

**APPENDIX B**

**CHEMICALS ANALYZED  
AND METHODS**

**Table B-1.  
Chemical Analyses of Water Samples**

Analyte	Analysis Method	Water Target RLs <sup>a</sup>	Units
pH	Field Measurement	--	--
Specific Conductance	Field Measurement	--	µS/cm
Dissolved Oxygen	Field Measurement	--	mg/L
Temperature	Field Measurement	--	°C
Salinity	Field Measurement	--	ppt
Transmittance	Field Measurement	--	%
Total Suspended Solids	SM 2540 D		mg/L
Ammonia-N	SM 4500-NH <sub>3</sub> D	0.05	mg/L
Methylene Blue-Activated Substances (MBAS)	SM 5540 C	0.025	mg/L
Nitrate-N	USEPA 300.0/SM 4500-NO <sub>3</sub> E	0.05	mg/L
Oil and Grease	USEPA 1664B	1.0	mg/L
Dissolved Organic Carbon (DOC)	SM 5310 B	0.5	mg/L
Total Organic Carbon (TOC)	SM 5310 B	0.5	mg/L
Total Orthophosphates P	SM 4500-P E	0.05	mg/L
Aluminum (Al)	USEPA 1640	1.0	µg/L
Antimony (Sb)	USEPA 1640	0.015	µg/L
Arsenic (As)	USEPA 1640	0.015	µg/L
Barium (Ba)	USEPA 200.8	0.5	µg/L
Beryllium (Be)	USEPA 1640	0.01	µg/L
Cadmium (Cd)	USEPA 1640	0.005	µg/L
Chromium (Cr)	USEPA 1640	0.025	µg/L
Cobalt (Co)	USEPA 1640	0.01	µg/L
Copper (Cu)	USEPA 1640	0.01	µg/L
Iron (Fe)	USEPA 1640	1.0	µg/L
Lead (Pb)	USEPA 1640	0.005	µg/L
Manganese (Mn)	USEPA 1640	0.02	µg/L
Mercury (Hg)	USEPA 245.7	0.02	µg/L
Molybdenum (Mo)	USEPA 1640	0.01	µg/L
Nickel (Ni)	USEPA 1640	0.005	µg/L
Selenium (Se)	USEPA 1640	0.015	µg/L
Silver (Ag)	USEPA 1640	0.02	µg/L
Thallium (Tl)	USEPA 1640	0.01	µg/L
Tin (Sn)	USEPA 1640	0.01	µg/L
Titanium (Ti)	USEPA 1640	0.07	µg/L
Vanadium (V)	USEPA 1640	0.04	µg/L
Zinc (Zn)	USEPA 1640	0.005	µg/L
Polycyclic Aromatic Hydrocarbons (PAHs) <sup>b</sup>	USEPA 625	5.0	ng/L

Notes: Metals analysis consists of both total and dissolved fractions. Filtering for the dissolved fraction occurred in the field immediately after collection.

a. Reporting limits provided by Physis Environmental Laboratories.

b. Includes acenaphthene, acenaphthylene, anthracene, benz[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[e]pyrene, benzo[g,h,i]perylene, benzo[k]fluoranthene, biphenyl, chrysene, dibenz[a,h]anthracene, dibenzothiophene, fluoranthene, fluorene, indeno(1,2,3-c,d)pyrene, naphthalene, perylene, phenanthrene, pyrene, 2,6-dimethylnaphthalene, 1-methylnaphthalene, 2-methylnaphthalene, 1-methylphenanthrene, and 2,3,5-trimethylnaphthalene.

% = percent; °C = degrees Celsius; µg/L = microgram(s) per liter (parts per billion); µS/cm = microSiemen(s) per centimeter; mg/L = milligram(s) per liter; ng/L = nanogram(s) per liter; ppt = part(s) per thousand; RL = reporting limit; SM = Standard Method; USEPA = United States Environmental Protection Agency

**Table B-2.  
Chemical Analyses of Sediment Samples**

Analyte	Analysis Method	Sediment Target RLs <sup>a, b</sup>	Units
Total Solids	USEPA 160.3/SM 2540 B <sup>c</sup>	0.1	%
Total Organic Carbon	USEPA 9060	0.01	%
Grain Size	SM 2560 D	0.1	%
Aluminum	USEPA 6020/6010B <sup>d</sup>	NA	mg/kg
Antimony	USEPA 6020/6010B <sup>d</sup>	0.05	mg/kg
Arsenic	USEPA 6020/6010B <sup>d</sup>	0.05	mg/kg
Barium	USEPA 6020/6010B <sup>d</sup>	NA	mg/kg
Beryllium	USEPA 6020/6010B <sup>d</sup>	0.05	mg/kg
Cadmium	USEPA 6020/6010B <sup>d</sup>	0.01	mg/kg
Chromium	USEPA 6020/6010B <sup>d</sup>	0.05	mg/kg
Copper	USEPA 6020/6010B <sup>d</sup>	0.01	mg/kg
Iron	USEPA 6020/6010B <sup>d</sup>	5.0	mg/kg
Lead	USEPA 6020/6010B <sup>d</sup>	0.01	mg/kg
Mercury	USEPA 245.7 <sup>d</sup>	0.02	mg/kg
Nickel	USEPA 6020/6010B <sup>d</sup>	0.02	mg/kg
Selenium	USEPA 6020/6010B <sup>d</sup>	0.05	mg/kg
Silver	USEPA 6020/6010B <sup>d</sup>	0.02	mg/kg
Zinc	USEPA 6020/6010B <sup>d</sup>	0.05	mg/kg
Total Nitrogen	USEPA 9060	4.0	mg/kg
Total Phosphorus	USEPA 6020	4.0	mg/kg
Ammonia	SM 4500-NH <sub>3</sub> D	0.2	mg/kg
Acid Volatile Sulfides	Plumb 1981 and TERL	0.1	mg/kg
Simultaneous Extracted Metals	USEPA 200.8	0.0004-0.0124	µmol/g
PAHs <sup>e</sup>	USEPA 8270D	5.0	µg/kg
Chlorinated Pesticides <sup>f</sup>	USEPA 8270D	0.5-50	µg/kg
Fipronil & Degradates <sup>g</sup>	USEPA 8270D-NCI	0.5	µg/kg
Pyrethroid Pesticides <sup>h</sup>	USEPA 8270D-MRM	0.5-10	µg/kg
PCB Congeners <sup>i</sup>	USEPA 8270D PCB <sup>d</sup>	0.2-10	µg/kg
PBDEs <sup>j</sup>	USEPA 8270D-NCI	0.1	µg/kg

Notes:

- Sediment minimum detection limits are on a dry-weight basis.
  - Reporting limits provided by Physis Environmental Laboratories.
  - Standard Methods for the Examination of Water and Wastewater, 19th Ed. American Public Health Association, 1995.
  - USEPA 1986-1996. SW-846. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 3rd Ed.
  - Includes acenaphthene, acenaphthylene, anthracene, benz[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[e]pyrene, benzo[g,h,i]perylene, benzo[k]fluoranthene, biphenyl, chrysene, dibenz[a,h]anthracene, dibenzothiophene, fluoranthene, fluorene, indeno(1,2,3-c,d)pyrene, naphthalene, perylene, phenanthrene, pyrene, 2,6-dimethylnaphthalene, 1-methylnaphthalene, 2-methylnaphthalene, 1-methylphenanthrene, and 2,3,5-trimethylnaphthalene.
  - Includes cis-chlordane, trans-chlordane, o,p'-DDT, p,p'-DDT, o,p'-DDD, p,p'-DDD, o,p'-DDE, p,p'-DDE, p,p'-DDMU, aldrin, BHC-alpha, BHC-beta, BHC-gamma, BHC-delta, cis-nonachlor, trans-nonachlor, oxychlordane, DCPA (Dacthal), dicofol, dieldrin, toxaphene, endosulfan sulfate, endosulfan-I, endosulfan-II, endrin, endrin aldehyde, endrin ketone, heptachlor, heptachlor epoxide, hexachlorobenzene, methoxychlor, mirex, and perthane.
  - Includes fipronil, fipronil desulfinyl, fipronil sulfide, and fipronil sulfone.
  - Includes allethrin, bifenthrin, total cyfluthrin, total cypermethrin, Danitol (fenpropathrin), deltamethrin/tralomethrin, esfenvalerate, fenvalerate, fluralinate, lambda-cyhalothrin, cis-permethrin, trans-permethrin, and prallethrin.
  - Includes congeners: PCB-3, 5, 8, 15, 18, 27, 28, 29, 31, 33, 37, 44, 49, 52, 56(60), 66, 70, 74, 77, 81, 87, 95, 97, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 137, 138, 141, 149, 151, 153, 156, 157, 158, 167, 168+132, 169, 170, 174, 177, 180, 183, 187, 189, 194, 195, 199(200), 201, 203, 206, and 209.
  - Includes PBDE-17, 28, 47, 49, 66, 85, 99, 100, 138, 153, 154, 183, 190, and 209.
- % = percent; µg/kg = microgram(s) per kilogram (parts per billion); µmol/g = micromole(s) per gram; mg/kg = milligram(s) per kilogram (parts per million); NA = not applicable SM = Standard Method; RL = reporting limit; USEPA = United States Environmental Protection Agency