

Notes: This information is based on the BCMOE Laboratory Manual, Standard Methods (APHA), EPA and other applicable reference methods, and is subject to change. These are the minimum recommended volumes. Multiple analyses may be combined in a single container. Contact the lab if collection volume is uncertain.

**TABLE 1 - GENERAL ANALYSES**

PARAMETER	WATER			SOIL	
	CONTAINER	PRESERVATIVE	HOLDING TIME (4±2°C)	CONTAINER	HOLDING TIME (4±2°C)
Alkalinity / Acidity	0.5-1L Plastic	None	14 days	NA	NA
Anions (Br <sup>-</sup> , Cl <sup>-</sup> , F <sup>-</sup> , SO <sub>4</sub> <sup>2-</sup> )	0.5-1L Plastic	None	28 days	Jar / Bag	unlimited
BOD (Biochemical Oxygen Demand), CBOD, Soluble BOD	0.5-1L Plastic	None	AB: 2 days BC: 3 days	NA	NA
Carbon, Dissolved Organic (DOC)	2x40mL Amber Glass	0.45um filtered, H <sub>3</sub> PO <sub>4</sub> to pH<2	Pres: 28 days Unpres: 3 days (BC)	NA	NA
Carbon, Total Inorganic (TIC)	0.5-1L Plastic	None	14 days	NA	NA
Carbon, Total Organic (TOC)	2x40mL Amber	H <sub>3</sub> PO <sub>4</sub> to pH<2	28 days	Jar / Bag	28 days
Chlorine (Total or Free)	125mL Plastic	None	ASAP (15min)	NA	NA
Chlorophyll-a / Pheophytin	4L Plastic	None (keep dark)	Filter within 2 days	NA	NA
COD (Chemical Oxygen Demand)	125mL Plastic	H <sub>2</sub> SO <sub>4</sub> to pH<2	Pres: 28 days Unpres: 3 days (BC)	NA	NA
Colour (True / Apparent)	0.5-1L Plastic	None	AB: 2 days / BC: 3 days	NA	NA
Conductivity (EC) / Salinity	0.5-1L Plastic	None	28 days	Jar / Bag	28 days
Cyanide, SAD / WAD	0.5-1L Plastic	NaOH to pH>12	Pres: 14 days Unpres: 1 day	Jar / Bag	14 days
Formaldehyde	125mL Plastic	NaHSO <sub>3</sub>	28 days	Jar / Bag	28 days
Gross alpha/beta (Radiation)	6 x 1L Plastic	HNO <sub>3</sub> to pH<2	180 days	NA	NA
Microbiology – Coliforms (Total/Fecal), <i>e. coli</i> , enterococcus	300mL Plastic (Sterilized)	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	30 hours	Jar / Bag	48 hours
Microbiology – HPC (Heterotrophic Plate Count)	300mL Plastic (Sterilized)	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	24 hours	Jar / Bag	48 hours
Microbiology – SRB/IRB (Sulfur Reducing/Iron Related Bacteria)	300mL Plastic (Sterilized)	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (optional)	48 hours	Jar / Bag	48 hours
Nitrioltriactic Acid (NTA)	125mL Plastic	None	7 days	NA	NA
Nitrogen, NH <sub>3</sub> / NO <sub>2</sub> + NO <sub>3</sub>	125mL Plastic	H <sub>2</sub> SO <sub>4</sub> to pH<2	Pres: 28 days Unpres: 3 days (BC)	Jar / Bag	28 days
Nitrogen, NO <sub>2</sub> / NO <sub>3</sub> (Speciated)	0.5-1L Plastic	None	AB: 2 days / BC: 3 days	Jar / Bag	28 days
Nitrogen, Total Kjeldahl (TKN)	125mL Plastic	H <sub>2</sub> SO <sub>4</sub> to pH<2	Pres: 28 days Unpres: 3 days (BC)	Jar / Bag	28 days
Nitrogen, Total (TN)	125mL Plastic	H <sub>3</sub> PO <sub>4</sub> to pH<2	Pres: 28 days Unpres: 3 days (BC)	Jar / Bag	28 days
Oil and Grease, Total / Mineral	1L WM Glass	H <sub>2</sub> SO <sub>4</sub> / HCl to pH<2	28 days	125-250mL Jar	14 days
Oxyhalides (Chlorate, Bromate)	125mL Plastic	50mg/L EDA	28 days	NA	NA
pH	0.5-1L Plastic	None	ASAP (15min)	Jar / Bag	365 days
Phenolics, Total	0.25-1L Amber Glass	CuSO <sub>4</sub> + H <sub>3</sub> PO <sub>4</sub> to pH<4	28 days	Jar / Bag	14 days
Phosphorus, Total (TP)	125mL Plastic	H <sub>2</sub> SO <sub>4</sub> to pH<2	Pres: 28 days Unpres: 3 days (BC)	Jar / Bag	28 days
Phosphorus, Total Dissolved	125mL Plastic	0.45um filtered, H <sub>2</sub> SO <sub>4</sub> to pH<2	Pres: 28 days Unpres: 3 days (BC)	NA	NA
Phosphorus, Ortho (PO <sub>4</sub> , Reactive)	0.5-1L Plastic	None	AB: 2 days / BC: 3 days	NA	NA
Silica, Reactive	0.5-1L Plastic	None	28 days	NA	NA
Solids (TS, TSS, VSS, TDS)	1L Plastic	None	7 days	125-250mL Jar	14 days (moisture)
Sulfide	125mL Plastic	ZnOAc + NaOH to pH>9	7 days	125-250mL Jar	7 days
Surfactants, as MBAS	0.5-1L Plastic	None	2 days	NA	NA
Tannins and Lignins	0.5-1L Plastic	None	28 days	NA	NA
THM Formation Potential (inc. chlorine demand)	4L Plastic	None	3 days	NA	NA
Turbidity	0.5-1L Plastic	None	AB: 2 days / BC: 3 days	NA	NA
UV Absorbance / Transmissivity	0.5-1L Plastic	None	7 days	NA	NA

**TABLE 2 - ORGANIC ANALYSES**

PARAMETER	WATER			SOIL	
	CONTAINER	PRESERVATIVE	HOLDING TIME (4±2°C)	CONTAINER	HOLDING TIME (4±2°C)
Carbamate Pesticides	2x40mL Amber Glass	ChlorAC + Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	28 days	125-250mL Jar	14 days
Chlorinated / Non-Chlorinated Phenols	1L Amber Glass	None	7 days	125-250mL Jar	14 days
Diquat and Paraquat	125mL Poly, foil-wrapped	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	7 days	NA	NA
Dioxins and Furans	2x1L Amber Glass	None	unlimited	125-250mL Jar	unlimited
Glycols and Alcohols	2x40mL Amber Glass	None	14 days	125-250mL Jar	14 days
Glyphosate and AMPA	2x40mL Amber Glass	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	14 days	125-250mL Jar	14 days
Haloacetic Acids (HAA)	2x40mL Amber Glass	NH <sub>4</sub> Cl	14 days	NA	NA
Herbicides, Acid Extractable	1L Amber Glass	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	14 days	125-250mL Jar	14 days
Hydrocarbons: EPH, EPHsg, F2-F4	0.25-1L Amber Glass	None	7 days	125-250mL Jar	14 days
Organotins	1L Amber Glass	None	14 days	125-250mL Jar	14 days
Pesticides (OC/OP/ON)	1L Amber Glass	None	7 days	125-250mL Jar	14 days
Polychlorinated Biphenyls (PCB)	0.25-1L Amber Glass	None	unlimited	125-250mL Jar	unlimited
Polycyclic Aromatic Hydrocarbons (PAH) and other Semi-Volatiles	0.25-1L Amber Glass	None	7 days	125-250mL Jar	14 days
Trihalomethanes (THM)	2x40mL Amber Glass	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	14 days	NA	NA
Volatile Fatty Acids (VFA)	2x40mL Amber Glass	None	14 days	NA	NA
Volatiles: BTEX / VOC, VH / F1	2x40mL Amber Glass	NaHSO <sub>4</sub> to pH<2	14 days	125-250mL Jar	7 days
Waste Oil Content	1L Amber Glass	None	28 days	125-250mL Jar	28 days

**TABLE 3 - METALS ANALYSES**

PARAMETER	WATER			SOIL	
	CONTAINER	PRESERVATIVE	HOLDING TIME (4±2°C)	CONTAINER	HOLDING TIME (4±2°C)
Boron, Hot water soluble	NA	NA	NA	Jar / Bag	180 days
Chromium, Hexavalent	125mL Plastic	0.45um filtered, NaOH to pH>8	28 days (24 hr if not filtered / preserved)	Jar / Bag	30 days
Mercury, Dissolved <sup>3</sup>	125mL Plastic	0.45um filtered, HNO <sub>3</sub> to pH<2 or None if unfiltered	28 days (48 hr if not filtered / preserved)	NA	NA
Mercury, Total / SALM <sup>3</sup>	125mL Plastic	HNO <sub>3</sub> to pH<2	28 days	Jar / Bag	28 days
Metals, Dissolved <sup>1</sup>	125mL Plastic	0.45um filtered, HNO <sub>3</sub> to pH<2 or None if unfiltered	180 days (48 hr if not filtered / preserved)	NA	NA
Metals, Total Recoverable <sup>1</sup>	125mL Plastic	HNO <sub>3</sub> to pH<2	180 days	NA	NA
Metals, SALM <sup>2</sup>	NA	NA	NA	Jar / Bag	180 days
TCLP Metals	NA	NA	NA	Jar / Bag	180 days

**TABLE 4 – SOIL VAPOUR AND AIR ANALYSES**

PARAMETER	CONTAINER	PRESERVATIVE	HOLDING TIME (AMBIENT)
Ammonia	Silica Gel Tube	NA	14 days
Metals (i.e. lead)	Air Filter	NA	30 days
PAH	XAD2 Tube	NA	30 days
VOC and Vhv	Sorbent Tube	NA	30 days

<sup>1</sup> Includes calculated hardness

<sup>2</sup> Includes pH (1:2)

<sup>3</sup> Can be submitted in same bottle as metals