

## Field Sampling Guide

### Soil Samples

Most samples require chilling to 0°C – 6°C upon collection in the field

#### Volatile Organic Compounds

Analysis Description	Method	Container Type	Preservation	Hold Time
Volatile Organic Compounds	EPA 8260B	4 oz glass jar with Teflon lid	None	14 days
Volatile Organic Compounds	EPA 8260B 5035	2 x 40 mL VOA vials / 1 VOA vial	NaHSO <sub>4</sub> / MeOH	14 days
Volatile Aromatic Organic Compounds	EPA 8021B	4 oz glass jar with Teflon lid	None	14 days
1,4-Dioxane	EPA 8260B	4 oz glass jar with Teflon lid	None	14 days
Gasoline Range Organics	EPA 8015B	4 oz glass jar with Teflon lid	None	14 days

#### Semivolatile Organic Compounds

Analysis Description	Method	Container Type	Preservation	Hold Time
Semivolatile Organic Compounds / PAH SIM	EPA 8270C	4 oz glass jar with Teflon lid	None	14 days
1,4-Dioxane	EPA 8270C	4 oz glass jar with Teflon lid	None	14 days
Polychlorinated Biphenyls (PCBs)	EPA 8082	4 oz glass jar with Teflon lid	None	None
Chlorinated Pesticides	EPA 8081A	4 oz glass jar with Teflon lid	None	14 days
Chlorinated Herbicides	EPA 8151A	4 oz glass jar with Teflon lid	None	14 days
Total Petroleum Hydrocarbons – Diesel, Carbon Chain	EPA 8015B	4 oz glass jar with Teflon lid	None	14 days
Organophosphorus Pesticides	EPA 8141A	4 oz glass jar with Teflon lid	None	14 days

#### Metals Analysis

Analysis Description	Method	Container Type	Preservation	Hold Time
Metals Title 22/ CAM17 Metals	EPA 6010B / 6020	4 oz glass jar with Teflon lid	None	6 months
Mercury	EPA 7471A / 6020	4 oz glass jar with Teflon lid	None	28 days
Hexavalent Chromium	EPA 7196A / 7199	4 oz glass jar with Teflon lid	None	30 days

#### Inorganic Analysis by Wet Chemistry

Analysis Description	Method	Container Type	Preservation	Hold Time
Alkalinity	SM 2320B	4 oz glass jar with Teflon lid	None	14 days
Cyanide	EPA 9014	4 oz glass jar with Teflon lid	None	14 days
% Moisture	EPA 160.3	4 oz glass jar with Teflon lid	None	28 days
Oxidation Reduction Potential	SM 2580B	4 oz glass jar with Teflon lid	None	28 days
Perchlorate	EPA 314.0	4 oz glass jar with Teflon lid	None	28 days
pH	EPA 9045C	4 oz glass jar with Teflon lid	None	Immediately
Resistivity	EPA 120.1	4 oz glass jar with Teflon lid	None	28 days
Total Recoverable Petroleum Hydrocarbons (TRPH)	EPA 418.1	4 oz glass jar with Teflon lid	None	28 days
Anions: Br, Cl, F, NO <sub>2</sub> , NO <sub>3</sub> , PO <sub>4</sub> , SO <sub>4</sub>	EPA 300.0	4 oz glass jar with Teflon lid	None	28 days
Nitrogen - Ammonia	SM4500-NH <sub>3</sub> F	4 oz glass jar with Teflon lid	None	28 days
Nitrogen - Total Kjeldahl Nitrogen	SM4500-NH <sub>3</sub> F	4 oz glass jar with Teflon lid	None	28 days
Oil & Grease	EPA 1664B	4 oz glass jar with Teflon lid	None	28 days

### Air Samples

Analysis Description	Method	Container Type	Preservation	Hold Time
Volatile Organic Compounds	TO-14/TO-15	Tedlar Bag / Summa Canister	Bags - no sunlight	3/30 days

Gasoline Range Organics	TO-3 M	Tedlar Bag / Summa Canister	Bags - no sunlight	3/30 days
Hydrogen Sulfide	TO-14 M	Tedlar Bag / Summa Canister	Bags - no sunlight	3/30 days
Fixed Gases (CO <sub>2</sub> , O <sub>2</sub> , N <sub>2</sub> )	ASTM D-1946	Tedlar Bag / Summa Canister	Bags - no sunlight	3/30 days
Methane	EPA 8015 M	Tedlar Bag / Summa Canister	Bags - no sunlight	3/30 days

# SunStar Laboratories Field Sampling Guide

## Water Samples

Most samples require chilling to 0°C – 6°C upon collection in the field

### Volatile Organic Compounds

Analysis Description	Method	Container Type	Preservation	Hold Time
Volatile Organic Compounds <sup>1</sup>	EPA 8260B EPA 624	3 x 40 mL VOA vials	HCl, pH < 2	14 days
Volatile Aromatic Organic Compounds <sup>1</sup> / GRO <sup>1</sup>	EPA 8015 / 8021B	3 x 40 mL VOA vials	HCl, pH < 2	14 days
1,4-Dioxane	EPA 8260B	3 x 40 mL VOA vials	HCl, pH < 2	14 days
Methanol / Ethanol / Glycols	EPA 8015B	3 x 40 mL VOA vials	HCl, pH < 2	14 days
Methane/Ethane/Ethene – Dissolved gases <sup>1</sup>	RSK-175	2 x 40 mL VOA vials	HCl, pH < 2	14 days

### Semivolatile Organic Compounds

Analysis Description	Method	Container Type	Preservation	Hold Time
Semivolatile Organic Compounds / PAH SIM	EPA 8270C EPA 625	1 L amber bottle	None	7 days
1,4-Dioxane	EPA 8270C	1 L amber bottle	None	7 days
Polychlorinated Biphenyls (PCBs)	EPA 8082A EPA 608	1 L amber bottle	None	None
Chlorinated Pesticides	EPA 8081A EPA 608	1 L amber bottle	None	7 days
Chlorinated Herbicides	EPA 8151A	1 L amber bottle	None	7 days
Total Extractable Petroleum Hydrocarbons – Diesel, Carbon Chain	EPA 8015B	3 x 40 mL VOA vials	HCl/ none	7 days
Organophosphorus Pesticides	EPA 8141A	1 L amber bottle	None	7 days

### Metals Analysis

Analysis Description	Method	Container Type	Preservation	Hold Time
Metals, except Hg and Cr – Total	EPA 6010B / 200.7 6020 / 200.8	250 mL polypropylene container	HNO <sub>3</sub> , pH<2	6 months
Metals, except Hg and Cr – Dissolved	EPA 6010B / 200.7	250 mL polypropylene container	Filter HNO <sub>3</sub> , pH<2	6 months
Ferrous Iron	EPA 6010BA	250 mL polypropylene container	HNO <sub>3</sub> , pH<2	6 months
Mercury	EPA 7470A / 6020 / 200.8	250 mL polypropylene container	HNO <sub>3</sub> , pH<2	28 days
Hexavalent Chromium	EPA 7199 / 7196A/218.6	250 mL polypropylene container	None	24 hours

### Inorganic Analysis by Wet Chemistry

Analysis Description	Method	Container Type	Preservation	Hold Time
Alkalinity <sup>1</sup>	SM 2320B	250 mL polypropylene container	None	14 days
Anions: Nitrate, Nitrite, Phosphate	EPA 300.0	250 mL polypropylene container	None	48 hours
Anions: Bromide, Chloride, Fluoride, Sulfate	EPA 300.0	250 mL polypropylene container	None	28 days
Biochemical Oxygen Demand (BOD)	EPA 5210B	1 L polypropylene container	None	24 Hours
Carbon Dioxide <sup>1</sup>	SM4500-CO <sub>2</sub> C	250 mL polypropylene container	None	24 Hours
Chemical Oxygen Demand (COD)	EPA 410.4	250 mL polypropylene container	H <sub>2</sub> SO <sub>4</sub> , pH < 2	28 days
Conductivity	SM2510 B	250 mL polypropylene container	None	Immediately
Cyanide, Total Cyanide, Amenable	SM4500-CN B,C,E	250 mL polypropylene container 500 mL polypropylene container	NaOH to pH>12	14 days
Nitrogen - Ammonia	SM4500-NH3 F	250 mL polypropylene container	H <sub>2</sub> SO <sub>4</sub> , pH < 2	28 days
Nitrogen - Total Kjeldahl Nitrogen	SM4500-NH3 F	250 mL polypropylene container	H <sub>2</sub> SO <sub>4</sub> , pH < 2	28 days
Oil & Grease	EPA 1664B	1 L amber bottle	H <sub>2</sub> SO <sub>4</sub> , pH < 2	28 days
Organic Carbon, Total (TOC) and Dissolved DOC	SM5310 C	6x 40 mL VOA vials	H <sub>2</sub> SO <sub>4</sub> , pH < 2	28 days
Oxygen, Dissolved <sup>1</sup>	SM4500-O G	2 x 40 mL VOA vials	None	Immediately
Oxidation Reduction Potential <sup>1</sup>	SM2580B	250 mL polypropylene container	None	Immediately
Perchlorate	EPA 314.0	250 mL polypropylene container	None	28 days
pH	SM4500H+ B	250 mL polypropylene container	N/A	Immediately
Sulfide <sup>1</sup>	SM4500-S= D	2 x 40 mL VOA vials	NaOH to pH>9	7 days
Surfactants	SM5540C-2000	250 mL polypropylene container	None	48 Hours
Turbidity	EPA 180.1	250 mL polypropylene container	None	2 days
Solids, Settleable	SM2540F	1 L polypropylene container	None	2 days
Solids, Total	SM2540B	250 mL polypropylene container	None	7 days

Solids, Total Dissolved	SM2540C	250 mL polypropylene container	None	7 days
Solids, Total Suspended	SM2540D	1 L polypropylene container	None	7 days

<sup>1</sup>No headspace or bubbles permitted