

Table of Contents

Revision Z(NF)

General Information

Introduction	1
Pricing Policy Statement	1
Analytical Methods	1
Air Samples.....	1
Aqueous Samples.....	2
Solid Samples	2
Tissue and Biota Samples	2
Samples with Multiple Phases	2
Department of Defense.....	2
New Jersey Data of Known Quality (NJDKQP).....	2
Connecticut Reasonable Confidence Protocols (RCPs).....	3
Massachusetts Contingency Plan (MCP)	3
Texas Risk Reduction Program (TRRP).....	3
Additional Charges.....	3
Change of Scope Statement.....	3
Sample Cancellation Charge	3
Client-Supplied Cooler(s).....	3
Bottleware Charges	3
Overnight Shipment	4
International Shipment	4
Turnaround Times	4
Rush Analyses	4
Retention of Samples.....	4
Hazardous Waste	4
Quality Assurance Project Plan	5
GLP Pricing.....	5
Who to Contact	5
Business Development Group	5
Client Services Group	5
General Terms and Conditions of Sale.....	8
Key to Abbreviations	10
Explanation of Symbols and Abbreviation.....	11

Submitting Samples

Sample Kit/Cooler/SUMMA Canister Return Policy.....	13
Sample Kit/Cooler Temperatures	13
Sample Submission Requirements for Aqueous, Solid, and Tissue Samples	13
Sample Submission Requirements for Air Samples.....	15

Analytical Reports and Data Deliverables

E-mailed Results.....	19
Special Reports.....	19
Quality Control Summary	19
Laboratory Sample Analysis Record (LSAR).....	19
Analysis Report Approval.....	19
Data Package Preparation Services	20
Electronic Data Deliverables.....	23

Table of Contents *(continued)*

Environmental Analyses

Air Analyses.....	25
Aqueous and Solid Analyses.....	29
Drinking Water Regulations.....	63
Soil Sampling by SW-846 5035 and 5035A.....	67
Organic Extractions, Cleanups, and Sample Registration/Preparation.....	69

Compound Comparison Lists

Inorganics.....	73
Pesticides/PCBs and Herbicides.....	74
GC/MS Semivolatiles.....	75
GC/MS Volatiles.....	78

Petroleum Analyses

General Petroleum Analyses.....	85
State-Specific Petroleum Analyses.....	91
Pennsylvania Underground Storage Tanks.....	99

Index.....	103
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General Information

Eurofins Lancaster Laboratories Environmental, LLC (ELLE) has been providing comprehensive analytical, research, and consulting services in the chemical and biological sciences since 1961. As the largest single-location environmental laboratory in the nation, we have an experienced staff of more than 300 professional and support people, serving both national and international clients. For decades, we've built our reputation with a focused, corporate purpose that we're as dedicated to now as we were back when we started—to provide quality service at a fair price and to pay close attention to clients' needs.

We are NELAP, ISO17025, and DOD ELAP accredited. We also hold accreditation in many non-NELAP states. We have completed contracts for the U.S. Environmental Protection Agency (EPA) Contract Laboratory Program (CLP), Army, Navy, Corps of Engineers, and Air Force. We offer testing in compliance with the U.S. EPA and Food and Drug Administration (FDA) Current Good Laboratory Practice (cGLP) guidelines.

ELLE provides a comprehensive range of services to industry, institutions, government, and engineering firms. Our professionals thoroughly understand the regulations as established by the EPA and state agencies. We'll provide you with analytical reports that are accurate, precise, scientifically valid, and legally defensible. And, if you require project management and consulting services, we can help you identify your needs and design your project. If desired, we can also assist you with your sampling, monitoring, and documentation requirements.

We invite you to put our decades of experience to work in your analytical and research projects.

The Schedule of Services

This *Schedule of Services (SOS)* covers the services offered by Eurofins Lancaster Laboratories Environmental, LLC. With the exception of special projects, contract R&D, custom research, or analytical method development and validation studies, virtually every analysis and service we offer is described in this document. Please remember, however, that we continually add new capabilities. If you need an analysis and don't see it listed here, please call us.

Method references, analyses or services offered, and certifications are current at the time of this printing and are subject to change or to be discontinued without notice.

Pricing Policy Statement

Eurofins Lancaster Laboratories Environmental's *SOS* is periodically reviewed by management to ensure that we continue to offer the services most valuable to our clients. As changes are recommended, we will include them in our next version of our *SOS*. Please contact your Client Services Representative or our Business Development Group to confirm our most recent analysis fees or to obtain a formal quotation. Fees listed in our quotations are valid through the expiration date established on the quote.

Analytical Methods

Air Samples

Since holding times vary by state, we request that samples be submitted within 48 hours of collection. There is no requirement for temperature of SUMMA canisters or Tedlar bags during shipping. Samples are reported in ppb(v), $\mu\text{g}/\text{m}^3$, ppm(v), or mg/m^3 .

Canisters and/or flow controllers should be returned within two (2) weeks from shipping date. Canisters kept longer than two (2) weeks will be invoiced a replacement fee of \$415 per canister. Canisters with flow controllers kept longer than two (2) weeks will be invoiced a replacement fee of \$920 per set. If canisters are returned unused or filled with air but will not be analyzed, there is a cleaning and certification fee of \$60 per canister plus the cost of return shipping if not already covered.

Aqueous Samples

All aqueous samples should be submitted within 24 hours of collection and must be chilled (with wet ice) so that the temperature upon arrival is 0-6°C, not frozen. Many aqueous samples require a preservative. This is added by the laboratory to each bottle prior to shipment. It is necessary for this preservative to remain in the glassware when samples are collected. Volatile samples should be collected with no headspace. Sample results are reported in µg/L or mg/L. Dioxins and PCB congeners are reported in pg/L.

Solid Samples

Soil samples should be submitted within 24 hours of collection. Solid samples should also be submitted chilled (with wet ice) so that the temperature upon arrival is 0-6°C, not frozen. All non-volatile soil samples are thoroughly mixed prior to analysis. A special, cone-and-quartering homogenization technique can be performed at an additional cost. However, the soil aliquot collected should be mixed in the field and be representative of the sample location matrix. Most analyses for soil samples are reported on a dry-weight basis; therefore, moisture content must be determined. This is billed as a separate analysis. Clearly indicate on your chain of custody if results are to be reported as received or on a dry-weight basis. Sample results are reported in µg/kg or mg/kg. Dioxins and PCB congeners are reported in ng/kg.

Tissue and Biota Samples

Tissue and biota samples should be submitted within 24 hours of collection and frozen (dry ice is preferred, however, wet ice is acceptable) so that the temperature upon arrival is 0°C. All non-volatile tissue and biota samples should be homogenized. It is important to let the laboratory know which portion of the tissue/biota will be analyzed (whole body, edible portion, etc.). Additional charges apply for preparation of most tissue and biota samples. At times, analyses for tissue and biota samples are reported on a dry-weight and/or %lipid basis; therefore, moisture content and/or %lipids (fats) must be determined in these cases. This is billed as a separate analysis. Clearly indicate on your chain of custody if results are to be reported as received or on a dry-weight basis. Sample results are reported in µg/kg or mg/kg. Dioxins and PCB congeners are reported in ng/kg.

Samples with Multiple Phases

Any sample submitted with multiple phases (e.g., water/oil) will have each phase processed, analyzed, reported, and billed, as a distinct entity unless instructions accompanying the sample specify otherwise.

Department of Defense

ELLE holds laboratory accreditation implemented by the Department of Defense (DoD). The DoD Environmental Laboratory Accreditation Program was established in an effort to promote consistency among various laboratory contractors and improve the procurement process for testing services. All laboratories that perform testing in support of DoD environmental restoration programs for any branch of the military will be required to conform to the DoD Quality Systems Manual (QSM) for Environmental Laboratories. This manual is based on The NELAC Institute (TNI) Standard, but there are additional requirements specific to the DoD program.

We have approval for a wide range of analyses, including volatile and semivolatile organics by GC/MS, GRO, DRO, air samples by TO-15, perchlorate, metals by ICP and ICP/MS, pesticides, PCBs, PCB Congeners, Dioxins, PAHs, cyanide, hexavalent chromium, and anions by ion chromatography. For a complete list of parameters, please contact Environmental Business Development at 717-656-2300.

New Jersey Data of Known Quality Protocols (NJ DKQP)

In April 2014, the NJ Department of Environmental Protection (NJDEP) finalized their technical guidance documents for this program. The guidance is intended to assist those responsible for remediation projects in order to comply with the NJDEP Technical Requirements for Site Remediation. The goal of the guidance is to provide a consistent approach to the generation, assessment, and usability determinations for analytical data. At ELLE, our internal laboratory control limits comply with the requirement of DKQP without exception. We have integrated the NJ DKQP conformance/non-conformance summary questionnaire and associated narrative into our analysis report format. It is critical that you provide us with the project communication form prior to submitting samples.

If you have any questions, please contact Environmental Business Development at 717-656-2300.

Connecticut Reasonable Confidence Protocols (RCPs)

The Connecticut Department of Environmental Protection (DEP) developed guidelines for enhanced QA/QC procedures for analytical methods and reporting commonly referred to as the Reasonable Confidence Protocols. The RCPs will recommend method-specific performance criteria and will recommend methods for reporting QA/QC data. This guidance covers enhanced QA/QC for SW-846 and the Connecticut ETPH methods.

At ELLE, we use a laboratory certification form to document compliance with the DEP RCPs. This form is used to determine if the data meets the DEP's requirements for "Reasonable Confidence." If you have any questions, please contact Environmental Business Development at 717-656-2300.

Massachusetts Contingency Plan (MCP)

In 2003 the Massachusetts Department of Environmental Protection (MA DEP) enacted a data quality enhancement program to provide environmental professionals with recommended laboratory procedures, field sample quality assurance/quality control, and reporting requirements for analytical data. The laboratory procedures provided include method-specific QA/QC requirements and performance standards. Compliance with the QA/QC requirements and performance standards for these methods will provide a Licensed Site Professional (LSP) with the "presumptive certainty" regarding the usability of analytical data to support MCP decisions.

At ELLE, we provide a Presumptive Certainty form that states our lab complied with the requirements of the MCP and submit this with the data. If you have any questions, please contact Environmental Business Development at 717-656-2300.

Texas Risk Reduction Program (TRRP)

The Texas Commission on Environmental Quality (TCEQ) enacted the Texas Risk Reduction Program in September 1999 to provide a statewide corrective action program to protect both human health and the environment from releases of chemicals of concern (COC). The program applies to releases of COC that are produced, stored, or disposed at commercial and industrial facilities or operations. TRRP also applies to the closure of tanks, landfills, and other waste management facility components.

TRRP has specific data reporting requirements that are more intensive than most other state or federal programs. ELLE can provide TRRP-13 compliant analytical data and deliverables. If you have any questions, please contact Environmental Business Development at 717-656-2300.

Additional Charges

Change of Scope Statement

The fees provided in our quotations are based on the size and scope of the project as presented to us at the time of the quote request. If there is a significant reduction in the size (number of samples) and/or scope (analytical tests and technical requirements) of the project, we reserve the option to modify our fees accordingly.

Sample Cancellation Charge

If you need to cancel the analysis of a sample after it has been submitted, please contact our Client Services Group as soon as possible. Depending upon the status of the sample at the time we receive your instructions, you may be billed for the analyses that have already been processed.

Client-Supplied Cooler(s)

If you want your cooler(s) returned, when submitting samples you must provide us with a completed, return shipping form that includes your commercial carrier account number.

Bottleware Charges

A \$3.00 per bottle charge will be added to your invoice if the following occurs:

- Bottleware was sent but not received with paid samples
- Bottleware was returned unused

Overnight Shipment

The costs listed in our proposals and quotes include commercial shipment to your site location or office. If faster delivery is needed, the cost will be added to your invoice unless your commercial carrier account number is provided prior to shipment.

International Shipment

The client is expected to pay for both outgoing and incoming international shipments. Any charges incurred by the laboratory will be added to your invoice. Please contact our Client Services Group for more information.

Turnaround Times

Standard turnaround time (TAT) for most analyses is 10 business days. Expedited service is available for most analyses, see below for more details on RUSH analyses.

All expedited work MUST be prearranged. The TAT begins when the sample arrives at the laboratory unless...

- the sample arrives unannounced or
- discrepancies exist between client paperwork and information used to schedule the analytical work.

When samples arrive unannounced, the TAT will begin after the work has been approved.

For samples that have discrepancies, the TAT will start when all issues have been resolved.

Capacity and resources are allocated based on acceptance of samples for a given project on a certain date or timeframe. If the project start date is significantly altered, turnaround times may need to be adjusted or renegotiated to reflect the new project timeline.

Rush Analyses

RUSH service MUST be approved by the laboratory BEFORE samples are submitted. A surcharge is added to the fee if rush turnaround time (TAT) is requested. Such surcharges range from 25% to 200% of the fee and depend upon the TAT and analysis to be performed. Samples are scheduled into our rush analysis handling system immediately upon receipt at our facility.

Retention of Samples

After the analytical results have been reported, samples are routinely retained in our storage facilities for a minimum of 7 calendar days. Prior arrangements must be made if samples are to be held for a longer period of time. Long-term storage is available at \$10 per sample, per month. Limited frozen storage (-15°C) space is available at \$20 per sample per month.

Summa canisters are cleaned within 24 hours after results have been reported. Prior arrangements MUST be made to hold SUMMA canisters for a longer period of time. Additional charges will apply.

Nonvolatile environmental samples are kept in a limited-access refrigerator. This refrigerator has an automated storage and retrieval system that combines cranes, carousels, computers, and bar codes to allow samples to be tracked, stored, and retrieved efficiently.

Empty containers, and subsamples made by the laboratory are discarded immediately after the analysis.

Hazardous Waste

Unused portions of samples found or suspected to be hazardous as defined by state or federal regulatory guidelines may be returned to the client upon completion of the analytical work. The cost of returning the sample will be invoiced to the client. The sample and portions thereof remain the property of the client at all times.

Quality Assurance Project Plan (QAPP)

Quality Assurance Project Plans (QAPPs) are frequently required prior to the start of site investigations. These plans must be customized to the site and require input from the sampling party as well as the laboratory. Preparation fees vary depending upon the scope of the work. A minimum of 2 weeks preparation time is needed to prepare/write a QAPP. Assistance is also available to complete QAPP tables and provide SOPs. Please call for a quotation to prepare QAPP tables or write a QAPP for your project. Sufficient time is required by the laboratory to review a QAPP that is already prepared to ensure that we are meeting all of the site requirements.

GLP Pricing

- Analytical costs: 2x list price.
- QA time: billed at \$180 per hour. We require 2 hours per method per sample entry group.

Who to Contact

Business Development Group

Our Business Development Group includes experienced professionals who can assist prospective clients in their initial contact with us. Each Business Development Specialist can prepare formal project proposals and provide guidance regarding our breadth of analytical capabilities. Prospects inquiring about our services for the first time should ask to speak with one of our Business Development Specialists.

Client Services Group

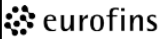
Our Client Services Group is comprised of professionals with in-depth knowledge and experience in environmental sciences and a working familiarity with all aspects of our services. Each specialist is trained to serve as a client's primary contact and is prepared to answer questions ranging from those concerning sample requirements or the technology of methods to the pricing of tests. Each can provide quotations, interim reports on analytical work in process, and referral to a specific staff chemist or microbiologist. In short, your Client Services Representative will be your Project Manager and will do their best to make your dealings with us as easy and convenient as possible.

Name	Direct Dial/ Mobile	Ext.	Email	Title
Account Management				
Don Wyand	717-556-7245 717-682-8970	1525	DonaldWyand@EurofinsUS.com	Director, National Programs and Business Development
Jane Huber	717-209-1438	1038	JaneHuber@EurofinsUS.com	National Program Manager, Government
Joseph Garzio	908-809-9243	1121	JosephGarzio@EurofinsUS.com	Senior Account Manager
Christine Jampo	717-327-7726	1988	ChristineJampo@EurofinsUS.com	Senior Account Manager
Tara Laroche	214-790-8519	1072	TaraLaroche@EurofinsUS.com	Senior Account Manager
Jenifer Lewis	717-945-4521	1265	JeniferLewis@EurofinsUS.com	Principal Account Manager
Ron Martino	717-205-5137	1041	RonMartino@EurofinsUS.com	Senior Account Manager
Kevin Moran	717-682-8972	1339	KevinMoran@EurofinsUS.com	Senior Account Manager
Jeremy Young	717-693-5814	1039	JeremyYoung@EurofinsUS.com	Senior Account Manager
Inside Business Development				
Melissa McDermott	717-556-7359	1806	MelissaMcDermott@EurofinsUS.com	Manager
Marianne Bragg	717-556-7251	1876	MarianneBragg@EurofinsUS.com	Principal Specialist
Laura Caulfield	717-556-7354	1126	LauraCaulfield@EurofinsUS.com	Specialist
Kaitlin Plasterer	717-556-7323	1815	KaitlinPlasterer@EurofinsUS.com	Senior Specialist
Tara Spaide	717-556-7263	1511	TaraSpaide@EurofinsUS.com	Senior Specialist

Name	Direct Dial/ Mobile	Ext.	Email	Title
Project Management (Client Services)				
Nicole Maljovec	717-556-7259 717-725-1021	1537	NicoleMaljovec@EurofinsUS.com	Manager, Client Services/US Service Centers
Alison Bainbridge	717-556-7366	1159	AlisonBainbridge@EurofinsUS.com	Specialist
Nancy Bornholm	717-556-7250	1310	NancyBornholm@EurofinsUS.com	Principal Specialist
Amek Carter	717-556-7252	1375	AmekCarter@EurofinsUS.com	Specialist
Hannah Cottman	717-556-7383	1896	HannahCottman@EurofinsUS.com	Specialist
Janine Eaby	717-556-7376	1520	JanineEaby@EurofinsUS.com	Associate Specialist
Lynn Frederiksen	717-556-7255	1501	LynnFrederiksen@EurofinsUS.com	Principal Specialist
Stacy Hess	717-556-7236	1480	StacyHess@EurofinsUS.com	Specialist
Kay Hower	717-556-7364	1198	KayHower@EurofinsUS.com	Principal Specialist
Kathy Klinefelter	717-556-7256	1566	KatherineKlinefelter@EurofinsUS.com	Principal Specialist
Elisabeth Knisley	NA	1241	ElisabethKnisley@EurofinsUS.com	Associate Specialist
Wendy Kozma	717-556-7257 717-209-2041	1522	WendyKozma@EurofinsUS.com	Principal Specialist/Group Leader
Bob Large	717-556-7223	1271	RobertLarge@EurofinsUS.com	Principal Specialist
Lyssa Longenecker	717-556-7321 717-725-3567	1802	LyssaLongenecker@EurofinsUS.com	Senior Specialist/Group Leader
Natalie Luciano	717-556-7258	1881	NatalieLuciano@EurofinsUS.com	Senior Specialist
Angela Miller	717-556-7260	1903	AngelaMiller@EurofinsUS.com	Specialist
Megan Moeller	717-556-7261 717-572-7529	1246	MeganMoeller@EurofinsUS.com	Senior Specialist/Group Leader
Madeline Ratcliff	717-556-7384	1189	MadelineRatcliff@EurofinsUS.com	Associate Specialist
Barbara Weyandt	717-556-7264	1576	BarbaraWeyandt@EurofinsUS.com	Specialist
Jordan Zito	NA	1626	JordanZito@EurofinsUS.com	Associate Specialist
US Service Centers				
<u>Bay Area Service Center (Richmond, California)</u>				
Larry Starkey	510-232-8891 510-672-4074	1044	LarryStarkey@EurofinsUS.com	Senior Specialist/Group Leader
<u>Chicago Area Service Center (Illinois)</u>				
Bonnie Stadelmann	312-590-3133	1711	BonnieStadelmann@EurofinsUS.com	Senior Specialist
<u>Houston Service Center (Stafford, Texas)</u>				
Ana Spencer	281-967-8096	1103	AnaSpencer@EurofinsUS.com	Specialist
<u>Pittsburgh Service Center (Cranberry Township, Pennsylvania)</u>				
Stephen Gordon	724-597-2027 412-525-0071	1009	StephenGordon@EurofinsUS.com	Specialist
<u>SeaTac Service Center (Bothell, Washington)</u>				
Vincent Yu	425-419-7406	NA	VincentYu@EurofinsUS.com	Courier

Name	Direct Dial/ Mobile	Ext.	Email	Title
Environmental Sciences Management Team				
Paul Wise	717-556-7351	1776	PaulWise@EurofinsUS.com	President
Duane Luckenbill	717-556-7227	1524	DuaneLuckenbill@EurofinsUS.com	Vice President
Rick Karam	717-556-7218 717-575-7916	1892	RichardKaram@EurofinsUS.com	Director of Operations
Dorothy Love	717-556-7327 717-725-2655	1204	DorothyLove@EurofinsUS.com	Director, Quality Assurance
Chuck Neslund	717-556-7231 717-799-0439	1819	CharlesNeslund@EurofinsUS.com	Technical Director
Steve Davies	717-556-7210 717-587-5131	1260	StevenDavies@EurofinsUS.com	Manager, Transportation and Sample Bottles
Erik Frederiksen	717-556-7214	1264	ErikFrederiksen@EurofinsUS.com	Manager, Wet Chemistry
Sue Goshert	717-556-7344	1889	SusanGoshert@EurofinsUS.com	Manager, Pesticides, Herbicides, and Miscellaneous Organics
Dana Kauffman	717-556-7219	1502	DanaKauffman@EurofinsUS.com	Manager, Data Packages and Lean Projects
Larry Lewis	717-556-7936	7936	LarryLewis@EurofinsUS.com	Manager, GC/MS Semivolatiles and Volatiles in Air
Kathrine Muramatsu	717-556-7378	1657	KathrineMuramatsu@EurofinsUS.com	Manager, GC and GC/MS Volatiles
Anneliese Owen	717-556-7232	1397	AnnelieseOwen@EurofinsUS.com	Manager, Sample Registration
Christine Ratcliff	717-556-7380	1203	ChristineRatcliff@EurofinsUS.com	Manager, Specialty Services
Bob Strocko	717-556-7242	1207	RobertStrocko@EurofinsUS.com	Manager, Metals and Microbiology

Telephone 717-656-2300 • Business Development Fax 717-656-9957 • Client Services Fax 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

 Lancaster Laboratories Environmental	General Terms & Conditions of Sale - Eurofins Lancaster Laboratories Environmental, LLC	
	Document Number: S-BD-FRM10782	Effective Date: December 8, 2016

1. Area of Application

1.1 All Orders accepted by "Eurofins Lancaster Laboratories Environmental, LLC or any of its subsidiaries or affiliates" (collectively, "ELLE") will be governed by these General Terms and Conditions of Sales (the "Terms and Conditions"), including orders placed by telephone which have not been confirmed in writing and orders made by delivery of samples. A contract with these Terms and Conditions comes into being when an order that has been placed with ELLE is accepted by ELLE. An order placed with ELLE is considered as accepted by ELLE when (a) ELLE proceeds to fulfill that order, without need for any written confirmation from ELLE or (b) ELLE accepts the order in writing.

If ELLE and Customer have an existing Services Agreement in place (i.e. Master Service Agreement, Laboratory Service Agreement or Environmental Service Agreement), that Agreement will constitute the entire agreement between the parties and any additional or conflicting terms and conditions are null and void.

1.2 These Terms and Conditions supersede and replace all prior verbal or written price quotations and agreements between the parties and, unless specifically indicated otherwise therein, take precedence over all conflicting or inconsistent provisions of subsequent written agreements between the parties. Only the chairman or president (collectively, "officer") has the authority to alter or waive any of these Terms and Conditions or to make any representation which conflicts with or purports to override any of these Terms and Conditions; and no such alteration, waiver or representation shall be binding upon ELLE, unless it is in writing and signed by an officer of ELLE.

2. Placement of Order

2.1 A customer's order will be valid only if it is sent by mail or fax or other electronic message on letterhead of the customer or by using ELLE approved sample dispatch sheets or electronic order forms and the commercial aspects of the order which are not specifically set out in these Terms and Conditions (including price, estimated turnaround times and delivery date) must be agreed at the time of the order. The customer must confirm in writing orders given by telephone immediately after they are made and will be deemed to have placed an order if the customer sends samples to ELLE quoting the customer reference. ELLE is not obligated to start any analytical work unless the order is clear and it has been provided all required information.

2.2 Unless specifically accepted in writing and signed by an officer of ELLE, any terms proposed or submitted by a customer at any time (including, but not limited to, terms or provisions in the customer's purchase order, instructions or other document) which differ from these Terms and Conditions are rejected as a material alteration of these Terms and Conditions and shall be of no force or effect. Furthermore, special terms or conditions of prior orders, including special pricing, will not automatically apply to subsequent orders. Each order accepted by ELLE will be treated as a separate contract between ELLE and the customer.

2.3 A request for additional services on samples that have entered the laboratory will be treated as a new order and may postpone estimated delivery date accordingly.

3. Price and Terms of Payment

3.1 If the acknowledgment of an order does not state otherwise, ELLE's prices apply. Any additional cost or disbursement (e.g. incurred by ELLE in connection with the order) must be paid by the customer.

3.2 Prices are exclusive of all applicable taxes (including sales, use and VAT) and are based on tariffs in force at the day of the remittance of the offer to the customer. Applicable taxes are those in force at the date of invoicing.

3.3 Unless specifically agreed otherwise by ELLE in its acceptance of an order, payment of all invoices is due strictly within 30 days of the invoice date. Any dispute about invoices must be raised within 30 days of the invoice date. The challenge of an analytical result will not entitle a customer to defer payment. Any invoice which remains outstanding after due date, may be additionally charged with an administrative penalty of Seventy Five Dollars (\$75) and may carry interest at the rate of one percent (1%) per month or the maximum interest rate permitted by applicable law, whichever is lower.

3.4 ELLE has the right to charge an administrative fee of up to Fifteen Dollars (\$15) to re-issue an invoice.

3.5 The invoice settlement method is check, bank transfer or direct debit. Any other method of payment must receive prior agreement from ELLE. The customer undertakes to provide bank account details.

3.6 ELLE is entitled to require payment of up to 100% of the quoted order price as a condition of acceptance.

4. Duties of Customer in Delivering Samples or Materials

4.1 The samples or materials must be in a condition that makes the preparation of reports/analyses or the production of ordered products possible without difficulty. ELLE is entitled to conduct an initial examination of the samples or materials to check their condition before processing the samples, drawing up a report or using them in production. The customer shall bear the costs of this initial examination, if the samples or materials do not comply with the requirements described in this clause 4.1. If the result of the initial examination is that an analysis or production is impossible or is possible only under more difficult conditions than originally anticipated – for example, because the samples or materials have been interspersed with foreign materials or substances that were not reported by the customer or are degraded - ELLE shall be entitled to terminate or interrupt the order and the customer shall bear costs incurred by ELLE to that point.

4.2 The customer must ensure, and hereby warrants, that no sample poses any danger, including on its site, during transportation, in the laboratory or otherwise to ELLE premises, instruments, personnel or representatives. It is the customer's responsibility to insure compliance with hazardous waste regulations, including regarding information, transportation and disposal and to inform ELLE personnel or representatives about sample health and safety concerns, including any known or suspected toxic or other contaminant that may be present in the sample and its likely level of contamination as well as the risks to ELLE premises, instruments, personnel and representatives related to the contamination. The customer shall be responsible for, and indemnifies ELLE against, all costs, damages, liabilities and injuries that may be caused to or incurred by ELLE or its personnel or representatives including on the sampling site, during the transportation or in the laboratory by the customer's sample or by sampling site conditions. The customer shall bear all extraordinary costs for adequate disposal of hazardous waste resulting from the sample, whether or not described as hazardous waste. At ELLE' request, the customer must provide ELLE with the exact composition of the samples.

5. Property Rights on Sample Material and Sample Storage

5.1 All samples become the property of ELLE to the extent necessary for the performance of the order.

5.2 ELLE can dispose of or destroy samples immediately after the analysis has been performed, unless ELLE and the customer have agreed in writing on the terms of ELLE' retention of the sample. ELLE also can dispose of or destroy the samples after the agreed upon retention period, without further notice and at customer's cost, should an extra cost for ELLE arise to comply with any regulation (for example, with respect to disposal of hazardous waste). If the customer requests the return of unneeded sample material, ELLE will return them to the customer, at the customer's cost and risk.

6. Delivery Dates, Turnaround Time

6.1 Delivery dates and turnaround times are estimates and do not constitute a commitment by ELLE. Nevertheless, ELLE shall make commercially reasonable efforts to meet its estimated deadlines.

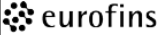
6.2 Results are generally sent by email and/or by USPS mail, or via other electronic means, to the attention of the persons indicated by the customer in the order, promptly after the analysis is completed.

7. Transfer of Property

7.1 Title in any analysis results, products, equipment, software or similar supplied by ELLE to the customer will remain with ELLE until all invoices in respect thereof have been paid by the customer in full, and until such full payment, the customer shall have no property rights or other rights to use them. In addition, even if ELLE has accepted and begun to fulfill an order, ELLE has the right at any time stop processing that order and to stop doing any work for a customer if that customer is late in paying any amount due to ELLE, whether for that or any other order.

8. Limited Warranties and Responsibilities

8.1 Orders are handled in the conditions available to ELLE in accordance with the current state of technology and methods developed and generally applied by ELLE and the results may not always be 100% exact and/ or relevant. Analyses, interpretations, assessments, consulting work and conclusions are prepared with a commercially reasonable degree of care but ELLE cannot guarantee that these will always be correct or absolute. This limited warranty expires six months after the delivery date of the samples, if the acknowledgement of the order does not specifically state otherwise. In all cases, the customer must independently verify the validity of any results, interpretations, assessments and conclusions supplied by ELLE, if it wishes to rely on the same in respect of matters of importance and shall do so at its own risk.

	Lancaster Laboratories Environmental	General Terms & Conditions of Sale - Eurofins Lancaster Laboratories Environmental, LLC	
		Document Number: S-BD-FRM10782	Effective Date: December 8, 2016

8.2 Each analytical report relates exclusively to the sample analyzed by ELLE. If ELLE has not expressly been mandated and paid for the definition of the sampling plan (including which samples of which raw materials and finished products and at which frequency should be analysed) and the definition of the precise range of analysis to be performed or if the customer has not followed ELLE recommendations, ELLE shall not bear any responsibility if the sampling plan and/or the range of analysis to be performed prove to be insufficient or inappropriate.

8.3 The customer is responsible for the proper delivery of samples sent to ELLE for examination/analyses or materials sent for production. Unless otherwise specifically agreed in writing by ELLE, ELLE accepts no responsibility for any loss or damage, which may occur to any sample in transit or to any facility or site where logistics services are being delivered. The customer will at all times be liable for the security, packaging and insurance of the sample from its dispatch until it is delivered to the offices or the laboratories of ELLE. ELLE will use commercially reasonable care in handling and storing samples, but ELLE shall not be held responsible for any loss or destruction of samples even after their receipt at its laboratories.

8.4 The customer warrants and represents to ELLE that all samples sent to ELLE for analysis are safe and in a stable condition and undertakes to indemnify ELLE for any losses, injuries, claims and costs which ELLE, or its personnel, may suffer as a result of any sample not being in a safe or stable condition, notwithstanding that the customer may have given an indication on the sample or any order form of any perceived problem with the sample. The customer must always inform ELLE in writing prior to shipment and label the packaging, samples and/or containers appropriately, if the samples are dangerous or otherwise of a hazardous nature.

8.5 Unless explicitly agreed in writing by all parties, the contractual relationship shall be exclusively between the customer and ELLE. There shall be no third party beneficiary or collateral warranty relating to any order and the customer shall indemnify and hold ELLE harmless from and against any and all third party claims in any way relating to the customer or to the order by the customer.

9. Limitation of Liability

9.1 Except to the extent that such limitations are not permitted or void under applicable law: (a) ELLE (together with its workers, office clerks, employees, representatives, managers, officers, directors, agents and consultants and all ELLE partners and affiliates, the "ELLE Indemnifying Parties") shall be liable only for the proven direct and immediate damage caused by the ELLE Indemnifying Party's willful misconduct in connection with the performance of an order and then, only if ELLE has received written notice thereof not later than six (6) months after the date of the customer's knowledge of the relevant claim (unless any longer period is prescribed under applicable law and cannot be contractually limited), and (b) in all cases (whether arising under contract, tort, negligence, strict liability, through indemnification or otherwise), the ELLE Indemnifying Parties' liability per claim or series of related claims, and the customer's exclusive remedy, with respect to ELLE' services which fall under these Terms and Conditions, shall be limited to the lesser of: (i) the direct and immediate loss or damage caused by the ELLE Indemnifying Party's willful misconduct in connection with the performance of the order and (ii) ten times the amount ELLE actually received from the customer in relation to the order up to fifteen thousand dollars (\$15,000).

9.2 The ELLE Indemnifying Parties shall not be liable for any indirect, direct or consequential loss or damage (including, but not limited to, loss of business, profits, goodwill, business opportunities or similar) incurred by the customer or by any third party.

9.3 It is a condition of ELLE' acceptance of an order that the customer indemnifies the ELLE Indemnifying Parties for any losses, injuries, claims and costs which the ELLE Indemnifying Parties may suffer as a result of arising from or in any way connected with its role under or services or products or software provided pursuant to these Terms and Conditions, except to the extent that the ELLE Indemnifying Parties are required to bear them according to these Terms and Conditions, and by placing an order the customer agrees to provide that indemnification.

10. Repeated Analysis

Objections to test results can be made within thirty (30) days after the customer receives the results. However, unless it would appear that the results of the repeated analysis do not match those of the first one, the customer shall bear the costs of the repeat testing or review. Furthermore, a repeated analysis will be possible only if ELLE has a sufficient amount of the original sample on hand when it receives the customer's objection. Otherwise the customer will be required to pay all costs, including sampling, transportation, analytical and disposal costs for the repeat analysis.

11. Force Majeure

ELLE cannot be held liable for delays, errors, damages or other problems caused by events or circumstances which are unforeseen or beyond ELLE' reasonable control, or which result from compliance with governmental requests, laws and regulations.

12. Confidentiality & Processing of Customer Data

12.1 ELLE shall be entitled to save and process personal or commercial data received from the customer in any way, no matter whether such data stem from the customer directly or from a third party and shall use commercially reasonable efforts to keep such data confidential, in compliance with applicable law.

12.2 ELLE shall use commercially reasonable efforts to keep all analysis results and service reports confidential, and the right to use them in order to demonstrate its entitlement to payment for services rendered.

12.3 Analysis results are prepared and supplied exclusively for the use of the customer and should not be divulged to a third party for any purposes without the prior written agreement of ELLE. In addition, the customer is required to maintain secrecy concerning all services provided by ELLE and their results as well as the composition of products and software delivered by ELLE. Analysis results are not to be publicly disclosed or exploited without the prior written consent of ELLE. Even if such written consent is given by ELLE, the customer (a) remains responsible for any consequences due to the divulgence of such results to a third party and any reliance of such third party on such results and (b) hereby agrees to indemnify the ELLE Indemnified Parties against any liability which the ELLE Indemnified Parties may incur as a result of such divulgence or any such third party reliance.

13. Disclaimer and Miscellaneous

13.1 ALL TERMS, CONDITIONS AND WARRANTIES (INCLUDING ANY IMPLIED WARRANTY AS TO MERCHANTABILITY QUALITY OR FITNESS FOR A PARTICULAR PURPOSE) AS TO THE MANNER, QUALITY AND TIMING OF THE TESTING SERVICE AND RESULTS, EQUIPMENT, PRODUCTS OR SOFTWARE SUPPLIED BY ELLE ARE EXCLUDED TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW. THE WARRANTIES, OBLIGATIONS AND LIABILITIES OF ELLE CONTAINED IN THESE TERMS AND CONDITIONS ARE EXCLUSIVE.

13.2 These Terms and Conditions may be modified in writing from time to time by ELLE and orders will be governed by the most recent version of these Terms and Conditions that is in effect at the time ELLE accepts the order.

13.3 Should a court waive, limit or hold to be invalid, illegal or unenforceable any part of these Terms and Conditions, all other parts shall still apply to the greatest extent possible.

13.4 Failure by either ELLE or the customer to exercise the rights under these Terms and Conditions shall not constitute a waiver or forfeiture of such rights.

14. Governing Law/ Jurisdiction

14.1 The construction, validity and performance of these Terms and Conditions shall be governed by the laws and the commercial courts of Lancaster, PA in which the registered office of the ELLE company which accepted the order in question is located (including in cases involving multiple counsels for the defence or third-party respondents), which shall have exclusive jurisdiction.

Key to Abbreviations

AOAC - Association of Official Analytical Chemists	mg/L - Equivalent to ppm (parts per million) in aqueous
API - American Petroleum Industry	mg/kg - Equivalent to ppm (parts per million) in solid
ASTM - American Society for Testing and Materials	mL - milliliter
BNA - Base Neutrals/Acid Extractables	N.A. - Not Applicable
C - Centigrade	NIOSH - <i>National Institute for Occupational Safety and Health Manual of Analytical Methods</i> , Ed. 2 and 3.
CFR - Code of Federal Regulations	NJDEP - New Jersey Dept. of Environmental Protection
CFU - Colony Forming Units	NPDES - National Pollutant Discharge Elimination System
CLP - Contract Lab Program	OSHA - Occupational Safety and Health Administration
DoD - Department of Defense	PAHs - Polynuclear Aromatic Hydrocarbons
DRO - Diesel Range Organics	PCB - Polychlorinated Biphenyl
EDB - Ethylene dibromide	PEG - Polyethylene glycol
EDC - Ethylene dichloride	PFAS - Polyfluorinated Alkyl Substances
EDTA - Ethylenediaminetetraacetic acid	PMI - Pharmaceutical Manufacturing Industry
EPA - Environmental Protection Agency	PNAs - Polynuclear Aromatics
EPH - Extractable Petroleum Hydrocarbon	PPL - Priority Pollutant List
ew - Potable water for compliance purposes	pw - Potable water
g - gram	RCRA - Resource Conservation & Recovery Act
GC - Gas Chromatography	SIM - Selective Ion Monitoring
GC/ECD - Gas Chromatography/Electron Capture Detector	SM - Standard Method
GC/FID - Gas Chromatography/Flame Ionization Detector	SW-846 - Test Methods for Evaluating Solid Waste
GC/MS - Gas Chromatography/Mass Spectrometry	TAL - Target Analyte List
GRO - Gasoline Range Organics	TBA - tert-Butyl Alcohol
HEM - Hexane Extractable Materials	TCL - Target Compound List
HPLC - High Pressure Liquid Chromatography	TCLP - Toxicity Characteristic Leaching Procedure
ICP - Inductively Coupled Plasma	TDS - Total Dissolved Solids
ICP/MS - Inductively Coupled Plasma/Mass Spectrometry	TICs - Tentatively Identified Compounds
IR - Infrared	TKN - Total Kjeldahl Nitrogen
L - Liter	TPH - Total Petroleum Hydrocarbons
LC/MS/MS – Liquid Chromatography/Mass Spectrometry/Mass Spectrometry	TSS - Total Suspended Solids
LOQ - Limit of Quantitation	μ - Micron (refers in this case to a filter's pore size)
LUFT - Leaking Underground Fuel Tank	μg/L - equivalent to ppb (parts per billion) in aqueous
MCA - Chloroacetic Acid	μg/kg - equivalent to ppb (parts per billion) in solid
MCLG - Maximum Contaminant Level Guidelines	VOCs - Volatile Organic Compounds
MDL - Method Detection Limit	VPH - Volatile Petroleum Hydrocarbon

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mg	milligram(s)
C	degrees Celsius	mL	milliliter(s)
cfu	colony forming units	MPN	Most Probable Number
CP Units	cobalt-chloroplatinate units	N.D.	none detected
F	degrees Fahrenheit	ng	nanogram(s)
g	gram(s)	NTU	nephelometric turbidity units
IU	International Units	pg/L	picogram/liter
kg	kilogram(s)	RL	Reporting Limit
L	liter(s)	TNTC	Too Numerous To Count
lb.	pound(s)	µg	microgram(s)
m³	cubic meter(s)	µL	microliter(s)
meq	milliequivalents	umhos/cm	micromhos/cm
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference...
- W - The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Directions for completing the chain-of-custody form:

Client Information

Client: Your company's name

Acct. #: Your account number with Eurofins Lancaster Laboratories Environmental, LLC

Project Name/#: The way your company refers to the work involved with these samples. You may want to include project location as part of the description.

PWSID: Potable Water Source ID# (if a regulated drinking water)

Project Manager: The person at your company responsible for overseeing the project

P.O. #: Your company's purchase order number

Sampler: The name of the person who collected the samples

Quote #: The reference number that appears on your quote (if provided by Eurofins Lancaster Laboratories Environmental)

State where samples were collected: Indicate where the samples were collected, (e.g., PA, NJ, etc.)

For Compliance: Check **Yes** or **No**

Sample Information

Sample Identification: The unique sample description you want to appear on the analytical report

Date Collected/Time Collected: When the sample was collected

Grab: Check here if sample was taken at one time from a single spot.

Composite: Check here if samples were taken from more than one spot, or periodically, and combined to make one sample.

Matrix: Check the type of sample you are submitting. If it is a water sample, indicate if it is potable water, NPDES, groundwater, or surface water.

Number of Containers: Indicate the total number of containers for each sampling point.

Analyses Requested: Write the name of each analysis (or an abbreviation of it) here and use the **catalog number** that appears at the beginning of each line in the *Schedule of Services*. Be sure to indicate which analyses are to be performed on which samples.

Remarks: List special instructions about the sample here (e.g., hazardous elements, high levels of analyte, etc.). The space can also be used (if needed) for listing additional analyses.

Turnaround Time Requested: Circle **Standard** if you want routine TAT, which is usually within 10 days. If you need your results faster, call ahead to schedule **Rush** work; surcharges will apply.

Rush Results Requested by: Include the date needed and e-mail address.

Data Package Options: Call our Client Services Group at 717-656-2300 if you have questions about these choices.

EDD Required? Indicate **Yes** if you need an electronic disk deliverable of the analytical results.

NOTE: If you are requesting site-specific QC, we need one quality control (QC) sample for every 20 samples you send. Please provide us this sample in triplicate volume and identify it by writing "QC" in the **Remarks** column.

Relinquished by/Received by: The form must be signed each time the sample changes hands. We can supply chain-of-custody seals for the outside of your packages if you require them.

Federal and State regulations require documentation of sample name and sampling location, date, and time in order for sample data to be legally defensible.

Each sample should be clearly labeled and cross-referenced on your chain-of-custody or submission form.

If accurate and detailed information is not available to us, it will delay sample processing and possibly inhibit our ability to meet your deadline or reporting date.

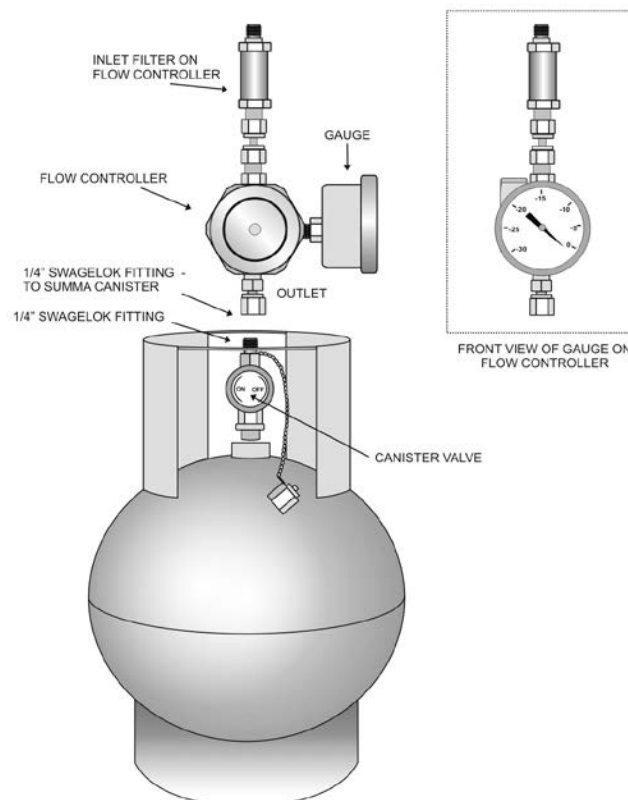
For the protection of our laboratory personnel, samples which might present health hazards, such as those containing high levels of toxic materials, must be clearly marked and identified.

Sample Submission Requirements for Air Samples

Instructions for collection of samples in SUMMA canisters using a passive flow controller:

1. Remove the canister and passive flow controller from the shipping box (retain the foam insert and any bubble wrap for return shipment). The canister has been evacuated by the laboratory. Note the identification on the tag attached to the canister. Some assembly will be required before the sample can be collected.
2. Remove the Swagelok cap (brass or stainless steel) on the top of the SUMMA canister. This will require a small adjustable or 9/16 inch wrench.
3. Attach the passive flow controller to the canister as indicated in the drawing. The connector (identified as the OUTLET in the drawing) is attached to the SUMMA canister. Hand-tighten the Swagelok fitting to the canister. Then snug with a wrench - about 1/8th turn.
4. If needed for the sampling, tubing should be attached to the INLET connector as indicated in the drawing of the flow controller assembly. Compression (Swagelok brand) fittings will be needed to make a leak tight connection. This should be addressed when the canisters and flow controllers are ordered.
5. Once the passive flow controller and tubing are attached to the canister, the sampling can begin. To start the sampling, open the valve on the canister at least one turn (for the blue handled valves this is one half turn). The flow controller has been calibrated in the laboratory to deliver the correct volume in the sampling time period that was selected.
6. At the end of the sampling time period, close the valve to the SUMMA canister. Do not over tighten the valve. Record the sampling time on the chain of custody along with the identification number (ID) for the canister and flow controller. Do not place a sticker on the canister. If the canister must be labeled, place the label on the card attached to the canister.
7. After the valve is closed, remove the passive flow controller. Replace the Swagelok cap on the canister and tighten it with a wrench.
8. Pack the canister and flow controller in the shipping box, making sure that the flow controller is padded using the foam insert and any bubble wrap it arrived in.

Diagram for connecting passive flow controller to a Summa Canister



Sample Information

Sample Identification: The unique sample description you want to appear on the analytical report

Sampling Dates and Times: Record the date, start time, and stop time for when the sample was collected.

Field Conditions: Record the temperature and barometric pressure conditions in the field and for each sample record the starting and ending canister pressure. Interior sampling temperature for the start and stop times should be recorded as appropriate.

Media Information: The remaining flow regulator, canister, and controller flow rate information is pre-filled by the laboratory based on the specific canister and flow controller information.

Turnaround Time Requested: Circle Standard if you want routine TAT, which is usually within 10 days. Please call ahead to schedule Rush work if you need your results faster than standard TAT.

Data Package Required? Indicate Yes, if you need a data package.

EDD Required? Indicate Yes if you need an electronic disk deliverable of the analytical results.

Analyses Requested: Indicate which analyses are to be performed on which samples. If EPA 25 is required, check the carbon ranges needed.

Instructions: List special instructions about the sample(s) here.

Relinquished by/Received by: The form must be signed each time the sample changes hands. We can supply chain-of-custody seals for the outside of your packages if you require them.

Note: *Federal and State regulations require documentation of sample name and sampling location, date, and time in order for sample data to be legally defensible.*

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Analytical Reports and Data Deliverables

E-mailed Results

Our default reporting convention is to e-mail results and analytical data to clients. Clients may choose e-mail delivery of results in Word, Excel, or PDF files. We send the files directly to your mailbox from our LIMS as soon as all analytical data are verified and reviewed.

myEOL, our innovative online data access tool, offers clients a timely and secure window to comprehensive laboratory information. The easy-to-use online setup allows clients to register for a myEOL account and begin viewing data quickly. Clients can view extensive, live project information such as submitted samples, chains of custody, sample receipts, document logs, final reports, and invoices. myEOL also allows clients to compare their results to regulatory limits, show exceedances, and export the data—making it easier for clients to see the comparison between sample results, reporting limits, and applicable regulatory limits.

Special Reports

Additional fees may be charged for supporting documentation and/or consultation services. Please allow sufficient time for compilation of the supporting data. Charges may also be necessary for customized reports that differ significantly from our standard format, and additional charges will apply for specific QA/QC report formats, such as NJDEP Reduced Deliverables or EPA CLP-like reports. Please ask for a quotation.

Absolutely no reports or copies thereof will be sent to anyone other than the client unless the client formally requests us to do so in writing.

Quality Control Summary

This is a summary of quality control data as generated on a routine basis in the laboratory. It may include data for a method blank, duplicates, matrix spike recovery, laboratory control sample, and surrogate recovery.

Laboratory Sample Analysis Record (LSAR)

This section of the Analysis Report provides documentation of each preparation and analysis performed for a sample. The information includes the method reference, trial number, batch number, analysis/preparation date and time, analyst name, and dilution level.

Analysis Report Approval

Scan	Title	Description
00100	QA Report/Package Approval	Triggers QA review of the analysis reports and the data package
00600	QA Data Package Review	Triggers QA review of the data package only
00601	QA Analysis Report Approval	Triggers QA review of the analysis reports only
10089	Analysis Report Narrative	Triggers a narrative and QA review of the reports. To be used on a project basis if the entire account does not need to have narratives.
00084	QA CT RCP Form Review	Triggers a narrative; CT RCP certification form and QA review of the reports
04272	QA MA MCP Form Review	Triggers a narrative; MA MCP certification form and QA review of the reports
10446	QA GLP Review	Triggers QA review of GLP reports and the associated data when there is no GLP data package needed
13230	NJDKQP	Triggers QA review of NJDKQP reports and the data package

Data Package Preparation Services

Data Packages

An extended data package is available for documentation of QA/QC and sample analyses for each sample delivery group (SDG) submitted. For data package purposes, an SDG is defined as a maximum of 20 field samples submitted over a 14-day period. We HIGHLY recommend that one sample in each SDG be submitted in triplicate in order to supply you with site-specific QC analysis data. To GUARANTEE that your sample will be analyzed as QC, you must request site-specific QC, which will be charged as additional samples. The turnaround time for any data package is contingent upon receipt of the last sample in the SDG. The time clock does not start until we have received the last sample in the SDG.

Standard Format (myEOL): All packages are electronically merged into an Adobe Portable Document Format (PDF), bookmarked, paginated, and uploaded to myEOL, our on-line data retrieval system. An e-mail notification will be sent when the data package is available. The e-mail will include a link that will direct you to the login page where, after adding your secured login credentials, you'll be given the option to either view or download a .pdf of your data package. The cost of this service is included in the data package surcharges listed below. Minimum charge is \$50 for any of our electronic standard formats.

Hard Copy Format: We realize that validation may be difficult from a PDF file and will provide hard copy packages at an additional charge when needed; charges range from \$40-\$65 per package.

CD Format: CD-ROMs of your data package can be generated and mailed at a cost of \$25-\$35 per SDG.

In order to meet both regulatory agency and client requirements, we are continually updating our data package formats. If you need additional modifications to one of the formats listed, please call to discuss your requirements.

<u>Type</u>	<u>Standard Format (Electronic)</u>	<u>EPA Equivalent</u>	<u>Surcharge</u>	<u>Scan</u>
I.....	Full Regulatory	Level 3 non-CLP	16%.....	4071

- Title page
- Sample reference list
- Analysis request form, field chain of custody
- Sample administration receipt and documentation log
- Preservation logs (if applicable)
- Method summary/references
- Analysis reports
- Case narrative
- QC summary
 - duplicate, matrix spike, matrix spike duplicate, blank, LCS, and surrogate recovery summary forms
 - GC/MS tuning summary and internal standard area summary

- Metals interference check standard summary, MSA (if needed), serial dilution, ICP inter-element correction factors, linear range summary, low level check standard summary, post digestion spike (if applicable), IDL summary, and tune & internal standard summary for ICP/MS
- Sample data
 - MDL summary form
 - all raw sample data including instrument printouts
- Standard data
 - initial and continuing calibration summary forms
 - all raw initial and continuing calibrations and standardization data including instrument printouts
- Raw QC data
 - all raw quality control sample data including printouts
 - preparation logs
 - run log

Hard copy format is \$65 per copy.

I (with no raw data).....	10%.....	1967
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- Title page
- Sample reference list
- Analysis request form, field chain of custody
- Sample administration receipt and documentation log
- Preservation logs(if applicable)
- Method summary/references
- Analysis reports
- Case narrative

- QC summary
 - MDL summary form
 - Duplicate, matrix spike, matrix spike duplicate, blank, LCS, and surrogate recovery summary forms
 - Initial and continuing calibration summary forms
 - GC/MS tuning summary forms and internal standard area summary
 - Metals interference check standard summary, MSA (if needed), serial dilution, ICP inter-element correction factors, linear range summary, low-level check standard summary, post digestion spike (if applicable), IDL summary, and tune and internal standard summary for ICP/MS
- Preparation and Run Logs

Hard copy format is \$40 per copy.

<u>Type</u>	<u>Standard Format (Electronic)</u>	<u>EPA Equivalent</u>	<u>Surcharge</u>	<u>Scan</u>
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III	Reduced Deliverables (non-CLP)		10%	945
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- | | |
|---|---|
| <ul style="list-style-type: none"> • Title page • Sample reference list • Analysis request form, field chain of custody • Sample administration receipt and documentation log • Preservation logs (if applicable) • Method summary/references • Analysis reports • Case narrative | <ul style="list-style-type: none"> • QC summary <ul style="list-style-type: none"> – duplicate, matrix spike, matrix spike duplicate, blank, LCS, and surrogate recovery summary forms – GC/MS tuning summary and internal standard area summary – summaries for calibration and standardization • Sample data <ul style="list-style-type: none"> – MDL summary form – all raw sample data including instrument printouts for GC and GC/MS • Raw QC data <ul style="list-style-type: none"> – blank raw data for GC and GC/MS – preparation logs |
|---|---|

Hard copy format is \$40 per copy.

VI	Raw Data Only		7%	6983
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|--|---|
| <ul style="list-style-type: none"> • Title page • Sample reference list • Sample data <ul style="list-style-type: none"> – all raw sample data including instrument printouts | <ul style="list-style-type: none"> • Raw QC data <ul style="list-style-type: none"> – blank raw data – LCS raw data |
|--|---|

Hard copy format is \$40 per copy.

	Type I Air Deliverables		20%	10422
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- | | |
|---|--|
| <ul style="list-style-type: none"> • Title page • Sample reference list • Analysis request form, field chain of custody • Sample administration receipt and documentation log • Internal chain of custody (New Jersey only) • Method summary/references • Analysis report with unit conversion • Case narrative • MDL summary • QC summary <ul style="list-style-type: none"> – blank, LCS, and duplicate summary forms – GC/MS tuning summary and internal standard area summary • Sample data <ul style="list-style-type: none"> – all raw sample data including instrument printouts | <ul style="list-style-type: none"> • Standard data <ul style="list-style-type: none"> – initial and continuing calibration summary forms – all raw initial and continuing calibrations and standardization data including instrument printouts • Raw QC data <ul style="list-style-type: none"> – all raw quality control sample data including printouts – run log • Screening data • Canister dilution calculation/pressure gauge readings • Clean canister certification information <ul style="list-style-type: none"> – clean canister reference list – initial and continuing calibration data for canister cleaning – canister cleaning raw data – blank, LCS/LCSD data associated with the canister cleaning |
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Hard copy format is \$65 per copy.

	Department of Defense (DoD)		16%	10946
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| <ul style="list-style-type: none"> • Title page • Sample reference list • Analysis request form, field chain of custody • Shipping logs (if applicable) • Sample administration receipt and documentation log • Preservation logs (If applicable) • Project correspondence (if applicable) • Method summary/references • Analysis reports • Case narrative • QC summary <ul style="list-style-type: none"> – duplicate, matrix spike, matrix spike duplicate, blank, LCS, and surrogate recovery summary forms – GC/MS tuning summary and internal standard area summary | <ul style="list-style-type: none"> – Metals interference check standard summary, MSA (if needed), serial dilution, ICP inter-element correction factors, linear range summary, low-level check standard summary, post digestion spike (if applicable), IDL summary, and tune and internal standard summary for ICP/MS • Sample data <ul style="list-style-type: none"> – MDL summary form – all raw sample data including instrument printouts • Standard data <ul style="list-style-type: none"> – initial and continuing calibration summary forms – all raw initial and continuing calibrations and standardization data including instrument printouts • Raw QC data <ul style="list-style-type: none"> – all raw quality control sample data including printouts – preparation logs – run log |
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Hard copy format is \$65 per copy.

..... TRRP-13	25%.....	5013
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| <ul style="list-style-type: none"> • Title page • TRRP-13 Signature Page • Laboratory review checklist for analytical data <ul style="list-style-type: none"> – reportable data – supporting data – exception reports • Sample reference list • Preservation logs (if applicable) | <ul style="list-style-type: none"> • Methodology summary/reference • Analysis Report/Field Chain of Custody • Fraction-specific summary forms <ul style="list-style-type: none"> – surrogate forms – blank forms – LCS forms – MS/MSD forms – lab duplicate forms – list of MDLs and unadjusted MQLs – DCS information |
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Hard copy format is \$40 per copy.

..... TRRP-13 Reduced	15%.....	14001
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| <ul style="list-style-type: none"> • Title page • TRRP-13 Signature Page • Laboratory review checklist for analytical data <ul style="list-style-type: none"> – reportable data – supporting data – exception reports | <ul style="list-style-type: none"> • Sample reference list • Detectability Checks (DCS) • Analysis Report/Field Chain of Custody • Sample Receipt Doc Log |
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Hard copy format is \$40 per copy.

..... NYSDEC Category A	10%.....	8098
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| <ul style="list-style-type: none"> • Title page • Sample reference list • Analysis request form, field chain of custody • Sample administration receipt and documentation log • Preservation logs (If applicable) | <ul style="list-style-type: none"> • Method summary/references • Analysis reports • Case narrative • Sample data <ul style="list-style-type: none"> – Form 1 for samples and QC |
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Hard copy format is \$65 per copy.

..... NYSDEC Category B	16%.....	8201
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| <ul style="list-style-type: none"> • Title page • Sample reference list • Analysis request form, field chain of custody • Sample administration receipt and documentation log • Preservation logs (If applicable) • Method summary/references • Analysis reports • Case narrative and calculation used to obtain result • QC summary <ul style="list-style-type: none"> – duplicate, matrix spike, matrix spike duplicate, blank, LCS, and surrogate recovery summary forms – GC/MS tuning summary and internal standard area summary – Metals interference check standard summary, MSA (if needed), serial dilution, ICP inter-element | <p>correction factors, linear range summary, low-level check standard summary, post digestion spike (if applicable),IDL summary, and tune and internal standard summary for ICP/MS</p> <ul style="list-style-type: none"> • Sample data <ul style="list-style-type: none"> – Form 1 for samples – MDL summary form – all raw sample data including instrument printouts • Standard data <ul style="list-style-type: none"> – initial and continuing calibration summary forms – all raw initial and continuing calibrations and standardization data including instrument printouts • Raw QC data <ul style="list-style-type: none"> – Form 1 for QC samples – all raw quality control sample data including printouts – preparation logs – run log |
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A modified version of the NYSDEC Category B data package is available. Hard copy format is \$65 per copy.

Post-analysis Data Package Requests

Data packages can be requested at any time. However, if requested after the original samples have reported the charges will be based on the hours required to retrieve, assemble, and review the raw data, forms, reports, etc. Please contact your Client Services Representative for a cost and time estimate (minimum of \$225).

If not originally requested, CD-ROMs of your data package can be generated and mailed at a cost of \$25 per SDG.

Full Internal Chain-of-Custody (Legal or Forensic) Documentation

The field chain of custody is completed when the samples are received at the laboratory. If requested, the lab will start an internal chain of custody, a hand-to-hand documentation recording the sample's movement throughout the lab. Each person handling any container associated with that sample must sign the chain of custody.

\$100 per sample (944)

Electronic Data Deliverables

Electronic data deliverable (EDD) is an option that compiles your analytical data in an electronic file. EDDs can be delivered by e-mail or via upload to a web server. We offer most industry-standard EDD formats and many types of custom spreadsheets and ASCII text files in fixed length, tab delimited, and comma/quote delimited. The fixed-length files have a predetermined record length, such that the fields within the record always start and end in consistent columns. The tab- and comma-delimited formats separate each field within the record with a tab or comma, respectively. These data fields can be parsed by searching from one tab or comma/quote to the next. This data can then be downloaded into spreadsheets or databases, eliminating time-consuming data entry and transcription errors.

We'll provide our standard format, an industry-standard format, or customize a format to match your specific needs. The EDD will be sent after the analytical reports have been reviewed. If requested, the EDD can be sent on CD-ROM with the hard copy, validatable data package. Please contact your Client Services Representative for further information. A brochure is available.

\$45 per sample group (4613)

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Air Analyses

Catalog Number	Analysis Matrix	Method	Sampling Medium	Preservation	Holding Time
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Ambient, Indoor Air, and Soil Vapor Analyses¹

Volatiles in Air - See *Air Profiles at the end of this section for list of compounds*

5298 [†]	air	EPA TO-15	SUMMA canister	N.A.	30 days
[†] Also available for DoD samples					
7199	air	EPA TO-14A	SUMMA canister	N.A.	30 days
5265	air	EPA TO-15	Tedlar bag ⁵	N.A.	3 days
7869	air	EPA TO-14A	Tedlar bag ⁵	N.A.	3 days

Selective Ion Monitoring

1,1,1-Trichloroethane	1,3-Butadiene	Chloromethane	Naphthalene
1,1,2-Trichloroethane	1,3-Dichlorobenzene	cis-1,2-Dichloroethene	o-Xylene
1,1-Dichloroethane	1,4-Dichlorobenzene	Dichlorodifluoromethane	Styrene
1,1-Dichloroethene	Acrylonitrile	Ethylbenzene	Tetrachloroethene
1,2,4-Trimethylbenzene	Benzene	Freon 113	Toluene
1,2-Dibromoethane	Bromodichloromethane	m-/p-Xylene	trans-1,2-Dichloroethene
1,2-Dichlorobenzene	Carbon Tetrachloride	Methyl tert-Butyl Ether (MTBE)	Trichloroethene
1,2-Dichloroethane	Chloroethane	Methylene Chloride	Vinyl Chloride
1,2-Dichloropropane	Chloroform		

7345	air	EPA TO-15 SIM	SUMMA canister	N.A.	30 days
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Library Search

6900	air			Non-Interpretive – 15 peaks	
888	air			Interpretive – 15 peaks	

Fixed Gases (O₂ and CO₂)

0034	air	ASTM D1946	SUMMA canister	N.A.	30 days
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Rental Fees

10232	SUMMA canister ^{2,3}				
10233	Flow controller ²				

Individual Canister Certification

10234	SUMMA canister ⁴				
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PAHs in Air

1-Methylnaphthalene	Benzo(a)anthracene]	Chrysene	Naphthalene
2-Methylnaphthalene	Benzo(a)pyrene	Dibenz(a,h)anthracene	Phenanthrene
Acenaphthene	Benzo(b)fluoranthene	Fluoranthene	Pyrene
Acenaphthylene	Benzo(g,h,i)perylene	Fluorene	
Anthracene	Benzo(k)fluoranthene	Indeno(1,2,3-cd)pyrene	

7804/2035	low-volume air	EPA TO-13A modified	XAD-2 Resin ⁶	N.A.	7 days
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Petroleum-Based Analyses

Oxygenates in Air

1,2,4-Trimethylbenzene	DIPE	Ethanol	o-Xylene
1,3,5-Trimethylbenzene	EDB	Ethyl Benzene	TAME
Benzene	EDC	m-/p-Xylene	TBA
Cumene	ETBE	MTBE	Toluene

5298	air	EPA TO-15	SUMMA canister ^{1,2,3,4}	N.A.	30 days
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Catalog Number	Analysis Matrix	Method	Sampling Medium	Preservation	Holding Time
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Petroleum-Based Analyses (continued)

7090	BTEX, MTBE, Methane, Ethane air	EPA 18 modified	Tedlar bag/SUMMA ^{2,5}	N.A.	3 days/30 days
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Benzene	C ₁ -C ₄ Hydrocarbons hexane	C ₂ -C ₄ Hydrocarbons hexane
Butane	C ₁ -C ₄ Hydrocarbons methane	C ₂ -C ₄ Hydrocarbons methane
Ethane	C ₁ -C ₄ Hydrocarbons propane	C ₂ -C ₄ Hydrocarbons propane
Ethylbenzene	C ₁ -C ₁₀ Hydrocarbons hexane	C ₂ -C ₁₀ Hydrocarbons hexane
Hexane	C ₁ -C ₁₀ Hydrocarbons methane	C ₂ -C ₁₀ Hydrocarbons methane
Methane	C ₁ -C ₁₀ Hydrocarbons propane	C ₂ -C ₁₀ Hydrocarbons propane
MTBE		>C ₄ -C ₁₀ Hydrocarbons hexane
Pentane		>C ₄ -C ₁₀ Hydrocarbons methane
Propane		>C ₄ -C ₁₀ Hydrocarbons propane
Toluene		
Xylene (total)		

7090	Hydrocarbon Ranges ^{1,2,3,4,5} air	EPA 25 modified	Tedlar bag/SUMMA	N.A.	3 days/30 days
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Tracer Gases - Contact us for pricing regarding other tracer gases.

1,2-Difluoroethane	Butane	Helium	Isopropanol (2-Propanol)	Propane
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10341 (He)	air	ASTM D1946	SUMMA canister ^{1,2,3,4}	N.A.	30 days
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Hold Analysis

12689	Used for any SUMMA samples that are being held pending the results of companion samples.				
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¹Default units for the above analyses are ppb(v). The results can be reported in µg/m³, ppm(v), or mg/m³ if requested at submission.

²If SUMMA canister is not returned within 2 weeks, the client will be invoiced for canister replacement at our cost of \$415. If SUMMA canister and flow controller are not returned within 2 weeks, the client will be invoiced for replacement of both at our cost of \$920.

³If canisters are returned unused, a cleaning and handling fee of \$60 will be charged.

⁴Pricing includes batch certification. If individual canister certification is required, additional fees will be incurred.

⁵The cost of the analysis does not include the Tedlar bag charge of \$12. SUMMA canisters and flow controllers may be used for sampling. There is an additional charge per SUMMA canister of \$75 and controller of \$50.

⁶XAD-2 Resin cost is \$4.

Air Profiles

Standard Target Compounds

1,1,1,2-Tetrachloroethane	Chloroethane
1,1,1-Trichloroethane	Chloroform
1,1,2,2-Tetrachloroethane	Chloromethane
1,1,2-Trichloroethane	cis-1,2-Dichloroethene
1,1-Dichloroethane	cis-1,3-Dichloropropene
1,1-Dichloroethene	Cumene (Isopropylbenzene)
1,2,3-Trichloropropane	Dibromochloromethane
1,2,4-Trimethylbenzene	Dibromomethane
1,2-Dibromoethane	Dichlorodifluoromethane (Freon 12)
1,2-Dichlorobenzene	Dichlorofluoromethane
1,2-Dichloroethane	Ethylbenzene
1,2-Dichloropropane	Freon 113 (1,1,2-Trichloro-1,2,2-Trifluoroethane)
1,3,5-Trimethylbenzene	Freon 114 (1,2-Dichlorotetrafluoroethane)
1,3-Butadiene	Heptane
1,3-Dichlorobenzene	Hexachloroethane
1,4-Dichlorobenzene	Hexane
2-Butanone (Methyl Ethyl Ketone)	Isooctane (2,2,4-Trimethylpentane)
2-Hexanone	m-/p-Xylene
3-Chloropropene (Allyl Chloride)	Methyl tert-Butyl Ether (MTBE)
4-Ethyltoluene	Methylene Chloride
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	Octane
Acetone	o-Xylene
Benzene	Pentane
Bromobenzene	Styrene
Bromodichloromethane	Tetrachloroethene
Bromoform	Toluene
Bromomethane	trans-1,2-Dichloroethene
Carbon Disulfide	trans-1,3-Dichloropropene
Carbon Tetrachloride	Trichloroethene
Chlorobenzene	Trichlorofluoromethane (Freon 11)
Chlorodifluoromethane	Vinyl Chloride

Additional compounds available by TO-15 or TO-14A:

1,2-Dibromo-3-Chloropropane	Freon 123a (1,2-Dichloro-1,1,2-Trifluoroethane)
1,2-Dichloroethene (total)	Hexachlorobutadiene
1,2,4-Trichlorobenzene	Isopropanol
1,3-Dichloropropene (total)	Methyl Acrylate
1,4-Dioxane	Methyl Iodide
2-Chlorotoluene	Methyl Methacrylate
Acetonitrile	Naphthalene
Acrolein	n-Butylbenzene
Acrylonitrile	n-Propylbenzene
a-Methyl Styrene	p-Isopropyltoluene
Benzyl Chloride	Propene
Bromoethene (vinyl bromide)	sec-Butylbenzene
Cyclohexane	TAME (tert-amyl methyl ether)
DIPE (di-isopropyl ether)	tert-Butyl Alcohol
ETBE (ethyl tert-butyl ether)	tert-Butylbenzene
Ethanol	Tetrahydrofuran
Ethyl Acetate	Vinyl Acetate
Ethyl Acrylate	Xylenes (Total)
Ethyl Methacrylate	

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Aqueous and Solid Analyses

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Acid Extractables (Only)					
10334	aqueous	EPA 625	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
14238	aqueous	EPA 625	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
14240	aqueous	SW-846 8270C	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
14242	aqueous	SW-846 8270D	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
10727	solid	SW-846 8270C (microwave)	100 g G	Cool, 6°C	14/40 days
10726	solid	SW-846 8270D (microwave)	100 g G	Cool, 6°C	14/40 days

Acid Volatile Sulfides/Simultaneously Extracted Metals (AVS/SEM)					
1630	aqueous	EPA 821-R-91-100	500 mL	Cool, 6°C NaOH >12 (no headspace)	14 days
1630	solid	EPA 821-R-91-100	100 g	Cool, 6°C (no headspace)	14 days
Metals include: Cadmium, Copper, Lead, Nickel, Zinc, and Mercury					

Acidity (to pH 3.7 and 8.3)					
475/476	aqueous	EPA 305.2	250 mL P/G	Cool, 6°C	14 days
4530	aqueous	2310 B-1997 or EPA 305.1	250 mL P/G	Cool, 6°C	14 days

Alcohols

1-Butanol*	Ethanol	Isopropanol
1-Propanol (n-Propanol)	Isobutanol	Methanol

*Available in waters only; must be prearranged with the lab.

6624	aqueous	SW-846 8015B	2 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace) Unpreserved	14 days 7 days
10603	aqueous	SW-846 8015C/D	2 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace) Unpreserved	14 days 7 days
10501	solid	SW-846 8015B modified	100 g G	Cool, 6°C	14 days
10604	solid	SW-846 8015C/D modified	100 g G	Cool, 6°C	14 days

Aldehydes

2,5-Dimethylbenzaldehyde	Butyraldehyde	Isovaleraldehyde	p-Tolualdehyde
Acetaldehyde	Crotonaldehyde	m-Tolualdehyde	Valeraldehyde
Benzaldehyde	Formaldehyde	o-Tolualdehyde	
	Hexaldehyde	Propionaldehyde	

8044	aqueous	SW-846 8315A	250 mL G	Cool, 6°C	3/3 days
8045	solid	SW-846 8315A	75 g G	Cool, 6°C	14/3/3 days
Acetaldehyde/Formaldehyde					
13022	aqueous	SW-846 8315A	250 mL G	Cool, 6°C	3/3 days
13031	solid	SW-846 8315A	75 g G	Cool, 6°C	14/3/3 days

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Total Alkalinity/Phenolphthalein Alkalinity (to pH 4.5 and 8.3)					
12150/12707	aqueous	2320 B-1997 or EPA 310.1	250 mL P/G	Cool, 6°C	14 days
Ammonia-Nitrogen (NH₃)					
Colorimetric					
12892	aqueous	EPA 350.1	1000 mL P/G	Cool, 6°C H ₂ SO ₄ to pH <2	28 days
13000/13001	solid	EPA 350.1 mod	100 g G	Cool, 6°C	28 days
Selective Ion Electrode (ISE)					
12677	aqueous	4500-NH ₃ D-1997 or EPA 350.3	500 mL P/G	Cool, 6°C H ₂ SO ₄ to pH <2	28 days
Distillation ISE					
12679/4219	aqueous	4500-NH ₃ -1997	1000 mL P/G	Cool, 6°C H ₂ SO ₄ to pH <2	28 days
10222/10696	solid	EPA 350.3 modified	100 g G	Cool, 6°C	28 days
Distillation/Titration					
221	aqueous	4500-NH ₃ B/C mod- 1997 or EPA 350.2	1000 mL P/G	Cool, 6°C H ₂ SO ₄ to pH <2	28 days
573	solid	4500-NH ₃ B/C mod 1997 or EPA 350.2 modified	100 g G	Cool, 6°C	28 days
Un-Ionized					
2593	aqueous	SM 8010 F-1997	1000 mL P/G	Cool, 6°C H ₂ SO ₄ to pH <2	28 days
Appendix IX					
Volatiles					
10335	aqueous	SW-846 8260B	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
11997	aqueous	SW-846 8260C	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
10237	solid	SW-846 8260B	<i>See Soil Sampling</i>	Cool, 6°C	14 days
11995	solid	SW-846 8260C	<i>See Soil Sampling</i>	Cool, 6°C	14 days
Semivolatiles					
14239	aqueous	SW-846 8270C	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
14241	aqueous	SW-846 8270D	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
10723	solid	SW-846 8270C (microwave)	100 g G	Cool, 6°C	14/40 days
10726	solid	SW-846 8270D (microwave)	100 g G	Cool, 6°C	14/40 days
Organochlorine Pesticides and PCBs					
177/ 10227	aqueous	SW-846 8081A/ SW-846 8082	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days 365/40 days
14134/ 14169	aqueous	SW-846 8081A/ SW-846 8082	2 × 250 mL G (amber)	Cool, 6°C	7/40 days 365/40 days
10589/ 10591	aqueous	SW-846 8081B/ SW-846 8082A	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days 365/40 days
14166/ 14184	aqueous	SW-846 8081B/ SW-846 8082A	2 × 250 mL G (amber)	Cool, 6°C	7/40 days 365/40 days

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Appendix IX (continued)					
Organochlorine Pesticides and PCBs (continued)					
10738/ 10736	solid	SW-846 8081A/ SW-846 8082 (microwave)	100 g G	Cool, 6°C	14/40 days 365/40 days
10590/ 10885	solid	SW-846 8081B/ SW-846 8082A (microwave)	100 g G	Cool, 6°C	14/40 days 365/40 days
Organophosphate Pesticides					
13182	aqueous	SW-846 8141A	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
14231	aqueous	SW-846 8141A	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
13186	aqueous	SW-846 8141B	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
14236	aqueous	SW-846 8141B	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
13178	solid	SW-846 8141A (soxhlet)	100 g G	Cool, 6°C	14/40 days
13184	solid	SW-846 8141B (soxhlet)	100 g G	Cool, 6°C	14/40 days
Herbicides plus Hexachlorophene					
10407	aqueous	SW-846 8151A	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
10401	solid	SW-846 8151A	100 g G	Cool, 6°C	14/40 days
Inorganics (Metals)					
APPMW	aqueous	SW-846 6010B/C SW-846 7470A	250 mL P	Cool, 6°C HNO ₃ to pH <2	6 months (Hg 28 days)
APPMS	solid	SW-846 6010B/C SW-846 7471A	100 g G	Cool, 6°C	6 months (Hg 28 days)
Cyanide					
8255	aqueous	SW-846 9012A/B	250 mL P	Cool, 6°C NaOH to pH >12 ascorbic acid	14 days
5895	solid	SW-846 9012A/B	100 g G	Cool, 6°C	14 days
Sulfide					
1333	aqueous	4500-S ₂ F-2000 or EPA 376.1 or SW-846 9034 mod	500 mL G	Cool, 6°C NaOH, ZnAc	7 days
Base Neutral Extractables (Only)					
10334	aqueous	EPA 625	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
14238	aqueous	EPA 625	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
14240	aqueous	SW-846 8270C	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
14242	aqueous	SW-846 8270D	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
10727	solid	SW-846 8270C (microwave)	100 g G	Cool, 6°C	14/40 days
10726	solid	SW-846 8270D (microwave)	100 g G	Cool, 6°C	14/40 days

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Bicarbonate (includes Alkalinity) (HCO₃)					
12149/12150	aqueous	2320 B-1997	250 mL P/G	Cool, 6°C	14 days
Biochemical Oxygen Demand (BOD)					
Total (BOD ₅)					
14108	aqueous	5210 B-2001 or EPA 405.1	1000 mL P/G	Cool, 6°C	48 hours
Soluble (BOD ₅)					
14111	aqueous	5210 B-2001 or EPA 405.1	500 mL P/G	Cool, 6°C	48 hours
Carbonaceous (BOD ₅)					
14109	aqueous	5210 B-2001 or EPA 405.1	500 mL P/G	Cool, 6°C	48 hours
Soluble Carbonaceous (BOD ₅)					
14110	aqueous	5210 B-2001 or EPA 405.1	500 mL P/G	Cool, 6°C	48 hours
Total (BOD ₂₀)					
14112	aqueous	5210 B-2001 or EPA 405.1	1000 mL P/G	Cool, 6°C	48 hours
Carbonaceous (BOD ₂₀)					
14113	aqueous	5210 B-2001 or EPA 405.1	500 mL P/G	Cool, 6°C	48 hours
Bromide					
1505	aqueous	EPA 300.0 or SW-846 9056/A	2 × 40 mL P/G	Cool, 6°C	28 days
12797 (low-level)	aqueous	EPA 300.0 or SW-846 9056	2 × 40 mL P/G	Cool, 6°C	28 days
7335/1352	solid	EPA 300.0	50 g G	Cool, 6°C	28 days
Ion Chromatography (DoD only)					
10702	aqueous	SW-846 9056/A	2 × 40 mL P/G	Cool, 6°C	28 days
Bulk Density (for Disposal Purposes)					
6569	solid	ASTM E-868-82 Sec 9.9 modified	100 g P/G	N.A.	N.A.
Carbon					
Organic (TOC)					
273	aqueous	5310 C-2000 or EPA 415.1	2 × 40 mL G (amber)	Cool, 6°C H ₃ PO ₄ to pH <2	28 days
354	aqueous	SW-846 9060/A	5 × 40 mL G (amber)	Cool, 6°C H ₃ PO ₄ to pH <2	28 days
2079	solid (FOC)	5310 B mod-2000 or EPA 415.1 modified or SW-846 9060/A mod	20 g G	Cool, 6°C	28 days
383	solid	Lloyd Kahn modified	20 g G	Cool, 6°C	14 days
Inorganic (TIC)					
6090/1550/273	aqueous	5310 C-2000 or EPA 415.1	4 × 40 mL G (amber)	Cool, 6°C H ₃ PO ₄ to pH <2 (2 preserved; 2 unpreserved)	28 days
11356/10065/2079	solid	5310 B mod-2000 or EPA 415.1 modified or SW-846 9060/A modified	20 g G	Cool, 6°C	28 days

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Carbon (continued)					
	Dissolved				
14256	aqueous	5310 C-2000	2 × 40 mL G (amber)	Cool, 6°C	28 days
	Dissolved Organic (DOC)				
7547	aqueous	5310 C-2000 or EPA 415.1 modified	2 × 40 mL G (amber)	Cool, 6°C	28 days
Carbon Dioxide (by Headspace)					
8097	aqueous	SW-846 8015B mod or RSK-175 mod	2 × 40 mL G	Cool, 6°C (no headspace)	14 days
13139	aqueous	SW-846 8015C/D	2 × 40 mL G	Cool, 6°C (no headspace)	14 days
Carbon Dioxide, Free (includes pH and Alkalinity)					
238/12149 12150/12152	aqueous	4500-CO ₂ D-1997	250 mL P/G	Cool, 6°C	14 days
Carbonate-CO₃ (includes Alkalinity)					
12148/12150	aqueous	2320 B-1997	250 mL P/G	Cool, 6°C	14 days
Cation Exchange Capacity					
2595/6196	solid	SW-846 9081	100 g G	Cool, 6°C	N.A.
Chemical Oxygen Demand (COD)					
4001	aqueous	EPA 410.4	100 mL P/G	Cool, 6°C H ₂ SO ₄ to pH <2	28 days
	Low Level				
13700	aqueous	EPA 410.4	100 mL P/G	Cool, 6°C H ₂ SO ₄ to pH <2	28 days
Chloride					
	Titrimetric				
1124	aqueous	4500-Cl C-1997 or EPA 325.3	500 mL P/G	Cool, 6°C	28 days
	Ion Chromatography				
224	aqueous	EPA 300.0 or SW-846 9056/A	2 × 40 mL P/G	Cool, 6°C	28 days
7333/1352	solid	EPA 300.0	50 g G	Cool, 6°C	28 days
	Ion Chromatography (DoD only)				
10697	aqueous	SW-846 9056/A	2 × 40 mL P/G	Cool, 6°C	28 days
Chlorine					
	Residual (Titrimetric)				
240	aqueous	4500-Cl F-2000 or EPA 330.4	200 mL G (amber)	No headspace	Analyze Immediately
Chromium, Hexavalent					
276	aqueous	SW-846 7196A	250 mL P/G	Cool, 6°C	24 hours
425/7825	solid	SW-846 7196A	100 g G	Cool, 6°C	30/7 days

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Chromium, Hexavalent (continued)					
Hexavalent Chromium (DoD only)					
10678	aqueous	SW-846 7196A	250 mL P/G	Cool, 6°C	24 hours
10679/7825	solid	SW-846 7196A	100 g G	Cool, 6°C	30/7 days
Hexavalent Chromium (NJDKQP only)					
13447	aqueous	SW-846 7196A	250 mL P/G	Cool, 6°C	24 hours
13431/13626	solid	SW-846 7196A	100 g G	Cool, 6°C	24 hours
5892/13625	solid	SW-846 7199	100 g G	Cool, 6°C	30/7 days
Low Level (NPDES)					
1446	aqueous	3500-Cr B-2009	250 mL P/G	Cool, 6°C	24 hours
Ion Chromatography					
<i>This analysis MUST be prearranged with the lab (waters only).</i>					
6467	aqueous	SW-846 7199	250 mL P/G	Cool, 6°C	24 hours
5892/2432	solid	SW-846 7199	50 g G	Cool, 6°C	30/7 days
Low Level by IC					
12868	aqueous	EPA 218.6	250 mL P/G	Cool, 6°C NH ₄ OH/(NH ₄) ₂ SO ₄	24 hours, unpreserved 28 days, preserved
13002	pw	EPA 218.7	250 mL P/G	Cool, 6°C NH ₄ OH/(NH ₄) ₂ SO ₄	24 hours, unpreserved 28 days, preserved
Chromium, Hexavalent with pH and ORP					
<i>These parameters can be used during validation with the interpretation of the matrix QC.</i>					
425/7825/ 394/1821	solid	SW-846 7196A	100 g G	Cool, 6°C	30/7 days
Ion Chromatography					
5892/2432/ 394/1821	solid	SW-846 7199	50 g G	Cool, 6°C	30/7 days
Chromium, Trivalent (includes total chromium and hexavalent chromium)					
2828/7051/ 276	aqueous	SW-846 6010B/C SW-846 7196A			
2828/7051/ 6467	aqueous	SW-846 6010B/C SW-846 7199			
2829/6951/ 425/7825	solid	SW-846 6010B/C SW-846 7196A			
2829/6951/ 5892/2432	solid	SW-846 6010B/C SW-846 7199			
Color					
Apparent - Visual (Co, Pt)					
277	aqueous	2120 B-2001 or EPA 110.2	250 mL P/G	Cool, 6°C	48 hours

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Corrosivity (for Hazardous Waste Characteristics)					
496/12152	aqueous	SW-846 Chapter 7	250 mL P/G	N.A.	Analyze Immediately
496/394	solid	SW-846 Chapter 7	50 g G	N.A.	N.A.

Corrosivity (in Potable Water) – See Langelier Index

Cyanide

Total					
237 or 8255 or 12823	aqueous	EPA 335.4 or SW-846 9012A/B or ASTM D 7511	250 mL P	Cool, 6°C NaOH to pH >12 ascorbic acid	14 days
5895	solid	SW-846 9012A/B	100 g G	Cool, 6°C	14 days
Total (DoD only)					
10704	aqueous	SW-846 9012A/B	250 mL P	Cool, 6°C NaOH to pH >12 ascorbic acid	14 days
10705	solid	SW-846 9012A/B	100 g G	Cool, 6°C	14 days
Total (NJDKQP, CT RCP, MA MCP only)					
957	aqueous	SW-846 9012A/B	250 mL P	Cool, 6°C NaOH to pH >12 ascorbic acid	14 days
959	solid	SW-846 9012A/B	100 g G	Cool, 6°C	14 days
Free					
12941	aqueous	OIA-1677-09	250 mL P/G	Cool, 6°C NaOH to pH >12 ascorbic acid	14 days
Amenable (includes Total Cyanide)					
1549 and 8255 or 237	aqueous	4500-CN G-1999 and SW-846 9012A/B or EPA 335.4	250 mL P/G	Cool, 6°C NaOH to pH >12 ascorbic acid	14 days
5898 and 5895	solid	SW-846 9012A/B	100 g G	Cool, 6°C	14 days
Available					
12999	aqueous	OIA-1677-09	250 mL P/G	Cool, 6°C NaOH to pH >12 ascorbic acid	14 days
Weak Acid Dissociable					
4814	aqueous	4500-CN I-1999	250 mL P/G	Cool, 6°C NaOH to pH >12	14 days
961	solid	4500-CN I-1999	100 g G	Cool, 6°C	14 days

1,4-Dioxane

10371	aqueous	EPA 624	3 × 40 mL G	Cool, 6°C HCl to pH<2 (no headspace)	14 days
10335	aqueous	SW-846 8260B	3 × 40 mL G	Cool, 6°C HCl to pH<2 (no headspace)	14 days
2898	aqueous	SW-846 8260B 25-ml purge	3 × 40 mL G	Cool, 6°C HCl to pH<2 (no headspace)	14 days
527	aqueous	SW-846 8260B SIM or EPA 1624 Rev. B mod.	3 × 40 mL G	Cool, 6°C HCl to pH<2 (no headspace)	14 days
10334	aqueous	EPA 625	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
14238	aqueous	EPA 625	2 × 250 mL G (amber)	Cool, 6°C	7/40 days

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
1,4-Dioxane (continued)					
14240	aqueous	SW-846 8270C	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
14242	aqueous	SW-846 8270D	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
14243	aqueous	SW-846 8270C SIM	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
14244	aqueous	SW-846 8270D SIM	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
10237	solid	SW-846 8260B	See Soil Sampling	Cool, 6°C	14 days
10326	solid	SW-846 8260B SIM	See Soil Sampling	Cool, 6°C	14 days
10727	solid	SW-846 8270C	100 g G	Cool, 6°C	14/40 days
10726	solid	SW-846 8270D	100 g G	Cool, 6°C	14/40 days
10725	solid	SW-846 8270C SIM	100 g G	Cool, 6°C	14/40 days
12969	solid	SW-846 8270D SIM	100 g G	Cool, 6°C	14/40 days
5298	air	EPA TO-15	SUMMA canister*	N.A.	N.A.

*If SUMMA canister is not returned within 2 weeks, the client will be invoiced for canister replacement at our cost of \$415. If SUMMA canister and flow controller are not returned within 2 weeks, the client will be invoiced for replacement of both at our cost of \$920.

If canisters are returned unused, a cleaning and handling fee of \$60 will be charged.

Pricing includes batch certification. If individual canister certification is required, additional fees will be incurred.

Dioxin (Qualitative Screen; as an add-on to BNA scan)

382	aqueous	EPA 625 mod or SW-846 8270C mod		Cool, 6°C	7/40 days
1196	solid	SW-846 8270C mod		Cool, 6°C	14/40 days

Dioxins and Furans (Quantitative)

2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin (TCDD)	2,3,7,8-Tetrachlorodibenzofuran (TCDF)
1,2,3,7,8-Pentachlorodibenzo- <i>p</i> -dioxin (PeCDD)	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)
1,2,3,4,7,8-Hexachlorodibenzo- <i>p</i> -dioxin (HxCDD)	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)
1,2,3,6,7,8-Hexachlorodibenzo- <i>p</i> -dioxin (HxCDD)	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)
1,2,3,7,8,9-Hexachlorodibenzo- <i>p</i> -dioxin (HxCDD)	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)
1,2,3,4,6,7,8-Heptachlorodibenzo- <i>p</i> -dioxin (HpCDD)	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)
1,2,3,4,6,7,8,9-Octachlorodibenzo- <i>p</i> -dioxin (OCDD)	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)
	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)
	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)
	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)

10915	aqueous	EPA 1613B	2 × 1000 mL G (amber)	Cool, 6°C	365 days
12936	aqueous	SW-846 8290A	2 × 1000 mL G (amber)	Cool, 6°C	365 days
12935 TCDD only	pw	EPA 1613B	2 × 1000 mL G (amber)	Cool, 6°C	365 days
11031	solid	EPA 1613B	100 g G (amber)	Cool, 6°C	365 days
12937	solid	SW-846 8290A	100 g G (amber)	Cool, 6°C	365 days

Ethylene Dibromide (EDB/Dibromochloropropane (DBCP))

1034	pw	EPA 504.1	2 × 40 mL G	Cool, 6°C Na ₂ S ₂ O ₃	14 days/24 hours
10398	aqueous	SW-846 8011	2 × 40 mL G	Cool, 6°C HCl	14/40 days
13214	soil	SW-846 8011	100 g G	Cool, 6°C	14/40 days

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Hardness, Total					
12147	aqueous	2340 C-1997 or EPA 130.2 mod.	250 mL P/G	HNO ₃ to pH <2	6 months
Calcium Hardness (NPDES)					
6256/ 1757/1750	aqueous	2340 B-1997	250 mL P/G	HNO ₃ to pH <2	6 months

Herbicides

Appendix IX Herbicides plus Hexachlorophene

10407	aqueous	SW-846 8151A	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
10401	solid	SW-846 8151A	100 g G	Cool, 6°C	14/40 days

Method 8151 Herbicides

2,4-D	Dalapon	Dichloroprop	MCP
2,4-DB	Dicamba (Banvel)	Dinoseb	Pentachlorophenol
2,4,5-T		MCPA	
2,4,5-TP (Silvex)			

10407	aqueous	SW-846 8151A	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
10401	solid	SW-846 8151A	100 g G	Cool, 6°C	14/40 days
13434	tissue	SW-846 8151A	30 g G	Frozen	14/40 days

Method 8270C Herbicides

2,4-D	2,4,5-T	2,4,5-TP (Silvex)
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2026	aqueous	SW-846 8270C SIM	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
952	aqueous	SW-846 8151A	1000 mL G (amber)	Cool, 6°C	7/40 days after leaching
952	solid	SW-846 8151A	200 g G	Cool, 6°C	14/40 days after leaching

Triazine

Alachlor (Lasso) Atrazine	Cyanazine	Metolachlor	Simazine
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5366	aqueous	SW-846 8141A	2 × 1000 mL G	Cool, 6°C	7/40 days
5367	solid	SW-846 8141A	100 g G	Cool, 6°C	14/40 days

Hydrazines

1,1-Dimethylhydrazine	Hydrazine	Methylhydrazine
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10342	aqueous	SW-846 8315A modified	40 mL G	Cool, 6°C Acetate buffer	10/28 days
10346	solid	SW-846 8315A modified	100 g G	Cool, 6°C	14/28 days

Hydroxide (includes Alkalinity)

1456/ 12150/12707	aqueous	2320 B-1997	250 mL P/G	Cool, 6°C	14 days
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Ignitability (for Hazardous Waste Characteristics)

542	solid	40 CFR 261.21	100 g G	N.A.	N.A.
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Langelier Index (Calculated from pH, Alkalinity, TDS, Calcium)

pH and temperature MUST be taken at time of collection.

576/12152/12150/ 12707/212/1750	aqueous	2330 B-1993	1000 mL P/G	Cool, 6°C HNO ₃ for metals	N.A.
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Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Leachates					
447	ASTM solid	ASTM D3987-85	200 g G	Cool, 6°C	N.A.
10606	Elutriate Extraction solid	USACE	Sample size is determined by analysis list.	Cool, 6°C	14 days
1339	Leachate Filtration (for aqueous sample containing <0.5 % solids) aqueous	SW-846 1311	Sample size is determined by analysis list.	Cool, 6°C	14 days
TCLP Extractions					
Non-volatile Extraction					
947	solid	SW-846 1311	200 g G	Cool, 6°C	14 days
Zero Headspace Extraction					
946	solid	SW-846 1311	60 g G	Cool, 6°C (no headspace)	14 days
75	solid	SW-846 1311	25 g EnCore	Cool, 0°C	48 hours (frozen)
Soluble Threshold Limit Concentration (STLC) Waste Extraction Test (WET) (California only)					
Non-volatile Extraction					
1435/1597	solid	CCR Title 22 WET Section 66700	200 g G	Cool, 6°C	14 days
Zero Headspace Extraction					
1436	solid	CCR Title 22 WET Section 66700	60 g G	Cool, 6°C (no headspace)	14 days
Synthetic Precipitation Leachate Procedure (SPLP)					
Non-volatile Extraction					
1567	solid	SW-846 1312	200 g G	Cool, 6°C	14 days
Zero Headspace Extraction					
8792	solid	SW-846 1312	60 g G	Cool, 6°C	14 days
Lead and Copper Rule					
<i>For lead and copper rule samples, EPA requires the first liter drawn (6-hour minimum standing time) to be analyzed.</i>					
6035/6033	pw	EPA 200.8	1000 mL P	Preserved upon receipt	6 months If turbidity >1 NTU
Lipids, percent					
4193	tissue	SW-846 3545 modified	10 g P/G	Frozen	N.A.
Lipids, percent					
<i>As part of dioxin and furan analysis.</i>					
13448	tissue	SW-846 1613B	10 g P/G	Frozen	N.A.
MBAS (Surfactants)					
225	aqueous	5540 C-2000 or EPA 425.1	250 mL P/G	Cool, 6°C	48 hours

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
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Metals

All NPDES and drinking water samples will be analyzed according to EPA 600 Methods. All other samples will be analyzed using SW-846 procedures. These methods meet or exceed the quality assurance requirements of most regulatory agencies. All pricing for suites is based on analysis by ICP.

All elements are available for DoD samples.

Results are normally reported in mg/L or µg/L for aqueous and mg/kg for solid samples.

For lead and copper rule samples, EPA requires the first liter drawn (6-hour minimum standing time) to be analyzed.

For school drinking water samples, EPA requires the first 250 milliliters drawn to be analyzed for lead; a 1-L container will be provided.

We can test lead in paint as long as it does not require HUD or IAHA certification.

Element	ICP (Water)	ICP (Soil)	ICP/MS (Water)	ICP/MS (Soil)	TAL	RCRA 8	PPL	App IX
Aluminum (Al)^	1743	1643	6023	6123	•			
Antimony (Sb)	7044	6944	6024	6124	•		•	•
Arsenic (As)	7035	6935	6025	6125	•	•	•	•
Barium (Ba)	7046	6946	6026	6126	•	•		•
Beryllium (Be)	7047	6947	6027	6127	•		•	•
Boron (B)^	8014	7914						
Cadmium (Cd)	7049	6949	6028	6128	•	•	•	•
Calcium (Ca)^	1750	1650	6029	6129	•			
Chromium (Cr)	7051	6951	6031	6131	•	•	•	•
Cobalt (Co)	7052	6952	6032	6132	•			•
Copper (Cu)	7053	6953	6033	6133	•		•	•
Iron (Fe)^	1754	1654	6034	6134	•			
Lead (Pb)	7055	6955	6035	6135	•	•	•	•
Magnesium (Mg)^	1757	1657	6036	6136	•			
Manganese (Mn)	7058	6958	6037	6137	•			
Mercury (Hg)	259	159			•	•	•	•
Molybdenum (Mo)^	7060	6960	6038	6138				
Nickel (Ni)	7061	6961	6039	6139	•		•	•
Potassium (K)^	1762	1662	6040	6140	•			
Selenium (Se)	7036	6936	6041	6141	•	•	•	•
Silver (Ag)	7066	6966	6042	6142	•	•	•	•
Sodium (Na)^	1767	1667	6043	6143	•			
Strontium (Sr)	8068	7968	6044	6144				
Thallium (Tl)	7022	6925	6045	6145	•		•	•
Tin (Sn)^	7069	6969	6046	6146				•
Titanium (Ti)	7070	6970	6047	6147				
Vanadium (V)	7071	6971	6048	6148	•			•
Zinc (Zn)	7072	6972	6049	6149	•		•	•
Lithium (Li)*	1756	1656						
Phosphorus (P)*	10143	10145						
Sulfur (S)*	12004	12003						
Lithium (Li)*	1756	1656						
Phosphorus (P)*	10143	10145						
Sulfur (S)*	12004	12003						

^We recommend analyzing these elements by ICP, as they are poor performers by ICP/MS.

*Shale work only

Metals by ICP (SW-846 6010B/C, EPA 200.7 Rev 4.4)

Metals by ICP/MS (SW-846 6020/A or EPA 200.8 Rev 5.4)

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Metals (continued)					
Mercury (Hg) by Cold Vapor					
259	aqueous	SW-846 7470A or EPA 245.1 Rev 3	250 mL P/G	Cool, 6°C HNO ₃ to pH <2	28 days 28 days
159	solid	SW-846 7471A/B	100 g P/G	Cool, 6°C	28 days
Digests for Mercury by Cold Vapor					
5714	aqueous/pw	EPA 245.1	250 mL P/G	Cool, 6°C HNO ₃ to pH <2	28 days
5713	aqueous/leachate	SW-846 7470A	250 mL P/G	Cool, 6°C HNO ₃ to pH <2	28 days
5711	solid	SW-846 7471A (Update III)	100 g G	Cool, 6°C	28 days
10638	solid	SW-846 7471B (Update IV)	100 g G	Cool, 6°C	28 days

Metals Suites

aqueous	SW-846 6010B/C/7470A or EPA 200.7/245.1	250 mL P/G	Cool, 6°C HNO ₃ to pH <2	6 months Hg 28 days
aqueous	SW-846 6020/A or EPA 200.8	250 mL P/G	Cool, 6°C HNO ₃ to pH <2	6 months
solid	SW-846 6010B/C/7471A/B	100 g P/G	Cool, 6°C	6 months Hg 28 days
solid	SW-846 6020/A	100 g P/G	Cool, 6°C	6 months

8 RCRA Metals

Arsenic (As)	Cadmium (Cd)	Lead (Pb)	Selenium (Se)
Barium (Ba)	Chromium (Cr)	Mercury (Hg)	Silver (Ag)

13 Priority Pollutant List Metals

Antimony (Sb)	Chromium (Cr)	Mercury (Hg)	Silver (Ag)
Arsenic (As)	Copper (Cu)	Nickel (Ni)	Thallium (Tl)
Beryllium (Be)	Lead (Pb)	Selenium (Se)	Zinc (Zn)
Cadmium (Cd)			

17 Appendix IX Metals

Antimony (Sb)	Chromium (Cr)	Mercury (Hg)	Thallium (Tl)
Arsenic (As)	Cobalt (Co)	Nickel (Ni)	Tin (Sn)
Barium (Ba)	Copper (Cu)	Selenium (Se)	Vanadium (V)
Beryllium (Be)	Lead (Pb)	Silver (Ag)	Zinc (Zn)
Cadmium (Cd)			

23 Target Analyte List Metals

Aluminum (Al)	Calcium (Ca)	Magnesium (Mg)	Silver (Ag)
Antimony (Sb)	Chromium (Cr)	Manganese (Mn)	Sodium (Na)
Arsenic (As)	Cobalt (Co)	Mercury (Hg)	Thallium (Tl)
Barium (Ba)	Copper (Cu)	Nickel (Ni)	Vanadium (V)
Beryllium (Be)	Iron (Fe)	Potassium (K)	Zinc (Zn)
Cadmium (Cd)	Lead (Pb)	Selenium (Se)	

CAM 17 Metals

Antimony (Sb)	Chromium (Cr)	Molybdenum (Mo)	Vanadium (V)
Arsenic (As)	Cobalt (Co)	Nickel (Ni)	Zinc (Zn)
Barium (Ba)	Copper (Cu)	Selenium (Se)	
Beryllium (Be)	Lead (Pb)	Silver (Ag)	
Cadmium (Cd)	Mercury (Hg)	Thallium (Tl)	

TCLP Metals

Arsenic (As)	Cadmium (Cd)	Lead (Pb)	Selenium (Se)
Barium (Ba)	Chromium (Cr)	Mercury (Hg)	Silver (Ag)

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Metals Digests					
<i>Samples for dissolved metals should be field filtered and unpreserved bottles should be sent. If laboratory filtration is required, additional charges will apply. Samples for North Carolina using SM20 3030C cannot be dissolved. Although North Carolina no longer requires the 3030C digest, some clients may still request it.</i>					
Digests for ICP Waters					
5281	pw	EPA 200.7	250 mL P/G	Cool, 6°C HNO ₃ to pH <2	6 months
5716	aqueous/pw	EPA 200.7	250 mL P/G	Cool, 6°C HNO ₃ to pH <2	6 months
1848	aqueous	SW-846 3005A (Update III)	250 mL P/G	Cool, 6°C HNO ₃ to pH <2	6 months
10635	aqueous	SW-846 3005A (Update IV)	250 mL P/G	Cool, 6°C HNO ₃ to pH <2	6 months
5705	aqueous/leachate	SW-846 3010A (Update III)	250 mL P/G	Cool, 6°C HNO ₃ to pH <2	6 months
10636	aqueous/leachate	SW-846 3010A (Update IV)	250 mL P/G	Cool, 6°C HNO ₃ to pH <2	6 months
Digests for ICP Waters (continued)					
2812 (NC only)	aqueous	3030 C-1997 (Update III)	250 mL P/G	Cool, 6°C HNO ₃ to pH <2	72 hours
10651 (NC only)	aqueous	3030 C-1997 (Update IV)	250 mL P/G	Cool, 6°C HNO ₃ to pH <2	72 hours
Digests for ICP/MS Waters					
6051	pw	EPA 200.8	250 mL P/G	Cool, 6°C HNO ₃ to pH <2	6 months
7050	aqueous	EPA 200.8	250 mL P/G	Cool, 6°C HNO ₃ to pH <2	6 months
6050	aqueous/leachate	SW-846 3020A/3010A modified (Update III)	250 mL P/G	Cool, 6°C HNO ₃ to pH <2	6 months
10639	aqueous/leachate	SW-846 3020A/3010A modified (Update IV)	250 mL P/G	Cool, 6°C HNO ₃ to pH <2	6 months
11988 (NC only)	aqueous	3030 C-1997 (Update III)	250 mL P/G	Cool, 6°C HNO ₃ to pH <2	6 months
11989 (NC only)	aqueous	3030 C-1997 (Update IV)	250 mL P/G	Cool, 6°C HNO ₃ to pH <2	6 months
Digests for ICP Oils					
1015/1383	oil	SW-846 3050B Modified (Update III)	100 g G	Cool, 6°C	6 months
13714/1383	oil	SW-846 3050B Modified (Update IV)	100 g G	Cool, 6°C	6 months
Digests for ICP and ICP/MS Soils					
5708	solid	SW-846 3050B (Update III)	100 g G	Cool, 6°C	6 months
10637	solid	SW-846 3050B (Update IV)	100 g G	Cool, 6°C	6 months
Filtration for Dissolved Metals					
3277	aqueous	Not Applicable	250 mL P/G	Cool, 6°C	5 days Hg 28 days

Microbiology

Fecal by Membrane Filtration

11028	ew	9222 D-1997	125 mL P (sterile)	Cool, 6°C Na ₂ S ₂ O ₃	30 hours
11028	pw	9222 D-1997	125 mL P (sterile)	Cool, 6°C Na ₂ S ₂ O ₃	24 hours

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Microbiology (continued)					
Fecal by Membrane Filtration (continued)					
199	aqueous (NPDES)	9222 D-1997	125 mL P (sterile)	Cool, 6°C Na ₂ S ₂ O ₃	6 hours
11028	aqueous (non-NPDES)	9222 D-1997	125 mL P (sterile)	Cool, 6°C Na ₂ S ₂ O ₃	24 hours
11028	sludges	9222 D-1997	50 g Aseptic	Cool, 6°C	24 hours
Total Coliform/E. coli (Presence/Absence)					
6477	ew	9223 B-1997	125 mL P (sterile)	Cool, 6°C Na ₂ S ₂ O ₃	30 hours
6477	pw	9223 B-1997	125 mL P (sterile)	Cool, 6°C Na ₂ S ₂ O ₃	24 hours
6477	aqueous	9223 B-1997	125 mL P (sterile)	Cool, 6°C Na ₂ S ₂ O ₃	24 hours
6479	pool water	9223 B-1997	125 mL P (sterile)	Cool, 6°C Na ₂ S ₂ O ₃	24 hours
Total Coliform/E. coli (MPN quantitative - estimated number of organisms)					
8161	ew	9223 B-1997	125 mL P (sterile)	Cool, 6°C Na ₂ S ₂ O ₃	30 hours
8161	pw	9223 B-1997	125 mL P (sterile)	Cool, 6°C Na ₂ S ₂ O ₃	24 hours
8161	aqueous	9223 B-1997	125 mL P (sterile)	Cool, 6°C Na ₂ S ₂ O ₃	24 hours
Heterotrophic Plate Count					
<i>The countable range for bacteria is 30 to 300 CFU/mL. Samples expected to have higher bacteria levels can be diluted to obtain countable plates. Additional fees for dilutions will apply and range from \$10 to \$50 per sample.</i>					
307	ew	9215 B-1994	10 mL P (sterile)	Cool 6°C Na ₂ S ₂ O ₃	8 hours
307	pw	9215 B-1994	10 mL P (sterile)	Cool 6°C Na ₂ S ₂ O ₃	24 hours

Moisture

111	solid	2540 G-1997 EPA 160.3 modified	50 g G	Cool, 6°C	N.A.
7801	solid	2540 G-1997 EPA 160.3 modified	50 g G	Cool, 6°C	N.A.
7116/7119	solid	ASTM D2216-98	20 g G	Cool, 6°C	N.A.

Nitroaromatics and Nitramines (Explosives) by HPLC

1,2-Dinitrobenzene (1,2-DNB)	3-Nitrotoluene (3-NT)
1,3,5-Trinitrobenzene (1,3,5-TNB)	4-Amino-2,6-dinitrotoluene (4-Am-DNT)
1,3-Dinitrobenzene (1,3-DNB)	4-Nitrotoluene (4-NT)
1,4-Dinitrobenzene (1,4-DNB)	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)
1-Nitronaphthalene	Methyl-2,4,6-trinitrophenylnitramine (Tetryl)
2,4,6-Trinitrotoluene (2,4,6-TNT)	Nitrobenzene (NB)
2,4-Dinitrotoluene (2,4-DNT)	Nitroglycerin
2,6-Dinitrotoluene (2,6-DNT)	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	PETN
2-Nitrotoluene (2-NT)	

6916	aqueous	SW-846 8330	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
10595	aqueous	SW-846 8330A	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
6918	solid	SW-846 8330	100 g G	Cool, 6°C	14/40 days
10596	solid	SW-846 8330A	100 g G	Cool, 6°C	14/40 days

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
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Nitroaromatics and Nitramines (Explosives) by HPLC (continued)

1,3,5-Trinitrobenzene (1,3,5-TNB)	3-Nitrotoluene (3-NT)
1,3-Dinitrobenzene (1,3-DNB)	4-Amino-2,6-dinitrotoluene (4-Am-DNT)
2,4,6-Trinitrotoluene (2,4,6-TNT)	4-Nitrotoluene (4-NT)
2,4-Diamino-6-nitrotoluene	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)
2,4-Dinitrotoluene (2,4-DNT)	Methyl-2,4,6-trinitrophenylnitramine (Tetryl)
2,6-Diamino-4-nitrotoluene	Nitrobenzene (NB)
2,6-Dinitrotoluene (2,6-DNT)	Nitroglycerin
2-Amino-4,6-dinitrotoluene (2-Am-DNT)	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)
2-Nitrotoluene (2-NT)	PETN
3,5-Dinitroaniline	

13395	aqueous	SW-846 8330B	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
13413	solid	SW-846 8330B	100 g G	Cool, 6°C	14/40 days

Nitrogen

Ammonia (NH₃)

Selective Ion Electrode (ISE)

12677	aqueous	4500-NH ₃ D-1997 or EPA 350.3	500 mL P/G	Cool, 6°C H ₂ SO ₄ to pH <2	28 days
13000/13001	solid	EPA 350.1 mod	100 g G	Cool, 6°C	28 days

Distillation ISE

12679/4219	aqueous	4500-NH ₃ -1997	1000 mL P/G	Cool, 6°C H ₂ SO ₄ to pH <2	28 days
10222/10696	solid	EPA 350.3 modified	100 g G	Cool, 6°C	28 days

Distillation

221	aqueous	4500-NH ₃ B/C mod- 1997 or EPA 350.2	1000 mL P/G	Cool, 6°C H ₂ SO ₄ to pH <2	28 days
573	solid	4500-NH ₃ B/C mod- 1997 or EPA 350.2 modified	100 g G	Cool, 6°C	28 days

Un-Ionized Ammonia

2593/12151/12152	aqueous	SM 8010 F-1997	1000 mL P/G	Cool, 6°C H ₂ SO ₄ to pH <2	28 days
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Nitrate (Ion Chromatography)

368	aqueous	EPA 300.0 or SW-846 9056/A	2 × 40 mL P/G	Cool, 6°C	48 hours
7336/1352	solid	EPA 300.0	50 g G	Cool, 6°C	28 days

Nitrate (Ion Chromatography) (DoD only)

10700	aqueous	SW-846 9056/A	2 × 40 mL P/G	Cool, 6°C	48 hours
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Nitrite (Ion Chromatography)

1506	aqueous	EPA 300.0 or SW-846 9056/A	2 × 40 mL P/G	Cool, 6°C	48 hours
7334/1352	solid	EPA 300.0	50 g G	Cool, 6°C	28 days

Nitrite (Ion Chromatography) (DoD only)

10699	aqueous	SW-846 9056/A	2 × 40 mL P/G	Cool, 6°C	48 hours
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Nitrate (NO₃)/Nitrite (NO₂) (Cadmium Reduction)

219/220	aqueous	EPA 353.2	2 × 40 mL P/G	Cool, 6°C 1 - H ₂ SO ₄ to pH <2 1 - Unpreserved	48 hours/28 days
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Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time																
Nitrogen (continued)																					
Nitrite/Nitrate Total (combined result)																					
7882	aqueous	EPA 353.2	120 mL P/G	Cool, 6°C H ₂ SO ₄ to pH <2	28 days																
Organic (includes Ammonia and TKN)																					
223/221 217	aqueous	(Calculation) 4500-Norg-1997	1000 mL P/G	Cool, 6°C H ₂ SO ₄ to pH <2	28 days																
4235/573 1511	solid	(Calculation) 4500-Norg-1997	100 g G	Cool, 6°C	28 days																
Total Kjeldahl Nitrogen (TKN)																					
217	aqueous	EPA 351.2	500 mL P/G	Cool, 6°C H ₂ SO ₄ to pH <2	28 days																
1511	solid	EPA 351.2 modified	50 g G	Cool, 6°C	28 days																
Total Nitrogen (includes Total Nitrate/Nitrite and TKN)																					
6165/217/ 7882	aqueous	4500-N-1999	500 mL P/G	Cool, 6°C H ₂ SO ₄ to pH <2	28 days																
Total Organic Nitrogen (includes Ammonia and TKN)																					
12892/217/ 223	aqueous	EPA 350.1	500 mL P/G	Cool, 6°C H ₂ SO ₄ to pH <2	28 days																
Organic Acids (Volatile Fatty Acids)																					
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">Acetic</td> <td style="width: 25%;">Isovaleric</td> <td style="width: 25%;">Propionic</td> <td style="width: 25%;">Succinic</td> </tr> <tr> <td>Butyric</td> <td>Lactic</td> <td>Pyruvic</td> <td>Tartaric</td> </tr> <tr> <td>Citric</td> <td>Oxalic</td> <td>Quinic</td> <td>Valeric</td> </tr> <tr> <td>Formic</td> <td></td> <td></td> <td></td> </tr> </table>						Acetic	Isovaleric	Propionic	Succinic	Butyric	Lactic	Pyruvic	Tartaric	Citric	Oxalic	Quinic	Valeric	Formic			
Acetic	Isovaleric	Propionic	Succinic																		
Butyric	Lactic	Pyruvic	Tartaric																		
Citric	Oxalic	Quinic	Valeric																		
Formic																					
8843 DoD certification only	aqueous	SW-846 8015B	40 mL G	Cool, 6°C	14 days																
1273 DoD certification only	aqueous	SW-846 8015D	40 mL G	Cool, 6°C	14 days																
13947	aqueous	SW-846 8321B	40 mL G	Cool, 6°C	14 days																
Oxidation-Reduction Potential (ORP) or Eh																					
1821	aqueous/solid	ASTM D1498	250 mL P/G	Cool, 6°C	Analyze Immediately																
Oxygen, Dissolved																					
428	aqueous	4500-O G-2001 or EPA 360.1	300 mL G	No headspace	Analyze Immediately																
Paint Filter Liquid Test/Free Liquids Test																					
1820	aqueous/solid	SW-846 9095A/B	500 g G	N.A.	N.A.																
Particle Size/Grain Size																					
to 1 µm																					
7103	soil	ASTM D422	500 g G	Cool, 6°C	N.A.																
Perchlorate																					
6386	aqueous	SW-846 6850	50 mL P/G	Cool, 6°C	28 days																
6557	solid	SW-846 6850	100 g G	Cool, 6°C	28 days																

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
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Pesticides

4,4'-DDD	beta-BHC	Endosulfan Sulfate	Heptachlor
4,4'-DDE	Chlordane	Endrin	Heptachlor Epoxide
4,4'-DDT	delta-BHC	Endrin Aldehyde	Methoxychlor
Aldrin	Dieldrin	Endrin Ketone	Toxaphene
alpha-BHC	Endosulfan I	gamma-BHC (Lindane)	
alpha-Chlordane	Endosulfan II	gamma-Chlordane	

Additional compounds available by EPA 608:

alpha-Chlordane	Hexachlorobenzene (HCB)	Mirex	o,p'-DDE
Endrin Ketone		o,p'-DDD - NS*	o,p'-DDT
gamma-Chlordane			Telodrin

Additional compounds available by SW-846 8081:

Hexachlorobenzene (HCB)	Mirex	o,p'-DDE	Telodrin
Kepone	o,p'-DDD	o,p'-DDT	

Captan/Difolatan

2257	aqueous	SW-846 8081A	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
2253	solid	SW-846 8081A	100 g G	Cool, 6°C	14/40 days

Chlorinated (Organochlorine) Pesticides

7572	aqueous	EPA 608	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
13634	aqueous	EPA 608	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
177	aqueous	SW-846 8081A	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
14134	aqueous	SW-846 8081A	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
10738	solid	SW-846 8081A (microwave)	100 g G	Cool, 6°C	14/40 days
13237	tissue	SW-846 8081A/B	15 g G	Frozen	14/40 days
10589	aqueous	SW-846 8081B	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
14166	aqueous	SW-846 8081B	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
10590	solid	SW-846 8081B (microwave)	100 g G	Cool, 6°C	14/40 days

Chlordane only

180	aqueous	SW-846 8081A or EPA 608	2 × 1000 mL G (amber)	Cool, 6°C	7/14 days
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Connecticut Pesticides

Alachlor	Chlordane - NS	Endrin Aldehyde	Heptachlor
α-BHC	Dieldrin	Endrin Ketone	Methoxychlor
β-BHC	Endosulfan Sulfate	Endrin	p,p'-DDD
δ-BHC	Endosulfan I	HCB - *NS	p,p'-DDE
γ-BHC (Lindane)	Endosulfan II	Heptachlor Epoxide	p,p'-DDT
Aldrin			Toxaphene - NS

1954	aqueous	SW-846 8081A	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
1420	solid	SW-846 8081A	100 g G	Cool, 6°C	14/40 days

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Pesticides (continued)					
n-Methyl Carbamates					
	Aldicarb Aldicarb Sulfone Aldicarb Sulfoxide	Baygon Carbaryl (Sevin) Carbofuran		Carbofuran 3-OH Methiocarb	Methomyl Oxamyl (Vydate)
1340	aqueous	EPA 531.1 Rev 3.1	2 × 40 mL G	Na ₂ S ₂ O ₃ MCA to pH of 3 ± 0.2	28 days
1509	solid	SW-846 8318	100 g G	Cool, 6°C	7/40 days
10597	solid	SW-846 8318A	100 g G	Cool, 6°C	7/40 days
Organophosphate Pesticides					
	Bolstar Coumaphos Demeton-O Demeton-S Diazinon Dichlorvos Disulfoton	Dursban (Chlorpyrifos) EPN Ethion Ethoprop (Mocap) Ethyl Parathion Famphur Fensulfothion		Fenthion Guthion (Azinphos-methyl) Malathion Merphos Methyl Parathion Mevinphos Naled	Phorate (Thimet) Ronnel Stirophos Tokuthion Trichloronate Trithion
10410 or 12144	aqueous	SW-846 8141A or EPA 622	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
14200	aqueous	SW-846 8141A	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
10593	aqueous	SW-846 8141B	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
14229	aqueous	SW-846 8141B	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
10408	solid	SW-846 8141A	100 g G	Cool, 6°C	14/40 days
10594	solid	SW-846 8141B	100 g G	Cool, 6°C	14/40 days
TCLP					
950 or 10647	aqueous	SW-846 8081A or SW-846 8081B	1000 mL G	Cool, 6°C	7/40 days after leaching
950 or 10647	solid	SW-846 8081A or SW-846 8081B	100 g G	Cool, 6°C	7/40 days after leaching

PFAS

PFAS by LC/MS/MS

	4:2 Perfluorohexanesulfonate 6:2 Perfluorooctanesulfonate 8:2 Fluorotelomersulfonate 8:2 Perfluorodecanesulfonate 10:2 Perfluorododecanesulfonate n-Ethyl Perfluorooctanesulfonamidoacetic acid n-Methyl Perfluorooctanesulfonamidoacetic acid	Perfluorobutanesulfonate Perfluorobutanoic acid Perfluorodecanesulfonate Perfluorodecanoic acid Perfluorododecanesulfonate Perfluorododecanoic acid Perfluoroheptanesulfonate Perfluoroheptanoic acid		Perfluorohexanesulfonate Perfluorohexanoic acid Perfluorohexadecanoic acid Perfluorononanesulfonate Perfluorononanoic acid Perfluorooctadecanoic acid Perfluorooctanesulfonate	Perfluorooctanoic acid Perfluoropentanesulfonate Perfluoropentanoic acid Perfluorotetradecanoic acid Perfluorotridecanoic acid Perfluoroundecanoic acid
10954	aqueous	EPA 537	2 × 250 mL HDPE	Cool, 6°C Trizma	14/28 days
14070	pw	EPA 537	2 x 250 ml HDPE	Cool, 6°C Trizma	14/28 days
14027	solid	EPA 537 mod.	100 g P	Cool, 6°C	28/28 days

pH

12152/12151	aqueous	4500-H+B-2000 or EPA 150.1 or SW-846 9040B/C	250 mL P/G	Cool, 6°C	Analyze Immediately
394	solid	SW-846 9045C/D modified	50 g G	Cool, 6°C	N.A.

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
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Pharmaceutical Manufacturing Industry (PMI)

Direct Aqueous Injection

	Acetonitrile Diethylamine	Dimethyl Sulfoxide Ethanol	Methanol Methyl Cellosolve	n-Propanol Triethylamine
2366	aqueous	EPA 1671 Rev. A	3 × 40 mL G	Cool, 6°C if unpreserved 7 days If Na ₂ S ₂ O ₃ (no headspace) 7 days If HCl (no headspace) 14 days

GC/MS Volatiles

	1,2-Dichlorobenzene 1,2-Dichloroethane	Acetone Benzene	Chlorobenzene Chloroform	Methylene Chloride Toluene
3648	aqueous	EPA 524.2 Rev. 4.1	3 × 40 mL G	Cool, 6°C HCl to pH <2 ascorbic acid (no headspace) 14 days

Isotope Dilution (GC/MS)

	2-Propanol 4-Methyl-2-pentanone Ethyl Acetate Heptane	Hexane Isobutyraldehyde Isopropyl Acetate Isopropyl Ether	m-/p-Xylene Methyl formate n-Amyl Acetate n-Amyl Alcohol	n-Butyl Acetate o-Xylene tert-Butyl Alcohol Tetrahydrofuran
2394	aqueous	EPA 1666	3 × 40 mL G	Cool, 6°C HCl to pH<2 (no headspace) 14 days

Percent Solids

2365	aqueous	EPA 1666	120 mL G	Cool, 6°C	Analyze Immediately
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Phenolics

14002	aqueous	EPA 420.4	250 mL G	Cool, 6°C H ₂ SO ₄ to pH <2	28 days
14088	aqueous	SW-846 9066	250 mL G	Cool, 6°C H ₂ SO ₄ to pH <2	28 days
5912	solid	SW-846 9066	100 g G	Cool, 6°C	28 days

Phosphorus

Hydrolyzable Phosphorus

13463	aqueous	4500-P F-1999 or 4500-P-E-1999 or EPA 365.1	250 mL P/G	Cool, 6°C H ₂ SO ₄ to pH <2	28 days
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Ortho-Phosphate as P

226	aqueous	4500-P E-1999 or EPA 365.3	250 mL P/G	Filter on-site Cool, 6°C	48 hours
7337/1352	solid	EPA 300.0	50 g P/G	Cool, 6°C	28 days

Ortho-Phosphate as P (DoD only)

10703	aqueous	SW-846 9056/A	2 × 40 mL P/G	Filter on-site Cool, 6°C	48 hours
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Total as P

227	aqueous	4500-P F-1999 or EPA 365.1	250 mL P/G	Cool, 6°C H ₂ SO ₄ to pH <2	28 days
5893	solid	4500-P F-1999 or EPA 365.1	50 g G	Cool, 6°C	28 days

Total as PO₄

345	aqueous	EPA 365.1	250 mL P/G	Cool, 6°C H ₂ SO ₄ to pH <2	28 days
5894	solid	EPA 365.1	50 g G	Cool, 6°C	28 days

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Phosphorus (continued)					
Soluble as P (dissolved)					
1546	aqueous	EPA 365.1	250 mL P/G	Cool, 6°C H ₂ SO ₄ to pH <2	28 days
Picric Acid					
2265	aqueous	SW-846 8015B	250 mL P/G	Cool, 6°C	7/40 days
10709*	solid	SW-846 8015B	100 g G	Cool, 6°C	14/40 days

*Must be prearranged two weeks prior with the lab.

Polychlorinated Biphenyls (PCBs/Aroclors)

	Aroclor 1016 Aroclor 1221 Aroclor 1232		Aroclor 1242 Aroclor 1248		Aroclor 1254 Aroclor 1260		Aroclor 1262 Aroclor 1268 Total Aroclor	
	6030	aqueous	EPA 608	2 × 1000 mL G (amber)	Cool, 6°C	365/40 days		
14188	aqueous	EPA 608	2 × 250 mL G (amber)	Cool, 6°C	365/40 days			
10227	aqueous	SW-846 8082	2 × 1000 mL G (amber)	Cool, 6°C	365/40 days			
14169	aqueous	SW-846 8082	2 × 250 mL G (amber)	Cool, 6°C	365/40 days			
12013	aqueous	SW-846 8082 (low-level)	2 × 250 mL G (amber)	Cool, 6°C	365/40 days			
10591	aqueous	SW-846 8082A	2 × 1000 mL G (amber)	Cool, 6°C	365/40 days			
14184	aqueous	SW-846 8082A	2 × 250 mL G (amber)	Cool, 6°C	365/40 days			
12686	aqueous	SW-846 8082A (low-level)	2 × 250 mL G (amber)	Cool, 6°C	365/40 days			
10736	solid	SW-846 8082 (microwave)	100 g G	Cool, 6°C	365/40 days			
10885	solid	SW-846 8082A (microwave)	100 g G	Cool, 6°C	365/40 days			
13099	solid	SW-846 8082A (microwave)	100 g G	Cool, 6°C	365/40 days			
174	oil	SW-846 8082	12 mL G	N.A.	365/40 days			
12708	oil	SW-846 8082A	12 mL G	N.A.	365/40 days			
13236	tissue	SW-846 8082 (microwave)	100 g	Frozen	365/40 days			
13713	tissue	SW-846 8082A (microwave)	100 g	Frozen	365/40 days			
10906	wipe (hexane)	SW-846 8082 (microwave)	1 wipe	Cool, 6°C	365/40 days			
12718	wipe (hexane)	SW-846 8082A (microwave)	1 wipe	Cool, 6°C	365/40 days			

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time																				
Polychlorinated Biphenyls (PCBs/Aroclors) (continued)																									
Connecticut CTRCP PCBs																									
10227	aqueous	SW-846 8082	2 × 1000 mL G (amber)	Cool, 6°C	365/40 days																				
14169	aqueous	SW-846 8082	2 × 250 mL G (amber)	Cool, 6°C	365/40 days																				
10591	aqueous	SW-846 8082A	2 × 1000 mL G (amber)	Cool, 6°C	365/40 days																				
14184	aqueous	SW-846 8082A	2 × 250 mL G (amber)	Cool, 6°C	365/40 days																				
1030	solid	SW-846 8082	100 g G	Cool, 6°C	365/40 days																				
Polychlorinated Biphenyl Congeners (PCB Congeners)																									
12429	aqueous	EPA 1668C PCB congeners	2 × 1000 mL G (amber)	Cool, 6°C	365 days																				
12154	solid	EPA 1668C PCB congeners	100 g G (amber)	Cool, 6°C	365 days																				
13584	aqueous	EPA 1668A PCB congeners	2.5 L G	Cool, 6°C	365 days																				
13708	aqueous	EPA 1668A PCB congeners	2 × 1000 mL G (amber)	Cool, 6°C	365 days																				
13707	solid	EPA 1668A PCB congeners	100 g G (amber)	Cool, 6°C	365 days																				
Polychlorinated Biphenyl Homologs (PCB Homologs)																									
13729	aqueous	EPA 680	2 × 1000 mL G	Cool, 6°C	7 days																				
13716	solid	EPA 680	100 g G	Cool, 6°C	365 days																				
Polynuclear Aromatic Hydrocarbons (PAHs)																									
<table border="1"> <tr> <td>1-Methylnaphthalene*</td> <td>Benzo(a)anthracene</td> <td>Chrysene</td> <td>Indeno(1,2,3-cd)pyrene</td> </tr> <tr> <td>2-Methylnaphthalene*</td> <td>Benzo(a)pyrene</td> <td>Dibenz(a,h)anthracene</td> <td>Naphthalene</td> </tr> <tr> <td>Acenaphthene</td> <td>Benzo(b)fluoranthene</td> <td>Fluoranthene</td> <td>Phenanthrene</td> </tr> <tr> <td>Acenaphthylene</td> <td>Benzo(g,h,i)perylene</td> <td>Fluorene</td> <td>Pyrene</td> </tr> <tr> <td>Anthracene</td> <td>Benzo(k)fluoranthene</td> <td></td> <td></td> </tr> </table>						1-Methylnaphthalene*	Benzo(a)anthracene	Chrysene	Indeno(1,2,3-cd)pyrene	2-Methylnaphthalene*	Benzo(a)pyrene	Dibenz(a,h)anthracene	Naphthalene	Acenaphthene	Benzo(b)fluoranthene	Fluoranthene	Phenanthrene	Acenaphthylene	Benzo(g,h,i)perylene	Fluorene	Pyrene	Anthracene	Benzo(k)fluoranthene		
1-Methylnaphthalene*	Benzo(a)anthracene	Chrysene	Indeno(1,2,3-cd)pyrene																						
2-Methylnaphthalene*	Benzo(a)pyrene	Dibenz(a,h)anthracene	Naphthalene																						
Acenaphthene	Benzo(b)fluoranthene	Fluoranthene	Phenanthrene																						
Acenaphthylene	Benzo(g,h,i)perylene	Fluorene	Pyrene																						
Anthracene	Benzo(k)fluoranthene																								
*Can be added by request to any of the PAH analyses.																									
7804/2035	low-volume air modified	EPA TO-13A	XAD-2 Resin	N.A.	7 days																				
14249	aqueous	SW-846 8270C	2 × 250 mL G (amber)	Cool, 6°C	7/40 days																				
14250	aqueous	SW-846 8270D	2 × 250 mL G (amber)	Cool, 6°C	7/40 days																				
14243	aqueous	SW-846 8270C SIM	2 × 250 mL G (amber)	Cool, 6°C	7/40 days																				
14244	aqueous	SW-846 8270D SIM	2 × 250 mL G (amber)	Cool, 6°C	7/40 days																				
10724	solid	SW-846 8270C (microwave)	100 g G	Cool, 6°C	14/40 days																				
10726	solid	SW-846 8270D (microwave)	100 g G	Cool, 6°C	14/40 days																				
10725	solid	SW-846 8270C SIM (microwave)	100 g G	Cool, 6°C	14/40 days																				
12969	solid	SW-846 8270D SIM (microwave)	100 g G	Cool, 6°C	14/40 days																				

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
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Polynuclear Aromatic Hydrocarbons (PAHs) (continued)

Acenaphthene	Dibenz(a,h)anthracene	C1-Benzanthrene/chrysenes	C3-Benzathrene/chrysenes
Acenaphthylene	Fluoranthene	C1-Fluoranthrenes/pyrenes	C3-Fluorenes
Anthracene	Fluorene	C1-Fluorenes	C3-Naphthalenes
Benzo(a)anthracene	Indeno(1,2,3-cd)pyrene	C1-Naphthalenes	C3-Phenanthrenes/anthracenes
Benzo(a)pyrene	Naphthalene	C1-Phenanthrenes/anthracenes	C4-Benzathrene/chrysenes
Benzo(e)pyrene	Phenanthrene	C2-Benzathrene/chrysenes	C4-Naphthalenes
Benzo(b)fluoranthene	Perylene	C2-Fluorenes	C4-Phenanthrenes/anthracenes
Benzo(g,h,i)perylene	Pyrene	C2-Naphthalenes	
Benzo(k)fluoranthene		C2-Phenanthrenes/anthracenes	
Chrysene			

Alkylated PAHs and Biomarkers

10262	aqueous	SW-846 8270C SIM	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
10242	solid	SW-846 8270C SIM	100 g G	Cool, 6°C	14/40 days

Priority Pollutant Parameters

Volatiles

10371	aqueous	EPA 624	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
10335	aqueous	SW-846 8260B	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
11997	aqueous	SW-846 8260C	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
10237	solid	SW-846 8260B	See Soil Sampling	Cool, 6°C	14 days
11995	solid	SW-846 8260C	See Soil Sampling	Cool, 6°C	14 days

Volatiles Library Search

880	aqueous/solid	EPA 624 or SW-846 8260B/C		non-interpretative	15 peaks
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Acid/Base Neutral Extractables (BNAs or Semivolatiles)

10334	aqueous	EPA 625	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
14238	aqueous	EPA 625	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
14240	aqueous	SW-846 8270C	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
14242	aqueous	SW-846 8270D	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
10727	solid	SW-846 8270C (microwave)	100 g G	Cool, 6°C	14/40 days
10726	solid	SW-846 8270D (microwave)	100 g G	Cool, 6°C	14/40 days

Extractables Library Search

893	aqueous/solid	EPA 625 or SW-846 8270C/D		non-interpretative	25 peaks
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Pesticides/PCBs

7572/ 6030	aqueous	EPA 608	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days 365/40 days
13634/ 14188	aqueous	EPA 608	2 × 250 mL G (amber)	Cool, 6°C	7/40 days 365/40 days
177/ 10227	aqueous	SW-846 8081A/ SW-846 8082	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days 365/40 days
14134/ 14169	aqueous	SW-846 8081A/ SW-846 8082	2 × 250 mL G (amber)	Cool, 6°C	7/40 days 365/40 days
10589/ 10591	aqueous	SW-846 8081B/ SW-846 8082A	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days 365/40 days
14166/ 14184	aqueous	SW-846 8081B/ SW-846 8082A	2 × 250 mL G (amber)	Cool, 6°C	7/40 days 365/40 days

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Priority Pollutant Parameters (continued)					
Pesticides/PCBs (continued)					
10738/ 10736	solid	SW-846 8081A/ SW-846 8082 (microwave)	100 g G	Cool, 6°C	14/40 days 365/40 days
10590/ 10885	solid	SW-846 8081B/ SW-846 8082A (microwave)	100 g G	Cool, 6°C	14/40 days 365/40 days
Metals					
PPWAT	aqueous	SW-846 6010 B/C and SW-846 7471A	250 mL P	Cool, 6°C HNO ₃ to pH <2	6 months (Hg 28 days)
PPSOL	solid	SW-846 6010 B/C and SW-846 7471A/B	100 g G	Cool, 6°C	6 months (Hg 28 days)
Cyanide					
237 or 8255 12823	aqueous	EPA 335.4 or SW-846 9012A/B ASTM D 7511	500 mL P	Cool, 6°C NaOH to pH >12 ascorbic acid	14 days
5895	solid	SW-846 9012A/B	100 g G	Cool, 6°C	14 days
Phenolics					
14002 or 14088	aqueous	EPA 420.4 or 420.2 or SW-846 9066	250 mL G	Cool, 6°C H ₂ SO ₄ to pH <2	28 days
5912	solid	SW-846 9066	100 g G	Cool, 6°C	28 days
Dioxin (Qualitative Screen; as an add-on to BNA scan)					
382	aqueous	EPA 625 modified or SW-846 8270C modified		Cool, 6°C	7/40 days
1196	solid	SW-846 8270C modified		Cool, 6°C	14/40 days
Reactivity (Cyanide/Sulfide) (for Hazardous Waste Characteristics)					
1121/ 1123/ 1122	aqueous/solid	SW-846 Ch. 7.3/ SW-846 9012A mod./ SW-846 9034	100 g G	Cool, 6°C	N.A.
Residue					
Total (includes moisture)					
7400/111	solid	2540 G-1997	50 g G	Cool, 6°C	7 days
Total (includes moisture)					
521/6866	solid	2540 G-1997	50 g G	Cool, 6°C	7 days
Volatile (includes Total Residue)					
522/521/6866	solid	2540 G-1997	50 g G	Cool, 6°C	7 days
Fixed (includes Total and Volatile Residue)					
1029/521/522/ 6866	solid	2540 G-1997 or 2540 E-1997	50 g G	Cool, 6°C	7 days

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
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Semivolatile Organics

Some samples may require the utilization of a special cleanup technique, the addition of selected compounds to standard lists, or method development procedures. Please call for an individual quotation for these types of analyses.

1,1'-Biphenyl	3-Methylcholanthrene	Butyl Benzyl Phthalate	n-Nitrosodimethylaminen-
1,2,4,5-Tetrachlorobenzene	3-Nitroaniline	Caprolactam	Nitrosodi-n-butylamine
1,2,4-Trichlorobenzene	4,6-Dinitro-2-methylphenol	Carbazole	n-Nitrosodi-n-propylamine
1,2-Dichlorobenzene	4-Aminobiphenyl	Chlorobenzilate	n-Nitrosodiphenylamine ³
1,2-Diphenylhydrazine ²	4-Bromophenyl phenyl ether	Chrysene	n-Nitrosomethylethylamine
1,3,5-Trinitrobenzene	4-Chloroaniline	cis/trans-Diallate	n-Nitrosomorpholine
1,3-Dichlorobenzene	4-Chlorophenyl phenyl ether	Dibenz(a,h)anthracene	n-Nitrosopiperidine
1,3-Dinitrobenzene	4-Nitroaniline	Dibenzofuran	n-Nitrosopyrrolidine
1,4-Dichlorobenzene	4-Nitrophenol	Diethyl Phthalate	O,O,O-Triethyl
1,4-Naphthoquinone	4-Nitroquinoline-1-oxide	Dimethoate	phosphorothioate
1,4-Phenylenediamine	5-Nitro-o-toluidine	Dimethyl Phthalate	o-Cresol (2-Methylphenol)
1-Naphthylamine	7,12-Dimethylbenz(a)anthracene	Di-n-butyl Phthalate	o-Toluidine
2,2'-Oxybis(1-chloropropane)	Acenaphthene	Di-n-octyl Phthalate	p-(Dimethylamino)azobenzene
2,3,4,6-Tetrachlorophenol	Acenaphthylene	Diphenylamine ³	p-Chloro-m-cresol (4-chloro-3-
2,4,5-Trichlorophenol	Acetophenone	Ethyl Methanesulfonate	methylphenol)
2,4,6-Trichlorophenol	Aniline	Fluoranthene	p-Cresol (4-Methylphenol) ¹
2,4-Dichlorophenol	Anthracene	Fluorene	Pentachlorobenzene
2,4-Dimethylphenol	Atrazine ⁵	Hexachlorobenzene	Pentachloronitrobenzene
2,4-Dinitrophenol	Benzaldehyde ⁵	Hexachlorobutadiene	Pentachlorophenol
2,4-Dinitrotoluene	Benzidine	Hexachlorocyclopentadiene	Phenacetin
2,6-Dichlorophenol	Benzo(a)anthracene (1,2-	Hexachloroethane	Phenanthrene
2,6-Dinitrotoluene	Benzanthracene)	Hexachloropropene	Phenol
2-Acetylaminofluorene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Pronamide
2-Chloronaphthalene	Benzo(b)fluoranthene (3,4-	Isodrin	Pyrene
2-Chlorophenol	Benzofluoranthene)	Isophorone	Pyridine
2-Methylnaphthalene	Benzo(g,h,i)perylene	Isosafrole	Safrole
2-Naphthylamine	Benzo(k)fluoranthene	Methapyrilene	Tetraethyl dithiopyrophosphate
2-Nitroaniline	Benzyl Alcohol	Methyl Methanesulfonate	(Sulfotopp)
2-Nitrophenol	bis(2-Chloroethoxy)methane	Naphthalene	Thionazin
2-Picoline	bis(2-Chloroethyl)ether	Nitrobenzene	
3,3'-Dichlorobenzidine	bis(2-Chloroisopropyl)ether	n-Nitrosodiethylamine	
3,3'-Dimethylbenzidine	bis(2-Ethylhexyl)phthalate		

Additional compounds available by EPA 625:

1,1'-Biphenyl	2-Methylnaphthalene	a-Terpineol	n-Hexadecane
1,2,4,5-Tetrachlorobenzene	2-Methylphenol	Benzoic Acid	n-Nitrosodiethylamine
1,4-Dioxane	2-Nitroaniline	Benzyl Alcohol	n-Nitrosodi-n-butylamine
1-Methylphenanthrene	3-Nitroaniline	Carbazole	n-Nitrosopyrrolidine
2,3,4,6-Tetrachlorophenol	4-Chloroaniline	Dibenzofuran	n-Octadecane
2,3-Dichloroaniline	4-Methylphenol	Diphenyl Ether	n-Tetradecane
2,3-Dinitrotoluene	4-Nitroaniline	n-Decane	o-Toluidine
2,4,5-Trichlorophenol	Acetophenone	n-Docosane	Pentachlorobenzene
2,6-Dichlorophenol	Aniline	n-Eicosane	Pyridine

Additional compounds available by SW-846 8270C/D:

(2-Bromoethyl)benzene	4,4'-Methylenebis(2-chloroaniline)	Diphenyl Ether	N,N-Dimethyl acetamide
1,2,3,4-Tetrachlorobenzene ⁵	a,a-Dimethylphenethylamine ⁵	Disulfoton ⁵	N,N-Dimethyl formamide
1,2,3,4-Tetrahydronaphthalene ⁵	a-Methyl Styrene ⁵	Famphur ⁵	NDPA as diphenylamine
1,4-Dinitrobenzene	Aramite ⁵	Kepon	Octachlorosyrene
1,4-Dioxane	Benzenethiol ⁵	Methyl Parathion	Parathion
1-Chloro-4-Nitrobenzene	Benzoic Acid	Dibenz(a,h)acridine	Phenothiazine
1-Chloronaphthalene	Benzophenone ⁵	Dibenz(a,j)acridine	Phorate (Thimet)
1-Methylnaphthalene	Dinoseb	Indene	Phthalic anhydride
3-Chloroaniline			Quinoline

¹3-Methylphenol and 4-Methylphenol (m- and p-cresol) cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-Methylphenol (p-cresol) represents the combined total of both compounds.

²1,2-Diphenylhydrazine cannot be distinguished from azobenzene; therefore, the value reported represents the combined total of both compounds.

³n-Nitrosodiphenylamine decomposes to diphenylamine in the GC inlet; therefore, the value reported represents the combined total of both compounds.

⁴Dichlorobenzenes can be reported from either volatiles (624) or semivolatiles (625). The client MUST specify which method to use for reporting these parameters.

⁵Requires additional calibration standards and setup time.

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Semivolatile Organics (continued)					
Acid/Base Neutral Extractables (BNAs or Semivolatiles)					
10334	aqueous	EPA 625	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
14238	aqueous	EPA 625	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
14240	aqueous	SW-846 8270C	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
14239 (extended list)	aqueous	SW-846 8270C	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
14242	aqueous	SW-846 8270D	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
14241 (extended list)	aqueous	SW-846 8270D	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
10727	solid	SW-846 8270C (microwave)	100 g G	Cool, 6°C	14/40 days
10723 (extended list)	solid	SW-846 8270C (microwave)	100 g G	Cool, 6°C	14/40 days
10726	solid	SW-846 8270D (microwave)	100 g G	Cool, 6°C	14/40 days
Drinking Water					
10333	pw	EPA 525.2 Rev. 2.0	2 × 1000 mL G (amber)	Cool, 6°C HCl to pH <2 Na ₂ SO ₃	14/30 days
Selective Ion Monitoring					
14243	aqueous	SW-846 8270C SIM	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
14244	aqueous	SW-846 8270D SIM	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
14243 (extended list)	aqueous	SW-846 8270C SIM	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
10725	solid	SW-846 8270C SIM (microwave)	100 g G	Cool, 6°C	14/40 days
12969	solid	SW-846 8270D SIM (microwave)	100 g G	Cool, 6°C	14/40 days
TCLP					
14251	aqueous	SW-846 8270C	250 mL G (amber)	Cool, 6°C	7/40 days after leaching
14252	aqueous	SW-846 8270D	250 mL G (amber)	Cool, 6°C	7/40 days after leaching
14251	solid	SW-846 8270C	100 g G (amber)	Cool, 6°C	7/40 days after leaching
14252	solid	SW-846 8270D	100 g G (amber)	Cool, 6°C	7/40 days after leaching
Tetraethyl Lead					
4221	solid	SW-846 8270C	100 g G	Cool, 6°C	14/40 days
Tetraethyl Lead/Tetramethyl Lead					
4220	aqueous	SW-846 8270C	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days

Library Search

Available on all analyses in this grouping

893	aqueous/solid	EPA 625 or SW-846 8270C/D		Non-Interpretive – 25 peaks
885	aqueous/solid	EPA 625 or SW-846 8270C/D		Non-Interpretive – 15 peaks

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Semivolatile Organics (continued)					
Library Search (continued)					
886	aqueous/solid	EPA 625 or SW-846 8270C/D		Interpretive – 25 peaks	
887	aqueous/solid	EPA 625 or SW-846 8270C/D		Interpretive – 15 peaks	
Silica (Dissolved, colorimetric) SiO₂					
559	aqueous	4500-SiO ₂ C-1997 or EPA 370.1	250 mL P	Cool, 6°C	28 days
Solids					
Total					
203	aqueous	2540 B-1997 or G-1997 or EPA 160.3	250 mL P/G	Cool, 6°C	7 days
Fixed (includes Total Solids)					
204/203	aqueous	2540 E-1997 or G-1997 or EPA 160.4	250 mL P/G	Cool, 6°C	7 days
Volatile (includes Total and Fixed Solids)					
205/203/204	aqueous	2540 E-1997 or G-1997 or EPA 160.4	250 mL P/G	Cool, 6°C	7 days
Total Dissolved Solids (TDS)					
212	aqueous	2540 C-1997 or EPA 160.1	500 mL P/G	Cool, 6°C	7 days
Fixed (includes Dissolved Solids)					
210/203/204/ 207/10457	aqueous	2540 E-1997 or EPA 160.4	1500 mL P/G	Cool, 6°C	7 days
Volatile (includes Dissolved and Fixed Solids)					
211/210/203/ 204/207/209/ 10457	aqueous	2540 E-1997 or EPA 160.4	1500 mL P/G	Cool, 6°C	7 days
Total Dissolved Solids (state-specific waters)					
6649	aqueous	2540 C-1997	500 mL P/G	Cool, 6°C	7 days
<i>Use this analysis for the following: California, Colorado, Connecticut, Florida, Hawaii, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Missouri, Montana, Nevada, New Hampshire, New Jersey, New York, North Dakota, Oregon, Pennsylvania, Rhode Island, Tennessee, Texas, Utah, Vermont, Virginia, Washington, and Wyoming.</i>					
Total Suspended Solids (TSS)					
10457	aqueous	2540 D-1997	1500 mL P/G	Cool, 6°C	7 days
Fixed (includes Suspended Solids)					
207/10457	aqueous	2540 E-1997 or EPA 160.4	1500 mL P/G	Cool, 6°C	7 days
Volatile (includes Suspended Solids and Fixed Solids)					
208/10457/207	aqueous	2540 E-1997 or EPA 160.4	1500 mL P/G	Cool, 6°C	7 days
Total Dissolved Solids (calculation includes Total and Suspended Solids)					
209/203/10457	aqueous	Calculation	1750 mL P/G	Cool, 6°C	7 days

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Solids (continued)					
Total Suspended Solids (state-specific waters)					
13858	aqueous	2540 D-1997	1500 mL P/G	Cool, 6°C	7 days
<i>Use this analysis for the following: California, Colorado, Connecticut, Florida, Hawaii, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Missouri, Montana, Nevada, New Hampshire, New Jersey, New York, North Dakota, Oregon, Pennsylvania, Rhode Island, Tennessee, Texas, Utah, Vermont, Virginia, Washington, and Wyoming.</i>					
Settleable					
215	aqueous	2540 F-1997 or EPA 160.5	1000 mL P/G	Cool, 6°C	48 hours
Specific Conductance					
12146	aqueous	2510 B-1997 or EPA 120.1 or SW-846 9050A	250 mL P/G	Cool, 6°C	28 days
Specific Gravity					
1443	aqueous	2710 F-1997	100 g P/G	N.A.	N.A.
Sulfate					
Turbidimetric (Not approved for NPDES)					
1125	aqueous	EPA 375.4	250 mL P/G	Cool, 6°C	28 days
Ion Chromatography (NPDES)					
228	aqueous	EPA 300.0 or SW-846 9056/A	2 × 40 mL P/G	Cool, 6°C	28 days
7338/1352	solid	EPA 300.0	50 g G	Cool, 6°C	28 days
Ion Chromatography (DoD only)					
10698	aqueous	SW-846 9056/A	2 × 40 mL P/G	Cool, 6°C	28 days
Sulfide					
Titrimetric					
1333	aqueous	4500-S ₂ F-2000 or EPA 376.1	500 mL G	Cool, 6°C NaOH, ZnAc (no headspace)	7 days
Colorimetric					
230	aqueous	4500-S ₂ D-2000 or EPA 376.2	250 mL G	Cool, 6°C NaOH, ZnAc (no headspace)	7 days
Dissolved					
10499	aqueous	4500-S ₂ D-2000 or EPA 376.2	250 mL G	Cool, 6°C NaOH (no headspace)	7 days
Sulfide as H ₂ S (calculation includes Dissolved Sulfide, pH, Specific Conductance)					
10293/12152/ 10499/12146	aqueous	SM18 4500-S ₂ F	250 mL G	Cool, 6°C NaOH (no headspace)	7 days
Sulfite					
229	aqueous	4500-SO ₃ B-2000 or EPA 377.1	250 mL P/G	Cool, 6°C EDTA (no headspace)	Analyze Immediately
Surfactants (MBAS)					
225	aqueous	5540 C-2000 or EPA 425.1	250 mL P/G	Cool, 6°C	48 hours

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Target Compound List					
Pesticides and PCBs					
177/ 10227	aqueous	SW-846 8081A/ SW-846 8082	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days 365/40 days
14134/ 14169	aqueous	SW-846 8081A/ SW-846 8082	2 × 250 mL G (amber)	Cool, 6°C	7/40 days 365/40 days
10589/ 10591	aqueous	SW-846 8081B/ SW-846 8082A	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days 365/40 days
14166/ 14184	aqueous	SW-846 8081B/ SW-846 8082A	2 × 250 mL G (amber)	Cool, 6°C	7/40 days 365/40 days
10738/ 10736	solid	SW-846 8081A/ SW-846 8082 (microwave)	100 g G	Cool, 6°C	14/40 days 365/40 days
10590/ 10885	solid	SW-846 8081B/ SW-846 8082A (microwave)	100 g G	Cool, 6°C	14/40 days 365/40 days
13237 13236	tissue	SW-846 8081A/B SW-846 8082 (microwave)	15 g	Frozen	14/40 days 365/40 days
13237 13713	tissue	SW-846 8081A/B SW-846 8082A (microwave)	15 g	Frozen	14/40 days 365/40 days
Semivolatiles					
14240	aqueous	SW-846 8270C	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
14242	aqueous	SW-846 8270D	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
10727	solid	SW-846 8270C (microwave)	100 g G	Cool, 6°C	14/40 days
10726	solid	SW-846 8270D (microwave)	100 g G	Cool, 6°C	14/40 days
Volatiles					
10335	aqueous	SW-846 8260B	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
11997	aqueous	SW-846 8260C	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
10237	solid	SW-846 8260B	<i>See Soil Sampling</i>	Cool, 6°C	14 days
11995	solid	SW-846 8260C	<i>See Soil Sampling</i>	Cool, 6°C	14 days

TCLP Parameters

If a TCLP leachate has incompatible or multiple liquid layers, the layers will be analyzed separately and the results will be mathematically combined to yield a volume-weighted average concentration. There will be additional fees to analyze the incompatible liquid layers. If a sample needs particle-size reduction (crushing or grinding) to meet the TCLP size requirement, additional fees will be incurred.

TCLP Non-volatile Extraction					
947	solid	SW-846 1311	200 g G	Cool, 6°C	14 days
TCLP Zero Headspace Extraction (ZHE)					
946	solid	SW-846 1311	60 g G	Cool, 6°C (no headspace)	14 days
75	solid	SW-846 1311	25 g EnCore	Cool, 0°C	48 hours (frozen)
TCLP Filtration (for aqueous sample containing <0.5% solids)					
1339	aqueous		Sample size is determined by analysis list	Cool, 6°C	14 days

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
TCLP Parameters (continued)					
TCLP Inorganics					
TLNVM	aqueous	SW-846 6010 B/C and SW-846 7470	250 mL P	Cool, 6°C	6 months after leaching (Hg 28 days)
	HWNO¹ and contaminant		Parameter	CAS No.²	Regulatory Level (mg/L)
	D004		Arsenic	7440-38-2	5.0
	D005		Barium	7440-39-3	100.0
	D006		Cadmium	7440-43-9	1.0
	D007		Chromium	7440-47-3	5.0
	D008		Lead	7439-92-1	5.0
	D009		Mercury	7439-97-6	0.2
	D010		Selenium	7782-49-2	1.0
	D011		Silver	7440-22-4	5.0
TCLP Pesticides/Herbicides					
950/ 952	aqueous	SW-846 8081A/ SW-846 8151A	1000 mL G (amber)	Cool, 6°C	7/40 days after leaching
10647/952	aqueous	SW-846 8081B/ SW-846 8151A	1000 mL G (amber)	Cool, 6°C	7/40 days after leaching
	HWNO¹ and contaminant		Parameter	CAS No.²	Regulatory Level (mg/L)
	D020		Chlordane	57-74-9	0.03
	D012		Endrin	72-20-8	0.02
	D031		Heptachlor (and it's Epoxide)	76-44-8	0.008
	D013		Lindane	58-89-9	0.4
	D014		Methoxychlor	72-43-5	10.0
	D015		Toxaphene	8001-35-2	0.5
	HWNO¹ and contaminant		Parameter	CAS No.²	Regulatory Level (mg/L)
	D016		2,4-D	94-75-7	10.0
	D017		2,4,5-TP (Silvex)	93-72-1	1.0
TCLP Semivolatiles					
14251	aqueous	SW-846 8270C	1000 mL G (amber)	Cool, 6°C	7/40 days after leaching
14252	aqueous	SW-846 8270D	1000 mL G (amber)	Cool, 6°C	7/40 days after leaching
	HWNO¹ and contaminant		Parameter	CAS No.²	Regulatory Level (mg/L)
	D027		1,4-Dichlorobenzene	106-46-7	7.5
	D041		2,4,5-Trichlorophenol	95-95-4	400.0
	D042		2,4,6-Trichlorophenol	88-06-2	2.0
	D030		2,4-Dinitrotoluene	121-14-2	0.13
	D023		2-Methylphenol	95-48-7	200.0 ³
	D024		3-Methylphenol*	108-39-4	200.0 ³
	D025		4-Methylphenol*	106-44-5	200.0 ³
	D032		Hexachlorobenzene	118-74-1	0.13
	D033		Hexachlorobutadiene	87-68-3	0.5
	D034		Hexachloroethane	67-72-1	3.0
	D036		Nitrobenzene	98-95-3	2.0
	D037		Pentachlorophenol	87-86-5	100.0
	D038		Pyridine	110-86-1	5.0

*3- and 4-Methylphenol cannot be differentiated.

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
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TCLP Parameters (continued)

TCLP Volatiles					
3636	aqueous	SW-846 8260B	4 × 40 mL G	Cool, 6°C (no headspace)	14 days after leaching
HWNO ¹ and contaminant		Parameter	CAS No. ²	Regulatory Level (mg/L)	
	D029	1,1-Dichloroethene	75-35-4	0.7	
	D028	1,2-Dichloroethane	107-06-2	0.5	
	D035	2-Butanone (MEK)	78-93-3	200.0	
	D018	Benzene	71-43-2	0.5	
	D019	Carbon Tetrachloride	56-23-5	0.5	
	D021	Chlorobenzene	108-90-7	100.0	
	D022	Chloroform	67-66-3	6.0	
	D039	Tetrachloroethene	127-18-4	0.7	
	D040	Trichloroethene	79-01-6	0.5	
	D043	Vinyl Chloride	75-01-4	0.2	

¹Hazardous Waste Identification Number

²Chemical Abstracts Service Registry Number

³If *o*-, *m*-, and *p*-Cresol concentrations cannot be differentiated, the total cresol concentration is used. The regulatory level for total cresol is 200 mg/L.

Source: Federal Register, June 29, 1999

The EPA in a final rule published in the November 24, 1992, Federal Register, p. 55114, removes the requirement to correct results on the basis of the recovery of the spiked sample. Metals analysis will use the method of standard additions to quantify the result as required in the TCLP Regulation.

If quantitation limits less than the MCL for water are required for the analysis of the organic phase, alternative methods can be provided. Please contact us to discuss these options. Additional charges may apply.

Required Volumes for TCLP/SPLP Extraction

Matrix	Metals	Volatiles	Semivolatiles	Pesticides/Herbicides	Full TCLP
Aqueous (<0.5% solids)	1 liter	4 × 40 mL	1 liter	1 liter	3 liters
Solvent/Oil*	2 liters	500 mL	2 liters	2 liters	6 liters
Sludge/Aqueous (>0.5% solids)	500 mL	125 mL	1 liter	1 liter	2 liters
Solid/Soil**	200 g	100 g	200 g	200 g	300 g
Solid (in EnCore Sampler)		3 × 25 g			

*Depending upon the % solids, this sample matrix may result in a multiple phase leachate.

**This category would include any nonfilterable waste (i.e., rags or bag filters).

Holding Times for TCLP/SPLP

	From field collection to TCLP or SPLP extraction	From TCLP or SPLP extraction to complete analysis
Volatiles	14 days	14 days
Semivolatiles	14 days	7/40 days
Pesticides and Herbicides	14 days	7/40 days
Mercury	28 days	28 days
All other metals	180 days	180 days

1,2,3-Trichloropropane (TCP)

7934	aqueous	EPA 504.1	2 × 40 mL G	Cool, 6°C Na ₂ S ₂ O ₃ (no headspace)	14 days/24 hours
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Turbidity

12145	aqueous	EPA 180.1 (1993)	250 mL P/G	Cool, 6°C	48 hours
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Upload Chromatograms

12153	This analysis number is to be used when you have additional chromatograms that need to be added to a group BEFORE printing/release. It has a "T" suffix on the end of the group PDF. This acts like a 7615 and will not let the groups print until these have been uploaded to eLIMS-EP and the scan completed and verified by the uploader. Generally this is a no price analysis, but a price can be added as needed.				
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Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
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Volatile Organics (continued)

Additional compounds available by SW-846 8260B:

1,1-Dichloropropane ²	2-Propanol	Diethylbenzene (total)	n-Butylbenzene
1,2,3-Trimethylbenzene	4-Chlorotoluene	di-Isopropyl ether	n-Heptane
1,2,4-Trimethylbenzene	Benzyl Chloride	Ethanol	n-Hexane
1,2-Dichloroethene (total)	Bromobenzene	Ethyl Acetate	n-Pentane
1,2-Diethylbenzene	Butyl Acetate	Ethyl Ether	n-Propyl Acetate
1,3,5-Trimethylbenzene	C4-C10 TPH GRO	Ethyl Methacrylate	n-Propylbenzene
1,3-Dichloropropane	C4-C12 TPH GRO	Ethyl t-butyl ether	p-Isopropyltoluene
1,3-Dichloropropene (total)	C5-C12 TPH GRO	Freon 123a	sec-Butylbenzene
1,3-Diethylbenzene	C6-C10 TPH GRO	Freon 133a	t-Amyl Methyl Ether
1,4-Diethylbenzene	C6-C12 TPH GRO	Hexachlorobutadiene	t-Butyl Alcohol
2,2'-Dichloropropane	Chlorotrifluoroethene	Isopropyl acetate	tert-Butylbenzene
2-Methylnaphthalene	Cyclohexanone	Naphthalene	Tetrahydrofuran
2-Nitropropane	Dichlorofluoromethane	n-Butanol	

¹Dichlorobenzenes can be reported from either volatiles (624) or semivolatiles (625). The client MUST specify which method to use for reporting these parameters.

²Requires additional calibration standards and setup time.

³Requires unpreserved vials; is second curve.

Appendix I

10371	aqueous	EPA 624	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
10335	aqueous	SW-846 8260B	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
11997	aqueous	SW-846 8260C	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
10237	solid	SW-846 8260B	See Soil Sampling	Cool, 6°C	14 days
11995	solid	SW-846 8260C	See Soil Sampling	Cool, 6°C	14 days

1,4-Dioxane by Isotope Dilution SIM

Seven (7) days advance notice is required.

527	aqueous	SW-846 8260B SIM or EPA 1624 Rev. B mod.	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
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Drinking Water

3648	pw	EPA 524.2	4 × 40 mL G	Cool, 6°C HCl to pH <2 ascorbic acid (no headspace)	14 days
3648	pw	EPA 524.2 Rev. 4.1	4 × 40 mL G	Cool, 6°C HCl to pH <2 ascorbic acid (no headspace)	14 days
3648	pw	EPA 524.2 (regulated list only)	3 × 40 mL G	Cool, 6°C HCl to pH <2 ascorbic acid (no headspace)	14 days
11017 (1,2,3-trichloropropane only)	pw	EPA 524M	3 × 40 mL G	Cool, 6°C HCl to pH <2 ascorbic acid (no headspace)	14 days

Trihalomethanes (THM)

	Bromodichloromethane	Bromoform	Chloroform	Dibromochloromethane
3648	pw	EPA 524.2	3 × 40 mL G	Cool, 6°C HCl to pH <2 ascorbic acid (no headspace)

Selective Ion Monitoring

6008	aqueous	SW-846 8260B SIM	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
12030	aqueous	SW-846 8260C SIM	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Volatile Organics (continued)					
TCLP					
3636	aqueous	SW-846 8260B	4 × 40 mL G	Cool, 6°C (no headspace)	14 days after leaching
3636	solid	SW-846 8260B	60 g G	Cool, 6°C (no headspace)	14 days after leaching
3636	solid	SW-846 8260B	25 g EnCore	Cool, 0°C	48 hours (Frozen)
Volatile Organics					
10335	aqueous	SW-846 8260B	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
11997	aqueous	SW-846 8260C	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
10237	solid	SW-846 8260B	<i>See Soil Sampling</i>	Cool, 6°C	14 days
11995	solid	SW-846 8260C	<i>See Soil Sampling</i>	Cool, 6°C	14 days
Volatiles by 25-mL Purge					
2898	aqueous	SW-846 8260B	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
11996	aqueous	SW-846 8260C	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
Volatiles by 6200B (25-mL Purge)					
10460	aqueous	SW-846 6200B	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
Library Search - Available on all analyses in this grouping					
890	aqueous/solid	EPA 624 or EPA 524.2 or SW-846 8260B/C			Non-Interpretive – 10 peaks
880	aqueous/solid	EPA 624 or EPA 524.2 or SW-846 8260B/C			Non-Interpretive – 15 peaks
12028	aqueous/solid	EPA 624 or EPA 524.2 or SW-846 8260B/C			Non-Interpretive – 20 peaks
882	aqueous/solid	EPA 624 or EPA 524.2 or SW-846 8260B/C			Interpretive – 10 peaks
884	aqueous/solid	EPA 624 or EPA 524.2 or SW-846 8260B/C			Interpretive – 15 peaks
12027	aqueous/solid	EPA 624 or EPA 524.2 or SW-846 8260B/C			Interpretive – 20 peaks

Drinking Water Regulations

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
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National Primary Drinking Water Regulations

Volatile Organic Chemicals

Compound	MCL (mg/L)	Compound	MCL (mg/L)
1,1-Dichloroethene	0.007	cis-1,2-Dichloroethene	0.07
1,1,1-Trichloroethane	0.2	Dichloromethane	0.005
1,1,2-Trichloroethane	0.005	Ethylbenzene	0.7
1,2-Dichlorobenzene (o)	0.6	Styrene	0.1
1,2-Dichloroethane	0.005	Tetrachloroethene	0.005
1,2-Dichloropropane	0.005	Toluene	1
1,2,4-Trichlorobenzene	0.07	trans-1,2-Dichloroethene	0.1
1,4-Dichlorobenzene (p)	0.075	Trichloroethene	0.005
Benzene	0.005	Vinyl Chloride	0.002
Carbon Tetrachloride	0.005	Xylenes (total)	10
Chlorobenzene	0.1		

Volatiles

1,1-Dichloroethene	1,2,4-Trichlorobenzene	cis-1,2-Dichloroethene	Toluene
1,1,1-Trichloroethane	1,4-Dichlorobenzene (p)	Dichloromethane	trans-1,2-Dichloroethene
1,1,2-Trichloroethane	Benzene	Ethylbenzene	Trichloroethene
1,2-Dichlorobenzene (o)	Carbon Tetrachloride	Styrene	Vinyl Chloride
1,2-Dichloroethane	Chlorobenzene	Tetrachloroethene	Xylenes (total)
1,2-Dichloropropane			

3648	pw	EPA 524.2	4 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
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Synthetic Organic Chemicals

Compound	MCL (mg/L)	Compound	MCL (mg/L)
2,3,7,8-TCDD (dioxin)	3E-08	Heptachlor	0.0004
Alachlor (Lasso)	0.002	Heptachlor Epoxide	0.0002
Atrazine	0.003	Hexachlorobenzene	0.001
Benzo(a)pyrene	0.0002	Hexachlorocyclopentadiene	0.05
Carbofuran	0.04	Lindane	0.0002
Chlordane	0.002	Methoxychlor	0.04
Di(2-ethylhexyl)adipate	0.4	Oxamyl (Vydate)	0.2
Di(2-ethylhexyl)phthalate	0.006	PCBs	0.0005
Dibromochloropropane (DBCP)	0.0002	Simazine	0.004
Endrin	0.002	Toxaphene	0.003
Ethylene dibromide (EDB)	0.00005		

DBCP/EDB

Dibromochloropropane (DBCP)	Ethylene dibromide (EDB)
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1034	pw	EPA 504.1	2 × 40 mL G	Cool, 6°C Na ₂ S ₂ O ₃	14 days/24 hours
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n-Methyl Carbamates

Carbofuran	Oxamyl (Vydate)
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1340	pw	EPA 531.1	2 × 40 mL G	Na ₂ S ₂ O ₃ MCA to pH of 3 ± 0.2	28 days
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Semivolatiles

Alachlor (Lasso)	Di(2-ethylhexyl)adipate	Hexachlorocyclopentadiene	Methoxychlor
Atrazine	Di(2-ethylhexyl)phthalate	Lindane	Simazine
Benzo(a)pyrene			Toxaphene

10333	pw	EPA 525.2 Rev. 2.0	2 × 1000 mL G (amber)	Cool, 6°C HCl to pH <2 Na ₂ SO ₃	14/30 days
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Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
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National Primary Drinking Water Regulations *(continued)*

TCDD

2,3,7,8-TCDD (dioxin)

12935	pw	EPA 1613B or SW-846 8290A	2 × 1000 mL G	Cool, 6°C	1 year
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Synthetic Organic Chemicals – Not Offered

Compound	MCL (mg/L)	Compound	MCL (mg/L)
2,4,5-TP (Silvex)	0.05	Endothall	0.1
2,4-D	0.07	Epichlorohydrin	TT
Acrylamide	TT	Glyphosate	0.7
Dalapon	0.2	Pentachlorophenol	0.001
Dinoseb	0.007	Picloram	0.5
Diquat	0.02		

TT - Treatment Technique

Disinfection Byproducts

Total trihalomethanes

Compound	MCL (mg/L)
Total trihalomethanes	0.08

(Bromoform, Bromodichloromethane, Chloroform, Chlorodibromomethane)

3648	pw	EPA 524.2	3 × 40 mL G	Cool, 6°C HCl to pH <2 ascorbic acid (no headspace)	14 days
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Disinfection Byproducts – Not offered

Compound	MCL (mg/L)	Compound	MCL (mg/L)
Bromate	0.01	Haloacetic acids	0.06
Chlorite	1.0		

Inorganic Chemicals

Compound	MCL (mg/L)	Compound	MCL (mg/L)
Antimony	0.006	Fluoride	4*
Arsenic	0.01	Lead	0.015*
Barium	2	Mercury	0.002
Beryllium	0.004	Nickel	No MCL
Cadmium	0.005	Nitrate (as N)	10
Chromium	0.1	Nitrite (as N)	1
Copper	1.3*	Selenium	0.05
Cyanide	0.2	Thallium	0.002

*The PA MCL is 1.0 mg/L for copper, 2 mg/L for fluoride, and 0.005 mg/L for lead.

For lead and copper rule samples, EPA requires the first liter drawn (6-hour minimum standing time) to be analyzed.

Metals by ICP

Barium	Chromium
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pw	EPA 200.7	250 mL P/G	Cool, 6°C HNO ₃ to pH <2	6 months Hg 28 days
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Metals by ICP/MS

Antimony	Beryllium	Copper	Selenium
Arsenic	Cadmium	Lead	Thallium

pw	EPA 200.8	250 mL P/G	Cool, 6°C HNO ₃ to pH <2	6 months
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Mercury by Cold Vapor

259	pw	EPA 245.1 Rev 3	250 mL P/G	Cool, 6°C HNO ₃ to pH <2	28 days 28 days
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Total Cyanide

237/492	pw	EPA 335.4	250 mL P	Cool, 6°C NaOH to pH >12 ascorbic acid	14 days
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Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
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National Primary Drinking Water Regulations *(continued)*

Fluoride					
12678	pw	4500-F C-1997 or EPA 340.2	100 mL P	Cool, 6°C	28 days

Nitrate/Nitrite					
219/220	pw	EPA 353.2	2 × 40 mL P/G	Cool, 6°C 1 - H ₂ SO ₄ to pH <2 1 - Unpreserved	48 hours

Inorganic Chemicals – Not Offered

Compound	MCL (MFL)
Asbestos	7

MFL – million fibers per liter

Microbiological Contaminants

Compound	MCL (mg/L)	Compound	MCL (mg/L)
Total Coliforms & E. coli	5% per month	Heterotrophic Plate Count	<500 colonies/mL
Fecal Coliforms	MCL		

Total Coliforms and E. coli					
6477	pw	9223 B-1997	125 mL P (sterile)	Cool, 6°C Na ₂ S ₂ O ₃	24 hours

Fecal Coliforms					
11028	pw	9222 D-1997	125 mL P (sterile)	Cool, 6°C Na ₂ S ₂ O ₃	24 hours

Heterotrophic Plate Count					
307	pw	9215 B-1994	10 mL P (sterile)	Cool 6°C Na ₂ S ₂ O ₃	24 hours

Microbiological Contaminants – Not Offered

Compound	MCL (mg/L)	Compound	MCL (mg/L)
Cryptosporidium	TT	Legionella	TT
Giardia lamblia	TT	Viruses (enteric)	TT

TT – treatment technique

Turbidity

Compound	MCL (NTU)
Turbidity	0.3-1.0

12145	pw	EPA 180.1 (1993)	100 mL P/G	Cool, 6°C	48 hours
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NTU - nephelometric turbidity units

Radionuclides - Not offered

Compound	MCL	Compound	MCL
Gross alpha	15 pCi/L	Radium 226 and 228	5 pCi/L
Gross beta	4 mrem	Uranium	30 µg/L

Disinfectants – Not offered

Compound	MRDL (mg/L)	Compound	MRDL (mg/L)
Chlorine	4.0	Chlorine dioxide	0.8
Chloramine	4.0		

MRDL – maximum residual disinfectant level

National Secondary Drinking Water Regulations

Secondary Contaminants

Compound	MCL (mg/L)	Compound	MCL (mg/L)
Aluminum	0.05-0.2	Iron	0.3
Chloride	250	Manganese	0.05
Color	15 color units	pH	6.5-8.5
Corrosivity	Noncorrosive	Silver	0.10
Copper	1.0*	Sulfate	250
Fluoride	2.0*	Total Dissolved Solids)	500
Foaming agents	0.5	Zinc	5

*Not required in PA.

Metals by ICP

Aluminum Copper	Iron	Manganese	Silver Zinc
pw	EPA 200.7	250 mL P/G	Cool, 6°C HNO ₃ to pH <2 6 months Hg 28 days

Anions by IC

Chloride	Sulfate
224 (Chloride) 228 (Sulfate)	pw EPA 300.0 50 mL P/G Cool, 6°C 28 days

Color

277	pw	2120 B-2001 or EPA 110.2	100 mL P/G	Cool, 6°C	48 hours
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Corrosivity (Langelier Index)

576/12152/12150/ 12707/212/1750	pw	2330 B-1993	1000 mL P/G	Cool, 6°C HNO ₃ for metals	N.A.
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Corrosivity (Langelier Index) (Pennsylvania only)

576/12152/12150/ 12707/6649/1750	pw	2330 B-1993	1000 mL P/G	Cool, 6°C HNO ₃ for metals	N.A.
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Fluoride

12678	pw	4500-F C-1997or EPA 340.2	100 mL P	Cool, 6°C	28 days
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Foaming agents (MBAS)

225	pw	5540 C-2000 or EPA 425.1	250 mL P/G	Cool, 6°C	48 hours
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pH

12152	pw	4500-H+B-2000 or EPA 150.1	50 mL P/G	Cool, 6°C	Analyze Immediately
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Total Dissolved Solids (TDS)

212	pw	2540 C-1997 or EPA 160.1	500 mL P/G	Cool, 6°C	7 days
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Total Dissolved Solids (PA only)

6649	pw	2540 C-1997	500 mL P/G	Cool, 6°C	7 days
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Secondary Contaminants – Not offered

Compound	MCL (TON)
Odor	3

TON - threshold odor number

Soil Sampling by SW-846 5035 and 5035A

These are methods for collection and analysis of soils and solid waste samples for volatile organic compounds. Method 5035 is described in Update III to the Third Edition of SW-846, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, and is required for all analytical methods using purge and trap techniques (8021B, 8015B, and 8260B/C). Method 5035A is published by EPA on their website. Alternative protocols may be used in some states. Please contact your Client Services Representative if you require such a protocol.

The volatile analysis is performed over two ranges:

	<u>GC/MS (8260)</u>	<u>GC (8021 or 8015B)</u>
Low Level	5 – 300 µg/kg	Not Available
High Level	>250 µg/kg	>20 µg/kg

The different levels require different sampling techniques. The low-level (LL) method can only handle samples within a specific concentration range. Because these samples CANNOT be diluted, a high-level (HL) sample MUST be collected to ensure that all the target analytes can be quantified.

Naturally occurring carbonates in some soils may cause effervescence (foaming) on contact with the sodium bisulfate (NaHSO₄) solution used as preservative for the low-level preparation. This interference makes it necessary for the laboratory to use the high-level prep or an alternative technique for low level. Please check with your regulator to discuss acceptable options.

For specific reporting limits and pricing for the appropriate analytical methods, please contact our Client Services Group.

We support the following options for the two levels:

	Low-Level Options	No. of Containers*	Sample Size (g)	Holding Time**
1	LL EnCore (8389)	2	5	48 hours
	HL EnCore (8390)	1	5	48 hours
2	LL Field-Preserved NaHSO ₄ (2392)	2	5	14 days
	HL Field-Preserved Methanol (7579)	1	5	14 days
3	LL VOA Vial with DI Water (6176)	2	5	48 hours
	HL Methanol VOA Vial (7579)	1	5	14 days

*Additional containers will be needed for MS/MSD. Please contact your Client Services Representative for additional information and costs.

**Because of the need to preserve the samples within 48 hours of collection, it is imperative that samples be returned to the laboratory within one day of sample collection. Once preserved the holding time is 14 days from collection. Although not recommended, samples can be submitted in bulk containers. The holding time for these samples is 14 days from collection.

***Cost of an individual EnCore Sampler is \$7.50. Cost of the T-handle used to collect the sample using an EnCore is \$125.

If samples are collected in EnCore or other approved core samplers, a small quantity of soil must be collected for a moisture determination and to determine if the soil effervesces with the addition of sodium bisulfate. If the soils do react, they will be frozen until analysis in place of chemical preservation.

Options 1 and 2 follow EPA Method 5035. Option 3 follows EPA Method 5035A.

The EnCore Sampler is disposable—it can only be used ONCE. It CANNOT be cleaned, reused, or returned for a refund. You will be billed for all EnCore Samplers requested. The samplers should be used in conjunction with an EnCore T-Handle that can be purchased from Eurofins Lancaster Laboratories Environmental.

TerraCores are available upon request. The cost of these devices is included in the cost of the sample preparation.

	High-Level Options	No. of Containers*	Sample Size (g)	Holding Time**
4	Field-Preserved Methanol (405)	1	10	14 days
5	Field-Preserved Methanol (6171)	1	5	14 days
6	HL EnCore (8390)	1	5	48 hours
7	HL EnCore (6174)	1	25	48 hours

**Additional containers will be needed for MS/MSD. Please contact your Client Services Representative for additional information and costs.*

***Because of the need to preserve the samples within 48 hours of collection, it is imperative that samples be returned to the laboratory within one day of sample collection. Once preserved the holding time is 14 days from collection. Although not recommended, samples can be submitted in bulk containers. The holding time for these samples is 14 days from collection.*

****Cost of an individual EnCore Sampler is \$7.50. Cost of the T-handle used to collect the sample using an EnCore is \$125.*

Options 4, 5, 6, and 7 follow EPA Method 5035.

The EnCore Sampler is disposable—it can only be used ONCE. It CANNOT be cleaned, reused, or returned for a refund. You will be billed for all EnCore Samplers requested. The samplers should be used in conjunction with an EnCore T-Handle that can be purchased from Eurofins Lancaster Laboratories Environmental.

TerraCores are available upon request. The cost of these devices is included in the cost of the sample preparation.

Organic Extractions, Cleanups, and Sample Registration/Preparation

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
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Organic Extractions

Charges will apply if samples are prepared (extracted) but not analyzed. If analyzed at a later date, full analytical costs will apply in addition to the extract and hold charges.

Extract and Hold Analyses

DRO/TPH by GC

2827	aqueous	SW-846 3510C	2 × 1000 mL G (amber)	Cool, 6°C HCl to pH <2	7/40 days
2826	solid	SW-846 3546 or 3550B/C	100 g G	Cool, 6°C (no headspace)	14/40 days

Pesticides/PCBs by SW-846 8081A/8082

2818	aqueous	SW-846 3510C	2 × 250 mL G (amber)	Cool, 6°C	7/40 days (pesticides) 365/40 days (PCBs)
2814	solid	SW-846 3546 or 3550B/C	100 g G	Cool, 6°C	14/40 days (pesticides) 365/40 days (PCBs)

Semivolatiles by SW-846 8270C

2825	aqueous	SW-846 3510C	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
2824	solid	SW-846 3546 or 3550B/C	100 g G	Cool, 6°C	14/40 days

Specialty Analyses

13965	aqueous				varies
13964	solid				varies

Aqueous Extractions

Micro Extraction for DRO (12858/12059)

aqueous SW-846 3511

Mini Extraction for Organics (semivolatiles, pesticides, PCBs, DRO)

aqueous SW-846 3510C

Separatory Funnel Extraction for Pesticides and Semivolatiles

aqueous SW-846 3510C

Solid-Phase Extraction for Semivolatiles (11011)

aqueous EPA 525.2

Solid Extractions

Microwave Extraction for Pesticides, PCBs, and Semivolatiles

solid SW-846 3546

Sonication Extraction for Pesticides and Semivolatiles

solid SW-846 3550B/C

Soxhlet Extraction for Pesticides (OP Pest 6677)

solid SW-846 3540C

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
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Organic Cleanups

Charges will apply if sample extracts go through a cleanup procedure at client's request.

Alumina Cleanup for EPH (11599) and Semivolatiles (11600)

aqueous	SW-846 3610B/C
solid	SW-846 3610B/C

Florisil Column Cleanup for Herbicides, PCBs, and Pesticides

aqueous	SW-846 3620B/C
solid	SW-846 3620B/C

Gel Permeation Cleanup for Pesticides (2169) and Semivolatiles (2170)

aqueous	SW-846 3640A
solid	SW-846 3640A

Silica Gel Cleanup, Quick (2176)

aqueous	SW-846 3630C
solid	SW-846 3630C

Silica Gel Cleanup, Column (11681)

aqueous	SW-846 3630C
solid	SW-846 3630C

Sulfur Cleanup for PCBs

aqueous	SW-846 3660B
solid	SW-846 3660B

Sulfuric Acid Cleanup for PCBs

aqueous	SW-846 3665A
solid	SW-846 3665A

Sample Registration/Preparation

Analysis Entry and Hold

11613

Compositing for Volatiles and other analytes in liquids

aqueous

Coning and Quartering Homogenization (individual container)

10450

solid

Crushing (by hand)

7831

solid

Food and Tissue Preparation

2487

solid

GC High-Level Bulk Soil Preparation

1132

solid SW-846 5035A modified

1150

solid SW-846 5035A modified

GC/MS Low-Level Bulk Soil Preparation

374

solid SW-846 5035A modified

GC/MS High-Level Bulk Soil Preparation

6646

solid SW-846 5035A modified

GC/MS High-Level Bulk Soil Preparation

10445

solid SW-846 5035A modified

Homogenization with Compositing

6967

solid

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Sample Registration/Preparation (continued)					
Incremental Sample Sieving					
13564	solid	SW-846 8330B	200 g	Cool, 6°C	varies
DP 22 Sieving					
10681	solid		500 g	Cool, 6°C	varies
Pulverizing/Grinding (with machine)					
7831	solid				
Special Compositing					
6648	aqueous				
Special Homogenization (cutting)					
7832	solid				
VPH Bulk Soil Preparation					
6170	solid	SW-846 5035A modified			

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Compound Comparison Lists

Inorganics

Element	Available by ICP	Available by ICP/MS	TAL	RCRA 8	PPL	CAM	Appendix IX
Aluminum (Al)	•	•	•				
Antimony (Sb)	•	•	•		•	•	•
Arsenic (As)	•	•	•	•	•	•	•
Barium (Ba)	•	•	•	•		•	•
Beryllium (Be)	•	•	•		•	•	•
Boron (B)	•	•					
Cadmium (Cd)	•	•	•	•	•	•	•
Calcium (Ca)	•	•	•				
Chromium (Cr)	•	•	•	•	•	•	•
Cobalt (Co)	•	•	•			•	•
Copper (Cu)	•	•	•		•	•	•
Iron (Fe)	•	•	•				
Lead (Pb)	•	•	•	•	•	•	•
Magnesium (Mg)	•	•	•				
Manganese (Mn)	•	•	•				
Mercury (Hg)	cold vapor		•	•	•	•	•
Molybdenum (Mo)	•	•				•	
Nickel (Ni)	•	•	•		•	•	•
Potassium (K)	•	•	•				
Selenium (Se)	•	•	•	•	•	•	•
Silver (Ag)	•	•	•	•	•	•	•
Sodium (Na)	•	•	•				
Strontium (Sr)	•	•					
Thallium (Tl)	•	•	•		•	•	•
Tin (Sn)	•	•					•
Titanium (Ti)	•	•					
Vanadium (V)	•	•	•			•	•
Zinc (Zn)	•	•	•		•	•	•
Lithium (Li)	•						
Phosphorus (P)	•						
Sulfur (S)	•						
Cyanide, total			•		•		•
Phenolics, total					•		
Sulfide, total ¹							•

¹Available only on aqueous samples.

Pesticides/PCBs and Herbicides

Compounds	TCL SOM01.2 or SOM02.2 8081/8082	TCL 3.2 or 4.3 by 8081/8082	PPL 608 or 8081/8082	Appendix IX 8081/8082/ 8141/8151A	Chlorinated Pest/PCB 8081/8082
2,4,5-T				• ²	
2,4,5-TP (Silvex)				• ²	
2,4-D				• ²	
4,4'-DDD	•	•	•	•	•
4,4'-DDE	•	•	•	•	•
4,4'-DDT	•	•	•	•	•
Aldrin	•	•	•	•	•
alpha-BHC	•	•	•	•	•
alpha-Chlordane	•	•			•
Aroclor 1016	•	•	•	•	•
Aroclor 1221	•	•	•	•	•
Aroclor 1232	•	•	•	•	•
Aroclor 1242	•	•	•	•	•
Aroclor 1248	•	•	•	•	•
Aroclor 1254	•	•	•	•	•
Aroclor 1260	•	•	•	•	•
Aroclor 1262	•				
Aroclor 1268	•				
beta-BHC	•	•	•	•	•
Chlordane			•	•	•
delta-BHC	•	•	•	•	•
Dieldrin	•	•	•	•	•
Dinoseb				• ²	
Disulfoton				• ³	
Endosulfan I	•	•	•	•	•
Endosulfan II	•	•	•	•	•
Endosulfan Sulfate	•	•	•	•	•
Endrin	•	•	•	•	•
Endrin Aldehyde	•	•	•	•	•
Endrin Ketone	•	•			•
Ethyl Parathion				• ³	
Famphur				• ³	
gamma-BHC (Lindane)	•	•	•	•	•
gamma-Chlordane	•	•			•
Heptachlor	•	•	•	•	•
Heptachlor Epoxide	•	•	•	•	•
Hexachlorobenzene (HCB)					•
Hexachlorophene				• ^{2,4}	
Kepone				•	•
Methoxychlor	•	•	• ¹	•	•
Methyl Parathion				• ³	
Mirex					•
Phorate (Thimet)				• ³	
Telodrin					•
Toxaphene	•	•	•	•	•

¹8081A/B/8082/A only

²8151A

³8141A/B

⁴This compound is not included in standard Appendix IX and must be requested separately.

GC/MS Semivolatiles

Compounds	TCL SOM01.2 8270	TCL SOM02.2 8270	TCL 4.3 by 8270	TCL 3.2 by 8270	PPL 625 or 8270C/D	Appendix IX 8270C/D
1,1'-Biphenyl	•	•	•			
1,2,4,5-Tetrachlorobenzene	•	•				•
1,2,4-Trichlorobenzene				•	• ⁴	•
1,2-Dichlorobenzene				•	• ⁴	•
1,2-Diphenylhydrazine ²					•	
1,3,5-Trinitrobenzene						•
1,3-Dichlorobenzene				•	• ⁴	•
1,3-Dinitrobenzene						•
1,4-Dichlorobenzene				•	• ⁴	•
1,4-Dioxane		•				
1,4-Naphthoquinone						•
1,4-Phenylenediamine						•
1-Naphthylamine						•
2,2'-Oxybis(1-chloropropane)	•	•	•	•		
2,3,4,6-Tetrachlorophenol	•	•				•
2,4,5-Trichlorophenol	•	•	•	•		•
2,4,6-Trichlorophenol	•	•	•	•	•	•
2,4-Dichlorophenol	•	•	•	•	•	•
2,4-Dimethylphenol	•	•	•	•	•	•
2,4-Dinitrophenol	•	•	•	•	•	•
2,4-Dinitrotoluene	•	•	•	•	•	•
2,6-Dichlorophenol						•
2,6-Dinitrotoluene	•	•	•	•	•	•
2-Acetylaminofluorene						•
2-Chloronaphthalene	•	•	•	•	•	•
2-Chlorophenol	•	•	•	•	•	•
2-Methylnaphthalene	•	•	•	•		•
2-Methylphenol (o-Cresol)	•	•	•	•		•
2-Naphthylamine						•
2-Nitroaniline	•	•	•	•		•
2-Nitrophenol	•	•	•	•	•	•
2-Picoline						•
3,3'-Dichlorobenzidine	•	•	•	•	•	•
3,3'-Dimethylbenzidine						•
3-Methylcholanthrene						•
3-Nitroaniline	•	•	•	•		•
4,6-Dinitro-2-methylphenol	•	•	•	•	•	•
4-Aminobiphenyl						•
4-Bromophenyl phenyl ether	•	•	•	•	•	•
4-chloro-3-methylphenol (p-Chloro-m-cresol)	•	•	•	•	•	•
4-Chloroaniline	•	•	•	•		•
4-Chlorophenyl phenyl ether	•	•	•	•	•	•
4-Methylphenol (p-Cresol) ¹	•	•	•	•		•
4-Nitroaniline	•	•	•	•		•
4-Nitrophenol	•	•	•	•	•	•
4-Nitroquinoline-1-oxide						•
5-Nitro-o-toluidine						•
7,12-Dimethylbenz(a)anthracene						•
Acenaphthene	•	•	•	•	•	•
Acenaphthylene	•	•	•	•	•	•
Acetophenone	•	•	•			•

GC/MS Semivolatiles (continued)

Compounds	TCL SOM01.2 8270	TCL SOM02.2 8270	TCL 4.3 by 8270	TCL 3.2 by 8270	PPL 625 or 8270C/D	Appendix IX 8270C/D
Aniline						•
Anthracene	•	•	•	•	•	•
Atrazine ⁵	•	•	•			
Benzaldehyde ⁵	•	•	•			
Benzidine					•	
Benzo(a)anthracene (1,2-Benzanthracene)	•	•	•	•	•	•
Benzo(a)pyrene	•	•	•	•	•	•
Benzo(b)fluoranthene (3,4-Benzofluoranthene)	•	•	•	•	•	•
Benzo(g,h,i)perylene	•	•	•	•	•	•
Benzo(k)fluoranthene	•	•	•	•	•	•
Benzyl Alcohol						•
bis(2-Chloroethoxy)methane	•	•	•	•	•	•
bis(2-Chloroethyl)ether	•	•	•	•	•	•
bis(2-Chloroisopropyl)ether					•	•
bis(2-Ethylhexyl)phthalate	•	•	•	•	•	•
Butyl Benzyl Phthalate	•	•	•	•	•	•
Caprolactam	•	•	•			
Carbazole	•	•	•	•		
Chlorobenzilate						•
Chrysene	•	•	•	•	•	•
cis/trans-Diallate						•
Dibenz(a,h)anthracene	•	•	•	•	•	•
Dibenzofuran	•	•	•	•		•
Diethyl Phthalate	•	•	•	•	•	•
Dimethoate						•
Dimethyl Phthalate	•	•	•	•	•	•
Di-n-butyl Phthalate	•	•	•	•	•	•
Di-n-octyl Phthalate	•	•	•	•	•	•
Diphenylamine ³						•
Ethyl Methanesulfonate						•
Fluoranthene	•	•	•	•	•	•
Fluorene	•	•	•	•	•	•
Hexachlorobenzene	•	•	•	•	•	•
Hexachlorobutadiene	•	•	•	•	•	•
Hexachlorocyclopentadiene	•	•	•	•	•	•
Hexachloroethane	•	•	•	•	•	•
Hexachloropropene						•
Indeno(1,2,3-cd)pyrene	•	•	•	•	•	•
Isodrin						•
Isophorone	•	•	•	•	•	•
Isosafrole						•
Methapyrilene						•
Methyl Methanesulfonate						•
Naphthalene	•	•	•	•	•	•
Nitrobenzene	•	•	•	•	•	•
n-Nitrosodiethylamine						•
n-Nitrosodimethylamine					•	•
n-Nitrosodi-n-butylamine						•
n-Nitrosodi-n-propylamine	•	•	•	•	•	•
n-Nitrosodiphenylamine ³	•	•	•	•	•	•

GC/MS Semivolatiles (continued)

Compounds	TCL SOM01.2 8270	TCL SOM02.2 8270	TCL 4.3 or 8270	TCL 3.2 or 8270	PPL 625 or 8270C/D	Appendix IX 8270C/D
n-Nitrosomethylethylamine						•
n-Nitrosomorpholine						•
n-Nitrosopiperidine						•
n-Nitrosopyrrolidine						•
O,O,O-Triethyl phosphorothioate						•
o-Toluidine						•
p-(Dimethylamino)azobenzene						•
Pentachlorobenzene						•
Pentachloronitrobenzene						•
Pentachlorophenol	•	•	•	•	•	•
Phenacetin						•
Phenanthrene	•	•	•	•	•	•
Phenol	•	•	•	•	•	•
Pronamide						•
Pyrene	•	•	•	•	•	•
Pyridine						•
Safrole						•
Tetraethyl dithiopyrophosphate (Sulfotepp)						•
Thionazin						•

Additional compounds available by EPA 625:

1,1'-Biphenyl	2-Methylphenol	a-Terpineol	n-Eicosane
1,4-Dioxane	2-Nitroaniline	Benzoic Acid	n-Hexadecane
1-Methylphenanthrene	3-Nitroaniline	Benzyl Alcohol	n-Octadecane
2,3,4,6-Tetrachlorophenol	4-Chloroaniline	Carbazole	n-Tetradecane
2,3-Dichloroaniline	4-Methylphenol	Dibenzofuran	o-Toluidine
2,3-Dinitrotoluene	4-Nitroaniline	Diphenyl Ether	Pyridine
2,4,5-Trichlorophenol	Acetophenone	n-Decane	
2-Methylnaphthalene	Aniline	n-Docosane	

Additional compounds available by SW-846 8270C/D:

1,2,3,4-Tetrahydronaphthalene ⁵	1-Methylnaphthalene	Benzenethiol ⁵	Indene
1,4-Dioxane	6-Methylchrysene	Dibenz(a,h)acridine	Quinoline
1-Chloronaphthalene	a-Methyl Styrene ⁵	Dibenz(a,j)acridine	

Additional Appendix IX compounds available by SW-846 8270C/D:

1,4-Dioxane	Aramite ⁵	Famphur ⁵	N,N-Dimethyl formamide ⁵
1-Chloronaphthalene	Dinoseb	Methyl Parathion	Phorate (Thimet)
1-Methylnaphthalene	Disulfoton ⁵	N,N-Dimethyl acetamide ⁵	
a,a-Dimethylphenethylamine ⁵	Ethyl Parathion		

¹3-Methylphenol and 4-Methylphenol (m- and p-cresol) cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-Methylphenol (p-cresol) represents the combined total of both compounds.

²1,2-Diphenylhydrazine cannot be distinguished from azobenzene; therefore, the value reported represents the combined total of both compounds.

³n-Nitrosodiphenylamine decomposes to diphenylamine in the GC inlet; therefore, the value reported represents the combined total of both compounds.

⁴Dichlorobenzenes can be reported from either volatiles (624) or semivolatiles (625). The client MUST specify which method to use for reporting these parameters.

⁵Requires additional calibration standards and setup time.

GC/MS Volatiles

Compound	TCL SOM01.2 8260	TCL SOM02.2 8260	TCL 4.3 by 8260	TCL 3.2 by 8260	PPL 624 or 8260B	8260 Extended
1,1,1,2-Tetrachloroethane						•
1,1,1-Trichloroethane	•	•	•	•	•	•
1,1,2,2-Tetrachloroethane	•	•	•	•	•	•
1,1,2-Trichloroethane	•	•	•	•	•	•
1,1-Dichloroethane	•	•	•	•	•	•
1,1-Dichloroethene	•	•	•	•	•	•
1,1-Dichloropropanone						
1,1-Dichloropropene						•
1,2,3-Trichlorobenzene	•	•				•
1,2,3-Trichloropropane						•
1,2,4-Trichlorobenzene	•	•	•			•
1,2,4-Trimethylbenzene						•
1,2-Dibromo-3-Chloropropane (DBCP)	•	•	•			•
1,2-Dibromoethane (Ethylene Dibromide [EDB])	•	•	•			•
1,2-Dichlorobenzene	•	•	•		• ¹	•
1,2-Dichloroethane	•	•	•	•	•	•
1,2-Dichloropropane	•	•	•	•	•	•
1,3,5-Trimethylbenzene						•
1,3-Dichlorobenzene	•	•	•		• ¹	•
1,3-Dichloropropane						•
1,4-Dichlorobenzene	•	•	•		• ¹	•
1,4-Dioxane	•					
1-Chlorobutane						
2,2-Dichloropropane						•
2-Butanone (MEK)	•	•	•	•		
2-Chloro-1,3-Butadiene (Chloroprene)						
2-Chloroethyl vinyl ether					•	
2-Chlorotoluene						•
2-Hexanone	•	•	•	•		
2-Nitropropane						
2-Propanol (Isopropanol)						
4-Chlorotoluene						•
4-Methyl-2-Pentanone (MIBK)	•	•	•	•		
Acetone (2-Propanone)	•	•	•	•		
Acetonitrile						
Acrolein					•	
Acrylonitrile					•	
Allyl Chloride (3-Chloro-1-Propene)						
Benzene	•	•	•	•	•	•
Bromobenzene						•
Bromochloromethane	•	•				•
Bromodichloromethane	•	•	•	•	•	•
Bromoform	•	•	•	•	•	•
Bromomethane (Methyl Bromide)	•	•	•	•	•	•
Carbon Disulfide	•	•	•	•		
Carbon Tetrachloride	•	•	•	•	•	•
Chloroacetonitrile						
Chlorobenzene	•	•	•	•	•	•
Chloroethane	•	•	•	•	•	•

GC/MS Volatiles (continued)

Compound	EPA 1666/1671/524.2 Table 1F 40 CFR 439				
	EPA 524.2	EPA 524.2 Rev. 4.1	App. IX 8260B	App. I 8260B	
1,1,1,2-Tetrachloroethane	•	•	•	•	
1,1,1-Trichloroethane	•	•	•	•	
1,1,2,2-Tetrachloroethane	•	•	•	•	
1,1,2-Trichloroethane	•	•	•	•	
1,1-Dichloroethane	•	•	•	•	
1,1-Dichloroethene	•	•			
1,1-Dichloropropanone		•	•	•	
1,1-Dichloropropene	•	•			
1,2,3-Trichlorobenzene	•	•	•	•	
1,2,3-Trichloropropane	•	•	•	•	
1,2,4-Trichlorobenzene	•	•		•	
1,2,4-Trimethylbenzene	•	•	•	•	
1,2-Dibromo-3-Chloropropane (DBCP)	•	•	•	•	
1,2-Dibromoethane (Ethylene Dibromide [EDB])	•	•			
1,2-Dichlorobenzene	•	•		•	• ²
1,2-Dichloroethane	•	•	•		• ²
1,2-Dichloropropane	•	•	•	•	
1,3,5-Trimethylbenzene	•	•	•		
1,3-Dichlorobenzene	•	•			
1,3-Dichloropropane	•	•	•	•	
1,4-Dichlorobenzene	•	•	•	•	
1,4-Dioxane			•	•	
1-Chlorobutane		•	•		
2,2-Dichloropropane	•	•	•		
2-Butanone (MEK)		•	•	•	
2-Chloro-1,3-Butadiene (Chloroprene)			•		
2-Chloroethyl vinyl ether			•	•	
2-Chlorotoluene	•	•		•	
2-Hexanone		•	•	•	
2-Nitropropane		•	•	•	
2-Propanol (Isopropanol)			•	•	• ³
4-Chlorotoluene	•	•	•	•	
4-Methyl-2-Pentanone (MIBK)		•	•	•	• ³
Acetone (2-Propanone)		•	•	•	• ²
Acetonitrile			•	•	• ⁴
Acrolein			•	•	
Acrylonitrile		•	•	•	
Allyl Chloride (3-Chloro-1-Propene)		•	•	•	
Benzene	•	•	•	•	• ²
Bromobenzene	•	•			
Bromochloromethane	•	•	•	•	
Bromodichloromethane	•	•	•	•	
Bromoform	•	•	•		
Bromomethane (Methyl Bromide)	•	•	•		
Carbon Disulfide		•	•	•	
Carbon Tetrachloride	•	•			
Chloroacetonitrile		•	•		
Chlorobenzene	•	•			
Chloroethane	•	•	•		• ²

GC/MS Volatiles (continued)

Compound	TCL SOM01.2 8260	TCL SOM02.2 8260	TCL 4.3 by 8260	TCL 3.2 by 8260	PPL 624 or 8260B	8260 Extended
Chloroform	•	•	•	•	•	•
Chloromethane (Methyl Chloride)	•	•	•	•	•	•
cis-1,2-Dichloroethene	•	•	•	•	•	•
cis-1,3-Dichloropropene	•	•	•	•	•	
Cyclohexane	•	•	•			
Dibromochloromethane	•	•	•	•	•	•
Dibromomethane						•
Dichlorodifluoromethane	•	•	•			•
Diethylamine						
Dimethyl Sulfoxide						
Ethanol						
Ethyl Acetate						
Ethyl Ether						
Ethyl Methacrylate						
Ethylbenzene	•	•	•	•	•	•
Freon 113 (1,1,2-Trichloro-1,2,2-Trifluoroethane)	•	•	•			
Hexachlorobutadiene						•
Hexachloroethane						
Isobutyl Alcohol						
Isobutyraldehyde						
Isopropyl Acetate						
Isopropyl Ether						
Isopropylbenzene	•	•	•			•
m/p-Xylene		•				•
Methacrylonitrile						
Methanol						
Methyl Acetate	•	•	•			
Methyl Acrylate						
Methyl Cellosolve						
Methyl Formate						
Methyl Iodide						
Methyl Methacrylate						
Methyl tert-Butyl Ether (MTBE)	•	•	•			
Methylcyclohexane	•	•	•			•
Methylene Chloride	•	•	•	•	•	
n-Amyl Acetate						
n-Amyl Alcohol						
Naphthalene						•
n-Butyl Acetate						
n-Butylbenzene						•
n-Heptane						
n-Hexane						
Nitrobenzene						
n-Propanol						
n-Propylbenzene						•
o-Xylene		•				•
Pentachloroethane						
p-Isopropyltoluene						•
Propionitrile (Ethyl Cyanide)						

GC/MS Volatiles (continued)

Compound	EPA 1666/1671/524.2 Table 1F 40 CFR 439				
	EPA 524.2	EPA 524.2 Rev. 4.1	App. IX 8260B	App. I 8260B	
Chloroform	•	•			• ²
Chloromethane (Methyl Chloride)	•	•			
<i>cis</i> -1,2-Dichloroethene	•	•			
<i>cis</i> -1,3-Dichloropropene	•	•			
Cyclohexane					
Dibromochloromethane	•	•			
Dibromomethane	•	•			
Dichlorodifluoromethane	•	•			
Diethylamine					• ⁴
Dimethyl Sulfoxide					• ⁴
Ethanol					• ⁴
Ethyl Acetate					• ³
Ethyl Ether		•			
Ethyl Methacrylate		•			
Ethylbenzene	•	•			
Freon 113 (1,1,2-Trichloro-1,2,2-Trifluoroethane)					
Hexachlorobutadiene	•	•			
Hexachloroethane		•			
Isobutyl Alcohol					
Isobutyraldehyde					• ³
Isopropyl Acetate					• ³
Isopropyl Ether					• ³
Isopropylbenzene	•	•			
<i>m/p</i> -Xylene	•	•			• ³
Methacrylonitrile		•			
Methanol			•	•	• ⁴
Methyl Acetate			•		
Methyl Acrylate		•			
Methyl Cellosolve					• ⁴
Methyl Formate			•	•	• ³
Methyl Iodide		•	•		
Methyl Methacrylate		•	•		
Methyl tert-Butyl Ether (MTBE)		•	•	•	
Methylcyclohexane			•	•	
Methylene Chloride	•	•	•	•	• ²
<i>n</i> -Amyl Acetate			•	•	• ³
<i>n</i> -Amyl Alcohol			•	•	• ³
Naphthalene	•	•	•	•	
<i>n</i> -Butyl Acetate			•	•	• ³
<i>n</i> -Butylbenzene	•	•	•	•	
<i>n</i> -Heptane			•	•	• ³
<i>n</i> -Hexane			•	•	• ³
Nitrobenzene		•	•	•	
<i>n</i> -Propanol					• ⁴
<i>n</i> -Propylbenzene	•	•			
<i>o</i> -Xylene	•	•			• ³
Pentachloroethane		•			
<i>p</i> -Isopropyltoluene	•	•			
Propionitrile (Ethyl Cyanide)		•			

GC/MS Volatiles (continued)

Compound	TCL SOM01.2 8260	TCL SOM02.2 8260	TCL 4.3 by 8260	TCL 3.2 by 8260	PPL 624 or 8260B	8260 Extended
sec-Butylbenzene						•
Styrene	•	•	•	•		•
tert-Butyl Alcohol (TBA)						
tert-Butylbenzene						•
Tetrachloroethene	•	•	•	•	•	•
Tetrahydrofuran						
Toluene	•	•	•	•	•	•
trans-1,2-Dichloroethene	•	•	•	•	•	•
trans-1,3-Dichloropropene	•	•	•	•	•	
trans-1,4-Dichloro-2-Butene						
Trichloroethene	•	•	•	•	•	•
Trichlorofluoromethane	•	•	•		•	•
Triethylamine						
Vinyl Acetate						
Vinyl Chloride	•	•	•	•	•	•
Xylenes, total	•		•	•	• ⁵	

¹624 only; dichlorobenzenes can be reported from either volatiles (624) or semivolatiles (625). The client MUST specify which method to use for reporting these parameters.

²Analytes determined by EPA 524.2, "Measurement of Purgeable Organic Compounds in Water by Capillary Column GC/MS"

³Analytes determined by EPA 1666, "Volatile Organic Compounds Specific to the Pharmaceutical Manufacturing Industry by Isotope Dilution GC/MS"

⁴Analytes determined by EPA 1671, "Volatile Organic Compounds Specific to the Pharmaceutical Manufacturing Industry by GC/FID"

⁵8260B only

A dilution factor of 10 is used when a wastewater sample is analyzed by 524.2.

GC/MS Volatiles (continued)

Compound	EPA 524.2	EPA 524.2 Rev. 4.1	App. IX 8260B	App. I 8260B	EPA 1666/1671/524.2
					Table 1F 40 CFR 439
sec-Butylbenzene	•	•			
Styrene	•	•			
tert-Butyl Alcohol (TBA)					• ³
tert-Butylbenzene	•	•			
Tetrachloroethene	•	•			
Tetrahydrofuran		•			• ³
Toluene	•	•			• ²
trans-1,2-Dichloroethene	•	•			
trans-1,3-Dichloropropene	•	•			
trans-1,4-Dichloro-2-Butene		•			
Trichloroethene	•	•			
Trichlorofluoromethane	•	•			
Triethylamine					• ⁴
Vinyl Acetate					
Vinyl Chloride	•	•			
Xylenes, total					

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General Petroleum Analyses

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
BTEX (Benzene, Toluene, Ethylbenzene, Total Xylenes)**					
BTEX by GC					
7090	air	EPA 18 modified	Tedlar bag*	N.A.	N.A.
8241	aqueous	EPA 602	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
2102	aqueous	SW-846 8021B	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
8179	solid	SW-846 8021B	See Soil Sampling***	Cool, 6°C	14 days
BTEX by GC/MS					
5298	air	TO-15	SUMMA Canister*	N.A.	N.A.
10371	aqueous	EPA 624	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
10335	aqueous	SW-846 8260B	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
11997	aqueous	SW-846 8260C	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
3648	aqueous	EPA 524.2	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
10237	solid	SW-846 8260B	See Soil Sampling***	Cool, 6°C	14 days
11995	solid	SW-846 8260C	See Soil Sampling***	Cool, 6°C	14 days

*There is an additional charge for the Tedlar bag and SUMMA canister. (See Air Analyses Section for pricing.)

**MTBE (Methyl *tert*-Butyl Ether) and/or Naphthalene can be added to the BTEX scan(s) for an additional charge.

***The volatile soil fee does not include the cost of the field-preserved kit, EnCore sampler(s), or the laboratory preparation.

GC Fingerprint

This analysis is typically used for reference materials and unknown fuels/oils in conjunction with TPH by GC analysis on soils and waters. It should be used for raw petroleum products only.

Custom hydrocarbon fingerprinting and interpretation of data is available by our staff of experienced analysts. We encourage the submission of project-specific reference materials and information regarding the project site in conjunction with samples for analysis. This work is billable on an hourly basis in addition to base analysis fees.

Qualitative

Identifies petroleum materials by their GC pattern(s). This is appropriate for fractions from gasoline to light motor oil. This analysis will identify the petroleum distillate(s).

2012	oil or free product	SW-846 8015B modified	20 mL G	N.A.	14 days
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Quantitative

Identifies petroleum materials by their GC pattern(s) and quantitates them against the same material. This is appropriate for fractions from gasoline to light motor oil. This analysis will both identify and quantify the petroleum distillate(s).

2535	oil or free product	SW-846 8015B modified	20 mL G	N.A.	14 days
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Hexane Extractable Materials (HEM)

HEM

8079	aqueous	EPA 1664A*	2 × 1000 mL G	Cool, 6°C HCl to pH <2	28 days
2562	solid	SW-846 9071B	100 g G	Cool, 6°C	28 days

Silica Gel Treated (SGT) – HEM

612	aqueous	EPA 1664A	2 × 1000 mL G	Cool, 6°C HCl to pH <2	28 days
6598	solid	SW-846 9071B modified	100 g G	Cool, 6°C	28 days

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Hexane Extractable Materials (HEM) (continued)					
SGT – HEM and HEM					
8078/8079	aqueous	EPA 1664A	3 × 1000 mL G	Cool, 6°C HCl to pH <2	28 days

Methyl tert-Butyl Ether (MTBE)**

MTBE by GC					
7090	air	EPA 18 modified	Tedlar bag*	N.A.	N.A.
MTBE by GC/MS					
5298	air	EPA TO-15	SUMMA canister*	N.A.	N.A.
10371	aqueous	EPA 624	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
10335	aqueous	SW-846 8260B	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
11997	aqueous	SW-846 8260C	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
3648	aqueous	EPA 524.2	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
10237	solid	SW-846 8260B	See Soil Sampling***	Cool, 6°C	14 days
11995	solid	SW-846 8260C	See Soil Sampling***	Cool, 6°C	14 days

*There is an additional charge for the Tedlar bag and SUMMA canister. (See Air Analyses Section for pricing.)

**BTEX and/or Naphthalene can be added to the MTBE scan(s) for an additional charge.

***The volatile soil fee does not include the cost of the field-preserved kit, EnCore sampler(s), or the laboratory preparation.

Naphthalene**

Naphthalene by GC/MS					
5298	air	EPA TO-15	SUMMA canister*	N.A.	N.A.
10371	aqueous	EPA 624	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
10335	aqueous	SW-846 8260B	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
11997	aqueous	SW-846 8260C	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
3648	aqueous	EPA 524.2	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
10237	solid	SW-846 8260B	See Soil Sampling***	Cool, 6°C	14 days
11995	solid	SW-846 8260C	See Soil Sampling***	Cool, 6°C	14 days
10334	aqueous	EPA 625	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
14238	aqueous	EPA 625	2 × 250 mL G (amber)	Cool, 6°C Na ₂ S ₂ O ₃	7/40 days
14249	aqueous	SW-846 8270C	2 × 250 mL G (amber)	Cool, 6°C Na ₂ S ₂ O ₃	7/40 days
14250	aqueous	SW-846 8270D	2 × 250 mL G (amber)	Cool, 6°C Na ₂ S ₂ O ₃	7/40 days
10727	solid	SW-846 8270C	100 g G	Cool, 6°C	14/40 days
10726	solid	SW-846 8270D	100 g G	Cool, 6°C	14/40 days

*There is an additional charge for the SUMMA canister. (See Air Analyses Section for pricing.)

**BTEX and/or MTBE can be added to the Naphthalene scan(s) for an additional charge.

***The volatile soil fee does not include the cost of the field-preserved kit, EnCore sampler(s), or the laboratory preparation.

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
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Oxygenates

Methyl tert-Butyl Ether (MTBE) tert-Butyl Alcohol (TBA) tert-Amyl Methyl Ether (TAME)	Di Isopropyl Ether (DIPE) Ethyl tert-Butyl Ether (ETBE)
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5298	air	EPA TO-15	SUMMA canister*	N.A.	N.A.
10335	aqueous	SW-846 8260B	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
11997	aqueous	SW-846 8260C	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
10237	solid	SW-846 8260B	See Soil Sampling**	Cool, 6°C	14 days
11995	solid	SW-846 8260C	See Soil Sampling**	Cool, 6°C	14 days

*There is an additional charge for the SUMMA canister. (See Air Analyses Section for pricing.)

**The volatile soil fee does not include the cost of the field-preserved kit, EnCore sampler(s), or the laboratory preparation.

Soil Sampling - Please see Soil Sampling by SW-846 5035 for additional sample container and laboratory preparation information.

tert-Butyl Alcohol (TBA)**

TBA by GC/MS

5298	air	EPA TO-15	SUMMA canister*	N.A.	N.A.
10335	aqueous	SW-846 8260B	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
11997	aqueous	SW-846 8260C	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
10237	solid	SW-846 8260B	See Soil Sampling**	Cool, 6°C	14 days
11995	solid	SW-846 8260C	See Soil Sampling**	Cool, 6°C	14 days

*There is an additional charge for the SUMMA canister. (See Air Analyses Section for pricing.)

**TBA can be added to the Volatiles scan(s) for an additional charge.

***The volatile soil fee does not include the cost of the field-preserved kit, EnCore sampler(s), or the laboratory preparation.

Tetraethyl Lead

4221	solid	SW-846 8270C	100 g G	Cool, 6°C	14/40 days
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Tetraethyl Lead/Tetramethyl Lead

4220	aqueous	SW-846 8270C	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
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Total Petroleum Hydrocarbons (TPH) by GC

Total Hydrocarbons by GC/FID - Quantitation is performed in a format similar to API/EPA UST Work Group protocol where total organics detected in the C8 to C40 hydrocarbon range are quantitated as a single total hydrocarbon value based on a series of normal alkane compounds.

8093	aqueous	SW-846 8015B modified	2 × 1000 mL G (amber)	Cool, 6°C HCl to pH <2 (no headspace)	7 days
13136	aqueous	SW-846 8015C/D modified	2 × 1000 mL G (amber)	Cool, 6°C HCl to pH <2 (no headspace)	7 days
8107	solid	SW-846 8015B modified	125 g G	Cool, 6°C (no headspace)	14 days
13135	solid	SW-846 8015C/D modified	125 g G	Cool, 6°C (no headspace)	14 days

TPH by GC/FID - Fuels and other petroleum-related materials are determined by SW-846 8015B/C protocol (modified for gasoline). This analysis includes interpretation of data and may be used to characterize petroleum contamination and potential source materials. Quantitation and identification is performed for petroleum materials in the C8 to C40 hydrocarbon range (gasoline through 10W 40 motor oil). Standard reference materials include gasoline, kerosene, #2 Fuel, #6 Fuel, mineral spirits, motor oil (10W 40), and coal tar oil. Other reference materials are available for special comparisons.

5260	aqueous	SW-846 8015B modified	2 × 1000 mL G (amber)	Cool, 6°C HCl to pH <2 (no headspace)	7 days
13137	aqueous	SW-846 8015C/D	2 × 1000 mL	Cool, 6°C	7 days

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
		modified	G (amber)	HCl to pH <2 (no headspace)	
Total Petroleum Hydrocarbons (TPH) by GC (continued)					
5256	solid	SW-846 8015B modified	125 g G	Cool, 6°C (no headspace)	14 days
13138	solid	SW-846 8015C/D modified	125 g G	Cool, 6°C (no headspace)	14 days
Custom TPH by GC/FID					
2740	aqueous	SW-846 8015B modified	2 × 1000 mL G (amber)	Cool, 6°C HCl to pH <2 (no headspace)	7 days
13260	solid	SW-846 8015B Modified (microwave)	125 g G	Cool, 6°C (no headspace)	14 days
TPH-DRO (Diesel Range Organics)					
8269	aqueous	SW-846 8015B	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
6609	aqueous	SW-846 8015B	2 × 500 mL G (amber)	Cool, 6°C HCl to pH <2	7/40 days
10600	aqueous	SW-846 8015C/D	2 × 1000 mL G (amber)	Cool, 6°C HCl to pH <2	7/40 days
12899 (mini)	aqueous	SW-846 8015B	2 × 250 mL G (amber)	Cool, 6°C HCl to pH <2	7/40 days
13579 (mini)	aqueous	SW-846 8015C/D	2 × 250 mL G (amber)	Cool, 6°C HCl to pH <2	7/40 days
13580 (mini quick Si Gel)	aqueous	SW-846 8015C/D	2 × 250 mL G (amber)	Cool, 6°C HCl to pH <2	7/40 days
13256 (mini column Si Gel)	aqueous	SW-846 8015C/D	2 × 250 mL G (amber)	Cool, 6°C HCl to pH <2	7/40 days
TPH-DRO (Diesel Range Organics) (continued)					
12858 (micro)	aqueous (silica gel cleanup not available)	SW-846 8015B	2 × 40 mL G	Cool, 6°C HCl to pH <2	14/40 days
13163 (micro)	aqueous (silica gel cleanup not available)	SW-846 8015C/D	2 × 40 mL G	Cool, 6°C HCl to pH <2	14/40 days
10941	solid	SW-846 8015B (microwave)	125 g G	Cool, 6°C	14/40 days
12838	solid	SW-846 8015C/D (microwave)	125 g G	Cool, 6°C	14/40 days
6912	aqueous	SW-846 8015B	2 × 500 mL G (amber)	Cool, 6°C HCl to pH <2	7/40 days
6901	solid	SW-846 8015B (microwave)	125 g G	Cool, 6°C	14/40 days
TPH-DRO/ORO (Diesel Range Organics/Oil Range Organics)					
6635	aqueous	SW-846 8015B mod.	2 × 1000 mL G (amber)	Cool, 6°C HCl to pH <2	7/40 days
13240	aqueous	SW-846 8015C/D	2 × 1000 mL G (amber)	Cool, 6°C HCl to pH <2	7/40 days
6631	solid	SW-846 8015B mod.	125 g G	Cool, 6°C	14/40 days
8349	aqueous	SW-846 8015B	2 × 1000 mL G (amber)	Cool, 6°C HCl to pH <2	7/40 days
13566	aqueous	SW-846 8015C/D	2 × 1000 mL G (amber)	Cool, 6°C HCl to pH <2	7/40 days
12899 (mini)	aqueous	SW-846 8015B	2 × 250 mL G (amber)	Cool, 6°C HCl to pH <2	7/40 days
13579 (mini)	aqueous	SW-846 8015C/D	2 × 250 mL G (amber)	Cool, 6°C HCl to pH <2	7/40 days

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
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Total Petroleum Hydrocarbons (TPH) by GC (continued)

TPH-DRO/ORO (Diesel Range Organics/Oil Range Organics) (continued)

12908 (mini quick Si Gel)	aqueous	SW-846 8015B	2 × 250 mL G (amber)	Cool, 6°C	14/40 days
13580 (mini quick Si Gel)	aqueous	SW-846 8015C/D	2 × 250 mL G (amber)	Cool, 6°C	14/40 days
12917 (mini column Si Gel)	aqueous	SW-846 8015B	2 × 250 mL G (amber)	Cool, 6°C	14/40 days
13581 (mini column Si Gel)	aqueous	SW-846 8015C/D	2 × 250 mL G (amber)	Cool, 6°C	14/40 days
8345	solid	SW-846 8015B (microwave)	125 g G	Cool, 6°C	14/40 days
13567	solid	SW-846 8015C/D (microwave)	125 g G	Cool, 6°C	14/40 days

Saturated Hydrocarbons

11554*	aqueous	SW-846 8015B/C	2 × 1000 mL G (amber)	Cool, 6°C HCl to pH <2	7/40 days
11507*	solid	SW-846 8015B/C	125 g G	Cool, 6°C	14/40 days

*Must be prearranged two to four weeks prior with the lab.

TPH-GRO (Gasoline Range Organics by SW-846 8015B/C)

1635	aqueous	SW-846 8015B modified	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
10598	aqueous	SW-846 8015C/D	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
1637	solid	SW-846 8015B modified	<i>See Soil Sampling</i>	Cool, 6°C	14 days
10599	solid	SW-846 8015C/D	<i>See Soil Sampling</i>	Cool, 6°C	14 days

TPH-GRO (C₆-C₁₀) plus BTEX*

1636/2102	aqueous	SW-846 8015B modified and SW-846 8021B	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
10598/2102	aqueous	SW-846 8015C/D modified and SW-846 8021B	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
1638/8179	solid	SW-846 8015B modified and SW-846 8021B	<i>See Soil Sampling</i>	Cool, 6°C	14 days
10599/8179	solid	SW-846 8015C/D modified and SW-846 8021B	<i>See Soil Sampling</i>	Cool, 6°C	14 days

*MTBE can be added to this analysis for an additional fee.

Total Petroleum Hydrocarbons (TPH) by GC/MS

TPH-GRO

10335	aqueous	SW-846 8260B	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
11997	aqueous	SW-846 8260C	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
10237	solid	SW-846 8260B	<i>See Soil Sampling</i>	Cool, 6°C	14 days
11995	solid	SW-846 8260C	<i>See Soil Sampling</i>	Cool, 6°C	14 days

Total Petroleum Hydrocarbons (TPH) by IR – See Hexane Extractable Materials

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State-Specific Petroleum Analyses

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Alaska DRO (C₁₀-C₂₅)					
1741	aqueous	AK 102 04/08/02	2 × 1000 mL G	Cool, 6°C HCl to pH <2	14/40 days
13025	aqueous	AK 102-SV DRO 04/08/02	2 × 250 mL G	Cool, 6°C HCl to pH <2	14/40 days
1742	solid	AK 102/AK 103 04/08/02	125 g G	Cool, 6°C	14/40 days
Alaska DRO (C₁₀ <C₂₅)/RRO (C₂₅-C₃₆)					
2923	aqueous	AK 102/AK 103 04/08/02 modified	2 × 1000 mL G (amber)	Cool, 6°C HCl to pH <2	14/40 days
13222	aqueous	AK 102/AK 103 04/08/02 modified	2 × 250 mL G	Cool, 6°C HCl to pH <2	14/40 days
1738	solid	AK 102/AK 103 04/08/02	125 g G	Cool, 6°C	14/40 days
Alaska GRO (C₆-C₁₀)					
1438	aqueous	AK 101	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
1450	solid	AK 101	25 g G	Cool, 6°C Methanol	28 days
California DRO (C₁₀-C₂₈)					
8269	aqueous	SW-846 8015B	2 × 1000 mL G	Cool, 6°C	7/40 days
12858	aqueous (silica gel cleanup not available)	SW-846 8015B	2 × 40 mL G	Cool, 6°C HCl to pH <2	14/40 days
10600	aqueous	SW-846 8015C/D	2 × 1000 mL G (amber)	Cool, 6°C HCl to pH <2	7/40 days
13163	aqueous (silica gel cleanup not available)	SW-846 8015C/D	2 × 40 mL G	Cool, 6°C HCl to pH <2	14/40 days
10941	solid	SW-846 8015B (microwave)	125 g G	Cool, 6°C	14/40 days
12838	solid	SW-846 8015C/D (microwave)	125 g G	Cool, 6°C	14/40 days
California DRO (C₁₃-C₂₂)					
12680	aqueous	SW-846 8015B modified	125 g G	Cool, 6°C	14/40 days
California DRO (C₁₃-C₂₂)/ORO (C₂₃-C₄₀)					
6635	aqueous	SW-846 8015B modified	2 × 1000 mL G	Cool, 6°C HCl to pH <2	7/40 days
13240	aqueous	SW-846 8015C/D	2 × 1000 mL G	Cool, 6°C HCl to pH <2	7/40 days
6631	solid	SW-846 8015B modified	125 g G	Cool, 6°C	14/40 days
California DRO (C₁₂-C₂₃)/ORO (>C₂₃-C₃₂)					
13122	aqueous	SW-846 8015B	2 × 1000 mL G	Cool, 6°C HCl to pH <2	7/40 days
California DRO (C₁₃-C₂₂)					
12680	aqueous	SW-846 8015B modified	125 g G	Cool, 6°C	14/40 days

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
California GRO (C₅-C₁₂)					
8229	aqueous	SW-846 8015B modified	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
5551	solid	SW-846 8015B modified	<i>See Soil Sampling</i>	Cool, 6°C	14 days
Connecticut ETPH (C₉-C₃₆)					
2768	aqueous	CT ETPH 03/99	2 × 1000 mL G	Cool, 6°C	7/40 days
2769	solid	CT ETPH 03/99	125 g G	Cool, 6°C	14/40 days
Delaware Underground Storage Tanks (UST) – Contact your client service representative					
Florida PRO (C₈-C₄₀)					
2099	aqueous	FL PRO 11/95	2 × 1000 mL G	Cool, 6°C HCl to pH <2	7/40 days
2100	solid	FL PRO 11/95	125 g G	Cool, 6°C	14/40 days
Florida PRO (C₈-C₄₀) with ranges					
00347	aqueous	FL PRO 11/95	2 × 1000 mL G	Cool, 6°C HCl to pH <2	7/40 days
00359	solid	FL PRO 11/95	125 g G	Cool, 6°C	14/40 days
Iowa OA-1 (GRO [C₆-C₁₀]/BTEX/MTBE)					
1636/2102	aqueous	OA-1 GRO SW-846 8015B modified and SW-846 8021B	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
1638/8179	solid	OA-1 GRO SW-846 8015B modified and SW-846 8021B	<i>See Soil Sampling</i>	Cool, 6°C	14 days
Iowa OA-2					
2112	aqueous	OA-2 DRO SW-846 8015B	2 × 1000 mL G	Cool, 6°C HCl to pH <2	7/40 days
2110	solid	OA-2 DRO SW-846 8015B	125 g G	Cool, 6°C	14/40 days
Kentucky TPH-DRO (C₁₀-C₂₈)					
8269	aqueous	SW-846 8015B	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
10600	aqueous	SW-846 8015C/D	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
10941	solid	SW-846 8015B (microwave)	125 g G	Cool, 6°C	14/40 days
12838	solid	SW-846 8015C/D (microwave)	125 g G	Cool, 6°C	14/40 days
Kentucky TPH-GRO (C₆-C₁₀)					
1635	aqueous	SW-846 8015B modified	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
10598	aqueous	SW-846 8015C/D modified	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
1637	solid	SW-846 8015B modified	<i>See Soil Sampling</i>	Cool, 6°C	14 days
10599	solid	SW-846 8015C/D modified	<i>See Soil Sampling</i>	Cool, 6°C	14 days

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Louisiana EPH (Aliphatics >C₁₀-C₃₅; Aromatics >C₁₀-C₃₅)					
6976	aqueous	MA EPH 05/04 (modified ranges)	2 × 1000 mL G	Cool, 6°C HCl to pH <2	14/40 days
7062	solid	MA EPH 05/04 (modified ranges)	125 g G	Cool, 6°C	14/40 days
Louisiana EPH (Aliphatics >C₁₀-C₂₈; Aromatics >C₁₀-C₂₈)					
8323	aqueous	MA EPH 05/04 (modified ranges)	2 × 1000 mL G	Cool, 6°C HCl to pH <2	14/40 days
8324	solid	MA EPH 05/04 (modified ranges)	125 g G	Cool, 6°C	7/40 days
Louisiana VPH (Aliphatics >C₆-C₁₀; Aromatics >C₈-C₁₀)					
6630	aqueous	MA DEP VPH modified	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
6629	solid	MA DEP VPH modified	15 g G	Cool, 6°C methanol	28 days
Louisiana TPH-D (C₁₀-C₂₈) and TPH-O (>C₂₈-C₃₅)					
8349	aqueous	SW-846 8015B	2 × 1000 mL G	Cool, 6°C HCl to pH <2	7/40 days
8345	solid	SW-846 8015B	125 g G	Cool, 6°C	14/40 days
Louisiana TPH-G (C₆-C₁₀)					
2762	aqueous	SW-846 8015B modified	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
2765	solid	SW-846 8015B modified	<i>See Soil Sampling</i>	Cool, 6°C	14 days
Massachusetts EPH (Aliphatics C₉-C₃₆; Aromatics C₁₁-C₂₂; PAH)					
5331	aqueous	MA EPH 05/04	2 × 1000 mL G	Cool, 6°C HCl to pH <2	14/40 days
5332	solid	MA EPH 05/04	125 g G	Cool, 6°C	14/40 days
Massachusetts VPH (Aliphatic C₅-C₁₂; Aromatic C₉-C₁₀; BTEX/MTBE/Naphthalene)					
8754	aqueous	MA DEP VPH 05/04	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
14079 (DoD only)	aqueous	MA DEP VPH 05/04	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
8765	solid	MA DEP VPH 05/04	15 g G	Cool, 6°C methanol	28 days
Michigan UST (BTEX/MTBE/TMBs/Naphthalene/2-Methylnaphthalene)					
10335	aqueous	SW-846 8260B	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
11997	aqueous	SW-846 8260C	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
10237	solid	SW-846 8260B	<i>See Soil Sampling</i>	Cool, 6°C	14 days
11995	solid	SW-846 8260B	<i>See Soil Sampling</i>	Cool, 6°C	14 days
Montana Prescreen EPH					
5968	aqueous	MT DEQ	2 × 1000 mL G	Cool, 6°C HCl to pH <2	14/40 days
5969	solid	MT DEQ	125 g G	Cool, 6°C	7/40 days
Montana EPH (Aliphatic C₉-C₃₆; Aromatic C₁₁-C₂₂; Total Hydrocarbons)					
5944	aqueous	MT DEQ MA EPH	2 × 1000 mL G	Cool, 6°C HCl to pH <2	14/40 days
5949	solid	MT DEQ MA EPH	125 g G	Cool, 6°C	7/40 days

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time																																
Montana VPH (Aliphatic C₅-C₁₂; Aromatic C₉-C₁₀; BTEX/MTBE/Naphthalene/Total Hydrocarbons)																																					
5869	aqueous	MA DEP VPH 05/04	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days																																
5988	solid	MA DEP VPH 05/04	15 g G	Cool, 6°C methanol	28 days																																
New Jersey Prescreen EPH																																					
12997	aqueous	NJDEP EPH 10/08	1000 mL G	Cool, 6°C	14 days																																
14025 (DoD only)	aqueous	NJDEP EPH 10/08	1000 mL G	Cool, 6°C	14 days																																
11986	solid	NJDEP EPH 10/08	125 g G	Cool, 6°C	14 days																																
14024 (DoD only)	solid	NJDEP EPH 10/08	125 g G	Cool, 6°C	14 days																																
New Jersey EPH (Aliphatic C₉-C₄₀; Aromatic C₁₀-C₃₆; Total Hydrocarbons)																																					
10973	aqueous	NJDEP EPH 10/08	2 × 1000 mL G	Cool, 6°C HCl to pH <2	14/40 days																																
10967	solid	NJDEP EPH 10/08	125 g G	Cool, 6°C	14/40 days																																
New Jersey Underground Storage Tanks (UST) – Contact your client service representative																																					
New York CP-51 Fuel Oil Contamination																																					
<table border="1"> <tr> <td>1,2,4-Trimethylbenzene</td> <td>Benzo(b)fluoranthene*</td> <td>Fluorene*</td> <td>o-Xylene</td> </tr> <tr> <td>1,3,5-Trimethylbenzene</td> <td>Benzo(g,h,i)perylene*</td> <td>Indeno(1,2,3-cd)pyrene*</td> <td>Phenanthrene*</td> </tr> <tr> <td>Acenaphthene*</td> <td>Benzo(k)fluoranthene*</td> <td>Isopropylbenzene</td> <td>p-Isopropyltoluene</td> </tr> <tr> <td>Acenaphthylene*</td> <td>Chrysene*</td> <td>m-/p-Xylene</td> <td>Pyrene*</td> </tr> <tr> <td>Anthracene*</td> <td>Dibenz(a,h)anthracene*</td> <td>Naphthalene*</td> <td>sec-Butylbenzene</td> </tr> <tr> <td>Benzene</td> <td>Ethylbenzene</td> <td>n-Butylbenzene</td> <td>tert-Butylbenzene</td> </tr> <tr> <td>Benzo(a)anthracene*</td> <td>Fluoranthene*</td> <td>n-Propylbenzene</td> <td>Toluene</td> </tr> <tr> <td>Benzo(a)pyrene*</td> <td></td> <td></td> <td></td> </tr> </table>						1,2,4-Trimethylbenzene	Benzo(b)fluoranthene*	Fluorene*	o-Xylene	1,3,5-Trimethylbenzene	Benzo(g,h,i)perylene*	Indeno(1,2,3-cd)pyrene*	Phenanthrene*	Acenaphthene*	Benzo(k)fluoranthene*	Isopropylbenzene	p-Isopropyltoluene	Acenaphthylene*	Chrysene*	m-/p-Xylene	Pyrene*	Anthracene*	Dibenz(a,h)anthracene*	Naphthalene*	sec-Butylbenzene	Benzene	Ethylbenzene	n-Butylbenzene	tert-Butylbenzene	Benzo(a)anthracene*	Fluoranthene*	n-Propylbenzene	Toluene	Benzo(a)pyrene*			
1,2,4-Trimethylbenzene	Benzo(b)fluoranthene*	Fluorene*	o-Xylene																																		
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Benzo(a)pyrene*																																					
*PAHs by SW-846 8270D																																					
11997	aqueous	SW-846 8260C	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days																																
10461	aqueous	SW-846 8270D	2 × 250 mL G (amber)	Cool, 6°C	7/40 days																																
11995	solid	SW-846 8260C	See Soil Sampling	Cool, 6°C	14 days																																
10726	solid	SW-846 8270D (microwave)	125 g G	Cool, 6°C	14/40 days																																
New York CP-51 Fuel Oil Contamination TCLP Extraction																																					
946/11997	aqueous	SW-846 1311/ SW-846 8260C	200 g G	Cool, 6°C (no headspace)	14 days after extraction																																
947/14252	aqueous	SW-846 1311/ SW-846 8270D	200 g G	Cool, 6°C	7/40 days after extraction																																
New York CP-51 Gasoline Contamination																																					
<table border="1"> <tr> <td>1,2,4-Trimethylbenzene</td> <td>Isopropylbenzene</td> <td>Naphthalene</td> <td>o-Xylene</td> </tr> <tr> <td>1,3,5-Trimethylbenzene</td> <td>m-/p-Xylene</td> <td>n-Butylbenzene</td> <td>p-Isopropyltoluene</td> </tr> <tr> <td>Benzene</td> <td>Methyl tert-Butyl Ether</td> <td>n-Propylbenzene</td> <td>sec-Butylbenzene</td> </tr> <tr> <td>Ethylbenzene</td> <td></td> <td></td> <td>tert-Butylbenzene</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Toluene</td> </tr> </table>						1,2,4-Trimethylbenzene	Isopropylbenzene	Naphthalene	o-Xylene	1,3,5-Trimethylbenzene	m-/p-Xylene	n-Butylbenzene	p-Isopropyltoluene	Benzene	Methyl tert-Butyl Ether	n-Propylbenzene	sec-Butylbenzene	Ethylbenzene			tert-Butylbenzene				Toluene												
1,2,4-Trimethylbenzene	Isopropylbenzene	Naphthalene	o-Xylene																																		
1,3,5-Trimethylbenzene	m-/p-Xylene	n-Butylbenzene	p-Isopropyltoluene																																		
Benzene	Methyl tert-Butyl Ether	n-Propylbenzene	sec-Butylbenzene																																		
Ethylbenzene			tert-Butylbenzene																																		
			Toluene																																		
11997	aqueous	SW-846 8260C	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days																																
11995	solid	SW-846 8260C	See Soil Sampling	Cool, 6°C	14 days																																
New York CP-51 Gasoline Contamination TCLP Extraction																																					
946/11997	aqueous	SW-846 1311/ SW-846 8260C	200 g G	Cool, 6°C (no headspace)	14 days after extraction																																

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
North Carolina DRO (C₁₀-C₂₈)					
10600	aqueous	SW-846 8015C/D	2 × 1000 mL G (amber)	Cool, 6°C HCl to pH <2	7/40 days
12838	solid	SW-846 8015C/D (microwave)	125 g G	Cool, 6°C	14/40 days
North Carolina GRO (C₆-C₁₀)					
1635	aqueous	SW-846 8015B modified	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
10598	aqueous	SW-846 8015C/D	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
1637	solid	SW-846 8015B modified	<i>See Soil Sampling</i>	Cool, 6°C	14 days
10599	solid	SW-846 8015C/D	<i>See Soil Sampling</i>	Cool, 6°C	14 days
North Carolina EPH (Aliphatic C₉-C₃₆; Aromatic C₁₁-C₂₂; PAH)					
5331	aqueous	MA EPH 05/04	2 × 1000 mL G	Cool, 6°C HCl to pH <2	14/40 days
5332	solid	MA EPH 05/04	125 g G	Cool, 6°C	14/40 days
North Carolina VPH (Aliphatic C₅-C₁₂; Aromatic C₉-C₁₀; BTEX/MTBE/Naphthalene)					
8754	aqueous	MA DEP VPH 05/04	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
8765	solid	MA DEP VPH 05/04	15 g G	Cool, 6°C methanol	28 days
Ohio DRO (C₁₀-C₂₈) (not VAP certified)					
8269	aqueous	SW-846 8015B	2 × 1000 mL G (amber)	Cool, 6°C	7/40 days
8270	solid	SW-846 8015B	125 g G	Cool, 6°C	14/14 days
Ohio GRO (C₆-C₁₀) (not VAP certified)					
1635	aqueous	SW-846 8015B modified	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
1637	solid	SW-846 8015B modified	<i>See Soil Sampling</i>	Cool, 6°C	14 days
10598	aqueous	SW-846 8015C/D	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
10599	solid	SW-846 8015C/D	<i>See Soil Sampling</i>	Cool, 6°C	14 days
Oklahoma DRO (C₁₀-C₂₈)					
7785	aqueous	OK DEQ 10/97	2 × 1000 mL G	Cool, 6°C HCl to pH <2	7/40 days
7784	solid	OK DEQ 10/97	125 g G	Cool, 6°C	7/40 days
Oklahoma DRO (C₁₀-C₂₈) with ranges					
10024	aqueous	OK DEQ 10/97	2 × 1000 mL G	Cool, 6°C HCl to pH <2	7/40 days
10027	solid	OK DEQ 10/97	125 g G	Cool, 6°C	7/40 days
Oklahoma GRO (C₅-C₁₂)					
2315	aqueous	OK DEQ 02/24/96 8015B modified	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
8789	solid	OK DEQ 02/24/96 8015B modified	<i>See Soil Sampling</i>	Cool, 6°C	14 days

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Oregon NW-Dx (DRO C₁₂-C₂₄; HRO C₂₄-C₄₀)					
8271	aqueous	ECY 97-602 NWTPH-Dx modified	2 × 1000 mL G	Cool, 6°C HCl to pH <2	14/40 days
12899	aqueous	ECY 97-602 NWTPH-Dx modified	2 × 250 mL G (amber)	Cool, 6°C HCl to pH <2	7/40 days
8272	solid	ECY 97-602 NWTPH-Dx modified	125 g G	Cool, 6°C	14/40 days
Oregon NW-Gx (C₇-C₁₂)					
8273	aqueous	ECY 97-602 NWTPH-Gx modified	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
2005	solid	ECY 97-602 NWTPH-Gx modified	<i>See Soil Sampling</i>	Cool, 6°C	14 days
Pennsylvania Underground Storage Tanks (UST) - See table at end of this section					
South Carolina DRO					
13094	aqueous	SW-846 8015C	2 × 1000 mL G	Cool, 6°C HCl to pH <2	7/40 days
10396	solid	SW-846 8015C	125 g G	Cool, 6°C	7/40 days
Tennessee EPH (C₁₂-C₄₀)					
2784	aqueous	TN EPH 12/98	2 × 1000 mL G	Cool, 6°C HCl to pH <2	7/40 days
2785	solid	TN EPH 12/98	125 g G	Cool, 6°C	14/40 days
Texas TX-1005 (TPH) (C₆-C₁₂, >C₁₂-C₂₈; >C₂₈-C₃₅; Total Hydrocarbons)					
2318	aqueous	TNRCC 1005 Rev 3. 06/01	2 × 40 mL G	Cool, 6°C HCl to pH <2	14/14 days
2321	solid	TNRCC 1005 Rev 3. 06/01	2 × 10 g G	Cool, 6°C	14/14 days
Texas TX-1006 (multiple ranges)					
6091/497	aqueous	TX 1006	2 × 40 mL G	Cool, 6°C HCl to pH <2	14/14 days
6104/497	solid	TX 1006	2 × 10 g G	Cool, 6°C	14/14 days
Washington EPH (multiple ranges)					
5979	aqueous	ECY 97-602 WA EPH	2 × 1000 mL G	Cool, 6°C HCl to pH <2	14 days
5970	solid	ECY 97-602 WA EPH	125 g G	Cool, 6°C	14 days
14100 (DoD only)	solid	ECY 97-602 WA EPH	125 g G	Cool, 6°C	14 days
Washington VPH (multiple ranges)					
5665	aqueous	ECY 97-602 WA VPH	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days*
5666	solid	ECY 97-602 WA VPH	<i>See Soil Sampling</i>	Cool, 6°C	14 days
*Holding time for unpreserved waters is 7 days.					
Washington NW-Dx (DRO C₁₂-C₂₄; HRO C₂₄-C₄₀)					
8271	aqueous	ECY 97-602 NWTPH-Dx modified	2 × 1000 mL G	Cool, 6°C HCl to pH <2	14/40 days
12899	aqueous	ECY 97-602 NWTPH-Dx modified	2 × 250 mL G (amber)	Cool, 6°C HCl to pH <2	7/40 days
8272	solid	ECY 97-602 NWTPH-Dx modified	125 g G	Cool, 6°C	14/40 days

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Washington NW-Gx (C₇-C₁₂)					
8273	aqueous	ECY 97-602 NWTPH-Gx modified	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
2005	solid	ECY 97-602 NWTPH-Gx modified	<i>See Soil Sampling</i>	Cool, 6°C	14 days
Wisconsin DRO (C₁₀-C₂₈)					
7554	aqueous	WI DRO PUBL-SW-141 09/95	2 × 1000 mL G	Cool, 6°C HCl to pH <2	7/40 days
7553	solid	WI DRO PUBL-SW-141 09/95	<i>See Soil Sampling</i>	Cool, 6°C	10/40 days
Wyoming TPH-DRO (C₁₀-C₃₂)					
5867	aqueous	SW-846 8015B	2 × 1000 mL G	Cool, 6°C HCl to pH <2 (no headspace)	7 days
12858 (micro)	aqueous	SW-846 8015B	2 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	7 days
13163 (micro)	aqueous	SW-846 8015C/D	2 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	7 days
12899 (mini)	aqueous	SW-846 8015B	2 × 250 mL G	Cool, 6°C HCl to pH <2 (no headspace)	7 days
13579 (mini)	aqueous	SW-846 8015C/D	2 × 250 mL G	Cool, 6°C HCl to pH <2 (no headspace)	7 days
5868	solid	SW-846 8015B	125 g G	None	14 days
Wyoming TPH-GRO (C₆-C₁₀)					
1635	aqueous	SW-846 8015B modified	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
10598	aqueous	SW-846 8015C/D modified	3 × 40 mL G	Cool, 6°C HCl to pH <2 (no headspace)	14 days
1637	solid	SW-846 8015B modified	<i>See Soil Sampling</i>	Cool, 6°C	14 days
10599	solid	SW-846 8015C/D modified	<i>See Soil Sampling</i>	Cool, 6°C	14 days

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Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
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Pennsylvania Underground Storage Tanks

Pennsylvania – Leaded Gasoline

BTEX, Naphthalene, Cumene, EDC, 1,3,5-Trimethylbenzene, and 1,2,4-Trimethylbenzene					
10945	aqueous	SW-846 8260B	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
13130	aqueous	SW-846 8260C	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
EDB					
10398	aqueous	SW-846 8011	2 × 40 mL G	Cool, 6°C HCl	14/40 days
Lead (dissolved) by ICP/MS					
6035	aqueous	SW-846 6020/A	250 mL P/G	Cool, 6°C HNO ₃ to pH <2	6 months
BTEX, Naphthalene, Cumene, EDC, EDB, 1,3,5-Trimethylbenzene, and 1,2,4-Trimethylbenzene (Must use low-level field preserved vials or EnCore preparation)					
10237	solid	SW-846 8260B	<i>See Soil Sampling*</i>	Cool, 6°C	14 days
11995	solid	SW-846 8260C	<i>See Soil Sampling*</i>	Cool, 6°C	14 days
Lead by ICP					
6955	solid	SW-846 6010B/C	100 g P/G	Cool, 6°C	6 months

Pennsylvania – Unleaded Gasoline

BTEX, MTBE, Naphthalene, Cumene, 1,3,5-Trimethylbenzene, and 1,2,4-Trimethylbenzene					
10945	aqueous	SW-846 8260B	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
13130	aqueous	SW-846 8260C	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
10237	solid	SW-846 8260B	<i>See Soil Sampling*</i>	Cool, 6°C	14 days
11995	solid	SW-846 8260C	<i>See Soil Sampling*</i>	Cool, 6°C	14 days

Pennsylvania – Kerosene, #1 Fuel Oil

BTE, MTBE, Naphthalene, Cumene, 1,3,5-Trimethylbenzene, and 1,2,4-Trimethylbenzene					
10945	aqueous	SW-846 8260B	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
13130	aqueous	SW-846 8260C	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
10237	solid	SW-846 8260B	<i>See Soil Sampling*</i>	Cool, 6°C	14 days
11995	solid	SW-846 8260C	<i>See Soil Sampling*</i>	Cool, 6°C	14 days

Pennsylvania – #2 Fuel Oil/Diesel Fuel (home heating oil)

BTE, MTBE, Naphthalene, Cumene, 1,3,5-Trimethylbenzene, and 1,2,4-Trimethylbenzene					
10945	aqueous	SW-846 8260B	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
13130	aqueous	SW-846 8260C	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
10237	solid	SW-846 8260B	<i>See Soil Sampling*</i>	Cool, 6°C	14 days
11995	solid	SW-846 8260C	<i>See Soil Sampling*</i>	Cool, 6°C	14 days

*SW-846 5035 soil notes: EnCore prices are \$8.50 per sampler (low-level option requires 3 = \$25.50; high-level option requires 1 = \$8.50). Low-level prep charge for field preserved vials (2392) or EnCores (8389) is \$40. High-level prep charge for field preserved vials (6171) or EnCore (8390) is \$16.

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Pennsylvania – #4, #5, and #6 Fuel Oils (lube oil, hydraulic fluids)					
Benzene, Naphthalene					
10945	aqueous	SW-846 8260B	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
13130	aqueous	SW-846 8260C	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
10237	solid	SW-846 8260B	<i>See Soil Sampling*</i>	Cool, 6°C	14 days
11995	solid	SW-846 8260C	<i>See Soil Sampling*</i>	Cool, 6°C	14 days
Phenanthrene, Pyrene, Chrysene					
14249	aqueous	SW-846 8270C	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
Fluorene, Anthracene, Phenanthrene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(a)pyrene, Benzo(g,h,i)perylene					
10724	solid	SW-846 8270C (microwave)	100 g G	Cool, 6°C	7/40 days
10726	solid	SW-846 8270D (microwave)	100 g G	Cool, 6°C	7/40 days
Pennsylvania – Used Motor Oil (waste oil)					
BTE, Naphthalene, and Cumene					
10945	aqueous	SW-846 8260B	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
13130	aqueous	SW-846 8260C	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
10237	solid	SW-846 8260B	<i>See Soil Sampling*</i>	Cool, 6°C	14 days
11995	solid	SW-846 8260C	<i>See Soil Sampling*</i>	Cool, 6°C	14 days
Lead (dissolved) by ICP/MS					
6035	aqueous	SW-846 6020/A	250 mL P/G	Cool, 6°C HNO ₃ to pH <2	6 months
Lead by ICP					
6955	solid	SW-846 6010B/C	100 g P/G	Cool, 6°C	6 months
Pyrene, Chrysene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(a)anthracene, Indeno(1,2,3-cd)pyrene, Benzo(g,h,i)perylene					
14249	aqueous	SW-846 8270C	2 × 250 mL G (amber)	Cool, 6°C	7/40 days
10724	solid	SW-846 8270C (microwave)	100 g G	Cool, 6°C	7/40 days
10726	solid	SW-846 8270D (microwave)	100 g G	Cool, 6°C	7/40 days

Pennsylvania – Mineral Insulating Oil

1,3,5-Trimethylbenzene and 1,2,4-Trimethylbenzene					
10945	aqueous	SW-846 8260B	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
13130	aqueous	SW-846 8260C	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
10237	solid	SW-846 8260B	<i>See Soil Sampling*</i>	Cool, 6°C	14 days
11995	solid	SW-846 8260C	<i>See Soil Sampling*</i>	Cool, 6°C	14 days

*SW-846 5035 soil notes: EnCore prices are \$8.50 per sampler (low-level option requires 3 = \$25.50; high-level option requires 1 = \$8.50). Low-level prep charge for field preserved vials (2392) or EnCores (8389) is \$40. High-level prep charge for field preserved vials (6171) or EnCore (8390) is \$16.

Catalog Number	Analysis Matrix	Method	Sample Size Plastic/Glass	Preservation	Holding Time
Pennsylvania – Mineral Insulating Oil (continued)					
PCBs					
10227	aqueous	SW-846 8082	2 × 1000 mL G (amber)	Cool, 6°C	365/40 days
14169	aqueous	SW-846 8082	2 × 250 mL G (amber)	Cool, 6°C	365/40 days
10591	aqueous	SW-846 8082A	2 × 1000 mL G (amber)	Cool, 6°C	365/40 days
14184	aqueous	SW-846 8082A	2 × 250 mL G (amber)	Cool, 6°C	365/40 days
10736	solid	SW-846 8082 (microwave)	100 g G	Cool, 6°C	365/40 days
10885	solid	SW-846 8082A (microwave)	100 g G	Cool, 6°C	365/40 days
Pennsylvania – Combination of Leaded and Unleaded Gasoline					
BTEX, MTBE, Naphthalene, Cumene, EDC, 1,3,5-Trimethylbenzene, and 1,2,4-Trimethylbenzene					
10945	aqueous	SW-846 8260B	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
13130	aqueous	SW-846 8260C	3 × 40 mL G	Cool, 6°C HCl to pH <2	14 days
EDB					
10398	aqueous	SW-846 8011	2 × 40 mL G	Cool, 6°C HCl	14/40 days
Lead (dissolved) by ICP/MS					
6035	aqueous	SW-846 6020/A	250 mL P/G	Cool, 6°C HNO ₃ to pH <2	6 months
BTEX, MTBE, Naphthalene, Cumene, EDC, EDB, 1,3,5-Trimethylbenzene, and 1,2,4-Trimethylbenzene					
<i>Must use low-level field preserved vials or Encore preparation.</i>					
10237	solid	SW-846 8260B	<i>See Soil Sampling*</i>	Cool, 6°C	14 days
11995	solid	SW-846 8260C	<i>See Soil Sampling*</i>	Cool, 6°C	14 days
Lead by ICP					
6955	solid	SW-846 6010B/C	100 g P/G	Cool, 6°C	6 months

*SW-846 5035 soil notes: EnCore prices are \$8.50 per sampler (low-level option requires 3 = \$25.50; high-level option requires 1 = \$8.50). Low-level prep charge for field preserved vials (2392) or EnCores (8389) is \$40. High-level prep charge for field preserved vials (6171) or EnCore (8390) is \$16.

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Index

1

1,1,1,2-Tetrachloroethane, 27, 60, 78, 79
1,1,1-Trichloroethane, 25, 27, 60, 63, 78, 79
1,1,2,2-Tetrachloroethane, 27, 60, 78, 79
1,1,2-Trichloro-1,2,2-Trifluoroethane, 27, 60, 80, 81
1,1,2-Trichloroethane, 25, 27, 60, 63, 78, 79
1,1'-Biphenyl, 53, 75, 77
1,1-Dichloroethane, 25, 27, 60, 78, 79
1,1-Dichloroethene, 27, 59, 60, 63, 78, 79
1,1-Dichloropropane, 61
1,1-Dichloropropene, 60
1,1-Dimethylhydrazine, 38
1,2,3,4,5,6,7,8-OCDD, 36
1,2,3,4,6,7,8,9-OCDF, 36
1,2,3,4,6,7,8-HpCDD, 36
1,2,3,4,6,7,8-HpCDF, 36
1,2,3,4,7,8,9-HpCDF, 36
1,2,3,4,7,8-HxCDD, 36
1,2,3,4,7,8-HxCDF, 36
1,2,3,4-Tetrachlorobenzene, 53
1,2,3,4-Tetrahydronaphthalene, 53, 77
1,2,3,6,7,8-HxCDD, 36
1,2,3,6,7,8-HxCDF, 36
1,2,3,7,8,9-HxCDD, 36
1,2,3,7,8,9-HxCDF, 36
1,2,3,7,8-PeCDD, 36
1,2,3,7,8-PeCDF, 36
1,2,3-Trichlorobenzene, 60, 78, 79
1,2,3-Trichloropropane, 27, 59, 60, 78, 79
1,2,3-Trihalopropane, 60
1,2,3-Trimethylbenzene, 61
1,2,4,5-Tetrachlorobenzene, 53, 75
1,2,4,5-Tetrachlorobenzene, 53
1,2,4-Trichlorobenzene, 27, 53, 60, 63, 75, 78, 79
1,2,4-Trimethylbenzene, 25, 27, 60, 61, 94
1,2-Benzanthracene, 53, 76
1,2-Dibromo-3-Chloropropane, 27, 60, 78, 79
1,2-Dibromoethane, 25, 27, 60, 78, 79
1,2-Dichlorobenzene, 25, 27, 48, 53, 60, 63, 75, 78, 79
1,2-Dichloroethane, 25, 27, 48, 59, 60, 63, 78, 79
1,2-Dichloroethene, 27
1,2-Dichloroethene (total), 61
1,2-Dichloropropane, 25, 27, 60, 63, 78, 79
1,2-Dichlorotetrafluoroethane, 27
1,2-Diethylbenzene, 61
1,2-Difluoroethane, 26
1,2-Dinitrobenzene, 43
1,2-Diphenylhydrazine, 53, 75
1,3,5-Trimethylbenzene, 25, 27, 60, 61, 94
1,3,5-Trinitrobenzene, 43, 44, 53, 75
1,3-Butadiene, 25, 27
1,3-Dichlorobenzene, 25, 27, 53, 60, 75, 78, 79
1,3-Dichloropropane, 60, 61
1,3-Dichloropropene, 27
1,3-Dichloropropene (total), 61
1,3-Diethylbenzene, 61
1,3-Dinitrobenzene, 43, 44, 53, 75
1,4-Dichlorobenzene, 25, 27, 53, 58, 60, 63, 75, 78, 79
1,4-Diethylbenzene, 61
1,4-Dinitrobenzene, 43, 53
1,4-Dioxane, 27, 35, 36, 53, 60, 61, 77, 78, 79
1,4-Naphthoquinone, 53, 75
1,4-Phenylenediamine, 53, 75
1-Butanol, 29
1-Chloro-4-Nitrobenzene, 53
1-Chloronaphthalene, 53, 77

1-Methylnaphthalene, 25, 50, 53, 77
1-Methylphenanthrene, 53, 77
1-Naphthylamine, 53, 75
1-Nitronaphthalene, 43
1-Propanol, 29

2

2,2,4-Trimethylpentane, 27
2,2'-Dichloropropane, 60, 61
2,2'-Oxybis(1-chloropropane), 53, 75
2,3,4,6,7,8-HxCDF, 36
2,3,4,6-Tetrachlorophenol, 53, 75, 77
2,3,4,7,8-PeCDF, 36
2,3,7,8-TCDD, 36, 63
2,3,7,8-TCDF, 36
2,3-Dichloroaniline, 53, 77
2,3-Dinitrotoluene, 53, 77
2,4,4-Trimethyl-1-Pentene, 60
2,4,4-Trimethyl-2-Pentene, 60
2,4,5-T, 38, 74
2,4,5-TP, 38, 58, 74
2,4,5-Trichlorophenol, 53, 58, 75, 77
2,4,6-Trichlorophenol, 53, 58, 75
2,4,6-Trinitrotoluene, 43, 44
2,4-D, 38, 58, 74
2,4-DB, 38
2,4-Diamino-6-nitrotoluene, 44
2,4-Dichlorophenol, 53, 75
2,4-Dimethylphenol, 53, 75
2,4-Dinitrophenol, 53, 75
2,4-Dinitrotoluene, 43, 44, 53, 58, 75
2,5-Dimethylbenzaldehyde, 29
2,6-Diamino-4-nitrotoluene, 44
2,6-Dichlorophenol, 53, 75
2,6-Dinitrotoluene, 43, 44, 53, 75
25D, 60
2-Acetylaminofluorene, 53, 75
2-Amino-4,6-dinitrotoluene, 43, 44
2-Bromoethyl benzene, 53
2-Butanone, 27, 59, 60, 78, 79
2-Chloro-1,3-Butadiene, 60, 78, 79
2-Chloroethyl vinyl ether, 60, 78, 79
2-Chloronaphthalene, 53, 75
2-Chlorophenol, 53, 75
2-Chlorotoluene, 27, 60
2-Hexanone, 27, 60, 78, 79
2-Methylnaphthalene, 25, 50, 53, 61, 75, 77
2-Methylxethanol, 37
2-Methylphenol, 53, 58, 75, 77
2-Naphthylamine, 53, 75
2-Nitroaniline, 53, 75, 77
2-Nitrophenol, 53, 75
2-Nitropropane, 61
2-Nitrotoluene, 43, 44
2-Picoline, 53, 75
2-Propanol, 26, 60, 61
2-Propanone, 60, 78, 79

3

3,3'-Dichlorobenzidine, 53, 75
3,3'-Dimethylbenzidine, 53, 75
3,4-Benzofluoranthene, 53, 76
3,5-Dinitroaniline, 44
3-Chloro-1-Propene, 60, 78, 79
3-Chloroaniline, 53
3-Chloropropene, 27

3-Methylcholanthrene, 53, 75
3-Methylphenol, 58
3-Nitroaniline, 53, 75, 77
3-Nitrotoluene, 43, 44

4

4,4'-DDD, 46, 74
4,4'-DDE, 46, 74
4,4'-DDT, 46, 74
4,4'-Methylenebis(2-chloroaniline), 53
4,6-Dinitro-2-methylphenol, 53, 75
4-Amino-2,6-dinitrotoluene, 43, 44
4-Aminobiphenyl, 53, 75
4-Bromophenyl phenyl ether, 53, 75
4-Chloro-3-methylphenol, 53, 75
4-Chloroaniline, 53, 75, 77
4-Chlorophenyl phenyl ether, 53, 75
4-Chlorotoluene, 60, 61
4-Ethyltoluene, 27
4-Methyl-2-Pentanone, 27, 60, 78, 79
4-Methylphenol, 53, 58, 75, 77
4-Nitroaniline, 53, 75, 77
4-Nitrophenol, 53, 75
4-Nitroquinoline-1-oxide, 53, 75
4-Nitrotoluene, 43, 44

5

5-Nitro-o-toluidine, 53, 75

6

6-Methylchrysene, 77

7

7,12-Dimethylbenz(a)anthracene, 53, 75

A

a,a-Dimethylphenethylamine, 53, 77
Acenaphthene, 25, 50, 51, 53, 75, 94
Acenaphthylene, 25, 50, 51, 53, 75, 94
Acetaldehyde, 29
Acetic Acid, 45
Acetone, 27, 48, 60, 78, 79
Acetonitrile, 27, 48, 60, 78, 79
Acetophenone, 53, 75, 77
Acid Extractables, 29, 51, 54
Acid Volatile Sulfides, 29
Acidity, 29
Acrolein, 27, 60, 78, 79
Acrylonitrile, 25, 27, 60, 78, 79
Alachlor, 38, 46
Alaska DRO, 91
Alaska GRO, 91
Alcohols, 29
Aldehydes, 29
Aldicarb, 47
Aldicarb Sulfone, 47
Aldicarb Sulfoxide, 47
Aldrin, 46, 74
Alkalinity, 30, 32, 33, 38
Alkylated PAHs, 51
Allyl Chloride, 27, 60, 78, 79
alpha-BHC, 46, 74
alpha-Chlordane, 46, 74
Alumina Cleanup, 70
Aluminum, 40, 41, 66, 73
Ambient Air, 25
a-Methyl Styrene, 27, 53, 77
Ammonia, 30, 44, 45
Aniline, 53, 76, 77

Anthracene, 25, 50, 51, 53, 76, 94
Antimony, 40, 41, 64, 73
Appendix I, 61
Appendix IX, 30, 41
Aramite, 53, 77
Aroclor 1016, 49, 74
Aroclor 1221, 49, 74
Aroclor 1232, 46, 49, 74
Aroclor 1242, 49, 74
Aroclor 1248, 49, 74
Aroclor 1254, 49, 74
Aroclor 1260, 49, 74
Aroclor 1262, 49, 74
Aroclor 1268, 49, 74
Arsenic, 40, 41, 58, 64, 73
a-Terpeneol, 53, 77
Atrazine, 38, 53, 76
AVS/SEM, 29
Azinphos-methyl, 47

B

Banvel, 38
Barium, 40, 41, 58, 64, 73
Base Neutral Extractables, 31, 51, 54
Baygon, 47
Benzaldehyde, 29, 53, 76
Benzene, 25, 26, 27, 48, 59, 60, 63, 78, 79, 85, 94
Benzenethiol, 53, 77
Benzidine, 53, 76
Benzo(a)anthracene, 25, 50, 51, 53, 76, 94
Benzo(a)pyrene, 25, 50, 51, 53, 63, 76, 94
Benzo(b)fluoranthene, 25, 50, 51, 53, 76, 94
Benzo(e)pyrene, 51
Benzo(g,h,i)perylene, 25, 50, 51, 53, 76, 94
Benzo(k)fluoranthene, 25, 50, 51, 53, 76, 94
Benzoic Acid, 53, 77
Benzophenone, 53
Benzyl Alcohol, 53, 76, 77
Benzyl Chloride, 27, 60, 61
Beryllium, 40, 41, 64, 73
beta-BHC, 46, 74
Bicarbonate, 32
Biochemical Oxygen Demand, 32
bis(2-Chloroethoxy)methane, 53, 76
bis(2-Chloroethyl)ether, 53, 76
bis(2-Chloroisopropyl)ether, 53, 76
bis(2-Ethylhexyl)phthalate, 53, 76
BOD, 32
Bolstar, 47
Boron, 40, 73
Bromide, 32
Bromobenzene, 27, 61
Bromochloromethane, 60, 78, 79
Bromodichlorobenzene, 25
Bromodichloromethane, 27, 60, 61, 78, 79
Bromoethene, 27
Bromoform, 27, 60, 61, 78, 79
Bromomethane, 27, 60, 78, 79
BTEX, 26, 85, 89
Bulk Density, 32
Butane, 26
Butyl Acetate, 60, 61
Butyl Benzyl Phthalate, 53, 76
Butyraldehyde, 29
Butyric Acid, 45

C

C1-Benzanthrene/chrysenes, 51
C1-C10 hydrocarbons hexane, 26
C1-C10 hydrocarbons methane, 26
C1-C10 hydrocarbons propane, 26

C1-C4 hydrocarbons hexane, 26
C1-C4 hydrocarbons methane, 26
C1-C4 hydrocarbons propane, 26
C1-Fluoranthrenes/pryenes, 51
C1-Fluorenes, 51
C1-Naphthalenes, 51
C1-Phenanthrenes/anthracenes, 51
C2-Benzathrene/chrysenes, 51
C2-C10 hydrocarbons hexane, 26
C2-C10 hydrocarbons methane, 26
C2-C10 hydrocarbons propane, 26
C2-C4 hydrocarbons hexane, 26
C2-C4 hydrocarbons methane, 26
C2-C4 hydrocarbons propane, 26
C2-Fluorenes, 51
C2-Naphthalenes, 51
C2-Phenanthrenes/anthracenes, 51
C3-Benzathrene/chrysenes, 51
C3-Fluorenes, 51
C3-Naphthalenes, 51
C3-Phenanthrenes/anthracenes, 51
C4-Benzathrene/chrysenes, 51
C4-C10 hydrocarbons hexane, 26
C4-C10 hydrocarbons methane, 26
C4-C10 hydrocarbons propane, 26
C4-C10 TPH GRO, 61
C4-C12 TPH GRO, 61
C4-Naphthalenes, 51
C4-Phenanthrenes/anthracenes, 51
C5-C12 TPH GRO, 61
C6-C10 TPH GRO, 61
C6-C12 TPH GRO, 61
Cadmium, 40, 41, 58, 64, 73
Calcium, 40, 41, 73
Calcium Hardness, 38
California, 39
California DRO, 91
California DRO/ORO, 91
California GRO, 92
CAM 17, 41
Caprolactam, 53, 76
Captan, 46
Carbaryl, 47
Carbazole, 53, 76, 77
Carbofuran, 47, 63
Carbon, 32, 33
Carbon Dioxide, 33
Carbon Disulfide, 27, 60, 78, 79
Carbon Tetrachloride, 25, 27, 59, 60, 63, 78, 79
Carbonate, 33
Cation Exchange Capacity, 33
Chemical Oxygen Demand, 33
Chlordane, 46, 58, 63, 74
Chloride, 33, 66
Chlorinated Pesticides, 46
Chlorine, 33
Chlorobenzene, 27, 48, 59, 60, 63, 78, 79
Chlorobenzilate, 53, 76
Chlorodifluoromethane, 27
Chloroethane, 25, 27, 60, 78, 79
Chloroform, 25, 27, 48, 59, 60, 61, 80, 81
Chloromethane, 25, 27, 60, 80, 81
Chloroprene, 60, 78, 79
Chlorotrifluoroethene, 61

Chlorpyrifos, 47
Chromium, 40, 41, 58, 64, 73
Chrysene, 25, 50, 51, 53, 76, 94
cis/trans-Diallate, 53, 76
cis-1,2-Dichloroethene, 25, 27, 60, 63, 80, 81
cis-1,3-Dichloropropene, 27, 60, 80, 81
Citric Acid, 45
Cleanups, 70
Cobalt, 40, 41, 73
COD, 33
Coliform, 43
Color, 34, 66
Conductance, 56
Connecticut ETPH, 92
Connecticut PCBs, 50
Connecticut Pesticides, 46
Copper, 39, 40, 41, 64, 66, 73
Corrosivity, 35, 66
Coumaphos, 47
Crotonaldehyde, 29
Cumene, 25, 27
Cyanazine, 38
Cyanide, 31, 35, 52, 64, 73
Cyclohexane, 27, 60, 80, 81
Cyclohexanone, 61

D

Dalapon, 38
DBCP, 36, 60, 63, 78, 79
Delaware UST, 92
delta-BHC, 46, 74
Demeton-O, 47
Demeton-S, 47
Detergents, 39
Di(2-ethylhexyl)adipate, 63
Di(2-ethylhexyl)phthalate, 63
Diazinon, 47
Dibenz(a,h)acridine, 53, 77
Dibenz(a,h)anthracene, 25, 50, 51, 53, 76, 94
Dibenz(a,j)acridine, 53, 77
Dibenzofuran, 53, 76, 77
Dibromochloromethane, 27, 60, 61, 80, 81
Dibromochloropropane, 36, 63
Dibromomethane, 27, 60, 80, 81
Dicamba, 38
Dichlorodifluoromethane, 25, 27, 60, 80, 81
Dichlorofluoromethane, 27, 61
Dichloromethane, 63
Dichloroprop, 38
Dichlorvos, 47
Dieldrin, 46, 74
Diethyl Phthalate, 53, 76
Diethylamine, 48
Diethylbenzene (total), 61
Diethylene Glycol, 37
Difolatan, 46
di-Isopropyl ether, 60, 61
Dimethoate, 53, 76
Dimethyl Phthalate, 53, 76
Dimethyl Sulfoxide, 48
Di-n-butyl Phthalate, 53, 76
Di-n-octyl Phthalate, 53, 76
Dinoseb, 38, 53, 74, 77
Dioxin, 36, 52, 63
DIPE, 25, 27, 87
Diphenyl Ether, 53, 77
Diphenylamine, 53, 76
Dissolved Gases, 60
Disulfoton, 47, 53, 74, 77

Drinking Water, 54, 61, 63
DRO, 69, 88, 89
Dursban, 47

E

E. coli, 43, 65
EDB, 25, 36, 60, 63, 78, 79
EDC, 25
Eh, 45
Endosulfan I, 46, 74
Endosulfan II, 46, 74
Endosulfan Sulfate, 46, 74
Endrin, 46, 58, 63, 74
Endrin Aldehyde, 46, 74
Endrin Ketone, 46, 74
EPN, 47
ETBE, 25, 27, 87
Ethane, 26, 60
Ethanol, 25, 27, 29, 48, 61
Ethene, 60
Ethion, 47
Ethoprop, 47
Ethyl Acetate, 27, 48, 60, 61
Ethyl Acrylate, 27
Ethyl Benzene, 25
Ethyl Cyanide, 60, 80, 81
Ethyl Ether, 61
Ethyl Methacrylate, 27, 60, 61, 80, 81
Ethyl Methanesulfonate, 53, 76
Ethyl Parathion, 47, 74, 77
Ethyl t-butyl ether, 60, 61
Ethylbenzene, 25, 26, 27, 60, 63, 80, 81, 85, 94
Ethylene Dibromide, 36, 60, 78, 79
Ethylene Glycol, 37
Explosives, 43, 44
Extract and Hold Analyses, 69
Extractables, 29, 31, 39
Extractions, 57, 59, 69

F

Famphur, 47, 53, 74, 77
Fecal Coliforms, 65
Fensulfothion, 47
Fenthion, 47
Ferric Iron, 37
Ferrous Iron, 37
Fixed Gases, 25
Flashpoint, 37
Florida PRO, 92
Florisil Column Cleanup, 70
Fluoranthene, 25, 50, 51, 53, 76, 94
Fluorene, 25, 50, 51, 53, 76, 94
Fluoride, 37, 64, 65, 66
Fluorotelomersulfonate, 8:2, 47
Foaming agents, 66
Formaldehyde, 29
Formic Acid, 45
Free Liquids, 37, 45
Freon, 27
Freon 113, 25, 27, 60, 80, 81
Freon 123a, 27, 60, 61
Freon 133a, 61
Furan, 36

G

gamma-BHC, 46, 74
gamma-Chlordane, 46, 74
Gas Phase Hydrocarbons, 60

GC Fingerprint, 85
Gel Permeation Cleanup, 70
Glycols, 37
Grain Size, 37, 45
Grease, 85, 86
GRO, 89
Guthion, 47

H

Hardness, 38
Hazardous Waste Characteristics, 35, 37, 38, 52
HCB, 46, 74
Helium, 26
HEM, 85, 86
Heptachlor, 46, 58, 63, 74
Heptachlor Epoxide, 46, 63, 74
Heptane, 27, 48
Herbicides, 31, 38, 58, 74
Heterotrophic Plate Count, 43, 65
Hexachlorobenzene, 46, 53, 58, 63, 74, 76
Hexachlorobutadiene, 27, 53, 58, 60, 61, 76
Hexachlorocyclopentadiene, 53, 63, 76
Hexachloroethane, 27, 53, 58, 76
Hexachlorophene, 31, 38, 74
Hexachloropropene, 53, 76
Hexahydro-1,3,5-trinitro-1,3,5-triazine, 43, 44
Hexaldehyde, 29
Hexane, 26, 27, 48
Hexane Extractable Materials, 85, 86
Hexavalent Chromium, 34
Hexavalent Chromium, 33
Hexavalent Chromium, 34
HMX, 43, 44
Hydrazine, 38
Hydrocarbon Ranges, 26
Hydroxide, 38

I

Ignitability, 38
Indene, 53, 77
Indeno(1,2,3-cd)pyrene, 25, 50, 51, 53, 76, 94
Indoor Air, 25
Inorganic Chemicals, 64
Inorganics, 31, 58, 73
Iowa OA-1, 92
Iowa OA-2, 92
Iron, 40, 41, 66, 73
Isobutanol, 29
Isobutyl Alcohol, 60, 80, 81
Isodrin, 53, 76
Isooctane, 27
Isophorone, 53, 76
Isopropanol, 26, 27, 29
Isopropyl acetate, 61
Isopropyl Acetate, 60
Isopropylbenzene, 27, 60, 80, 81, 94
Isosafrole, 53, 76
Isotope Dilution, 48
Isovaleraldehyde, 29
Isovaleric Acid, 45

K

Kentucky DRO, 92
Kentucky GRO, 92
Kepone, 46, 53, 74

L

Lactic Acid, 45
 Langelier Index, 38, 66
 Lasso, 38
 Leachates, 39
 Lead, 39, 40, 41, 58, 64, 73
 Library Search, 25, 51, 54, 55, 62
 Lindane, 46, 58, 63, 74
 Lipids, 39
 Lithium, 40, 73
 Louisiana EPH, 93
 Louisiana TPH-D and TPH-O, 93
 Louisiana TPH-G, 93
 Louisiana VPH, 93

M

m-/p-Xylene, 25, 27, 48, 60, 94
 Magnesium, 40, 41, 73
 Malathion, 47
 Manganese, 40, 41, 66, 73
 Massachusetts EPH, 93
 Massachusetts VPH, 93
 MBAS, 39, 56, 66
 MCPA, 38
 MCPP, 38
 MEK, 60, 78, 79
 Mercury, 40, 41, 58, 64, 73
 Merphos, 47
 Metals, 29, 31, 40, 52, 64, 73
 Metals Digests, 42
 Methacrylonitrile, 60, 80, 81
 Methane, 26, 60
 Methanol, 29, 48
 Methapyrilene, 53, 76
 Methiocarb, 47
 Methomyl, 47
 Methoxychlor, 46, 58, 63, 74
 Methyl Acetate, 60, 80, 81
 Methyl Acrylate, 27
 Methyl Bromide, 60, 78, 79
 Methyl Cellosolve, 48
 Methyl Chloride, 60, 80, 81
 Methyl Ethyl Ketone, 27
 Methyl Iodide, 27, 60, 80, 81
 Methyl Isobutyl Ketone, 27
 Methyl Methacrylate, 27, 60, 80, 81
 Methyl Methanesulfonate, 53, 76
 Methyl Parathion, 47, 53, 74, 77
 Methyl tert-Butyl Ether, 25, 27, 60, 80, 81, 86, 94
 Methyl-2,4,6-trinitrophenylnitramine, 43, 44
 Methylcyclohexane, 60, 80, 81
 Methylene Chloride, 25, 27, 48, 60, 80, 81
 Methylhydrazine, 38
 Metolachlor, 38
 Mevinphos, 47
 MIBK, 60, 78, 79
 Michigan UST, 93
 Microbiological Contaminants, 65
 Microbiology, 42, 43
 Mirex, 46, 74
 Mocap, 47
 Moisture, 43, 52
 Molybdenum, 40, 73
 Montana EPH, 93
 Montana VPH, 94
 MTBE, 25, 26, 27, 60, 80, 81, 86, 87
 m-Tolualdehyde, 29

N

N,N-Dimethyl acetamide, 53, 77

N,N-Dimethyl formamide, 53, 77
 Naled, 47
 Naphthalene, 25, 27, 50, 51, 53, 60, 61, 76, 86, 94
 n-butanol, 60
 n-Butanol, 61
 n-Butylbenzene, 27, 60, 61, 94
 n-Decane, 53, 77
 n-Docosane, 53, 77
 NDPA as diphenylamine, 53
 n-Eicosane, 53, 77
 n-Ethyl perfluorooctanesulfonamidoacetic acid, 47
 New Jersey EPH, 94
 New Jersey UST, 94
 New York CP-51, 94
 n-Heptane, 60, 61
 n-Hexadecane, 53, 77
 n-Hexane, 60, 61
 Nickel, 40, 41, 64, 73
 Nitramines, 43, 44
 Nitrate, 44, 45, 64, 65
 Nitrite, 44, 45, 64, 65
 Nitroaromatics, 43, 44
 Nitrobenzene, 43, 44, 53, 58, 76
 Nitrogen, 44
 Nitroglycerin, 43, 44
 n-Methyl Carbamates, 47, 63
 n-Methyl Perfluorooctanesulfonamidoacetic acid, 47
 n-Nitrosodiethylamine, 53, 76
 n-Nitrosodimethylamine, 53, 76
 n-Nitrosodi-n-butylamine, 53, 76
 n-Nitrosodi-n-propylamine, 53, 76
 n-Nitrosodiphenylamine, 53, 76
 n-Nitrosomethylethylamine, 53, 77
 n-Nitrosomorpholine, 53, 77
 n-Nitrosopiperidine, 53, 77
 n-Nitrosopyrrolidine, 53, 77
 n-Octadecane, 53, 77
 North Carolina DRO, 95
 North Carolina EPH, 95
 North Carolina GRO, 95
 North Carolina VPH, 95
 n-Pentane, 60, 61
 n-Propanol, 29, 48
 n-Propyl Acetate, 60, 61
 n-Propylbenzene, 27, 60, 61, 94
 n-Tetradecane, 53, 77

O

O,O,O-Triethyl phosphorothioate, 53, 77
 o-Cresol, 53, 75
 Octachlorostyrene, 53
 Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine, 43, 44
 Octane, 27
 Ohio DRO, 95
 Ohio GRO, 95
 Oil, 85, 86
 Oklahoma DRO, 95
 Oklahoma GRO, 95
 Oregon NW-Dx, 96
 Oregon NW-Gx, 96
 Organic Acids, 45
 Organic Extractions, 69
 Organochlorine Pesticides, 30, 31
 Organophosphate Pesticides, 31, 47
 ORO, 88, 89
 ORP, 45

Ortho-Phosphate, 48
o-Tolualdehyde, 29
o-Toluidine, 53, 77
Oxalic Acid, 45
Oxamyl, 47, 63
Oxidation-Reduction Potential, 45
Oxygen, 45
Oxygenates, 25, 87
o-Xylene, 25, 27, 48, 60, 94

P

p-(Dimethylamino)azobenzene, 53, 77
PAHs, 25, 50, 51
Paint Filter Liquid, 37, 45
Parathion, 53
Particle Size, 37, 45
PCB Congeners, 50
PCB Homologs, 50
PCBs, 30, 31, 49, 50, 51, 52, 57, 63, 69, 74
p-Chloro-m-cresol, 53, 75
p-Cresol, 53, 75
Pennsylvania UST, 96, 99
Pentachlorobenzene, 53, 77
Pentachloroethane, 60, 80, 81
Pentachloronitrobenzene, 53, 77
Pentachlorophenol, 38, 53, 77
Pentane, 26, 27
Pentchlorophenol, 58
Perchlorate, 45
Perfluorobutanesulfonate, 47
Perfluorobutanoic acid, 47
Perfluorodecanesulfonate, 47
Perfluorodecanesulfonate, 8:2, 47
Perfluorodecanoic acid, 47
Perfluorododecanesulfonate, 47
Perfluorododecanesulfonate, 10:2, 47
Perfluorododecanoic acid, 47
Perfluoroheptanesulfonate, 47
Perfluoroheptanoic acid, 47
Perfluorohexadecanoic acid, 47
Perfluorohexanesulfonate, 47
Perfluorohexanesulfonate, 4:2, 47
Perfluorohexanoic acid, 47
Perfluorononanesulfonate, 47
Perfluorononanoic acid, 47
Perfluorooctadecanoic acid, 47
Perfluorooctanesulfonate, 47
Perfluorooctanesulfonate, 6:2, 47
Perfluorooctanoic acid, 47
Perfluoropentanesulfonate, 47
Perfluoropentanoic acid, 47
Perfluorotetradecanoic acid, 47
Perfluorotridecanoic acid, 47
Perfluoroundecanoic acid, 47
Perylene, 51
Pesticides, 46, 47, 51, 52, 57, 58, 69, 74
PETN, 43, 44
Petroleum, 25, 26, 91
PFAS, 47
pH, 33, 47, 66
Pharmaceutical Manufacturing Industry, 48
Phenacetin, 53, 77
Phenanthrene, 25, 50, 51, 53, 77, 94
Phenol, 53, 77
Phenolics, 48, 52, 73
Phenothiazine, 53
Phorate, 47, 53, 74, 77
Phosphorus, 40, 48, 49, 73
Phthalic anhydride, 53

Picric Acid, 49
p-Isopropyltoluene, 27, 60, 61, 94
Plate Count, 43
PMI, 48
Polychlorinated Biphenyls, 49, 50
Polynuclear Aromatic Hydrocarbons, 50, 51
Potassium, 40, 41, 73
Priority Pollutant List, 41, 51, 52
Pronamide, 53, 77
Propane, 26, 60
Propene, 27
Propionaldehyde, 29
Propionic Acid, 45
Propionitrile, 60, 80, 81
Propylene Glycol, 37
p-Tolualdehyde, 29
Pyrene, 25, 50, 51, 53, 77, 94
Pyridine, 53, 58, 77
Pyruvic Acid, 45

Q

Quinic Acid, 45
Quinoline, 53, 77

R

Radionuclides, 65
RCRA, 41
RDX, 43, 44
Reactivity, 52
Redox Potential, 45
Residue, 52
Ronnell, 47

S

Safrole, 53, 77
Sample Preparation, 70, 71
Saturated Hydrocarbons, 89
sec-Butylbenzene, 27, 60, 61, 94
Selective Ion Monitoring, 25, 54, 61
Selenium, 40, 41, 58, 64, 73
Semivolatiles, 30, 51, 53, 54, 57, 58, 63, 69, 75
Sevin, 47
Silica Gel Cleanup, 70
Silica, Dissolved, 55
Silver, 40, 41, 58, 66, 73
Silvex, 38, 58, 74
Simazine, 38
Simultaneously Extracted Metals, 29
Sodium, 40, 41, 73
Soil Sampling, 87
Soil Vapor, 25
Solids, 48, 55, 56
Soluble Threshold Limit Concentration, 39
South Carolina DRO, 96
Specific Conductance, 56
Specific Gravity, 56
SPLP, 39
Stirophos, 47
STLC, 39
Strontium, 40, 73
Styrene, 25, 27, 60, 63, 82, 83
Succinic Acid, 45
Sulfate, 56, 66
Sulfide, 31, 52, 56, 73
Sulfite, 56
Sulfotep, 53, 77
Sulfur, 40, 73
Sulfur Cleanup, 70

Sulfuric Acid Cleanup, 70
Surfactants, 39, 56
Synthetic Organic Chemicals, 63
Synthetic Precipitation Leachate Procedure, 39

T

TAME, 25, 27, 87
t-Amyl Methyl Ether, 60, 61
Target Analyst List, 41
Target Compound List, 57
Tartaric Acid, 45
TBA, 25, 87
t-Butyl Alcohol, 60, 61
TCDD, 64
TCLP, 38, 39, 41, 47, 54, 57, 62
TCP, 59
TDS, 66
Telodrin, 46, 74
Tennessee EPH, 96
tert-Butyl Alcohol, 27, 48, 87
tert-Butylbenzene, 27, 60, 61, 94
Tetrachloroethene, 25, 27, 59, 60, 63, 82, 83
Tetraethyl dithiopyrophosphate, 53, 77
Tetraethyl Lead, 54, 87
Tetrahydrofuran, 27, 60, 61
Tetramethyl Lead, 54, 87
Tetryl, 43, 44
Texas TX-1005, 96
Texas TX-1006, 96
Thallium, 40, 41, 64, 73
Thimet, 47, 53, 74, 77
Thionazin, 53, 77
THM, 61
Tin, 40, 41, 73
Titanium, 40, 73
TKN, 45
Tokuthion, 47
Toluene, 25, 26, 27, 48, 60, 63, 82, 83, 85, 94
Total Aroclor, 49
Total Coliforms, 65
Total Kjeldahl Nitrogen, 45
Total Nitrogen, 45
Total Organic Nitrogen, 45
Total Petroleum Hydrocarbons, 69, 87, 88, 89
Total Xylenes, 85
Toxaphene, 46, 58, 63, 74
TPH, 69, 87, 88, 89
Tracer Gases, 26
trans-1,2-Dichloroethene, 25, 27, 60, 63, 82, 83

trans-1,3-Dichloropropene, 27, 60, 82, 83
trans-1,4-Dichloro-2-Butene, 60, 82, 83
Triazine, 38
Trichloroethene, 25, 27, 59, 60, 63, 82, 83
Trichlorofluoromethane, 27, 60, 82, 83
Trichloronate, 47
Triethylamine, 48
Triethylene Glycol, 37
Trihalomethanes, 61
Trithion, 47
Trivalent Chromium, 34
Turbidity, 59, 65

U

Upload Chromatograms, 59

V

Valeraldehyde, 29
Valeric Acid, 45
Vanadium, 40, 41, 73
Vinyl Acetate, 27, 60, 82, 83
Vinyl Chloride, 25, 27, 59, 60, 63, 82, 83
Volatile Fatty Acids, 45
Volatile Headspace Hydrocarbons, 60
Volatile Organic Chemicals, 63
Volatile Organic Concentration of Waste, 60
Volatiles, 25, 30, 48, 51, 52, 57, 59, 60, 78
Vydate, 47, 63

W

Washington EPH, 96
Washington NW-Dx, 96
Washington NW-Gx, 97
Washington VPH, 96
Waste Extraction Test, 39
WET, 39
Wisconsin DRO, 97
Wyoming TPH-DRO, 97
Wyoming TPH-GRO, 97

X

Xylenes, 26, 27, 60, 63, 82, 83

Z

Zinc, 40, 41, 66, 73