Utah Department of
Health & Human Services
Utah Public Health Laboratory

Client Services Manual

Revision 4: July 2024

Utah Public Health Laboratory

Environmental Chemistry

The Environmental Chemistry Laboratory is TNI-accredited. TNI (The NELAC Institute) promotes the generation of data of known and documented quality through the National Environmental Laboratory Accreditation Program, or NELAP, and is considered the gold standard for environmental testing laboratories.

Quick Links

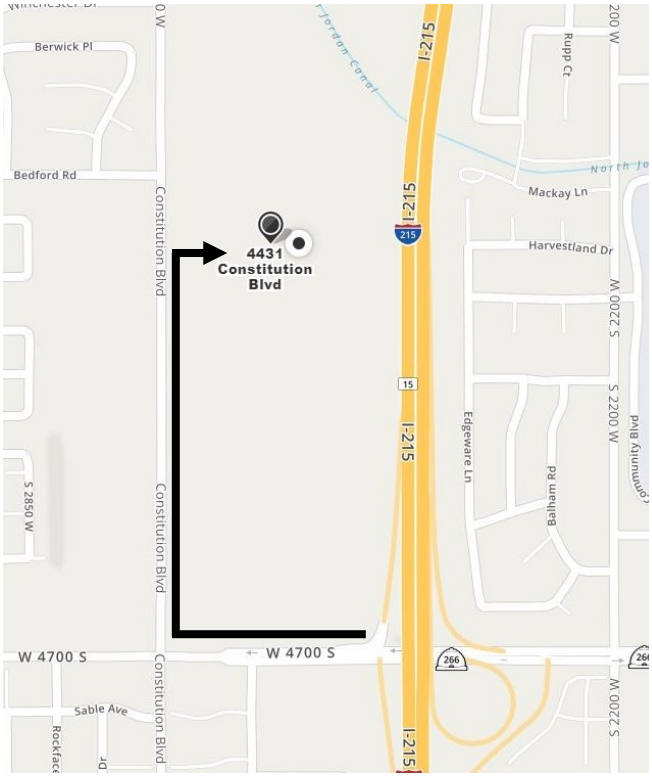
BASIC INFORMATION

Address: Utah Public Health Lab
4431 S 2700 W
Taylorsville, UT 84129
Phone: (801) 965-2400
Website: https://uphl.utah.gov/

Laboratory business hours:
Mon. – Fri., 8:00 am – 5:00 pm

After hours, holidays, and emergency:
1-888-374-8824

To schedule sample testing:
801-965-2400 or 801-965-2405



A listing of all Environmental Chemistry testing, including methods and fees, is located on the UPHL website at: https://uphl.utah.gov/uphl-service-fee-schedule/.

USE OF THIS CLIENT SERVICES MANUAL

This manual is designed to provide a resource for sample collection and available testing information. Its contents are not to be used for regulatory purposes other than providing proper sample collection and preservation information.

To find a specific test, refer to the Analytical Services Section or the General Index toward the end of the manual. The Analytical Services Section is organized by testing group (Inorganic, Metals, Organic, Environmental Water Micro). Within each group, contents are organized alphabetically by contaminant. The index located at the end of the manual lists each test alphabetically along with their method numbers. Program specific indices are organized by the specific program, giving the analytes and tests codes.

Once a contaminant has been selected, refer to the sampling/testing instructions located on the page dedicated to the test.

GENERAL LAB PRACTICES & POLICIES

Our laboratory is responsible for the receipt of samples and testing of chemicals and environmental microbial contaminants in drinking water, wastewater, environmental soils and hazardous waste. Testing is done to ensure compliance with health and safety standards established by Federal and Utah State agencies. Services are provided to Utah DEQ, public water and wastewater utilities, local health departments, as well as other state and federal agencies.

Labeled sample collection materials such as water bottles, glass vials, and solids containers may be obtained from the laboratory. The laboratory tests each lot of containers to ensure they are free of contamination. The tested lot number appears on each container label.

Sample submission forms are available from the UPHL website at https://uphl.utah.gov/environmental-chemistry-program/Env_Chem_TestRequestForms/ or provided when containers are picked up. Follow sampling instructions as stated. The completed sample submission forms should accompany the samples when dropped off at the lab. All information should be checked and confirmed to be accurate before samples are submitted for testing. Tests, which are needed by the client but are not performed in our laboratory, will be subcontracted to a commercial laboratory with approval from the client. It should be noted that subcontracted testing will be invoiced at the subcontractor pricing.

Test results are provided to the submitting client, to other individuals as authorized by the submitting client, and to state and/or federal regulatory agencies as required by law. Fees for laboratory services will be charged to the submitting client.

SAMPLING REQUEST INSTRUCTIONS

To help reduce delays in processing your samples, please fill out one test form for each sample site. One sample site may have multiple bottles, but one form cannot have multiple collection sites. Complete the collection information on all of the bottles that are submitted and place completed form in a resalable bag. The Division of Drinking Water has requested some new fields on the forms—Facility ID and Sampling Point ID. If you are not certain what to put in those fields, please contact The Division of Drinking Water. Also, when making a sample delivery, please include a telephone number that is reachable 24-28 hours after sample has been received.

Please make sure you are using our current shipping address to prevent extra courier charges and delays in your shipment as well as to ensure that your environmental samples get

delivered to the proper location once they are received at the lab, use one of these two addresses listed below. If the samples need to go to someone's attention at the lab, please contact them prior to shipping so they can coordinate with sample receiving.

Address options for shipping environmental samples:

FedEx or UPS	USPS
Utah Public Health Laboratory Attn BCES Sample Receiving 4431 S 2700 W Taylorsville, UT 84129	Utah Public Health Laboratory Attn BCES Sample Receiving PO Box 144300 Salt Lake City, UT 84131-9988
Utah Public Health Laboratory 4431 S 2700 W Rm 149 Taylorsville, UT 84129	Utah Public Health Laboratory Rm 149 PO Box 144300 Salt Lake City, UT 84131-9988

For questions, please contact:

Environmental Chemistry Sample Receiving
Utah Public Health Laboratory
4431 S 2700 W
Taylorsville, UT 84129
801-965-2405

Business hours are Monday-Friday from 8:00 am to 5:00 pm.

TEST REQUEST FORMS

When filling out test request forms the following fields of information must be completed for proper identification of samples at time of receipt:

- **System Name / Agency Name**
- **System Number / Agency Code**
- **Cost Code / Project Code**
- **Contact Information** (phone number is required)
- **Person Submitting Samples** (point of contact for clarifications)
- **Billing Information** (if submitting samples for the first time or if updates are needed)

If you are unsure of your system name and number or agency code, please contact the laboratory prior to sample submission. Or, for drinking water samples contact the Division of Drinking Water at 801-536-4200. If you do not have a system number and have not submitted samples to the

laboratory before, a system number will be assigned at time of sample receipt. If you do not know which cost code or project code applies to your samples, please contact the laboratory.

CHAIN OF CUSTODY

When submitting chain of custody samples, please complete the following steps to ensure proper preservation of sample integrity:

- **Place Seals on Sample Container Lid or Cap or over the cooler.** (must be initialed and dated at time of collection)
- **Identify Continuous Sample Possession** (signatures for dispatch, courier, relinquish, and so forth) located at bottom of chain-of-custody form
- **Verify Laboratory Receipt** (obtain copy of form when signed by DLS staff at time of receipt)

ANALYTICAL SERVICES

Inorganic Chemistry

ANALYTICAL SERVICES

Metals

ANALYTICAL SERVICES

Organic Chemistry

ANALYTICAL SERVICES

Environmental Water Microbiology

Inorganic Chem
Metals
Organic Chem
Indexes

INDEXES

Inorganic Chemistry

Name: Alkalinity
Test: SM2320B-ALK

Application: Drinking Water, Surface Water

Analytes:
Alkalinity
Carbonate Solids
Carbonate
Bicarbonate (BICD)
Carbon Dioxide
Hydroxide

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container.

Required Containers/Volume: 120 mL Alkalinity – unpreserved plastic bottle
1L Total Chemistry – unpreserved plastic bottle (also applicable)

Preservative: Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend next day receipt at lab**. Sample must be analyzed within 14 days of collection.

Method Technology: pH Titration and Calculation

Back to Inorganic Analytical Services

Inorganic Chemistry

Name: Ammonia [NH3]
Test: EPA350.1-NH3

Groupings: Total Nutrients
Application: Drinking Water, Surface Water

Analytes: Ammonia

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container, be sure not to over fill to prevent loss of preservative.

Required Containers/Volume: 500 mL Nutrient Analysis – plastic bottle

Preservative: H2SO4 to pH <2, refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend next day receipt at lab.** Sample must be analyzed within 28 days after collection.

Method Technology: Distillation technique followed by Flow Injection Colorimetry

Back to Inorganic Analytical Services

Inorganic Chemistry

Name: Biological Oxygen Demand (BOD)
Test: SM 5210B-BOD, CBOD, SBOD,SCBOD

NOTE: This test is NOT performed at UPHL and will be sent to a subcontracted laboratory for testing.

Application: Drinking Water, Surface Water, Waste Water

Analytes: BOD5 (Biological Oxygen Demand)
CBOD (Carbonaceous BOD)
SBOD (Soluble BOD)
SCBOD (Soluble Carbonaceous BOD)

Note: **Please take into account that the completion of the 5-day testing duration cannot fall on a weekend or holiday.**

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container.

Required Containers/Volume: 2 L BOD – unpreserved plastic bottle

Preservative: Refrigerate or store on ice. Do not allow to freeze

Handling: **Recommend same day receipt at lab.** Sample testing must begin within 48 hours after collection and will be completed 5 days after testing begins.

Method Technology: Dissolved Oxygen Reduction over 5 days at 20°C

Back to Inorganic Analytical Services

Inorganic Chemistry

Name: Bromate [BrO3], Bromide [Br], Chlorate [ClO3], Chlorite [ClO2]
Test: EPA 300.1- BRO3, -BRIC, -CLO3, -CLO2

Groupings: Inorganic Disinfection By-Products

Application: Drinking Water, Surface Water

Analytes:
Bromate
Bromide
Chlorate
Chlorite

Note: Prior to collection, analysis should be scheduled with the laboratory at (801) 965-2400

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container.

Required Containers/Volume: 100 mL Bromate, Chlorate, Chlorite – plastic bottle

Preservative: 25 mg Ethylenediamine, refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend next day receipt at lab**. Sample testing must begin within 28 days after collection , except for Chlorite and Bromate which must begin within 14 days.

Method Technology: Ion Chromatography

Back to Inorganic Analytical Services

Inorganic Chemistry

Name: Bromide [Br], Chloride [Cl]
Test: EPA 300.1-BRIC, EPA 300.0-CLIC, or EPA 325.2-CL

Groupings: Disinfectants

Application: Drinking Water (300.1-BRIC, 300.0-CLIC)
Surface Water (325.2-CL)

Analytes: Bromide
Chloride

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container.

Required Containers/Volume: 120 mL Bromide & Chloride – unpreserved plastic bottle
120 mL Sulfate – unpreserved plastic bottle (also applicable)
1 L Total Chemistry – unpreserved plastic bottle (also applicable)

Preservative: Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend next day receipt at lab.** Sample testing must begin within 28 days after sample collection.

Method Technology: Ion Chromatography and Flow Injection Colorimetry

Back to Inorganic Analytical Services

Inorganic Chemistry

Name: Color
Test: EPA 110.2-L-COLR

Groupings: New Drinking Water Source
Application: Drinking Water, Surface Water

Analytes: Color

Note: **Prior to collection of Color, analysis must be scheduled at (801) 965-2400.**

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container.

Required Containers/Volume: 250 mL Color – plastic bottle

Preservative: Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend same day receipt at lab.** Sample testing must begin within 48 hours after collection.

Method Technology: Flow Injection Colorimetry

Back to Inorganic Analytical Services

Inorganic Chemistry

Name: Conductivity
Test: EPA 120.1-COND

Groupings: Total Chemistry
Application: Total & Filtered Metals
Corrosivity
Radiologic Testing

Analytes: L-Specific Conductance

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container.

Required Containers/Volume: 120 mL Conductivity – unpreserved plastic bottle
1 L Total Chemistry – unpreserved plastic bottle (also applicable)

Preservative: Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend next day receipt at lab.** Sample testing must begin within 28 days after sample collection.

Method Technology: Specific Conductance

Back to Inorganic Analytical Services

Inorganic Chemistry

Name: Corrosivity (Langlier Index)
Test: SM 2330B-CORR

Note: **Corrosivity requires testing of Calcium, TDS, Hardness, Alkalinity, and F-pH (field measured)**

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container. If preservative is present, be sure not to over fill to prevent loss of preservative

Required Containers/Volume: 250 mL Total Metals – plastic bottle
1 L Total Chemistry – plastic bottle

Preservative: For Total Metals bottle, add HNO3 to pH <2. Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend next day receipt at** lab. Total Metals sample testing must begin within 180 days after collection. Total Chemistry sample testing must begin within 48 hours after collection.

Method Technology: Calculation: Calcium, TDS, Hardness, Alkalinity, and F-pH levels

Back to Inorganic Analytical Services

Inorganic Chemistry

Name: Cyanide [CN]
Test: EPA 335.4-CNCL

Application: Drinking Water, Surface Water, Groundwater

Analytes: Cyanide

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container, be sure not to over fill to prevent loss of preservative.

Required Containers/Volume: 500 mL Cyanide – plastic bottle

Preservative: 2g NaOH to pH >12, ascorbic acid in the presence of residual chlorine. Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend next day receipt at lab**. Sample testing must begin within 14 days after collection.

Method Technology: Flow Injection Colorimetry

Preparation Method: Distillation required before analysis

Back to Inorganic Analytical Services

Inorganic Chemistry

Name: Fluoride [F]
Test: EPA 300.0-FLIC

Application: Drinking Water, Surface Water

Analytes: Fluoride

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container.

Required Containers/Volume: 120 mL Fluoride – unpreserved plastic bottle

Preservative: Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend next day receipt at lab.** Sample testing must begin within 28 days of sample collection.

Method Technology: Ion Chromatography

Back to Inorganic Analytical Services

Inorganic Chemistry

Name: Nitrate + Nitrite [NO3+NO2], Nitrite [NO2]
Test: EPA 353.2-NO2+NO3, EPA 353.2-NO2

Groupings: Total Nutrients
Filtered Nutrients

Application: Drinking Water, Surface Water

Analytes: Nitrate/Nitrite (NO3+NO2)
Nitrite (NO2)

Note: **Prior to collection of Nitrate and Nitrite, analysis must be scheduled at (801) 965-2400.**

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container, be sure not to over fill to prevent loss of preservative.

Required Containers/Volume: 120 mL Nitrate – plastic bottle
500 mL Total Nutrients – plastic bottle (also applicable)
120 mL Nitrite – unpreserved plastic bottle

Preservative: **Nitrate** – H2SO4 to pH <2, refrigerate or store on ice. Do not allow to freeze.
Nitrite – No preservative, refrigerate or store on ice. Do not allow to freeze.

Handling: Nitrate – **Recommend next day receipt at lab.** Sample testing must begin within 28 days after collection.
Nitrite – **Recommend next day receipt at lab.** Sample testing must begin within 48 hours after collection.

Method Technology: Flow Injection Colorimetry

Back to Inorganic Analytical Services

Inorganic Chemistry

Name: Nitrogen, Total
Test: SM 4500N (Lachat)

Groupings: Filtered Nutrients
Application: Drinking Water, Surface Water

Analytes: Nitrogen

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container, be sure not to over fill to prevent loss of preservative

Required Containers/Volume: 250 mL Filtered Nutrient-plastic bottle

Preservative: H2SO4 to pH <2, refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend next day receipt at lab**. Sample testing must begin within 28 days of sample collection.

Method Technology: Flow Injection Colorimetry

Back to Inorganic Analytical Services

Inorganic Chemistry

Name: Odor
Test: EPA 140.1-ODOR

Groupings: New Drinking Water Source
Application: Drinking Water, Surface Water

Analytes: Odor (Threshold Odor Number, TON)

Note: **Prior to collection of Odor, analysis must be scheduled at (801) 965-2400.**

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container.

Required Containers/Volume: 1 L Odor – amber glass bottle

Preservative: Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend same day receipt at lab.** Sample testing must begin within 24 hours after sample collection.

Method Technology: Odor Threshold (Consistent Series)

Back to Inorganic Analytical Services

Inorganic Chemistry

Name: Perchlorate [CLO4]

Test: EPA 314.0-CLO4

NOTE: This test is NOT performed at UPHL and will be sent to a subcontracted laboratory for testing.

Application: Drinking Water

Analytes: Perchlorate
Conductivity

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container.

Required Containers/Volume: 120 mL Perchlorate – unpreserved plastic bottle
1L Total Chemistry – unpreserved plastic bottle (also applicable)

Preservative: Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend next day receipt at lab.** Sample testing must begin within 28 days after sample collection.

Method Technology: Ion Chromatography

Back to Inorganic Analytical Services

Inorganic Chemistry

Name: pH
Test: EPA 150.1-PH

Groupings: Total Chemistry
Application: Drinking Water, Surface Water

Analytes: L-pH (L = Lab Measured)

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container.

Required Containers/Volume: 1 L Total Chemistry – unpreserved plastic bottle

Preservative: Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend same day receipt at lab.** Sample testing must begin within 24 hours after sample collection.

Method Technology: Electrometric Measurement

Back to Inorganic Analytical Services

Inorganic Chemistry

Name: Phosphate [PO4]

Test: EPA 365.1-TPO4, EPA 365.1-D-TP

Groupings: Total Nutrients
Dissolved Nutrients

Application: Drinking Water, Surface Water

Analytes: Phosphate, Total (TPO4)
Phosphate, Dissolved (D-TP)
Phosphate, ORTHO

Note: **Prior to collection of Phosphate (Ortho), analysis must be scheduled with the laboratory at (801) 965-2400.**

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container, be sure not to over fill to prevent loss of preservative.

Required Containers/Volume: 500 mL Nutrient Analysis – plastic bottle

Preservative: H2SO4 to pH <2, refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend same day receipt at lab.** Sample testing must begin within 28 days after sample collection. For ORTHO-Phosphate, contact laboratory.

Method Technology: Flow Injection Colorimetry

Preparation Method: Digestion technique

Back to Inorganic Analytical Services

Inorganic Chemistry

Name: Silica [SiO2]
Test: EPA 370.1-SIO2

Application: Drinking Water, Surface Water

Analytes: Silica (SiO2)

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container.

Required Containers/Volume: 1 L Total Chemistry – unpreserved plastic bottle

Preservative: Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend same day receipt at lab.** Sample testing must begin within 28 days after sample collection.

Method Technology: Flow Injection Colorimetry

Back to Inorganic Analytical Services

Inorganic Chemistry

Name: Sulfate [SO4]
Test: EPA 300.0-SO4C, EPA 375.2-SO4

Application: Drinking Water (300.0), Surface Water (375.2)

Analytes: Sulfate

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container.

Required Containers/Volume: 120 mL Sulfate – unpreserved plastic bottle

Preservative: Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend next day receipt at lab.** Sample testing must begin within 28 days after sample collection.

Method Technology: Ion Chromatography and Flow Injection Colorimetry

Back to Inorganic Analytical Services

Inorganic Chemistry

Name: Sulfide [S]
Test: EPA 376.2-SULI

Application: Drinking Water, Surface Water

Analytes: Sulfide

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container, be sure not to over fill to prevent loss of preservative.

Required Containers/Volume: 120 mL Sulfide – plastic bottle

Preservative: 3 drops Zinc Acetate and NaOH to pH >9. Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend next day receipt at lab.** Sample testing must begin within 7 days after sample collection.

Method Technology: Flow Injection Colorimetry

Back to Inorganic Analytical Services

Inorganic Chemistry

Name: Solids
Test: SM 2540C-TDS, SM 2540D-TSS, EPA 160.4-TVS, SM 2540F-SS

Application: Drinking Water, Surface Water

Analytes: Solids, Total Dissolved (TDS) – filterable
Solids, Total Suspended (TSS) – non-filterable
Solids, Total Volatile (TVS)
Solids, Settleable (SS)

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container.

Required Containers/Volume: 1 L Total Chemistry – unpreserved plastic bottle

Preservative: Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend same day receipt at lab.** Sample testing must begin within 7 days after collection, except SS which is 48 hours.

Method Technology: Gravimetric detection

Back to Inorganic Analytical Services

Inorganic Chemistry

Name: Turbidity

Test: EPA 180.1-TURB

Groupings: Total Chemistry
Water Treatment Technique

Application: Drinking Water, Surface Water

Analytes: Turbidity (NTU)

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container.

Required Containers/Volume: 1 L Total Chemistry – unpreserved plastic bottle

Preservative: Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend same day receipt at lab.** Sample testing must begin within 48 hours after sample collection.

Method Technology: Nephelometric Absorbance

Back to Inorganic Analytical Services

Metals & Inorganic Chemistry

Name: Annual Inorganics & Metals (18 Parameters)
Test: Type 9 (Primary Inorganics & Metals Chemistry)

Analytes:

Cyanide	Fluoride
Turbidity (NTU)	Solids (TDS)
T-Arsenic	T-Barium
T-Beryllium	T-Cadmium
T-Chromium	T-Copper
T-Lead	T-Mercury
T-Nickel	T-Selenium
T-Antimony	T-Thallium
T-Sodium	Sulfate

Instructions for Collection: Allow sample tap to flow for a few minutes until water temperature stabilizes. Slowly fill containers to top, be sure not to over fill to prevent loss of preservative.

Required Containers/Volume: 1 L Total Chemistry – unpreserved plastic bottle
250 mL Total Metals – plastic bottle
500mL Cyanide – plastic bottle

Preservative: Refrigerate or store on ice, Do not allow to freeze.

Handling: **Recommend same day receipt at lab. Must be received at lab within 24 hours of collection time.**

Method Technology: Nephelometric, Gravimetric, Flow Injection Colorimetry, Ion Chromatography, ICP, and ICPMS

Back to Inorganic Analytical Services

Metals & Inorganic Chemistry

Name: New Drinking Water Source (46 Parameters)

Test: Type 7 (Total Inorganics & Metals Chemistry)

Analytes

Odor (TON)	Solids (TDS)	T-Arsenic
Surfactant	Solids (TSS)	T-Barium
Alkalinity	Turbidity (NTU)	T-Beryllium
Bicarbonate	Cyanide	T-Boron
Carbon Dioxide	Sulfate	T-Cadmium
Carbonate	Ammonia	T-Chromium
Carbonate Solids	NO2+NO3	T-Copper
Chloride	T-Phosphate	T-Iron
Corrosivity	Color	T-Lead
Fluoride	D-Calcium	T-Manganese
Hardness	D-Magnesium	T-Mercury
Hydroxide	D-Potassium	T-Selenium
L-pH or F-pH	D-Sodium	T-Silver
L-Specific Conductivity	T-Aluminum	T-Thallium
Silica	T-Antimony	T-Zinc
		Total Organic Carbon (TOC)

Note: Prior to collection of New Drinking Water Source samples, analysis must be scheduled with the laboratory at (801) 965-2400.

Instructions for Collection:

Allow sample tap to run for a few minutes until water temperature stabilizes. Slowly fill to top of bottles, be sure not to over fill to prevent loss of preservatives.

Required Containers/Volume:

1 L Odor – amber glass bottle
1 L Surfactant – amber glass bottle
1 L Total Chemistry – unpreserved plastic bottle
500 mL Cyanide – plastic bottle
500 mL Nutrient Analysis – plastic bottle
250 mL Color – plastic bottle
*250 mL Filtered Metals –plastic bottle
*250 mL Total Metals – plastic bottle
200 mL TOC – amber glass bottle

Preservative:

Refrigerate or store on ice. Do not allow to freeze. **Metals Preserve with HNO3 to pH <2.**

Handling:

Recommend same day receipt at lab. Must be received at lab within 24 hours of collection time.

Method Technology:

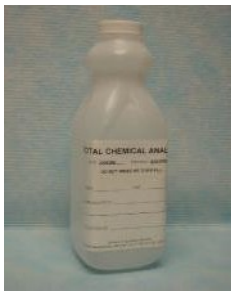
Electrometric, Nephelometric, Gravimetric, Titration, Flow Injection Colorimetry, Ion Chromatography, ICP, and ICPMS

Back to Inorganic Analytical Services

Metals & Inorganic Chemistry

Name: Total Chemistry (Analytical Groupings)

Test: Type 2, Type 3, Type 9



Type 2 or 3

Type 9

L = Lab Measured
D = Dissolved
T = Total

Type 2	Type 3	Type 9
pH	pH	Cyanide
Solids (TSS)	Solids (TSS)	Turbidity (NTU)
Bicarbonate	D-Calcium	T-Arsenic
Carbon Dioxide	D-Magnesium	T-Beryllium
Carbonate	D-Potassium	T-Chromium
Chloride	Bicarbonate	T-Lead
Hydroxide	Carbon Dioxide	T-Nickel
Sulfate	Carbonate	T-Antimony
Alkalinity	Chloride	T-Sodium
Turbidity (NTU)	Hydroxide	Fluoride
Conductivity	Sulfate	Solids (TDS)
Solids (TDS)	Alkalinity	T-Barium
	Hardness	T-Cadmium
	Turbidity (NTU)	T-Copper
	Conductivity	T-Mercury
	Solids (TDS)	T-Selenium
	Carbonate Solids	T-Thallium
		Sulfate

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container.

Required Containers/Volume: 1 L Total Chemistry – unpreserved plastic bottle
1 L Total Chemistry – unpreserved plastic bottle
250 mL Total Metals – plastic bottle
500mL Cyanide – plastic bottle

Preservative: Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend next day receipt at lab.** Sample testing must begin within 48 hours after sample collection.

Method Technology: Electrometric, Nephelometric, Gravimetric, Titration, Flow Injection Colorimetry, Ion Chromatography, ICP, and ICPMS

Back to Inorganic Analytical Services

Inorganic Chemistry

Name: Nutrients, Total & Dissolved (Analytical Groupings)
Test: Total: Type 2, Type 3, Type 6
Dissolved: Type 9

Type 2, 3 or 6

Type 9

Type 2
Ammonia
Phosphate (T-PO4)

Type 3
Ammonia
Phosphate (T-PO4)
Nitrate+Nitrite (NO3+NO2)

Type 6
Phosphate (T-PO4)
Nitrate+Nitrite (NO3+NO2)

Type 9
Phosphate (D-PO4)
D-Nitrate+Nitrite (NO23)
D-Total Nitrogen

Note: **To test for Dissolved analytes, field filtration must be done at time of sample collection and Filtered-Nutrients bottle used.**

D = Dissolved
T = Total

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container, be sure not to over fill to prevent loss of preservative.

Required Containers/Volume: 500 mL Nutrient Analysis – plastic bottle
250 mL Filtered Nutrients – plastic bottle

Preservative: H_2SO_4 to pH <2. Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend next day receipt at lab.** Sample testing must begin within 28 days after sample collection.

Method Technology: Flow Injection Colorimetry

Preparation Method: Digestion Techniques (except for Nitrate + Nitrite)

Back to Inorganic Analytical Services

Metals

Analytical Methods for Metals

EPA 200.8	Drinking Water and Groundwater
EPA 200.7	Drinking Water, Groundwater, and Wastewater
EPA 6010	Wastes (SW 846), Water, Soil
EPA 6020	Wastes (SW 846), Water, Soil
EPA 245.1	Mercury in Water (Prep Method 245.1)
EPA 7471B	Mercury in Soil (Prep Method 7471B)
SM 3114C	Selenium by Hydride Generation/AAS

Digestion Methods for Metals (Non-Drinking Water)

EPA 3010A	TCLP & Total Metal Sample Digestion
EPA 200.8	Waste water, Groundwater and Drinking Water
EPA 3050B	Solid and Hazardous Wastes

Note: Drinking water samples do not require digestion unless water exceeds turbidity of 1 NTU.

Back to Metals Analytical Services

Metals

Name: Arsenic [As]
Test: EPA 200.8-T-AS
EPA 200.8-D-AS

Groupings: Metals
Application: Arsenic Rule, Drinking Water, Surface Water

Analytes: Arsenic (T-As, Total)
Arsenic (D-As, Dossolved)

Instructions for Collection: Allow sample tap to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container, be sure not to over fill to prevent loss of preservative.

Required Containers/Volume: 250 mL Total Metals – plastic bottle

Preservative: HNO3 to pH <2, refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend next day receipt at lab.** Sample must be analyzed within 6 months after collection.

Method Technology: Digestion technique followed by ICPMS detection

Back to Metals Analytical Services

Metals

Name: Mercury [Hg]
Test: EPA 245.1-T-HG, 245.1-D-HG, EPA 7471B (T-HG or D-HG)

Groupings: Metals
Application: Drinking Water, Surface Water, Soil, Solids, Sludge

Analytes: Mercury (T-Hg, Total)
Mercury (D-Hg, Dissolved)

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container, be sure not to over fill to prevent loss of preservative.

Required Containers/Volume: **Water** – 250 mL Total Metals – plastic bottle
Soils, solids, sludge – 4 oz. glass container with Teflon-lined lid

Preservative: HNO3 to pH <2. Refrigerate or store on ice (4-6°C). Do not allow to freeze.

Handling: **Recommend next day receipt at lab.** Sample testing must begin within 28 days after collection. If sample is not preserved, sample testing must begin within 24 hrs.

Method Technology: Cold Vapor AA detection

Preparation Method: Digestion Technique

Back to Metals Analytical Services

Metals

Name: Chromium-VI [Cr^{6+}]
Test: EPA 218.7

Application: Drinking Water, Surface Water

Analytes: Chromium-VI (Hexavalent)

Note: **Prior to collection of Chromium-VI samples, analysis must be scheduled at (801) 965-2400.**

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container.

Required Containers/Volume: 120 mL Chromium-VI – plastic bottle

Preservative: 1 mL of (NH4)2SO4/NH4OH to 100 mL. Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend same day receipt at lab.** Sample testing must begin within 14 days after sample collection.

Method Technology: Ion Chromatography

Back to Metals Analytical Services

Metals

Name: Lead & Copper
Test: EPA 200.8-Type 8 Metals (T-PB & T-CU)

Groupings: Metals
Application: Corrosion Control Assessment, Drinking Water

Analytes: Lead (T-Pb, Total)
Copper (T-Cu, Total)

Instructions for Collection: Allow sample tap to flow for a few minutes until water temperature stabilizes. Slowly fill to line.

Required Containers/Volume: 1 L Lead and Copper – plastic bottle

Preservative: Refrigerate or store on ice. Do not allow to freeze. Sample must be preserved with HNO3 to pH <2 within 14 days after sample collection.

Handling: **Recommend next day receipt at lab.** If preserved within 14 days after sample collection, testing must begin within 6 months.

Method Technology: ICPMS Detection

Preparation Method: Digestion Technique

Back to Metals Analytical Services

Metals

Name: Hardness (Total Hardness as CaCO3)
Test: HARD

Application: Drinking Water, Surface Water

Analytes: Calcium
Magnesium

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container, be sure not to over fill to prevent loss of preservative.

Required Containers/Volume: 250 mL Total Metals – plastic bottle

Preservative: HNO3 to pH <2. Refrigerate or store on ice. Do not allow to freeze.

Handling: Store filtered samples in plastic bag

Method Technology: ICPMS Detection of Ca & Mg. Calculation: Based on Calcium and Magnesium levels

Preparation Method: Digestion Technique if turbidity is >1 NTU.

Back to Metals Analytical Services

Metals

Name: Selenium by Hydride Generation
Test: SM 3114C (modified)

Groupings: Metals

Application: Drinking Water, Surface Water, Grounwater

Analytes: Selenium Hydride

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container, be sure not to over fill to prevent loss of preservative.

Required Containers/Volume: 250 mL Metals – plastic bottle

Preservative: Add HNO3 to pH <2. Refrigerate or store on ice. Do not allow to freeze

Handling: **Recommend next day receipt at lab. Sample testing must begin within** 180 days after sample collection.

Method Technology: Hydride AAS

Preparation Method: Digestion Technique

Back to Metals Analytical Services

Metals

Name: Toxic Characteristic Leaching Procedure (TCLP) RCRA

Test: TCLP-Metals, 1311-TCLP, 1332-TCLP

Groupings: Metals Testing (RCRA)

Note: **Prior to collection of 1311-TCLP (water and soil) or 1332-TCLP (oil), analysis must be scheduled at (801) 965-2400.**

*Other metals may be analyzed, but must be specified on test request form. For complete list of metals see indexes or contact us 801-965-2400.

HW	RCRA 8	RCRA 8+4	RCRA 8+4+6
D004	T-Arsenic	T-Arsenic	T-Arsenic
D005	T-Barium	T-Barium	T-Barium
D006	T-Cadmium	T-Cadmium	T-Cadmium
D007	T-Chromium	T-Chromium	T-Chromium
D008	T-Lead	T-Lead	T-Lead
D009	T-Mercury	T-Mercury	T-Mercury
D010	T-Selenium	T-Selenium	T-Selenium
D011	T-Silver	T-Silver	T-Silver
		T-Copper	T-Copper
		T-Iron	T-Iron
		T-Manganese	T-Manganese
		T-Zinc	T-Zinc
			T-Aluminum
			T-Beryllium
			T-Cobalt
			T-Molybdenum
			T-Nickel
			T-Vanadium

Instructions for Collection: Slowly fill to top of container.

Required Containers/Volume: **Water** - 4 L amber glass bottle
Soil - 4 oz. amber with Teflon-lined lid glass container

Preservative: Refrigerate or store on ice 4-6°C. Do not allow to freeze.

Handling: **Recommend next day receipt at lab.** Samples must be TCLP extracted within 7 days after collection and must be analyzed within 180 days, except Mercury which must be analyzed within 28 days after collection.

Method Technology: Method 6010 ICP, Method 6020 ICPMS, and Cold Vapor AA Detections

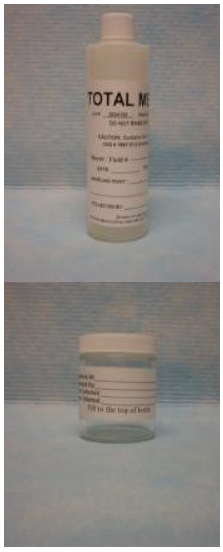
Preparation Method: Method 1311 Leaching Procedure and Extraction Technique

Back to Metals Analytical Services

Metals

Name: Total Metals & Dissolved Metals (Analytical Groupings)

Test: Total Metals: Type 7, 9, RCRA
Filtered Metals: Type 3, 4, 6010 Metals (Soil)



Note: To test for dissolved analytes, field filtration must be done at time of sample collection and a filtered-metals bottle used. The constituents of the types are subject to change based upon customer request.

Type 3
D-Aluminum
D-Arsenic
D-Barium
D-Boron
D-Cadmium
D-Calcium
D-Chromium
D-Copper
D-Iron
D-Lead
D-Magnesium
D-Manganese
D-Mercury
D-Nickel
D-Potassium
D-Selenium
D-Silver
D-Sodium
D-Zinc
Hardness

Type 4
D-Calcium
D-Magnesium
D-Potassium
D-Sodium
Hardness

Type 7
T-Aluminum
T-Arsenic
T-Barium
T-Boron
T-Cadmium
T-Calcium
T-Chromium
T-Copper
T-Iron
T-Lead
T-Magnesium
T-Manganese
T-Mercury
T-Nickel
T-Potassium
T-Selenium
T-Silver
T-Sodium
T-Zinc

Type 9
T-Barium
T-Cadmium
T-Chromium
T-Mercury
T-Selenium

RCRA 8
T-Arsenic
T-Barium
T-Cadmium
T-Chromium
T-Lead
T-Mercury
T-Selenium
T-Silver

RCRA 8+4
T-Arsenic
T-Barium
T-Cadmium
T-Chromium
T-Lead
T-Mercury
T-Selenium
T-Silver
T-Copper
T-Iron
T-Manganese
T-Zinc

RCRA 8+4+6
T-Arsenic
T-Barium
T-Cadmium
T-Chromium
T-Lead
T-Mercury
T-Selenium
T-Silver
T-Copper
T-Iron
T-Manganese
T-Zinc
T-Aluminum
T-Beryllium
T-Cobalt
T-Molybdenum
T-Nickel
T-Vanadium

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container, be sure not to over fill to prevent loss of preservative.

Required Containers/Volume: 250 mL Total Metals – plastic bottle
250 mL Filtered Metals – plastic bottle
Soils, solids, sludge– 4 oz. glass container with Teflon-lined lid

Preservative: Liquids add HNO_3 to pH <2. Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend next day receipt at lab. Sample testing must begin within** 180 days after collection, except Mercury which is 28 days (24 hrs for Hg if not preserved).

Method Technology: ICP (EPA 200.7, 6010), ICPMS (EPA 200.8, 6020), and Cold Vapor AA Detections (EPA 245.1)

Preparation Method: Digestion Techniques (except for Drinking Water)

Back to Metals Analytical Services

Organic Chemistry

Name: Chlorophyll-A & Pheophytin-A
Test: SM 10200H-CH-A (modified), CHLA_HPLC

Application: Surface Water

Analytes: Chlorophyll-A
Pheophytin-A

Instructions for Collection: Filter up to 1000 mL of water through a glass fiber filter and place filter in an opaque container. **Record the volume of sample filtered on the test request form.**

Required Containers/Volume: Glass fiber filters; Store filter in an opaque container. Use one filter per sample.

Preservative: Freeze sample filter.

Handling: Keep frozen. Protect from light. **Recommend next day receipt at lab**. Must analyze sample within 28 days after collection.

Method Technology: UV-VIS Spectrophotometry or HPLC

Preparation Method: Homogenization; addition of acid for UV-VIS Pheophytin

Back to Organic Analytical Services

Organic Chemistry

Name: Cyanotoxins
Test: ELISA

Application: Drinking Water, Surface Water

Analytes: Anatoxin-A
Cylindrospermopsin
Total Microcystins & Nodularins

Note: UPHL can also perform *qPCR* analysis for total Cyanobacteria present, as well as total Microcystins, Cylindrospermopsin and Saxitoxin.

Microcystins & Cylindrosperm.

Anatoxin-a

Instructions for Collection: Carefully fill to shoulder of bottle. Do not immerse or overfill bottle or preservative will be lost.

Required Containers/Volume: 250-mL amber glass bottle. One bottle for Cylidrospermopsin & Microcystins. One bottle for Anatoxin-a.

Preservative: **Surface Water**: Micro/Cylin bottle – no preservative. Anatoxin bottle – 250 mg sodium bisulfate.
Drinking Water: Micro/Cylin bottle – 25 mg ascorbic acid & 25 mg sodium thiosulfate. Anatoxin bottle – 250 mg sodium bisulfate & 25 mg ascorbic acid.
Samples may be stored refrigerated up to 5 days after collection. After 5 days, the samples should be stored frozen.

Handling: Keep samples refrigerated or store on ice**. Recommend same day receipt at lab**. Sample prep and analysis should begin as soon as possible upon receipt.

Method Technology: ELISA

Preparation Method: Freeze/Thaw Cycles

Back to Organic Analytical Services

Organic Chemistry

Name: Haloacetic Acids (HAAs)
Test: SM 6251B

Grouping: Disinfection By-Products
Application: Water systems using chlorine or bromine for disinfection.

Analytes:
Dibromoacetic Acid (DBAA)
Dichloroacetic Acid (DCAA)
Monobromoacetic Acid (MBAA)
Monochloroacetic Acid (MCAA)
Trichloroacetic Acid (TCAA)

Instructions for Collection: Allow sample tap to run for a few minutes until water temperature stabilizes. Slowly fill vials to top of container, be sure not to over fill to prevent loss of preservative. Check for air bubbles by inverting. Fill the remaining space if bubbles are observed. **There must be no headspace**.

Required Containers/Volume: 3/40 mL vials

Preservative: 65 mg NH_4Cl

Handling: Refrigerate or store on ice. Do not allow sample to freeze. **Recommend next day receipt at lab**. Sample must be extracted within 14 days of sample collection.

Method Technology: Analysis by GC-ECD

Preparation Method: Liquid-liquid Extraction

Back to Organic Analytical Services

Organic Chemistry

Name: Organic Carbon, Total (TOC) & Dissolved (DOC)
Test: SM 5310B-TOC

Grouping: Total Nutrients, Filtered Nutrients

Application: Drinking Water, Surface Water, Groundwater

Analytes: Organic Carbon, Total (TOC)
Organic Carbon, Dissolved (DOC)

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to the top of the container. Be sure not to over fill to prevent loss of preservative.

Required Containers/Volume: 200 mL TOC – amber glass bottle

Preservative: H2SO4 to pH <2. Refrigerate or store on ice. Do not allow it to freeze.

Handling: **Recommend next day receipt at lab**. Sample must be analyzed within 28 days after collection.

Method Technology: Combustion / Infrared Detection

Back to Organic Analytical Services

Organic Chemistry

Name: Organic Constituents, UV-Absorbing, UV254
Test: SM5910B-UV254

Grouping: Total Nutrients
Water Treatment Technique
Application: Drinking Water, Surface Water, Groundwater

Analytes: UV-Absorbing Organics, UV254

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container.

Required Containers/Volume: 200 mL UV254 – amber glass bottle

Preservative: Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend next day receipt at lab.** Sample analysis must begin within 48 hours after sample collection.

Method Technology: UV Absorbance

Back to Organic Analytical Services

Organic Chemistry

Name: Periphyton
Test: SM 10300C (modified)

Application: Surface Water

Analytes: Periphyton

Instructions for Collection: Follow sample collector's protocol or SM10200H (modified)

Required Containers/Volume: Glass Fiber filter paper– store in opaque container or follow sample collector's instructions

Preservative: Keep frozen.

Handling: **Recommend next day receipt at lab.** Sample testing must begin as soon as possible after sample collection.

Method Technology: Gravimetry

Preparation Method: Dry-Ashing Technique

Back to Organic Analytical Services

Organic Chemistry

Name: Trihalomethanes (THMs), Max Potential THMs
Test: EPA 524.2-THM

Grouping: Disinfection By-Products

Application: Water systems using chlorine or bromine for disinfection.

Analytes: Bromodichloromethane
Bromoform
Chlorodibromomethane
Chloroform

Maximum Potential THMs, EPA 510.1

Instructions for Collection: Allow sample tap to run for a few minutes until water temperature stabilizes. Slowly fill vials to top of container, be sure not to over fill to prevent loss of preservative. Check for air bubbles by inverting. Fill the remaining space if bubbles are observed. **There must be no headspace**.

Required Containers/Volume: 3/40 mL vials

Preservative: 4 mg Na2S2O3

Handling: Refrigerate or store on ice. Do not allow sample to freeze. **Recommend next day receipt at lab**. Sample must be analyzed within 14 days of sample collection.

Method Technology: Purge and trap technique; Analysis by GC-MS

Back to Organic Analytical Services

Organic Chemistry

Name: BTEXN

Test: EPA 8260B-BTEXN

NOTE: This test is NOT performed at UPHL and will be sent to a subcontracted laboratory for testing.

Application: Wastewater, Soil

Analytes:
Benzene
Toluene
Ethylbenzene
Xylenes
Naphthalene

Note: **If using Encore sampler, please bring to lab as soon as possible (within 48 hours).**

Instructions for Collection: If applicable, allow sample tap to run for a few minutes until water temperature stabilizes. Slowly fill vials to top of container. Check for air bubbles by inverting, and fill the remaining portion if bubbles found. There must be no headspace.

Required Containers/Volume: Water – 3/40 mL vials
Soil – 4 oz. glass container with Teflon-lined lid

Preservative: Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend next day receipt at lab.** Sample testing must begin within 14 days after sample collection.

Method Technology: Purge and trap technique followed by GCMS detection

Preparation Method: Water-EPA 5030; Soil-EPA 3585

Back to Organic Analytical Services

Organic Chemistry

Name: Carbamates (Insecticides & Alicarbs)
Test: EPA 531.1

NOTE: This test is NOT performed at UPHL and will be sent to a subcontracted laboratory for testing.

Application: Drinking Water

Analytes:
3-Hydroxycarbofuran
Aldicarb (Temik)
Aldicarb Sulfone
Aldicarb Sulfoxide
Carbaryl (Sevin)
Carbofuran (Furadan)
Methomyl
Oxamyl (Vydate)

Instructions for Collection: Allow sample tap to run for a few minutes until water temperature stabilizes. Slowly fill vial to top of container, be sure not to over fill to prevent loss of preservative. Check for air bubbles by inverting, and fill the remaining portion if bubbles found. There must be no headspace.

Required Containers/Volume: 40 mL amber glass vial

Preservative: 1.2 mL Monochloroacetic acid. Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend next day receipt at lab.** Sample testing must begin within 28 days after sample collection.

Method Technology: Aqueous Injection HPLC with Post-column Derivation and Fluorescence Detection

Back to Organic Analytical Services

Organic Chemistry

Name: Geosmin & MIB (Odor)

Test: EPA 525.2-ODOR

NOTE: This test is NOT performed at UPHL and will be sent to a subcontracted laboratory for testing.

Application: Drinking Water

Analytes: Geosmin
2-Methylisoborneol (MIB)

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container.

Required Containers/Volume: 1 L Method EPA 525.2 Odor – amber glass bottle

Handling: **Same day receipt at lab.** No holding time

Method Technology: GCMS Detection

Preparation Method: Liquid-solid extraction

Back to Organic Analytical Services

Organic Chemistry

Name: Herbicides (Chlorinated Organic Acids)
Test: EPA 515.1-HERB, EPA 8151-HERB

NOTE: This test is NOT performed at UPHL and will be sent to a subcontracted laboratory for testing.

Application: Drinking Water, Surface Water, Wastewater, Groundwater, Soil

Analytes:
2,4-D
2,4,5-TP (Silvex)
Dalapon
Dicamba
Dinoseb
Pentachlorophenol
Picloram

Instructions for Collection: If applicable, allow sample tap to run for a few minutes until water temperature stabilizes. Slowly fill bottles to top of container, be sure not to over fill to prevent loss of preservative. Collect per project sampling plan.

Required Containers/Volume: **Water** – 2/1L amber glass bottles
Soils, Solids, and Sludge– 4 oz. amber glass container with Teflon-lined lid

Preservative: 30 mg $Na_2S_2O_3$ if chlorinated. Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend next day receipt at lab. Sample extraction must begin within** 14 days after collection. Analysis must begin within 28 days after extraction.

Method Technology: GC-ECD Detection

Preparation Method: EPA 515.1 and 8151 (Water)- Liquid-liquid extraction; EPA 8151-(Soils) Solid-liquid extraction, then liquid-liquid extraction.

Back to Organic Analytical Services

Organic Chemistry

Name: Oil and Grease

Test: EPA 1664-O/G

NOTE: This test is NOT performed at UPHL and will be sent to a subcontracted laboratory for testing.

Analytes: Total O/G (Oil and Grease)

Instructions for Collection: If applicable, allow source to flow for a few minutes until water temperature stabilizes. Slowly fill containers to top, be sure not to over fill to prevent loss of preservative.

Required Containers/Volume: Water – 1 L glass container with Teflon-lined lid
Soil – 4 oz. glass container with Teflon-lined lid

Preservative: H2SO4 to pH <2. Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend next day receipt at lab.** Sample testing must begin within 28 days after collection.

Method Technology: Gravimetric Detection

Preparation Method: Liquid-solid Extraction

Back to Organic Analytical Services

Organic Chemistry

Name: Pesticides & Semi-Volatile Organic Compounds (SVOCs)
Test: EPA 525.2-SVOC, EPA 625-SVOC, EPA 8270-SVOC

NOTE: This test is NOT performed at UPHL and will be sent to a subcontracted laboratory for testing.

Application: Drinking Water, Surface Water, Wastewater, Groundwater, Solids

Analytes: Refer to Program Specific Indexes

CWA: Page 75
RCRA: Page 82
SDWA: Page 91

Instructions for Collection: For drinking water samples, pour the small vial of acid into each sample bottle. Allow source to flow for a few minutes until water temperature stabilizes, **do not use Tygon tubing**. Slowly fill bottles to top of container, be sure not to over fill to prevent loss of preservative.

Required Containers/Volume:
Drinking Water – 2/1L amber glass bottles + acid vials
Surface Water – 2/1L amber glass bottles
Groundwater – 2/1L amber glass bottles
Soil, solids, sludges – 4 oz. amber glass container with Teflon-lined lid

Preservative:
Drinking Water – HCl to pH <2, 50 mg sodium sulfite
Surface Water – No preservative
Groundwater and Solids – No preservative
All sample types, refrigerate or store on ice 4-6°C. Do not allow to freeze.

Handling: **Recommend next day receipt at lab.** Sample extraction/analysis times: EPA 525.2 – 14 days to extract, then 30 days to analyze. EPA 625 and EPA 8270 – 7 days to extract, then 40 days to analyze. Solids – 14 days to extract, then 40 days to analyze.

Method Technology: GCMS Detection

Preparation Method: Liquid-solid Extraction; Groundwater (EPA 8270)-EPA 3510; Soil (EPA 8270)-EPA 3550 or EPA 3545A

Back to Organic Analytical Services

Organic Chemistry

Name: Polychlorinated Biphenyls (PCBs) & Organochlorine Pesticides (OcPest)
Test: EPA 608-PCB/OcPEST, EPA 8081-OcPEST, EPA 8082-PCB

NOTE: This test is NOT performed at UPHL and will be sent to a subcontracted laboratory for testing.

Applicaton: Surface Water, Groundwater, Wastewater, Solids

Analytes: Refer to Program Specific Indexes

CWA: Page 71
RCRA: Page 78

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container.

Required Containers/Volume:
Surface Water – 1 L amber glass bottle
Groundwater – 1 L amber glass bottle
Soils, solids, sludge – 4 oz. amber glass container with Teflon-lined lid
Oil – 4 oz. amber glass container with Teflon-lined lid

Preservative: Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend next day receipt at lab.** Sample extraction must begin within 7 days of collection (except Soil – 14 days). Analysis must begin within 40 day of extraction.

Method Technology: GCMS detection

Preparation Method: Extraction technique (Liquid-liquid, sonication, waste dilution); Water- EPA 3510; Oils-EPA 3580; Soil-EPA 3550.

Back to Organic Analytical Services

Organic Chemistry

Name: Surfactants

Test: SM 5540C-SURF

NOTE: This test is NOT performed at UPHL and will be sent to a subcontracted laboratory for testing.

Grouping: New Drinking Water Source

Application: Drinking Water, Surface Water

Analytes: Total Surfactants

Instructions for Collection: Allow sample tap to run for a few minutes until water temperature stabilizes. Slowly fill to top of container.

Required Containers/Volume: 1 L amber glass bottle

Preservative: Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend same day receipt at lab.** Sample testing must begin within 48 hours after sample collection.

Method Technology: MBAS Detection

Preparation Method: Extraction Technique

Back to Organic Analytical Services

Organic Chemistry

Name: Total Petroleum Hydrocarbons (TPH)
Test: EPA 8015B-TPH

NOTE: This test is NOT performed at UPHL and will be sent to a subcontracted laboratory for testing.

Application: Surface Water. Wastewater, Groundwater, Soil

Analytes: GRO-Gasoline Range Organics (C6-C10)
DRO-Diesel Range Organics (C10-C28)
ORO-Oil Range Organics (C28-C35)

Total TPH = GRO+DRO+ORO

Instructions for Collection: If applicable, allow sample tap to run for a few minutes until water temperature stabilizes. Slowly fill vials to top of container. Check for air bubbles by inverting, and fill the remaining portion if bubbles found. There must be no headspace.

Required Containers/Volume: **Water** – 3/40 mL vials
Soil – 4 oz. glass container with Teflon-lined lid

Preservative: Refrigerate or store on ice. Do not allow to freeze.

Handling: **Recommend next day receipt at lab.** Sample extraction must begin within 14 days of collection, then sample analysis within 40 days after extraction.

Method Technology: GCFID Detection

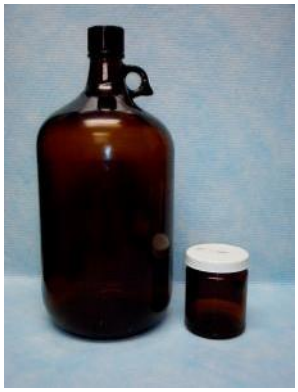
Preparation Method: Extraction technique (liquid-liquid, waste dilution); Water- EPA 3510; Soil- EPA 3580

Back to Organic Analytical Services

Organic Chemistry

Name: RCRA Toxic Characteristic Leaching Procedure (TCLP)
Test: TCLP-Organics (VOCs, SVOCs, Pesticides, Herbicides)

NOTE: This test is NOT performed at UPHL and will be sent to a subcontracted laboratory for testing.
Groupings: RCRA Organic Testing
Application: Wastewater, Soil, Oil



Herbicides
2,4-D
2,4,5-TP (Silvex)

Pesticides
Chlordane
Endrin
Heptachlor
Heptachlor Epoxide
Lindane
Methoxychlor
Toxaphene

VOCs

D029	1,1-Dichloroethene
D028	1,2-Dichloroethane
D027	1,4-Dichlorobenzene
D018	Benzene
D019	Carbon Tetrachloride
D021	Chlorobenzene
D022	Chloroform
D035	Methyl Ethyl Ketone
D039	Tetrachloroethene
D040	Trichloroethene
D043	Vinyl Chloride

SVOCs

D030	2.4-Dinitrotoluene
D041	2,4,5-Trichlorophenol
D042	2,4,6-Trichlorophenol
D032	Hexachlorobenzene
D033	Hexachlorobutadiene
D034	Hexachloroethane
D024	m-Cresol
D036	Nitrobenzene
D023	o-Cresol
D025	p-Cresol
D037	Pentachlorophenol
D038	Pyridine

Instructions for Collection: Slowly fill to top of container.
Required Containers/Volume: **Liquids** – 4 L amber glass bottle
Soil & Oil – 4 oz. amber glass container with Teflon-lined lid
Preservative: Refrigerate or store on ice. Do not allow to freeze.
Handling: **Recommend next day receipt at lab.** Prep and analysis times:
SVOCs: 7 days to TCLP/40 days to analyze.
VOCs: 14 days to TCLP/40 days to analyze.
Pesticides: 7 days to extract/40 days to analyze.
Solids: 14 days to extract/ 40 days to analyze.
Herbicides: 14 days to extract/28 days to analyze.
Method Technology: GCMS Detection
Preparation Method: Leaching Procedure & Extraction Technique

Back to Organic Analytical Services

Organic Chemistry

Name: Volatile Organic Compounds (VOCs)
Test: EPA 524.2-VOC, EPA 624-VOC, EPA 8260-VOC

NOTE: This test is NOT performed at UPHL and will be sent to a subcontracted laboratory for testing.

Application: Drinking Water, Surface Water, Wastewater, Groundwater, Solids

Analytes: Refer to Program Specific Indexes

CWA: Page 73
RCRA: Page 80
SDWA: Page 88

Note: **If using Encore sampler, please bring to lab as soon as possible (within 48 hours).**

Instructions for Collection: **Caution: For surface waters and groundwater samples, check to see if HCl preservative reacts with source water (foams, effervesces, etc.). If a reaction occurs, do not add HCl.** For aqueous samples, fill vials with sample source to top of container. Add 2 drops HCl acid to each vial, more drops needed if highly buffered source. Be sure not to over fill to prevent loss of preservative. Check for air bubbles by inverting, and fill the remaining portion if bubbles are found. **There must be no headspace**.

Required Containers/Volume: **Drinking Water** – 3/40mL vials, plus 1 trip blank
Surface Water – 4/40 mL, plus 1 trip blank
Groundwater – 4/40 mL vials, plus 1 trip blank, prepared and delivered with sample bottles.
Note: For chlorinated sites, use specially prepared 4/40 mL vials.
Soil, solids, sludge – 4 oz. glass container with Teflon-lined lid

Preservative: **Drinking Water** – 25 mg ascorbic acid, HCl to pH <2.
Surface Water – 10 mg Na2S2O3 for chlorinated sites and HCl if needed.
Groundwater – 10 mg Na2S2O3 for chlorinated sites and HCl if needed.
All sample types, refrigerate or store on ice. Do not allow to freeze, 4-6°C.

Handling: **Recommend next day receipt at lab. For water, sample analysis must begin within** 14 days after collection. For Soil, extraction must occur within 14 days after collection and then 14 days for analysis after extraction.

Method Technology: Purge and trap technique followed by GCMS detection

Preparation Method: Water (EPA 624 and EPA 8260): EPA 3050. Soil (EPA 8260): EPA 3585

Back to Organic Analytical Services

Environmental Water Microbiology

Name: Heterotrophic Plate Count (HPC)
Test: SM 9215B

Application: Drinking Water, Pool/Spa Water, Reagent Water (deionized, distilled, etc.), Surface Water

Analytes: Heterotrophic Plate Count (total bacteria count)

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container, be sure not to over fill to prevent loss of preservative.

Required Containers/Volume: Sterile plastic bottle; 120 mL Water Bacteriology

Preservative: 10 mg $Na_2S_2O_3$

Handling: Refrigerate or store on ice. Do not allow sample to freeze. **Recommend same day receipt at lab**. Sample analysis must begin within 30 hours after collection, except for Surface Water which must begin within 8 hours.

Method Technology: Pour Plate Agar

Back to Env Water Micro Analytical Services

Environmental Water Microbiology

Name: Legionella
Test: SM 9260J

Application: Drinking Water (hot water tanks), Air Handling (swamp coolers, evaporators, etc.)

Analytes: Legionella

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to top of container.

Required Containers/Volume: Unpreserved plastic bottle; 500 mL – 2 L.

Preservative: None

Handling: **Recommend same day or next day receipt at lab.** Testing must begin within 48 hours of receiving sample.

Method Technology: Filtration, Elution, MWY Agar, BCYE Agar, Latex-Agglutination.

****The Utah Public Health Laboratory is a member of the CDC's ELITE program for Legionella testing.****

Back to Env Water Micro Analytical Services

Environmental Water Microbiology

Name: Total Coliforms/E.*coli*.
Test: SM 9223B-Colilert

Application: Drinking Water, Surface Water

Analytes: Total Coliforms
E.*coli*.

Instructions for Collection: Allow source to flow for a few minutes until water temperature stabilizes. Slowly fill to above the 100 mL line but below the 120 mL line. Do not over fill to prevent loss of preservative.

Required Containers/Volume: Sterile Plastic Bottle; 120 mL Water Bacteriology

Preservative: 10 mg Na2S2O3

Handling: Refrigerate or store on ice. Do not allow sample to freeze. **Recommend same day receipt at lab**. Sample analysis must begin within 30 hours after collection, except for Surface Water which must begin within 8 hours.

Method Technology: Chromofluorogenic

Back to Env Water Micro Analytical Services

Clean Water Act (CWA)

Analyte	Test Code	UPHL Unit	Page #
Alkalinity	SM 2320B-ALK	Inorganic Chemistry	13
Aluminum	EPA 200.8-AL	Metals	47
Ammonia	EPA 350.1-NH3	Inorganic Chemistry-Nutrients	14
Antimony	EPA 200.8-SB	Metals	47
Arsenic	EPA 200.8-AS	Metals	39
Barium	EPA 200.8-BA	Metals	47
Beryllium	EPA 200.8-BE	Metals	47
BOD	EPA 405.1-BOD	Inorganic Chemistry	15
Boron	EPA 200.7-B	Metals	47
Cadmium	EPA 200.8-CD	Metals	47
Calcium	EPA 200.7-CA	Metals	47
CBOD	CBOD	Inorganic Chemistry	15
Chloride	EPA 325.2-CL	Inorganic Chemistry	17
Chlorophyll-A	SM 10200H-CH-A	Inorganic Chemistry	48
Chromium	EPA 200.8-CR	Metals	47
Chromium-IV	EPA 218.7	Inorganic Chemistry	41
Cobalt	EPA 200.8-CO	Metals	47
Conductivity	EPA 120.1-COND	Inorganic Chemistry	19
Copper	EPA 200.8-CU	Metals	47
Cyanide	EPA-CNCL	Inorganic Chemistry	21
E. coli	SM 9223B-Colilert	Environmental Microbiology	68
Fluoride	EPA 300.0-FLIC	Inorganic Chemistry	22
Hardness	HARD	Inorganic Chemistry	44
Heterotrophic Plate Count	SM 9215B-HPC	Environmental Microbiology	66
Iron	EPA 200.7-FE	Metals	47
Lead	EPA 200.8-PB	Metals	47
Magnesium	EPA 200.7-MG	Metals	47
Manganese	EPA 200.8-MN	Metals	47
Mercury	EPA 245.1-HG	Metals	40
Mercury	EPA 200.8-HG	Metals	47
Molybdenum	EPA 200.8-MO	Metals	47
Nickel	EPA 200.8-NI	Metals	47
Nitrate+Nitrite	EPA 353.2-NO2+NO3	Inorganic Chemistry-Nutrients	23
Nitrite (only)	EPA 353.2-NO2	Inorganic Chemistry-Nutrients	23
Oil and Grease	EPA 1664-O/G	Organic Chemistry	59
Phosphate	EPA 365.1-TPO4	Inorganic Chemistry-Nutrients	28
pH	EPA 150.1-PH	Inorganic Chemistry	27
Potassium	EPA 200.7-K	Metals	47
Selenium	EPA 200.8-SE	Metals	47
Silica	EPA 370.1-SIO2	Inorganic Chemistry	29
Silver	EPA 200.8-AG	Metals	47

Clean Water Act (CWA)

Analyte	Test Code	UPHL Unit	Page #
Sodium	EPA 200.7-NA	Metals	47
Sulfate	EPA 375.2-SO4	Inorganic Chemistry	30
Sulfide	EPA 376.2-SULI	Inorganic Chemistry	31
Thallium	EPA 200.8-TL	Metals	47
TOC	SM 5310B-TOC	Inorganic Chemistry	51
Total Coliform	SM 9223B-Colilert	Environmental Microbiology	68
Total Dissolved Solids	EPA 160.1-TDS	Inorganic Chemistry	32
Total Suspended Solids	EPA 160.2-TSS	Inorganic Chemistry	32
Turbidity	EPA EPA 180.1-TURB	Inorganic Chemistry	33
UV254	SM 5910B-UV254	Inorganic Chemistry	52
Vanadium	EPA 200.8-V	Metals	47
Zinc	EPA 200.8-ZN	Metals	47
4,4'-DDD	EPA 608-PCB/OcPest	Organic Chemistry-PCB/OcPest	61
4,4'-DDE	EPA 608-PCB/OcPest	Organic Chemistry-PCB/OcPest	61
4,4'-DDT	EPA 608-PCB/OcPest	Organic Chemistry-PCB/OcPest	61
Aldrin	EPA 608-PCB/OcPest	Organic Chemistry-PCB/OcPest	61
alpha-BHC	EPA 608-PCB/OcPest	Organic Chemistry-PCB/OcPest	61
beta-BHC	EPA 608-PCB/OcPest	Organic Chemistry-PCB/OcPest	61
Chlordane	EPA 608-PCB/OcPest	Organic Chemistry-PCB/OcPest	61
delta-BHC	EPA 608-PCB/OcPest	Organic Chemistry-PCB/OcPest	61
Dieldrin	EPA 608-PCB/OcPest	Organic Chemistry-PCB/OcPest	61
Endosulfan I	EPA 608-PCB/OcPest	Organic Chemistry-PCB/OcPest	61
Endosulfan II	EPA 608-PCB/OcPest	Organic Chem-PCB/OcPest	61
Endosulfan sulfate	EPA 608-PCB/OcPest	Organic Chem-PCB/OcPest	61
Endrin	EPA 608-PCB/OcPest	Organic Chem-PCB/OcPest	61
Endrin aldehyde	EPA 608-PCB/OcPest	Organic Chem-PCB/OcPest	61
gamma-BHC	EPA 608-PCB/OcPest	Organic Chem-PCB/OcPest	61
Heptachlor	EPA 608-PCB/OcPest	Organic Chem-PCB/OcPest	61
Heptachlor epoxide	EPA 608-PCB/OcPest	Organic Chem-PCB/OcPest	61
Methoxychlor	EPA 608-PCB/OcPest	Organic Chem-PCB/OcPest	61
PCB-1016	EPA 608-PCB/OcPest	Organic Chem-PCB/OcPest	61
PCB-1221	EPA 608-PCB/OcPest	Organic Chem-PCB/OcPest	61
PCB-1232	EPA 608-PCB/OcPest	Organic Chem-PCB/OcPest	61
PCB-1242	EPA 608-PCB/OcPest	Organic Chem-PCB/OcPest	61
PCB-1248	EPA 608-PCB/OcPest	Organic Chem-PCB/OcPest	61
PCB-1254	EPA 608-PCB/OcPest	Organic Chem-PCB/OcPest	61
PCB-1260	EPA 608-PCB/OcPest	Organic Chem-PCB/OcPest	61
Toxaphene	EPA 608-PCB/OcPest	Organic Chem-PCB/OcPest	61
1,1-Dichloroethane	EPA 624-VOC	Organic Chemistry-VOC	65
1,1-Dichloroethene	EPA 624-VOC	Organic Chemistry-VOC	65
1,1-Dichloropropene	EPA 624-VOC	Organic Chemistry-VOC	65

Clean Water Act (CWA)

Analyte	Test Code	UPHL Unit	Page #
1,1,1-Trichloroethane	EPA 624-VOC	Organic Chemistry-VOC	65
1,1,1,2- Tetrachloroethane	EPA 624-VOC	Organic Chemistry-VOC	65
1,1,2-Trichloroethane	EPA 624-VOC	Organic Chemistry-VOC	65
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	EPA 624-VOC	Organic Chemistry-VOC	65
1,1,2,2-Tetrachloroethane	EPA 624-VOC	Organic Chemistry-VOC	65
1,2-Dibromo-3-chloropropane	EPA 624-VOC	Organic Chemistry-VOC	65
1,2-Dichlorobenzene	EPA 624-VOC	Organic Chemistry-VOC	65
1,2-Dichloroethane	EPA 624-VOC	Organic Chemistry-VOC	65
1,2-Dichloropropane	EPA 624-VOC	Organic Chemistry-VOC	65
1,2-Dichlorotoluene	EPA 624-VOC	Organic Chemistry-VOC	65
1,2,3-Trichlorobenzene	EPA 624-VOC	Organic Chemistry-VOC	65
1,2,3-Trichloropropane	EPA 624-VOC	Organic Chemistry-VOC	65
1,2,4-Trichlorobenzene	EPA 624-VOC	Organic Chemistry-VOC	65
1,2,4-Trimethylbenzene	EPA 624-VOC	Organic Chemistry-VOC	65
1,3-Dichlorobenzene	EPA 624-VOC	Organic Chemistry-VOC	65
1,3-Dichloropropane	EPA 624-VOC	Organic Chemistry-VOC	65
1,3,5-Trimethylbenzene	EPA 624-VOC	Organic Chemistry-VOC	65
1,4-Dichlorobenzene	EPA 624-VOC	Organic Chemistry-VOC	65
1,4-Dichlorotoluene	EPA 624-VOC	Organic Chemistry-VOC	65
1,4-Isopropyltoluene	EPA 624-VOC	Organic Chemistry-VOC	65
2,2-Dichloropropane	EPA 624-VOC	Organic Chemistry-VOC	65
Benzene	EPA 624-VOC	Organic Chemistry-VOC	65
Bromobenzene	EPA 624-VOC	Organic Chemistry-VOC	65
Bromochloromethane	EPA 624-VOC	Organic Chemistry-VOC	65
Bromodichloromethane	EPA 624-VOC	Organic Chemistry-VOC	65
Bromoform	EPA 624-VOC	Organic Chemistry-VOC	65
Bromomethane	EPA 624-VOC	Organic Chemistry-VOC	65
Carbon tetrachloride	EPA 624-VOC	Organic Chemistry-VOC	65
Chlorobenzene	EPA 624-VOC	Organic Chemistry-VOC	65
Chlorodibromomethane	EPA 624-VOC	Organic Chemistry-VOC	65
Chloroethane	EPA 624-VOC	Organic Chemistry-VOC	65
Chloroform	EPA 624-VOC	Organic Chemistry-VOC	65
Chloromethane	EPA 624-VOC	Organic Chemistry-VOC	65
cis-1,2-Dichloroethene	EPA 624-VOC	Organic Chemistry-VOC	65
cis-1,3-Dichloropropene	EPA 624-VOC	Organic Chemistry-VOC	65
Dibromomethane	EPA 624-VOC	Organic Chemistry-VOC	65
Dichlorodifluoromethane	EPA 624-VOC	Organic Chemistry-VOC	65
Ethylbenzene	EPA 624-VOC	Organic Chemistry-VOC	65
Ethylene dibromide	EPA 624-VOC	Organic Chemistry-VOC	65
Hexachlorobutadiene	EPA 624-VOC	Organic Chemistry-VOC	65
Isopropylbenzene	EPA 624-VOC	Organic Chemistry-VOC	65
Methylene chloride	EPA 624-VOC	Organic Chemistry-VOC	65

Clean Water Act (CWA)

Analyte	Test Code	UPHL Unit	Page #
MTBE	EPA 624-VOC	Organic Chemistry-VOC	65
Napthalene	EPA 624-VOC	Organic Chemistry-VOC	65
n-Butylbenzene	EPA 624-VOC	Organic Chemistry-VOC	65
n-Propylbenzene	EPA 624-VOC	Organic Chemistry-VOC	65
sec-Butylbenzene	EPA 624-VOC	Organic Chemistry-VOC	65
Styrene	EPA 624-VOC	Organic Chemistry-VOC	65
tert-Butylbenzene	EPA 624-VOC	Organic Chemistry-VOC	65
Tetrachloroethene (PCE)	EPA 624-VOC	Organic Chemistry-VOC	65
Toluene	EPA 624-VOC	Organic Chemistry-VOC	65
trans-1,2-Dichloroethene	EPA 624-VOC	Organic Chemistry-VOC	65
trans-1,3-Dichloropropene	EPA 624-VOC	Organic Chemistry-VOC	65
Trichloroethene (TCE)	EPA 624-VOC	Organic Chemistry-VOC	65
Trichlorofluoromethane	EPA 624-VOC	Organic Chemistry-VOC	65
Vinyl chloride	EPA 624-VOC	Organic Chemistry-VOC	65
Xylene	EPA 624-VOC	Organic Chemistry-VOC	65
1,2-Dichlorobenzene	EPA 625-SVOC	Organic Chemistry-SVOC	60
1,2,4-Trichlorobenzene	EPA 625-SVOC	Organic Chemistry-SVOC	60
1,3-Dichlorobenzene	EPA 625-SVOC	Organic Chemistry-SVOC	60
1,4-Dichlorobenzene	EPA 625-SVOC	Organic Chemistry-SVOC	60
2-Chloronaphthalene	EPA 625-SVOC	Organic Chemistry-SVOC	60
2-Chlorophenol	EPA 625-SVOC	Organic Chemistry-SVOC	60
2-Methyl naphthalene	EPA 625-SVOC	Organic Chemistry-SVOC	60
2-Methyl phenol	EPA 625-SVOC	Organic Chemistry-SVOC	60
2-Methyl-4,6-dinitrophenol	EPA 625-SVOC	Organic Chemistry-SVOC	60
2-Nitroaniline	EPA 625-SVOC	Organic Chemistry-SVOC	60
2-Nitrophenol	EPA 625-SVOC	Organic Chemistry-SVOC	60
2,4-Dichlorophenol	EPA 625-SVOC	Organic Chemistry-SVOC	60
2,4-Dimethylphenol	EPA 625-SVOC	Organic Chemistry-SVOC	60
2,4-Dinitrophenol	EPA 625-SVOC	Organic Chemistry-SVOC	60
2,4-Dinitrotoluene	EPA 625-SVOC	Organic Chemistry-SVOC	60
2,4,6-Trichlorophenol	EPA 625-SVOC	Organic Chemistry-SVOC	60
2,6-Dinitrotoluene	EPA 625-SVOC	Organic Chemistry-SVOC	60
3-Methyl phenol	EPA 625-SVOC	Organic Chemistry-SVOC	60
3-Nitroaniline	EPA 625-SVOC	Organic Chemistry-SVOC	60
3,3'-Dichlorobenzidine	EPA 625-SVOC	Organic Chemistry-SVOC	60
4-Bromophenyl phenyl ether	EPA 625-SVOC	Organic Chemistry-SVOC	60
4-Chloroaniline	EPA 625-SVOC	Organic Chemistry-SVOC	60
4-Chlorophenyl phenyl ether	EPA 625-SVOC	Organic Chemistry-SVOC	60
4-Chloro-3-methyl phenol	EPA 625-SVOC	Organic Chemistry-SVOC	60
4-Methyl phenol	EPA 625-SVOC	Organic Chemistry-SVOC	60
4-Nitroaniline	EPA 625-SVOC	Organic Chemistry-SVOC	60
4-Nitrophenol	EPA 625-SVOC	Organic Chemistry-SVOC	60

Clean Water Act (CWA)

Analyte	Test Code	UPHL Unit	Page #
Acenaphthene	EPA 625-SVOC	Organic Chemistry-SVOC	60
Acenaphthylene	EPA 625-SVOC	Organic Chemistry-SVOC	60
Aniline	EPA 625-SVOC	Organic Chemistry-SVOC	60
Anthracene	EPA 625-SVOC	Organic Chemistry-SVOC	60
Benzidine	EPA 625-SVOC	Organic Chemistry-SVOC	60
Benzo (a) anthracene	EPA 625-SVOC	Organic Chemistry-SVOC	60
Benzo (a) pyrene	EPA 625-SVOC	Organic Chemistry-SVOC	60
Benzo (b) fluoranthene	EPA 625-SVOC	Organic Chemistry-SVOC	60
Benzo (g,h,i) perylene	EPA 625-SVOC	Organic Chemistry-SVOC	60
Benzo (k) fluoranthene	EPA 625-SVOC	Organic Chemistry-SVOC	60
Benzylbutylphthalate	EPA 625-SVOC	Organic Chemistry-SVOC	60
Benzyl alcohol	EPA 625-SVOC	Organic Chemistry-SVOC	60
Benzoic acid	EPA 625-SVOC	Organic Chemistry-SVOC	60
bis (2-chloroethyl) ether	EPA 625-SVOC	Organic Chemistry-SVOC	60
bis (2-chloroethoxy) methane	EPA 625-SVOC	Organic Chemistry-SVOC	60
bis (2-chloroisopropyl) ether	EPA 625-SVOC	Organic Chemistry-SVOC	60
bis (2-ethylhexyl) phthalate	EPA 625-SVOC	Organic Chemistry-SVOC	60
Chrysene	EPA 625-SVOC	Organic Chemistry-SVOC	60
Dibenzo (a,h) anthracene	EPA 625-SVOC	Organic Chemistry-SVOC	60
Dibenzofuran	EPA 625-SVOC	Organic Chemistry-SVOC	60
Diethyl phthalate	EPA 625-SVOC	Organic Chemistry-SVOC	60
Dimethyl phthalate	EPA 625-SVOC	Organic Chemistry-SVOC	60
Di-n-butyl phthalate	EPA 625-SVOC	Organic Chemistry-SVOC	60
Di-n-octyl phthalate	EPA 625-SVOC	Organic Chemistry-SVOC	60
Fluoranthene	EPA 625-SVOC	Organic Chemistry-SVOC	60
Fluorene	EPA 625-SVOC	Organic Chemistry-SVOC	60
Hexachlorobenzene	EPA 625-SVOC	Organic Chemistry-SVOC	60
Hexachlorobutadiene	EPA 625-SVOC	Organic Chemistry-SVOC	60
Hexachlorocyclopentadiene	EPA 625-SVOC	Organic Chemistry-SVOC	60
Hexachloroethane	EPA 625-SVOC	Organic Chemistry-SVOC	60
Indeno (1,2,3-cd) pyrene	EPA 625-SVOC	Organic Chemistry-SVOC	60
Isophorone	EPA 625-SVOC	Organic Chemistry-SVOC	60
n-Nitrosodimethylamine	EPA 625-SVOC	Organic Chemistry-SVOC	60
n-Nitrosodiphenylamine	EPA 625-SVOC	Organic Chemistry-SVOC	60
n-Nitrosodipropylamine	EPA 625-SVOC	Organic Chemistry-SVOC	60
Naphthalene	EPA 625-SVOC	Organic Chemistry-SVOC	60
Nitrobenzene	EPA 625-SVOC	Organic Chemistry-SVOC	60
Pentachlorophenol	EPA 625-SVOC	Organic Chemistry-SVOC	60
Phenanthrene	EPA 625-SVOC	Organic Chemistry-SVOC	60
Phenol	EPA 625-SVOC	Organic Chemistry-SVOC	60
Pyrene	EPA 625-SVOC	Organic Chemistry-SVOC	60

Resource Conservation & Recovery Act (RCRA)

Analyte	Test Code	EPA HW#	UPHL Unit	Page #
4,4'-DDD	EPA 8081-OcPest	U060	Organic Chemistry-PCB/OcPest	61
4,4'-DDE	EPA 8081-OcPest		Organic Chemistry-PCB/OcPest	61
4,4'-DDT	EPA 8081-OcPest	U061	Organic Chemistry-PCB/OcPest	61
Aldrin	EPA 8081-OcPest	P005	Organic Chemistry-PCB/OcPest	61
alpha-BHC	EPA 8081-OcPest	U129	Organic Chemistry-PCB/OcPest	61
beta-BHC	EPA 8081-OcPest		Organic Chemistry-PCB/OcPest	61
Chlordane	EPA 8081-OcPest	D020	Organic Chemistry-PCB/OcPest	61
delta-BHC	EPA 8081-OcPest		Organic Chemistry-PCB/OcPest	61
Dieldrin	EPA 8081-OcPest	P037	Organic Chemistry-PCB/OcPest	61
Endosulfan I	EPA 8081-OcPest	P050	Organic Chemistry-PCB/OcPest	61
Endosulfan II	EPA 8081-OcPest	P050	Organic Chemistry-PCB/OcPest	61
Endosulfan sulfate	EPA 8081-OcPest	P050	Organic Chemistry-PCB/OcPest	61
Endrin	EPA 8081-OcPest	D012	Organic Chemistry-PCB/OcPest	61
Endrin aldehyde	EPA 8081-OcPest	D012	Organic Chemistry-PCB/OcPest	61
gamma-BHC (Lindane)	EPA 8081-OcPest	D013	Organic Chemistry-PCB/OcPest	61
Heptachlor	EPA 8081-OcPest	D031	Organic Chemistry-PCB/OcPest	61
Heptachlor epoxide	EPA 8081-OcPest	D031	Organic Chemistry-PCB/OcPest	61
Methoxychlor	EPA 8081-OcPest	D014	Organic Chemistry-PCB/OcPest	61
PCB-1016	EPA 8082-PCB		Organic Chemistry-PCB/OcPest	61
PCB-1221	EPA 8082-PCB		Organic Chemistry-PCB/OcPest	61
PCB-1232	EPA 8082-PCB		Organic Chemistry-PCB/OcPest	61
PCB-1242	EPA 8082-PCB		Organic Chemistry-PCB/OcPest	61
PCB-1248	EPA 8082-PCB		Organic Chemistry-PCB/OcPest	61
PCB-1254	EPA 8082-PCB		Organic Chemistry-PCB/OcPest	61
PCB-1260	EPA 8082-PCB		Organic Chemistry-PCB/OcPest	61
Toxaphene	EPA 8081-OcPest	D015	Organic Chem-PCB/OcPest	61
*Add-ons	EPA 8081-OcPest		Organic Chem-PCB/OcPest	61
2,4-D	EPA 8151-Herbicides	D016	Organic Chem-PCB/OcPest	58
2,4,5-TP (Silvex)	EPA 8151-Herbicides	D017	Organic Chem-PCB/OcPest	58
Dalapon	EPA 8151-Herbicides		Organic Chem-PCB/OcPest	58
Dinoseb	EPA 8151-Herbicides	P020	Organic Chem-PCB/OcPest	58
Pentachlorophenol	EPA 8151-Herbicides	D037	Organic Chem-PCB/OcPest	58
Picloram	EPA 8151-Herbicides		Organic Chem-PCB/OcPest	58
*Add-ons	EPA 8151-Herbicides		Organic Chem-PCB/OcPest	58
1,1-Dichloroethane	EPA 8260-VOC		Organic Chemistry-VOC	65
1,1-Dichloroethene	EPA 8260-VOC	D029	Organic Chemistry-VOC	65
1,1-Dichloropropene	EPA 8260-VOC		Organic Chemistry-VOC	65
1,1,1-Trichloroethane	EPA 8260-VOC		Organic Chemistry-VOC	65
1,1,1,2-Tetrachloroethane	EPA 8260-VOC	U208	Organic Chemistry-VOC	65
1,1,2-Trichloroethane	EPA 8260-VOC	U227	Organic Chemistry-VOC	65

*Tentative analysis by special request, record specific analyte on test request form and schedule at 801-965-2400

Resource Conservation & Recovery Act (RCRA)

Analyte	Test Code	EPA HW#	UPHL Unit	Page #
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	EPA 8260-VOC		Organic Chemistry-VOC	65
1,1,2,2-Tetrachloroethane	EPA 8260-VOC	U209	Organic Chemistry-VOC	65
1,2-Dibromo-3-chloropropane	EPA 8260-VOC	U066	Organic Chemistry-VOC	65
1,2-Dichlorobenzene	EPA 8260-VOC	U070	Organic Chemistry-VOC	65
1,2-Dichloroethane	EPA 8260-VOC	D028	Organic Chemistry-VOC	65
1,2-Dichloropropane	EPA 8260-VOC	U083	Organic Chemistry-VOC	65
1,2-Dichlorotoluene	EPA 8260-VOC		Organic Chemistry-VOC	65
1,2,3-Trichlorobenzene	EPA 8260-VOC		Organic Chemistry-VOC	65
1,2,3-Trichloropropane	EPA 8260-VOC		Organic Chemistry-VOC	65
1,2,4-Trichlorobenzene	EPA 8260-VOC		Organic Chemistry-VOC	65
1,2,4-Trimethylbenzene	EPA 8260-VOC		Organic Chemistry-VOC	65
1,3-Dichlorobenzene	EPA 8260-VOC	U071	Organic Chemistry-VOC	65
1,3-Dichloropropane	EPA 8260-VOC	U084	Organic Chemistry-VOC	65
1,3,5-Trimethylbenzene	EPA 8260-VOC		Organic Chemistry-VOC	65
1,4-Dichlorobenzene	EPA 8260-VOC	D027	Organic Chemistry-VOC	65
1,4-Dichlorotoluene	EPA 8260-VOC	U072	Organic Chemistry-VOC	65
1,4-Isopropyltoluene	EPA 8260-VOC		Organic Chemistry-VOC	65
2,2-Dichloropropane	EPA 8260-VOC		Organic Chemistry-VOC	65
Benzene	EPA 8260-VOC	D018	Organic Chemistry-VOC	65
Bromobenzene	EPA 8260-VOC		Organic Chemistry-VOC	65
Bromochloromethane	EPA 8260-VOC		Organic Chemistry-VOC	65
Bromodichloromethane	EPA 8260-VOC		Organic Chemistry-VOC	65
Bromoform	EPA 8260-VOC	U225	Organic Chemistry-VOC	65
Bromomethane	EPA 8260-VOC	U029	Organic Chemistry-VOC	65
Carbon tetrachloride	EPA 8260-VOC	D019	Organic Chemistry-VOC	65
Chloroethane	EPA 8260-VOC	U045	Organic Chemistry-VOC	65
Chloroform	EPA 8260-VOC	D022	Organic Chemistry-VOC	65
Chloromethane	EPA 8260-VOC	U045	Organic Chemistry-VOC	65
cis-1,2-Dichloroethene	EPA 8260-VOC		Organic Chemistry-VOC	65
cis-1,3-Dichloropropene	EPA 8260-VOC		Organic Chemistry-VOC	65
Dibromomethane	EPA 8260-VOC	U068	Organic Chemistry-VOC	65
Dichlorodifluoromethane	EPA 8260-VOC	U075	Organic Chemistry-VOC	65
Ethylbenzene	EPA 8260-VOC		Organic Chemistry-VOC	65
Ethylene dibromide	EPA 8260-VOC	U067	Organic Chemistry-VOC	65
Hexachlorobutadiene	EPA 8260-VOC	D033	Organic Chemistry-VOC	65
Isopropylbenzene	EPA 8260-VOC		Organic Chemistry-VOC	65
Methyl ethyl ketone*	EPA 8260-VOC	D035	Organic Chemistry-VOC	65
Methylene chloride	EPA 8260-VOC	U080	Organic Chemistry-VOC	65
MTBE	EPA 8260-VOC		Organic Chemistry-VOC	65
Napthalene	EPA 8260-VOC		Organic Chemistry-VOC	65

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Analyte	Test Code	EPA HW#	UPHL Unit	Page #
n-Butylbenzene	EPA 8260-VOC		Organic Chemistry-VOC	65
n-Propylbenzene	EPA 8260-VOC		Organic Chemistry-VOC	65
sec-Butylbenzene	EPA 8260-VOC		Organic Chemistry-VOC	65
Styrene	EPA 8260-VOC		Organic Chemistry-VOC	65
tert-Butylbenzene	EPA 8260-VOC		Organic Chemistry-VOC	65
Tetrachloroethene (PCE)	EPA 8260-VOC	D039	Organic Chemistry-VOC	65
Toluene	EPA 8260-VOC	U220	Organic Chemistry-VOC	65
trans-1,2-Dichloroethene	EPA 8260-VOC	U079	Organic Chemistry-VOC	65
trans-1,3-Dichloropropene	EPA 8260-VOC	U084	Organic Chemistry-VOC	65
Trichloroethene (TCE)	EPA 8260-VOC	D040	Organic Chemistry-VOC	65
Trichlorofluoromethane	EPA 8260-VOC	U121	Organic Chemistry-VOC	65
Vinyl chloride	EPA 8260-VOC	D043	Organic Chemistry-VOC	65
Xylene	EPA 8260-VOC	U239	Organic Chemistry-VOC	65
*Add-ons	EPA 8260-VOC		Organic Chemistry-VOC	65
1,2-Dichlorobenzene	EPA 8270-SVOC		Organic Chemistry-SVOC	60
1,2,4-Trichlorobenzene	EPA 8270-SVOC		Organic Chemistry-SVOC	60
1,3-Dichlorobenzene	EPA 8270-SVOC		Organic Chemistry-SVOC	60
1,4-Dichlorobenzene	EPA 8270-SVOC		Organic Chemistry-SVOC	60
2-Chloronaphthalene	EPA 8270-SVOC	U047	Organic Chemistry-SVOC	60
2-Chlorophenol	EPA 8270-SVOC	U048	Organic Chemistry-SVOC	60
2-Methyl naphthalene	EPA 8270-SVOC		Organic Chemistry-SVOC	60
2-Methyl phenol (o-Cresol)	EPA 8270-SVOC	D023	Organic Chemistry-SVOC	60
2-Methyl-4,6-dinitrophenol	EPA 8270-SVOC		Organic Chemistry-SVOC	60
2-Nitroaniline	EPA 8270-SVOC		Organic Chemistry-SVOC	60
2-Nitrophenol	EPA 8270-SVOC		Organic Chemistry-SVOC	60
2,4-Dichlorophenol	EPA 8270-SVOC	U081	Organic Chemistry-SVOC	60
2,4-Dimethylphenol	EPA 8270-SVOC	U101	Organic Chemistry-SVOC	60
2,4-Dinitrophenol	EPA 8270-SVOC	P048	Organic Chemistry-SVOC	60
2,4-Dinitrotoluene	EPA 8270-SVOC	D030	Organic Chemistry-SVOC	60
2,4,5-Trichlorophenol	EPA 8270-SVOC	D041	Organic Chemistry-SVOC	60
2,4,6-Trichlorophenol	EPA 8270-SVOC	D042	Organic Chemistry-SVOC	60
2,6-Dinitrotoluene	EPA 8270-SVOC	U106	Organic Chemistry-SVOC	60
3-Methyl phenol (m-Cresol)	EPA 8270-SVOC	D024	Organic Chemistry-SVOC	60
3-Nitroaniline	EPA 8270-SVOC		Organic Chemistry-SVOC	60
3,3'-Dichlorobenzidine	EPA 8270-SVOC	U073	Organic Chemistry-SVOC	60
4-Bromophenyl phenyl ether	EPA 8270-SVOC	U030	Organic Chemistry-SVOC	60
4-Chloroaniline	EPA 8270-SVOC	P024	Organic Chemistry-SVOC	60
4-Chlorophenyl phenyl ether	EPA 8270-SVOC		Organic Chemistry-SVOC	60
4-Chloro-3-methyl phenol	EPA 8270-SVOC	)39	Organic Chemistry-SVOC	60
4-Methyl phenol (p-Cresol)	EPA 8270-SVOC	)25	Organic Chemistry-SVOC	60

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Analyte	Test Code	EPA HW#	UPHL Unit	Page #
4-Nitroaniline	EPA 8270-SVOC	P077	Organic Chemistry-SVOC	60
4-Nitrophenol	EPA 8270-SVOC	U170	Organic Chemistry-SVOC	60
Acenaphthene	EPA 8270-SVOC		Organic Chemistry-SVOC	60
Acenaphthylene	EPA 8270-SVOC		Organic Chemistry-SVOC	60
Aniline	EPA 8270-SVOC	U012	Organic Chemistry-SVOC	60
Anthracene	EPA 8270-SVOC		Organic Chemistry-SVOC	60
Benzidine	EPA 8270-SVOC	U021	Organic Chemistry-SVOC	60
Benzo (a) anthracene	EPA 8270-SVOC	U018	Organic Chemistry-SVOC	60
Benzo (a) pyrene	EPA 8270-SVOC	U022	Organic Chemistry-SVOC	60
Benzo (b) fluoranthene	EPA 8270-SVOC		Organic Chemistry-SVOC	60
Benzo (g,h,i) perylene	EPA 8270-SVOC		Organic Chemistry-SVOC	60
Benzo (k) fluoranthene	EPA 8270-SVOC		Organic Chemistry-SVOC	60
Benzylbutylphthalate	EPA 8270-SVOC		Organic Chemistry-SVOC	60
Benzyl alcohol	EPA 8270-SVOC		Organic Chemistry-SVOC	60
Benzoic acid	EPA 8270-SVOC		Organic Chemistry-SVOC	60
bis (2-chloroethyl) ether	EPA 8270-SVOC	U025	Organic Chemistry-SVOC	60
bis (2-chloroethoxy) methane	EPA 8270-SVOC	U046	Organic Chemistry-SVOC	60
bis (2-chloroisopropyl) ether	EPA 8270-SVOC	U027	Organic Chemistry-SVOC	60
bis (2-ethylhexyl) phthalate	EPA 8270-SVOC	U028	Organic Chemistry-SVOC	60
Chrysene	EPA 8270-SVOC	U050	Organic Chemistry-SVOC	60
Dibenzo (a,h) anthracene	EPA 8270-SVOC	U063	Organic Chemistry-SVOC	60
Dibenzofuran	EPA 8270-SVOC		Organic Chemistry-SVOC	60
Diethyl phthalate	EPA 8270-SVOC	U088	Organic Chemistry-SVOC	60
Dimethyl phthalate	EPA 8270-SVOC	U102	Organic Chemistry-SVOC	60
Di-n-butyl phthalate	EPA 8270-SVOC	U069	Organic Chemistry-SVOC	60
Di-n-octyl phthalate	EPA 8270-SVOC	U107	Organic Chemistry-SVOC	60
Fluoranthene	EPA 8270-SVOC	U120	Organic Chemistry-SVOC	60
Fluorene	EPA 8270-SVOC		Organic Chemistry-SVOC	60
Hexachlorobenzene	EPA 8270-SVOC	D032	Organic Chemistry-SVOC	60
Hexachlorobutadiene	EPA 8270-SVOC	D033	Organic Chemistry-SVOC	60
Hexachlorocyclopentadiene	EPA 8270-SVOC	U130	Organic Chemistry-SVOC	60
Hexachloroethane	EPA 8270-SVOC	D034	Organic Chemistry-SVOC	60
Ideno (1,2,3-cd) pyrene	EPA 8270-SVOC	U137	Organic Chemistry-SVOC	60
Isophorone	EPA 8270-SVOC		Organic Chemistry-SVOC	60
n-Nitrosodimethylamine	EPA 8270-SVOC	P082	Organic Chemistry-SVOC	60
n-Nitrosodiphenylamine	EPA 8270-SVOC		Organic Chemistry-SVOC	60
n-Nitrosodipropylamine	EPA 8270-SVOC		Organic Chemistry-SVOC	60
Naphthalene	EPA 8270-SVOC	U165	Organic Chemistry-SVOC	60
Nitrobenzene	EPA 8270-SVOC	D036	Organic Chemistry-SVOC	60
Pentachlorophenol	EPA 8270-SVOC	D037	Organic Chemistry-SVOC	60
Phenanthrene	EPA 8270-SVOC		Organic Chemistry-SVOC	60

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Analyte	Test Code	EPA HW#	UPHL Unit	Page #
Phenol	EPA 8270-SVOC	U188	Organic Chemistry-SVOC	60
Pyrene	EPA 8270-SVOC		Organic Chemistry-SVOC	60
*Pyridine	EPA 8270-SVOC	D038	Organic Chemistry-SVOC	60
*Add-ons	EPA 8270-SVOC		Organic Chemistry-SVOC	60

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Analyte	Test Code	UPHL Unit	Page #
2,4-D	EPA 515.1	Organic Chemistry-Herbicides	58
2,4,5-TP (Silvex)	EPA 515.1	Organic Chemistry-Herbicides	58
3-Hyrdroxycarbofuran	EPA 531.1	Organic Chemistry-Carbamates	56
Aldicarb (Temik)	EPA 531.1	Organic Chemistry-Carbamates	56
Aldicarb sulfone	EPA 531.1	Organic Chemistry-Carbamates	56
Aldicarb sulfoxide	EPA 531.1	Organic Chemistry-Carbamates	56
Alkalinity	SM 2320B-ALK	Inorganic Chemistry	13
Aluminum	EPA 200.8-AL	Metals	47
Ammonia	EPA 350.1-NH3	Inorganic Chemistry-Nutrients	14
Antimony	EPA 200.8-SB	Metals	47
Arsenic	EPA 200.8-AS	Metals	39
Barium	EPA 200.8-BA	Metals	47
Beryllium	EPA 200.8-BE	Metals	47
Boron	EPA 200.7-B	Metals	47
Bromate	EPA 300.0-BRO3	Inorganic Chemistry	16
Bromide	EPA 300.1-BRIC	Inorganic Chemistry	16,17
Bromodichloromethane	EPA 524.2-THM	Organic Chemistry-THM	54
Bromoform	EPA 524.2-THM	Organic Chemistry-THM	54
Cadmium	EPA 200.8-CD	Metals	47
Calcium	EPA 200.7-CA	Metals	47
Carbaryl (Sevin)	EPA 531.1	Organic Chemistry-Carbamates	56
Carbofuran (Furadan)	EPA 531.1	Organic Chemistry-Carbamates	56
Chlorate	EPA 300.0-CLO3	Inorganic Chemistry	16
Chloride	EPA 325.2-CL	Inorganic Chemistry	17
Chloride	EPA 300.0-CLIC	Inorganic Chemistry	17
Chlorite	EPA 300.0-CLO2	Inorganic Chemistry	16
Chlorodibromomethane	EPA 524.2-THM	Organic Chemistry-THM	54
Chloroform	EPA 524.2-THM	Organic Chemistry-THM	54
Chromium	EPA 200.8-CR	Metals	47
Chromium-IV	EPA 218.7-CR6+	Inorganic Chemistry	41
Cobalt	EPA 200.8-CO	Metals	47
Color	EPA 110.2-L-COLR	Inorganic Chemistry	18
Conductivity	EPA 120.1-COND	Inorganic Chemistry	19
Copper	EPA 200.8-CU	Metals	47
Corrosivity	EPA 1110 CORR	Inorganic Chemistry	20
Cyanide	EPA 335.4-CNCL	Inorganic Chemistry	21
Dalapon	EPA 515.1	Organic Chemistry-Herbicides	58
Dibromoacetic acid	SM 6251B-HAA	Organic Chemistry-HAA	50
Dichloroacetic acid	SM 6251B-HAA	Organic Chemistry-HAA	50
Dinoseb	EPA 515.1	Organic Chemistry-Herbicides	58
E. coli	SM 9223B-Colilert	Environmental Microbiology	68

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Analyte	Test Code	UPHL Unit	Page #
Fluoride	EPA 300.0-FLIC	Inorganic Chemistry	22
Hardness	HARD	Inorganic Chemistry	44
Heterotrophic Plate Count	SM 9215B-HPC	Environmental Microbiology	66
Iron	EPA 200.7-FE	Metals	47
Lead	EPA 200.8-PB	Metals	47
Legionella	SM 9260J	Environmental Microbiology	67
Magnesium	EPA 200.7-MG	Metals	47
Manganese	EPA 200.8-MN	Metals	47
Mercury	EPA 245.1-HG	Metals	40
Methomyl	EPA 531.1	Organic Chemistry-Carbamates	56
Molybdenum	EPA 200.8-MO	Metals	47
Monobromoacetic acid	SM 6215B-HAA	Organic Chemistry-HAA	50
Monochloroacetic acid	SM 6215B-HAA	Organic Chemistry-HAA	50
Nickel	EPA 200.8-NI	Metals	47
Nitrate+Nitrite	EPA 353.2-NO2+NO3	Inorganic Chemistry-Nutrients	23
Nitrite (only)	EPA 353.2-NO2	Inorganic Chemistry-Nutrients	23
Odor	EPA 140.1-ODOR	Inorganic Chemistry	25
Oxamyl (Vydate)	EPA 531.1	Organic Chemistry-Carbamates	56
Pentachlorophenol	EPA 515.1	Organic Chemistry-Herbicides	58
Perchlorate	EPA 314.0-CLO4	Inorganic Chemistry	26
pH	EPA 150.1-PH	Inorganic Chemistry	27
Phosphate	EPA 365.1-TPO4	Inorganic Chemistry-Nutrients	28
Picloram	EPA 515.1	Organic Chemistry-Herbicides	58
Potassium	EPA 200.7-K	Metals	47
Selenium	EPA 200.8-SE	Metals	47
Silica	EPA 370.1-SIO2	Inorganic Chemistry	29
Silver	EPA 200.8-AG	Metals	47
Sodium	EPA 200.7-NA	Metals	47
Sulfate	EPA 300.0-SO4C	Inorganic Chemistry	30
Sulfide	EPA 376.2-SULI	Inorganic Chemistry	31
Thallium	EPA 200.8-TL	Metals	47
TOC	SM 5310B-TOC	Inorganic Chemistry	51
Total Coliform	SM 9223B-Colilert	Environmental Microbiology	68
Total Dissolved Solids (TDS)	EPA 160.1-TDS	Inorganic Chemistry	32
Total Suspended Solids (TSS)	EPA 160.2-TSS	Inorganic Chemistry	32
Trichloroacetic acid	SM 6251B-HAA	Organic Chemistry-HAA	50
Turbidity	EPA 180.1-TURB	Inorganic Chemistry	33
UV254	SM 5910B-UV254	Inorganic Chemistry	52
Vanadium	EPA 200.8-V	Metals	47
Zinc	EPA 200.8-ZN	Metals	47
1,1-Dichloroethane	EPA 524.2-VOC	Organic Chemistry-VOC	65

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Analyte	Test Code	UPHL Unit	Page #
1,1-Dichloroethene	EPA 524.2-VOC	Organic Chemistry-VOC	65
1,1-Dichloropropene	EPA 524.2-VOC	Organic Chemistry-VOC	65
1,1,1-Trichloroethane	EPA 524.2-VOC	Organic Chemistry-VOC	65
1,1,2-Trichloroethane	EPA 524.2-VOC	Organic Chemistry-VOC	65
1,1,1,2-Tetrachloroethane	EPA 524.2-VOC	Organic Chemistry-VOC	65
1,1,2,2-Tetrachloroethane	EPA 524.2-VOC	Organic Chemistry-VOC	65
1,2-Dibromo-3-chloropropane	EPA 524.2-VOC	Organic Chemistry-VOC	65
1,2-Dichlorobenzene	EPA 524.2-VOC	Organic Chemistry-VOC	65
1,2-Dichloroethane	EPA 524.2-VOC	Organic Chemistry-VOC	65
1,2-Dichloropropane	EPA 524.2-VOC	Organic Chemistry-VOC	65
1,2-Dichlorotoluene	EPA 524.2-VOC	Organic Chemistry-VOC	65
1,2,3-Trichlorobenzene	EPA 524.2-VOC	Organic Chemistry-VOC	65
1,2,3-Trichloropropane	EPA 524.2-VOC	Organic Chemistry-VOC	65
1,2,4-Trichlorobenzene	EPA 524.2-VOC	Organic Chemistry-VOC	65
1,2,4-Trimethylbenzene	EPA 524.2-VOC	Organic Chemistry-VOC	65
1,3-Dichlorobenzene	EPA 524.2-VOC	Organic Chemistry-VOC	65
1,3-Dichloropropane	EPA 524.2-VOC	Organic Chemistry-VOC	65
1,3,5-Trimethylbenzene	EPA 524.2-VOC	Organic Chemistry-VOC	65
1,4-Dichlorobenzene	EPA 524.2-VOC	Organic Chemistry-VOC	65
1,4-Dichlorotoluene	EPA 524.2-VOC	Organic Chemistry-VOC	65
1,4-Isopropyltoluene	EPA 524.2-VOC	Organic Chemistry-VOC	65
2,2-Dichloropropane	EPA 524.2-VOC	Organic Chemistry-VOC	65
Benzene	EPA 524.2-VOC	Organic Chemistry-VOC	65
Bromobenzene	EPA 524.2-VOC	Organic Chemistry-VOC	65
Bromochloromethane	EPA 524.2-VOC	Organic Chemistry-VOC	65
Bromodichloromethane	EPA 524.2-VOC	Organic Chemistry-VOC	65
Bromoform	EPA 524.2-VOC	Organic Chemistry-VOC	65
Bromomethane	EPA 524.2-VOC	Organic Chemistry-VOC	65
Carbon tetrachloride	EPA 524.2-VOC	Organic Chemistry-VOC	65
Chlorobenzene	EPA 524.2-VOC	Organic Chemistry-VOC	65
Chlorodibromomethane	EPA 524.2-VOC	Organic Chemistry-VOC	65
Chloroethane	EPA 524.2-VOC	Organic Chemistry-VOC	65
Chloroform	EPA 524.2-VOC	Organic Chemistry-VOC	65
Chloromethane	EPA 524.2-VOC	Organic Chemistry-VOC	65
cis-1,2-Dichloroethene	EPA 524.2-VOC	Organic Chemistry-VOC	65
cis-1,3-Dichloropropene	EPA 524.2-VOC	Organic Chemistry-VOC	65
Dibromomethane	EPA 524.2-VOC	Organic Chemistry-VOC	65
Dichlorodifluoromethane	EPA 524.2-VOC	Organic Chemistry-VOC	65
Ethylbenzene	EPA 524.2-VOC	Organic Chemistry-VOC	65
Ethylene dibromide	EPA 524.2-VOC	Organic Chemistry-VOC	65
Hexachlorobutadiene	EPA 524.2-VOC	Organic Chemistry-VOC	65

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Analyte	Test Code	UPHL Unit	Page #
Isopropylbenzene	EPA 524.2-VOC	Organic Chemistry-VOC	65
Methylene chloride	EPA 524.2-VOC	Organic Chemistry-VOC	65
MTBE	EPA 524.2-VOC	Organic Chemistry-VOC	65
Napthalene	EPA 524.2-VOC	Organic Chemistry-VOC	65
n-Butylbenzene	EPA 524.2-VOC	Organic Chemistry-VOC	65
n-Propylbenzene	EPA 524.2-VOC	Organic Chemistry-VOC	65
sec-Butylbenzene	EPA 524.2-VOC	Organic Chemistry-VOC	65
Styrene	EPA 524.2-VOC	Organic Chemistry-VOC	65
tert-Butylbenzene	EPA 524.2-VOC	Organic Chemistry-VOC	65
Tetrachloroethene (PCE)	EPA 524.2-VOC	Organic Chemistry-VOC	65
Toluene	EPA 524.2-VOC	Organic Chemistry-VOC	65
trans-1,2-Dichloroethene	EPA 524.2-VOC	Organic Chemistry-VOC	65
trans-1,3-Dichloropropene	EPA 524.2-VOC	Organic Chemistry-VOC	65
Trichloroethene (TCE)	EPA 524.2-VOC	Organic Chemistry-VOC	65
Trichlorofluoromethane	EPA 524.2-VOC	Organic Chemistry-VOC	65
Vinyl chloride	EPA 524.2-VOC	Organic Chemistry-VOC	65
Xylene	EPA 524.2-VOC	Organic Chemistry-VOC	65
2,4-Dinitrotoluene	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
2,6-Dinitrotoluene	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
4,4'-DDE	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Acetochlor	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Alachlor	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Aldrin	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
alpha-Chlordane	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Atrazine	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
bis (2-ethylhexyl) adipate	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
bis (2-ethylhexyl) phthalate	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Benzo (a) pyrene	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Bromocil	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Butachlor	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Chlorobiphenyl	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Cyanazine	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Dichlorobiphenyl	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Dieldrin	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Endrin	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
EPTC	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
gamma-Chlordane	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Heptachlor	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Heptachlor epoxide	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Heptachlorobiphenyl	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Hexachlorobenzene	EPA 525.2-SVOC	Organic Chemistry-SVOC	60

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Analyte	Test Code	UPHL Unit	Page #
Hexachlorobiphenyl	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Hexachlorocyclopentadiene	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Lindane (gamma-BHC)	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Methoxychlor	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Metolachlor	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Metribuzin	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Molinate	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Octachlorobiphenyl	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Pentachlorobiphenyl	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Pentachlorophenol	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Prometon	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Propachlor	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Simazine	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Terbacil	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Tetrachlorobiphenyl	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
trans-Nonachlor	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Trichlorobiphenyl	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Trifluralin	EPA 525.2-SVOC	Organic Chemistry-SVOC	60
Toxaphene	EPA 525.2-SVOC	Organic Chemistry-SVOC	60