TABLE 8. PROPOSED FIELD PROGRAM FOR PRIVATE SUPPLY WELL AND PIEZOMETER SAMPLING

Sample Location	Sample Identification	Sampling Method	Analyses										
			Field Parameters	LNAPL Characterization	VOCs (includes EDB)	PAHs (SIM)	SVOCs	TAL Metals (includes Mercury)	Cyanide	Hexavalent Chromium	Pesticides	PCBs	Dioxins/ Furans
East Tank Farm Residential Wells	GW-01	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
	GW-02	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
	GW-03	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
	GW-04	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
North of East Tank Farm Residential Wells	GW-05	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
	GW-06	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
	GW-07	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
South of East Tank Farm Residential Wells	GW-08	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
	GW-09	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
Lorraine Process Area Church Well	GW-10	Tap or Grab	1	1	1	1	1	1	1	1	0	0	0
North Tank Farm Residential Well	GW-11	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
North of North Tank Farm Residential Well	GW-12	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
Wilcox Residential Well	GW-13	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
East Tank Farm Private Wells Not In Use	GW-14	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
	GW-15	Tap or Grab	1	0	1	1	1	1	1	1	0	0	0
Total Investigation Tap Samples			**15**	**1**	**15**	**15**	**15**	**15**	**15**	**15**	**0**	**0**	**0**
Field duplicate	1 per 10 samples		0	0	2	2	2	2	2	2	0	0	0
MS/MSDs	1 per 20 samples (extra volume only; not included in total sample count)		0	0	1	1	1	1	1	1	0	0	0
Total Private Supply Well Samples			**15**	**1**	**17**	**17**	**17**	**17**	**17**	**17**	**0**	**0**	**0**
Water QC Samples													
Trip blanks	1 per cooler containing aqueous samples for VOC analysis		0	0	1	0	0	0	0	0	0	0	0
Equipment blanks	1 per day per set of for nondedicated equipment per team		0	0	0	0	0	0	0	0	0	0	0
Total Water QC Samples Associated with Private Supply Well Sampling			**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Piezometers													
Piezometers	PW-01 through PW-10	Low Flow	10	0	10	10	10	10	10	1	0	0	0
Total Investigation Tap Samples			**10**	**0**	**10**	**10**	**10**	**10**	**10**	**1**	**0**	**0**	**0**
Field duplicate	1 per 10 samples		0	0	1	1	1	1	1	1	0	0	0
MS/MSDs	1 per 20 samples (extra volume only; not included in total sample count)		0	0	1	1	1	1	1	1	0	0	0
Total Piezometer Samples			**10**	**0**	**11**	**11**	**11**	**11**	**11**	**2**	**0**	**0**	**0**
Water QC Samples													
Trip blanks	1 per cooler containing aqueous samples for VOC analysis		0	0	1	0	0	0	0	0	0	0	0
Equipment blanks	1 per day per set of nondedicated equipment per team		0	0	1	1	1	1	1	1	0	0	0
Total Water QC Samples Associated with Piezometer Sampling			**0**	**0**	**2**	**1**	**1**	**1**	**1**	**1**	**0**	**0**	**0**

NOTES:
Field parameters: pH, temperature, conductivity, dissolved oxygen, oxidation-reduction potential, and turbidity
bgs = Below ground surface
EDB = Ethylene dibromide
MS = Matrix spike
MSD = Matrix spike duplicate
PAH = Polycyclic aromatic hydrocarbon
PCB = Polychlorinated biphenyl
QC = Quality control
SIM = Selective ion monitoring
VOC = Volatile organic compound

TABLE 9. PROPOSED FIELD PROGRAM FOR VAPOR INTRUSION INVESTIGATION

Sample Type	Proposed Sample Area	Matrix	Sample Method	Sample Frequency	Sample Interval	Sample Identification	No. of Sample Locations	TO-15 SIM /TO-15
Vapor Instrusion Samples								
Indoor Air/ Sub-Slab or Crawlspace	Lorraine Process Area (LPA) Church	Air/Soil Gas	TO-15: 6-Liter Summa canister with 24-hour regulator	1 sub-slab or crawlspace 1 indoor per location (sampled once in winter and once in summer)	Sub-slab taken below slab Crawlspace taken in crawlspace Indoor air sample collected from within breathing zone (3 to 4 feet above ground surface) of the home	For sub-slab or crawl space air sample: LPA-SS-01 or LPA-CS-01 For indoor air sample: LPA-IA-01	2	2
	Lorraine Process Area Residence					For sub-slab or crawl space air sample: LPA-SS-02 or LPA-CS-02 For indoor air sample: LPA-IA-02	2	2
	Wilcox Process Area (WPA) Residence					For sub-slab or crawl space air sample: WPA-SS-03 or WPA-CS-03 For indoor air sample: WPA-IA-03	2	2
Background	Upwind of sample locations in open area			Locations around perimeter of sampling area	5 to 8 feet off the ground	LPA-VIBG-01, LPA-VIBG-02, WPA-VIBG-03	4	4
Field duplicate	As close as possible, in space and time, to the original sample			1 outdoor location 1 sub-slab 1 indoor	Same as original sample	Same as original with "D" added to the ID, for example LPA or WPA-SS-01D	3	3
Total Vapor Intrusion Samples							**13**	**13**

NOTE:
SIM = Selective ion monitoring

TABLE 12. PARAMETERS, METHODS, REQUIRED VOLUME, CONTAINERS, PRESERVATIVES, AND HOLDING TIMES

Parameter	Method	Volume and Container [1]	Preservatives	Holding Time [2]
Air Samples				
VOCs	EPA TO-15 SIM	One 6-liter evacuated summa canister	None	30 days
Aqueous Samples				
Alkalinity	Standard Method 2320 B	One 250-milliliter HDPE bottle	Store at <6°C (4+2°C)	7 days
Cyanide	CLP ISM02.3	One 1-liter HDPE bottle	NaOH to pH >12; Store at <6°C (4+2°C)	14 days
Dioxins and Furans	CLP HRSM01.2	Two 1-liter amber glass bottles	Store at <6°C (4+2°C)	360 days
Hardness	EPA Method 130.2	One 100-milliliter HDPE bottle	HNO_3 to pH ≤ 2; Store at <6°C (4+2°C)	6 months
Hexavalent Chromium	SW-846 Method 7199 or Standard Method 218.6	One 125-milliliter HDPE bottle	Store at <6°C (4+2°C)	24 hours
Metals (including Hg)	CLP ISM02.3 (ICS/AES and ICS/MS)	One to two 1-liter HDPE bottles	HNO_3 to pH ≤ 2; Store at <6°C (4+2°C)	180 days (28 days for Hg)
PCBs (Aroclors)	CLP SOM02.3	Two 1-liter amber glass bottles	Store at <6°C (4+2°C)	7 days
Pesticides	CLP SOM02.3	Two 1-liter amber glass bottles	Store at <6°C (4+2°C)	7 days
SVOC SIM (PAHs)	CLP SOM02.3	Four 1-liter amber glass bottles	Store at <6°C (4+2°C)	7 days
SVOCs	CLP SOM02.3	Two 1-liter amber glass bottles	Store at <6°C (4+2°C)	7 days
Total Dissolved Solids	EPA Method 160.1	One 1-liter HDPE bottle	Store at <6°C (4+2°C)	7 days
Total Organic Carbon	Standard Method 5310	One 250-milliliter glass bottle	H_2SO_4 to pH <2; Store at <6°C (4+2°C)	28 days
Total Suspended Sediment	ASTM Method D 3977-97	One 200-milliliter HDPE bottle	Store at <6°C (4+2°C)	7 days
VOCs	CLP SOM02.3	Three 40-milliliter amber glass VOA vials (filled to capacity with no headspace)	HCL to pH <2; Store at <6°C (4+2°C)	14 days
Soil and Sediment Samples				
Asbestos	CARB Method 435	One 16-ounce glass jar	None	Unspecified
AVS/SEM	EPA 821/R-91-100 SW-846 Method 6010C/9034	One 8-ounce amber glass jar (filled to capacity)	Store at <6°C (4+2°C)	14 days
Cyanide	CLP ISM02.3	One 8-ounce glass jar with Teflon™-lined cap	Store at <6°C (4+2°C)	14 days
Dioxins and Furans	CLP HRSM01.2	One 8-ounce amber glass jar with Teflon™-lined cap	Store at <6°C (4+2°C)	360 days
Grain Size	ASTM Method D422	1-gallon plastic bag	None	Unspecified
Hexavalent Chromium	SW-846 Methods 3060 and 7199	One 8-ounce glass jar with Teflon™-lined cap	Store at <6°C (4+2°C)	30 days
Metals (including Hg)	CLP ISM02.3 (ICP/AES and ICP/MS)	One to two 8-ounce glass jars with TeflonTM-lined caps	Store at <6°C (4+2°C)	180 days (28 days for Hg)
PCBs (Aroclors)	CLP SOM02.3	One 8-ounce amber glass jar with Teflon™-lined cap	Store at <6°C (4+2°C)	14 days
Pesticides	CLP SOM02.3	One 8-ounce amber glass jar with Teflon™-lined cap	Store at <6°C (4+2°C)	14 days
pH	SW9045D	One 8-ounce glass jar with Teflon™-lined cap	Store at <6°C	Analyze immediately
SVOC SIM (PAHs)	CLP SOM02.3	One 8-ounce amber glass jar with Teflon™-lined cap	Store at <6°C (4+2°C)	14 days
SVOCs	CLP SOM02.3	One 8-ounce amber glass jar with Teflon™-lined cap	Store at <6°C (4+2°C)	14 days
Total Organic Carbon	Walkley- Black	One 8-ounce amber glass jar with Teflon™-lined cap	Store at <6°C (4+2°C)	28 days
VOCs	CLP SOM02.3 SW-846 Method 5035 or 5035A (VOC sample preparation)	Three 5-gram coring tool devices (e.g., EnCore) samplers and one 4-ounce glass jar	Store at <6°C (4+2°C)	48 hours
		Three closed-system pre-weighed 40-milliliter amber glass vials with magnetic stir bar and one 4-ounce glass jar		
LNAPL Sample				
C3-C44 Whole Oil or C8-C40 Full Scan	ASTM Method D3328 or ASTM Method 5739	Two 40-milliliter VOA vials	Unpreserved	Unlimited
Alkyl Leads, EDB, MMT	EPA 8080 Modified (GC/ECD)	Two 40-milliliter VOA vials	Unpreserved	Unlimited
Investigation-derived Waste				
Reactivity	SW-846 Chapter 7	One 4-ounce glass jar with Teflon™-lined cap	Store at <6°C (4+2°C)	72 hours
Corrosivity (pH soil)	SW-846 Method 9045	One 4-ounce glass jar with Teflon™-lined cap	Store at <6°C (4+2°C)	72 hours
Corrosivity (pH liquid)	SW-846 Method 9040	One 500-milliliter glass bottle	Store at <6°C (4+2°C)	72 hours
Corrosivity (steel)	SW-846 Method 1110	One 4-ounce glass jar	Store at <6°C (4+2°C)	7 days
		One 250-milliliter HDPE bottle	Store at <6°C (4+2°C)	
Ignitability (solids)	SW-846 Method 1030	One 4-ounce glass jar	Store at <6°C (4+2°C)	14 days
Ignitability (liquid)	SW-846 Method 1010 or 1020	One 250-milliliter HDPE bottle	Store at <6°C (4+2°C)	14 days
TPH GRO	TX Method 1005	One 4-ounce amber glass jar (filled to capacity)	Store at <6°C (4+2°C)	14 days
TPH DRO and ORO			Store at <6°C (4+2°C)	
TCLP Metals[3]	SW-846 Methods 1311, 3010, 6010, and 7470	100 grams minimum (solid) or 1 liter minimum (liquid) Plastic or glass container	Store at <6°C (4+2°C)	180 days (28 days for Hg)
TCLP SVOCs	SW-846 Methods 1311, 3510, and 8270C	100 grams minimum (solid) or 2 liters minimum (liquid) Glass containers	Store at <6°C (4+2°C)	14 days
TCLP VOCs	SW-846 Methods 1311 and 8260B	50 grams minimum (solid) or 120 milliliters minimum (liquid) Glass containers	Store at <6°C (4+2°C)	14 days

NOTES:

[1] It will be necessary to verify container requirements with the laboratory at the time of scheduling.

[2] Holding time is measured from the time of sample collection to the time of sample extraction and/or analysis.

[3] Arsenic, barium, cadmium, chromium, lead, mercury, silver, and selenium

AES = Atomic emission spectroscopy
ASTM = American Society for Testing and Materials
AVS = Acid volatile sulfide
CARB = California Air Resource Board
CLP = Contract Laboratory Program
DRO = Diesel range organics C_{10} - C_{28}
ECD = Electron capture detector
EDB = Ethylene dibromide
GC = Gas chromatography
GRO = Gasoline range organics C_6 - C_{10}
H_2SO_4 = Sulfuric acid
HCL = Hydrochloric acid
HDPE = High-density polyethylene
Hg = Mercury
HNO_3 = Nitric acid
ICP = Inductively-coupled plasma
MMT = Methylcyclopentadienyl manganese tricarbonyl
MS = Mass spectrometry
NaOH = Sodium hydroxide
ORO = Oil range organics > C_{28}
PAH = Polycyclic aromatic hydrocarbon
PCB = Polychlorinated biphenyl
SEM = Simultaneously extracted metals
SIM = Selective ion monitoring
SVOC = Semivolatile organic compound
TCLP = Toxicity Characteristic Leaching Procedure
TPH = Total petroleum hydrocarbons
VOC = Volatile organic compound

TABLE B-1A. SCREENING CRITERIA FOR SOIL AND CLP REFERENCE LIMITS

Analyte	Analytical Method	CASRN	Units	Soil Screening Level: EPA Regional Screening Level [1]			Soil Screening Level: Ecological Screening Level [2]			Project Screening Level[5]	CRQL [6]		
				c/nc	Residential	Industrial	Lowest RAIS Screening Value [3]	EPA Eco-SSL Lowest Value [4]	EPA Eco-SSL Additional Value [4]		Low Soil by SIM	Low Soil	Medium Soil
Volatile Organic Compounds (VOCs)													
1,1,1-Trichloroethane	SOM02.3	71-55-6	mg/kg	ns	8100	36000	0.07	NS	NS	0.07	--	0.005	0.25
1,1,2-Trichloro-1,2,2-trifluoroethane	SOM02.3	76-13-1	mg/kg	ns	40000	170000	NS	NS	NS	40,000	--	0.005	0.25
1,1,2,2-Tetrachloroethane	SOM02.3	79-34-5	mg/kg	c	0.6	2.7	0.127	NS	NS	0.127	--	0.005	0.25
1,1,2-Trichloroethane	SOM02.3	79-00-5	mg/kg	n	1.1	5	0.4	NS	NS	0.4	--	0.005	0.25
1,1-Dichloroethane	SOM02.3	75-34-3	mg/kg	c	3.6	16	0.02	NS	NS	0.02	--	0.005	0.25
1,1-Dichloroethene	SOM02.3	75-35-4	mg/kg	n	230	1000	0.1	NS	NS	0.1	--	0.005	0.25
1,2,3-Trichlorobenzene	SOM02.3	87-61-6	mg/kg	n	63	930	0.01	NS	NS	0.01	--	0.005	0.25
1,2,4-Trichlorobenzene	SOM02.3	120-82-1	mg/kg	n	24	110	0.01	NS	NS	0.01	--	0.005	0.25
1,2-Dibromo-3-chloropropane	SOM02.3	96-12-8	mg/kg	c	0.0053	0.064	0.035	NS	NS	0.0053	--	0.005	0.25
1,2-Dibromoethane (EDB)	SOM02.3	106-93-4	mg/kg	c	0.036	0.16	1.23	NS	NS	0.036	--	0.005	0.25
1,2-Dichlorobenzene	SOM02.3	95-50-1	mg/kg	ns	1800	9300	0.01	NS	NS	0.01	--	0.005	0.25
1,2-Dichloroethane	SOM02.3	107-06-2	mg/kg	c*	0.46	2	0.02	NS	NS	0.02	--	0.005	0.25
1,2-Dichloropropane	SOM02.3	78-87-5	mg/kg	c*	1	4.4	0.002	NS	NS	0.002	--	0.005	0.25
1,3-Dichlorobenzene	SOM02.3	541-73-1	mg/kg	ns	1800	9300	0.03	NS	NS	0.03	--	0.005	0.25
1,4-Dichlorobenzene	SOM02.3	106-46-7	mg/kg	c	2.6	11	0.01	NS	NS	0.01	--	0.005	0.25
2-Butanone (Methyl ethyl ketone)	SOM02.3	78-93-3	mg/kg	n	27000	190000	35	NS	NS	35	--	0.01	0.5
2-Hexanone	SOM02.3	591-78-6	mg/kg	n	200	1300	12.6	NS	NS	12.6	--	0.01	0.5
4-Methyl-2-pentanone (Methyl-isobutyl ketone)	SOM02.3	108-10-1	mg/kg	ns	33000	140000	443	NS	NS	443	--	0.01	0.5
Acetone	SOM02.3	67-64-1	mg/kg	n	61000	670000	2.5	NS	NS	2.5	--	0.01	0.5
Benzene	SOM02.3	71-43-2	mg/kg	c*	1.2	5.1	0.01	NS	NS	0.01	--	0.005	0.25
Bromochloromethane	SOM02.3	74-97-5	mg/kg	n	150	630	NS	NS	NS	150	--	0.005	0.25
Bromodichloromethane	SOM02.3	75-27-4	mg/kg	c	0.29	1.3	0.54	NS	NS	0.29	--	0.005	0.25
Bromoform	SOM02.3	75-25-2	mg/kg	c*	19	86	15.9	NS	NS	15.9	--	0.005	0.25
Bromomethane	SOM02.3	74-83-9	mg/kg	n	6.8	30	0.235	NS	NS	0.235	--	0.005	0.25
Carbon Disulfide	SOM02.3	75-15-0	mg/kg	ns	770	3500	0.094	NS	NS	0.094	--	0.005	0.25
Carbon Tetrachloride	SOM02.3	56-23-5	mg/kg	c	0.65	2.9	0.4	NS	NS	0.4	--	0.005	0.25
Chlorobenzene	SOM02.3	108-90-7	mg/kg	n	280	1300	0.03	NS	NS	0.03	--	0.005	0.25
Chloroethane	SOM02.3	75-00-3	mg/kg	ns	14000	57000	NS	NS	NS	14,000	--	0.005	0.25
Chloroform	SOM02.3	67-66-3	mg/kg	c	0.32	1.4	0.001	NS	NS	0.001	--	0.005	0.25
Chloromethane	SOM02.3	74-87-3	mg/kg	n	110	460	10.4	NS	NS	10.4	--	0.005	0.25
cis-1,2-Dichloroethene	SOM02.3	156-59-2	mg/kg	n	160	2300	NS	NS	NS	160	--	0.005	0.25
cis-1,3-Dichloropropene [7]	SOM02.3	10061-01-5	mg/kg	c*	1.8	8.2	0.398	NS	NS	0.398	--	0.005	0.25
Cyclohexane	SOM02.3	110-82-7	mg/kg	ns	6500	27000	NS	NS	NS	6,500	--	0.005	0.25
Dibromochloromethane	SOM02.3	124-48-1	mg/kg	c	8.3	39	2.05	NS	NS	2.05	--	0.005	0.25
Dichlorodifluoromethane	SOM02.3	75-71-8	mg/kg	n	87	370	39.5	NS	NS	39.5	--	0.005	0.25
Ethylbenzene	SOM02.3	100-41-4	mg/kg	c	5.8	25	0.03	NS	NS	0.03	--	0.005	0.25
Isopropylbenzene (Cumene)	SOM02.3	98-82-8	mg/kg	ns	1900	9900	NS	NS	NS	1,900	--	0.005	0.25
Methyl Acetate	SOM02.3	79-20-9	mg/kg	ns	78000	1200000	NS	NS	NS	78,000	--	0.005	0.25
Methylcyclohexane	SOM02.3	108-87-2	mg/kg	ns	6500	27000	NS	NS	NS	6500	--	0.005	0.25
Methyl tert Butyl Ether	SOM02.3	1634-04-4	mg/kg	c	47	210	100	NS	NS	47	--	0.005	0.25
Methylene Chloride	SOM02.3	75-09-2	mg/kg	n	57	1000	0.4	NS	NS	0.4	--	0.005	0.25
Styrene	SOM02.3	100-42-5	mg/kg	ns	6000	35000	0.1	NS	NS	0.1	--	0.005	0.25
Tetrachloroethene	SOM02.3	127-18-4	mg/kg	n	24	100	0.002	NS	NS	0.002	--	0.005	0.25
Toluene	SOM02.3	108-88-3	mg/kg	ns	4900	47000	0.01	NS	NS	0.01	--	0.005	0.25
trans-1,2-Dichloroethene	SOM02.3	156-60-5	mg/kg	n	1600	23000	0.784	NS	NS	1	--	0.005	0.25
trans-1,3-Dichloropropene [7]	SOM02.3	10061-02-6	mg/kg	c*	1.8	8.2	0.398	NS	NS	0.398	--	0.005	0.25
Trichloroethene	SOM02.3	79-01-6	mg/kg	n	0.94	6	0.001	NS	NS	0.001	--	0.005	0.25
Trichlorofluoromethane	SOM02.3	75-69-4	mg/kg	ns	23000	350000	16.4	NS	NS	16.4	--	0.005	0.25
Vinyl Chloride	SOM02.3	75-01-4	mg/kg	c	0.059	1.7	0.01	NS	NS	0.01	--	0.005	0.25
m,p-Xylene	SOM02.3	179601-23-1	mg/kg	ns	580	2500	NS	NS	NS	580	--	0.005	0.25
o-Xylene	SOM02.3	95-47-6	mg/kg	ns	650	2800	0.1	NS	NS	0.1	--	0.005	0.25
Semivolatile Organic Compounds (SVOCs)													
1,1'-Biphenyl	SOM02.3	92-52-4	mg/kg	n	47	200	60	NS	NS	47	--	0.17	5
1,2,4,5-Tetrachlorobenzene	SOM02.3	95-94-3	mg/kg	n	23	350	0.01	NS	NS	0.01	--	0.17	5
1,4-Dioxane	SOM02.3	123-91-1	mg/kg	c	5.3	24	2.05	NS	NS	2.05	--	0.067	2
2,2'-Oxybis (1-chloropropane)	SOM02.3	108-60-1	mg/kg	ns	3100	47000	19.9	NS	NS	19.9	--	0.33	10
2,3,4,6-Tetrachlorophenol	SOM02.3	58-90-2	mg/kg	n	1900	25000	0.01	NS	NS	0.01	--	0.17	5
2,4,5-Trichlorophenol	SOM02.3	95-95-4	mg/kg	n	6300	82000	0.01	NS	NS	0.01	--	0.17	5
2,4,6-Trichlorophenol	SOM02.3	88-06-2	mg/kg	n	49	210	0.01	NS	NS	0.01	--	0.17	5
2,4-Dichlorophenol	SOM02.3	120-83-2	mg/kg	n	190	2500	0.01	NS	NS	0.01	--	0.17	5
2,4-Dimethylphenol	SOM02.3	105-67-9	mg/kg	n	1300	16000	0.01	NS	NS	0.01	--	0.17	5
2,4-Dinitrophenol	SOM02.3	51-28-5	mg/kg	n	130	1600	0.0609	NS	NS	0.0609	--	0.33	10
2,4-Dinitrotoluene	SOM02.3	121-14-2	mg/kg	c*	1.7	7.4	1.28	NS	NS	1.28	--	0.17	5
2,6-Dinitrotoluene	SOM02.3	606-20-2	mg/kg	c*	0.36	1.5	0.033	NS	NS	0.033	--	0.17	5
2-Chloronaphthalene	SOM02.3	91-58-7	mg/kg	n	4800	60000	0.012	NS	NS	0.012	--	0.17	5
2-Chlorophenol	SOM02.3	95-57-8	mg/kg	n	390	5800	0.01	NS	NS	0.01	--	0.17	5
2-Methylnaphthalene	SOM02.3	91-57-6	mg/kg	n	240	3000	3.24	29	LMW-PAH based on soil invertebrates (100 for mammalian)	3.24	0.0033	0.17	5
2-Methylphenol	SOM02.3	95-48-7	mg/kg	n	3200	41000	0.5	NS	NS	0.5	--	0.33	10
2-Nitroaniline	SOM02.3	88-74-4	mg/kg	n	630	8000	74.1	NS	NS	74.1	--	0.17	5
2-Nitrophenol	SOM02.3	88-75-5	mg/kg	c	NS	NS	1.6	NS	NS	1.6	--	0.17	5
3,3'-Dichlorobenzidine	SOM02.3	91-94-1	mg/kg	c	1.2	5.1	0.646	NS	NS	0.646	--	0.33	10
3-Nitroaniline	SOM02.3	99-09-2	mg/kg	nc	NS	NS	3.16	NS	NS	3.16	--	0.33	10
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	SOM02.3	534-52-1	mg/kg	n	5.1	66	0.144	NS	NS	0.144	--	0.33	10
4-Bromophenyl-phenylether	SOM02.3	101-55-3	mg/kg	-	NS	NS	NS	NS	NS	NS	--	0.17	5
4-Chloro-3-methylphenol	SOM02.3	59-50-7	mg/kg	n	6300	82000	7.95	NS	NS	7.95	--	0.17	5
4-Chloroaniline	SOM02.3	106-47-8	mg/kg	c*	2.7	11	0.03	NS	NS	0.03	--	0.33	10
4-Chlorophenyl-phenylether	SOM02.3	7005-72-3	mg/kg	-	NS	NS	NS	NS	NS	NS	--	0.17	5
4-Methylphenol	SOM02.3	106-44-5	mg/kg	n	6300	82000	0.05	NS	NS	0.05	--	0.33	10
4-Nitroaniline	SOM02.3	100-01-6	mg/kg	n	27	110	21.9	NS	NS	21.9	--	0.33	10
4-Nitrophenol	SOM02.3	100-02-7	mg/kg	c	NS	NS	5.12	NS	NS	5.12	--	0.33	10
Acenaphthene	SOM02.3	83-32-9	mg/kg	n	3600	45000	20	29	LMW-PAH based on soil invertebrates (100 for mammalian)	20.0	0.0033	0.17	5
Acetophenone	SOM02.3	98-86-2	mg/kg	ns	7800	120000	300	NS	NS	300	--	0.33	10
Acenaphthylene	SOM02.3	208-96-8	mg/kg	n	3600	45000	682	29	LMW-PAH based on soil invertebrates (100 for mammalian)	29.0	0.0033	0.17	5
Anthracene	SOM02.3	120-12-7	mg/kg	n	18000	230000	0.1	29	LMW-PAH based on soil invertebrates (100 for mammalian)	0.1	0.0033	0.17	5
Atrazine	SOM02.3	1912-24-9	mg/kg	c	2.4	10	0.00005	NS	NS	0.00005	--	0.33	10
Benzaldehyde	SOM02.3	100-52-7	mg/kg	ns	7800	120000	NS	NS	NS	7,800	--	0.33	10
Benzo(a)anthracene	SOM02.3	56-55-3	mg/kg	c	0.16	2.9	5.21	1.1	HMW-PAH based on mammalian receptors (18 for soil invertebrates)	0.16	0.0033	0.17	5
Benzo(a)pyrene	SOM02.3	50-32-8	mg/kg	c	0.016	0.29	0.1	1.1	HMW-PAH based on mammalian receptors (18 for soil invertebrates)	0.016	0.0033	0.17	5
Benzo(b)fluoranthene	SOM02.3	205-99-2	mg/kg	c	0.16	2.9	59.8	1.1	HMW-PAH based on mammalian receptors (18 for soil invertebrates)	0.16	0.0033	0.17	5
Benzo(g,h,i)perylene	SOM02.3	191-24-2	mg/kg	n	1800	23000	119	1.1	HMW-PAH based on mammalian receptors (18 for soil invertebrates)	1.1	0.0033	0.17	5
Benzo(k)fluoranthene	SOM02.3	207-08-9	mg/kg	c	1.6	29	148	1.1	HMW-PAH based on mammalian receptors (18 for soil invertebrates)	1.1	0.0033	0.17	5
bis(2-Chloroethoxy)methane	SOM02.3	111-91-1	mg/kg	n	190	2500	0.302	NS	NS	0.302	--	0.17	5
bis(2-Chloroethyl)ether	SOM02.3	111-44-4	mg/kg	c	0.23	1	23.7	NS	NS	0.23	--	0.33	10
bis(2-Ethylhexyl)phthalate	SOM02.3	117-81-7	mg/kg	c*	39	160	0.1	NS	NS	0.1	--	0.17	5
Butylbenzylphthalate	SOM02.3	85-68-7	mg/kg	c*	290	1200	0.1	NS	NS	0.1	--	0.17	5
Caprolactam	SOM02.3	105-60-2	mg/kg	n	31000	400000	NS	NS	NS	31,000	--	0.33	10
Carbazole	SOM02.3	86-74-8	mg/kg	-	NS	NS	NS	NS	NS	NS	--	0.33	10
Chrysene	SOM02.3	218-01-9	mg/kg	c	16	290	4.73	1.1	HMW-PAH based on mammalian receptors (18 for soil invertebrates)	1.1	0.0033	0.17	5
Di-n-butylphthalate	SOM02.3	84-74-2	mg/kg	n	6300	82000	0.1	NS	NS	0.1	--	0.17	5
Di-n-octylphthalate	SOM02.3	117-84-0	mg/kg	n	630	8200	0.1	NS	NS	0.1	--	0.33	10
Dibenz(a,h)anthracene	SOM02.3	53-70-3	mg/kg	c	0.016	0.29	18.4	1.1	HMW-PAH based on mammalian receptors (18 for soil invertebrates)	0.016	0.0033	0.17	5
Dibenzofuran	SOM02.3	132-64-9	mg/kg	n	73	1000	NS	NS	NS	73	--	0.17	5
Diethylphthalate	SOM02.3	84-66-2	mg/kg	n	51000	660000	0.1	NS	NS	0.1	--	0.17	5
Dimethylphthalate	SOM02.3	131-11-3	mg/kg	-	NS	NS	0.1	NS	NS	0.1	--	0.17	5
Fluoranthene	SOM02.3	206-44-0	mg/kg	n	2400	30000	0.1	1.1	HMW-PAH based on mammalian receptors (18 for soil invertebrates)	0.1	0.0033	0.33	10
Fluorene	SOM02.3	86-73-7	mg/kg	n	2400	30000	30	29	LMW-PAH based on soil invertebrates (100 for mammalian)	29	0.0033	0.17	5
Hexachlorobenzene	SOM02.3	118-74-1	mg/kg	c	0.21	0.96	0.0025	NS	NS	0.0025	--	0.17	5
Hexachlorobutadiene	SOM02.3	87-68-3	mg/kg	c*	1.2	5.3	0.04	NS	NS	0.04	--	0.17	5
Hexachlorocyclopentadiene	SOM02.3	77-47-4	mg/kg	n	1.8	7.5	0.755	NS	NS	0.755	--	0.33	10
Hexachloroethane	SOM02.3	67-72-1	mg/kg	c*	1.8	8	0.596	NS	NS	0.596	--	0.17	--
Indeno(1,2,3-cd)pyrene	SOM02.3	193-39-5	mg/kg	c	0.16	2.9	109	1.1	HMW-PAH based on mammalian receptors (18 for soil invertebrates)	0.16	0.0033	0.17	5
Isophorone	SOM02.3	78-59-1	mg/kg	c*	570	2400	139	NS	NS	139	--	0.17	5
N-Nitroso-di-n-propylamine	SOM02.3	621-64-7	mg/kg	c	0.078	0.33	0.544	NS	NS	0.078	--	0.17	5
N-Nitrosodiphenylamine	SOM02.3	86-30-6	mg/kg	c	110	470	0.545	NS	NS	0.545	--	0.17	5
Naphthalene	SOM02.3	91-20-3	mg/kg	c*	3.8	17	0.099	29	LMW-PAH based on soil invertebrates (100 for mammalian)	0.099	0.0033	0.17	5
Nitrobenzene	SOM02.3	98-95-3	mg/kg	c*	5.1	22	1.31	NS	NS	1.31	--	0.17	5
Pentachlorophenol	SOM02.3	87-86-5	mg/kg	c	1	4	0.002	2.1	Based on avian receptors (2.8 for mammalian, 5.0 for plants, 31 for soil invertebrates)	0.002	0.0067	0.33	10
Phenanthrene	SOM02.3	85-01-8	mg/kg	n	1800	23000	0.1	29	LMW-PAH based on soil invertebrates (100 for mammalian)	0.1	0.0033	0.17	5
Phenol	SOM02.3	108-95-2	mg/kg	n	19000	250000	0.05	NS	NS	0.05	--	0.33	10
Pyrene	SOM02.3	129-00-0	mg/kg	n	1800	23000	0.1	1.1	HMW-PAH based on mammalian receptors (18 for soil invertebrates)	0.1	0.0033	0.17	5
Polycyclic Aromatic Hydrocarbons (PAHs)													
Acenaphthene	SOM02.3	83-32-9	mg/kg	n	3600	45000	20	29	LMW-PAH based on soil invertebrates (100 for mammalian)	20	0.0033	0.17	5
Acenaphthylene	SOM02.3	208-96-8	mg/kg	n	3600	45000	682	29	LMW-PAH based on soil invertebrates (100 for mammalian)	29	0.0033	0.17	5
Anthracene	SOM02.3	120-12-7	mg/kg	n	18000	230000	0.1	29	LMW-PAH based on soil invertebrates (100 for mammalian)	0.1	0.0033	0.17	5
Benzo(a)anthracene	SOM02.3	56-55-3	mg/kg	c	0.16	2.9	5.21	1.1	HMW-PAH based on mammalian receptors (18 for soil invertebrates)	0.16	0.0033	0.17	5
Benzo(a)pyrene	SOM02.3	50-32-8	mg/kg	c	0.016	0.29	0.1	1.1	HMW-PAH based on mammalian receptors (18 for soil invertebrates)	0.016	0.0033	0.17	5
Benzo(b)fluoranthene	SOM02.3	205-99-2	mg/kg	c	0.16	2.9	59.8	1.1	HMW-PAH based on mammalian receptors (18 for soil invertebrates)	0.16	0.0033	0.17	5
Benzo(g,h,i)perylene	SOM02.3	191-24-2	mg/kg	n	1800	23000	119	1.1	HMW-PAH based on mammalian receptors (18 for soil invertebrates)	1.1	0.0033	0.17	5
Benzo(k)fluoranthene	SOM02.3	207-08-9	mg/kg	c	1.6	29	148	1.1	HMW-PAH based on mammalian receptors (18 for soil invertebrates)	1.1	0.0033	0.17	5
Chrysene	SOM02.3	218-01-9	mg/kg	c	16	290	4.73	1.1	HMW-PAH based on mammalian receptors (18 for soil invertebrates)	1.1	0.0033	0.17	5
Dibenz(a,h)anthracene	SOM02.3	53-70-3	mg/kg	c	0.016	0.29	18.4	1.1	HMW-PAH based on mammalian receptors (18 for soil invertebrates)	0.016	0.0033	0.17	5
Fluoranthene	SOM02.3	206-44-0	mg/kg	n	2400	30000	0.1	1.1	HMW-PAH based on mammalian receptors (18 for soil invertebrates)	0.1	0.0033	0.33	10
Fluorene	SOM02.3	86-73-7	mg/kg	n	2400	30000	30	29	LMW-PAH based on soil invertebrates (100 for mammalian)	29	0.0033	0.17	5
Indeno(1,2,3-cd)pyrene	SOM02.3	193-39-5	mg/kg	c	0.16	2.9	109	1.1	HMW-PAH based on mammalian receptors (18 for soil invertebrates)	0.16	0.0033	0.17	5
Naphthalene	SOM02.3	91-20-3	mg/kg	c*	3.8	17	0.099	29	LMW-PAH based on soil invertebrates (100 for mammalian)	0.099	0.0033	0.17	5
Phenanthrene	SOM02.3	85-01-8	mg/kg	n	1800	23000	0.1	29	LMW-PAH based on soil invertebrates (100 for mammalian)	0.1	0.0033	0.17	5
Pyrene	SOM02.3	129-00-0	mg/kg	n	1800	23000	0.1	1.1	HMW-PAH based on mammalian receptors (18 for soil invertebrates)	0.1	0.0033	0.17	5
2-Methylnaphthalene	SOM02.3	91-57-6	mg/kg	n	240	3000	3.24	29	LMW-PAH based on soil invertebrates (100 for mammalian)	3.24	0.0033	0.17	5
Organochlorine Pesticides													
Aldrin	SOM02.3	309-00-2	mg/kg	c*	0.039	0.18	0.00006	NS	NS	0.00006	--	0.0017	--
Alpha BHC	SOM02.3	319-84-6	mg/kg	c	0.086	0.36	0.0025	NS	NS	0.0025	--	0.0017	--
Alpha Chlordane	SOM02.3	5103-71-9	mg/kg	c*	1.7	7.5	0.00003	NS	NS	0.00003	--	0.0017	--
Beta BHC	SOM02.3	319-85-7	mg/kg	c	0.3	1.3	0.001	NS	NS	0.001	--	0.0017	--
Delta BHC	SOM02.3	319-86-8	mg/kg	c	0.086	0.36	0.005	NS	NS	0.005	--	0.0017	--
Dieldrin	SOM02.3	60-57-1	mg/kg	c*	0.034	0.14	0.0005	0.0049	Based on mammalian receptors (0.022 for avian)	0.0005	--	0.0033	--
Endosulfan I [8]	SOM02.3	959-98-8	mg/kg	n	470	7000	0.00001	NS	NS	0.00001	--	0.0017	--
Endosulfan II [8]	SOM02.3	33213-65-9	mg/kg	n	470	7000	0.00001	NS	NS	0.00001	--	0.0033	--
Endosulfan Sulfate [8]	SOM02.3	1031-07-8	mg/kg	n	470	7000	0.036	NS	NS	0.036	--	0.0033	--
Endrin	SOM02.3	72-20-8	mg/kg	n	19	250	0.00004	NS	NS	0.00004	--	0.0033	--
Endrin Aldehyde	SOM02.3	7421-93-4	mg/kg	n	19	250	0.0105	NS	NS	0.0105	--	0.0033	--
Endrin Ketone	SOM02.3	53494-70-5	mg/kg	n	19	250	NS	NS	NS	19	--	0.0033	--
Gamma BHC - Lindane	SOM02.3	58-89-9	mg/kg	c*	0.57	2.5	0.00005	NS	NS	0.00005	--	0.0017	--
Gamma Chlordane	SOM02.3	5103-74-2	mg/kg	c*	1.7	7.5	0.00003	NS	NS	0.00003	--	0.0017	--
Heptachlor	SOM02.3	76-44-8	mg/kg	c	0.13	0.63	0.0007	NS	NS	0.0007	--	0.0017	--
Heptachlor Epoxide	SOM02.3	1024-57-3	mg/kg	c*	0.07	0.33	0.0000002	NS	NS	0.0000002	--	0.0017	--
Methoxychlor	SOM02.3	72-43-5	mg/kg	n	320	4100	0.02	NS	NS	0.02	--	0.017	--
Toxaphene	SOM02.3	8001-35-2	mg/kg	c	0.49	2.1	0.119	NS	NS	0.119	--	0.17	--
p,p-DDD	SOM02.3	72-54-8	mg/kg	c	2.3	9.6	0.01	0.021	DDT (and metabolites) value based on mammalian receptors (0.093 for	0.01	--	0.0033	--
p,p-DDE	SOM02.3	72-55-9	mg/kg	c	2	9.3	0.01	0.021	DDT (and metabolites) value based on mammalian receptors (0.093 for	0.01	--	0.0033	--
p,p-DDT	SOM02.3	50-29-3	mg/kg	c*	1.9	8.5	0.0035	0.021	DDT (and metabolites) value based on mammalian receptors (0.093 for avian)	0.0035	--	0.0033	--

TABLE B-1A. SCREENING CRITERIA FOR SOIL AND CLP REFERENCE LIMITS

Analyte	Analytical Method	CASRN	Units	Soil Screening Level: EPA Regional Screening Level (1)			Ecological Screening Level (2)			Project Screening Level(5)	CRQL (6)		
				c/nc	Residential	Industrial	Lowest RAIS Screening Value (3)	EPA Eco-SSL Lowest Value (4)	EPA Eco-SSL Additional Value (4)		Low Soil by SIM	Low Soil	Medium Soil
Polychlorinated Biphenyls (PCBs)													
Aroclor-1016	SOM02.3	12674-11-2	mg/kg	n	4.1	27	NS	NS	NS	4.1	--	0.033	--
Aroclor-1221	SOM02.3	11104-28-2	mg/kg	c	0.2	0.83	NS	NS	NS	0.2	--	0.033	--
Aroclor-1232	SOM02.3	11141-16-5	mg/kg	c	0.17	0.72	NS	NS	NS	0.17	--	0.033	--
Aroclor-1242	SOM02.3	53469-21-9	mg/kg	c	0.23	0.95	NS	NS	NS	0.23	--	0.033	--
Aroclor-1248	SOM02.3	12672-29-6	mg/kg	c	0.23	0.95	NS	NS	NS	0.23	--	0.033	--
Aroclor-1254	SOM02.3	11097-69-1	mg/kg	n	0.24	0.97	40	NS	NS	0.24	--	0.033	--
Aroclor-1260	SOM02.3	11096-82-5	mg/kg	c	0.24	0.99	NS	NS	NS	0.24	--	0.033	--
Aroclor-1262	SOM02.3	37324-23-5	mg/kg	c	0.24	0.99	NS	NS	NS	0.24	--	0.033	--
Aroclor-1268	SOM02.3	11100-14-4	mg/kg	c	0.24	0.99	NS	NS	NS	0.24	--	0.033	--
TAL Metals ICP-MS													
Antimony	ISM02.3	7440-36-0	mg/kg	n	31	470	0.14	0.27	Based on mammalian (78 for soil invertebrates)	0.14	--	1	--
Arsenic	ISM02.3	7440-38-2	mg/kg	c*R	0.68	3	5.7	18	Based on terrestrial plants (43 for avian, 46 for mammalian)	0.68	--	0.5	--
Barium	ISM02.3	7440-39-3	mg/kg	n	15000	220000	1	330	Based on soil invertebrates (2,000 for mammalian)	1	--	5	--
Beryllium	ISM02.3	7440-41-7	mg/kg	n	160	2300	1.1	21	Based on mammalian (40 for soil invertebrates)	1.1	--	0.5	--
Cadmium	ISM02.3	7440-43-9	mg/kg	n	71	980	0.0022	0.36	Based on mammalian (0.77 for avian receptors, 32 for plants, 140 for soil invertebrates)	0.0022	--	0.5	--
Chromium	ISM02.3	7440-47-3	mg/kg	nm	120000	1800000	0.4	26	Chromium III based on avian (34 for mammalian)	0.4	--	1	--
Cobalt	ISM02.3	7440-48-4	mg/kg	n	23	350	0.14	13	Based on terrestrial plants (120 for avian and 230 for mammalian)	0.14	--	0.5	--
Copper	ISM02.3	7440-50-8	mg/kg	n	3100	47000	5.4	28	Based on avian receptors (49 for mammalian, 70 for plants, and 80 for soil invertebrates)	5.4	--	1	--
Lead	ISM02.3	7439-92-1	mg/kg	L	400	800	0.054	11	Based on avian receptors (56 for mammalian, 120 for plants, and 1,700 for soil invertebrates)	0.054	--	0.5	--
Manganese	ISM02.3	7439-96-5	mg/kg	n	1800	26000	100	220	Based on terrestrial plants (450 for soil invertebrates, 4,000 for mammalian, and 4,300 for avian)	100	--	0.5	--
Nickel	ISM02.3	7440-02-0	mg/kg	n	1500	22000	14	38	Based on terrestrial plants (130 for mammalian, 210 for avian, and 280 for soil invertebrates)	14	--	0.5	--
Selenium	ISM02.3	7782-49-2	mg/kg	n	390	5800	0.028	0.52	Based on terrestrial plants (0.63 for mammalian, 1.2 for avian, and 4.1 for soil invertebrates)	0.028	--	2.5	--
Silver	ISM02.3	7440-22-4	mg/kg	n	390	5800	2	4.2	Based on avian receptors (14 for mammalian and 560 for plants)	2	--	0.5	--
Thallium	ISM02.3	7440-28-0	mg/kg	n	0.78	12	0.057	NS	NS	0.057	--	0.5	--
Vanadium	ISM02.3	7440-62-2	mg/kg	n	390	5800	1.6	7.8	Based on avian receptors (280 for mammalian)	1.6	--	2.5	--
Zinc	ISM02.3	7440-66-6	mg/kg	n	23000	350000	6.6	46	Based on avian receptors (79 for mammalian, 120 for soil invertebrates, and 160 for plants)	6.6	--	1	--
TAL Metals ICP-AES													
Aluminum	ISM02.3	7429-90-5	mg/kg	n	77000	1100000	50	NS	Not enough information to provide an Eco-SSL, instead if pH<5.5 then aluminum may be of concern	50	--	20	--
Calcium	ISM02.3	7440-70-2	mg/kg	-	NS	NS	NS	NS	NS	NS	--	500	--
Iron	ISM02.3	7439-89-6	mg/kg	n	55000	820000	200	NS	A determination of the geochemical conditions (i.e., pH and Eh at a minimum) of the environmental setting, as well as the presence of iron floc and the toxic metals, is critical to the determination of the relative importance of iron at a site.	200	--	10	--
Magnesium	ISM02.3	7439-95-4	mg/kg	-	NS	NS	NS	NS	NS	NS	--	500	--
Potassium	ISM02.3	7440-09-7	mg/kg	nc	NS	NS	NS	NS	NS	NS	--	500	--
Sodium	ISM02.3	7440-23-5	mg/kg	-	NS	NS	NS	NS	NS	NS	--	500	--
Miscellaneous													
Cyanide	ISM02.3	57-12-5	mg/kg	n	2.7	12	NS	NS	NS	2.7	--	0.5	--
2,3,7,8-TCDD (TEQ)	CLP HRSM01.2	1746-01-6	mg/kg	c	0.0000048	0.000022	NS	NS	NS	0.0000048	--	--	0.000001
Mercury	ISM02.3	7439-97-6	mg/kg	ns	11	46	0.1	NS	NS	0.1	--	0.1	--

NOTES:

1. EPA Regional Screening Levels (RSLs) for residential and industrial use scenario for hazard index = 1.0 for non-carcinogens and a 10^{-6} cancer risk level for carcinogens (May 2016).
2. Ecological screening levels for soil are only applicable to surface or shallow subsurface soil.
3. The lowest ecological risk soil screening value from the Risk Assessment Information System (RAIS) database, found at https://rais.ornl.gov/tools/eco search.php.
4. EPA Ecological Soil Screening Levels (SSLs). http://www.epa.gov/ecotox/ecossl
5. The project screening level was selected to satisfy the EPA requirements as the (1) the residential EPA RSL and (2) the lowest ecological risk soil screening value from the RAIS. For analytes with no SSL or RSL, the project screening level will be NS (not specified).
6. Contract-required Quantitation Limits (CRQL) for U.S. Environmental Protection Agency (EPA) Contract Laboratory Program (CLP)
7. The values for cis-1,3-dichloropropene and trans-1,3-dichloropropene for the EPA RSLs reflect the value reported for 1,3-dichloropropene from their respective sources.
8. The values of endosulfan I, endosulfan II, and endosulfan sulfate for the EPA RSLs reflect the value reported for Endosulfan from their respective sources.

mg/kg = Milligram(s) per kilogram
c = Carcinogenic; nc = Non-carcinogenic
CASRN = Chemical Abstracts Service Registry Number
DL = Detection limit
Eco-SSL = Ecological Screening Level

-- = Not provided
NS = Not specified
SIM = Selective ion monitoring
SW = EPA SW-846 Test Methods for Evaluating Solid Waste, Third Edition

TABLE B-1B. SCREENING CRITERIA FOR SOIL AND PRIVATE LABORATORY REFERENCE LIMITS

Analyte	Analytical Method	CASRN	Units	Soil Screening Levels							Project Screening Level (6)	Achievable Laboratory Limits (7)	
				EPA Regional Screening Levels(1)			Ecological Screening Levels(2)			ODEQ Risk-based Level for TPH (5)			
				c/nc	Residential	Industrial	Lowest RAIS Screening Value (3)	EPA Eco-SSL Lowest Value (4)	EPA Eco-SSL Additional Values (4)			RL	DL
Miscellaneous													
Hexavalent chromium	SW3060/7199A	18540-29-9	mg/kg	c	0.3	6.3	NS	130	Based on mammalian (no other values)	NS	0.3	0.4	0.14

NOTES:

1. U.S. Environmental Protection Agency (EPA) Regional Screening Levels (RSLs) for residential and industrial use scenario for hazard index = 1.0 for non-carcinogens and a 10-6 cancer risk level for carcinogens (May 2016).
2. Ecological screening levels for soil are only applicable to surface or shallow subsurface soil.
3. The lowest ecological risk soil screening value from the Risk Assessment Information System (RAIS) database, found at http://rais.ornl.gov/tools/eco_search.php.
4. EPA Ecological Soil Screening Levels. http://www.epa.gov/ecotox/ecossl/.
5. Oklahoma Department of Environmental Quality (ODEQ). 2012. *Risk-Based Levels for Total Petroleum Hydrocarbons (TPH)* . Land Protection Division. October. https://www.deq.state.ok.us/lpdnew/VCPIndex.htm
6. The project screening level was selected to satisfy the requirements of the EPA as the (1) the residential EPA RSL and (2) the lowest ecological risk soil screening value from the RAIS. For analytes with no SSL or RSL, the project screening level will be NS (not specified).
7. Achievable laboratory limits are for Eurofins Lancaster Laboratories Environmental, LLC., Lancaster, Pennsylvania.

mg/kg = Milligram(s) per kilogram

c = Carcinogenic

NS = Not specified

CASRN = Chemical Abstracts Service Registry Number

RL = Reporting limit

DL = Detection limit

SW = EPA SW-846 Test Methods for Evaluating Solid Waste, Third Edition

Eco-SSL = Ecological Screening Level

TABLE B-2A. SCREENING CRITERIA FOR SEDIMENT AND CLP REFERENCE LIMITS

Analyte	Analytical Method	CASRN	Units	Sediment Screening Levels			Project Screening Level (4)	CRQLs (5)		
				TCEQ Ecological Screening Values(1)	Protection of Benthic Invertebrates Screening Level (2)	Human Health Sediment Bioaccumulation Screening Level (3)		Low Soil by SIM	Low Soil	Medium Soil
Volatile Organic Compounds										
1,1,1-Trichloroethane	SOM02.3	71-55-6	mg/kg	4.13	0.07	NS	0.07	--	0.005	0.25
1,1,2-Trichloro-1,2,2-trifluoroethane	SOM02.3	76-13-1	mg/kg	2.78	NS	NS	3	--	0.005	0.25
1,1,2,2-Tetrachloroethane	SOM02.3	79-34-5	mg/kg	0.63	NS	NS	0.63	--	0.005	0.25
1,1,2-Trichloroethane	SOM02.3	79-00-5	mg/kg	0.98	0.4	NS	0.4	--	0.005	0.25
1,1-Dichloroethane	SOM02.3	75-34-3	mg/kg	2.32	0.02	NS	0.02	--	0.005	0.25
1,1-Dichloroethene	SOM02.3	75-35-4	mg/kg	1.87	0.1	NS	0.1	--	0.005	0.25
1,2,3-Trichlorobenzene	SOM02.3	87-61-6	mg/kg	NS	0.011	NS	0.011	--	0.005	0.25
1,2,4-Trichlorobenzene	SOM02.3	120-82-1	mg/kg	0.88	0.011	NS	0.011	--	0.005	0.25
1,2-Dibromo-3-chloropropane	SOM02.3	96-12-8	mg/kg	NS	NS	NS	NS	--	0.005	0.25
1,2-Dibromoethane (EDB)	SOM02.3	106-93-4	mg/kg	NS	NS	NS	NS	--	0.005	0.25
1,2-Dibromoethane (EDB)	SW8011	106-93-4	mg/kg	NS	NS	NS	NS	--	--	--
1,2-Dichlorobenzene	SOM02.3	95-50-1	mg/kg	0.83	0.03	NS	0.03	--	0.005	0.25
1,2-Dichloroethane	SOM02.3	107-06-2	mg/kg	4.79	0.02	NS	0.02	--	0.005	0.25
1,2-Dichloropropane	SOM02.3	78-87-5	mg/kg	2.20	0.002	NS	0.002	--	0.005	0.25
1,3-Dichlorobenzene	SOM02.3	541-73-1	mg/kg	0.19	0.03	NS	0.03	--	0.005	0.25
1,4-Dichlorobenzene	SOM02.3	106-46-7	mg/kg	0.77	0.03	NS	0.03	--	0.005	0.25
2-Butanone (Methyl ethyl ketone)	SOM02.3	78-93-3	mg/kg	25.71	35	NS	26	--	0.01	0.5
2-Hexanone	SOM02.3	591-78-6	mg/kg	4.70	NS	NS	4.7	--	0.01	0.5
4-Methyl-2-pentanone (Methyl-isobutyl ketone)	SOM02.3	108-10-1	mg/kg	19.43	NS	NS	19	--	0.01	0.5
Acetone	SOM02.3	67-64-1	mg/kg	60.03	NS	NS	60	--	0.01	0.5
Benzene	SOM02.3	71-43-2	mg/kg	0.16	0.01	NS	0.01	--	0.005	0.25
Bromochloromethane	SOM02.3	74-97-5	mg/kg	NS	NS	NS	NS	--	0.005	0.25
Bromodichloromethane	SOM02.3	75-27-4	mg/kg	2.46	NS	NS	2.46	--	0.005	0.25
Bromoform	SOM02.3	75-25-2	mg/kg	0.22	75	NS	0.22	--	0.005	0.25
Bromomethane	SOM02.3	74-83-9	mg/kg	0.08	NS	NS	0.08	--	0.005	0.25
Carbon Disulfide	SOM02.3	75-15-0	mg/kg	0.12	NS	NS	0.12	--	0.005	0.25
Carbon Tetrachloride	SOM02.3	56-23-5	mg/kg	0.02	0.17	NS	0.02	--	0.005	0.25
Chlorobenzene	SOM02.3	108-90-7	mg/kg	0.17	0.03	NS	0.03	--	0.005	0.25
Chloroethane	SOM02.3	75-00-3	mg/kg	NS	NS	NS	NS	--	0.005	0.25
Chloroform	SOM02.3	67-66-3	mg/kg	0.94	0.02	NS	0.02	--	0.005	0.25
Chloromethane	SOM02.3	74-87-3	mg/kg	17.80	NS	NS	18	--	0.005	0.25
cis-1,2-Dichloroethene	SOM02.3	156-59-2	mg/kg	NS	0.2	NS	0.2	--	0.005	0.25
cis-1,3-Dichloropropene	SOM02.3	10061-01-5	mg/kg	NS	NS	NS	NS	--	0.005	0.25
Cyclohexane	SOM02.3	110-82-7	mg/kg	NS	NS	NS	NS	--	0.005	0.25
Dibromochloromethane	SOM02.3	124-48-1	mg/kg	0.16	NS	NS	0.16	--	0.005	0.25
Dichlorodifluoromethane	SOM02.3	75-71-8	mg/kg	3.68	NS	NS	4	--	0.005	0.25
Ethylbenzene	SOM02.3	100-41-4	mg/kg	2.86	0.03	NS	0.03	--	0.005	0.25
Isopropylbenzene (Cumene)	SOM02.3	98-82-8	mg/kg	8.99	NS	NS	9	--	0.005	0.25
Methyl Acetate	SOM02.3	79-20-9	mg/kg	NS	NS	NS	NS	--	0.005	0.25
Methylcyclohexane	SOM02.3	108-87-2	mg/kg	NS	NS	NS	NS	--	0.005	0.25
Methyl tert Butyl Ether	SOM02.3	1634-04-4	mg/kg	NS	100	NS	100	--	0.005	0.25
Methylene Chloride	SOM02.3	75-09-2	mg/kg	7.75	0.018	NS	0.018	--	0.005	0.25
Styrene	SOM02.3	100-42-5	mg/kg	10.24	0.2	NS	0.2	--	0.005	0.25
Tetrachloroethene	SOM02.3	127-18-4	mg/kg	1.69	0.002	NS	0.002	--	0.005	0.25
Toluene	SOM02.3	108-88-3	mg/kg	2.88	0.01	NS	0.01	--	0.005	0.25
trans-1,2-Dichloroethene	SOM02.3	156-60-5	mg/kg	23.95	0.2	NS	0.2	--	0.005	0.25
trans-1,3-Dichloropropene	SOM02.3	10061-02-6	mg/kg	NS	NS	NS	NS	--	0.005	0.25
Trichloroethene	SOM02.3	79-01-6	mg/kg	0.84	0.0078	NS	0.0078	--	0.005	0.25
Trichlorofluoromethane	SOM02.3	75-69-4	mg/kg	1.69	NS	NS	1.69	--	0.005	0.25
Vinyl Chloride	SOM02.3	75-01-4	mg/kg	1.96	0.01	NS	0.01	--	0.005	0.25
m,p-Xylene	SOM02.3	179601-23-1	mg/kg	NS	0.11	NS	0.11	--	0.005	0.25
o-Xylene	SOM02.3	95-47-6	mg/kg	NS	0.089	NS	0.089	--	0.005	0.25
Semivolatile Organic Compounds										
1,1'-Biphenyl	SOM02.3	92-52-4	mg/kg	NS	NS	NS	NS	--	0.17	5
1,2,4,5-Tetrachlorobenzene	SOM02.3	95-94-3	mg/kg	NS	0.01	NS	0.01	--	0.17	5
1,4-Dioxane	SOM02.3	123-91-1	mg/kg	NS	NS	NS	NS	--	0.067	2
2,2'-Oxybis (1-chloropropane)	SOM02.3	108-60-1	mg/kg	NS	NS	NS	NS	--	0.33	10
2,3,4,6-Tetrachlorophenol	SOM02.3	58-90-2	mg/kg	NS	0.01	NS	0.01	--	0.17	5
2,4,5-Trichlorophenol	SOM02.3	95-95-4	mg/kg	NS	0.01	NS	0.01	--	0.17	5
2,4,6-Trichlorophenol	SOM02.3	88-06-2	mg/kg	NS	0.01	NS	0.01	--	0.17	5
2,4-Dichlorophenol	SOM02.3	120-83-2	mg/kg	NS	0.01	NS	0.01	--	0.17	5
2,4-Dimethylphenol	SOM02.3	105-67-9	mg/kg	NS	NS	NS	NS	--	0.17	5
2,4-Dinitrophenol	SOM02.3	51-28-5	mg/kg	NS	NS	NS	NS	--	0.33	10
2,4-Dinitrotoluene	SOM02.3	121-14-2	mg/kg	NS	NS	NS	NS	--	0.17	5
2,6-Dinitrotoluene	SOM02.3	606-20-2	mg/kg	NS	NS	NS	NS	--	0.17	5
2-Chloronaphthalene	SOM02.3	91-58-7	mg/kg	NS	0.25	NS	0.25	--	0.17	5
2-Chlorophenol	SOM02.3	95-57-8	mg/kg	NS	0.055	NS	0.055	--	0.17	5
2-Methylnaphthalene	SOM02.3	91-57-6	mg/kg	NS	NS	NS	NS	0.0033	0.17	5
2-Methylphenol	SOM02.3	95-48-7	mg/kg	NS	0.5	NS	0.5	--	0.33	10
2-Nitroaniline	SOM02.3	88-74-4	mg/kg	NS	NS	NS	NS	--	0.17	5
2-Nitrophenol	SOM02.3	88-75-5	mg/kg	NS	NS	NS	NS	--	0.17	5
3,3'-Dichlorobenzidine	SOM02.3	91-94-1	mg/kg	NS	NS	NS	NS	--	0.33	10
3-Nitroaniline	SOM02.3	99-09-2	mg/kg	NS	NS	NS	NS	--	0.33	10
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	SOM02.3	534-52-1	mg/kg	NS	NS	NS	NS	--	0.33	10
4-Bromophenyl-phenylether	SOM02.3	101-55-3	mg/kg	NS	NS	NS	NS	--	0.17	5
4-Chloro-3-methylphenol	SOM02.3	59-50-7	mg/kg	NS	NS	NS	NS	--	0.17	5
4-Chloroaniline	SOM02.3	106-47-8	mg/kg	NS	0.005	NS	0.005	--	0.33	10
4-Chlorophenyl-phenylether	SOM02.3	7005-72-3	mg/kg	NS	NS	NS	NS	--	0.17	5
4-Methylphenol	SOM02.3	106-44-5	mg/kg	NS	NS	NS	NS	--	0.33	10
4-Nitroaniline	SOM02.3	100-01-6	mg/kg	NS	NS	NS	NS	--	0.33	10
4-Nitrophenol	SOM02.3	100-02-7	mg/kg	NS	NS	NS	NS	--	0.33	10
Acenaphthene	SOM02.3	83-32-9	mg/kg	0.007	0.00671	NS	0.0067	0.0033	0.17	5
Acetophenone	SOM02.3	98-86-2	mg/kg	NS	NS	NS	NS	--	0.33	10
Acenaphthylene	SOM02.3	208-96-8	mg/kg	0.006	0.00587	NS	0.00587	0.0033	0.17	5
Anthracene	SOM02.3	120-12-7	mg/kg	0.057	0.0572	NS	0.0572	0.0033	0.17	5
Atrazine	SOM02.3	1912-24-9	mg/kg	0.000	0.0002	NS	0.0002	--	0.33	10
Benzaldehyde	SOM02.3	100-52-7	mg/kg	NS	NS	NS	NS	--	0.33	10
Benzo(a)anthracene	SOM02.3	56-55-3	mg/kg	0.108	0.0317	NS	0.0317	0.0033	0.17	5
Benzo(a)pyrene	SOM02.3	50-32-8	mg/kg	0.150	0.0319	NS	0.0319	0.0033	0.17	5
Benzo(b)fluoranthene	SOM02.3	205-99-2	mg/kg	NS	NS	NS	NS	0.0033	0.17	5
Benzo(g,h,i)perylene	SOM02.3	191-24-2	mg/kg	NS	0.17	NS	0.17	0.0033	0.17	5
Benzo(k)fluoranthene	SOM02.3	207-08-9	mg/kg	NS	0.0272	NS	0.0272	0.0033	0.17	5
bis(2-Chloroethoxy)methane	SOM02.3	111-91-1	mg/kg	NS	NS	NS	NS	--	0.17	5
bis(2-Chloroethyl)ether	SOM02.3	111-44-4	mg/kg	NS	NS	NS	NS	--	0.33	10
bis(2-Ethylhexyl)phthalate	SOM02.3	117-81-7	mg/kg	NS	0.1	NS	0.1	--	0.17	5
Butylbenzylphthalate	SOM02.3	85-68-7	mg/kg	NS	0.1	NS	0.1	--	0.17	5
Caprolactam	SOM02.3	105-60-2	mg/kg	NS	NS	NS	NS	--	0.33	10

TABLE B-2A. SCREENING CRITERIA FOR SEDIMENT AND CLP REFERENCE LIMITS

Analyte	Analytical Method	CASRN	Units	Sediment Screening Levels			Project Screening Level (4)	CRQLs (5)		
				TCEQ Ecological Screening Values(1)	Protection of Benthic Invertebrates Screening Level (2)	Human Health Sediment Bioaccumulation Screening Level (3)		Low Soil by SIM	Low Soil	Medium Soil
Carbazole	SOM02.3	86-74-8	mg/kg	NS	NS	NS	NS	--	0.33	10
Chrysene	SOM02.3	218-01-9	mg/kg	0.166	0.0571	NS	0.0571	0.0033	0.17	5
Di-n-butylphthalate	SOM02.3	84-74-2	mg/kg	NS	0.11	NS	0.11	--	0.17	5
Di-n-octylphthalate	SOM02.3	117-84-0	mg/kg	NS	0.1	NS	0.1	--	0.33	10
Dibenz(a,h)anthracene	SOM02.3	53-70-3	mg/kg	0.033	0.00622	NS	0.00622	0.0033	0.17	5
Dibenzofuran	SOM02.3	132-64-9	mg/kg	NS	5.1	NS	5.1	--	0.17	5
Diethylphthalate	SOM02.3	84-66-2	mg/kg	0.630	0.53	NS	0.53	--	0.17	5
Dimethylphthalate	SOM02.3	131-11-3	mg/kg	NS	1	NS	1	--	0.17	5
Fluoranthene	SOM02.3	206-44-0	mg/kg	0.423	0.111	62	0.111	0.0033	0.33	10
Fluorene	SOM02.3	86-73-7	mg/kg	0.077	0.0774	NS	0.0774	0.0033	0.17	5
Hexachlorobenzene	SOM02.3	118-74-1	mg/kg	0.020	0.0014	0.0023	0.0014	--	0.17	5
Hexachlorobutadiene	SOM02.3	87-68-3	mg/kg	0.055	NS	NS	0.055	--	0.17	5
Hexachlorocyclopentadiene	SOM02.3	77-47-4	mg/kg	NS	NS	NS	NS	--	0.33	10
Hexachloroethane	--	67-72-1	mg/kg	0.230	NS	NS	0.23	--	0.17	--
Indeno(1,2,3-cd)pyrene	SOM02.3	193-39-5	mg/kg	NS	0.0173	NS	0.0173	0.0033	0.17	5
Isophorone	SOM02.3	78-59-1	mg/kg	NS	NS	NS	NS	--	0.17	5
N-Nitroso-di-n-propylamine	SOM02.3	621-64-7	mg/kg	NS	NS	NS	NS	--	0.17	5
N-Nitrosodiphenylamine	SOM02.3	86-30-6	mg/kg	NS	NS	NS	NS	--	0.17	5
Naphthalene	SOM02.3	91-20-3	mg/kg	0.176	0.176	NS	0.176	0.0033	0.17	5
Nitrobenzene	SOM02.3	98-95-3	mg/kg	0.510	NS	NS	0.51	--	0.17	5
Pentachlorophenol	SOM02.3	87-86-5	mg/kg	NS	0.01	0.03	0.01	0.0067	0.33	10
Phenanthrene	SOM02.3	85-01-8	mg/kg	0.204	0.0419	NS	0.0419	0.0033	0.17	5
Phenol	SOM02.3	108-95-2	mg/kg	NS	0.048	NS	0.048	--	0.33	10
Pyrene	SOM02.3	129-00-0	mg/kg	0.195	0.053	47	0.053	0.0033	0.17	5
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	SOM02.3	83-32-9	mg/kg	0.007	0.00671	NS	0.0067	0.0033	0.17	5
Acenaphthylene	SOM02.3	208-96-8	mg/kg	0.006	0.00587	NS	0.00587	0.0033	0.17	5
Anthracene	SOM02.3	120-12-7	mg/kg	0.057	0.0572	NS	0.0572	0.0033	0.17	5
Benzo(a)anthracene	SOM02.3	56-55-3	mg/kg	0.108	0.0317	NS	0.0317	0.0033	0.17	5
Benzo(a)pyrene	SOM02.3	50-32-8	mg/kg	0.150	0.0319	NS	0.0319	0.0033	0.17	5
Benzo(b)fluoranthene	SOM02.3	205-99-2	mg/kg	NS	NS	NS	NS	0.0033	0.17	5
Benzo(g,h,i)perylene	SOM02.3	191-24-2	mg/kg	NS	0.17	NS	0.17	0.0033	0.17	5
Benzo(k)fluoranthene	SOM02.3	207-08-9	mg/kg	NS	0.0272	NS	0.0272	0.0033	0.17	5
Chrysene	SOM02.3	218-01-9	mg/kg	0.166	0.0571	NS	0.0571	0.0033	0.17	5
Dibenz(a,h)anthracene	SOM02.3	53-70-3	mg/kg	0.033	0.00622	NS	0.00622	0.0033	0.17	5
Fluoranthene	SOM02.3	206-44-0	mg/kg	0.423	0.111	62	0.111	0.0033	0.33	10
Fluorene	SOM02.3	86-73-7	mg/kg	0.077	0.0774	NS	0.0774	0.0033	0.17	5
Indeno(1,2,3-cd)pyrene	SOM02.3	193-39-5	mg/kg	NS	0.0173	NS	0.0173	0.0033	0.17	5
Naphthalene	SOM02.3	91-20-3	mg/kg	0.176	0.176	NS	0.176	0.0033	0.17	5
Phenanthrene	SOM02.3	85-01-8	mg/kg	0.204	0.0419	NS	0.0419	0.0033	0.17	5
Pyrene	SOM02.3	129-00-0	mg/kg	0.195	0.053	47	0.053	0.0033	0.17	5
2-Methylnaphthalene	SOM02.3	91-57-6	mg/kg	NS	NS	NS	NS	0.0033	0.17	5
Organochlorine Pesticides										
Aldrin	SOM02.3	309-00-2	mg/kg	0.002	0.00006	NS	0.00006	--	0.0017	--
Alpha BHC	SOM02.3	319-84-6	mg/kg	0.006	0.003	NS	0.003	--	0.0017	--
Alpha Chlordane	SOM02.3	5103-71-9	mg/kg	NS	0.00324	0.000046	0.000046	--	0.0017	--
Beta BHC	SOM02.3	319-85-7	mg/kg	0.005	0.005	NS	0.005	--	0.0017	--
Delta BHC	SOM02.3	319-86-8	mg/kg	NS	0.01	NS	0.01	--	0.0017	--
Dieldrin	SOM02.3	60-57-1	mg/kg	0.0019	0.0019	0.000001	0.000001	--	0.0033	--
Endosulfan I	SOM02.3	959-98-8	mg/kg	NS	0.00001	NS	0.00001	--	0.0017	--
Endosulfan II	SOM02.3	33213-65-9	mg/kg	NS	0.00001	NS	0.00001	--	0.0033	--
Endosulfan Sulfate	SOM02.3	1031-07-8	mg/kg	NS	NS	NS	NS	--	0.0033	--
Endrin	SOM02.3	72-20-8	mg/kg	0.00222	0.00222	NS	0.00222	--	0.0033	--
Endrin Aldehyde	SOM02.3	7421-93-4	mg/kg	NS	NS	NS	NS	--	0.0033	--
Endrin Ketone	SOM02.3	53494-70-5	mg/kg	NS	NS	NS	NS	--	0.0033	--
Gamma BHC - Lindane	SOM02.3	58-89-9	mg/kg	0.00237	0.00094	NS	0.00094	--	0.0017	--
Gamma Chlordane	SOM02.3	5103-74-2	mg/kg	NS	0.00324	0.000046	0.000046	--	0.0017	--
Heptachlor	SOM02.3	76-44-8	mg/kg	NS	0.0007	NS	0.0007	--	0.0017	--
Heptachlor Epoxide	SOM02.3	1024-57-3	mg/kg	0.00247	0.0006	NS	0.0006	--	0.0017	--
Methoxychlor	SOM02.3	72-43-5	mg/kg	NS	0.019	NS	0.019	--	0.017	--
Toxaphene	SOM02.3	8001-35-2	mg/kg	0.0001	0.0001	NS	0.0001	--	0.17	--
p,p-DDD	SOM02.3	72-54-8	mg/kg	0.00488	0.00354	0.00004	0.00004	--	0.0033	--
p,p-DDE	SOM02.3	72-55-9	mg/kg	0.00316	0.00142	0.00004	0.00004	--	0.0033	--
p,p-DDT	SOM02.3	50-29-3	mg/kg	0.00416	0.00119	0.00004	0.00004	--	0.0033	--
Polychlorinated Biphenyls										
Aroclor-1016	SOM02.3	12674-11-2	mg/kg	0.007	NS	NS	0.007	--	0.033	--
Aroclor-1221	SOM02.3	11104-28-2	mg/kg	NS	NS	NS	NS	--	0.033	--
Aroclor-1232	SOM02.3	11141-16-5	mg/kg	NS	NS	NS	NS	--	0.033	--
Aroclor-1242	SOM02.3	53469-21-9	mg/kg	NS	NS	NS	NS	--	0.033	--
Aroclor-1248	SOM02.3	12672-29-6	mg/kg	0.03	NS	NS	0.03	--	0.033	--
Aroclor-1254	SOM02.3	11097-69-1	mg/kg	NS	0.06	NS	0.06	--	0.033	--
Aroclor-1260	SOM02.3	11096-82-5	mg/kg	0.005	NS	NS	0.005	--	0.033	--
Aroclor-1262	SOM02.3	37324-23-5	mg/kg	NS	NS	NS	NS	--	0.033	--
Aroclor-1268	SOM02.3	11100-14-4	mg/kg	NS	NS	NS	NS	--	0.033	--
Total PCBs	--	1336-36-3	mg/kg	0.0598	0.0341	0.000048	0.000048	--	--	--
Nitroaromatics/ Nitroamines										
1,3,5-Trinitrobenzene	SW8330B	99-35-4	mg/kg	NS	NS	NS	NS	--	--	--
1,3-Dinitrobenzene	SW8330B	99-65-0	mg/kg	NS	NS	NS	NS	--	--	--
2,4,6-Trinitrotoluene	SW8330B	118-96-7	mg/kg	NS	NS	NS	NS	--	--	--
2,4-Dinitrotoluene	SW8330B	121-14-2	mg/kg	NS	NS	NS	NS	--	0.17	5
2,6-Dinitrotoluene	SW8330B	606-20-2	mg/kg	NS	NS	NS	NS	--	0.17	5
2-Amino-4,6-Dinitrotoluene	SW8330B	35572-78-2	mg/kg	NS	NS	NS	NS	--	--	--
2-Nitrotoluene (o-Nitrotoluene)	SW8330B	88-72-2	mg/kg	NS	NS	NS	NS	--	--	--
3,5-Dinitroaniline	SW8330B	618-87-1	mg/kg	NS	NS	NS	NS	--	--	--
3-Nitrotoluene (m-Nitrotoluene)	SW8330B	99-08-1	mg/kg	NS	NS	NS	NS	--	--	--
4-Amino-2,6-Dinitrotoluene	SW8330B	19406-51-0	mg/kg	NS	NS	NS	NS	--	--	--
4-Nitrotoluene (p-Nitrotoluene)	SW8330B	99-99-0	mg/kg	NS	NS	NS	NS	--	--	--
Octahydro-1,3,5,7-tetratnitro-1,3,5,7-tetrazocine (HI	SW8330B	2691-41-0	mg/kg	NS	NS	NS	NS	--	--	--
Nitrobenzene	SW8330B	98-95-3	mg/kg	0.51	NS	NS	0.51	--	--	--
Nitroglycerin	SW8330B	55-63-0	mg/kg	NS	NS	NS	NS	--	--	--
Pentaerythritol tetranitrate (PETN)	SW8330B	78-11-5	mg/kg	NS	NS	NS	NS	--	--	--
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	SW8330B	121-82-4	mg/kg	NS	NS	NS	NS	--	--	--
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	SW8330B	479-45-8	mg/kg	NS	NS	NS	NS	--	--	--

TABLE B-2A. SCREENING CRITERIA FOR SEDIMENT AND CLP REFERENCE LIMITS

Analyte	Analytical Method	CASRN	Units	Sediment Screening Levels			Project Screening Level (4)	CRQLs (5)		
				TCEQ Ecological Screening Values(1)	Protection of Benthic Invertebrates Screening Level (2)	Human Health Sediment Bioaccumulation Screening Level (3)		Low Soil by SIM	Low Soil	Medium Soil
Hydrazines										
1,1-Dimethylhydrazine	SW8315A	57-14-7	mg/kg	NS	NS	NS	NS	--	--	--
Hydrazine	SW8315A	302-01-2	mg/kg	NS	NS	NS	NS	--	--	--
Methylhydrazine	SW8315A	60-34-4	mg/kg	NS	NS	NS	NS	--	--	--
TAL Metals ICP-MS										
Antimony	ISM02.3	7440-36-0	mg/kg	2	3	NS	2	--	1	--
Arsenic	ISM02.3	7440-38-2	mg/kg	9.79	5.9	7	5.9	--	0.5	--
Barium	ISM02.3	7440-39-3	mg/kg	NS	NS	NS	NS	--	5	--
Beryllium	ISM02.3	7440-41-7	mg/kg	NS	NS	NS	NS	--	0.5	--
Cadmium	ISM02.3	7440-43-9	mg/kg	0.99	0.596	1	0.596	--	0.5	--
Chromium	ISM02.3	7440-47-3	mg/kg	43.4	37.3	NS	37.3	--	1	--
Cobalt	ISM02.3	7440-48-4	mg/kg	50	50	NS	50	--	0.5	--
Copper	ISM02.3	7440-50-8	mg/kg	31.6	31.6	NS	31.6	--	1	--
Lead	ISM02.3	7439-92-1	mg/kg	35.8	35	17	17	--	0.5	--
Manganese	ISM02.3	7439-96-5	mg/kg	460	460	NS	460	--	0.5	--
Nickel	ISM02.3	7440-02-0	mg/kg	22.7	18	NS	18	--	0.5	--
Selenium	ISM02.3	7782-49-2	mg/kg	NS	NS	2	2	--	2.5	--
Silver	ISM02.3	7440-22-4	mg/kg	1	0.5	NS	0.5	--	0.5	--
Thallium	ISM02.3	7440-28-0	mg/kg	NS	NS	NS	NS	--	0.5	--
Vanadium	ISM02.3	7440-62-2	mg/kg	NS	NS	NS	NS	--	2.5	--
Zinc	ISM02.3	7440-66-6	mg/kg	121	121	NS	121	--	1	--
TAL Metals ICP-AES										
Aluminum	ISM02.3	7429-90-5	mg/kg	NS	25,500	NS	25,500	--	20	--
Calcium	ISM02.3	7440-70-2	mg/kg	NS	NS	NS	NS	--	500	--
Iron	ISM02.3	7439-89-6	mg/kg	20000	20,000	NS	20,000	--	10	--
Magnesium	ISM02.3	7439-95-4	mg/kg	NS	NS	NS	NS	--	500	--
Potassium	ISM02.3	7440-09-7	mg/kg	NS	NS	NS	NS	--	500	--
Sodium	ISM02.3	7440-23-5	mg/kg	NS	NS	NS	NS	--	500	--
Miscellaneous										
Asbestos	USEPA/600/R-93/116	1332-21-4	fibers	NS	NS	NS	NS	--	--	--
Chloride	E300.0	16887-00-6	mg/kg	NS	NS	NS	NS	--	--	--
Cyanide	ISM02.3	57-12-5	mg/kg	NS	NS	NS	NS	--	0.5	--
Mercury	ISM02.3	7439-97-6	mg/kg	0.18	0.174	0.07	0.07	--	0.1	--
Nitrate nitrogen	E300.0	14797-55-8	mg/kg	850000	NS	NS	850000	--	--	--
Nitrate-Nitrite nitrogen	E300.0	NS	mg/kg	NS	NS	NS	NS	--	--	--
Nitrite nitrogen	E300.0	14797-65-0	mg/kg	53000	NS	NS	53000	--	--	--
Perchlorate	SW6850	14797-73-0	mg/kg	180	NS	NS	180	--	--	--
pH	SW9045C	NS	S.U.	NS	NS	NS	NS	--	--	--
Sulfate	E300.0	18785-72-3	mg/kg	NS	NS	NS	NS	--	--	--
Total Phosphorous as Phosphate	E365.1	98059-61-1	mg/kg	NS	NS	NS	NS	--	--	--

NOTES:

1. Ecological Screening Values for Freshwater Sediment from TCEQ's *Draft Conducting Ecological Risk Assessments at Remediation Sites in Texas* . January 2014. https://www.tceq.texas.gov/assets/public/remediation/trrp/rg263-draft.pdf
2. Benthic protection based on the NOAA SQuIRTs values listed in Buchman (NOAA 2008), consensus-based unless not available, otherwise the lowest of listed screening values are presente
3. State of Oregon Department of Environmental Quality, *Guidance for Assessing Bioaccumulative Chemicals of Concern in Sediment* (2007), Table A-1a. Used for chemicals bioaccumulating into fish with subsequent human ingestion. Based on subsistence/tribal ingestion rate.
4. The minimum value was selected as the project screening level
5. Contract-required Quantitation Limits (CRQL) for U.S. Environmental Protection Agency (EPA) Contract Laboratory Program (CLP)

mg/kg = Milligram(s) per kilogram
NS = Not specified
SL = Screening Level
CASRN = Chemical Abstracts Service Registry Numbe
PCLs = Protective Concentration Levels
-- = Not provided
SIM = Selective ion monitoring

TABLE B-2B. SCREENING CRITERIA FOR SEDIMENT AND PRIVATE LABORATORY REFERENCE LIMITS

Analyte	Analytical Method	CASRN	Units	Sediment Screening Levels			Project Screening Level (4)	Achievable Laboratory Limits (5)	
				TCEQ Ecological Screening Values(1)	Protection of Benthic Invertebrates Screening Level (2)	Human Health Sediment Bioaccumulation Screening Level (3)		RL	DL
Miscellaneous									
AVS/SEM	EPA 821/R-91-100 SW 6010C/9034	NS	µmol/g	NS	NS	NS	NS	--	--
Hexavalent chromium	SW3060/7199A	18540-29-9	mg/kg	NS	NS	NS	NS	0.4	0.14
Grain size	ASTM D422	NS	NS	NS	NS	NS	NS	--	--
pH	SW9045C	NS	S.U.	NS	NS	NS	NS	--	--
Total organic carbon	SM 5310B	NS	mg/kg	NS	NS	NS	NS	--	--

NOTES:

1. Ecological Screening Values for Freshwater Sediment from TCEQ's Draft Conducting Ecological Risk Assessments at Remediation Sites in Texas . January 2014. https://www.tceq.texas.gov/assets/public/remediation/trrp/rg263-draft.pdf
2. Benthic protection based on the NOAA SQuIRTs values listed in Buchman (2008), consensus-based unless not available, otherwise the lowest of listed screening values are presented.
3. State of Oregon Department of Environmental Quality, *Guidance for Assessing Bioaccumulative Chemicals of Concern in Sediment* (2007), Table A-1a. Used for chemicals bioaccumulating into fish with subsequent human ingestion.
4. The minimum value was selected as the project screening level
5. Achievable laboratory limits are for Eurofins Lancaster Laboratories Environmental, LLC., Lancaster, Pennsylvania.

mg/kg = Milligram(s) per kilogram
CASRN = Chemical Abstracts Service Registry Number
DL = Detection limit
NS = Not specified
PCLs = Protective Concentration Levels
RL = Reporting limit
SL = Screening Level
S.U. = Standard Unit
µmol/g = micromole per gram

TABLE B-3A. SCREENING CRITERIA FOR GROUND WATER AND CLP REFERENCE LIMITS

Analyte	Analytical Method	CASRN	Units	c/nc	EPA MCL [1]	EPA Tapwater RSL [2]	OWRB Interim WQS[3] for Public & Private Water Supply (Raw Water)	Project Screening Level[4]	CRQLs[5]		
									Low Water by SIM	Trace Water	Low Water
Volatile Organic Compounds											
1,1,1-Trichloroethane	SOM02.3	71-55-6	µg/L	nc	200	8000	NS	200	--	0.50	5
1,1,2-Trichloro-1,2,2-trifluoroethane	SOM02.3	76-13-1	µg/L	-	NS	55000	NS	55000	--	0.50	5
1,1,2,2-Tetrachloroethane	SOM02.3	79-34-5	µg/L	c	NS	0.076	NS	0.076	--	0.50	5
1,1,2-Trichloroethane	SOM02.3	79-00-5	µg/L	c	5	0.28	NS	5	--	0.50	5
1,1-Dichloroethane	SOM02.3	75-34-3	µg/L	c	NS	2.8	NS	2.8	--	0.50	5
1,1-Dichloroethene	SOM02.3	75-35-4	µg/L	nc	7	280	NS	7	--	0.50	5
1,2,3-Trichlorobenzene	SOM02.3	87-61-6	µg/L	nc	NS	7	NS	7	--	0.50	5
1,2,4-Trichlorobenzene	SOM02.3	120-82-1	µg/L	c	70	1.2	NS	70	--	0.50	5
1,2-Dibromo-3-chloropropane	SOM02.3	96-12-8	µg/L	c	0.2	0.00033	NS	0.2	--	0.50	5
1,2-Dibromoethane (EDB)	SOM02.3	106-93-4	µg/L	c	0.05	0.0075	NS	0.05	--	0.50	5
1,2-Dichlorobenzene	SOM02.3	95-50-1	µg/L	nc	600	300	NS	600	--	0.50	5
1,2-Dichloroethane	SOM02.3	107-06-2	µg/L	c	5	0.17	NS	5	--	0.50	5
1,2-Dichloropropane	SOM02.3	78-87-5	µg/L	c	5	0.44	NS	5	--	0.50	5
1,3-Dichlorobenzene	SOM02.3	541-73-1	µg/L	-	600	300	NS	600	--	0.50	5
1,4-Dichlorobenzene	SOM02.3	106-46-7	µg/L	c	75	0.48	NS	75	--	0.50	5
2-Butanone (Methyl Ethyl Ketone)	SOM02.3	78-93-3	µg/L	nc	NS	5600	NS	5,600	--	5	10
2-Hexanone	SOM02.3	591-78-6	µg/L	nc	NS	38	NS	38	--	5	10
4-Methyl-2-pentanone (Methyl isobutyl ketone)	SOM02.3	108-10-1	µg/L	nc	NS	6300	NS	6,300	--	5	10
Acetone	SOM02.3	67-64-1	µg/L	nc	NS	14000	NS	14,000	--	5	10
Benzene	SOM02.3	71-43-2	µg/L	c	5	0.46	NS	5	--	0.50	5
Bromochloromethane	SOM02.3	74-97-5	µg/L	nc	NS	83	NS	83	--	0.50	5
Bromodichloromethane[6]	SOM02.3	75-27-4	µg/L	c	80	0.13	NS	80	--	0.50	5
Bromoform[6]	SOM02.3	75-25-2	µg/L	c	80	3.3	NS	80	--	0.50	5
Bromomethane	SOM02.3	74-83-9	µg/L	nc	NS	7.5	NS	7.5	--	0.50	5
Carbon Disulfide	SOM02.3	75-15-0	µg/L	nc	NS	810	NS	810	--	0.50	5
Carbon Tetrachloride	SOM02.3	56-23-5	µg/L	c	5	0.46	NS	5	--	0.50	5
Chlorobenzene	SOM02.3	108-90-7	µg/L	nc	100	78	NS	100	--	0.50	5
Chloroethane	SOM02.3	75-00-3	µg/L	nc	NS	21000	NS	21,000	--	0.50	5
Chloroform[6]	SOM02.3	67-66-3	µg/L	c	80	0.22	NS	80	--	0.50	5
Chloromethane	SOM02.3	74-87-3	µg/L	nc	NS	190	NS	190	--	0.50	5
cis-1,2-Dichloroethene	SOM02.3	156-59-2	µg/L	nc	70	36	NS	70	--	0.50	5
cis-1,3-Dichloropropene	SOM02.3	10061-01-5	µg/L	c	NS	0.47	NS	0.47	--	0.50	5
Cyclohexane	SOM02.3	110-82-7	µg/L	-	NS	13000	NS	13,000	--	0.50	5
Dibromochloromethane	SOM02.3	124-48-1	µg/L	c	80	0.87	NS	80	--	0.50	5
Dichlorodifluoromethane	SOM02.3	75-71-8	µg/L	nc	NS	200	NS	200	--	0.50	5
Ethylbenzene	SOM02.3	100-41-4	µg/L	c	700	1.5	NS	700	--	0.50	5
Isopropylbenzene (Cumene)	SOM02.3	98-82-8	µg/L	-	NS	450	NS	450	--	0.50	5
Methyl Acetate	SOM02.3	79-20-9	µg/L	-	NS	20000	NS	20,000	--	0.50	5
Methylcyclohexane	SOM02.3	108-87-2	µg/L	-	NS	13000	NS	13000	--	0.50	5
Methyl tert-Butyl Ether	SOM02.3	1634-04-4	µg/L	c	NS	14	NS	14	--	0.50	5
Methylene Chloride	SOM02.3	75-09-2	µg/L	c	5	11	NS	5	--	0.50	5
Styrene	SOM02.3	100-42-5	µg/L	nc	100	1200	NS	100	--	0.50	5
Tetrachloroethene	SOM02.3	127-18-4	µg/L	c	5	11	NS	5	--	0.50	5
Toluene	SOM02.3	108-88-3	µg/L	nc	1000	1100	NS	1,000	--	0.50	5
trans-1,2-Dichloroethene	SOM02.3	156-60-5	µg/L	nc	100	360	NS	100	--	0.50	5
trans-1,3-Dichloropropene	SOM02.3	10061-02-6	µg/L	c	NS	0.47	NS	0.47	--	0.50	5
Trichloroethene	SOM02.3	79-01-6	µg/L	c	5	0.49	NS	5	--	0.50	5
Trichlorofluoromethane	SOM02.3	75-69-4	µg/L	nc	NS	5200	NS	5,200	--	0.50	5
Vinyl Chloride	SOM02.3	75-01-4	µg/L	c	2	0.019	NS	2	--	0.50	5
m,p-Xylene	SOM02.3	179601-23-1	µg/L	nc	10000	190	NS	10,000	--	0.50	5
o-Xylene	SOM02.3	95-47-6	µg/L	nc	NS	190	NS	190	--	0.50	5
Semivolatile Organic Compounds											
1,1'-Biphenyl	SOM02.3	92-52-4	µg/L	nc	NS	0.83	NS	0.83	--	--	5
1,2,4,5-Tetrachlorobenzene	SOM02.3	95-94-3	µg/L	nc	NS	1.7	NS	1.7	--	--	5
1,4-Dioxane	SOM02.3	123-91-1	µg/L	c	NS	0.46	NS	0.46	--	--	2
2,2'-Oxybis (1-chloropropane)	SOM02.3	108-60-1	µg/L	nc	NS	710	NS	710	--	--	10
2,3,4,6-Tetrachlorophenol	SOM02.3	58-90-2	µg/L	nc	NS	240	NS	240	--	--	5
2,4,5-Trichlorophenol	SOM02.3	95-95-4	µg/L	nc	NS	1200	NS	1,200	--	--	5
2,4,6-Trichlorophenol	SOM02.3	88-06-2	µg/L	c	NS	4.1	NS	4.1	--	--	5
2,4-Dichlorophenol	SOM02.3	120-83-2	µg/L	nc	NS	46	NS	46	--	--	5
2,4-Dimethylphenol	SOM02.3	105-67-9	µg/L	nc	NS	360	NS	360	--	--	5
2,4-Dinitrophenol	SOM02.3	51-28-5	µg/L	nc	NS	39	NS	39	--	--	10
2,4-Dinitrotoluene	SOM02.3	121-14-2	µg/L	c	NS	0.24	NS	0.24	--	--	5
2,6-Dinitrotoluene	SOM02.3	606-20-2	µg/L	c	NS	0.049	NS	0.049	--	--	5
2-Chloronaphthalene	SOM02.3	91-58-7	µg/L	nc	NS	750	NS	750	--	--	5
2-Chlorophenol	SOM02.3	95-57-8	µg/L	nc	NS	91	NS	91	--	--	5
2-Methylnaphthalene	SOM02.3	91-57-6	µg/L	nc	NS	36	NS	36	0.1	--	5
2-Methylphenol	SOM02.3	95-48-7	µg/L	nc	NS	930	NS	930	--	--	10
2-Nitroaniline	SOM02.3	88-74-4	µg/L	nc	NS	190	NS	190	--	--	5
2-Nitrophenol	SOM02.3	88-75-5	µg/L	c	NS	NS	NS	NS	--	--	5
3,3'-Dichlorobenzidine	SOM02.3	91-94-1	µg/L	c	NS	0.13	NS	0.13	--	--	5
3-Methylphenol	SOM02.3	108-39-4	µg/L	nc	NS	930	NS	930	--	--	5
3-Nitroaniline	SOM02.3	99-09-2	µg/L	nc	NS	NS	NS	NS	--	--	10
4,6-Dinitro-2-methylphenol	SOM02.3	534-52-1	µg/L	nc	NS	1.5	NS	1.5	--	--	10
4-Bromophenyl-phenylether	SOM02.3	101-55-3	µg/L	-	NS	NS	NS	NS	--	--	5
4-Chloro-3-methylphenol	SOM02.3	59-50-7	µg/L	nc	NS	1400	NS	1,400	--	--	5
4-Chloroaniline	SOM02.3	106-47-8	µg/L	c	NS	0.37	NS	0.37	--	--	10
4-Chlorophenyl-phenylether	SOM02.3	7005-72-3	µg/L	-	NS	NS	NS	NS	0.1	--	5
4-Methylphenol	SOM02.3	106-44-5	µg/L	nc	NS	1900	NS	1,900	--	--	10
4-Nitroaniline	SOM02.3	100-01-6	µg/L	c	NS	3.8	NS	3.8	--	--	10
4-Nitrophenol	SOM02.3	100-02-7	µg/L	c	NS	NS	NS	NS	--	--	10
Acenaphthene	SOM02.3	83-32-9	µg/L	nc	NS	530	NS	530	0.1	--	5
Acetophenone	SOM02.3	98-86-2	µg/L	nc	NS	1900	NS	1,900	--	--	10
Acenaphthylene	SOM02.3	208-96-8	µg/L	-	NS	530	NS	530	0.1	--	5
Anthracene	SOM02.3	120-12-7	µg/L	nc	NS	1800	NS	1,800	0.1	--	5
Atrazine	SOM02.3	1912-24-9	µg/L	c	3	0.3	NS	3	--	--	10
Benzaldehyde	SOM02.3	100-52-7	µg/L	nc	NS	1900	NS	1,900	--	--	10
Benzo(a)anthracene	SOM02.3	56-55-3	µg/L	c	NS	0.012	NS	0.012	0.1	--	5
Benzo(a)pyrene	SOM02.3	50-32-8	µg/L	c	0.2	0.0034	NS	0.2	0.1	--	5
Benzo(b)fluoranthene	SOM02.3	205-99-2	µg/L	c	NS	0.034	NS	0.034	0.1	--	5
Benzo(g,h,i)perylene	SOM02.3	191-24-2	µg/L	nc	NS	120	NS	120	0.1	--	5
Benzo(k)fluoranthene	SOM02.3	207-08-9	µg/L	c	NS	0.34	NS	0.34	0.1	--	5
bis(2-Chloroethoxy)methane	SOM02.3	111-91-1	µg/L	nc	NS	59	NS	59	--	--	5
bis(2-Chloroethyl)ether	SOM02.3	111-44-4	µg/L	c	NS	0.014	NS	0.014	--	--	10
bis(2-Ethylhexyl)phthalate	SOM02.3	117-81-7	µg/L	c	6	5.6	NS	6	--	--	5
Butylbenzylphthalate	SOM02.3	85-68-7	µg/L	c	NS	16	150	16	--	--	5

TABLE B-3A. SCREENING CRITERIA FOR GROUND WATER AND CLP REFERENCE LIMITS

Analyte	Analytical Method	CASRN	Units	c/nc	EPA MCL [1]	EPA Tapwater RSL [2]	OWRB Interim WQS[3] for Public & Private Water Supply (Raw Water)	Project Screening Level[4]	CRQLs[5]		
									Low Water by SIM	Trace Water	Low Water
Caprolactam	SOM02.3	105-60-2	µg/L	nc	NS	9900	NS	9,900	--	--	10
Carbazole	SOM02.3	86-74-8	µg/L	-	NS	NS	NS	NS	--	--	10
Chrysene	SOM02.3	218-01-9	µg/L	c	NS	3.4	NS	3.4	0.1	--	5
Di-n-butylphthalate	SOM02.3	84-74-2	µg/L	nc	NS	900	NS	900	--	--	5
Di-n-octylphthalate	SOM02.3	117-84-0	µg/L	nc	NS	200	NS	200	--	--	10
Dibenz(a,h)anthracene	SOM02.3	53-70-3	µg/L	c	NS	0.0034	NS	0.0034	0.1	--	5
Dibenzofuran	SOM02.3	132-64-9	µg/L	nc	NS	7.9	NS	7.9	--	--	5
Diethylphthalate	SOM02.3	84-66-2	µg/L	nc	NS	15000	NS	15,000	--	--	5
Dimethylphthalate	SOM02.3	131-11-3	µg/L	-	NS	NS	NS	NS	--	--	5
Fluoranthene	SOM02.3	206-44-0	µg/L	nc	NS	800	NS	800	0.1	--	10
Fluorene	SOM02.3	86-73-7	µg/L	nc	NS	290	NS	290	0.1	--	5
Hexachlorobenzene	SOM02.3	118-74-1	µg/L	c	1	0.0098	NS	1	--	--	5
Hexachlorobutadiene	SOM02.3	87-68-3	µg/L	c	NS	0.14	NS	0.14	--	--	5
Hexachlorocyclopentadiene	SOM02.3	77-47-4	µg/L	nc	50	0.41	NS	50	--	--	10
Hexachloroethane	SOM02.3	67-72-1	µg/L	c	NS	0.33	NS	0.33	--	--	5
Indeno(1,2,3-cd)pyrene	SOM02.3	193-39-5	µg/L	c	NS	0.034	NS	0.034	0.1	--	5
Isophorone	SOM02.3	78-59-1	µg/L	c	NS	78	NS	78	--	--	5
N-Nitrosodimethylamine	SOM02.3	62-75-9	µg/L	c	NS	0.00011	NS	0.00011	--	--	5
N-Nitroso-di-n-propylamine	--	621-64-7	µg/L	c	NS	0.011	NS	0.011	--	--	--
Naphthalene	SOM02.3	91-20-3	µg/L	c	NS	0.17	NS	0.17	--	--	5
Nitrobenzene	SOM02.3	98-95-3	µg/L	c	NS	0.14	NS	0.14	0.1	--	5
Pentachlorophenol	SOM02.3	87-86-5	µg/L	c	1	0.041	NS	1	0.2	--	10
Phenanthrene	SOM02.3	85-01-8	µg/L	nc	NS	120	NS	120	0.1	--	5
Phenol	SOM02.3	108-95-2	µg/L	nc	NS	5800	NS	5,800	NS	--	10
Pyrene	SOM02.3	129-00-0	µg/L	nc	NS	120	NS	120	0.1	--	5
Polycyclic Aromatic Hydrocarbons											
Acenaphthene	SOM02.3	83-32-9	µg/L	nc	NS	530	NS	530	0.1	--	5
Acenaphthylene	SOM02.3	208-96-8	µg/L	-	NS	530	NS	530.00	0.1	--	5
Anthracene	SOM02.3	120-12-7	µg/L	nc	NS	1800	NS	1,800	0.1	--	5
Benzo(a)anthracene	SOM02.3	56-55-3	µg/L	c	NS	0.012	NS	0.012	0.1	--	5
Benzo(a)pyrene	SOM02.3	50-32-8	µg/L	c	0.2	0.0034	NS	0.2	0.1	--	5
Benzo(b)fluoranthene	SOM02.3	205-99-2	µg/L	c	NS	0.034	NS	0.034	0.1	--	5
Benzo(g,h,i)perylene	SOM02.3	191-24-2	µg/L	nc	NS	120	NS	120.00	0.1	--	5
Benzo(k)fluoranthene	SOM02.3	207-08-9	µg/L	c	NS	0.34	NS	0.34	0.1	--	5
Chrysene	SOM02.3	218-01-9	µg/L	c	NS	3.4	NS	3.4	0.1	--	5
Dibenz(a,h)anthracene	SOM02.3	53-70-3	µg/L	c	NS	0.0034	NS	0.0034	0.1	--	5
Fluoranthene	SOM02.3	206-44-0	µg/L	nc	NS	800	NS	800	0.1	--	10
Fluorene	SOM02.3	86-73-7	µg/L	nc	NS	290	NS	290	0.1	--	5
Indeno(1,2,3-cd)pyrene	SOM02.3	193-39-5	µg/L	c	NS	0.034	NS	0.034	0.1	--	5
Naphthalene	SOM02.3	91-20-3	µg/L	c	NS	0.17	NS	0.17	0.1	--	5
Phenanthrene	SOM02.3	85-01-8	µg/L	nc	NS	120	NS	120.00	0.1	--	5
Pyrene	SOM02.3	129-00-0	µg/L	nc	NS	120	NS	120	0.1	--	5
2-Methylnaphthalene	SOM02.3	91-57-6	µg/L	nc	NS	36	NS	36	0.1	--	5
Organochlorine Pesticides											
Aldrin	SOM02.3	309-00-2	µg/L	c	NS	0.00092	NS	0.00092	--	--	0.05
Alpha BHC (Hexachlorocyclohexane)	SOM02.3	319-84-6	µg/L	c	NS	0.0072	NS	0.0072	--	--	0.05
Alpha Chlordane	SOM02.3	5103-71-9	µg/L	c	2	0.045	NS	2	--	--	0.05
Beta BHC	SOM02.3	319-85-7	µg/L	c	NS	0.025	NS	0.025	--	--	0.05
Delta BHC	SOM02.3	319-86-8	µg/L	c	NS	0.0072	NS	0.0072	--	--	0.05
Dieldrin	SOM02.3	60-57-1	µg/L	c	NS	0.0018	NS	0.0018	--	--	0.1
Endosulfan I	SOM02.3	959-98-8	µg/L	nc	NS	100	NS	100	--	--	0.05
Endosulfan II	SOM02.3	33213-65-9	µg/L	nc	NS	100	NS	100	--	--	0.1
Endosulfan Sulfate	SOM02.3	1031-07-8	µg/L	nc	NS	100	NS	100	--	--	0.1
Endrin	SOM02.3	72-20-8	µg/L	nc	2	2.3	0.2	2	--	--	0.1
Endrin Aldehyde	SOM02.3	7421-93-4	µg/L	nc	2	2.3	NS	2	--	--	0.1
Endrin Ketone	SOM02.3	53494-70-5	µg/L	nc	2	2.3	NS	2	--	--	0.1
Gamma BHC (Lindane)	SOM02.3	58-89-9	µg/L	c	0.2	0.042	4	0.2	--	--	0.05
Gamma Chlordane	SOM02.3	5103-74-2	µg/L	c	2	0.045	NS	2	--	--	0.05
Heptachlor	SOM02.3	76-44-8	µg/L	c	0.4	0.0014	NS	0.4	--	--	0.05
Heptachlor Epoxide	SOM02.3	1024-57-3	µg/L	c	0.2	0.0014	NS	0.2	--	--	0.05
Methoxychlor	SOM02.3	72-43-5	µg/L	nc	40	37	100	40	--	--	0.5
Toxaphene	SOM02.3	8001-35-2	µg/L	c	3	0.071	5	3	--	--	5
p,p-DDD	SOM02.3	72-54-8	µg/L	c	NS	0.032	NS	0.032	--	--	0.1
p,p-DDE	SOM02.3	72-55-9	µg/L	c	NS	0.046	NS	0.046	--	--	0.1
p,p-DDT	SOM02.3	50-29-3	µg/L	c	NS	0.23	NS	0.23	--	--	0.1
Polychlorinated Biphenyls											
Aroclor-1016	SOM02.3	12674-11-2	µg/L	c	NS	0.22	NS	0.22	--	--	1
Aroclor-1221	SOM02.3	11104-28-2	µg/L	c	NS	0.0047	NS	0.0047	--	--	1
Aroclor-1232	SOM02.3	11141-16-5	µg/L	c	NS	0.0047	NS	0.0047	--	--	1
Aroclor-1242	SOM02.3	53469-21-9	µg/L	c	NS	0.0078	NS	0.0078	--	--	1
Aroclor-1248	SOM02.3	12672-29-6	µg/L	c	NS	0.0078	NS	0.0078	--	--	1
Aroclor-1254	SOM02.3	11097-69-1	µg/L	c	NS	0.0078	NS	0.0078	--	--	1
Aroclor-1260	SOM02.3	11096-82-5	µg/L	c	NS	0.0078	NS	0.0078	--	--	1
Aroclor-1262	SOM02.3	37324-23-5	µg/L	-	NS	0.0078	NS	0.0078	--	--	1
Aroclor-1268	SOM02.3	11100-14-4	µg/L	-	NS	0.0078	NS	0.0078	--	--	1
Total PCBs	--	1336-36-3	µg/L	c	NS	NS	NS	NS	--	--	--
Nitroaromatic/Nitramine Explosive Compounds											
1,3,5-Trinitrobenzene	SW8330B	99-35-4	µg/L	nc	NS	590	NS	590			
1,3-Dinitrobenzene	SW8330B	99-65-0	µg/L	nc	NS	2	NS	2			
2,4,6-Trinitrotoluene	SW8330B	118-96-7	µg/L	c	NS	2.5	NS	2.5			
2,4-Dinitrotoluene	SW8330B	121-14-2	µg/L	c	NS	0.24	NS	0.24			
2,6-Dinitrotoluene	SW8330B	606-20-2	µg/L	c	NS	0.049	NS	0.049			
2-Amino-4,6-Dinitrotoluene	SW8330B	35572-78-2	µg/L	nc	NS	39	NS	39			
2-Nitrotoluene	SW8330B	88-72-2	µg/L	c	NS	0.31	NS	0.31			
3,5-Dinitroaniline	SW8330B	618-87-1	µg/L	-	NS	NS	NS	NS			
3-Nitrotoluene	SW8330B	99-08-1	µg/L	nc	NS	1.7	NS	1.7			
4-Amino-2,6-Dinitrotoluene	SW8330B	19406-51-0	µg/L	nc	NS	39	NS	39			
4-Nitrotoluene	SW8330B	99-99-0	µg/L	c	NS	4.3	NS	4.3			
HMX	SW8330B	2691-41-0	µg/L	nc	NS	1000	NS	1000			
Nitrobenzene	SW8330B	98-95-3	µg/L	c	NS	0.14	NS	0.14			
Nitroglycerin	SW8330B	55-63-0	µg/L	nc	NS	2	NS	2			
PETN	SW8330B	78-11-5	µg/L	c	NS	19	NS	19			
RDX	SW8330B	121-82-4	µg/L	c	NS	0.7	NS	0.7			
Tetryl	SW8330B	479-45-8	µg/L	nc	NS	39	NS	39			

TABLE B-3A. SCREENING CRITERIA FOR GROUND WATER AND CLP REFERENCE LIMITS

Analyte	Analytical Method	CASRN	Units	c/nc	EPA MCL [1]	EPA Tapwater RSL [2]	OWRB Interim WQS[3] for Public & Private Water Supply (Raw Water)	Project Screening Level[4]	CRQLs[5]		
									Low Water by SIM	Trace Water	Low Water
Hydrazines											
1,1-Dimethylhydrazine	SW8315A	57-14-7	µg/L	nc	NS	0.0042	NS	0.0042			
Hydrazine	SW8315A	302-01-2	µg/L	c	NS	0.0011	NS	0.0011			
Methylhydrazine	SW8315A	60-34-4	µg/L	c	NS	0.0056	NS	0.0056			
ICP-MS Metals[7]											
Aluminum	ISM02.3	7429-90-5	µg/L	nc	NS	20000	NS	20000	--	--	20
Antimony	ISM02.3	7440-36-0	µg/L	nc	6	7.8	NS	6	--	--	2
Arsenic	ISM02.3	7440-38-2	µg/L	c	10	0.052	40	10	--	--	1
Barium	ISM02.3	7440-39-3	µg/L	nc	2000	3800	1,000	2,000	--	--	10
Beryllium	ISM02.3	7440-41-7	µg/L	nc	4	25	NS	4	--	--	1
Cadmium	ISM02.3	7440-43-9	µg/L	nc	NS	NS	20	20	--	--	1
Calcium	ISM02.3	7440-70-2	µg/L	-	NS	NS	NS	NS	--	--	500
Chromium[8]	ISM02.3	7440-47-3	µg/L	nc	100	22000	50	100	--	--	2
Cobalt	ISM02.3	7440-48-4	µg/L	nc	NS	6	NS	6	--	--	1
Copper	ISM02.3	7440-50-8	µg/L	nc	1300	800	1,000	1,300	--	--	2
Iron	ISM02.3	7439-89-6	µg/L	nc	NS	14000	NS	14,000	--	--	200
Lead	ISM02.3	7439-92-1	µg/L	-	15	15	100	15	--	--	1
Magnesium	ISM02.3	7439-95-4	µg/L	-	NS	NS	NS	NS	--	--	500
Manganese	ISM02.3	7439-96-5	µg/L	nc	NS	430	NS	430	--	--	1
Nickel	ISM02.3	7440-02-0	µg/L	nc	NS	390	NS	390	--	--	1
Potassium	ISM02.3	7440-09-7	µg/L	-	NS	NS	NS	NS	--	--	500
Selenium	ISM02.3	7782-49-2	µg/L	nc	50	100	10	50	--	--	5
Silver	ISM02.3	7440-22-4	µg/L	nc	NS	94	50	50	--	--	1
Sodium	ISM02.3	7440-23-5	µg/L	-	NS	NS	50	50	--	--	500
Thallium	ISM02.3	7440-28-0	µg/L	nc	2	0.2	NS	2	--	--	1
Vanadium	ISM02.3	7440-62-2	µg/L	nc	NS	86	NS	86	--	--	5
Zinc	ISM02.3	7440-66-6	µg/L	nc	NS	6000	5,000	5,000	--	--	2
ICP-AES Metals[7]											
Aluminum	ISM02.3	7429-90-5	µg/L	nc	NS	20000	NS	20,000	--	--	200
Antimony	ISM02.3	7440-36-0	µg/L	nc	6	7.8	NS	6	--	--	60
Arsenic	ISM02.3	7440-38-2	µg/L	c	10	0.052	40	10	--	--	10
Barium	ISM02.3	7440-39-3	µg/L	nc	2000	3800	1,000	2,000	--	--	200
Beryllium	ISM02.3	7440-41-7	µg/L	nc	4	25	NS	4	--	--	5
Boron	--	7440-42-8	µg/L	nc	NS	4000	NS	4,000	--	--	--
Cadmium	ISM02.3	7440-43-9	µg/L	nc	NS	NS	20	20	--	--	5
Calcium	ISM02.3	7440-70-2	µg/L	-	NS	NS	NS	NS	--	--	5,000
Chromium[8]	ISM02.3	7440-47-3	µg/L	nc	100	22000	50	100	--	--	10
Cobalt	ISM02.3	7440-48-4	µg/L	nc	NS	6	NS	6	--	--	50
Copper	ISM02.3	7440-50-8	µg/L	nc	1300	800	1000	1300	--	--	25
Iron	ISM02.3	7439-89-6	µg/L	nc	NS	14000	NS	14,000	--	--	100
Lead	ISM02.3	7439-92-1	µg/L	-	15	15	100	15	--	--	10
Magnesium	ISM02.3	7439-95-4	µg/L	-	NS	NS	NS	NS	--	--	5,000
Manganese	ISM02.3	7439-96-5	µg/L	nc	NS	430	NS	430	--	--	15
Nickel	ISM02.3	7440-02-0	µg/L	nc	NS	390	NS	390	--	--	40
Potassium	ISM02.3	7440-09-7	µg/L	-	NS	NS	NS	NS	--	--	5,000
Selenium	ISM02.3	7782-49-2	µg/L	nc	50	100	10	50	--	--	35
Silicon	ISM02.3	7440-21-3	µg/L	-	NS	NS	NS	NS	--	--	NS
Silver	ISM02.3	7440-22-4	µg/L	nc	NS	94	50	50	--	--	10
Sodium	ISM02.3	7440-23-5	µg/L	-	NS	NS	NS	NS	--	--	5,000
Thallium	ISM02.3	7440-28-0	µg/L	nc	2	0.2	NS	2	--	--	25
Vanadium	ISM02.3	7440-62-2	µg/L	nc	NS	86	NS	86	--	--	50
Zinc	ISM02.3	7440-66-6	µg/L	nc	NS	6000	5,000	5,000	--	--	60
Miscellaneous											
Cyanide	ISM02.3	57-12-5	µg/L	nc	200	1.5	200	200	--	--	10
Hexavalent Chromium (EPA Region 6 Lab)	EPA 218.6	18540-29-9	µg/L	c	NS	0.035	NS	0.035	--	--	--
Mercury	ISM02.3	7439-97-6	µg/L	nc	2	0.63	2	2	--	--	0.2

NOTES:

1. U.S. Environmental Protection Agency (EPA) National Primary Drinking Water Regulations, Maximum Contaminant Levels (MCLs), May 2009.
2. EPA Region 6 Regional Screening Levels (RSLs) for Tapwater (May 2016) for hazard index = 1.0 for non-carcinogens and a 10-6 cancer risk level for carcinogens.
3. Oklahoma Water Resources Board (OWRB) Interim Water Quality Standards (WQSs) (https://www.owrb.ok.gov/quality/standards/standards.php) (OWRB 2013)
4. The project screening level was selected to satisfy EPA requirements. The EPA MCL will be used; if no EPA MCL standard exists for an analyte, then the project screening level is the lower of the EPA Tapwater RSL or OWRB Interim WQS, if achievable.
5. Contract-required Quantitation Limits (CRQLs) for EPA Contract Laboratory Program (CLP)
6. EPA RSL for tapwater is for total trihalomethanes.
7. EPA MCL and tapwater RSL apply to total metals.

µg/L = Microgram(s) per liter
mg/L = Milligram(s) per liter
-- = Not provided
c = Carcinogenic; nc = Non-carcinogenic
CASRN = Chemical Abstracts Service Registry Number
DL = Detection limit
ICP-AES = Inductively-coupled plasma and atomic emission spectroscopy
ICPMS = Inductively-coupled plasma and mass spectrometry
NS = Not specified
PCB = Polychlorinated biphenyl
SIM = Selective ion monitoring
S.U. = Standard Unit
TPH = Total petroleum hydrocarbon

TABLE B-3B. SCREENING CRITERIA FOR GROUND WATER AND PRIVATE LABORATORY REFERENCE LIMITS

Analyte	Analytical Method	CASRN	Units	c/nc	EPA MCL (1)	EPA Tapwater RSL (2)	OWRB Interim WQS (3)	Project Screening Level (4)	Achievable Laboratory Limits (5)	
									RL	DL
Miscellaneous										
Hexavalent Chromium	SW7199	18540-29-9	mg/L	c	NS	0.000035	NS	0.000035	0.01	0.005

NOTES:

1. U.S. Environmental Protection Agency (EPA) National Primary Drinking Water Regulations, Maximum Contaminant Levels (MCLs), May 2009.
2. EPA Region 6 Regional Screening Levels (RSLs) for Tapwater (November 2015) for hazard index = 1.0 for non-carcinogens and a 10-6 cancer risk level for carcinogens.
3. Oklahoma Water Resources Board (OWRB) Interim Water Quality Standards (WQSs) (https://www.owrb.ok.gov/quality/standards/standards.php) (OWRB 2013)
4. The project screening level was selected to satisfy the requirements of the EPA. The EPA MCL will be used; if no EPA MCL standard exists for any analyte, then the project screening level is lower of the EPA Tapwater RSL or OWRB Interim WQS, if achievable.
5. Achievable laboratory limits are for Eurofins Lancaster Laboratories Environmental, LLC.

µg/L = Microgram(s) per liter
mg/L = Milligram(s) per liter
c = Carcinogenic; nc = Non-carcinogenic
CASRN = Chemical Abstracts Service Registry Number
DL = Detection limit
ICP-AES = Inductively-coupled plasma and atomic emission spectroscopy
ICP-MS = Inductively-coupled plasma and mass spectrometry
-- = Not provided
NS = Not specified
PCB = Polychlorinated biphenyl
RL = Reporting limit
SIM = Selective ion monitoring
S.U. = Standard Unit

TABLE B-4A. SCREENING CRITERIA FOR SURFACE WATER AND CONTRACT LABORATORY PROGRAM REFERENCE LIMITS

Analyte	Analytical Method	CASRN	Units	c/nc	National Recommended Water Quality Criteria (1)			OWRB Interim Water Quality Standards(2)				Project Screening Level (3)	CRQLs (4)		
					Aquatic Life Freshwater Acute	Aquatic Life Freshwater Chronic	Human Health for Consumption Organism Only	Fish & Wildlife Propagation Acute	Fish & Wildlife Propagation Chronic	Fish Consumption (+ Other Organisms) & Water	Fish Consumption (+ Other Organisms)		Low Water by SIM	Trace Water	Low Water
Volatile Organic Compounds															
1,1,1-Trichloroethane	SOM02.3	71-55-6	µg/L	nc	NS	NS	200	NS	NS	3094	173100	200	--	0.50	5
1,1,2-Trichloro-1,2,2-trifluoroethane	SOM02.3	76-13-1	µg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	--	0.50	5
1,1,2,2-Tetrachloroethane	SOM02.3	79-34-5	µg/L	c	NS	NS	0.17	NS	NS	NS	NS	0.17	--	0.50	5
1,1,2-Trichloroethane	SOM02.3	79-00-5	µg/L	c	NS	NS	0.59	NS	NS	NS	NS	0.59	--	0.50	5
1,1-Dichloroethane	SOM02.3	75-34-3	µg/L	c	NS	NS	NS	NS	NS	NS	NS	NS	--	0.50	5
1,1-Dichloroethene	SOM02.3	75-35-4	µg/L	nc	NS	NS	330	NS	NS	NS	NS	330	--	0.50	5
1,2,3-Trichlorobenzene	SOM02.3	87-61-6	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	0.50	5
1,2,4-Trichlorobenzene	SOM02.3	120-82-1	µg/L	c	NS	NS	35	NS	NS	NS	NS	35	--	0.50	5
1,2-Dibromo-3-chloropropane	SOM02.3	96-12-8	µg/L	c	NS	NS	NS	NS	NS	NS	NS	NS	--	0.50	5
1,2-Dibromoethane (EDB)	SOM02.3	106-93-4	µg/L	c	NS	NS	NS	NS	NS	NS	NS	NS	--	0.50	5
1,2-Dichlorobenzene	SOM02.3	95-50-1	µg/L	nc	NS	NS	420	NS	NS	NS	NS	420	--	0.50	5
1,2-Dichloroethane	SOM02.3	107-06-2	µg/L	c	NS	NS	0.38	NS	NS	NS	NS	0.38	--	0.50	5
1,2-Dichloropropane	SOM02.3	78-87-5	µg/L	c	NS	NS	0.5	NS	NS	NS	NS	0.5	--	0.50	5
1,3-Dichlorobenzene	SOM02.3	541-73-1	µg/L	-	NS	NS	320	NS	NS	NS	NS	320	--	0.50	5
1,4-Dichlorobenzene	SOM02.3	106-46-7	µg/L	c	NS	NS	63	NS	NS	NS	NS	63	--	0.50	5
2-Butanone (Methyl Ethyl Ketone)	SOM02.3	78-93-3	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	5	10
2-Hexanone	SOM02.3	591-78-6	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	5	10
4-Methyl-2-pentanone (Methyl isobutyl ketone)	SOM02.3	108-10-1	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	5	10
Acetone	SOM02.3	67-64-1	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	5	10
Benzene	SOM02.3	71-43-2	µg/L	c	NS	NS	2.2	NS	2,200	22	510	2.2	--	0.50	5
Bromochloromethane	SOM02.3	74-97-5	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	0.50	5
Bromodichloromethane	SOM02.3	75-27-4	µg/L	c	NS	NS	0.55	NS	NS	5.5	170	0.55	--	0.50	5
Bromoform	SOM02.3	75-25-2	µg/L	c	NS	NS	4.3	NS	NS	NS	NS	4.3	--	0.50	5
Bromomethane	SOM02.3	74-83-9	µg/L	nc	NS	NS	47	NS	NS	NS	NS	47	--	0.50	5
Carbon Disulfide	SOM02.3	75-15-0	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	0.50	5
Carbon Tetrachloride	SOM02.3	56-23-5	µg/L	c	NS	NS	0.23	NS	NS	2.3	16	0.23	--	0.50	5
Chlorobenzene	SOM02.3	108-90-7	µg/L	nc	NS	NS	100	NS	NS	NS	NS	100	--	0.50	5
Chloroethane	SOM02.3	75-00-3	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	0.50	5
Chloroform	SOM02.3	67-66-3	µg/L	c	NS	NS	5.7	NS	NS	56.69	4,708	5.7	--	0.50	5
Chloromethane	SOM02.3	74-87-3	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	0.50	5
cis-1,2-Dichloroethene	SOM02.3	156-59-2	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	0.50	5
cis-1,3-Dichloropropene	SOM02.3	10061-01-5	µg/L	c	NS	NS	NS	NS	NS	NS	NS	NS	--	0.50	5
Cyclohexane	SOM02.3	110-82-7	µg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	--	0.50	5
Dibromochloromethane	SOM02.3	124-48-1	µg/L	c	NS	NS	0.4	NS	NS	NS	NS	0.4	--	0.50	5
Dichlorodifluoromethane	SOM02.3	75-71-8	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	0.50	5
Ethylbenzene	SOM02.3	100-41-4	µg/L	c	NS	NS	530	NS	NS	530	2,100	530	--	0.50	5
Isopropylbenzene (Cumene)	SOM02.3	98-82-8	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	0.50	5
Methyl Acetate	SOM02.3	79-20-9	µg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	--	0.50	5
Methylcyclohexane	SOM02.3	108-87-2	µg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	--	0.50	5
Methyl tert-Butyl Ether	SOM02.3	1634-04-4	µg/L	c	NS	NS	NS	NS	NS	NS	NS	NS	--	0.50	5
Methylene Chloride	SOM02.3	75-09-2	µg/L	c	NS	NS	4.6	NS	NS	NS	NS	4.6	--	0.50	5
Styrene	SOM02.3	100-42-5	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	0.50	5
Tetrachloroethene	SOM02.3	127-18-4	µg/L	c	NS	NS	0.69	5,280	NS	6.9	33	0.69	--	0.50	5
Toluene	SOM02.3	108-88-3	µg/L	nc	NS	NS	1000	NS	875	1,300	15,000	875	--	0.50	5
trans-1,2-Dichloroethene	SOM02.3	156-60-5	µg/L	nc	NS	NS	100	NS	NS	NS	NS	100	--	0.50	5
trans-1,3-Dichloropropene	SOM02.3	10061-02-6	µg/L	c	NS	NS	NS	NS	NS	NS	NS	NS	--	0.50	5
Trichloroethene	SOM02.3	79-01-6	µg/L	c	NS	NS	2.5	NS	NS	3,094	173,100	3	--	0.50	5
Trichlorofluoromethane	SOM02.3	75-69-4	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	0.50	5
Vinyl Chloride	SOM02.3	75-01-4	µg/L	c	NS	NS	0.025	NS	NS	NS	NS	0.025	--	0.50	5
m,p-Xylene	SOM02.3	179601-23-1	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	0.50	5
o-Xylene	SOM02.3	95-47-6	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	0.50	5
Semivolatile Organic Compound															
1,1'-Biphenyl	SOM02.3	92-52-4	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	--	5
1,2,4,5-Tetrachlorobenzene	SOM02.3	95-94-3	µg/L	nc	NS	NS	0.97	NS	NS	NS	NS	0.97	--	--	5
1,4-Dioxane	SOM02.3	123-91-1	µg/L	c	NS	NS	NS	NS	NS	NS	NS	NS	--	--	2
2,2'-Oxybis (1-chloropropane)	SOM02.3	108-60-1	µg/L	nc	NS	NS	1400	NS	NS	NS	NS	1400	--	--	10
2,3,4,6-Tetrachlorophenol	SOM02.3	58-90-2	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	--	5
2,4,5-Trichlorophenol	SOM02.3	95-95-4	µg/L	nc	NS	NS	1800	NS	NS	NS	NS	1800	--	--	5
2,4,6-Trichlorophenol	SOM02.3	88-06-2	µg/L	c	NS	NS	1.4	NS	NS	NS	NS	1.4	--	--	5
2,4-Dichlorophenol	SOM02.3	120-83-2	µg/L	nc	NS	NS	77	NS	NS	NS	NS	77	--	--	5
2,4-Dimethylphenol	SOM02.3	105-67-9	µg/L	nc	NS	NS	380	NS	NS	NS	NS	380	--	--	5
2,4-Dinitrophenol	SOM02.3	51-28-5	µg/L	nc	NS	NS	69	NS	NS	NS	NS	69	--	--	10
2,4-Dinitrotoluene	SOM02.3	121-14-2	µg/L	c	NS	NS	0.11	NS	NS	NS	NS	0.11	--	--	5
2,6-Dinitrotoluene	SOM02.3	606-20-2	µg/L	c	NS	NS	NS	NS	NS	NS	NS	NS	--	--	5
2-Chloronaphthalene	SOM02.3	91-58-7	µg/L	nc	NS	NS	1000	NS	NS	NS	NS	1000	--	--	5
2-Chlorophenol	SOM02.3	95-57-8	µg/L	nc	NS	NS	81	NS	NS	NS	NS	81	--	--	5
2-Methylnaphthalene	SOM02.3	91-57-6	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	0.1	--	5
2-Methylphenol	SOM02.3	95-48-7	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	--	10
2-Nitroaniline	SOM02.3	88-74-4	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	--	5
2-Nitrophenol	SOM02.3	88-75-5	µg/L	c	NS	NS	NS	NS	NS	NS	NS	NS	--	--	5
3,3'-Dichlorobenzidine	SOM02.3	91-94-1	µg/L	c	NS	NS	0.021	NS	NS	NS	NS	0.021	--	--	5
3-Methylphenol	SOM02.3	108-39-4	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	--	5
3-Nitroaniline	SOM02.3	99-09-2	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	--	10
4,6-Dinitro-2-methylphenol	SOM02.3	534-52-1	µg/L	nc	NS	NS	13	NS	NS	NS	NS	13	--	--	10
4-Bromophenyl-phenylether	SOM02.3	101-55-3	µg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	--	--	5
4-Chloro-3-methylphenol	SOM02.3	59-50-7	µg/L	nc	NS	NS	59507	NS	NS	NS	NS	59507	--	--	5
4-Chloroaniline	SOM02.3	106-47-8	µg/L	c	NS	NS	NS	NS	NS	NS	NS	NS	--	--	10
4-Chlorophenyl-phenylether	SOM02.3	7005-72-3	µg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	0.1	--	5
4-Methylphenol	SOM02.3	106-44-5	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	--	10
4-Nitroaniline	SOM02.3	100-01-6	µg/L	c	NS	NS	NS	NS	NS	NS	NS	NS	--	--	10
4-Nitrophenol	SOM02.3	100-02-7	µg/L	c	NS	NS	NS	NS	NS	NS	NS	NS	--	--	10
Acenaphthene	SOM02.3	83-32-9	µg/L	nc	NS	NS	670	NS	NS	NS	NS	670	0.1	--	5
Acetophenone	SOM02.3	98-86-2	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	--	10
Acenaphthylene	SOM02.3	208-96-8	µg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	0.1	--	5
Anthracene	SOM02.3	120-12-7	µg/L	nc	NS	NS	8300	NS	NS	NS	NS	8,300	0.1	--	5
Atrazine	SOM02.3	1912-24-9	µg/L	c	NS	NS	NS	NS	NS	NS	NS	NS	--	--	10
Benzaldehyde	SOM02.3	100-52-7	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	--	10
Benzo(a)anthracene	SOM02.3	56-55-3	µg/L	c	NS	NS	0.0038	NS	NS	NS	NS	0.0038	0.1	--	5
Benzo(a)pyrene	SOM02.3	50-32-8	µg/L	c	NS	NS	0.0038	NS	NS	NS	NS	0.0038	0.1	--	5
Benzo(b)fluoranthene	SOM02.3	205-99-2	µg/L	c	NS	NS	0.0038	NS	NS	NS	NS	0.0038	0.1	--	5
Benzo(g,h,i)perylene	SOM02.3	191-24-2	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	0.1	--	5
Benzo(k)fluoranthene	SOM02.3	207-08-9	µg/L	c	NS	NS	0.0038	NS	NS	NS	NS	0.0038	0.1	--	5
bis(2-Chloroethoxy)methane	SOM02.3	111-91-1	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	--	5
bis(2-Chloroethyl)ether	SOM02.3	111-44-4	µg/L	c	NS	NS	0.03	NS	NS	NS	NS	0.03	--	--	10
bis(2-Ethylhexyl)phthalate	SOM02.3	117-81-7	µg/L	c	NS	NS	1.2	NS	NS	12	22	1.2	--	--	5
Butylbenzylphthalate	SOM02.3	85-68-7	µg/L	c	NS	NS	1500	NS	NS	1,500	1,900	1,500	--	--	5
Caprolactam	SOM02.3	105-60-2	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	--	10
Carbazole	SOM02.3	86-74-8	µg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	--	--	10
Chrysene	SOM02.3	218-01-9	µg/L	c	NS	NS	0.0038	NS	NS	NS	NS	0.0038	0.1	--	5
Di-n-butylphthalate	SOM02.3	84-74-2	µg/L	nc	NS	NS	2000	NS	NS	2,000	4,500	2,000	--	--	5
Di-n-octylphthalate	SOM02.3	117-84-0	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	--	10
Dibenz(a,h)anthracene	SOM02.3	53-70-3	µg/L	c	NS	NS	0.0038	NS	NS	NS	NS	0.0038	0.1	--	5
Dibenzofuran	SOM02.3	132-64-9	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	--	5
Diethylphthalate	SOM02.3	84-66-2	µg/L	nc	NS	NS	17000	NS	NS	17,000	44,000	17,000	--	--	5
Dimethylphthalate	SOM02.3	131-11-3	µg/L	-	NS	NS	270000	NS	NS	270,000	1,100,000	270,000	--	--	5
Fluoranthene	SOM02.3	206-44-0	µg/L	nc	NS	NS	130	NS	NS	NS	NS	130	0.1	--	10
Fluorene	SOM02.3	86-73-7	µg/L	nc	NS	NS	1100	NS	NS	NS	NS	1,100	0.1	--	5
Hexachlorobenzene	SOM02.3	118-74-1	µg/L	c	NS	NS	0.00028	NS	NS	0.0028	0.0029	0.00028	--	--	5
Hexachlorobutadiene	SOM02.3	87-68-3	µg/L	c	NS	NS	0.44	NS	NS	NS	NS	0.44	--	--	5
Hexachlorocyclopentadiene	SOM02.3	77-47-4	µg/L	nc	NS	NS	40	NS	NS	NS	NS	40	--	--	10
Hexachloroethane	SOM02.3	67-72-1	µg/L	c	NS	NS	1.4	NS	NS	NS	NS	1.4	--	--	5
Indeno(1,2,3-cd)pyrene	SOM02.3	193-39-5	µg/L	c	NS	NS	0.0038	NS	NS	NS	NS	0.0038	0.1	--	5
Isophorone	SOM02.3	78-59-1	µg/L	c	NS	NS	35	NS	NS	NS	NS	35	--	--	5
N-Nitroso-di-n-propylamine	--	621-64-7	µg/L	c	NS	NS	0.005	NS	NS	NS	NS	0.005	--	--	--
N-Nitrosodiphenylamine	SOM02.3	86-30-6	µg/L	c	NS	NS	3.3	NS	NS	NS	NS	3.3	--	--	5
Naphthalene	SOM02.3	91-20-3	µg/L	c	NS	NS	NS	NS	NS	NS	NS	NS	--	--	5
Nitrobenzene	SOM02.3	98-95-3	µg/L	c	NS	NS	17	NS	NS	NS	NS	17	0.1	--	5
Pentachlorophenol	SOM02.3	87-86-5	µg/L	c	19	15	0.27	see OWRB	see OWRB	2.7	30	0.27	0.2	--	10
Phenanthrene	SOM02.3	85-01-8	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	0.1	--	5
Phenol	SOM02.3	108-95-2	µg/L	nc	NS	NS	10000	NS	NS	10,000	860,000	10,000	--	--	10
Pyrene	SOM02.3	129-00-0	µg/L	nc	NS	NS	830	NS	NS	NS	NS	830	0.1	--	5

TABLE B-4A. SCREENING CRITERIA FOR SURFACE WATER AND CONTRACT LABORATORY PROGRAM REFERENCE LIMITS

Analyte	Analytical Method	CASRN	Units	c/nc	National Recommended Water Quality Criteria (1)			OWRB Interim Water Quality Standards (2)				Project Screening Level (3)	CRQLs (4)		
					Aquatic Life Freshwater Acute	Aquatic Life Freshwater Chronic	Human Health for Consumption Organism Only	Fish & Wildlife Propagation Acute	Fish & Wildlife Propagation Chronic	Fish Consumption (+ Other Organisms) & Water	Fish Consumption (+ Other Organisms)		Low Water by SIM	Trace Water	Low Water
Polycyclic Aromatic Hydrocarbons															
Acenaphthene	SOM02.3	83-32-9	µg/L	nc	NS	NS	670	NS	NS	NS	NS	670	0.1	--	5
Acenaphthylene	SOM02.3	208-96-8	µg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	0.1	--	5
Anthracene	SOM02.3	120-12-7	µg/L	nc	NS	NS	8300	NS	NS	NS	NS	8,300	0.1	--	5
Benzo(a)anthracene	SOM02.3	56-55-3	µg/L	c	NS	NS	0.0038	NS	NS	NS	NS	0.0038	0.1	--	5
Benzo(a)pyrene	SOM02.3	50-32-8	µg/L	c	NS	NS	0.0038	NS	NS	NS	NS	0.0038	0.1	--	5
Benzo(b)fluoranthene	SOM02.3	205-99-2	µg/L	c	NS	NS	0.0038	NS	NS	NS	NS	0.0038	0.1	--	5
Benzo(g,h,i)perylene	SOM02.3	191-24-2	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	0.1	--	5
Benzo(k)fluoranthene	SOM02.3	207-08-9	µg/L	c	NS	NS	0.0038	NS	NS	NS	NS	0.0038	0.1	--	5
Chrysene	SOM02.3	218-01-9	µg/L	c	NS	NS	0.0038	NS	NS	NS	NS	0.0038	0.1	--	5
Dibenz(a,h)anthracene	SOM02.3	53-70-3	µg/L	c	NS	NS	0.0038	NS	NS	NS	NS	0.0038	0.1	--	5
Fluoranthene	SOM02.3	206-44-0	µg/L	nc	NS	NS	130	NS	NS	NS	NS	130	0.1	--	10
Fluorene	SOM02.3	86-73-7	µg/L	nc	NS	NS	1100	NS	NS	NS	NS	1,100	0.1	--	5
Indeno(1,2,3-cd)pyrene	SOM02.3	193-39-5	µg/L	c	NS	NS	0.0038	NS	NS	NS	NS	0.0038	0.1	--	5
Naphthalene	SOM02.3	91-20-3	µg/L	c	NS	NS	NS	NS	NS	NS	NS	NS	0.1	--	5
Phenanthrene	SOM02.3	85-01-8	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	0.1	--	5
Pyrene	SOM02.3	129-00-0	µg/L	nc	NS	NS	830	NS	NS	NS	NS	830	0.1	--	5
2-Methylnaphthalene	SOM02.3	91-57-6	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	0.1	--	5
ICP-MS Metals - Total															
Aluminum	ISM02.3	7429-90-5	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	--	20
Antimony	ISM02.3	7440-36-0	µg/L	nc	NS	NS	5.6	NS	NS	NS	NS	5.6	--	--	2
Arsenic	ISM02.3	7440-38-2	µg/L	c	340	150	0.018	360	190	NS	205	0.018	--	--	1
Barium	ISM02.3	7440-39-3	µg/L	nc	NS	NS	1000	NS	NS	NS	NS	1000	--	--	10
Beryllium	ISM02.3	7440-41-7	µg/L	nc	NS	NS	4	NS	NS	NS	NS	4	--	--	1
Cadmium	ISM02.3	7440-43-9	µg/L	nc	2	0.25	5	see OWRB	see OWRB	14.49	84.13	0.25	--	--	1
Calcium	ISM02.3	7440-70-2	µg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	--	--	500
Chromium	ISM02.3	7440-47-3	µg/L	nc	16	11	100	NS	NS	166.3	3,365	11	--	--	2
Cobalt	ISM02.3	7440-48-4	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	--	1
Copper	ISM02.3	7440-50-8	µg/L	nc	13	9	1300	see OWRB	see OWRB	NS	NS	9	--	--	2
Iron	ISM02.3	7439-89-6	µg/L	nc	NS	1,000	NS	NS	NS	NS	NS	1,000	--	--	200
Lead	ISM02.3	7439-92-1	µg/L	-	65	2.5	NS	see OWRB	see OWRB	5	25	2.5	--	--	1
Magnesium	ISM02.3	7439-95-4	µg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	--	--	500
Manganese	ISM02.3	7439-96-5	µg/L	nc	NS	NS	50	NS	NS	NS	NS	50	--	--	1
Nickel	ISM02.3	7440-02-0	µg/L	nc	470	52	610	see OWRB	see OWRB	607.2	4,583	52	--	--	1
Potassium	ISM02.3	7440-09-7	µg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	--	--	500
Selenium	ISM02.3	7782-49-2	µg/L	nc	NS	4.6	50	20	5	NS	NS	4.6	--	--	5
Silver	ISM02.3	7440-22-4	µg/L	nc	3.2	NS	NS	see OWRB	NS	104.8	64,620	3.2	--	--	1
Sodium	ISM02.3	7440-23-5	µg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	--	--	500
Thallium	ISM02.3	7440-28-0	µg/L	nc	NS	NS	0.24	1,400	NS	0.24	0.47	0.24	--	--	1
Vanadium	ISM02.3	7440-62-2	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	--	5
Zinc	ISM02.3	7440-66-6	µg/L	nc	120	120	7400	see OWRB	see OWRB	NS	NS	120	--	--	2
ICP-AES Metals - Total															
Aluminum	ISM02.3	7429-90-5	µg/L	nc	750	87	NS	NS	NS	NS	NS	87	--		20
Antimony	ISM02.3	7440-36-0	µg/L	nc	NS	NS	5.6	NS	NS	NS	NS	5.6	--	--	60
Arsenic	ISM02.3	7440-38-2	µg/L	c	340	150	0.018	360	190	NS	205	0.018	--	--	10
Barium	ISM02.3	7440-39-3	µg/L	nc	NS	NS	1000	NS	NS	NS	NS	1000	--	--	200
Beryllium	ISM02.3	7440-41-7	µg/L	nc	NS	NS	4	NS	NS	NS	NS	4	--	--	5
Cadmium	ISM02.3	7440-43-9	µg/L	nc	1.8	0.72	5	see OWRB	see OWRB	14.49	84.13	0.72	--	--	5
Calcium	ISM02.3	7440-70-2	µg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	--		5,000
Chromium	ISM02.3	7440-47-3	µg/L	nc	16	11	100	NS	NS	166.3	3,365	11	--	--	10
Cobalt	ISM02.3	7440-48-4	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	--	50
Copper	ISM02.3	7440-50-8	µg/L	nc	13	9	1300	see OWRB	see OWRB	NS	NS	9	--	--	25
Iron	ISM02.3	7439-89-6	µg/L	nc	NS	1,000	NS	NS	NS	NS	NS	1,000	--		100
Lead	ISM02.3	7439-92-1	µg/L	-	65	2.5	NS	see OWRB	see OWRB	5	25	2.5	--	--	10
Magnesium	ISM02.3	7439-95-4	µg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	--		5,000
Manganese	ISM02.3	7439-96-5	µg/L	nc	NS	NS	50	NS	NS	NS	NS	50	--	--	15
Nickel	ISM02.3	7440-02-0	µg/L	nc	470	52	610	see OWRB	see OWRB	607.2	4,583	52	--	--	40
Potassium	ISM02.3	7440-09-7	µg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	--		5,000
Selenium	ISM02.3	7782-49-2	µg/L	nc	NS	5	50	20	5	NS	NS	5	--	--	35
Silver	ISM02.3	7440-22-4	µg/L	nc	3.2	NS	NS	see OWRB	NS	104.8	64,620	3.2	--	--	10
Sodium	ISM02.3	7440-23-5	µg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	--		5,000
Thallium	ISM02.3	7440-28-0	µg/L	nc	NS	NS	0.24	1,400	NS	0.24	0.47	0.24	--	--	25
Vanadium	ISM02.3	7440-62-2	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	--	50
Zinc	ISM02.3	7440-66-6	µg/L	nc	120	120	7400	see OWRB	see OWRB	NS	NS	120	--	--	60
ICP-MS Metals - Dissolved															
Aluminum	ISM02.3	7429-90-5	µg/L	nc	750	87	NS	NS	NS	NS	NS	87	--	--	20
Antimony	ISM02.3	7440-36-0	µg/L	nc	NS	NS	5.6	NS	NS	NS	NS	5.6	--	--	2
Arsenic	ISM02.3	7440-38-2	µg/L	c	340	150	0.018	360	190	NS	205	0.018	--	--	1
Barium	ISM02.3	7440-39-3	µg/L	nc	NS	NS	1000	NS	NS	NS	NS	1000	--	--	10
Beryllium	ISM02.3	7440-41-7	µg/L	nc	NS	NS	4	NS	NS	NS	NS	4	--	--	1
Cadmium	ISM02.3	7440-43-9	µg/L	nc	2	0.25	5	see OWRB	see OWRB	14.49	84.13	0.25	--	--	1
Calcium	ISM02.3	7440-70-2	µg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	--	--	500
Chromium	ISM02.3	7440-47-3	µg/L	nc	16	11	100	NS	NS	166.3	3,365	11	--	--	2
Cobalt	ISM02.3	7440-48-4	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	--	1
Copper	ISM02.3	7440-50-8	µg/L	nc	13	9	1300	see OWRB	see OWRB	NS	NS	9	--	--	2
Iron	ISM02.3	7439-89-6	µg/L	nc	NS	1,000	NS	NS	NS	NS	NS	1,000	--	--	200
Lead	ISM02.3	7439-92-1	µg/L	-	65	2.5	NS	see OWRB	see OWRB	5	25	2.5	--	--	1
Magnesium	ISM02.3	7439-95-4	µg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	--	--	500
Manganese	ISM02.3	7439-96-5	µg/L	nc	NS	NS	50	NS	NS	NS	NS	50	--	--	1
Nickel	ISM02.3	7440-02-0	µg/L	nc	470	52	610	see OWRB	see OWRB	607.2	4,583	52	--	--	1
Potassium	ISM02.3	7440-09-7	µg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	--	--	500
Selenium	ISM02.3	7782-49-2	µg/L	nc	NS	4.6	50	20	5	NS	NS	4.6	--	--	5
Silver	ISM02.3	7440-22-4	µg/L	nc	3.2	NS	NS	see OWRB	NS	104.8	64,620	3.2	--	--	1
Sodium	ISM02.3	7440-23-5	µg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	--	--	500
Thallium	ISM02.3	7440-28-0	µg/L	nc	NS	NS	0.24	1,400	NS	0.24	0.47	0.24	--	--	1
Vanadium	ISM02.3	7440-62-2	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	--	5
Zinc	ISM02.3	7440-66-6	µg/L	nc	120	120	7400	see OWRB	see OWRB	NS	NS	120	--	--	2
ICP-AES Metals - Dissolved															
Aluminum	ISM02.3	7429-90-5	µg/L	nc	750	87	NS	NS	NS	NS	NS	87	--	--	20
Antimony	ISM02.3	7440-36-0	µg/L	nc	NS	NS	5.6	NS	NS	NS	NS	5.6	--	--	60
Arsenic	ISM02.3	7440-38-2	µg/L	c	340	150	0.018	360	190	NS	205	0.018	--	--	10
Barium	ISM02.3	7440-39-3	µg/L	nc	NS	NS	1000	NS	NS	NS	NS	1000	--	--	200
Beryllium	ISM02.3	7440-41-7	µg/L	nc	NS	NS	4	NS	NS	NS	NS	4	--	--	5
Cadmium	ISM02.3	7440-43-9	µg/L	nc	1.8	0.72	5	see OWRB	see OWRB	14.49	84.13	0.72	--	--	5
Calcium	ISM02.3	7440-70-2	µg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	--	--	5,000
Chromium	ISM02.3	7440-47-3	µg/L	nc	16	11	100	NS	NS	166.3	3,365	11	--	--	10
Cobalt	ISM02.3	7440-48-4	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	--	50
Copper	ISM02.3	7440-50-8	µg/L	nc	13	9	1300	see OWRB	see OWRB	NS	NS	9	--	--	25
Iron	ISM02.3	7439-89-6	µg/L	nc	NS	1,000	NS	NS	NS	NS	NS	1,000	--	--	100
Lead	ISM02.3	7439-92-1	µg/L	-	65	2.5	NS	see OWRB	see OWRB	5	25	2.5	--	--	10
Magnesium	ISM02.3	7439-95-4	µg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	--	--	5,000
Manganese	ISM02.3	7439-96-5	µg/L	nc	NS	NS	50	NS	NS	NS	NS	50	--	--	15
Nickel	ISM02.3	7440-02-0	µg/L	nc	470	52	610	see OWRB	see OWRB	607.2	4,583	52	--	--	40
Potassium	ISM02.3	7440-09-7	µg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	--	--	5,000
Selenium	ISM02.3	7782-49-2	µg/L	nc	NS	5	50	20	5	NS	NS	5	--	--	35
Silver	ISM02.3	7440-22-4	µg/L	nc	3.2	NS	NS	see OWRB	NS	104.8	64,620	3.2	--	--	10
Sodium	ISM02.3	7440-23-5	µg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	--	--	5,000
Thallium	ISM02.3	7440-28-0	µg/L	nc	NS	NS	0.24	1,400	NS	0.24	0.47	0.24	--	--	25
Vanadium	ISM02.3	7440-62-2	µg/L	nc	NS	NS	NS	NS	NS	NS	NS	NS	--	--	50
Zinc	ISM02.3	7440-66-6	µg/L	nc	120	120	7400	see OWRB	see OWRB	NS	NS	120	--	--	60
Miscellaneous															
Cyanide - Total	ISM02.3	57-12-5	mg/L	nc	0.022	0.0052	140	0.04593	0.01072	NS	NS	0.0052	--		0.001
Mercury (Total)	ISM02.3	7439-97-6	mg/L	nc	0.0017	0.00091	NS	0.0024	0.00132	0.00005	0.000051	0.00005	--		0.0002

NOTES:

1. EPA National Recommended Water Quality Criteria (accessed 18 June 2012 at http://water.epa.gov/scitech/swguidance/standards/criteria/current/index.cfm).
2. Oklahoma Water Resources Board (OWRB) Interim Water Quality Standards (WQSs) (https://www.owrb.ok.gov/quality/standards/standards.php) (OWRB 2013) Equations are prescribed in Table 2 of this reference for metals whose toxicity varies with water quality.
3. Project screening levels reflect the lowest value for EPA or OWRB surface water quality criteria.
4. Contract-required Quantitation Limits (CRQL) for EPA Contract Laboratory Program (CLP)

µg/L = Microgram(s) per liter
AES = Atomic emission spectroscopy
c = Carcinogenic; nc = Non-carcinogenic
CASRN = Chemical Abstracts Service Registry Number
ICP = Inductively-coupled plasma
mg/L = Milligram(s) per liter
MS = Mass spectrometry
-- = Not provided
NS = Not specified
PCB = Polychlorinated biphenyl
SIM = Selective ion monitoring

TABLE B-4B. SCREENING CRITERIA FOR SURFACE WATER AND PRIVATE LABORATORY REFERENCE LIMITS

Analyte	Analytical Method	CASRN	Units	c/nc	National Recommended Water Quality Criteria [1]			OWRB Interim Water Quality Standards [2]				Project Screening Level [3]	Achievable Laboratory Limits [4]	
					Aquatic Life Freshwater Acute	Aquatic Life Freshwater Chronic	Human Health for Consumption Organism Only	Fish & Wildlife Propagation Acute	Fish & Wildlife Propagation Chronic	Fish Consumption (+ Other Organisms) & Water	Fish Consumption (+ Other Organisms)		RL	DL
Miscellaneous														
Alkalinity -Bicarbonate/Carbonate	SM 2320B	NS	mg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	2	0.7
Hardness	EPA 130.2	NS	mg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	--	--
Hexavalent Chromium	SW7199	18540-29-9	mg/L	c	0.016	0.011	NS	NS	NS	NS	NS	0.011	0.01	0.005
pH	SW9045C	NS	S.U.	-	NS	NS	NS	NS	NS	NS	NS	NS	0.01	0.01
Total Organic Carbon	SM 5310B	NS	mg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	300	100
Total Dissolved Solids	SM 2540C	NS	mg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	30	9.7
Total Suspended Sediment	ASTM D 3977-97	NS	mg/L	-	NS	NS	NS	NS	NS	NS	NS	NS	--	--

NOTES:

1. EPA National Recommended Water Quality Criteria (accessed 18 June 2012 at http://water.epa.gov/scitech/swguidance/standards/criteria/current/index.cfm).
2. Oklahoma Water Resources Board (OWRB) Interim Water Quality Standards (WQSs) (https://www.owrb.ok.gov/quality/standards/standards.php) (OWRB 2013) Equations are prescribed in Table 2 of this reference for metals whose toxicity varies with water quality.
3. Project screening levels reflect the lowest value for EPA or OWRB surface water quality criteria.
4. Achievable laboratory limits are for Eurofins Lancaster Laboratories Environmental, LLC.
5. Oklahoma GRO 8082/8015 modified for ground water.
6. Oklahoma DRO 8000/8100 modified for ground water.

µg/L = Microgram(s) per liter
AES = Atomic emission spectroscopy
c = Carcinogenic; nc = Non-carcinogenic
CASRN = Chemical Abstracts Service Registry Number
ICP = Inductively-coupled plasma
mg/L = Milligram(s) per liter
MS = Mass spectrometry
-- = Not provided
NS = Not specified
PCB = Polychlorinated biphenyl
SIM = Selective ion monitoring
DL = Detection limit
RL = Reporting limit

TABLE B-5. SCREENING CRITERIA FOR AIR AND EPA AND PRIVATE LABORATORY REFERENCE LIMITS

Analyte	Analytical Method [1]	Units	CASRN	EPA Indoor Residential Air Screening Level [2]	EPA Crawl Space Residential Air Screening Level [3]	EPA Sub-Slab Residential Air Screening Level [3]	Project Screening Level [4]	Achievable Laboratory Limits [5]		Private Laboratory RL for TO-15 SIM
								DL	RL	
Volatile Organic Compounds (VOCs), including Naphthalene										
Acetone	TO-15 SIM/TO-15	µg/m^3	67-64-1	32,000	32,000	1,066,667	32,000	0.109	1.188	1.188
Benzene	TO-15 SIM/TO-15	µg/m^3	71-43-2	0.36	0.36	12	0.36	0.249	0.31947	0.16
Bromodichloromethane	TO-15 SIM/TO-15	µg/m^3	75-27-4	0.076	0.076	3	**0.076**	0.121	0.670	0.670
Bromoform	TO-15 SIM/TO-15	µg/m^3	75-25-2	2.6	2.6	87	2.6	0.114	1.034	1.034
Bromomethane	TO-15 SIM/TO-15	µg/m^3	74-83-9	5.2	5.2	173	5.2	0.299	1.553	1.553
1,3-Butadiene	TO-15 SIM/TO-15	µg/m^3	106-99-0	0.094	0.094	3	0.094	0.049	0.221	0.221
2-Butanone (Methyl Ethyl Ketone)	TO-15 SIM/TO-15	µg/m^3	78-93-3	5,200	5,200	173,333	5,200	0.147	1.180	1.180
Carbon Disulfide	TO-15 SIM/TO-15	µg/m^3	75-15-0	730	730	24,333	730	0.115	1.557	1.557
Carbon Tetrachloride	TO-15 SIM/TO-15	µg/m^3	56-23-5	0.47	0.47	16	0.47	0.069	0.6292	0.12
Chlorobenzene	TO-15 SIM/TO-15	µg/m^3	108-90-7	52	52	1,733	52	0.041	0.460	0.460
Chloroethane (ethyl chloride)	TO-15 SIM/TO-15	µg/m^3	75-00-3	10,000	10,000	333,333	10,000	0.132	1.31943	0.13
Chloroform	TO-15 SIM/TO-15	µg/m^3	67-66-3	0.12	0.12	4	0.12	0.054	0.4883	0.01
Chloromethane	TO-15 SIM/TO-15	µg/m^3	74-87-3	94	94	3,133	94	0.114	1.032	0.1
3-Chloropropene	TO-15 SIM/TO-15	µg/m^3	107-05-1	0.47	0.47	16	0.47	0.213	1.565	1.565
alpha-Chlorotoluene	TO-15 SIM/TO-15	µg/m^3	100-44-7	0.057	0.057	2	**0.057**	0.072	0.518	0.518
Cumene	TO-15 SIM/TO-15	µg/m^3	98-82-8	420	420	14,000	420	0.059	0.492	0.492
Cyclohexane	TO-15 SIM/TO-15	µg/m^3	110-82-7	6,300	6,300	210,000	6,300	0.072	0.344	0.344
Dibromochloromethane	TO-15 SIM/TO-15	µg/m^3	124-48-1	NS	NS	NS	NS	0.111	0.852	0.852
1,2-Dichlorobenzene	TO-15 SIM/TO-15	µg/m^3	95-50-1	210	210	7,000	210	0.144	0.601	0.601
1,3-Dichlorobenzene	TO-15 SIM/TO-15	µg/m^3	541-73-1	NS	NS	NS	NS	0.114	0.601	0.601
cis-1,2-Dichloroethene	TO-15 SIM/TO-15	µg/m^3	156-59-2	NS	NS	NS	NS	0.107	0.39648	0.079
1,1-Dichloroethane	TO-15 SIM/TO-15	µg/m^3	75-34-3	1.8	1.8	60	1.8	0.077	0.40479	0.081
1,1-Dichloroethene	TO-15 SIM/TO-15	µg/m^3	75-35-4	210	210	7,000	210	0.091	0.39652	0.04
1,2-Dibromoethane (EDB)	TO-15 SIM/TO-15	µg/m^3	106-93-4	0.0047	0.0047	0	**0.0047**	0.115	0.76843	0.15
1,2-Dichloroethane	TO-15 SIM/TO-15	µg/m^3	107-06-2	0.11	0.11	4	0.11	0.081	0.40474	0.081
1,4-Dichlorobenzene	TO-15 SIM/TO-15	µg/m^3	106-46-7	0.26	0.26	9	0.26	0.084	0.60127	0.12
trans-1,2-Dichloroethene	TO-15 SIM/TO-15	µg/m^3	156-60-5	NS	NS	NS	NS	0.075	0.39648	0.4
1,2-Dichloropropane	TO-15 SIM/TO-15	µg/m^3	78-87-5	0.28	0.28	9	0.28	0.055	0.462	0.462
cis-1,3-Dichloropropene	TO-15 SIM/TO-15	µg/m^3	10061-01-5	NS	NS	NS	NS	0.077	0.454	0.454
1,4-Dioxane	TO-15 SIM/TO-15	µg/m^3	123-91-1	0.56	0.56	19	0.56	0.133	0.360	0.360
Ethanol	TO-15 SIM/TO-15	µg/m^3	64-17-5	NS	NS	NS	NS	0.141	0.942	0.942
Ethyl Benzene	TO-15 SIM/TO-15	µg/m^3	100-41-4	1.1	1.1	37	1.1	0.096	0.43419	0.087
4-Ethyltoluene	TO-15 SIM/TO-15	µg/m^3	622-96-8	NS	NS	NS	NS	0.088	0.492	0.492
Freon 11	TO-15 SIM/TO-15	µg/m^3	75-69-4	NS	NS	NS	NS	0.09	0.562	0.562
Freon 113	TO-15 SIM/TO-15	µg/m^3	76-13-1	31,000	31,000	1,033,333	31,000	0.1	0.766	0.766
Freon 114	TO-15 SIM/TO-15	µg/m^3	76-14-2	NS	NS	NS	NS	0.077	0.699	0.14
Freon 12 (dichlorodifluoromethane)	TO-15 SIM/TO-15	µg/m^3	75-71-8	100	100	3,333	100	0.094	0.494	0.099
Heptane	TO-15 SIM/TO-15	µg/m^3	142-82-5	NS	NS	NS	NS	0.041	0.410	0.410
Hexachlorobutadiene	TO-15 SIM/TO-15	µg/m^3	87-68-3	0.13	0.13	4	0.13	0.469	5.333	5.333
Hexane	TO-15 SIM/TO-15	µg/m^3	110-54-3	730	730	24,333	730	0.053	0.352	0.352
2-Hexanone	TO-15 SIM/TO-15	µg/m^3	591-78-6	31	31	1,033	31	0.225	2.048	2.048
Methylene Chloride	TO-15 SIM/TO-15	µg/m^3	75-09-2	100	100	3,333	100	0.069	0.695	0.695
4-Methyl-2-pentanone	TO-15 SIM/TO-15	µg/m^3	108-10-1	3,100	3,100	103,333	3,100	0.078	0.410	0.410
Methyl tert-butyl ether	TO-15 SIM/TO-15	µg/m^3	1634-04-4	110	110	3,667	110	0.054	0.36053	0.36
Naphthalene	TO-15 SIM/TO-15	µg/m^3	91-20-3	0.83	0.83	28	0.83	NS	NS	0.26
Propylbenzene	TO-15 SIM/TO-15	µg/m^3	103-65-1	1,000	1,000	33,333	1,000	0.074	0.492	0.492
2-Propanol	TO-15 SIM/TO-15	µg/m^3	67-63-0	210	210	7,000	210	0.388	1.229	1.229
1,1,2,2-Tetrachloroethane	TO-15 SIM/TO-15	µg/m^3	79-34-5	0.048	0.048	2	**0.048**	0.124	0.68654	0.14
Tetrachloroethene	TO-15 SIM/TO-15	µg/m^3	127-18-4	11	11	367	11	0.061	0.67832	0.14
Toluene	TO-15 SIM/TO-15	µg/m^3	108-88-3	5,200	5,200	173,333	5,200	0.064	0.37681	0.075
1,2,4-Trichlorobenzene	TO-15 SIM/TO-15	µg/m^3	120-82-1	2.1	2.1	70	2.1	0.334	3.711	3.711
Trichloroethene	TO-15 SIM/TO-15	µg/m^3	79-01-6	0.48	0.48	16	0.48	0.107	0.53738	0.075
1,1,1-Trichloroethane	TO-15 SIM/TO-15	µg/m^3	71-55-6	5,200	5,200	NS	5,200	0.065	0.54569	0.11
1,1,2-Trichloroethane	TO-15 SIM/TO-15	µg/m^3	79-00-5	0.18	0.18	6	0.18	0.082	0.54569	0.11
1,2,4-Trimethylbenzene	TO-15 SIM/TO-15	µg/m^3	95-63-6	7.3	7.3	243	7.3	0.034	0.492	0.492
1,3,5-Trimethylbenzene	TO-15 SIM/TO-15	µg/m^3	108-67-8	NS	NS	NS	NS	0.098	0.492	0.492
2,2,4-Trimethylpentane	TO-15 SIM/TO-15	µg/m^3	540-84-1	NS	NS	NS	NS	0.121	2.336	2.336
m,p-Xylene	TO-15 SIM/TO-15	µg/m^3	108-38-3	100	100	3,333	100	0.056	0.43423	0.17
o-Xylene	TO-15 SIM/TO-15	µg/m^3	95-47-6	100	100	3,333	100	0.069	0.43423	0.087
Vinyl Chloride	TO-15 SIM/TO-15	µg/m^3	75-01-4	0.17	0.17	5.67	0.17	0.023	0.255	0.026

NOTES:

1. Analytical laboratory will screen the sample to determine if sample will be analyzed via TO-15 SIM (low level) or TO-15.
2. U.S. Environmental Protection Agency (EPA) Regional Screening Levels (RSLs) Summary Table May 2016 http://www.epa.gov/region9/superfund/prg/.
3. Values calculated based on EPA current residential air RSLs (updated May 2016) modified using the methodology specified in the *EPA OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Source to Indoor Air* , June 2015 by dividing by an attenuation factor of 1 for crawlspace soil gas and 0.03 for sub-slab soil gas.
4. The project screening level was selected to satisfy the EPA requirements asspecified in the *EPA OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Source to Indoor Air*. Yellow-highlighted project screening levels are either below the DL/RL or not a reported analyte for the prescribed analytical method.
5. Achievable laboratory limits are for Eurofins Air Toxics, Inc., Folsom, California; limits determined for Quarter 3 of 2015.

CASRN = Chemical Abstracts Service Registry Number
c/nc = Carcinogen/non-carcinogen
NA = Not applicable
NS = Not specified
RL = Reporting limit
µg/m^3= Microgram(s) per cubic meter
TO-15 = *EPA Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air* , Second Edition.