METALS	
Test Parameters	Sampling Requirements
Metals Dissolved (water sample)	One 500-mL plastic bottle. Filter on site with 0.45-µm filter. Preserve with HNO_3 to pH <2 and cool to 0–6 °C. The holding time is 6 months.
Metals, Suspended (water sample)	One 1000-mL plastic bottle. Cool to 0–6 °C, and SVL will filter with 0.45-µm filter. No preservation necessary. The holding time is 6 months. - or - Filter on-site with 0.45-µm filter and submit filter to SVL for analysis. Please provide the volume of sample filtered. Cool to 0–6 °C. No preservation necessary. The holding time is 6 months.
Metals, Total (water sample)	One 500-mL plastic bottle. Preserve with HNO_3 to pH <2 and cool to 0–6 °C. The holding time is 6 months.
Metals, Total (soil sample)	One 8-oz jar. Cool to 0–6 °C. No preservation necessary. The holding time is 6 months.
Mercury, Dissolved (water sample)	One 500-mL plastic bottle. Filter on-site with 0.45-µm filter and preserve with HNO_3 to pH <2. The holding time is 28 days.
Mercury, Total (water sample)	One 500-mL plastic bottle. Preserve with HNO_3 to pH <2. The holding time is 28 days.
Mercury, Total (soil sample)	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary. The holding time is 28 days.
Priority Pollutant List Metals (PPL) (water sample)	One 500-mL plastic bottle. Preserve with HNO_3 to pH <2. The holding times are 28 days for mercury, 6 months for the remaining metals.
Priority Pollutant List Metals (PPL) (soil sample)	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary. The holding time is 28 days for mercury, 6 months for the remaining metals.
Target Analyte List Metals (TALM) (water sample)	One 500-mL plastic bottle. Preserve with HNO_3 to pH <2. The holding times are 28 days for mercury, 6 months for the remaining metals.
Target Analyte List Metals (TALM) (soil sample)	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary. The holding time is 28 days for mercury, 6 months for the remaining metals.
Target Analyte List (TAL) includes CN (water sample)	One 500-mL plastic bottle. Preserve with HNO_3 to pH <2. One 500-mL plastic bottle. Preserve with NaOH to pH >12 and store at 0–6 °C. The holding times are 28 days for mercury, 6 months for the remaining metals, and 14 days for cyanide.
Target Analyte List (TAL) includes CN (soil sample)	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary. The holding times are 28 days for mercury, 6 months for the remaining metals, and 14 days for cyanide.

ORGANICS	
Test Parameters	Sampling Requirements
Volatile Organics (VOC) in Drinking Water	Two 40-mL VOA vials. Preserve with maleic and ascorbic acid to pH <2 and cool to 0–6 °C (no bubbles). The holding time is 14 days.
Halogenated Volatile Organics (water sample)	Two 40-mL VOA vials. Preserve with HCl to pH <2 and cool to 0–6 °C (no bubbles). The holding time is 14 days.
Halogenated Volatile Organics (soil sample)	One 4-oz soil jar. Cool to 0–6 °C. No preservation necessary. The holding time is 14 days.
Aromatic Volatile Organics (water sample)	Two 40-mL VOA vials. Preserve with HCl to pH <2 and cool to 0–6 °C (no bubbles). The holding time is 7 days.
Aromatic Volatile Organics (soil sample)	One 4-oz soil jar. Cool to 0–6 °C. No preservation necessary. The holding time is 14 days.
Halogenated Volatile Organics and Aromatic Volatile Organics (water sample)	Two 40-mL VOA vials. Preserve with HCl to pH <2 and cool to 0–6 °C (no bubbles). The holding time is 14 days.
Halogenated Volatile Organics and Aromatic Volatile Organics (soil sample)	One 4-oz soil jar. Cool to 0–6 °C. No preservation necessary. The holding time is 14 days.
Chlorinated Pesticides and PCBs (water sample)	One 1000-mL amber glass bottle. Cool to 0–6 °C. No preservation necessary. The holding time is 7 days.
Chlorinated Pesticides and PCBs (soil sample)	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary. The holding time is 14 days.
Chlorinated Herbicides (water sample)	One 1000-mL amber glass bottle. Cool to 0–6 °C. No preservation necessary. The holding time is 7 days.
Chlorinated Herbicides (soil sample)	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary. The holding time is 14 days.
PCBs (water sample)	One 1000-mL amber glass bottle. Cool to 0–6 °C. No preservation necessary. The holding time is 7 days.
PCBs (soil sample)	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary. The holding time is 14 days.
PCBs (oil sample)	One 40-mL VOA vial. Cool to 0–6 °C. No preservation necessary. The holding time is 14 days.
Semi-volatile Organics (SVOCs) (water sample)	One 1000-mL amber glass bottle. Cool to 0–6 °C. No preservation necessary. The holding time is 7 days.
Semi-volatile Organics (SVOCs) (soil sample)	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary. The holding time is 14 days.
SVOC Acid Fraction (Phenols) (water sample)	One 1000-mL amber glass bottle. Cool to 0–6 °C. No preservation necessary. The holding time is 7 days.
SVOC Acid Fraction (Phenols) (soil sample)	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary. The holding time is 14 days.
SVOC Base/Neutral Fraction (PAHs) (water sample)	One 1000-mL amber glass bottle. Cool to 0–6 °C. No preservation necessary. The holding time is 7 days.
SVOC Base/Neutral Fraction (PAHs) (soil sample)	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary. The holding time is 14 days.
NOTE: Three1000-mL amber glass bottles should be provided for wastewaters requiring 600 series methods (due to QC requirements)	

ORGANICS (continued)	
Test Parameters	Sampling Requirements
Volatile Organics (VOC) (water sample)	Two 40-mL VOA vials. Preserve with HCl to pH <2 and cool to 0–6 °C (no bubbles). The holding time is 14 days.
Volatile Organics (VOC) (soil sample)	One 4-oz soil jar. Cool to 0–6 °C. No preservation necessary. The holding time is 14 days.
Total Organic Carbon (TOC) (water sample)	Two 40-mL VOA amber vials. Preserve with H_2SO_4 to pH <2 and cool to 0–6 °C (no bubbles). The holding time is 28 days.
Total Organic Matter (TOM) (soil sample)	One 4-oz soil jar. Cool to 0–6 °C. No preservation necessary.
Total Organic Halides (TOX) (water sample)	One 1000-mL amber glass bottle. Preserve with H_2SO_4 to pH <2 and cool to 0–6 °C. The holding time is 14 days.
Total Organic Halides (TOX) (soil sample)	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary. The holding time is 14 days.
Total Organic Halides (TOX) (oil sample)	One 250-mL amber glass bottle or 2–40-mL VOA vials. Cool to 0–6 °C. No preservation necessary. The holding time is 28 days.
TPH – Diesel/Motor Oil (water sample)	One 1000-mL amber glass bottle. Preserve with HCl to pH <2 and cool to 0–6 °C. The holding time is 14 days.
TPH – Diesel/Motor Oil (soil sample)	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary. The holding time is 14 days.
TPH – DRO (water sample)	One 1000-mL amber glass bottle. Preserve with HCl to pH <2 and cool to 0–6 °C. The holding time is 14 days.
TPH – DRO (soil sample)	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary. The holding time is 14 days.
TPH – Gasoline/BTEX (water sample)	Two 40-mL VOA vials. Preserve with HCl to pH <2 and cool to 0–6 °C (no bubbles). The holding time is 14 days.
TPH – Gasoline/BTEX (soil sample)	One 4-oz soil jar. Cool to 0–6 °C. No preservation necessary. The holding time is 14 days.
TPH – GRO/BTEX (water sample)	Two 40-mL VOA vials. Preserve with HCl to pH <2 and cool to 0–6 °C (no bubbles). The holding time is 14 days.
TPH – GRO/BTEX (soil sample)	One 4-oz soil jar. Cool to 0–6 °C. No preservation necessary. The holding time is 14 days
TPH – HCID (water sample)	Two 40-mL VOA vials and one 1-L amber glass bottle. Preserve with HCl to pH <2 and cool to 0–6 °C (no bubbles). The holding time is 14 days.
TPH – HCID (soil sample)	One 4-oz soil jar. Cool to 0–6 °C. No preservation necessary. The holding time is 14 days.
BTEX (water sample)	Two 40-mL VOA vials. Preserve with HCl to pH <2 and cool to 0–6 °C (no bubbles). The holding time is 14 days.
BTEX (soil sample)	One 4-oz soil jar. Cool to 0–6°C. No preservation necessary. The holding time is 14 days.

LEACHING PROCEDURES	
Test Parameters	Sampling Requirements
TCLP Extraction: Metals and Semi-volatiles	Two 8-oz glass jars. Cool to 0–6 °C. No preservation necessary.
TCLP Extraction: Volatiles only	One 8-oz glass jars. Cool to 0–6 °C. No preservation necessary.
SPLP Extraction	One 1000-mL wide-mouth plastic bottle filled with approximately 500 g of soil. Cool to 0–6 °C. No preservation necessary.

INORGANICS	
Test Parameters	Sampling Requirements
Acidity – Total as $CaCO_3$	One 500-mL plastic bottle. Cool to 0–6 °C. No preservation necessary. The holding time is 14 days.
Alkalinity – Total	One 500-mL plastic bottle. Cool to 0–6 °C. No preservation necessary. The holding time is 14 days.
Alkalinity – CO_3, HCO_3, OH	One 500-mL plastic bottle. Cool to 0–6 °C. No preservation necessary. The holding time is 14 days.
Chemical Oxygen Demand (COD)	One 500-mL plastic bottle. Preserve with H_2SO_4 to pH <2 and cool to 0–6 °C. Holding time is 28 days.
Chromium, Hexavalent	One 500-mL plastic bottle. For non-drinking water, filter on-site with 0.45-µg filter. Preserve with ammonium sulfate and NaOH to pH 9.3–9.7 (28-day holding time). Filter raw sample and drinking water sample (24-hour holding time).
Cyanide – Total (water sample)	One 500-mL plastic bottle. Preserve with NaOH to pH >12 and cool to 0–6 °C (if the sample has been chlorinated, add 0.6 g sodium thiosulfate). Holding time is 14 days.
Cyanide – Total (soil sample)	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary. Holding time is 14 days.
Cyanide – Weak Acid Dissociable (WAD) (water sample)	One 250-mL amber plastic bottle. Preserve with NaOH to pH >12 and cool to 0–6 °C (if the sample has been chlorinated, add 0.6 g sodium thiosulfate). Holding time is 14 days.
Cyanide – Weak Acid Dissociable (WAD) (soil sample)	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary. Holding time is 14 days.
Cyanide – Free (water sample)	One 500-mL plastic bottle. Preserve with NaOH to pH >10 and cool to 0–6 °C. Holding time is 14 days.
Cyanide – Free (soil sample)	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary. Holding time is 14 days.
Anions: chloride, fluoride, sulfate, nitrate, nitrite, bromide, ortho-phosphate, thiocyanate	One 500-mL plastic bottle. Cool to 0–6 °C. No preservation necessary. Holding times are 48 hours for nitrate and nitrite and 28 days for the remaining anions.
MBAS (Surfactants)	Two1000-mL plastic bottles. Cool to 0–6 °C. No preservation necessary. Holding time is 48 hours.
Nitrogen – Ammonia	One 500-mL plastic bottle. Preserve with H_2SO_4 to pH <2 and cool to 0–6 °C. Holding time is 28 days.

INORGANICS (continued)	
Test Parameters	Sampling Requirements
Nitrogen – Nitrate + Nitrite (by Method 353.2)	One 500-mL plastic bottle. Preserve with H_2SO_4 to pH <2 and cool to 0–6 °C. Holding time is 28 days.
Nitrogen – sum of Nitrate + Nitrite (by Method 300.0)	One 500-mL plastic bottle. Cool to 0–6 °C. No preservation necessary. Holding time is 48 hours.
Nitrogen – Total Kjeldahl (TKN)	One 500-mL plastic bottle. Preserve with H_2SO_4 to pH <2 and cool to 0–6 °C. Holding time is 28 days.
Oil and Grease (water sample)	One 1000-mL amber glass bottle. Preserve with HCl to pH <2 and cool 0–6 °C. Holding time is 28 days. Additional volume required for QC.
Oil and Grease (soil sample)	One 4-oz amber soil jar. Cool 0–6 °C. No preservation necessary. Holding time is 28 days.
Phenols (Total)	One 1000-mL amber glass bottle. Preserve with H_2SO_4 to pH <2 and cool to 0–6 °C. Holding time is 28 days.
Phosphate (Ortho)	One 250-mL plastic bottle. Cool to 0–6 °C. Filter in field at 0.45 µm. No preservation necessary. Holding time is 48 hours.
Phosphorus (Total)	One 500-mL plastic bottle. Preserve with H_2SO_4 to pH <2 and cool to 0–6 °C. Holding time is 28 days.
Specific Gravity	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary.
Sulfide	One 500-mL poly bottle. Preserve with zinc acetate and NaOH to pH >9. Cool 0–6 °C. Holding time is 7 days.
Arsenic Speciation (As^{+3}, As^{+5})	One 125-mL plastic bottle preserved with 6-mL 0.25M EDTA. Reduce headspace and cool to 0–6 °C. Also collect one 250-mL bottle preserved with HNO_3 for total arsenic.

BIOLOGICAL	
Test Parameters	Sampling Requirements
BOD	One 500-mL unpreserved plastic bottle.
Chlorophyll A	One 1-L specially prepared bottle.
Coliform (includes quantitray testing)	One 150-mL clear sterile bottle prepreserved with sodium thiosulfate.
MPN	One 250-mL sterile Nalgene bottle prepreserved with sodium thiosulfate.
HPC	One 250-mL sterile Nalgene bottle prepreserved with sodium thiosulfate. Unpreserved samples are acceptable.
Iron Bacteria	One 250-mL sterile Nalgene bottle prepreserved with sodium thiosulfate. Unpreserved samples are acceptable.

SOIL/OVERBURDEN TESTING & NDEP REQUIREMENTS

Test Parameters	Sampling Requirements
Paste pH	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary.
Cation Exchange Capacity (CEC)	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary.
Loss on Ignition (LOI)	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary.
Sand, Silt, Clay (textural class)	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary.
Total Sulfur	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary.
Total Carbon	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary.
Acid/Base Account (ABA)	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary.
Acid Neutralization Potential (ANP)	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary.
Acid Generation Potential (AGP)	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary.
Total Sulfur	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary.
Sulfate Sulfur (HCL Extractable)	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary.
Pyritic Sulfur (HNO_3 Extractable)	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary.
Non-Extractable Sulfur	One 8-oz soil jar. Cool to 0–6 °C. No preservation necessary.
NDEP Profile I Analyses	One 500-mL plastic bottle. Preserve with HNO_3 to pH <2. One 250-mL brown plastic bottle. Preserve with NaOH to pH >12. One 500-mL plastic bottle. Preserve with H_2SO_4 to pH <2. One 500-mL plastic bottle. No preservation necessary. Cool all bottles to 0–6 °C. The holding times are 28 days for mercury, 6 months for the remaining metals, 14 days for cyanide, 28 days for nitrate + nitrite, 7 days for TDS, and 14 days for alkalinity.
NDEP Profile II Analyses	One 500-mL plastic bottle. Preserve with HNO_3 to pH <2. One 250-mL brown plastic bottle. Preserve with NaOH to pH >12. One 500-mL plastic bottle. Preserve with H_2SO_4 to pH <2. One 500-mL plastic bottle. No preservation necessary. Cool all bottles to 4 °C. The holding times are 28 days for mercury, 6 months for the remaining metals, 14 days for cyanide, 28 days for nitrate + nitrite, 7 days for TDS, and 14 days for alkalinity.
NDEP Profile III Analyses	One 500-mL plastic bottle. Preserve with HNO_3 to pH <2. One 250-mL brown plastic bottle. One 500-mL plastic bottle. Preserve with H_2SO_4 to pH <2. One 500-mL plastic bottle. No preservation necessary. Cool all bottles to 4 °C. The holding times are 28 days for mercury, 6 months for the remaining metals, 14 days for cyanide, 28 days for nitrate + nitrite, 7 days for TDS, and 14 days for alkalinity.
Meteoric Water Mobility (MWM)	Fill one 5-gallon bucket with 12 kg of mine rock sample. No preservation necessary.

PHYSICAL TESTS	
Test Parameters	Sampling Requirements
Flash Point (water sample)	One 100-mL plastic bottle. Cool to 0–6 °C. No preservation required. Holding time is 10 days.
Flash Point (soil sample)	One 8-oz soil jar. Cool to 0–6 °C. No preservation required. Holding time is 10 days.
Conductance, Specific (EC) (water sample)	One 100-mL plastic bottle. Cool to 0–6 °C. No preservation required. Holding time is 28 days.
Conductance, Specific (EC) (soil sample)	One 8-oz soil jar. Cool to 0–6 °C. No preservation required.
Corrosivity as pH (water sample)	One 100-mL plastic bottle. Cool to 0–6 °C. No preservation required. Holding time is 24 hours.
Corrosivity as pH (soil sample)	One 8-oz soil jar. Cool to 0–6 °C. No preservation required. Holding time is 24 hours.
Hardness (as Ca + Mg)	One 500-mL plastic bottle. Preserve with HNO_3 to pH<2 and cool to 0–6 °C. Holding time is 6 months.
Hardness total as $CaCO_3$	One 100-mL plastic bottle. Cool to 0–6 °C. No preservation required. Holding time is 28 days.
pH (water sample)	One 250-mL plastic bottle. Cool to 0–6 °C. No preservation required. Analyze immediately.
pH (soil sample)	One 8-oz soil jar. Cool to 0–6 °C. No preservation required.
Total Dissolved Solids (TDS)	One 500-mL plastic bottle. Cool to 0–6 °C. No preservation required. Holding time is 7 days.
Total Suspended Solids (TSS)	One 500-mL plastic bottle. Cool to 0–6 °C. No preservation required. Holding time is 7 days.
Total Solids (TS)	One 500-mL plastic bottle. Cool to 0–6 °C. No preservation required. Holding time is 7 days.
Total Volatile Solids (TVS)	One 500-mL plastic bottle. Cool to 0–6 °C. No preservation required. Holding time is 7 days.
Turbidity	One 500-mL plastic bottle. Cool to 0–6 °C. No preservation required. Holding time is 48 hours.
Color	One 250-mL plastic bottle. Cool to 0–6 °C. No preservation required. Holding time is 48 hours.
Odor	One 500-mL amber glass bottle. Cool to 0–6 °C. No preservation required. Holding time is 24 hours.