7.2E+01	1.1E+02	8.0E+01	8.0E+01	6.2E+01	2.3E+03	3.1E+04	No
Organic Semivolatiles												
Fluoranthene	206-44-0	mg/kg	1 / 3	1.2E-01	2.5E-01	1.2E-01	5.0E-01	1.2E-01	--	2.3E+02	2.2E+03	No
Phenanthrene	85-01-8	mg/kg	1 / 3	1.6E-01	2.7E-01	1.6E-01	4.8E-01	1.6E-01	--	--	--	Yes
Pyrene	129-00-0	mg/kg	1 / 3	1.2E-01	2.5E-01	1.2E-01	5.0E-01	1.2E-01	--	2.3E+02	2.9E+03	No
Organic Volatiles												
Acetone	67-64-1	mg/kg	1 / 2	6.3E-03	1.0E-02	6.3E-03	3.4E-02	6.3E-03	--	1.6E+02	6.0E+02	No
Packaging and Shipping Areas												
Inorganics												
Aluminum	7429-90-5	mg/kg	12 / 12	3.9E+03	1.1E+04	1.5E+04	1.2E+04	1.2E+04	1.8E+04	7.6E+03	9.2E+04	No
Antimony	7440-36-0	mg/kg	3 / 7	6.8E-01	7.9E-01	1.5E+00	1.0E+00	1.0E+00	9.6E-01	3.1E+00	4.1E+01	No
Arsenic	7440-38-2	mg/kg	12 / 12	4.5E+00	8.2E+00	1.3E+01	9.5E+00	9.5E+00	1.5E+01	3.9E-01	1.6E+00	No
Barium	7440-39-3	mg/kg	12 / 12	2.5E+01	1.1E+02	2.7E+02	2.0E+02	2.0E+02	8.8E+01	5.4E+02	6.7E+03	No
Beryllium	7440-41-7	mg/kg	5 / 11	1.1E+00	8.5E-01	2.1E+00	1.2E+00	1.2E+00	8.8E-01	1.5E+01	1.9E+02	No
Cadmium	7440-43-9	mg/kg	8 / 12	1.9E-01	2.0E+00	9.1E+00	2.0E+01	9.1E+00	--	3.7E+00	4.5E+01	Yes
Calcium	7440-70-2	mg/kg	11 / 11	1.1E+03	2.2E+04	5.3E+04	3.2E+04	3.2E+04	1.6E+04	--	--	No
Chromium	7440-47-3	mg/kg	12 / 12	4.5E+00	1.2E+01	3.0E+01	1.7E+01	1.7E+01	1.7E+01	2.1E+02	4.5E+02	No
Cobalt	7440-48-4	mg/kg	11 / 11	3.2E+00	5.6E+00	8.5E+00	6.9E+00	6.9E+00	1.0E+01	1.4E+02	1.3E+03	No
Copper	7440-50-8	mg/kg	11 / 11	1.0E+01	2.4E+01	5.6E+01	3.6E+01	3.6E+01	1.8E+01	3.1E+02	4.1E+03	No
Iron	7439-89-6	mg/kg	11 / 11	7.9E+03	1.8E+04	3.8E+04	2.5E+04	2.5E+04	2.3E+04	2.3E+03	3.1E+04	No
Lead	7439-92-1	mg/kg	12 / 12	1.4E+01	9.2E+01	5.0E+02	1.7E+02	1.7E+02	1.9E+01	4.0E+02	7.5E+02	Yes
Magnesium	7439-95-4	mg/kg	11 / 11	9.7E+02	5.0E+03	1.3E+04	1.1E+04	1.1E+04	3.0E+03	--	--	No
Manganese	7439-96-5	mg/kg	12 / 12	1.5E+02	6.7E+02	1.9E+03	1.3E+03	1.3E+03	1.5E+03	1.8E+02	1.9E+03	Yes
Mercury	7487-94-6	mg/kg	7 / 12	1.2E-02	2.6E-02	7.8E-02	4.2E-02	4.2E-02	3.6E-02	2.3E+00	3.1E+01	No

Table Q-5. Summary of COPC Screening for Load Line 4 Deep Surface Soil

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Residential PRG	Region 9 Industrial PRG	COPC?
Nickel	7440-02-0	mg/kg	11 / 11	7.4E+00	1.4E+01	2.6E+01	1.8E+01	1.8E+01	2.1E+01	1.6E+02	2.0E+03	No
Potassium	7440-09-7	mg/kg	11 / 11	3.0E+02	7.2E+02	1.4E+03	1.0E+03	1.0E+03	9.3E+02	--	--	No
Selenium	7782-49-2	mg/kg	7 / 12	3.6E-01	8.8E-01	1.4E+00	1.1E+00	1.1E+00	1.4E+00	3.9E+01	5.1E+02	No
Sodium	7440-23-5	mg/kg	6 / 11	8.2E+01	2.4E+02	3.3E+02	3.0E+02	3.0E+02	1.2E+02	--	--	No
Thallium	6533-73-9	mg/kg	6 / 11	2.9E-01	3.3E-01	6.6E-01	4.6E-01	4.6E-01	--	5.2E-01	6.7E+00	Yes
Vanadium	7440-62-2	mg/kg	11 / 11	5.2E+00	1.2E+01	2.4E+01	1.6E+01	1.6E+01	3.1E+01	5.5E+01	7.2E+02	No
Zinc	7440-66-6	mg/kg	12 / 12	4.9E+01	2.2E+02	8.4E+02	4.8E+02	4.8E+02	6.2E+01	2.3E+03	3.1E+04	No
Organic Explosives												
Nitrocellulose	9004-70-0	mg/kg	1 / 1	9.0E+00	9.0E+00	9.0E+00	--	9.0E+00	--	--	--	Yes
Organic PCBs												
PCB-1254	11097-69-1	mg/kg	3 / 10	2.7E-01	2.0E-01	7.5E-01	3.7E-01	3.7E-01	--	1.1E-01	7.4E-01	Yes
PCB-1260	11096-82-5	mg/kg	2 / 10	4.3E-02	1.6E-01	1.3E+00	3.9E-01	3.9E-01	--	2.2E-01	7.4E-01	Yes
Organic Pesticides												
4,4'-DDE	72-55-9	mg/kg	1 / 1	3.8E-02	3.8E-02	3.8E-02	--	3.8E-02	--	1.7E+00	7.0E+00	No
Dieldrin	60-57-1	mg/kg	1 / 1	1.4E-02	1.4E-02	1.4E-02	--	1.4E-02	--	3.0E-02	1.1E-01	No
Endrin Aldehyde	7421-93-4	mg/kg	1 / 1	5.7E-02	5.7E-02	5.7E-02	--	5.7E-02	--	1.8E+00	1.8E+01	No
Methoxychlor	72-43-5	mg/kg	1 / 1	2.5E-02	2.5E-02	2.5E-02	--	2.5E-02	--	3.1E+01	3.1E+02	No
alpha-Chlordane	5103-71-9	mg/kg	1 / 1	1.4E-02	1.4E-02	1.4E-02	--	1.4E-02	--	1.6E+00	6.5E+00	No
gamma-Chlordane	5103-74-2	mg/kg	1 / 1	1.1E-02	1.1E-02	1.1E-02	--	1.1E-02	--	1.6E+00	6.5E+00	No
Organic Semivolatiles												
Benz(*a*)anthracene	56-55-3	mg/kg	1 / 2	9.3E-02	1.5E-01	9.3E-02	5.0E-01	9.3E-02	--	6.2E-01	2.1E+00	No
Benzo(*a*)pyrene	50-32-8	mg/kg	1 / 2	1.0E-01	1.5E-01	1.0E-01	4.8E-01	1.0E-01	--	6.2E-02	2.1E-01	Yes
Benzo(*b*)fluoranthene	205-99-2	mg/kg	2 / 2	1.0E-01	1.2E-01	1.3E-01	2.1E-01	1.3E-01	--	6.2E-01	2.1E+00	No
Benzo(*g,h,i*)perylene	191-24-2	mg/kg	2 / 2	6.6E-02	8.3E-02	1.0E-01	1.9E-01	1.0E-01	--	--	--	Yes
Benzo(*k*)fluoranthene	207-08-9	mg/kg	1 / 2	8.0E-02	1.4E-01	8.0E-02	5.4E-01	8.0E-02	--	6.2E+00	2.1E+01	No
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	1 / 2	7.8E-02	1.4E-01	7.8E-02	5.4E-01	7.8E-02	--	3.5E+01	1.2E+02	No
Chrysene	218-01-9	mg/kg	2 / 2	8.7E-02	1.1E-01	1.4E-01	2.8E-01	1.4E-01	--	6.2E+01	2.1E+02	No
Fluoranthene	206-44-0	mg/kg	2 / 2	1.3E-01	2.1E-01	2.9E-01	7.2E-01	2.9E-01	--	2.3E+02	2.2E+03	No
Phenanthrene	85-01-8	mg/kg	1 / 2	1.7E-01	1.9E-01	1.7E-01	3.0E-01	1.7E-01	--	--	--	Yes
Pyrene	129-00-0	mg/kg	1 / 2	1.8E-01	1.9E-01	1.8E-01	2.7E-01	1.8E-01	--	2.3E+02	2.9E+03	No
Organic Volatiles												
Toluene	108-88-3	mg/kg	1 / 3	1.6E-03	2.5E-03	1.6E-03	3.9E-03	1.6E-03	--	6.6E+01	2.2E+02	No

Table Q-5. Summary of COPC Screening for Load Line 4 Deep Surface Soil

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Residential PRG	Region 9 Industrial PRG	COPC?
Perimeter Area												
Inorganics												
Aluminum	7429-90-5	mg/kg	27 / 27	6.2E+03	1.1E+04	1.5E+04	1.2E+04	1.2E+04	1.8E+04	7.6E+03	9.2E+04	No
Arsenic	7440-38-2	mg/kg	27 / 27	2.3E+00	8.5E+00	1.4E+01	9.4E+00	9.4E+00	1.5E+01	3.9E-01	1.6E+00	No
Barium	7440-39-3	mg/kg	27 / 27	2.1E+01	5.7E+01	1.1E+02	6.5E+01	6.5E+01	8.8E+01	5.4E+02	6.7E+03	No
Beryllium	7440-41-7	mg/kg	3 / 23	5.3E-01	3.7E-01	1.5E+00	4.8E-01	4.8E-01	8.8E-01	1.5E+01	1.9E+02	No
Cadmium	7440-43-9	mg/kg	12 / 27	5.5E-02	2.3E-01	5.4E-01	2.7E-01	2.7E-01	--	3.7E+00	4.5E+01	No
Calcium	7440-70-2	mg/kg	23 / 23	1.6E+02	5.2E+03	5.3E+04	1.0E+04	1.0E+04	1.6E+04	--	--	No
Chromium	7440-47-3	mg/kg	27 / 27	6.2E+00	1.9E+01	1.2E+02	2.6E+01	2.6E+01	1.7E+01	2.1E+02	4.5E+02	No
Cobalt	7440-48-4	mg/kg	23 / 23	2.2E+00	7.0E+00	1.5E+01	8.1E+00	8.1E+00	1.0E+01	1.4E+02	1.3E+03	No
Copper	7440-50-8	mg/kg	23 / 23	4.8E+00	1.1E+01	1.7E+01	1.3E+01	1.3E+01	1.8E+01	3.1E+02	4.1E+03	No
Iron	7439-89-6	mg/kg	23 / 23	6.4E+03	1.7E+04	2.5E+04	1.9E+04	1.9E+04	2.3E+04	2.3E+03	3.1E+04	No
Lead	7439-92-1	mg/kg	27 / 27	7.8E+00	1.1E+02	1.3E+03	2.1E+02	2.1E+02	1.9E+01	4.0E+02	7.5E+02	Yes
Magnesium	7439-95-4	mg/kg	23 / 23	6.8E+02	2.3E+03	8.2E+03	2.9E+03	2.9E+03	3.0E+03	--	--	No
Manganese	7439-96-5	mg/kg	27 / 27	8.5E+01	4.0E+02	1.8E+03	5.8E+02	5.8E+02	1.5E+03	1.8E+02	1.9E+03	Yes
Mercury	7487-94-6	mg/kg	21 / 26	1.2E-02	4.2E-02	9.4E-02	5.5E-02	5.5E-02	3.6E-02	2.3E+00	3.1E+01	No
Nickel	7440-02-0	mg/kg	23 / 23	5.4E+00	1.3E+01	2.1E+01	1.5E+01	1.5E+01	2.1E+01	1.6E+02	2.0E+03	No
Potassium	7440-09-7	mg/kg	23 / 23	3.5E+02	6.8E+02	1.0E+03	7.5E+02	7.5E+02	9.3E+02	--	--	No
Selenium	7782-49-2	mg/kg	14 / 27	3.5E-01	9.1E-01	1.2E+00	1.0E+00	1.0E+00	1.4E+00	3.9E+01	5.1E+02	No
Sodium	7440-23-5	mg/kg	2 / 23	8.7E+01	2.8E+02	1.7E+02	3.0E+02	1.7E+02	1.2E+02	--	--	No
Thallium	6533-73-9	mg/kg	21 / 23	3.0E-01	4.4E-01	6.7E-01	5.0E-01	5.0E-01	--	5.2E-01	6.7E+00	Yes
Vanadium	7440-62-2	mg/kg	23 / 23	7.6E+00	1.7E+01	2.4E+01	1.8E+01	1.8E+01	3.1E+01	5.5E+01	7.2E+02	No
Zinc	7440-66-6	mg/kg	27 / 27	2.7E+01	5.7E+01	1.2E+02	6.7E+01	6.7E+01	6.2E+01	2.3E+03	3.1E+04	No
Organic Semivolatiles												
Benz(*a*)anthracene	56-55-3	mg/kg	1 / 5	1.1E-01	1.8E-01	1.1E-01	2.2E-01	1.1E-01	--	6.2E-01	2.1E+00	No
Benzo(*a*)pyrene	50-32-8	mg/kg	1 / 5	1.4E-01	1.9E-01	1.4E-01	2.1E-01	1.4E-01	--	6.2E-02	2.1E-01	Yes
Benzo(*b*)fluoranthene	205-99-2	mg/kg	1 / 5	1.6E-01	1.9E-01	1.6E-01	2.1E-01	1.6E-01	--	6.2E-01	2.1E+00	No
Benzo(*g,h,i*)perylene	191-24-2	mg/kg	1 / 5	1.2E-01	1.8E-01	1.2E-01	2.2E-01	1.2E-01	--	--	--	Yes
Benzo(*k*)fluoranthene	207-08-9	mg/kg	1 / 5	7.8E-02	1.7E-01	7.8E-02	2.3E-01	7.8E-02	--	6.2E+00	2.1E+01	No
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	4 / 5	1.2E-01	2.0E-01	3.1E-01	3.2E-01	3.1E-01	--	3.5E+01	1.2E+02	No
Chrysene	218-01-9	mg/kg	1 / 5	1.4E-01	1.9E-01	1.4E-01	2.1E-01	1.4E-01	--	6.2E+01	2.1E+02	No
Fluoranthene	206-44-0	mg/kg	2 / 5	8.5E-02	1.7E-01	1.8E-01	2.2E-01	1.8E-01	--	2.3E+02	2.2E+03	No
Indeno(1,2,3-*cd*)pyrene	193-39-5	mg/kg	1 / 5	9.9E-02	1.8E-01	9.9E-02	2.2E-01	9.9E-02	--	6.2E-01	2.1E+00	No

Table Q-5. Summary of COPC Screening for Load Line 4 Deep Surface Soil

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Residential PRG	Region 9 Industrial PRG	COPC?
Pyrene	129-00-0	mg/kg	1 / 5	1.6E-01	1.9E-01	1.6E-01	2.1E-01	1.6E-01	--	2.3E+02	2.9E+03	No
Organic Volatiles												
Toluene	108-88-3	mg/kg	1 / 5	6.2E-04	2.5E-03	6.2E-04	3.5E-03	6.2E-04	--	6.6E+01	2.2E+02	No
Preparation and Receiving Areas												
Inorganics												
Aluminum	7429-90-5	mg/kg	20 / 20	2.3E+03	1.1E+04	3.7E+04	1.4E+04	1.4E+04	1.8E+04	7.6E+03	9.2E+04	Yes
Arsenic	7440-38-2	mg/kg	20 / 20	2.7E+00	9.7E+00	2.7E+01	1.3E+01	1.3E+01	1.5E+01	3.9E-01	1.6E+00	Yes
Barium	7440-39-3	mg/kg	20 / 20	2.5E+01	1.0E+02	4.0E+02	1.6E+02	1.6E+02	8.8E+01	5.4E+02	6.7E+03	No
Beryllium	7440-41-7	mg/kg	11 / 20	2.5E-01	7.6E-01	5.0E+00	1.1E+00	1.1E+00	8.8E-01	1.5E+01	1.9E+02	No
Cadmium	7440-43-9	mg/kg	16 / 20	1.2E-01	8.9E-01	4.6E+00	1.8E+00	1.8E+00	--	3.7E+00	4.5E+01	Yes
Calcium	7440-70-2	mg/kg	20 / 20	1.6E+03	4.0E+04	1.7E+05	6.4E+04	6.4E+04	1.6E+04	--	--	No
Chromium	7440-47-3	mg/kg	20 / 20	6.2E+00	1.9E+01	1.6E+02	3.1E+01	3.1E+01	1.7E+01	2.1E+02	4.5E+02	No
Cobalt	7440-48-4	mg/kg	20 / 20	1.9E+00	5.7E+00	1.4E+01	7.4E+00	7.4E+00	1.0E+01	1.4E+02	1.3E+03	No
Copper	7440-50-8	mg/kg	20 / 20	5.5E+00	4.3E+01	5.1E+02	8.6E+01	8.6E+01	1.8E+01	3.1E+02	4.1E+03	Yes
Cyanide	57-12-5	mg/kg	1 / 1	1.1E-01	1.1E-01	1.1E-01	--	1.1E-01	--	1.2E+02	1.2E+03	No
Iron	7439-89-6	mg/kg	20 / 20	7.5E+03	2.1E+04	1.0E+05	2.9E+04	2.9E+04	2.3E+04	2.3E+03	3.1E+04	No
Lead	7439-92-1	mg/kg	20 / 20	1.1E+01	1.2E+02	9.9E+02	2.5E+02	2.5E+02	1.9E+01	4.0E+02	7.5E+02	Yes
Magnesium	7439-95-4	mg/kg	20 / 20	9.6E+02	4.3E+03	1.7E+04	6.4E+03	6.4E+03	3.0E+03	--	--	No
Manganese	7439-96-5	mg/kg	20 / 20	8.5E+01	7.8E+02	4.7E+03	1.6E+03	1.6E+03	1.5E+03	1.8E+02	1.9E+03	Yes
Mercury	7487-94-6	mg/kg	15 / 20	1.1E-02	4.6E-01	7.4E+00	1.1E+00	1.1E+00	3.6E-02	2.3E+00	3.1E+01	Yes
Nickel	7440-02-0	mg/kg	20 / 20	4.3E+00	1.6E+01	4.8E+01	2.0E+01	2.0E+01	2.1E+01	1.6E+02	2.0E+03	No
Potassium	7440-09-7	mg/kg	20 / 20	3.6E+02	7.5E+02	2.5E+03	9.4E+02	9.4E+02	9.3E+02	--	--	No
Selenium	7782-49-2	mg/kg	8 / 20	4.2E-01	1.2E+00	2.8E+00	1.4E+00	1.4E+00	1.4E+00	3.9E+01	5.1E+02	No
Sodium	7440-23-5	mg/kg	7 / 20	7.4E+01	2.7E+02	6.4E+02	3.2E+02	3.2E+02	1.2E+02	--	--	No
Thallium	6533-73-9	mg/kg	15 / 20	2.6E-01	4.8E-01	1.2E+00	5.9E-01	5.9E-01	--	5.2E-01	6.7E+00	Yes
Vanadium	7440-62-2	mg/kg	20 / 20	5.5E+00	1.4E+01	4.1E+01	1.8E+01	1.8E+01	3.1E+01	5.5E+01	7.2E+02	No
Zinc	7440-66-6	mg/kg	20 / 20	3.6E+01	1.8E+02	7.5E+02	2.8E+02	2.8E+02	6.2E+01	2.3E+03	3.1E+04	No
Organic Explosives												
Nitrocellulose	9004-70-0	mg/kg	1 / 3	1.9E+01	7.6E+00	1.9E+01	2.4E+01	1.9E+01	--	--	--	Yes
Organic PCBs												
PCB-1254	11097-69-1	mg/kg	3 / 17	3.6E-01	2.9E+00	4.8E+01	7.8E+00	7.8E+00	--	1.1E-01	7.4E-01	Yes
PCB-1260	11096-82-5	mg/kg	1 / 16	5.7E+00	4.9E-01	5.7E+00	1.1E+00	1.1E+00	--	2.2E-01	7.4E-01	Yes

Table Q-5. Summary of COPC Screening for Load Line 4 Deep Surface Soil

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Residential PRG	Region 9 Industrial PRG	COPC?
Organic Semivolatiles												
Bis(2-ethylhexyl)phthalate	117-81-7	mg/kg	1 / 5	6.1E-02	1.9E-01	6.1E-02	2.7E-01	6.1E-02	--	3.5E+01	1.2E+02	No
Fluoranthene	206-44-0	mg/kg	1 / 5	7.0E-02	1.9E-01	7.0E-02	2.6E-01	7.0E-02	--	2.3E+02	2.2E+03	No
Phenanthrene	85-01-8	mg/kg	1 / 5	6.0E-02	1.9E-01	6.0E-02	2.6E-01	6.0E-02	--	--	--	Yes
Pyrene	129-00-0	mg/kg	1 / 5	6.9E-02	1.9E-01	6.9E-02	2.6E-01	6.9E-02	--	2.3E+02	2.9E+03	No
Organic Volatiles												
2-Butanone	78-93-3	mg/kg	1 / 5	1.3E-02	1.0E-02	1.3E-02	1.5E-02	1.3E-02	--	7.3E+02	2.7E+03	No
Acetone	67-64-1	mg/kg	2 / 4	1.2E-02	1.9E-02	4.2E-02	3.7E-02	3.7E-02	--	1.6E+02	6.0E+02	No
Toluene	108-88-3	mg/kg	3 / 5	6.6E-04	2.5E-03	5.1E-03	4.3E-03	4.3E-03	--	6.6E+01	2.2E+02	No

CAS = Chemical Abstracts Service.
COPC = Chemical of potential concern.
DDD = Dichlorodiphenyldichloroethane.
DDE = Dichlorodiphenyldichloroethylene.
DDT = Dichlorodiphenyltrichloroethane.
EPC = Exposure point concentration.
HMX = Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine.
PCB = Polychlorinated biphenyl.
RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine.
PRG = Preliminary remediation goal.
UCL = Upper confidence limit on the mean.
-- Criteria not available or insufficient data to calculate the UCL.

Table Q-6. Summary of COPC Screening for Load Line 4 Subsurface Soil

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Residential PRG	Region 9 Industrial PRG	COPC?
Explosives Handling Areas												
Inorganics												
Aluminum	7429-90-5	mg/kg	4 / 4	1.1E+04	1.3E+04	1.8E+04	1.9E+04	1.8E+04	2.0E+04	7.6E+03	9.2E+04	No
Arsenic	7440-38-2	mg/kg	4 / 4	4.3E+00	1.0E+01	1.8E+01	4.6E+01	1.8E+01	2.0E+01	3.9E-01	1.6E+00	No
Barium	7440-39-3	mg/kg	4 / 4	5.1E+01	1.1E+02	1.9E+02	1.9E+02	1.9E+02	1.2E+02	5.4E+02	6.7E+03	No
Beryllium	7440-41-7	mg/kg	2 / 4	1.5E+00	1.2E+00	2.7E+00	2.6E+00	2.6E+00	8.8E-01	1.5E+01	1.9E+02	No
Cadmium	7440-43-9	mg/kg	3 / 4	2.9E-01	8.7E-01	1.5E+00	1.7E+00	1.5E+00	--	3.7E+00	4.5E+01	No
Calcium	7440-70-2	mg/kg	4 / 4	3.8E+03	3.5E+04	8.5E+04	1.0E+08	8.5E+04	3.6E+04	--	--	No
Chromium	7440-47-3	mg/kg	4 / 4	1.3E+01	1.7E+01	2.8E+01	3.4E+01	2.8E+01	2.7E+01	2.1E+02	4.5E+02	No
Cobalt	7440-48-4	mg/kg	4 / 4	3.5E+00	6.6E+00	9.5E+00	2.4E+01	9.5E+00	2.3E+01	1.4E+02	1.3E+03	No
Copper	7440-50-8	mg/kg	4 / 4	1.5E+01	1.7E+01	1.8E+01	1.8E+01	1.8E+01	3.2E+01	3.1E+02	4.1E+03	No
Iron	7439-89-6	mg/kg	4 / 4	1.4E+04	1.9E+04	2.4E+04	2.6E+04	2.4E+04	3.5E+04	2.3E+03	3.1E+04	No
Lead	7439-92-1	mg/kg	4 / 4	1.1E+01	5.6E+01	1.4E+02	1.9E+04	1.4E+02	1.9E+01	4.0E+02	7.5E+02	No
Magnesium	7439-95-4	mg/kg	4 / 4	3.0E+03	7.0E+03	1.4E+04	4.4E+04	1.4E+04	8.8E+03	--	--	No
Manganese	7439-96-5	mg/kg	4 / 4	2.2E+02	8.9E+02	1.6E+03	1.8E+03	1.6E+03	3.0E+03	1.8E+02	1.9E+03	No
Mercury	7487-94-6	mg/kg	3 / 4	1.3E-02	6.7E-02	2.0E-01	1.7E+02	2.0E-01	4.4E-02	2.3E+00	3.1E+01	No
Nickel	7440-02-0	mg/kg	4 / 4	1.2E+01	1.8E+01	2.4E+01	3.3E+01	2.4E+01	6.1E+01	1.6E+02	2.0E+03	No
Potassium	7440-09-7	mg/kg	4 / 4	6.9E+02	1.3E+03	2.0E+03	3.8E+03	2.0E+03	3.4E+03	--	--	No
Selenium	7782-49-2	mg/kg	1 / 4	8.6E-01	1.1E+00	8.6E-01	1.3E+00	8.6E-01	1.5E+00	3.9E+01	5.1E+02	No
Sodium	7440-23-5	mg/kg	2 / 4	1.1E+02	2.4E+02	2.5E+02	3.4E+02	2.5E+02	1.5E+02	--	--	No
Thallium	6533-73-9	mg/kg	1 / 4	4.7E-01	2.3E-01	4.7E-01	4.2E-01	4.2E-01	9.1E-01	5.2E-01	6.7E+00	No
Vanadium	7440-62-2	mg/kg	4 / 4	8.7E+00	1.3E+01	1.7E+01	1.8E+01	1.7E+01	3.8E+01	5.5E+01	7.2E+02	No
Zinc	7440-66-6	mg/kg	4 / 4	5.7E+01	9.0E+01	1.3E+02	1.3E+02	1.3E+02	9.3E+01	2.3E+03	3.1E+04	No
Packaging and Shipping Areas												
Inorganics												
Aluminum	7429-90-5	mg/kg	1 / 1	1.3E+04	1.3E+04	1.3E+04	--	1.3E+04	2.0E+04	7.6E+03	9.2E+04	No
Arsenic	7440-38-2	mg/kg	1 / 1	7.7E+00	7.7E+00	7.7E+00	--	7.7E+00	2.0E+01	3.9E-01	1.6E+00	No
Barium	7440-39-3	mg/kg	1 / 1	1.3E+02	1.3E+02	1.3E+02	--	1.3E+02	1.2E+02	5.4E+02	6.7E+03	No
Beryllium	7440-41-7	mg/kg	1 / 1	1.1E+00	1.1E+00	1.1E+00	--	1.1E+00	8.8E-01	1.5E+01	1.9E+02	No
Cadmium	7440-43-9	mg/kg	1 / 1	3.2E+00	3.2E+00	3.2E+00	--	3.2E+00	--	3.7E+00	4.5E+01	No
Calcium	7440-70-2	mg/kg	1 / 1	2.4E+04	2.4E+04	2.4E+04	--	2.4E+04	3.6E+04	--	--	No
Chromium	7440-47-3	mg/kg	1 / 1	1.4E+01	1.4E+01	1.4E+01	--	1.4E+01	2.7E+01	2.1E+02	4.5E+02	No
Cobalt	7440-48-4	mg/kg	1 / 1	6.8E+00	6.8E+00	6.8E+00	--	6.8E+00	2.3E+01	1.4E+02	1.3E+03	No

Table Q-6. Summary of COPC Screening for Load Line 4 Subsurface Soil

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Residential PRG	Region 9 Industrial PRG	COPC?
Copper	7440-50-8	mg/kg	1 / 1	1.8E+01	1.8E+01	1.8E+01	--	1.8E+01	3.2E+01	3.1E+02	4.1E+03	No
Iron	7439-89-6	mg/kg	1 / 1	2.0E+04	2.0E+04	2.0E+04	--	2.0E+04	3.5E+04	2.3E+03	3.1E+04	No
Lead	7439-92-1	mg/kg	1 / 1	4.8E+01	4.8E+01	4.8E+01	--	4.8E+01	1.9E+01	4.0E+02	7.5E+02	No
Magnesium	7439-95-4	mg/kg	1 / 1	5.5E+03	5.5E+03	5.5E+03	--	5.5E+03	8.8E+03	--	--	No
Manganese	7439-96-5	mg/kg	1 / 1	7.3E+02	7.3E+02	7.3E+02	--	7.3E+02	3.0E+03	1.8E+02	1.9E+03	No
Mercury	7487-94-6	mg/kg	1 / 1	1.3E-02	1.3E-02	1.3E-02	--	1.3E-02	4.4E-02	2.3E+00	3.1E+01	No
Nickel	7440-02-0	mg/kg	1 / 1	1.9E+01	1.9E+01	1.9E+01	--	1.9E+01	6.1E+01	1.6E+02	2.0E+03	No
Potassium	7440-09-7	mg/kg	1 / 1	1.2E+03	1.2E+03	1.2E+03	--	1.2E+03	3.4E+03	--	--	No
Sodium	7440-23-5	mg/kg	1 / 1	8.2E+01	8.2E+01	8.2E+01	--	8.2E+01	1.5E+02	--	--	No
Thallium	6533-73-9	mg/kg	1 / 1	6.6E-01	6.6E-01	6.6E-01	--	6.6E-01	9.1E-01	5.2E-01	6.7E+00	No
Vanadium	7440-62-2	mg/kg	1 / 1	1.5E+01	1.5E+01	1.5E+01	--	1.5E+01	3.8E+01	5.5E+01	7.2E+02	No
Zinc	7440-66-6	mg/kg	1 / 1	1.0E+02	1.0E+02	1.0E+02	--	1.0E+02	9.3E+01	2.3E+03	3.1E+04	No
Perimeter Area												
Inorganics												
Aluminum	7429-90-5	mg/kg	3 / 3	1.4E+04	1.5E+04	1.5E+04	1.6E+04	1.5E+04	2.0E+04	7.6E+03	9.2E+04	No
Arsenic	7440-38-2	mg/kg	3 / 3	1.1E+01	1.2E+01	1.4E+01	1.6E+01	1.4E+01	2.0E+01	3.9E-01	1.6E+00	No
Barium	7440-39-3	mg/kg	3 / 3	4.7E+01	6.1E+01	7.1E+01	8.3E+01	7.1E+01	1.2E+02	5.4E+02	6.7E+03	No
Calcium	7440-70-2	mg/kg	3 / 3	2.2E+02	6.2E+02	9.2E+02	1.2E+03	9.2E+02	3.6E+04	--	--	No
Chromium	7440-47-3	mg/kg	3 / 3	1.5E+01	1.7E+01	1.7E+01	1.9E+01	1.7E+01	2.7E+01	2.1E+02	4.5E+02	No
Cobalt	7440-48-4	mg/kg	3 / 3	7.3E+00	8.2E+00	9.6E+00	1.2E+01	9.6E+00	2.3E+01	1.4E+02	1.3E+03	No
Copper	7440-50-8	mg/kg	3 / 3	1.6E+01	1.7E+01	1.7E+01	1.8E+01	1.7E+01	3.2E+01	3.1E+02	4.1E+03	No
Iron	7439-89-6	mg/kg	3 / 3	2.3E+04	2.4E+04	2.5E+04	2.6E+04	2.5E+04	3.5E+04	2.3E+03	3.1E+04	No
Lead	7439-92-1	mg/kg	3 / 3	3.2E+01	3.9E+01	4.6E+01	5.1E+01	4.6E+01	1.9E+01	4.0E+02	7.5E+02	No
Magnesium	7439-95-4	mg/kg	3 / 3	2.5E+03	2.8E+03	2.9E+03	3.2E+03	2.9E+03	8.8E+03	--	--	No
Manganese	7439-96-5	mg/kg	3 / 3	1.1E+02	1.5E+02	1.9E+02	2.2E+02	1.9E+02	3.0E+03	1.8E+02	1.9E+03	No
Mercury	7487-94-6	mg/kg	3 / 3	2.1E-02	3.4E-02	4.3E-02	5.3E-02	4.3E-02	4.4E-02	2.3E+00	3.1E+01	No
Nickel	7440-02-0	mg/kg	3 / 3	1.9E+01	2.0E+01	2.1E+01	2.2E+01	2.1E+01	6.1E+01	1.6E+02	2.0E+03	No
Potassium	7440-09-7	mg/kg	3 / 3	7.9E+02	8.8E+02	9.5E+02	1.0E+03	9.5E+02	3.4E+03	--	--	No
Thallium	6533-73-9	mg/kg	3 / 3	4.4E-01	5.1E-01	5.5E-01	6.1E-01	5.5E-01	9.1E-01	5.2E-01	6.7E+00	No
Vanadium	7440-62-2	mg/kg	3 / 3	2.0E+01	2.2E+01	2.4E+01	2.6E+01	2.4E+01	3.8E+01	5.5E+01	7.2E+02	No
Zinc	7440-66-6	mg/kg	3 / 3	5.4E+01	5.8E+01	6.1E+01	6.4E+01	6.1E+01	9.3E+01	2.3E+03	3.1E+04	No

Table Q-6. Summary of COPC Screening for Load Line 4 Subsurface Soil

Chemical	CAS Number	Units	Frequency of Detection	Minimum Detect	Average Result	Maximum Detect	95% UCL of Mean	EPC	Site Background Criteria	Region 9 Residential PRG	Region 9 Industrial PRG	COPC?
Preparation and Receiving Areas												
Inorganics												
Aluminum	7429-90-5	mg/kg	3 / 3	1.1E+04	2.0E+04	3.7E+04	1.5E+06	3.7E+04	2.0E+04	7.6E+03	9.2E+04	Yes
Arsenic	7440-38-2	mg/kg	3 / 3	2.7E+00	5.8E+00	8.8E+00	1.1E+01	8.8E+00	2.0E+01	3.9E-01	1.6E+00	No
Barium	7440-39-3	mg/kg	3 / 3	3.2E+01	2.1E+02	4.0E+02	5.2E+02	4.0E+02	1.2E+02	5.4E+02	6.7E+03	No
Beryllium	7440-41-7	mg/kg	2 / 3	1.1E+00	2.1E+00	5.0E+00	4.2E+12	5.0E+00	8.8E-01	1.5E+01	1.9E+02	No
Cadmium	7440-43-9	mg/kg	2 / 3	2.6E-01	3.3E-01	4.2E-01	6.8E-01	4.2E-01	--	3.7E+00	4.5E+01	No
Calcium	7440-70-2	mg/kg	3 / 3	1.9E+03	6.8E+04	1.7E+05	1.7E+28	1.7E+05	3.6E+04	--	--	No
Chromium	7440-47-3	mg/kg	3 / 3	8.9E+00	1.1E+01	1.2E+01	1.3E+01	1.2E+01	2.7E+01	2.1E+02	4.5E+02	No
Cobalt	7440-48-4	mg/kg	3 / 3	1.9E+00	3.9E+00	7.0E+00	3.1E+02	7.0E+00	2.3E+01	1.4E+02	1.3E+03	No
Copper	7440-50-8	mg/kg	3 / 3	5.5E+00	8.9E+00	1.5E+01	1.7E+02	1.5E+01	3.2E+01	3.1E+02	4.1E+03	No
Iron	7439-89-6	mg/kg	3 / 3	9.3E+03	1.4E+04	1.8E+04	2.1E+04	1.8E+04	3.5E+04	2.3E+03	3.1E+04	No
Lead	7439-92-1	mg/kg	3 / 3	1.4E+01	4.7E+01	8.5E+01	1.1E+02	8.5E+01	1.9E+01	4.0E+02	7.5E+02	No
Magnesium	7439-95-4	mg/kg	3 / 3	1.1E+03	7.8E+03	1.7E+04	1.8E+12	1.7E+04	8.8E+03	--	--	No
Manganese	7439-96-5	mg/kg	3 / 3	8.5E+01	2.1E+03	4.7E+03	6.1E+03	4.7E+03	3.0E+03	1.8E+02	1.9E+03	Yes
Nickel	7440-02-0	mg/kg	3 / 3	4.3E+00	9.4E+00	1.7E+01	8.4E+02	1.7E+01	6.1E+01	1.6E+02	2.0E+03	No
Potassium	7440-09-7	mg/kg	3 / 3	3.7E+02	1.3E+03	2.5E+03	1.1E+07	2.5E+03	3.4E+03	--	--	No
Selenium	7782-49-2	mg/kg	3 / 3	4.2E-01	1.3E+00	2.8E+00	1.2E+04	2.8E+00	1.5E+00	3.9E+01	5.1E+02	No
Sodium	7440-23-5	mg/kg	2 / 3	1.0E+02	3.5E+02	6.4E+02	8.1E+02	6.4E+02	1.5E+02	--	--	No
Vanadium	7440-62-2	mg/kg	3 / 3	8.0E+00	1.2E+01	1.5E+01	1.8E+01	1.5E+01	3.8E+01	5.5E+01	7.2E+02	No
Zinc	7440-66-6	mg/kg	3 / 3	3.6E+01	6.5E+01	1.1E+02	1.6E+03	1.1E+02	9.3E+01	2.3E+03	3.1E+04	No

CAS = Chemical Abstracts Service.
COPC = Chemical of potential concern.
EPC = Exposure point concentration.
PCB = Polychlorinated biphenyl.
PRG = Preliminary remediation goal.
UCL = Upper confidence limit on the mean.
-- Criteria not available or insufficient data to calculate the UCL.

Table Q-7. Chemical-Specific Exposure Parameters for Load Line 4 COPCs

COPC	Dermal Absorption Factor[a] (unitless)	Permeability Constant[b] (cm/hr)	Volatilization Factor[c] (m^3/kg)
Inorganics			
Aluminum	0.001	2.1E-03	--
Arsenic	0.03	1.9E-03	--
Barium	0.001	4.0E-04	--
Cadmium	0.001	3.5E-04	--
Copper	0.001	3.1E-04	--
Manganese	0.001	1.3E-03	--
Mercury	0.001	2.9E-05	--
Thallium (as Thallium carbomate)	0.001	1.6E-04	--
Zinc	0.001	3.4E-04	--
Organics			
2-Methylnaphthalene	0.1	1.4E-01	2.4E+05
4,4'-DDT	0.03	1.1E+00	--
Aldrin	0.1	4.7E-01	--
Benz(*a*)anthracene	0.13	9.5E-01	--
Benzo(*a*)pyrene	0.13	1.2E+00	--
Benzo(*b*)fluoranthene	0.13	7.0E-01	--
Dibenz(*a,h*)anthracene	0.13	1.7E+00	--
Dieldrin	0.1	4.5E-02	--
Heptachlor	0.1	2.2E-01	--
Indeno(1,2,3-*cd*)pyrene	0.13	2.2E+00	--
PCB-1254	0.14	1.3E+00	--
PCB-1260	0.14	5.5E+00	--
RDX	0.1	3.5E-04	--

[a] Chemical-specific absorption factor values from U.S. Environmental Protection Agency (EPA) Region 5 (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 EPA Region 4 Supplemental Guidance to RAGS.

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

[c] Volatilization factors (VFs) calculated using the 1996 EPA Soil Screening Guidance Methodology, using site-specific parameter values for Cleveland, Ohio. Only used for VOCs.

COPC = Chemical of potential concern.
DDT = Dichlorodiphenyltrichloroethane.
PCB = Polychlorinated biphenyl.
RAGS = Risk Assessment Guidance for Superfund.
RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine.
SVOC = Semivolatile organic compound.
VOC = Volatile organic compound.
-- = No value available.

Table Q-8. Noncarcinogenic RfDs for Load Line 4 COPCs

COPC	Oral Chronic RFD (mg/kg-d)	Confidence Level	% GI Absorption[a]	Dermal Chronic RfD (mg/kg-d)	Inhalation Chronic RfD (mg/kg-d)	RfD Basis (vehicle)	Critical Effect	Uncertainty/ Modifying Factor
Inorganics								
Aluminum	1.0E+00	NA	1	1.0E+00	1.4E-03	NA	NA	(O) UF = 10
Arsenic	3.0E-04	Medium (O)	0.95	3.0E-04	--	Oral, oral-water	Hyperpigmentation and keritosis and possible vascular complication	(O) UF = 3
Barium	7.0E-02	Medium (O)	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 (diet)	1.0E-03	High	0.025	2.5E-05	--	Oral, oral-water	Renal toxicity, osteomalacia, osteoporosis, and significant proteinuria	(O) UF = 1000
Copper	4.0E-02	NA	1	4.0E-02	--	NA	NA	NA
Manganese (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 (I) UF = 1000
Mercury	3.0E-04	Medium (I)	0.07	2.1E-05	--	Human occupational inhalation studies	Hand tremor, increases in memory disturbance; slight subjective and objective evidence of autonomic dysfunction	(I) UF = 30
Thallium	8.0E-05	Low	1	8.0E-05	--	Oral (rat)	Increased levels of SGOT and LDH	UF = 3000
Zinc	3.0E-01	Medium	0.3	9.0E-02	--	Oral	(O) Copper deficiency and hypochromic microcytic anemia (human) (I) Pulmonary and gastrointestinal effects (human)	UF = 3

Table Q-8. Noncarcinogenic RfDs for Load Line 4 COPCs

COPC	Oral Chronic RFD (mg/kg-d)	Confidence Level	% GI Absorption[a]	Dermal Chronic RfD (mg/kg-d)	Inhalation Chronic RfD (mg/kg-d)	RfD Basis (vehicle)	Critical Effect	Uncertainty/ Modifying Factor
Organics								
2-Methylnaphthalene	4.0E-03	Low	1	4.0E-03	--	Oral (mice)	Pulmonary alveolar proteinosis	(O) UF = 1000
4,4'-DDT	5.0E-04	Medium	0.9	5.0E-04	--	Oral (rat)	Liver lesions (rat)	UF = 100
Aldrin	3.0E-05	Medium	1	3.0E-05	--	Oral (rat)	Liver toxicity (rat)	UF = 1000
Dieldrin	5.0E-05	Medium	1	5.0E-05	--	Oral (rat)	Liver lesions (rat)	UF = 100
Heptachlor	5.0E-04	Low	1	5.0E-04	--	Oral (rat)	Liver weight increases in males	UF = 300
PCB-1254	2.0E-05	NA	0.8	2.0E-05	--	Oral: (monkey)	Immune system toxicity (monkey)	UF = 300
RDX	3.0E-03	High (O)	1	3.0E-03	--	Oral (rat)	Inflamed prostate	UF = 100

[a] % Gastrointestinal (GI) absorption values from EPA 2000.

(O) indicates oral, (I) indicates inhalation.

COPC = Chemical of potential concern.

DDT = Dichlorodipenyltrichloroethane.

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

NA = Not available.

PCB = Polychlorinated biphenyl.

RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine.

RfD = Reference dose.

UF = Uncertainty factor.

-- = No value available.

Table Q-9. CSFs for Load Line 4 COPCs

COPC	Oral Slope Factor $(mg/kg\text{-}d)^{-1}$	% GI Absorption[a]	Dermal Slope Factor $(mg/kg\text{-}d)^{-1}$	Inhalation Slope Factor $(mg/kg\text{-}d)^{-1}$	EPA Class	TEF	Type of Cancer
Inorganics							
Arsenic	1.5E+00	0.95	1.5E+00	1.5E+01	A	--	Respiratory system tumors
Cadmium (diet)	--	0.025	--	6.3E+00	B1	--	Respiratory tract and lung tumors
Organics							
4,4'-DDT	3.4E-01	0.9	3.4E-01	3.4E-01	B2	--	Liver tumors (mouse)
Aldrin	1.7E+01	1	1.7E+01	1.7E+01	B2	--	Tumor induction (mouse)
Benz(*a*)anthracene	7.3E-01	0.58	7.3E-01	3.1E-01	B2	0.1	Stomach tumors (mouse)
Benzo(*a*)pyrene	7.3E+00	0.58	7.3E+00	3.1E+00	B2	1	Stomach, nasal cavity, larynx, tracheak, and pharnyx
Benzo(*b*)fluoranthene	7.3E-01	0.58	7.3E-01	3.1E-01	B2	0.1	Tumors
Dibenz(*a,h*)anthracene	7.3E+00	0.58	7.3E+00	3.1E+00	B2	1	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)
Indeno(1,2,3-*cd*)pyrene	7.3E-01	0.58	7.3E-01	3.1E-01	B2	0.1	Tumors
PCB-1254	2.0E+00	0.8	2.0E+00	2.0E+00	B2	--	Liver hepatocellular adenomas, carcinomas, cholangiiomas, or cholangiocarcinomas (rat)
PCB-1260	2.0E+00	0.8	2.0E+00	2.0E+00	B2	--	Liver hepatocellular adenomas, carcinomas, cholangiiomas, or cholangiocarcinomas (rat)
RDX	1.1E-01	1	1.1E-01	--	C	--	Liver hepatocellular carcinomas/adenomas (mouse)

[a] % Gastrointestinal (GI) absorption values from U.S. Environmental Protection Agency (EPA 2000).

COPC = Chemical of potential concern.

CSF = Cancer slope factor.

DDT = Dichlorodiphenyltrichloroethane.

PCB = Polychlorinated biphenyl.

RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine.

TEF = Toxicity equivalency factor is based on the relative potency of each carcinogenic polycyclic aromatic hydrocarbon (PAH) relative to that of benzo(*a*)pyrene.

-- = No value available.

Table Q-10. Screening Risk-based RGOs for Groundwater (mg/L) COPCs at Load Line 4

COPC	Ingestion RGO		Dermal RGO		Inhalation RGO		Total RGO[a]		RGO[b] for Screening
	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	
National Guard Trainee									
Inorganics									
Arsenic	9.8E-03	6.1E-04	2.1E+00	1.3E-01	--	--	9.8E-03	6.1E-04	6.1E-04
Manganese	1.5E+00	--	1.9E+01	--	--	--	1.4E+00	--	1.4E+00
Resident Farmer Adult									
Inorganics									
Arsenic	1.1E-03	5.7E-05	2.3E-01	1.2E-02	--	--	1.1E-03	5.7E-05	5.7E-05
Manganese	1.7E-01	--	2.2E+00	--	--	--	1.6E-01	--	1.6E-01
Resident Farmer Child									
Inorganics									
Arsenic	3.1E-04	8.1E-05	1.1E-01	2.9E-02	--	--	3.1E-04	8.1E-05	8.1E-05
Manganese	4.8E-02	--	1.0E+00	--	--	--	4.6E-02	--	4.6E-02

[a] Total RGO is the RGO across all pathways (ingestion, dermal, and inhalation).

[b] RGO for screening is the smaller of the total RGOs. This screening RGO is only used to define COCs (see Table Q-16).

COC = Chemical of concern.

COPC = Chemical of potential concern.

HQ = Hazard quotient.

RGO = Remedial goal option. Risk-based RGOs for screening are at a risk level of 10^{-6} or hazard level of 0.1.

-- = No RGO could be quantified, based on lack of approved toxicity value.

Table Q-11. Screening Risk-based RGOs for Surface Water (mg/L) COPCs at Load Line 4

COPC	Ingestion RGO		Dermal RGO		Inhalation RGO		Total RGO[a]		RGO[b] for Screening
	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	
Dust/Fire Control Worker									
Inorganics									
Arsenic	5.1E-01	3.2E-02	2.0E+00	1.2E-01	--	--	4.1E-01	2.5E-02	2.5E-02
Manganese	7.8E+01	--	1.9E+01	--	--	--	1.5E+01	--	1.5E+01
Organic Pesticides									
4,4'-DDT	8.5E-01	1.4E-01	6.1E-03	1.0E-03	--	--	6.0E-03	1.0E-03	1.0E-03
Hunter/Trapper/Fisher									
Inorganics									
Arsenic	2.2E+00	1.1E-01	2.4E+00	1.2E-01	--	--	1.1E+00	5.9E-02	5.9E-02
Manganese	3.4E+02	--	2.2E+01	--	--	--	2.1E+01	--	2.1E+01
Organic Pesticides									
4,4'-DDT	3.7E+00	5.0E-01	7.2E-03	9.9E-04	--	--	7.2E-03	9.9E-04	9.9E-04
National Guard Trainee									
Inorganics									
Arsenic	2.0E-01	1.2E-02	1.3E-01	8.0E-03	--	--	7.8E-02	4.8E-03	4.8E-03
Manganese	3.0E+01	--	1.2E+00	--	--	--	1.1E+00	--	1.1E+00
Organic Pesticides									
4,4'-DDT	3.3E-01	5.4E-02	3.9E-04	6.4E-05	--	--	3.9E-04	6.4E-05	6.4E-05
Resident Farmer Adult									
Inorganics									
Arsenic	2.2E-02	1.1E-03	8.0E-02	4.1E-03	--	--	1.7E-02	8.9E-04	8.9E-04
Manganese	3.4E+00	--	7.4E-01	--	--	--	6.0E-01	--	6.0E-01
Organic Pesticides									
4,4'-DDT	3.7E-02	5.0E-03	2.4E-04	3.3E-05	--	--	2.4E-04	3.3E-05	3.3E-05

Table Q-11. Screening Risk-based RGOs for Surface Water (mg/L) COPCs at Load Line 4

COPC	Ingestion RGO		Dermal RGO		Inhalation RGO		Total RGO[a]		RGO[b] for Screening
	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	
Resident Farmer Child									
Inorganics									
Arsenic	4.7E-03	1.2E-03	4.4E-02	1.1E-02	--	--	4.2E-03	1.1E-03	1.1E-03
Manganese	7.2E-01	--	4.1E-01	--	--	--	2.6E-01	--	2.6E-01
Organic Pesticides									
4,4'-DDT	7.8E-03	5.4E-03	1.3E-04	9.2E-05	--	--	1.3E-04	9.1E-05	9.1E-05

[a] Total RGO is the RGO across all pathways (ingestion, dermal, and inhalation).

[b] RGO for screening is the smaller of the total RGOs. This screening RGO is only used to define COCs (see Table Q-17).

COC = Chemical of concern.

COPC = Chemical of potential concern.

DDT = Dichlorodiphenyltrichloroethane.

HQ = Hazard quotient.

RGO = Remedial goal option. Risk-based RGOs for screening are at a risk level of 10^{-6} or hazard level of 0.1.

-- = No RGO could be quantified, based on lack of approved toxicity value.

Table Q-12. Screening Risk-based RGOs for Sediment (mg/kg) COPCs at Load Line 4

COPC	Ingestion RGO		Dermal RGO		Inhalation RGO		Total RGO[a]		RGO[b] for Screening
	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	
Dust/Fire Control Worker									
Inorganics									
Aluminum	1.0E+06	--	1.0E+06	--	1.0E+06	--	1.0E+06	--	1.0E+06
Thallium	8.2E+02	--	1.4E+04	--	--	--	7.7E+02	--	7.7E+02
Hunter/Trapper/Fisher									
Inorganics									
Aluminum	1.0E+06	--	1.0E+06	--	1.0E+06	--	1.0E+06	--	1.0E+06
Thallium	1.5E+03	--	1.9E+04	--	--	--	1.4E+03	--	1.4E+03
National Guard Trainee									
Inorganics									
Aluminum	6.6E+05	--	1.0E+06	--	3.5E+03	--	3.5E+03	--	3.5E+03
Thallium	5.2E+01	--	5.3E+03	--	--	--	5.2E+01	--	5.2E+01
Resident Farmer Adult									
Inorganics									
Aluminum	7.3E+04	--	1.0E+06	--	1.0E+06	--	7.0E+04	--	7.0E+04
Thallium	5.8E+00	--	2.6E+02	--	--	--	5.7E+00	--	5.7E+00
Resident Farmer Child									
Inorganics									
Aluminum	7.8E+03	--	1.0E+06	--	1.0E+06	--	7.8E+03	--	7.8E+03
Thallium	6.3E-01	--	2.8E+02	--	--	--	6.2E-01	--	6.2E-01

[a] Total RGO is the RGO across all pathways (ingestion, dermal, and inhalation).

[b] RGO for screening is the smaller of the total RGOs. This screening RGO is only used to define COCs (see Table Q-18).

COC = Chemical of concern.

COPC = Chemical of potential concern.

HQ = Hazard quotient.

RGO = Remedial goal option. Risk-based RGOs for screening are at a risk level of 10^{-6} or hazard level of 0.1.

-- = No RGO could be quantified, based on lack of approved toxicity value.

Table Q-13. Screening Risk-based RGOs for Shallow Surface Soil (mg/kg) COPCs at Load Line 4

COPC	Ingestion RGO		Dermal RGO		Inhalation RGO		Total RGO[a]		RGO[b] for Screening
	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	
Dust/Fire Control Worker									
Inorganics									
Aluminum	1.0E+06	--	1.0E+06	--	1.0E+06	--	1.0E+06	--	1.0E+06
Arsenic	3.1E+03	1.9E+02	1.7E+03	1.1E+02	--	2.3E+05	1.1E+03	6.9E+01	6.9E+01
Barium	7.2E+05	--	8.4E+05	--	1.0E+06	--	3.8E+05	--	3.8E+05
Cadmium	1.0E+04	--	4.3E+03	--	--	5.5E+05	3.0E+03	5.5E+05	3.0E+03
Copper	4.1E+05	--	1.0E+06	--	--	--	3.9E+05	--	3.9E+05
Manganese	4.7E+05	--	3.2E+05	--	1.0E+06	--	1.7E+05	--	1.7E+05
Mercury	3.1E+03	--	3.6E+03	--	--	--	1.7E+03	--	1.7E+03
Thallium	8.2E+02	--	1.4E+04	--	--	--	7.7E+02	--	7.7E+02
Zinc	1.0E+06	--	1.0E+06	--	--	--	1.0E+06	--	1.0E+06
Organic Explosives									
RDX	3.1E+04	2.6E+03	5.2E+03	4.4E+02	--	--	4.4E+03	3.7E+02	3.7E+02
Organic PCBs									
PCB-1254	2.0E+02	1.4E+02	2.5E+01	1.7E+01	--	1.0E+06	2.2E+01	1.5E+01	1.5E+01
PCB-1260	--	1.4E+02	--	1.7E+01	--	1.0E+06	--	1.5E+01	1.5E+01
Organic Pesticides									
Aldrin	3.1E+02	1.7E+01	5.2E+01	2.8E+00	--	2.0E+05	4.4E+01	2.4E+00	2.4E+00
Dieldrin	5.1E+02	1.8E+01	8.6E+01	3.0E+00	--	2.2E+05	7.4E+01	2.6E+00	2.6E+00
Heptachlor	5.1E+03	6.4E+01	8.6E+02	1.1E+01	--	7.6E+05	7.4E+02	9.2E+00	9.2E+00
Organic Semivolatiles									
2-Methylnaphthalene	4.1E+04	--	6.9E+03	--	--	--	5.9E+03	--	5.9E+03
Benz(*a*)anthracene	--	3.9E+02	--	5.1E+01	--	1.0E+06	--	4.5E+01	4.5E+01
Benzo(*a*)pyrene	--	3.9E+01	--	5.1E+00	--	1.0E+06	--	4.5E+00	4.5E+00
Benzo(*b*)fluoranthene	--	3.9E+02	--	5.1E+01	--	1.0E+06	--	4.5E+01	4.5E+01
Dibenz(*a,h*)anthracene	--	3.9E+01	--	5.1E+00	--	1.0E+06	--	4.5E+00	4.5E+00
Indeno(1,2,3-*cd*)pyrene	--	3.9E+02	--	5.1E+01	--	1.0E+06	--	4.5E+01	4.5E+01
Hunter/Trapper/Fisher									
Inorganics									
Aluminum	1.0E+06	--	1.0E+06	--	1.0E+06	--	1.0E+06	--	1.0E+06
Arsenic	5.7E+03	3.0E+02	2.1E+03	1.1E+02	--	8.0E+05	1.6E+03	8.1E+01	8.1E+01
Barium	1.0E+06	--	1.0E+06	--	1.0E+06	--	5.8E+05	--	5.8E+05

Table Q-13. Screening Risk-based RGOs for Shallow Surface Soil (mg/kg) COPCs at Load Line 4

COPC	Ingestion RGO		Dermal RGO		Inhalation RGO		Total RGO[a]		RGO[b] for Screening
	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	
Cadmium	1.9E+04	--	5.3E+03	--	--	1.0E+06	4.2E+03	1.0E+06	4.2E+03
Copper	7.7E+05	--	1.0E+06	--	--	--	7.0E+05	--	7.0E+05
Manganese	8.8E+05	--	3.9E+05	--	1.0E+06	--	2.6E+05	--	2.6E+05
Mercury	5.7E+03	--	4.5E+03	--	--	--	2.5E+03	--	2.5E+03
Thallium	1.5E+03	--	1.7E+04	--	--	--	1.4E+03	--	1.4E+03
Zinc	1.0E+06	--	1.0E+06	--	--	--	1.0E+06	--	1.0E+06
Organic Explosives									
RDX	5.7E+04	4.1E+03	6.4E+03	4.5E+02	--	--	5.8E+03	4.1E+02	4.1E+02
Organic PCBs									
PCB-1254	3.8E+02	2.2E+02	3.0E+01	1.8E+01	--	1.0E+06	2.8E+01	1.6E+01	1.6E+01
PCB-1260	--	2.2E+02	--	1.8E+01	--	1.0E+06	--	1.6E+01	1.6E+01
Organic Pesticides									
Aldrin	5.7E+02	2.6E+01	6.4E+01	2.9E+00	--	7.0E+05	5.8E+01	2.6E+00	2.6E+00
Dieldrin	9.6E+02	2.8E+01	1.1E+02	3.1E+00	--	7.5E+05	9.6E+01	2.8E+00	2.8E+00
Heptachlor	9.6E+03	9.9E+01	1.1E+03	1.1E+01	--	1.0E+06	9.6E+02	1.0E+01	1.0E+01
Organic Semivolatiles									
2-Methylnaphthalene	7.7E+04	--	8.5E+03	--	--	--	7.7E+03	--	7.7E+03
Benz(*a*)anthracene	--	6.1E+02	--	5.2E+01	--	1.0E+06	--	4.8E+01	4.8E+01
Benzo(*a*)pyrene	--	6.1E+01	--	5.2E+00	--	1.0E+06	--	4.8E+00	4.8E+00
Benzo(*b*)fluoranthene	--	6.1E+02	--	5.2E+01	--	1.0E+06	--	4.8E+01	4.8E+01
Dibenz(*a,h*)anthracene	--	6.1E+01	--	5.2E+00	--	1.0E+06	--	4.8E+00	4.8E+00
Indeno(1,2,3-*cd*)pyrene	--	6.1E+02	--	5.2E+01	--	1.0E+06	--	4.8E+01	4.8E+01
Resident Farmer Adult									
Inorganics									
Aluminum	7.3E+04	--	1.0E+06	--	1.0E+06	--	7.0E+04	--	7.0E+04
Arsenic	2.2E+01	1.1E+00	3.2E+01	1.7E+00	--	3.0E+03	1.3E+01	6.7E-01	6.7E-01
Barium	5.1E+03	--	1.6E+04	--	2.8E+05	--	3.8E+03	--	3.8E+03
Cadmium	7.3E+01	--	8.0E+01	--	--	7.3E+03	3.8E+01	7.3E+03	3.8E+01
Copper	2.9E+03	--	1.3E+05	--	--	--	2.9E+03	--	2.9E+03
Manganese	3.4E+03	--	5.9E+03	--	2.8E+04	--	2.0E+03	--	2.0E+03
Mercury	2.2E+01	--	6.7E+01	--	--	--	1.7E+01	--	1.7E+01
Thallium	5.8E+00	--	2.6E+02	--	--	--	5.7E+00	--	5.7E+00

Table Q-13. Screening Risk-based RGOs for Shallow Surface Soil (mg/kg) COPCs at Load Line 4

COPC	Ingestion RGO		Dermal RGO		Inhalation RGO		Total RGO[a]		RGO[b] for Screening
	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	
Zinc	2.2E+04	--	2.9E+05	--	--	--	2.0E+04	--	2.0E+04
Organic Explosives									
RDX	2.2E+02	1.5E+01	9.6E+01	6.8E+00	--	--	6.7E+01	4.7E+00	4.7E+00
Organic PCBs									
PCB-1254	1.5E+00	8.5E-01	4.6E-01	2.7E-01	--	2.3E+04	3.5E-01	2.0E-01	2.0E-01
PCB-1260	--	8.5E-01	--	2.7E-01	--	2.3E+04	--	2.0E-01	2.0E-01
Organic Pesticides									
Aldrin	2.2E+00	1.0E-01	9.6E-01	4.4E-02	--	2.7E+03	6.7E-01	3.1E-02	3.1E-02
Dieldrin	3.7E+00	1.1E-01	1.6E+00	4.7E-02	--	2.8E+03	1.1E+00	3.2E-02	3.2E-02
Heptachlor	3.7E+01	3.8E-01	1.6E+01	1.7E-01	--	1.0E+04	1.1E+01	1.2E-01	1.2E-01
Organic Semivolatiles									
2-Methylnaphthalene	2.9E+02	--	1.3E+02	--	--	--	8.9E+01	--	8.9E+01
Benz(*a*)anthracene	--	2.3E+00	--	7.9E-01	--	1.5E+05	--	5.9E-01	5.9E-01
Benzo(*a*)pyrene	--	2.3E-01	--	7.9E-02	--	1.5E+04	--	5.9E-02	5.9E-02
Benzo(*b*)fluoranthene	--	2.3E+00	--	7.9E-01	--	1.5E+05	--	5.9E-01	5.9E-01
Dibenz(*a,h*)anthracene	--	2.3E-01	--	7.9E-02	--	1.5E+04	--	5.9E-02	5.9E-02
Indeno(1,2,3-*cd*)pyrene	--	2.3E+00	--	7.9E-01	--	1.5E+05	--	5.9E-01	5.9E-01
Resident Farmer Child									
Inorganics									
Aluminum	7.8E+03	--	1.0E+06	--	1.0E+06	--	7.8E+03	--	7.8E+03
Arsenic	2.3E+00	6.1E-01	3.6E+01	9.2E+00	--	6.5E+03	2.2E+00	5.7E-01	5.7E-01
Barium	5.5E+02	--	1.7E+04	--	1.2E+05	--	5.3E+02	--	5.3E+02
Cadmium	7.8E+00	--	8.9E+01	--	--	1.6E+04	7.2E+00	1.6E+04	7.2E+00
Copper	3.1E+02	--	1.4E+05	--	--	--	3.1E+02	--	3.1E+02
Manganese	3.6E+02	--	6.5E+03	--	1.2E+04	--	3.3E+02	--	3.3E+02
Mercury	2.3E+00	--	7.5E+01	--	--	--	2.3E+00	--	2.3E+00
Thallium	6.3E-01	--	2.8E+02	--	--	--	6.2E-01	--	6.2E-01
Zinc	2.3E+03	--	3.2E+05	--	--	--	2.3E+03	--	2.3E+03

Table Q-13. Screening Risk-based RGOs for Shallow Surface Soil (mg/kg) COPCs at Load Line 4

COPC	Ingestion RGO		Dermal RGO		Inhalation RGO		Total RGO[a]		RGO[b] for Screening
	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	
Organic Explosives									
RDX	2.3E+01	8.3E+00	1.1E+02	3.8E+01	--	--	1.9E+01	6.8E+00	6.8E+00
Organic PCBs									
PCB-1254	1.6E-01	4.6E-01	5.1E-01	1.5E+00	--	4.9E+04	1.2E-01	3.5E-01	1.2E-01
PCB-1260	--	4.6E-01	--	1.5E+00	--	4.9E+04	--	3.5E-01	3.5E-01
Organic Pesticides									
Aldrin	2.3E-01	5.4E-02	1.1E+00	2.4E-01	--	5.7E+03	1.9E-01	4.4E-02	4.4E-02
Dieldrin	3.9E-01	5.7E-02	1.8E+00	2.6E-01	--	6.1E+03	3.2E-01	4.7E-02	4.7E-02
Heptachlor	3.9E+00	2.0E-01	1.8E+01	9.2E-01	--	2.2E+04	3.2E+00	1.7E-01	1.7E-01
Organic Semivolatiles									
2-Methylnaphthalene	3.1E+01	--	1.4E+02	--	--	--	2.6E+01	--	2.6E+01
Benz(*a*)anthracene	--	1.3E+00	--	4.4E+00	--	3.2E+05	--	9.7E-01	9.7E-01
Benzo(*a*)pyrene	--	1.3E-01	--	4.4E-01	--	3.2E+04	--	9.7E-02	9.7E-02
Benzo(*b*)fluoranthene	--	1.3E+00	--	4.4E+00	--	3.2E+05	--	9.7E-01	9.7E-01
Dibenz(*a,h*)anthracene	--	1.3E-01	--	4.4E-01	--	3.2E+04	--	9.7E-02	9.7E-02
Indeno(1,2,3-*cd*)pyrene	--	1.3E+00	--	4.4E+00	--	3.2E+05	--	9.7E-01	9.7E-01
Security Guard/Maintenance Worker									
Inorganics									
Aluminum	1.0E+06	--	1.0E+06	--	1.0E+06	--	1.0E+06	--	1.0E+06
Arsenic	7.4E+02	4.6E+01	4.4E+01	2.8E+00	--	1.2E+05	4.2E+01	2.6E+00	2.6E+00
Barium	1.7E+05	--	2.2E+04	--	1.0E+06	--	1.9E+04	--	1.9E+04
Cadmium	2.5E+03	--	1.1E+02	--	--	2.9E+05	1.1E+02	2.9E+05	1.1E+02
Copper	9.8E+04	--	1.8E+05	--	--	--	6.3E+04	--	6.3E+04
Manganese	1.1E+05	--	8.1E+03	--	9.4E+05	--	7.5E+03	--	7.5E+03
Mercury	7.4E+02	--	9.3E+01	--	--	--	8.2E+01	--	8.2E+01
Thallium	2.0E+02	--	3.5E+02	--	--	--	1.3E+02	--	1.3E+02
Zinc	7.4E+05	--	4.0E+05	--	--	--	2.6E+05	--	2.6E+05
Organic Explosives									
RDX	7.4E+03	6.2E+02	1.3E+02	1.1E+01	--	--	1.3E+02	1.1E+01	1.1E+01

Table Q-13. Screening Risk-based RGOs for Shallow Surface Soil (mg/kg) COPCs at Load Line 4

COPC	Ingestion RGO		Dermal RGO		Inhalation RGO		Total RGO[a]		RGO[b] for Screening
	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	
Organic PCBs									
PCB-1254	4.9E+01	3.4E+01	6.3E-01	4.4E-01	--	9.2E+05	6.2E-01	4.4E-01	4.4E-01
PCB-1260	--	3.4E+01	--	4.4E-01	--	9.2E+05	--	4.4E-01	4.4E-01
Organic Pesticides									
Aldrin	7.4E+01	4.0E+00	1.3E+00	7.3E-02	--	1.1E+05	1.3E+00	7.2E-02	7.2E-02
Dieldrin	1.2E+02	4.3E+00	2.2E+00	7.7E-02	--	1.1E+05	2.2E+00	7.6E-02	7.6E-02
Heptachlor	1.2E+03	1.5E+01	2.2E+01	2.8E-01	--	4.1E+05	2.2E+01	2.7E-01	2.7E-01
Organic Semivolatiles									
2-Methylnaphthalene	9.8E+03	--	1.8E+02	--	--	--	1.7E+02	--	1.7E+02
Benz(*a*)anthracene	--	9.4E+01	--	1.3E+00	--	1.0E+06	--	1.3E+00	1.3E+00
Benzo(*a*)pyrene	--	9.4E+00	--	1.3E-01	--	6.0E+05	--	1.3E-01	1.3E-01
Benzo(*b*)fluoranthene	--	9.4E+01	--	1.3E+00	--	1.0E+06	--	1.3E+00	1.3E+00
Dibenz(*a,h*)anthracene	--	9.4E+00	--	1.3E-01	--	6.0E+05	--	1.3E-01	1.3E-01
Indeno(1,2,3-*cd*)pyrene	--	9.4E+01	--	1.3E+00	--	1.0E+06	--	1.3E+00	1.3E+00

[a] Total RGO is the RGO across all pathways (ingestion, dermal, and inhalation).

[b] RGO for screening is the smaller of the total RGOs. This screening RGO is only used to define COCs (see Table Q-19).

COC = Chemical of concern.

COPC = Chemical of potential concern.

HQ = Hazard quotient.

PCB = Polychlorinated biphenyl.

RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine.

RGO = Remedial goal option. Risk-based RGOs for screening are at a risk level of 10^{-6} or hazard level of 0.1.

-- = No RGO could be quantified, based on lack of approved toxicity value.

Table Q-14. Screening Risk-based RGOs for Deep Surface Soil (mg/kg) COPCs at Load Line 4

COPC	Ingestion RGO		Dermal RGO		Inhalation RGO		Total RGO[a]		RGO[b] for Screening
	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	
National Guard Trainee									
Inorganics									
Aluminum	6.6E+05	--	1.0E+06	--	3.5E+03	--	3.5E+03	--	3.5E+03
Arsenic	2.0E+02	1.2E+01	6.6E+02	4.1E+01	--	4.6E+00	1.5E+02	3.1E+00	3.1E+00
Barium	4.6E+04	--	3.2E+05	--	3.5E+02	--	3.5E+02	--	3.5E+02
Cadmium	6.6E+02	--	1.7E+03	--	--	1.1E+01	4.7E+02	1.1E+01	1.1E+01
Copper	2.6E+04	--	1.0E+06	--	--	--	2.6E+04	--	2.6E+04
Manganese	3.0E+04	--	1.2E+05	--	3.5E+01	--	3.5E+01	--	3.5E+01
Mercury	2.0E+02	--	1.4E+03	--	--	--	1.7E+02	--	1.7E+02
Thallium	5.2E+01	--	5.3E+03	--	--	--	5.2E+01	--	5.2E+01
Zinc	2.0E+05	--	1.0E+06	--	--	--	1.9E+05	--	1.9E+05
Organic Explosives									
RDX	2.0E+03	1.7E+02	2.0E+03	1.7E+02	--	--	9.9E+02	8.4E+01	8.4E+01
Organic PCBs									
PCB-1254	1.3E+01	9.2E+00	9.5E+00	6.6E+00	--	3.4E+01	5.5E+00	3.5E+00	3.5E+00
PCB-1260	--	9.2E+00	--	6.6E+00	--	3.4E+01	--	3.5E+00	3.5E+00
Organic Pesticides									
Aldrin	2.0E+01	1.1E+00	2.0E+01	1.1E+00	--	4.0E+00	9.9E+00	4.8E-01	4.8E-01
Dieldrin	3.3E+01	1.1E+00	3.3E+01	1.2E+00	--	4.3E+00	1.6E+01	5.1E-01	5.1E-01
Heptachlor	3.3E+02	4.1E+00	3.3E+02	4.1E+00	--	1.5E+01	1.6E+02	1.8E+00	1.8E+00
Organic Semivolatiles									
2-Methylnaphthalene	2.6E+03	--	2.6E+03	--	--	--	1.3E+03	--	1.3E+03
Benz(*a*)anthracene	--	2.5E+01	--	2.0E+01	--	2.2E+02	--	1.0E+01	1.0E+01
Benzo(*a*)pyrene	--	2.5E+00	--	2.0E+00	--	2.2E+01	--	1.0E+00	1.0E+00
Benzo(*b*)fluoranthene	--	2.5E+01	--	2.0E+01	--	2.2E+02	--	1.0E+01	1.0E+01
Dibenz(*a,h*)anthracene	--	2.5E+00	--	2.0E+00	--	2.2E+01	--	1.0E+00	1.0E+00
Indeno(1,2,3-*cd*)pyrene	--	2.5E+01	--	2.0E+01	--	2.2E+02	--	1.0E+01	1.0E+01

[a] Total RGO is the RGO across all pathways (ingestion, dermal, and inhalation).

[b] RGO for screening is the smaller of the total RGOs. This screening RGO is only used to define COCs (see Table Q-20).

COC = Chemical of concern.

COPC = Chemical of potential concern.

HQ = Hazard quotient.

PCB = Polychlorinated biphenyl.

RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine.

RGO = Remedial goal option. Risk-based RGOs for screening are at a risk level of 10^{-6} or hazard level of 0.1.

-- = No RGO could be quantified, based on lack of approved toxicity value.

Table Q-15. Screening Risk-based RGOs for Subsurface Soil (mg/kg) COPCs at Load Line 4

COPC	Ingestion RGO		Dermal RGO		Inhalation RGO		Total RGO[a]		RGO[b] for Screening
	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	HQ = 0.1	Risk = 10^{-6}	
Resident Farmer Adult									
Inorganics									
Aluminum	7.3E+04	--	1.0E+06	--	1.0E+06	--	7.0E+04	--	7.0E+04
Manganese	3.4E+03	--	5.9E+03	--	2.8E+04	--	2.0E+03	--	2.0E+03
Resident Farmer Child									
Inorganics									
Aluminum	7.8E+03	--	1.0E+06	--	1.0E+06	--	7.8E+03	--	7.8E+03
Manganese	3.6E+02	--	6.5E+03	--	1.2E+04	--	3.3E+02	--	3.3E+02

[a] Total RGO is the RGO across all pathways (ingestion, dermal, and inhalation).

[b] RGO for screening is the smaller of the total RGOs. This screening RGO is only used to define COCs (see Table Q-21).

COC = Chemical of concern.

COPC = Chemical of potential concern.

HQ = Hazard quotient.

RGO = Remedial goal option. Risk-based RGOs for screening are at a risk level of 10^{-6} or hazard level of 0.1.

-- = No RGO could be quantified, based on lack of approved toxicity value.

Table Q-16. Determination of Groundwater (mg/L) COCs at Load Line 4

COPC	Frequency of Detection	Maximum Detected	EPC	National Guard Trainee		Resident Farmer Adult		Resident Farmer Child	
				Screening RGO[a]	COC[b] ?	Screening RGO[a]	COC[b] ?	Screening RGO[a]	COC[b] ?
All									
Inorganics									
Arsenic	2 / 8	1.3E-02	9.4E-03	6.1E-04	Yes	5.7E-05	Yes	8.1E-05	Yes
Manganese	8 / 8	2.7E+00	2.7E+00	1.4E+00	Yes	1.6E-01	Yes	4.6E-02	Yes

[a] RGO = Remedial goal option. The screening RGO is the RGO at a risk level of 10^{-6} or hazard level of 0.1, whichever is smaller. See Table Q-10. This screening RGO is only used to define COCs.

[b] COC = Chemical of concern. A chemical is a COC if the EPC exceeds the screening RGO.

COPC = Chemical of potential concern.

EPC = Exposure point concentration.

Table Q-17. Determination of Surface Water (mg/L) COCs at Load Line 4

COPC	Frequency of Detection	Maximum Detected	EPC	Dust/Fire Control Worker		National Guard Trainee		Hunter/Trapper/ Fisher		Resident Farmer Adult		Resident Farmer Child	
				Screening RGO[a]	COC[b] ?	Screening RGO[a]	COC[b] ?	Screening RGO[a]	COC[b] ?	Screening RGO[a]	COC[b] ?	Screening RGO[a]	COC[b] ?
Main Stream Segment Upstream of Perimeter Road													
Inorganics													
Arsenic	2 / 2	7.1E-03	7.1E-03	2.5E-02	No	4.8E-03	Yes	5.9E-02	No	8.9E-04	Yes	1.1E-03	Yes
Manganese	2 / 2	3.6E+00	3.6E+00	1.5E+01	No	1.1E+00	Yes	2.1E+01	No	6.0E-01	Yes	2.6E-01	Yes
Main Stream Segment and Settling Pond													
Organic Pesticides													
4,4'-DDT	1 / 1	3.1E-04	3.1E-04	1.0E-03	No	6.4E-05	Yes	9.9E-04	No	3.3E-05	Yes	9.1E-05	Yes

[a] RGO = Remedial goal option. The screening RGO is the RGO at a risk level of 10^{-6} or hazard level of 0.1, whichever is smaller. See Table Q-11. This screening RGO is only used to define COCs.

[b] COC = Chemical of concern. A chemical is a COC if the EPC exceeds the screening RGO.

COPC = Chemical of potential concern.

DDT = Dichlorodiphenyltrichloroethane.

EPC = Exposure point concentration.

Table Q-18. Determination of Sediment (mg/kg) COCs at Load Line 4

COPC	Frequency of Detection	Maximum Detected	EPC	Dust/Fire Control Worker		National Guard Trainee		Hunter/Trapper/ Fisher		Resident Farmer Adult		Resident Farmer Child	
				Screening RGO[a]	COC[b] ?	Screening RGO[a]	COC[b] ?	Screening RGO[a]	COC[b] ?	Screening RGO[a]	COC[b] ?	Screening RGO[a]	COC[b] ?
Main Stream Segment and Settling Pond													
Inorganics													
Aluminum	6 / 6	1.7E+04	1.6E+04	1.0E+06	No	3.5E+03	Yes	1.0E+06	No	7.0E+04	No	7.8E+03	Yes
Thallium	5 / 5	2.7E+00	2.7E+00	7.7E+02	No	5.2E+01	No	1.4E+03	No	5.7E+00	No	6.2E-01	Yes

[a] RGO = Remedial goal option. The screening RGO is the RGO at a risk level of 10^{-6} or hazard level of 0.1, whichever is smaller. See Table Q-12. This screening RGO is only used to define COCs.

[b] COC = Chemical of concern. A chemical is a COC if the EPC exceeds the screening RGO.

COPC = Chemical of potential concern.

EPC = Exposure point concentration.

Table Q-19. Determination of Shallow Surface Soil (mg/kg) COCs at Load Line 4

COPC	Frequency of Detection	Maximum Detected	EPC	Security Guard/ Maintenance Worker		Dust/Fire Control Worker		Hunter/Trapper/ Fisher		Resident Farmer Adult		Resident Farmer Child	
				Screening RGO[a]	COC[b] ?	Screening RGO[a]	COC[b] ?	Screening RGO[a]	COC[b] ?	Screening RGO[a]	COC[b] ?	Screening RGO[a]	COC[b] ?
Change Houses													
Inorganics													
Thallium	4 / 6	8.5E-01	7.5E-01	1.3E+02	No	7.7E+02	No	1.4E+03	No	5.7E+00	No	6.2E-01	Yes
Organic Semivolatiles													
2-Methylnaphthalene	1 / 1	2.7E-01	2.7E-01	1.7E+02	No	5.9E+03	No	7.7E+03	No	8.9E+01	No	2.6E+01	No
Benzo(*a*)pyrene	1 / 1	5.0E-01	5.0E-01	1.3E-01	Yes	4.5E+00	No	4.8E+00	No	5.9E-02	Yes	9.7E-02	Yes
Benzo(*b*)fluoranthene	1 / 1	6.7E-01	6.7E-01	1.3E+00	No	4.5E+01	No	4.8E+01	No	5.9E-01	Yes	9.7E-01	No
Dibenz(*a,h*)anthracene	1 / 1	8.5E-02	8.5E-02	1.3E-01	No	4.5E+00	No	4.8E+00	No	5.9E-02	Yes	9.7E-02	No
Explosives Handling Areas													
Inorganics													
Aluminum	70 / 70	3.9E+04	1.1E+04	1.0E+06	No	1.0E+06	No	1.0E+06	No	7.0E+04	No	7.8E+03	Yes
Arsenic	70 / 70	1.8E+01	9.5E+00	2.6E+00	Yes	6.9E+01	No	8.1E+01	No	6.7E-01	Yes	5.7E-01	Yes
Barium	70 / 70	7.5E+02	1.1E+02	1.9E+04	No	3.8E+05	No	5.8E+05	No	3.8E+03	No	5.3E+02	No
Cadmium	61 / 70	1.3E+01	1.1E+00	1.1E+02	No	3.0E+03	No	4.2E+03	No	3.8E+01	No	7.2E+00	No
Manganese	70 / 70	7.3E+03	9.6E+02	7.5E+03	No	1.7E+05	No	2.6E+05	No	2.0E+03	No	3.3E+02	Yes
Thallium	28 / 40	1.3E+01	1.5E+00	1.3E+02	No	7.7E+02	No	1.4E+03	No	5.7E+00	No	6.2E-01	Yes
Zinc	70 / 70	3.7E+03	2.6E+02	2.6E+05	No	1.0E+06	No	1.0E+06	No	2.0E+04	No	2.3E+03	No
Organic Explosives													
RDX	2 / 52	1.9E+01	1.4E+00	1.1E+01	No	3.7E+02	No	4.1E+02	No	4.7E+00	No	6.8E+00	No
Organic PCBs													
PCB-1254	6 / 39	3.2E+00	5.5E-01	4.4E-01	Yes	1.5E+01	No	1.6E+01	No	2.0E-01	Yes	1.2E-01	Yes
PCB-1260	13 / 36	2.8E+01	2.8E+00	4.4E-01	Yes	1.5E+01	No	1.6E+01	No	2.0E-01	Yes	3.5E-01	Yes
Organic Pesticides													
Aldrin	2 / 17	4.3E-02	1.1E-02	7.2E-02	No	2.4E+00	No	2.6E+00	No	3.1E-02	No	4.4E-02	No
Dieldrin	3 / 17	7.0E-02	1.5E-02	7.6E-02	No	2.6E+00	No	2.8E+00	No	3.2E-02	No	4.7E-02	No
Heptachlor	2 / 17	6.7E-01	1.1E-01	2.7E-01	No	9.2E+00	No	1.0E+01	No	1.2E-01	No	1.7E-01	No
Organic Semivolatiles													
Benz(*a*)anthracene	9 / 19	2.1E+00	6.6E-01	1.3E+00	No	4.5E+01	No	4.8E+01	No	5.9E-01	Yes	9.7E-01	No
Benzo(*a*)pyrene	9 / 19	2.7E+00	8.1E-01	1.3E-01	Yes	4.5E+00	No	4.8E+00	No	5.9E-02	Yes	9.7E-02	Yes
Benzo(*b*)fluoranthene	10 / 19	7.2E+00	1.9E+00	1.3E+00	Yes	4.5E+01	No	4.8E+01	No	5.9E-01	Yes	9.7E-01	Yes
Dibenz(*a,h*)anthracene	4 / 19	1.2E+00	4.2E-01	1.3E-01	Yes	4.5E+00	No	4.8E+00	No	5.9E-02	Yes	9.7E-02	Yes

Table Q-19. Determination of Shallow Surface Soil (mg/kg) COCs at Load Line 4

COPC	Frequency of Detection	Maximum Detected	EPC	Security Guard/ Maintenance Worker		Dust/Fire Control Worker		Hunter/Trapper/ Fisher		Resident Farmer Adult		Resident Farmer Child	
				Screening RGO[a]	COC[b] ?	Screening RGO[a]	COC[b] ?	Screening RGO[a]	COC[b] ?	Screening RGO[a]	COC[b] ?	Screening RGO[a]	COC[b] ?
Indeno(1,2,3-*cd*)pyrene	8 / 18	3.7E+00	9.2E-01	1.3E+00	No	4.5E+01	No	4.8E+01	No	5.9E-01	Yes	9.7E-01	No
Melt-Pour Area Drainage Ditches													
Inorganics													
Arsenic	15 / 15	1.6E+01	1.1E+01	2.6E+00	Yes	6.9E+01	No	8.1E+01	No	6.7E-01	Yes	5.7E-01	Yes
Thallium	6 / 7	7.3E-01	7.3E-01	1.3E+02	No	7.7E+02	No	1.4E+03	No	5.7E+00	No	6.2E-01	Yes
Packaging and Shipping Areas													
Inorganics													
Cadmium	7 / 11	9.1E+00	3.5E+00	1.1E+02	No	3.0E+03	No	4.2E+03	No	3.8E+01	No	7.2E+00	No
Manganese	11 / 11	1.9E+03	1.4E+03	7.5E+03	No	1.7E+05	No	2.6E+05	No	2.0E+03	No	3.3E+02	Yes
Thallium	5 / 10	5.8E-01	4.0E-01	1.3E+02	No	7.7E+02	No	1.4E+03	No	5.7E+00	No	6.2E-01	No
Organic PCBs													
PCB-1254	3 / 10	7.5E-01	3.7E-01	4.4E-01	No	1.5E+01	No	1.6E+01	No	2.0E-01	Yes	1.2E-01	Yes
PCB-1260	2 / 10	1.3E+00	3.9E-01	4.4E-01	No	1.5E+01	No	1.6E+01	No	2.0E-01	Yes	3.5E-01	Yes
Organic Semivolatiles													
Benzo(*a*)pyrene	1 / 2	1.0E-01	1.0E-01	1.3E-01	No	4.5E+00	No	4.8E+00	No	5.9E-02	Yes	9.7E-02	Yes
Perimeter Area													
Inorganics													
Manganese	24 / 24	1.8E+03	6.6E+02	7.5E+03	No	1.7E+05	No	2.6E+05	No	2.0E+03	No	3.3E+02	Yes
Thallium	18 / 20	6.7E-01	4.9E-01	1.3E+02	No	7.7E+02	No	1.4E+03	No	5.7E+00	No	6.2E-01	No
Organic Semivolatiles													
Benzo(*a*)pyrene	1 / 5	1.4E-01	1.4E-01	1.3E-01	Yes	4.5E+00	No	4.8E+00	No	5.9E-02	Yes	9.7E-02	Yes
Preparation and Receiving Areas													
Inorganics													
Arsenic	17 / 17	2.7E+01	1.4E+01	2.6E+00	Yes	6.9E+01	No	8.1E+01	No	6.7E-01	Yes	5.7E-01	Yes
Cadmium	14 / 17	4.6E+00	2.4E+00	1.1E+02	No	3.0E+03	No	4.2E+03	No	3.8E+01	No	7.2E+00	No
Copper	17 / 17	5.1E+02	1.0E+02	6.3E+04	No	3.9E+05	No	7.0E+05	No	2.9E+03	No	3.1E+02	No
Manganese	17 / 17	1.8E+03	9.4E+02	7.5E+03	No	1.7E+05	No	2.6E+05	No	2.0E+03	No	3.3E+02	Yes
Mercury	15 / 17	7.4E+00	1.3E+00	8.2E+01	No	1.7E+03	No	2.5E+03	No	1.7E+01	No	2.3E+00	No
Thallium	15 / 17	1.2E+00	7.1E-01	1.3E+02	No	7.7E+02	No	1.4E+03	No	5.7E+00	No	6.2E-01	Yes
Organic PCBs													
PCB-1254	3 / 17	4.8E+01	7.8E+00	4.4E-01	Yes	1.5E+01	No	1.6E+01	No	2.0E-01	Yes	1.2E-01	Yes

Table Q-19. Determination of Shallow Surface Soil (mg/kg) COCs at Load Line 4

COPC	Frequency of Detection	Maximum Detected	EPC	Security Guard/ Maintenance Worker		Dust/Fire Control Worker		Hunter/Trapper/ Fisher		Resident Farmer Adult		Resident Farmer Child	
				Screening RGO[a]	COC[b] ?	Screening RGO[a]	COC[b] ?	Screening RGO[a]	COC[b] ?	Screening RGO[a]	COC[b] ?	Screening RGO[a]	COC[b] ?
PCB-1260	1 / 16	5.7E+00	1.1E+00	4.4E-01	Yes	1.5E+01	No	1.6E+01	No	2.0E-01	Yes	3.5E-01	Yes

[a] RGO = Remedial goal option. The screening RGO is the RGO at a risk level of 10^{-6} or hazard level of 0.1, whichever is smaller. See Table Q-13. This screening RGO is only used to define COCs.

[b] COC = Chemical of concern. A chemical is a COC if the EPC exceeds the screening RGO.

COPC = Chemical of potential concern.

EPC = Exposure point concentration.

PCB = Polychlorinated biphenyl.

RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine.

Table Q-20. Determination of Deep Surface Soil (mg/kg) COCs at Load Line 4

COPC	Frequency of Detection	Maximum Detected	EPC	National Guard Trainee	
				Screening RGO[a]	COC[b] ?
Change Houses					
Inorganics					
Thallium	4 / 6	8.5E-01	7.5E-01	5.2E+01	No
Organic Semivolatiles					
2-Methylnaphthalene	1 / 1	2.7E-01	2.7E-01	1.3E+03	No
Benzo(*a*)pyrene	1 / 1	5.0E-01	5.0E-01	1.0E+00	No
Benzo(*b*)fluoranthene	1 / 1	6.7E-01	6.7E-01	1.0E+01	No
Dibenz(*a,h*)anthracene	1 / 1	8.5E-02	8.5E-02	1.0E+00	No
Explosives Handling Areas					
Inorganics					
Aluminum	74 / 74	3.9E+04	1.1E+04	3.5E+03	Yes
Arsenic	74 / 74	1.8E+01	9.6E+00	3.1E+00	Yes
Barium	74 / 74	7.5E+02	1.1E+02	3.5E+02	No
Cadmium	64 / 74	1.3E+01	1.2E+00	1.1E+01	No
Manganese	74 / 74	7.3E+03	9.5E+02	3.5E+01	Yes
Thallium	29 / 44	1.3E+01	1.3E+00	5.2E+01	No
Zinc	74 / 74	3.7E+03	2.5E+02	1.9E+05	No
Organic Explosives					
RDX	2 / 53	1.9E+01	1.4E+00	8.4E+01	No
Organic PCBs					
PCB-1254	6 / 40	3.2E+00	5.3E-01	3.5E+00	No
PCB-1260	13 / 37	2.8E+01	2.8E+00	3.5E+00	No
Organic Pesticides					
Aldrin	2 / 17	4.3E-02	1.1E-02	4.8E-01	No
Dieldrin	3 / 17	7.0E-02	1.5E-02	5.1E-01	No
Heptachlor	2 / 17	6.7E-01	1.1E-01	1.8E+00	No
Organic Semivolatiles					
Benz(*a*)anthracene	9 / 19	2.1E+00	6.6E-01	1.0E+01	No
Benzo(*a*)pyrene	9 / 19	2.7E+00	8.1E-01	1.0E+00	No

Table Q-20. Determination of Deep Surface Soil (mg/kg) COCs at Load Line 4

COPC	Frequency of Detection	Maximum Detected	EPC	National Guard Trainee	
				Screening RGO[a]	COC[b] ?
Benzo(*b*)fluoranthene	10 / 19	7.2E+00	1.9E+00	1.0E+01	No
Dibenz(*a,h*)anthracene	4 / 19	1.2E+00	4.2E-01	1.0E+00	No
Indeno(1,2,3-*cd*)pyrene	8 / 18	3.7E+00	9.2E-01	1.0E+01	No
Melt-Pour Area Drainage Ditches					
Inorganics					
Arsenic	15 / 15	1.6E+01	1.1E+01	3.1E+00	Yes
Thallium	6 / 7	7.3E-01	7.3E-01	5.2E+01	No
Packaging and Shipping Areas					
Inorganics					
Cadmium	8 / 12	9.1E+00	9.1E+00	1.1E+01	No
Manganese	12 / 12	1.9E+03	1.3E+03	3.5E+01	Yes
Thallium	6 / 11	6.6E-01	4.6E-01	5.2E+01	No
Organic PCBs					
PCB-1254	3 / 10	7.5E-01	3.7E-01	3.5E+00	No
PCB-1260	2 / 10	1.3E+00	3.9E-01	3.5E+00	No
Organic Semivolatiles					
Benzo(*a*)pyrene	1 / 2	1.0E-01	1.0E-01	1.0E+00	No
Perimeter Area					
Inorganics					
Manganese	27 / 27	1.8E+03	5.8E+02	3.5E+01	Yes
Thallium	21 / 23	6.7E-01	5.0E-01	5.2E+01	No
Organic Semivolatiles					
Benzo(*a*)pyrene	1 / 5	1.4E-01	1.4E-01	1.0E+00	No
Preparation and Receiving Areas					
Inorganics					
Aluminum	20 / 20	3.7E+04	1.4E+04	3.5E+03	Yes
Arsenic	20 / 20	2.7E+01	1.3E+01	3.1E+00	Yes
Cadmium	16 / 20	4.6E+00	1.8E+00	1.1E+01	No
Copper	20 / 20	5.1E+02	8.6E+01	2.6E+04	No

Table Q-20. Determination of Deep Surface Soil (mg/kg) COCs at Load Line 4

COPC	Frequency of Detection	Maximum Detected	EPC	National Guard Trainee	
				Screening RGO[a]	COC[b] ?
Manganese	20 / 20	4.7E+03	1.6E+03	3.5E+01	Yes
Mercury	15 / 20	7.4E+00	1.1E+00	1.7E+02	No
Thallium	15 / 20	1.2E+00	5.9E-01	5.2E+01	No
Organic PCBs					
PCB-1254	3 / 17	4.8E+01	7.8E+00	3.5E+00	Yes
PCB-1260	1 / 16	5.7E+00	1.1E+00	3.5E+00	No

[a] RGO = Remedial goal option. The screening RGO is the RGO at a risk level of 10^{-6} or hazard level of 0.1, whichever is smaller. See Table Q-14. This screening RGO is only used to define COCs.

[b] COC = Chemical of concern. A chemical is a COC if the EPC exceeds the screening RGO.

COPC = Chemical of potential concern.

EPC = Exposure point concentration.

PCB = Polychlorinatd biphenyl.

RDX = Hexahydro-1,3,5-trinitro-1,3,5-triazine.

Table Q-21. Determination of Subsurface Soil (mg/kg) COCs at Load Line 4

COPC	Frequency of Detection	Maximum Detected	EPC	Resident Farmer Adult		Resident Farmer Child	
				Screening RGO[a]	COC[b] ?	Screening RGO[a]	COC[b] ?
Preparation and Receiving Areas							
Inorganics							
Aluminum	3 / 3	3.7E+04	3.7E+04	7.0E+04	No	7.8E+03	Yes
Manganese	3 / 3	4.7E+03	4.7E+03	2.0E+03	Yes	3.3E+02	Yes

[a] RGO = Remedial goal option. The screening RGO is the RGO at a risk level of 10^{-6} or hazard level of 0.1, whichever is smaller. See Table Q-15. This screening RGO is only used to define COCs.

[b] COC = Chemical of concern. A chemical is a COC if the EPC exceeds the screening RGO.

COPC = Chemical of potential concern.

EPC = Exposure point concentration.

Table Q-22. Calculations of Blood Lead Concentrations (PbBs) for Load Line 4 Shallow Surface Soil at the Explosives Handling Areas
EPA Technical Review Workgroup for Lead, Adult Lead Committee

Exposure Variable	PbB Equation[a]		Description of Exposure Variable	Units	Security Guard/ Maintenance Worker		Resident Farmer Adult		Resident Farmer Child[b]
	1*	2**			GSDi = 1.8	GSDi = 2.1	GSDi = 1.8	GSDi = 2.1	GSDi = 1.6
PbS	X	X	Soil lead concentration	mg/kg	275.3	275.3	275.3	275.3	275.3
$R_{fetal/maternal}$	X	X	Fetal/maternal PbB ratio	--	0.9	0.9	0.9	0.9	--
BKSF	X	X	Biokinetic slope factor	ug/dL per ug/d	0.4	0.4	0.4	0.4	--
GSD_i	X	X	Geometric standard deviation PbB	--	1.8	2.1	1.8	2.1	1.6
PbB_0	X	X	Baseline PbB	ug/dL	2.2	1.7	2.2	1.7	--
IR_S	X		Soil ingestion rate (including soil-derived indoor dust)	gal/d	0.1	0.1	0.1	0.1	0.2
IR_{S+D}		X	Total ingestion rate of outdoor soil and indoor dust	gal/d	--	--	--	--	--
W_S		X	Weighting factor; fraction of IR_{S+D} ingested as outdoor soil	--	--	--	--	--	--
K_{SD}		X	Mass fraction of soil in dust	--	--	--	--	--	--
$AF_{S,D}$	X	X	Absorption fraction (same for soil and dust)	--	0.12	0.12	0.12	0.12	--
$EF_{S,D}$	X	X	Exposure frequency (same for soil and dust)	d/year	250	250	350	350	--
$AT_{S,D}$	X	X	Averaging time (same for soil and dust)	d/year	365	365	365	365	--
PbB	**PbB of receptor, geometric mean**			**ug/dL**	**3.1**	**2.6**	**3.5**	**3.0**	**6.6**
$PbB_{fetal,\ 0.95}$	**95th percentile PbB among fetuses of adult workers**			**ug/dL**	**7.3**	**7.9**	**8.2**	**9.0**	**--**
PbB_t	**Target PbB level of concern (e.g., 10 ug/dL)**			**ug/dL**	**10**	**10**	**10**	**10**	**10**
$P(PbB > PbB_t)$	**Probability that PbB > PbB_t, assuming lognormal distribution**			**%**	**1.5%**	**2.5%**	**2.4%**	**3.8%**	**18.7%**

[a] Equation 1 does not apportion exposure between soil and dust ingestion (excludes $W_{S\ and}$ K_{SD}).
When $IR_S = IR_{S+D}$ and $W_S = 1.0$, the equations yield the same $PbB_{fetal,0.95}$.

[b] Child receptors use the IEUBK win 32 Lead Model Version 1.0 (Build 252) to calculate the PbB concentration and the probability that PbB > PbB_t.

EPA = U.S. Envinronmental Protection Agency.

***Equation 1, based on Equations 1 and 2 in EPA 1996.**

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

Table Q-23. Calculations of Blood Lead Concentrations (PbBs) for Load Line 4 Shallow Surface Soil at the Packaging and Shipping Areas
EPA Technical Review Workgroup for Lead, Adult Lead Committee

Exposure Variable	PbB Equation[a]		Description of Exposure Variable	Units	Security Guard/ Maintenance Worker		Resident Farmer Adult		Resident Farmer Child[b]
	1*	2**			GSDi = 1.8	GSDi = 2.1	GSDi = 1.8	GSDi = 2.1	GSDi = 1.6
PbS	X	X	Soil lead concentration	mg/kg	181.7	181.7	181.7	181.7	181.7
$R_{fetal/maternal}$	X	X	Fetal/maternal PbB ratio	--	0.9	0.9	0.9	0.9	--
BKSF	X	X	Biokinetic slope factor	ug/dL per ug/d	0.4	0.4	0.4	0.4	--
GSD_i	X	X	Geometric standard deviation PbB	--	1.8	2.1	1.8	2.1	1.6
PbB_0	X	X	Baseline PbB	ug/dL	2.2	1.7	2.2	1.7	--
IR_S	X		Soil ingestion rate (including soil-derived indoor dust)	gal/d	0.1	0.1	0.1	0.1	0.2
IR_{S+D}		X	Total ingestion rate of outdoor soil and indoor dust	gal/d	--	--	--	--	--
W_S		X	Weighting factor; fraction of IR_{S+D} ingested as outdoor soil	--	--	--	--	--	--
K_{SD}		X	Mass fraction of soil in dust	--	--	--	--	--	--
$AF_{S,D}$	X	X	Absorption fraction (same for soil and dust)	--	0.12	0.12	0.12	0.12	--
$EF_{S,D}$	X	X	Exposure frequency (same for soil and dust)	d/year	250	250	350	350	--
$AT_{S,D}$	X	X	Averaging time (same for soil and dust)	d/year	365	365	365	365	--
PbB	**PbB of receptor, geometric mean**			**ug/dL**	**2.8**	**2.3**	**3.0**	**2.5**	**5.0**
$PbB_{fetal,0.95}$	**95th percentile PbB among fetuses of adult workers**			**ug/dL**	**6.6**	**7.0**	**7.2**	**7.7**	**--**
PbB_t	**Target PbB level of concern (e.g., 10 ug/dL)**			**ug/dL**	**10**	**10**	**10**	**10**	**10**
$P(PbB > PbB_t)$	**Probability that PbB > PbB_t, assuming lognormal distribution**			**%**	**0.9%**	**1.7%**	**1.4%**	**2.3%**	**7.0%**

[a] Equation 1 does not apportion exposure between soil and dust ingestion (excludes $W_{S\ and}$ K_{SD}).
When $IR_S = IR_{S+D}$ and $W_S = 1.0$, the equations yield the same $PbB_{fetal,0.95}$.

[b] Child receptors use the IEUBK win 32 Lead Model Version 1.0 (Build 252) to calculate the PbB concentration and the probability that PbB > PbB_t.

EPA = U.S. Envinronmental Protection Agency.

***Equation 1, based on Equations 1 and 2 in EPA 1996.**

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

Table Q-24. Calculations of Blood Lead Concentrations (PbBs) for Load Line 4 Shallow Surface Soil at the Perimeter Area
EPA Technical Review Workgroup for Lead, Adult Lead Committee

Exposure Variable	PbB Equation[a]		Description of Exposure Variable	Units	Security Guard/ Maintenance Worker		Resident Farmer Adult		Resident Farmer Child[b]
	1*	2**			GSDi = 1.8	GSDi = 2.1	GSDi = 1.8	GSDi = 2.1	GSDi = 1.6
PbS	X	X	Soil lead concentration	mg/kg	227	227	227	227	227
$R_{fetal/maternal}$	X	X	Fetal/maternal PbB ratio	--	0.9	0.9	0.9	0.9	--
BKSF	X	X	Biokinetic slope factor	ug/dL per ug/d	0.4	0.4	0.4	0.4	--
GSD_i	X	X	Geometric standard deviation PbB	--	1.8	2.1	1.8	2.1	1.6
PbB_0	X	X	Baseline PbB	ug/dL	2.2	1.7	2.2	1.7	--
IR_S	X		Soil ingestion rate (including soil-derived indoor dust)	gal/d	0.1	0.1	0.1	0.1	0.2
IR_{S+D}		X	Total ingestion rate of outdoor soil and indoor dust	gal/d	--	--	--	--	--
W_S		X	Weighting factor; fraction of IR_{S+D} ingested as outdoor soil	--	--	--	--	--	--
K_{SD}		X	Mass fraction of soil in dust	--	--	--	--	--	--
$AF_{S,D}$	X	X	Absorption fraction (same for soil and dust)	--	0.12	0.12	0.12	0.12	--
$EF_{S,D}$	X	X	Exposure frequency (same for soil and dust)	d/year	250	250	350	350	--
$AT_{S,D}$	X	X	Averaging time (same for soil and dust)	d/year	365	365	365	365	--
PbB	**PbB of receptor, geometric mean**			**ug/dL**	**2.9**	**2.4**	**3.2**	**2.7**	**5.8**
$PbB_{fetal,\ 0.95}$	**95th percentile PbB among fetuses of adult workers**			**ug/dL**	**7.0**	**7.5**	**7.7**	**8.4**	**--**
PbB_t	**Target PbB level of concern (e.g., 10 ug/dL)**			**ug/dL**	**10**	**10**	**10**	**10**	**10**
$P(PbB > PbB_t)$	**Probability that PbB > PbB_t, assuming lognormal distribution**			**%**	**1.2%**	**2.1%**	**1.8%**	**3.0%**	**12.2%**

[a] Equation 1 does not apportion exposure between soil and dust ingestion (excludes $W_{S\ and}$ K_{SD}).
When $IR_S = IR_{S+D}$ and $W_S = 1.0$, the equations yield the same $PbB_{fetal,0.95}$.

[b] Child receptors use the IEUBK win 32 Lead Model Version 1.0 (Build 252) to calculate the PbB concentration and the probability that PbB > PbB_t.

EPA = U.S. Envinronmental Protection Agency.

***Equation 1, based on Equations 1 and 2 in EPA 1996.**

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

Table Q-25. Calculations of Blood Lead Concentrations (PbBs) for Load Line 4 Shallow Surface Soil at the Preparation and Receiving Areas
EPA Technical Review Workgroup for Lead, Adult Lead Committee

Exposure Variable	PbB Equation[a]		Description of Exposure Variable	Units	Security Guard/ Maintenance Worker		Resident Farmer Adult		Resident Farmer Child[b]
	1*	2**			GSDi = 1.8	GSDi = 2.1	GSDi = 1.8	GSDi = 2.1	GSDi = 1.6
PbS	X	X	Soil lead concentration	mg/kg	385.1	385.1	385.1	385.1	385.1
$R_{fetal/maternal}$	X	X	Fetal/maternal PbB ratio	--	0.9	0.9	0.9	0.9	--
BKSF	X	X	Biokinetic Slope Factor	ug/dL per ug/d	0.4	0.4	0.4	0.4	--
GSD_i	X	X	Geometric standard deviation PbB	--	1.8	2.1	1.8	2.1	1.6
PbB_0	X	X	Baseline PbB	ug/dL	2.2	1.7	2.2	1.7	--
IR_S	X		Soil ingestion rate (including soil-derived indoor dust)	gal/d	0.1	0.1	0.1	0.1	0.2
IR_{S+D}		X	Total ingestion rate of outdoor soil and indoor dust	gal/d	--	--	--	--	--
W_S		X	Weighting factor; fraction of IR_{S+D} ingested as outdoor soil	--	--	--	--	--	--
K_{SD}		X	Mass fraction of soil in dust	--	--	--	--	--	--
$AF_{S,D}$	X	X	Absorption fraction (same for soil and dust)	--	0.12	0.12	0.12	0.12	--
$EF_{S,D}$	X	X	Exposure frequency (same for soil and dust)	d/year	250	250	350	350	--
$AT_{S,D}$	X	X	Averaging time (same for soil and dust)	d/year	365	365	365	365	--
PbB	**PbB of receptor, geometric mean**			**ug/dL**	**3.5**	**3.0**	**4.0**	**3.5**	**8.3**
$PbB_{fetal, 0.95}$	**95th percentile PbB among fetuses of adult workers**			**ug/dL**	**8.2**	**9.0**	**9.4**	**10.6**	**--**
PbB_t	**Target PbB level of concern (e.g., 10 ug/dL)**			**ug/dL**	**10**	**10**	**10**	**10**	**10**
P(PbB > PbB_t)	**Probability that PbB > PbB_t, assuming lognormal distribution**			**%**	**2.4%**	**3.8%**	**4.0%**	**5.8%**	**34.7%**

[a] Equation 1 does not apportion exposure between soil and dust ingestion (excludes $W_{S\ and}$ K_{SD}).
When $IR_S = IR_{S+D}$ and $W_S = 1.0$, the equations yield the same $PbB_{fetal,0.95}$.

[b] Child receptors use the IEUBK win 32 Lead Model Version 1.0 (Build 252) to calculate the PbB concentration and the probability that PbB > PbB_t.

EPA = U.S. Envinronmental Protection Agency.

***Equation 1, based on Equations 1 and 2 in EPA 1996.**

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