BRAC Program Management Office East
Philadelphia, Pennsylvania

Final
Sampling and Analysis Plan Field Task Modification Request No. 5 for Surface Water and Sediment for Per- and Polyfluoroalkyl Substances

Former Naval Air Station Joint Reserve Base Willow Grove
Horsham Township, Pennsylvania

September 2024

Distribution Statement A: Approved for public release: distribution unlimited

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September 2024

Prepared for:
Naval Facilities Engineering Systems Command, BRAC PMO East
4911 South Broad Street, Philadelphia, Pennsylvania 19112-1303

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Contract Number: N6247016D9008, Contract Task Order: WE04

TETRA TECH

FIELD TASK MODIFICATION REQUEST FORM

NASJRB Willow Grove **Project/Installation Name**	**WE04** **CTO & Project Number**	**5** **Task Mod.**
Final SAP for PFAS Surface Water And Sediment Sampling **Modification To (e.g., Work Plan)**	**On-base and Off-base** **Site/Sample Location**	**Number 9/10/2024** **Date**

Activity Description: A field task modification request (FTMR) has been prepared to document changes to the *Final Sampling and Analysis Plan (SAP) for Surface Water and Sediment for Per- and Polyfluoroalkyl Substances (PFAS)* at the former Naval Air Station Joint Reserve Base (NASJRB) Willow Grove. The SAP worksheets need to be updated to include a laboratory analytical method change for the surface water and sediment analysis. The new method to be used for PFAS analysis is United States Environmental Protection Agency (EPA) Method 1633 compliant with Department of Defense (DoD) Quality Systems Manual (QSM) 6.0 Table B-24. The laboratory for PFAS analysis remains as Battelle in Norwell, Massachusetts, with Eurofins Lancaster Laboratory as the backup lab. Battelle and Eurofins Lancaster Laboratory are accredited by the DoD Environmental Laboratory Accreditation Program (ELAP) for EPA Method 1633, as well as by the Commonwealth of Pennsylvania.

Analytical procedures, bottleware requirements, and laboratory information are detailed in the *Final SAP for PFAS Surface Water and Sediment Sampling,* and SAP FTMRs No. 1, 2, 3, and 4 (Tetra Tech, 2020a, 2020b, 2021, 2022, 2023, respectively).

Reason for Change: EPA released Method 1633 as a standardized approach for measuring up to 40 PFAS analytes, and the DoD Office of the Assistant Secretary of Defense (OASD) issued mandatory analysis by this method, under the May 1, 2024 Memorandum. Analyzing surface water and sediment samples with this method will provide additional information into a broader range of short and long-chained PFAS. The accreditation documentation for Battelle is also included in this FTMR.

Recommended Disposition: Update SAP with revised Worksheets (attached) to document the changes described above.

Requester, Project Chemist (Signature) — Date: 9/10/2024

Approved Disposition: As recommended above.

Project Manager (Signature) — Date: 9/10/2024

Signed Internal Draft
Navy QAO (Signature) — Date

HELLAND.BRIAN.J.1231396710
Digitally signed by HELLAND.BRIAN.J.1231396710
Date: 2024.09.10 10:47:02 -04'00'
Navy RPM (Signature) — Date

Distribution Statement A: Approved for public release: distribution unlimited

Distribution:
Program/Project File – NASJRB Willow Grove
Project/ Task Order Manager – Stephen Mitchell
Project/Task Order Deputy Manager – Sue Herbert
Data Validation Manager – Joseph Samchuck
Field Operations Leaders – Chris Sinisi
Battelle Project Manager – Heather Thurston

References:

DoD, 2024. Office of the Assistant Secretary of Defense (OASD), Memorandum For Assistant Secretary Of The Army (Installations, Energy And Environment) Assistant Secretary Of The Navy (Energy, Installations And Environment) Assistant Secretary Of The Air Force (Installations, Environment And Energy) Director, National Guard Bureau (Joint Staff, J3/4/7) Director, Defense Logistics Agency (Installation Management): Establishing a Consistent Methodology for the Analysis of Per- and Polyfluoroalkyl Substances in Matrices Other than Drinking Water. May 1

Tetra Tech, 2020a. *Final Sampling and Analysis Plan for PFAS Surface Water and Sediment Sampling, Former NASJRB Willow Grove, Pennsylvania*. March.

Tetra Tech, 2020b. *SAP FTMR No. 1 for PFAS Surface Water and Sediment Sampling, Former NASJRB Willow Grove, Pennsylvania*. August.

Tetra Tech, 2021. *SAP FTMR No. 2 for PFAS Surface Water and Sediment Sampling, Former NASJRB Willow Grove, Pennsylvania*. April.

Tetra Tech, 2022. *SAP FTMR No .3 for PFAS Surface Water and Sediment Sampling, Former NASJRB Willow Grove, Pennsylvania*. April.

Tetra Tech, 2023. *SAP FTMR No .4 for PFAS Surface Water and Sediment Sampling, Former NASJRB Willow Grove, Pennsylvania*. October.

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SAP Worksheet #3 -- Distribution List

(UFP-QAPP Manual Section 2.3.1)

SAP Recipient	Title/Role	Organization	Telephone Number (optional)	E-mail Address or Mailing Address
Brian Helland	Naval Facilities Engineering Systems Command (NAVFAC) Remedial Project Manager (RPM) / Manages project activities for former Naval Air Station Joint Reserve Base (NASJRB) Willow Grove	NAVFAC	215-897-4912	brian.j.helland.civ@us.navy.mil
Dawn DeFreitas	NAVFAC Base Realignment and Closure (BRAC) Deputy Base Closure Manager (DBCM) / Provides technical support	NAVFAC	215-897-4903	dawn.m.defreitas.civ@us.navy.mil
Jonathan Harris	NAVFAC BRAC Environmental Coordinator (BEC) / Provides technical support	NAVFAC	215-897-4915	jonathan.i.harris5.civ@us.navy.mil
Jason Speicher	Navy Technical Support / Provides technical support	NAVFAC	215-897-4914	jason.a.speicher2.civ@us.navy.mil
Marty Schy	Site Caretaker / Coordinates activities	Willow Grove Navy Caretaker Site Office (CSO)	215-293-4888	martin.s.schy.civ@us.navy.mil
Jim Rugh	Site Caretaker / Coordinates activities	Willow Grove Navy CSO	215-293-4887	James.l.rugh.civ@us.navy.mil
Sarah Kloss	U.S. Environmental Protection Agency (EPA) RPM / Provides regulatory input and oversight for former NASJRB Willow Grove	EPA Region 3	215-814-3379	kloss.sarah@epa.gov
Colin Wade	Pennsylvania Department of Environmental Protection (PADEP) Project Officer / Provides regulatory input and oversight for former NASJRB Willow Grove	PADEP	484-250-5722	cowade@pa.gov
Lisa Senior	United States Geological Survey (USGS) Hydrogeologist / Provides technical support	USGS	610-518-7219	lasenior@usgs.gov
Dan Goode	USGS Hydrologist / Provides technical support	USGS	717-571-8783	djgoode@usgs.gov
Naval Installation Restoration Information Solution (NIRIS) records manager (final version only)	NIRIS Database / Database	NAVFAC	NA	NIRIS@navy.mil

SAP Recipient	Title/Role	Organization	Telephone Number (optional)	E-mail Address or Mailing Address
Catherine Kohler (cover letter only)	Program Manager / Manages Navy initiatives	Tetra Tech	757-461-3768	cathy.kohler@tetratech.com
Tricia Moore (copy of cover letter only)	Deputy Program Manager / Manages program activities	Tetra Tech	610-382-1171	tricia.moore@tetratech.com
Stephen Mitchell (electronic copy)	Project Manager (PM) / Provides oversight and daily management	Tetra Tech	301-528-5552	steve.mitchell@tetratech.com
Sue Herbert (electronic copy)	Deputy PM / Provides additional oversight and daily management	Tetra Tech	610-382-1537	sue.herbert@tetratech.com
Matt Soltis (electronic copy)	Health and Safety Manager (HSM) / Manages Comprehensive Long-Term Environmental Action, Navy (CLEAN) Health and Safety Program	Tetra Tech	412-921-8912	matt.soltis@tetratech.com
Michelle Coffman (electronic copy)	Quality Assurance (QA) Manager (QAM) / Implementation and oversight of Tetra Tech CLEAN quality program	Tetra Tech	412-921-8549	michelle.coffman@tetratech.com
Joseph Samchuck (electronic copy)	Data Validation Manager (DVM) / Oversight of data validation (DV) process	Tetra Tech	412-921-8510	joseph.samchuck@tetratech.com
Theresa Thompson (electronic copy)	Per- and polyfluoroalkyl substances (PFAS) Point of Contact (POC) / Serves as a single focal point for all PFAS matters regarding compliance with and implementation of NAVFAC and U.S Department of Defense (DoD) policy	Tetra Tech	832-251-5160	theresa.thompson@tetratech.com
Leroy Leonard (electronic copy)	Chief Technical Officer (CTO) / QAO / Technical support for reviewing planning documents, reports, graphics, and figures, including data analysis, interpretation, and statistical analyses for quality	Tetra Tech	865-220-4702	leroy.leonard@tetratech.com
Katherine Super (electronic copy)	Human Health Risk Assessor / Serves as technical resource	Tetra Tech	412-921-8887	katherine.super@tetratech.com
Aaron Bernhardt (electronic copy)	Ecological Risk Assessor / Serves as technical resource	Tetra Tech	412-921-8433	aaron.bernhardt@tetratech.com
Mandy Barnhart (electronic copy)	Project Chemist / Interfaces with laboratory, coordinates DV; serves as the focal point for chemistry-related issues. Sampling Coordinator/ Coordinates start of sampling effort and tracks samples	Tetra Tech	610-382-1528	mandy.barnhart@tetratech.com

SAP Recipient	Title/Role	Organization	Telephone Number (optional)	E-mail Address or Mailing Address
Chris Sinisi (electronic and hard copy)	Field Operations Leader (FOL) / Site Safety and Health Officer (SSHO) / Coordination and oversight of daily field operations and oversight of field health and safety	Tetra Tech	610-382-1524	chris.sinisi@tetratech.com
Heather Thurston (electronic copy)	Laboratory PM / Daily project management and coordination of activities	Battelle	781-681-5527	thurstonh@battelle.org
Stephen Gordon (electronic copy)	Laboratory PM / Daily project management and coordination of activities	Eurofins Lancaster Laboratory (ELLE)	412-525-0071	stephen.gordon@et.eurofinsus.com

SAP Worksheet #4 -- Project Personnel Sign-Off Sheet
(UFP-QAPP Manual Section 2.3.2)

Certification that project personnel have read the text will be obtained by one of the following methods as applicable:

1. In the case of regulatory agency personnel with oversight authority, approval letters or e-mails will constitute verification that applicable sections of this Field Task Modification Request (FTMR) and the Final Sampling and Analysis Plan (SAP) have been reviewed. Copies of regulatory agency approval letters/e-mails will be retained in the project files as project records (see Worksheet #29).
2. E-mails will be sent to the listed Navy, Tetra Tech, and subcontractor project personnel, who will be requested to verify by e-mail that they have read the applicable SAP/sections and the date on which they were reviewed. Copies of the verification e-mail will be included in the project files (see Worksheet #29).

A copy of the signed Worksheet #4 will be retained in the project files and is identified as a project record in Worksheet #29.

Key personnel (NAVFAC RPM), Tetra Tech PM, Tetra Tech Project Chemist, Tetra Tech FOL, and Tetra Tech SSHO will be instructed to read the SAP portions indicated in this worksheet before attending an internal site-specific kick-off meeting for field activities. The Tetra Tech PM will track when the reviews have been completed, obtain signatures, and ensure that the completed sign-off sheet is included in the central project file.

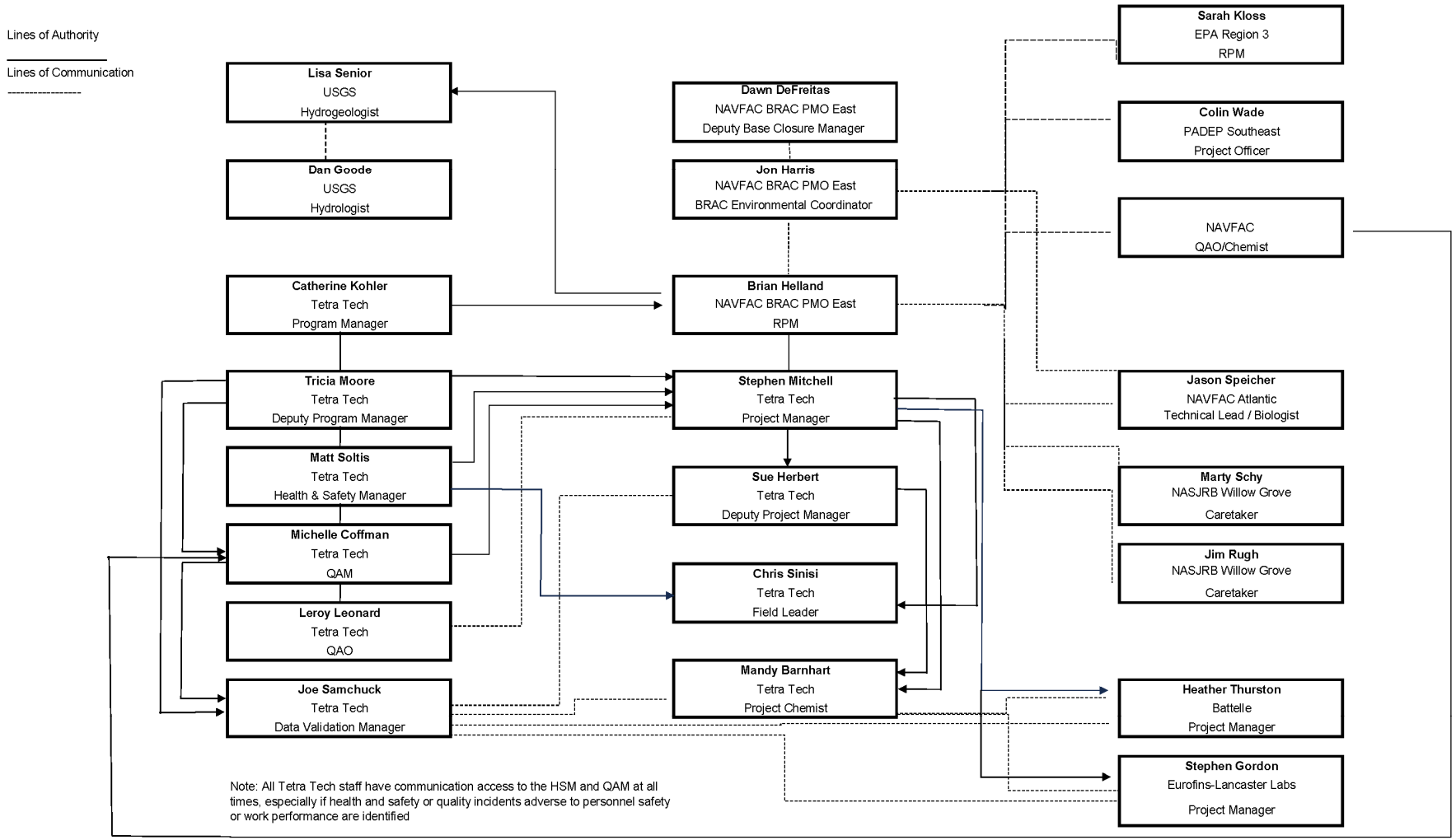
Name[(1)]	Organization/Title/Role	Telephone Number	Signature/E-mail Receipt	FTMR/SAP Section Reviewed	Date Read
Navy and Regulator Project Team Personnel					
Brian Helland (electronic copy only)	NAVFAC / RPM / Manages project for former NASJRB Willow Grove	215-897-4912	See FTMR form for signature	All	
Dawn DeFreitas (electronic copy only)	NAVFAC / BRAC DBCM / Provides technical support	215-897-4903	E-mail receipt	All	
Jonathan Harris (electronic copy only)	NAVFAC / BRAC BEC / Provides technical support	215-897-4915	E-mail receipt	All	
Jason Speicher (electronic copy only)	NAVFAC / Technical Support / Provides technical support	215-897-4914	E-mail receipt	All	
Marty Schy (electronic copy only)	NAVFAC / Site Caretaker / Coordinates activities	215-293-4888	E-mail receipt	All	
Jim Rugh (electronic copy only)	NAVFAC / Site Caretaker / Coordinates activities	215-293-4887	E-mail receipt	All	
Sarah Kloss (electronic copy only)	EPA / RPM / Provides regulatory input and oversight for former NASJRB Willow Grove	215-814-3379	E-mail receipt	All	

Name[(1)]	Organization/Title/Role	Telephone Number	Signature/E-mail Receipt	FTMR/SAP Section Reviewed	Date Read
Colin Wade (electronic copy only)	PADEP / Project Officer / Provides regulatory input	484-250-5722	E-mail receipt	All	
Lisa Senior (electronic copy only)	USGS / Hydrogeologist / Provides technical support	717-503-2367	E-mail receipt	All	
Dan Goode (electronic copy only)	USGS / Hydrologist / Provides technical support	717-571-8783	E-mail receipt	All	
Tetra Tech Project Team Personnel					
Catherine Kohler (electronic copy only)	Tetra Tech / Program Manager / Manages Navy initiatives	757-461-3768	E-mail receipt	All	
Tricia Moore (electronic copy only)	Tetra Tech / Deputy Program Manager/ Manages program activities	610-382-1171	E-mail receipt	All	
Stephen Mitchell (electronic copy)	Tetra Tech / PM / Provides oversight and daily management	301-528-5552	See FTMR form for signature	All	
Sue Herbert (electronic copy only)	Tetra Tech / Deputy PM / Provides oversight and daily management	610-382-1537	E-mail receipt	All	
Matt Soltis (electronic copy only)	Tetra Tech / CLEAN HSM / Manages Corporate Health and Safety Program	412-921-8912	See Health and Safety Plan (HASP) for signature	HASP	
Michelle Coffman (electronic copy only)	Tetra Tech / QAM / Manages CLEAN QA Program and its implementation	412-921-8549	E-mail receipt	All	
Joseph Samchuck (electronic copy only)	Tetra Tech / DVM / Manages DV	412-921-8510	E-mail receipt	All (emphasis on Worksheet #s 12, 14, 15, 19, 20, 23-28, 30, and 34-37)	
Theresa Thompson (electronic copy only)	Tetra Tech / PFAS POC / Serves as a single focal point for all PFAS matters regarding compliance with and implementation of NAVFAC and DoD policy	832-251-5160	E-mail receipt	All	

Name[1]	Organization/Title/Role	Telephone Number	Signature/E-mail Receipt	FTMR/SAP Section Reviewed	Date Read
Leroy Leonard (electronic copy only)	Tetra Tech / CTO/QAO / Provides quality assurance oversight	865-323-5683	E-mail receipt	All	
Mandy Barnhart (electronic copy only)	Tetra Tech / Project Chemist / Provides coordination with laboratory and DV group. Sampling Coordinator / Coordinates beginning of sampling effort / Tracks samples	610-382-1528	E-mail receipt	All	
Chris Sinisi (electronic copy only)	Tetra Tech / FOL / Oversees operational activities in the field. Tetra Tech / SSHO / Oversees health and safety activities in the field	610-382-1524	E-mail receipt	All (emphasis on Worksheet #s 5, 6, 10, 11.1-11.4, 12, 14, 15, 17 to 22, and 27)	
Heather Thurston (electronic copy only)	Battelle / PM / Oversees project-specific laboratory operations	781-681-5527	E-mail receipt	Worksheet #s 6, 12, 14, 15, 19, 23-28, 30, and 34-36	
Stephen Gordon (electronic copy only)	ELLE / PM / Oversees project-specific laboratory operations	412-525-0071	E-mail receipt	Worksheet #s 6, 12, 14, 15, 19, 23-28, 30, and 34-36	

1 Persons listed on this worksheet will be responsible for distributing the SAP to the appropriate people within their organization.
2 Backup laboratory information is provided in Appendix E.

SAP Worksheet #5 -- Project Organizational Chart
(UFP-QAPP Manual Section 2.4.1



SAP Worksheet #6 -- Communication Pathways

(UFP-QAPP Manual Section 2.4.2)

Communication Drivers	Responsible Entity	Name	Phone Number	Procedure (timing, pathways, etc.)
Draft SAP Review/Revisions	Tetra Tech PM Tetra Tech Deputy PM NAVFAC QAO/Chemist	Stephen Mitchell Sue Herbert NAVFAC QAO/Chemist	301-528-5552 610-382-1537 757-322-8341/ 757-322-4942/ 757-322-4112	Within two days of completing the draft SAP, the SAP will be submitted to NIRIS by the Tetra Tech PM. NAVFAC QAO/Chemist comments will be resolved to the satisfaction of the QAO/Chemist, and the SAP will be uploaded to NIRIS for QAO/Chemist signature.
Regulatory Agency Review/Interface	NAVFAC RPM EPA RPM PADEP Project Officer	Brian Helland Sarah Kloss Colin Wade	215-897-4912 215-814-3379 484-250-5722	The draft SAP will be submitted to the regulatory agency by the NAVFAC RPM or designee when due according to the project schedule. NAVFAC RPM will interface directly via phone or e-mail as needed.
Field Progress Reports	Tetra Tech FOL/SSHO	Chris Sinisi	610-382-1524	The Tetra Tech FOL/SSHO will provide email or verbal reports to the Tetra Tech PM on a schedule arranged by the PM.
Preparation for Sampling	Tetra Tech Project Chemist Battelle Laboratory PM ELLE Laboratory PM	Mandy Barnhart Heather Thurston Stephen Gordon	610-382-1528 781-681-5527 412-525-0071	At a time that ensures sample bottles will be available on-Base early enough to collect samples, the Tetra Tech Project Chemist will contact the Laboratory PM via e-mail or teleconference to order bottles. The Tetra Tech Project Chemist will maintain weekly contact with the laboratory throughout the project to ensure that project goals, including changes to laboratory-specific limits, are acceptable before and during the analyses.
Recommendations to stop work and start work upon corrective action	Tetra Tech FOL/SSHO Tetra Tech PM Tetra Tech Deputy PM Tetra Tech QAM Tetra Tech HSM NAVFAC RPM EPA RPM PADEP Project Officer	Chris Sinisi Stephen Mitchell Sue Herbert Michelle Coffman Matt Soltis Brian Helland Sarah Kloss Colin Wade	610-382-1524 301-528-5552 610-382-1537 412-921-8549 412-921-8912 215-897-4912 215-814-3379 484-250-5722	If Tetra Tech is the responsible party for a stop work command, the Tetra Tech FOL will inform on-Base personnel, subcontractor(s), the NAVFAC RPM, and the identified Project Team members within one hour (verbally or by e-mail) of recognizing the need to stop work. If a subcontractor is the responsible party, then the subcontractor PM must inform the Tetra Tech FOL within 15 minutes of recognizing the need to stop work, and the Tetra Tech FOL will then follow the procedure listed above. EPA, PADEP, and USGS will be notified of the stop work and corrective action by e-mail within one business day.

Communication Drivers	Responsible Entity	Name	Phone Number	Procedure (timing, pathways, etc.)
SAP Changes Before Field / Laboratory Work	NAVFAC RPM NAVFAC QAO/Chemist EPA RPM PADEP Project Officer Tetra Tech PM Tetra Tech Deputy PM Tetra Tech FOL/SSHO Tetra Tech QAM	Brian Helland NAVFAC QAO/Chemist Sarah Kloss Colin Wade Stephen Mitchell Sue Herbert Chris Sinisi Michelle Coffman	215-897-4912 757-322-8341/ 757-322-4942/ 757-322-4112 215-814-3379 484-250-5722 301-528-5552 610-382-1537 610-382-1524 412-921-8549	The Tetra Tech PM will document the required change via an FTMR form within five days and send it to the NAVFAC RPM. If necessary, the PM will submit a concurrence letter within seven days of identifying the need for change. The Tetra Tech PM will submit SAP amendments to the NAVFAC RPM for review and approval. At the RPM's discretion, submit SAP changes to the NAVFAC QAO for approval (e.g., when significant data quality objectives (DQO)-related changes occur or the laboratory is changed). The SAP will be revised or updated at a minimum of every five years or sooner if the project objectives change. The Tetra Tech PM will communicate scope changes to the Project Team (NAVFAC RPM, EPA RPM, PADEP project officer, Tetra Tech QAM, and Tetra Tech FOL) via e-mail within one business day.
Changes in Schedule	NAVFAC RPM EPA RPM PADEP Project Officer Tetra Tech PM Tetra Tech Deputy PM	Brian Helland Sarah Kloss Colin Wade Stephen Mitchell Sue Herbert	215-897-4912 215-814-3379 484-250-5722 301-528-5552 610-382-1537	The Tetra Tech PM will verbally inform the NAVFAC RPM on the day that a schedule change is known and will document via schedule impact letter within one business day of when the impact is recognized.

Communication Drivers	Responsible Entity	Name	Phone Number	Procedure (timing, pathways, etc.)
SAP Changes in the Field	NAVFAC RPM EPA RPM PADEP Project Officer Tetra Tech PM Tetra Tech Deputy PM Tetra Tech FOL/SSHO	Brian Helland Sarah Kloss Colin Wade Stephen Mitchell Sue Herbert Chris Sinisi	215-897-4912 215-814-3379 484-250-5722 301-528-5552 610-382-1537 610-382-1524	The Tetra Tech FOL will verbally inform Tetra Tech PM on the day that the issue is discovered. The Tetra Tech PM will inform the NAVFAC RPM (verbally or via e-mail) within one business day. The Tetra Tech PM will document the change via a FTMR form within five days and send it to the NAVFAC RPM. If necessary, a concurrence letter will be submitted within seven days of identifying the need for change. The NAVFAC RPM will issue a scope change (verbally or via e-mail), if warranted. The scope change is to be implemented before further work is executed. If scope changes are extensive, a SAP amendment will be issued at the discretion of the RPM. The Tetra Tech PM will communicate scope changes to the Project Team (NAVFAC RPM, EPA, RPM, PADEP Project Officer, Tetra Tech QAM, and Tetra Tech FOL) via e-mail within one business day.
Field Corrective Actions	Tetra Tech FOL Tetra Tech PM	Chris Sinisi Stephen Mitchell	610-382-1524 301-528-5552	The Tetra Tech FOL will start corrective actions and will notify the Tetra Tech PM verbally within one business day of taking action.
Sample Receipt Variances	Battelle Laboratory PM ELLE Laboratory PM Tetra Tech FOL/SSHO Tetra Tech PM Tetra Tech Project Chemist	Heather Thurston Stephen Gordon Chris Sinisi Stephen Mitchell Mandy Barnhart	781-681-5527 412-525-0071 610-382-1524 301-528-5552 610-382-1528	The laboratory sample custodian will report variances to the Tetra Tech FOL/SSHO, Tetra Tech Chemist, or PM within 24 hours of identifying a variance, and those individuals will attempt to resolve the variance with the laboratory. If the variance cannot be resolved, the Tetra Tech PM will notify the NAVFAC RPM within one business day of the variances being brought to his or her attention. If necessary, the NAVFAC RPM will take corrective action commensurate with the deficiency.

Communication Drivers	Responsible Entity	Name	Phone Number	Procedure (timing, pathways, etc.)
Laboratory Quality Variances	Battelle Laboratory PM ELLE Laboratory PM Tetra Tech Project Chemist Tetra Tech PM	Heather Thurston Stephen Gordon Mandy Barnhart Stephen Mitchell	781-681-5527 412-525-0071 610-382-1528 301-528-5552	The Laboratory PM will notify (verbally or via e-mail) the Tetra Tech Project Chemist within one business day of when an issue related to laboratory data is discovered. The Tetra Tech Project Chemist will notify (verbally or via e-mail) the data validation staff and the Tetra Tech PM within one business day. The Laboratory QAM will document all quality variances in the Case Narrative of the Analytical Laboratory Report. Corrective actions may include a consult with the NAVFAC RPM and, at the RPM's discretion, with the NAVFAC QAO/Chemist.
Analytical Corrective Actions	Battelle Laboratory PM ELLE Laboratory PM Tetra Tech FOL/SSHO Tetra Tech Project Chemist Tetra Tech PM NAVFAC RPM	Heather Thurston Stephen Gordon Chris Sinisi Mandy Barnhart Stephen Mitchell Brian Helland	781-681-5527 412-525-0071 610-382-1524 610-382-1528 301-528-5552 215-897-4912	If the impact of an identified deficiency is limited to this project, it will be resolved between the laboratory PM, Tetra Tech PM, and support staff and will be documented in the project report. If the deficiency is systemic and potentially affects other projects, the Tetra Tech PM will verbally advise the NAVFAC RPM within 24 hours of notification from the Project Chemist or DVM. The NAVFAC RPM will take corrective action appropriate for the identified deficiency. Corrective actions may include a consult with the NAVFAC QAO/Chemist and coordination with the laboratory.
Reporting DV Issues	Tetra Tech DVM Tetra Tech PM	Joe Samchuck Stephen Mitchell	412-921-8510 301-528-5552	Tetra Tech DV Chemist will document data qualifications in the data validation report and database. If the DV Chemist notices serious deficiencies in their opinion, then he/she will notify Tetra Tech PM verbally or via e-mail within 48 hours of recognizing that a significant laboratory quality deficiency has been detected that could affect this project and/or other projects. The Tetra Tech PM will relay information to the NAVFAC RPM regarding serious data or laboratory concerns.
DV Corrective Actions	Tetra Tech DV Manager Tetra Tech PM	Joe Samchuck Stephen Mitchell	412-921-8510 301-528-5552	If a data validation issue cannot be resolved between the Tetra Tech DV Chemist and the laboratory or the issue appears to be systemic, the Tetra Tech PM will verbally advise the NAVFAC RPM within 24 hours of notification from the DV Chemist. The NAVFAC RPM will take corrective action that is appropriate for the identified deficiency. This may include a consult with the NAVFAC QAO/Chemist.

Communication Drivers	Responsible Entity	Name	Phone Number	Procedure (timing, pathways, etc.)
Project Report Review	Tetra Tech PM Tetra Tech Deputy PM Tetra Tech CTO/QAO Tetra Tech support staff NAVFAC RPM	Stephen Mitchell Sue Herbert Leroy Leonard Various Brian Helland	301-528-5552 610-382-1537 865-323-5683 Various 215-897-4912	Internal reviews will be conducted by the Tetra Tech PM and support staff. Comments will be resolved internally to the satisfaction of the Tetra Tech PM. When satisfied with the resolution of all comments, the report will be submitted by the Tetra Tech PM or designee to the NAVFAC RPM in accordance with the project scope of work requirements. Upon resolution of NAVFAC comments, the report will be submitted to the NAVFAC RPM for transmittal to the regulators for review. Comments will be resolved to the satisfaction of the NAVFAC RPM, revisions will be made, and the report will be finished for final distribution and submittal to NIRIS.

SAP Worksheet #7 -- Personnel Responsibilities Table

(UFP-QAPP Manual Section 2.4.3)

Resumes of personnel below are maintained by their respective organizations and can be provided under separate cover by request.

Name	Title/Role	Organizational Affiliation	Responsibilities
Brian Helland	RPM / Provides oversight and daily management	NAVFAC	Oversees overall project implementation, including contracting, scoping, and overall financial and technical implementation of the project.
Sarah Kloss	RPM / Provides technical input and daily management	EPA	Participates in scoping, data review, evaluations, and approves the SAP.
Colin Wade	Project Officer / Provides technical input and daily management	PADEP	Participates in scoping, data review, evaluations, and approves the SAP.
Lisa Senior	Hydrogeologist/ Provides regulatory input	USGS	Participates in scoping.
Dan Goode	Hydrologist/ Provides regulatory input	USGS	Participates in scoping.
Stephen Mitchell	PM / Provides oversight and daily management	Tetra Tech	Monitors that health and safety requirements are implemented. Oversees project, financial, schedule, and technical day to day management of the project. Oversees project implementation, including scoping, data review, and evaluation for this project. Coordinates and oversees preparation and review of Tetra Tech project deliverables.
Sue Herbert	Deputy PM / Provides oversight and daily management	Tetra Tech	Ensures that health and safety requirements are implemented. Oversees project, financial, schedule, and technical day to day management of the project. Oversees project implementation, including scoping, data review, and evaluation for this project. Coordinates and oversees preparation and review of Tetra Tech project deliverables.
Leroy Leonard	CTO/QAO / Provides quality assurance oversight	Tetra Tech	Technical support for reviewing planning documents, reports, graphics, and figures, including data analysis, interpretation, and statistical analyses for quality

Name	Title/Role	Organizational Affiliation	Responsibilities
Chris Sinisi	FOL, SSHO / Directs and provides oversight of routine field activities and monitors health and safety aspects of field work	Tetra Tech	Supervises, coordinates, and performs field sampling activities. Ensures that health and safety requirements are implemented during field work. Functions as the on-site communications link between field staff members, the Site POC, and the Tetra Tech PM. Oversees mobilization and demobilization of all field equipment and subcontractors. Ensures proper maintenance of site logbooks, field logbooks, and field recordkeeping. Identifies and resolves problems in the field, resolves difficulties via consultation with the NAVFAC RPM, implements and documents corrective action procedures, and facilitates communication between the field team and project management. Responsible for on-site project-specific health and safety training and monitoring site conditions. Details of health and safety responsibilities are presented in the project-specific HASP.
Michelle Coffman	QAM / Directs the Tetra Tech CLEAN QA Program	Tetra Tech	Ensures that quality aspects of the Tetra Tech CLEAN QA program are implemented. Oversees review of the SAP, approves the SAP, oversees the preparation of the laboratory scopes of work, coordinates with the laboratory, and conducts data quality reviews.
Katherine Super	Human Health Risk Assessor / serves as technical resource	Tetra Tech	Serves as technical resource, does not implement SAP
Aaron Bernhardt	Ecological Risk Assessor / serves as technical resource	Tetra Tech	Serves as technical resource, does not implement SAP
Matt Soltis	HSM / Directs the Health and Safety Program	Tetra Tech	Ensures that health and safety aspects of the Tetra Tech CLEAN Health and Safety Program are implemented. Oversees review of health and safety documents and approves health and safety documents.
Mandy Barnhart	Chemist / Serves as focal point for chemistry-related issues	Tetra Tech	Coordinates analyses with laboratory chemists, ensures that the laboratory scope of work is followed, and that QA has been performed for QA data packages, and communicates with Tetra Tech staff. Ensures that the project meets objectives from the standpoint of laboratory performance. Provides technical advice to the Tetra Tech team on project chemistry matters. Functions as the primary interface with the subcontracted laboratory and the Tetra Tech PM. Ensures completion of Tetra Tech data validation.
Joe Samchuck	DVM / Directs and provides oversight of routine field activities	Tetra Tech	Manages data validation activities within Tetra Tech, including ensuring QA of data validation deliverables, providing technical advice on data usability, and coordinating and maintaining the data validation review schedule.
Ricky DePaul	Data Manager / Manages data receipt, database uploads, data archiving	Tetra Tech	Coordinates data receipt and upload to Tetra Tech and Navy databases; manages and controls flow of data to ensure data are secure.

Name	Title/Role	Organizational Affiliation	Responsibilities
Theresa Thompson	PFAS POC / Serves as a single focal point for all PFAS matters regarding compliance with and implementation of NAVFAC and DoD policy	Tetra Tech	Programmatic liaison and coordinator for PFAS-related matters. Maintains schedules, allocates resources, coordinates meetings, and is responsible for daily management and communication of PFAS-related information.
Heather Thurston	Laboratory PM / Directs and provides oversight of laboratory activities	Battelle	Coordinates analyses with Battelle laboratory chemists, ensures that the laboratory scope of work is followed, reviews data packages, and communicates with Tetra Tech staff.
Stephen Gordon	Laboratory PM / Directs and provides oversight of laboratory activities	ELLE	Coordinates analyses with ELLE laboratory chemists, ensures that the laboratory scope of work is followed, reviews data packages, and communicates with Tetra Tech staff.

SAP Worksheet #15 -- Reference Limits and Evaluation Table
(UFP-QAPP Manual Section 2.8.1)

Matrix: Surface Water
Analytical Group: Per- and polyfluoroalkyl substances (PFAS) by EPA Method 1633 (EPA, 2024) by LC/MS/MS compliant with QSM 6.0 Table B-24 (DoD, 2023b)

Analyte	Chemical Abstract Survey (CAS) Number	Human Health PAL[1] (ng/L)	PAL Reference [1]	Ecological PAL [2] (ng/L)	PAL Reference [2]	Battelle		
						Limit of Quantitation (LOQ) (ng/L)	Limit of Detection (LOD) (ng/L)	Detection Limit (DL) (ng/L)
Perfluorooctanoic acid (PFOA)	335-67-1	210	RSL Calc	307,000	Grippo et al. (2021)	1.60	0.75	0.290
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	140	RSL Calc	117	Grippo et al. (2021)	1.60	0.50	0.248
Perfluorobutanoic acid (PFBA)	375-22-4	34,000	RSL Calc	64,600	Grippo et al. (2021)	6.40	1.25	0.597
Perfluorobutanesulfonic acid (PFBS)	375-73-5	21,000	RSL Calc	400,000	Grippo et al. (2021)	1.60	0.50	0.177
Perfluorodecanoic acid (PFDA)	335-76-2	NA	NA	660	Grippo et al. (2021)	1.60	0.50	0.223
Perfluorododecanoic acid (PFDoA)	307-55-1	NA	NA	72,000	Divine et al. (2020)	1.60	0.75	0.301
Perfluoroheptanoic acid (PFHpA)	375-85-9	NA	NA	870,000	Divine et al. (2020)	1.60	0.50	0.173
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	1,200	RSL Calc	5,500	Grippo et al. (2021)	1.60	0.75	0.291
Perfluorohexanoic acid (PFHxA)	307-24-4	31,000	RSL Calc	28,800	Grippo et al. (2021)	1.60	1.00	0.412
Perfluorononanoic acid (PFNA)	375-95-1	170	RSL Calc	2,080	Grippo et al. (2021)	1.60	0.50	0.250
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	NA	NA	NA	NA	1.60	1.00	0.429
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	NA	NA	NA	NA	1.60	0.75	0.363
Perfluoroundecanoic acid (PFUnA)	2058-94-8	NA	NA	49,000	Divine et al. (2020)	1.60	0.50	0.203
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	NA	NA	NA	NA	1.60	1.50	0.655

Analyte	Chemical Abstract Survey (CAS) Number	Human Health PAL[1] (ng/L)	PAL Reference [1]	Ecological PAL [2] (ng/L)	PAL Reference [2]	Battelle		
						Limit of Quantitation (LOQ) (ng/L)	Limit of Detection (LOD) (ng/L)	Detection Limit (DL) (ng/L)
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	NA	NA	NA	NA	1.60	1.25	0.571
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	5	RSL Calc	NA	NA	6.40	1.50	0.748
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	NA	NA	NA	NA	6.40	2.25	1.09
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	NA	NA	NA	NA	6.40	1.50	0.699
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	NA	NA	NA	NA	6.40	1.50	0.694
Perfluoropentanoic acid (PFPeA)	2706-90-3	NA	NA	140,000	Divine et al. (2020)	3.20	1.25	0.563
Perfluoropentanesulfonic acid (PFPeS)	2706-91-4	NA	NA	NA	NA	1.60	0.50	0.129
Perfluoroheptanesulfonic acid (PFHpS)	375-92-8	NA	NA	NA	NA	1.60	0.50	0.204
Perfluorornonanesulfonic acid (PFNS)	68259-12-1	NA	NA	NA	NA	1.60	0.5	0.249
Perfluorordecaanesulfonic acid (PFDS)	335-77-3	NA	NA	NA	NA	1.60	0.50	0.162
Perfluorododecanesulfonic acid (PFDoS)	79780-39-5	NA	NA	NA	NA	1.60	0.50	0.18
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	757124-72-4	NA	NA	NA	NA	6.40	2.75	1.32
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	27619-97-2	NA	NA	NA	NA	6.40	3.00	1.48
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	39108-34-4	NA	NA	NA	NA	6.40	2.00	0.916
Perfluorooctanesulfonamide (PFOSA)	754-91-6	NA	NA	NA	NA	1.60	0.50	0.188
N-Methylperfluorooctanesulfonamide (NMeFOSA)	31506-32-8	NA	NA	NA	NA	1.60	0.50	0.199
N-Ethylperfluorooctanesulfonamide (NEtFOSA)	4151-50-2	NA	NA	NA	NA	1.60	0.25	0.0998
N-Methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	24448-09-7	NA	NA	NA	NA	16.0	3.50	1.65
N-Ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	1691-99-2	NA	NA	NA	NA	16.0	3.00	1.45
Perfluoro-3-methoxypropanoic acid (PFMPA)	377-73-1	NA	NA	NA	NA	3.20	1.50	0.628
Perfluoro-4-methoxybutanoic acid (PFMBA)	863090-89-5	NA	NA	NA	NA	3.20	1.25	0.600
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	151772-58-6	NA	NA	NA	NA	3.20	1.75	0.760
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	113507-82-7	NA	NA	NA	NA	3.20	0.50	0.212
3-Perfluoropropyl propanoic acid (3:3 FTCA)	356-02-5	NA	NA	NA	NA	8.00	3.50	1.67
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	914637-49-3	NA	NA	NA	NA	40.0	9.00	4.46
3-Perfluoroheptyl propanoic acid (7:3 FTCA)	812-70-4	NA	NA	NA	NA	40.0	10.50	5.22

[1] EPA RSL calculator target hazard quotient (HQ) of 0.1 used for a recreational swimmer based on November 2023 tables (EPA, 2023) based on site-specific exposure assumptions. Backup calculator is provided in Appendix G.

[2] EPA has not developed ecological screening levels for PFAS. Therefore, ecological PALs for aquatic invertebrates and wildlife values were identified based on a review of the literature. All ecological wildlife PALs are based on Grippo et al., 2021. The aquatic organism PALs for PFOA, PFOS, PFBS, PFBA, PFDA, PFHxA, and PFNA are based on Grippo et al., 2021, and PFDoA, PFHpA, and PFUNA are based on Divine et al., 2020. Divine et al. (2020) state that wildlife values are NOAEL-based. The lower of the aquatic invertebrate and the ecological wildlife values were used and referenced in the above table.

DoD = Department of Defense
EPA = United States Environmental Protection Agency
NA = Not applicable
PAL = Project action level
QSM = Quality Systems Manual
RSL Calc = EPA RSL Calculator
ng/L = Nanogram per liter
LC/MS/MS = Liquid Chromatography and Tandem Mass Spectroscopy

Results less than the DL will be reported as the LOD value followed by a “U” qualifier to indicate that the analyte was not detected at the indicated concentration level. Results between the DL and LOQ will be qualified with the “J” qualifier.

Matrix: Sediment
Analytical Group: PFAS by EPA Method 1633 (EPA, 2024) by LC/MS/MS Compliant with QSM 6.0 Table B-24 (DoD, 2023b)

Analyte	CAS Number	Human Health PAL [1] (µg/kg)	PAL Reference[1]	Ecological PAL [2] (µg/kg)	PAL Reference [2]	Battelle		
						LOQ (µg/kg)	LOD (µg/kg)	DL (µg/kg)
Perfluorooctanoic acid (PFOA)	335-67-1	130	RSL Calc	6	Divine et al. (2020)	0.160	0.100	0.0315
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	85	RSL Calc	1.4	Divine et al. (2020)	0.160	0.100	0.0426
Perfluorobutanoic acid (PFBA)	375-22-4	53,000	RSL Calc	1,600	Divine et al. (2020)	0.640	0.250	0.0872
Perfluorobutanesulfonic acid (PFBS)	375-73-5	13,000	RSL Calc	730	Divine et al. (2020)	0.160	0.150	0.0624
Perfluorodecanoic acid (PFDA)	335-76-2	NA	NA	NA	NA	0.160	0.150	0.0618
Perfluorododecanoic acid (PFDoA)	307-55-1	NA	NA	NA	NA	0.160	0.150	0.0648
Perfluoroheptanoic acid (PFHpA)	375-85-9	NA	NA	NA	NA	0.160	0.150	0.0675
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	850	RSL Calc	NA	NA	0.160	0.0800	0.0363
Perfluorohexanoic acid (PFHxA)	307-24-4	21,000	RSL Calc	1,800	Divine et al. (2020)	0.160	0.150	0.0375
Perfluorononanoic acid (PFNA)	375-95-1	130	RSL Calc	10	Divine et al. (2020)	0.160	0.100	0.0459
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	NA	NA	NA	NA	0.160	0.100	0.0408
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	NA	NA	NA	NA	0.160	0.100	0.0339
Perfluoroundecanoic acid (PFUnA)	2058-94-8	NA	NA	NA	NA	0.160	0.150	0.0240
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	NA	NA	NA	NA	0.160	0.100	0.0318
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	NA	NA	NA	NA	0.160	0.150	0.0510
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	160	RSL Calc	NA	NA	0.640	0.250	0.125
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	NA	NA	NA	NA	0.640	0.250	0.118
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	NA	NA	NA	NA	0.640	0.250	0.0986
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	NA	NA	NA	NA	0.640	0.250	0.110
Perfluoropentanoic acid (PFPeA)	2706-90-3	NA	NA	NA	NA	0.320	0.250	0.0842
Perfluoropentanesulfonic acid (PFPeS)	2706-91-4	NA	NA	NA	NA	0.160	0.150	0.0690
Perfluoroheptanesulfonic acid (PFHpS)	375-92-8	NA	NA	NA	NA	0.160	0.100	0.0483

Analyte	CAS Number	Human Health PAL [1] (µg/kg)	PAL Reference[1]	Ecological PAL [2] (µg/kg)	PAL Reference [2]	Battelle		
						LOQ (µg/kg)	LOD (µg/kg)	DL (µg/kg)
Perfluorornonanesulfonic acid (PFNS)	68259-12-1	NA	NA	NA	NA	0.160	0.100	0.0495
Perfluorordecaanesulfonic acid (PFDS)	335-77-3	NA	NA	NA	NA	0.160	0.125	0.0597
Perfluorododecanesulfonic acid (PFDoS)	79780-39-5	NA	NA	NA	NA	0.160	0.100	0.0309
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	757124-72-4	NA	NA	NA	NA	0.640	0.500	0.238
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	27619-97-2	NA	NA	NA	NA	0.640	0.500	0.193
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	39108-34-4	NA	NA	NA	NA	0.640	0.250	0.102
Perfluorooctanesulfonamide (PFOSA)	754-91-6	NA	NA	NA	NA	0.160	0.100	0.0273
N-Methylperfluorooctanesulfonamide (NMeFOSA)	31506-32-8	NA	NA	NA	NA	0.160	0.100	0.0468
N-Ethylperfluorooctanesulfonamide (NEtFOSA)	4151-50-2	NA	NA	NA	NA	0.160	0.100	0.0417
N-Methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	24448-09-7	NA	NA	NA	NA	1.60	0.750	0.290
N-Ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	1691-99-2	NA	NA	NA	NA	1.60	0.750	0.309
Perfluoro-3-methoxypropanoic acid (PFMPA)	377-73-1	NA	NA	NA	NA	0.320	0.250	0.103
Perfluoro-4-methoxybutanoic acid (PFMBA)	863090-89-5	NA	NA	NA	NA	0.320	0.250	0.0788
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	151772-58-6	NA	NA	NA	NA	0.320	0.250	0.0911
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	113507-82-7	NA	NA	NA	NA	0.320	0.150	0.0378
3-Perfluoropropyl propanoic acid (3:3 FTCA)	356-02-5	NA	NA	NA	NA	0.800	0.500	0.165
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	914637-49-3	NA	NA	NA	NA	4.00	1.500	0.0645
3-Perfluoroheptyl propanoic acid (7:3 FTCA)	812-70-4	NA	NA	NA	NA	4.00	1.500	0.741

[1] For human receptors, sediment PALs were calculated for PFOA, PFOS, PFBS, PFHxS, PFNA, HFPO-DA, PFHxA, and PFBA using the EPA's RSL Calculator Sediment Module for a recreational receptor with conservative assumptions for sediment exposure (see Appendix G for RSL calculator output file).
[2] EPA has not developed ecological screening levels for PFAS. Therefore, ecological PALs were identified based on a review of the available literature.

DoD = Department of Defense
EPA = U.S. Environmental Protection Agency
µg/kg = microgram per kilogram
NA = Not applicable
PAL = Project action level
QSM = Quality Systems Manual
RSL Calc = EPA RSL Calculator

Results less than the DL will be reported as the LOD value followed by a "U" qualifier to indicate that the analyte was not detected at the indicated concentration level. Results between the DL and LOQ will be qualified with the "J" qualifier.

SAP Worksheet #19 -- Field Sampling Requirements Table

(UFP-QAPP Manual Section 3.1.1)

Matrix	Analytical Group	Analytical and Preparation Method / Standard Operating Procedure (SOP) Reference	Containers (number, size, and type)	Sample Volume (units)	Preservation Requirements (chemical, temperature, light protected)	Maximum Holding Time[1] (preparation / analysis)
Surface Water	PFAS	PFAS by EPA Method 1633 by LC/MS/MS Compliant with QSM 6.0 Table B-24 / 5-381-04	2 x 500 mL HDPE bottle 1 x 125 mL HDPE bottle	2 x 500 mL 1 x 125 mL	Temperature must be above freezing and less than or equal to 6°C when received at the laboratory. Samples stored in the lab at 0 to 6°C or at ≤ -20°C and protected from light until sample preparation	28 days[2] from sampling to extraction if stored at 0 to 6°C, 90 days if stored at ≤ -20°C / Up to 90 days from extraction to analysis[3]
Sediment	PFAS	PFAS by EPA Method 1633 by LC/MS/MS Compliant with QSM 6.0 Table B-24 / 5-381-04	1 x 8 oz HDPE jar	20 to 30 g	Temperature must be above freezing and less than or equal to 6°C when received at the laboratory. Samples stored in the lab at 0 to 6°C or at ≤ -20°C and protected from light until sample preparation.	Up to 90 days from sampling to extraction when stored either ≤ -20°C or between 0 and 6°C [4] / Up to 90 from extraction to analysis[3]

[1] Maximum holding time is calculated from the time the sample is collected to the time the sample is prepared/extracted.
[2] Issues were observed with certain perfluorooctane sulfonamide ethanols and perfluorooctane sulfonamidoacetic acids after seven days if stored 0 to 6°C.
[3] Stored at 0 to 4°C, issues were observed for some ether sulfonates after 28 days.
[4] Samples may need to be extracted as soon as possible if nonafluoro-3,6-dioxaheptanoic acid (NFDHA) is an important analyte; the preferred storage method is ≤ -20°C.

g = Gram
HDPE = High-Density polyethylene
mL = Milliliter
oz = Ounce

SAP Worksheet #23 -- Analytical SOP References Table

(UFP-QAPP Manual Section 3.2.1)

Laboratory SOP Number[(1)]	Title, Revision Date, and/or Number	Definitive or Screening Data	Matrix and Analytical Group	Instrument	Organization Performing Analysis	Variance to QSM? (Y/N)	Modified for Project Work? (Y/N)
5-381-04	Analysis of Poly and Perfluoroalkyl Substances in Aqueous, Solid, Biosolid, and Tissue Samples by Liquid Chromatography and Tandem Mass Spectrometry (LC/MS/MS) Following EPA Draft Method 1633, 02/27/2024, Version 4	Definitive	Surface Water and Sediment / PFAS	LC/MS/MS	Battelle	N	N

SAP Worksheet #24 -- Analytical Instrument Calibration Table

(UFP-QAPP Manual Section 3.2.2)

**All of the requirements contained in final version of EPA Method 1633 (EPA, 2024) and QSM 6.0, Table B-24 (DoD, 2023b) must be met.

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
LC/MS/MS – PFAS by EPA Method 1633	Mass Calibration	Instrument must have a valid mass calibration following the manufacturer specified procedure prior to any sample analysis. The mass calibration must be performed at least annually, or as recommended by the instrument manufacture, whichever is more frequent and repeated on an as-needed basis (e.g., QC failures, ion masses fall outside of the instrument required mass window, major instrument maintenance is performed, or the instrument is moved). Multiple Reaction Monitoring analysis is required to achieve better sensitivity than full-scan analysis.	Calibrate the mass scale of the mass spectrometer with calibration compounds and procedures specified by the manufacturer.	Problem must be corrected. No samples, standards or blanks may be analyzed under a failing mass calibration. Mass calibration is judged on the basis of the presence or absence of the exact calibration masses (e.g., a limit of the number of masses that are “missed”). If peaks are missing or not correctly identified, adjust the mass spectrometer/mass spectrometer, and repeat the test. If the mass calibration fails, then recalibrate. If it fails again, consult manufacturer instructions on corrective maintenance. Flagging is not appropriate.	Analyst	5-381-04
LC/MS/MS – PFAS by EPA Method 1633	Mass Calibration Verification	The mass calibration must be verified prior to the analysis of any standards and samples and after each subsequent mass calibration.	Mass calibration must be performed per the instrument manufacturer’s instructions. Mass calibration verification must be performed using standards specified by the manufacturer, the mass calibration must also be verified with respect to the ion masses monitored by this method.	Check the mass calibration by measuring the amount of peak drift from the expected masses. If the peak apex has shifted more than approximately 0.2 Daltons, then the instrument will need to be recalibrated following the manufacturer’s instructions.	Analyst	5-381-04

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
			Check the instrument mass resolution to ensure that it is at least unit resolution. Unit resolution must meet the manufacturer's criteria			
LC/MS/MS – PFAS by EPA Method 1633	Sample PFAS ID (Peak Identification)	All analytes detected in a sample, standard, blank, or QC sample.	For target analytes or extracted internal standard (EIS) to be identified, peak responses of the quantitation and confirmation ions must be at least three times the background noise level (signal to noise ratio [S/N] of 3:1). The quantitation ion must have a S/N ≥ 10:1 if there is no confirmation ion. Target analyte, EIS analyte, and non-extracted internal standard (NIS) analyte retention times (RT) must fall within ± 0.4 minutes of the predicted retention times from the midpoint standard of the initial calibration (ICAL) or initial daily calibration verification (CV). For concentrations at or above the LOQ, in-house acceptance criteria for evaluation of ion abundance ratios (IAR) must be used if project limits are not established and must not exceed 50 to 150% of the midpoint ICAL standard.	If the S/N ratio is not met due to high background noise, the laboratory must correct the issue. If the S/N ratio is not met but the background is low, then the analyte is to be considered a non-detect. If the field sample result does not all meet the criteria stated in Sections 15.1.1 through 15.1.3 of EPA Method 1633, and all sample preparation avenues have been exhausted, the result may only be reported with a data qualifier alerting the data user that the result could not be confirmed because it did not meet the method-required criteria and therefore should be considered a tentative identification and an estimated value. If the criteria are not met for the standards, the laboratory must stop analysis of samples and correct the issue.	Analyst	5-381-04

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
			The total response of all isomers (branched and linear) in the quantitative standards should be used to define the IAR. In samples, the total response should include only the branched isomer peaks that have been identified in either the quantitative or qualitative standard. If standards (either quantitative or qualitative) are not available for purchase, only the linear isomer can be identified and quantitated in samples. The ratio requirement does not apply for PFBA, PFPeA, NMeFOSE, NEtFOSE, PFMPA, and PFMBA because suitable (not detectable or inadequate S/N) secondary transitions are unavailable.			
LC/MS/MS – PFAS by EPA Method 1633	ICAL Standards containing both branched and linear isomers must be used when commercially available.	Run initially prior to analysis of samples and after the mass calibration verification has met all criteria, and whenever the laboratory takes an action that changes the chromatographic conditions or might change or affect the ICAL criteria, or if either the CV or Instrument Sensitivity Check (ISC) acceptance criteria have not been met. Minimum 6 calibration standards for linear model and 7 calibration	One of the following two approaches must be used to evaluate the linearity of the instrument calibration: Option 1: Calculate the relative standard deviation (RSD) of the response ratio (RR) or response factor (RF) values for each target analyte and isotopically labeled compound for all ICAL standards that were analyzed. The RSD must be ≤ 20% to establish instrument linearity. Option 2: Calculate the relative standard error (RSE) for each target analyte and EIS compound for all the ICAL standards that were analyzed. The RSE for all	If the instrument sensitivity or the instrument linearity criteria for ICAL are not met, inspect the system for problems and take corrective actions to achieve the criteria. This may require the preparation and analysis of fresh calibration standards. All ICAL criteria must be met before any samples or required blanks are analyzed. Flagging is not appropriate.	Analyst	5-381-04

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
		standards for non-linear models. The initial calibration solutions contain the entire suite of EISs, NISs, and target compounds.	method analytes must be ≤ 20% to establish instrument linearity. In addition, although not required, it may be useful to compare the actual responses for each standard to the calibration model. Differences outside of a window of 70 – 130% of the modeled concentration may be cause for concern. Sufficient instrument sensitivity is established if a signal-to-noise ratio ≥ 3:1 for the quantitation ions and the confirmation ions, or ≥ 10:1 if the analyte only has a quantitation ion, can be achieved when analyzing the lowest concentration standard within the quantitation range that the laboratory includes in its assessment of calibration linearity (Table 4 of EPA Method 1633).			
LC/MS/MS – PFAS by EPA Method 1633	Initial calibration verification (ICV)	Once after each ICAL, prior to sample analysis. No samples shall be analyzed until acceptance criteria for ICV has been met.	Must be made from a second source standard. All analyte concentrations must be within 70% to 130% of their true values.	Correct problem, rerun ICV. If problem persists, repeat ICAL. Flagging is not appropriate.	Analyst	5-381-04
LC/MS/MS – PFAS by EPA Method 1633	RT window position establishment	Once per ICAL and at the beginning of the analytical sequence for each analyte and EIS.	Position will be set using the midpoint standard of the ICAL curve when ICAL is performed. On days when ICAL is not performed, the initial calibration verification (CV) RT can be used.	NA	Analyst	5-381-04

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
LC/MS/MS – PFAS by EPA Method 1633	RT window width	Every field sample, standard, blank, and QC sample. After ICAL and at the beginning of analytical sequence.	For all target analytes with exact corresponding isotopically labeled analogs, method analytes must elute within ± 0.1 minutes of the associated EIS. The RTs of each target analyte, EIS, and NIS compounds must fall within ± 0.4 minutes of the midpoint standard of the ICAL or initial CV used to establish the RT windows for the samples and batch QC.	When ICAL is not performed, the initial CV retention times or the midpoint standard of the ICAL curve can be used to establish the RT window position. Correct the problem and reanalyze the samples.	Analyst	5-381-04
LC/MS/MS – PFAS by EPA Method 1633	CCV (or CV)	Prior to sample analysis, every 10 samples or less, and at the end of the analytical sequence, by analysis of a mid-level calibration solution. CV uses the mean RRs or RFs determined from the ICAL to calculate the analyte concentrations in the verification standard. Results may not be reported without valid CCV/CV. ISC can serve as a bracketing CCV/CV.	Recovery of target analytes must be within 70 to 130% of their true value.	If the CV criterion in Section 14.3.3 of EPA Method 1633 is not met, take corrective action and reanalyze any extracts that were analyzed between the last passing CV and the one that failed. However, if an analyte in the CV failed because of high recovery, but that analyte was not detected in a sample extract associate with that failure, then that sample extract need not be reanalyzed. In some instances the laboratory may need to recalibrate the LC/MS/MS instrument according to Section 10.3 of EPA Method 1633.	Analyst	5-381-04
LC/MS/MS – PFAS by EPA Method 1633	ISC	Daily, at the beginning of each analytical sequence, prior to sample analysis.	The S/N of the ISC standard must be greater than or equal to 3:1 the quantitation and confirmation ions that exist and must meet the ion ratio requirements in Section 15.1.3. If the analyte has no confirmation ions, then a 10:1 S/N ratio is required.	If the S/N ratio requirements cannot be met, the problem must be corrected before analyses can proceed. Correct problem, rerun ISC. If problem persists, repeat ICAL.	Analyst	SOP 5-381-04

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
		No samples shall be analyzed until acceptance criteria for ISC has been met.	ISC standard concentrations must be at LOQ. All target analyte concentrations must be within ± 30% of their true values.	Flagging is not appropriate.		
LC/MS/MS – PFAS by EPA Method 1633	Instrument Blank	At the beginning of the analytical sequence and after the analysis of high concentration samples and standards (e.g., client samples, highest calibration standard, calibration verification standard).	No analytes detected >1/2 LOQ.	If acceptance criteria are not met after the highest calibration standard, calibration must be performed using a lower concentration for the highest standard until acceptance criteria are met. If field sample analyte concentrations exceed the highest calibration standard and the same analytes in the following field sample or in consecutive following field sample(s) also exceed the instrument blank acceptance criteria (>1/2 LOQ), the affected samples shall be reanalyzed using a fresh aliquot of the sample extract. If the extract cannot be reanalyzed and re-extraction is not possible, apply qualifier to affected results and explain in the case narrative.	Analyst	5-381-04

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
LC/MS/MS – PFAS by EPA Method 1633	Bile Salt Interference Check	Daily, after ICAL and during each analytical sequence prior to analysis of all matrix types (aqueous, solid, tissue, and AFFF). No samples shall be analyzed until acceptance criteria for the bile salt standard(s) has been met.	All EPA Method 1633 requirements for evaluation of the relationship of the retention time of the bile salt peak(s) to the retention time window of PFOS must be met for all matrix types. The retention time window of PFOS applies to the retention time of all isomers of PFOS. The retention time of the bile salt(s) peak must fall out of the retention time window of PFOS by at least one minute.	NA	Analyst, Supervisor	5-381-04
LC/MS/MS – PFAS by EPA Method 1633	Ion Ratio	All analytes detected in a sample.	Must meet the ion requirements of Section 15.1.3 of EPA Method 1633. For concentrations at or above the LOQ, the IAR must fall within ± 50% of the IAR observed in the mid-point initial calibration standard. If project-specific requirements involve reporting sample concentrations below the LOQ, the IAR must fall within ± 50% of the IAR observed in either the mid-point initial calibration standard or the initial CV.	Recalibrate if acceptance criteria is not met. Document and discuss the failure in the case narrative.	Analyst	5-381-04

SAP Worksheet #28 -- Laboratory QC Samples Table
(UFP-QAPP Manual Section 3.4)

**All of the requirements contained in final version of EPA Method 1633 (EPA, 2024) and QSM 6.0, Table B-24 (DoD, 2023b) must be met.

Matrix	Aqueous and Solid
Analytical Group	PFAS
Analytical Method/ SOP Reference	EPA Method 1633/ 5-381-04

QC Sample	Frequency & Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	DQI	MPC
EIS Compounds	Every field sample, standard, blank, and QC sample. An aliquot of EIS solution is added to each sample prior to extraction.	In additional to the requirements of EPA Method 1633, the following must be met: 1) Isotopically labeled analogs of analytes shall be used when they are commercially available. 2) Where EPA Method 1633 does not provide EIS recovery acceptance criteria for the sample matrix under evaluation, a laboratory shall use laboratory-developed recovery acceptance criteria no wider than any acceptance criteria provided by the client. Preliminary inhouse acceptance criteria of 20-150% shall be used until laboratory acceptance criteria are developed in accordance with EPA Method 1633. 3) Where EPA Method 1633 does not provide EIS recovery acceptance criteria for the sample matrix under evaluation,	Follow the requirements listed in EPA Method 1633, Section 15.3.2 for all sample matrices. If EIS recoveries still fall outside of the acceptance range, then a diluted sample extract must be analyzed, or a smaller sample mass/volume must be extracted (Section 15.3.1). If the recovery of any EIS in the diluted sample extract is below 5%, the method does not apply to the sample being analyzed and the result may not be reported or used for permitting or regulatory compliance purposes. If all cleanup procedures in this method and EIS recovery remains outside of the acceptance range, extraction and/or cleanup procedures that are beyond this scope of this method may be needed to analyze the sample. Apply qualifier to affected analyte results and document and	Analyst, Supervisor	Accuracy/ Bias	Same as Method/SOP QC Acceptance Limits.

Matrix	Aqueous and Solid
Analytical Group	PFAS
Analytical Method/ SOP Reference	EPA Method 1633/ 5-381-04

QC Sample	Frequency & Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	DQI	MPC
		the lower limit of laboratory-developed acceptance criteria cannot be < 20%.	discuss the failure in the case narrative.			
NIS Compounds	Every field sample, standard, blank, and QC sample. An aliquot of labeled NIS PFAS solution is spiked into the concentrated extract immediately prior to injection of an aliquot of the extract into the LC/MS/MS.	In additional to the requirements of EPA Method 1633, the following must be met: The NIS areas in the field samples and QC samples must be within 50 to 200% of the mean area of the corresponding NIS in the most recent initial calibration (i.e., a factor of 2). If the areas are low for all the field samples and QC samples in the batch, it suggests a loss of instrument sensitivity, while low areas in only some field or QC samples suggests a possible bad injection.	Repeat the analysis using a fresh aliquot of the extract. If failure does not confirm, report the second analysis. If the failure confirms, examine the project-specific requirements. Contact the client as to additional measures to be taken. Document and discuss the failure in the case narrative. Apply Q-flag to the result associated with the failure.	Analyst, Supervisor	Accuracy/ Bias	Same as Method/SOP QC Acceptance Limits.
Method Blank (MB)	One per preparatory batch.	In additional to the requirements of EPA Method 1633, the following must be met: No analytes detected >1/2 LOQ.	Correct the problem. If required, re-prepare and reanalyze MB and all QC samples and field samples processed with the contaminated blank if sufficient sample material is available. If samples cannot be reprepared and reanalyzed , apply B-flag to	Analyst, Supervisor	Accuracy/ Bias/ Contamination	Same as Method/SOP QC Acceptance Limits.

Matrix	Aqueous and Solid
Analytical Group	PFAS
Analytical Method/ SOP Reference	EPA Method 1633/ 5-381-04

QC Sample	Frequency & Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	DQI	MPC
			all results for the specific analyte(s) in all samples in the associated preparatory batch and explain in the case narrative.			
Laboratory Control Sample (LCS) and Low-Level Laboratory Control Sample (LLLCS)	One set per preparatory batch. Shall contain all EIS, NIS, and all analytes to be reported. EPA Method 1633 equivalent to the LCS is the Ongoing Precision and Recovery Standard. EPA Method 1633 equivalent to the LLLCS is Low-Level Ongoing Precision and Recovery Standard.	In additional to the requirements of EPA Method 1633, the following must be met: 1) Where EPA Method 1633 does not provide LCS and LLLCS recovery acceptance criteria for the sample matrix under evaluation, a laboratory shall use laboratory-developed recovery acceptance criteria no wider than any acceptance criteria provided by the client. Preliminary inhouse acceptance criteria of 40-150% shall be used until acceptance criteria are developed by the laboratory in accordance with EPA Method 1633. 2) Where EPA Method 1633 does not provide LCS and LLLCS recovery acceptance criteria for the sample matrix under evaluation, the laboratory-developed acceptance criteria shall not be < 40%.	In additional to the requirements of EPA Method 1633, the following must be met: Correct problem. If required, reprepare and analyze the LCS and/or LLLCS and all affected QC samples and field samples in the associated preparatory batch for failed analytes if sufficient sample material is available. If the samples cannot be reprepared and analyzed, apply Q-flag to specific analyte(s) in all samples in the associated preparatory batch and explain in the case narrative.	Analyst, Supervisor	Accuracy/ Bias	Same as Method/SOP QC Acceptance Limits.

Matrix	Aqueous and Solid
Analytical Group	PFAS
Analytical Method/ SOP Reference	EPA Method 1633/ 5-381-04

QC Sample	Frequency & Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	DQI	MPC
MS and MSD, if required	One MS/MSD pair per preparatory batch, if required.	Analyte recoveries must be within in-house LCS limits if project limits are not provided; otherwise, project limits must be met. RPD ≤ 30% (between MS and MSD).	Examine the project-specific requirements. Contact the client as to additional measures to be taken. If the analyte(s) are not listed, use inhouse LCS limits if project limits are not specified. For the specific analyte(s) in the parent sample, apply J-flag if acceptance criteria are not met and explain in the case narrative. The data shall be evaluated to determine the source of difference.	Analyst, Supervisor	Accuracy/ Bias	Same as Method/SOP QC Acceptance Limits.
Matrix Duplicate (MD) EPA Method 1633 equivalent to the MD is the laboratory duplicate	Each AFFF sample prepared using an aliquot of the field sample must be prepared in duplicate. For all other matrices, one per preparatory batch.	In additional to the requirements of EPA Method 1633, the following must be met: RPD of all analytes ≤ 30% (between sample and MD). RPD does not apply if both results are below the LOQ.	If an assignable cause isolated to only the MD is identified, reanalyze the MD or reprepare and analyze the MD if sufficient sample material is available, as indicated by the cause. Otherwise, apply qualifier to affected analyte results in the parent sample and explain in the case narrative.	Analyst, Supervisor	Precision/ Accuracy/ Bias	Same as Method/SOP QC Acceptance Limits.
AFFF Samples	Each AFFF sample. Note: This does not include AFFF samples that are to be evaluated for MIL-PRF-14385 compliance. Those AFFF samples shall be evaluated in compliance with DoD	AFFF samples shall be subsampled in duplicate for analysis in accordance with DoD AFFF01, Section 11.2.1 through 11.2.9. All AFFF samples shall be prepared and analyzed in	NA	Analyst, Supervisor	Accuracy/ Bias	Same as Method/SOP QC Acceptance Limits.

Matrix	Aqueous and Solid
Analytical Group	PFAS
Analytical Method/ SOP Reference	EPA Method 1633/ 5-381-04

QC Sample	Frequency & Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	DQI	MPC
	AFFF01, not EPA Method 1633. A copy of the latest version of DoD AFFF01 can be found at https://denix.osd.mil/edqw/	duplicate in the same manner as aqueous samples (e.g., solid phase extraction, extracted internal standards, carbon cleanup, etc.).				

SAP Worksheet #34-36 -- Data Verification and Validation (Steps I and IIa/IIb) Process Table

(UFP-QAPP Manual Section 5.2.1), (UFP-QAPP Manual Section 5.2.2), (Figure 37 UFP-QAPP Manual), (Table 9 UFP-QAPP Manual)

Data Review Input	Description	Responsible for Verification (name, organization)	Step I / IIa / IIb [1]	Internal/ External
Sample Log Sheets, Chain of Custody Forms, SAP, and Laboratory Sample Login Documentation	The FOL will verify that samples were correctly identified, chain of custody records are legible, data will be traceable to the corresponding samples, all samples listed in SAP Worksheets #12, #18, and #20 were collected from intended locations, and the correct sampling and analytical methods/SOPs were assigned to samples listed on the chain of custody record. The PM will verify that the sampling plan was implemented and carried out as written and will document any significant deviations in the project report.	FOL and PM, Tetra Tech	I	Internal
Chain-of-Custody Forms	Verify that the chain-of-custody form is complete and accurate and was signed and dated by the sampler relinquishing the samples and by the laboratory receiving the samples. Resolve discrepancies, if possible. Alert the Tetra Tech PM verbally or via e-mail if discrepancies are unresolvable.	FOL, Tetra Tech	I	Internal
Chain-of-Custody Forms	Verify sample shipment completeness against the chain-of-custody record, verify proper sample preservation/integrity, sign to indicate receipt, note any discrepancies, and correct them as necessary. Notify the Tetra Tech Project Chemist, FOL, or PM of any deviations from sample shipping requirements, such as damaged sample containers or inappropriate temperature or pH. Note uncorrectable discrepancies in the data package Case Narrative.	Laboratory Sample Custodian	I	External
Analytical Calibration Standards	Verify that standards are traceable and meet contract, method, and procedural requirements, as applicable, and include Certificates of Analysis in the laboratory data package to document the traceability. If discrepancies in traceability are found, bring the discrepancies to the Laboratory PM's attention for correction.	Laboratory analyst	I	Internal
SAP, Analytical SOPs, and Analytical Data Packages	Verify that the correct analytical methods/SOPs were applied. Establish that all method QC samples were analyzed and in control as listed in the analytical SOPs. If method QC is not in control. The Laboratory PM will contact the Tetra Tech Project Chemist or PM verbally or via e-mail for guidance before laboratory data package preparation.	Laboratory PM	I	Internal
Laboratory Analytical Data Package	Verify the analytical data package for completeness and accuracy, including Certificates of Analysis for calibration and check standards. The Laboratory QAM will sign the Case Narrative for each data package.	Laboratory QAM, Analytical Laboratory	I	Internal

Data Review Input	Description	Responsible for Verification (name, organization)	Step I / IIa / IIb [(1)]	Internal/ External
Laboratory Analytical Data Package	Review chain of custody records to ensure that the required analytical samples were collected, appropriate sample identifications were used, and correct analytical methods were applied to each sample. Verify the analytical data package for completeness and accuracy, including certificates of analysis for calibration and check standards. Obtain missing data package elements from the laboratory. Document unrecoverable elements, if any, in the DV report submitted to the Tetra Tech PM and alert the Project Chemist or PM.	Data Validator, Tetra Tech	I/IIa	External
Electronic Data Deliverables (EDDs)/ Analytical Data Packages	Verify 100% of EDD results for accuracy and completeness against hard copy data package and chain of custody records at the start of validation. If required elements are missing, obtain missing elements from the laboratory before completing the validation. If any element cannot be obtained, document the omission in the DV report and identify the missing elements to the Tetra Tech Project Chemist or PM as early as possible.	Data Validator, Tetra Tech	I/IIa	External
Sample Shipment and Storage Conditions; and Holding Times for Representativeness	Verify that sample shipping, storage conditions, and holding times satisfy Worksheet #19 requirements. Document deviations from requirements in the DV report and notify the Tetra Tech Project Chemist or PM if deviations from the SAP requirements are serious enough to warrant possible data rejection. If warranted, document findings in the DV report by using the X qualifier. The Project Team will make the final decision if the data are useable or will be rejected. If the data are determined to be usable, final DV qualifiers of “J”, “J+”, “J-“, or “UJ” will be applied. If the data are determined to be unusable, a final DV qualifier of “R” will be applied.	Data Validator, Tetra Tech	I/IIa	External
QC Samples/MPC Compliance	Ensure that the scheduled laboratory and field QC samples were submitted for analysis and that the MPCs listed in SAP Worksheets #12, #15, #24, and #28 were met for all field samples and QC samples. Document findings in the DV report. Evaluate sample results for laboratory contamination and qualify false detections using the laboratory method/preparation blank summaries. Qualify analyte concentrations between the DL and the LOQ as estimated (“J” qualifier). Replace laboratory flags with validation qualifiers on validated data in accordance with the DV process described below and document findings in the DV report. Retain laboratory flags in the database and provide them in the DV reports to document data as received from the laboratory.	Data Validators, Tetra Tech	IIa/IIb	External

Data Review Input	Description	Responsible for Verification (name, organization)	Step I / IIa / IIb (1)	Internal/ External
Field and Laboratory Duplicate Analyses for Precision	Verify field sampling precision by checking RPDs for field duplicate samples. Verify laboratory precision by checking RPDs or Percent Difference values from calibrations, laboratory duplicates, MS/MSDs, and LCS/LCS duplicates. Ensure compliance with MPC accuracy and precision goals listed in Worksheets #12, #24, and #28. Document findings in the DV report.	Data Validator, Tetra Tech	I/IIb	External
SAP/Laboratory Data Packages/EDDs	Conduct EPA Stage 2B data validation on 90% of the definitive laboratory data and EPA Stage 4 data validation on 10% of the definitive laboratory data generated by the selected methods in accordance with the requirements of the final version of EPA Method 1633 [EPA, 2024] and QSM 6.0 Table B-24 [DoD, 2023b]) and the QC criteria listed in Worksheets #s 12, 15, 24, and 28. Apply validation qualifiers in accordance with logic provided in DoD General DV Guidelines (November 2019) , PFAS Analyses in non-Drinking Water Matrices: DoD Data Validation Guidelines (DVG) Module 6: DV Procedure for Per- and Polyfluoroalkyl Substances Analysis by QSM Table B-24 (DOD, 2022), and Data Validation Guidelines Modules 1, 2, 3, 4, and 6 Revised Table for Sample Qualification in the Presence of Blank Contamination (DOD, 2023a). Document findings in the DV report.	Data Validator, Tetra Tech	IIa/IIb	External

1 IIa=compliance with methods, procedures, and contracts [see Table 10, page 117, UFP-QAPP manual, V.1, March 2005].
IIb=comparison with measurement performance criteria in the SAP [see Table 11, page 118, UFP-QAPP manual, V.1, March 2005].

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APPENDIX D
PRIMARY PFAS LABORATORY CERTIFICATIONS

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

BUREAU OF LABORATORIES

LABORATORY ACCREDITATION PROGRAM

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certifies That

68-05687

Battelle Analytical Chemistry Services

141 Long Water Drive, Suite 202, Norwell, MA, 02061

Having duly met the requirement of
The act of June 29, 2002 (P.L. 596, No. 90)
dealing with Environmental Laboratories Accreditation
(27 Pa. C.S. 4104-4113) and the
National Environmental Laboratory Accreditation Program Standard
is hereby approved as an

Accredited Laboratory

to conduct analysis within the fields of accreditations more fully described in the attached Scope of Accreditation

NELAP accreditation granted by the PA DEP to an environmental laboratory is conditioned upon continued compliance with the current edition of the NELAC Standard or TNI Standard and the following Subchapters and Sections of 25 Pa. Code Chapter 252: Subchapter A (relating to general provisions); Subchapter B (relating to application, fees and supporting documents); Subchapter E (relating to proficiency test study requirements); Subchapter F (relating to assessment requirements); Subchapter G (relating to miscellaneous provisions); Section 252.307; and Section 252.401.

Expiration Date: **03/31/2025**

Certificate Number: **007**

Annmarie Beach

Annmarie Beach, Chief
Laboratory Accreditation Program
Bureau of Laboratories

Continued accreditation status depends on successful ongoing participation in the program
Certificate not transferable Surrender upon revocation
To be conspicuously displayed at the Laboratory
Not valid unless accompanied by a valid Scope of Accreditation
Shall not be used to imply endorsement by the Commonwealth of Pennsylvania
Customers are urged to verify the laboratory's current accreditation status
PA DEP is a NELAP recognized accreditation body

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 007-001 expiration date 03/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Battelle Analytical Chemistry Services
141 Long Water Drive Suite 202
Norwell, MA 02061
(781) 681-5400

DEP Laboratory ID: 68-05687
EPA Lab Code: MA00056
TNI Code: TNI00280
PADWIS ID: 05687

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 533	1.0	10091619	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	FL	10/17/2023
EPA 533	1.0	10091619	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	6948	NELAP	FL	10/17/2023
EPA 533	1.0	10091619	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	6946	NELAP	FL	10/17/2023
EPA 533	1.0	10091619	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	6947	NELAP	FL	10/17/2023
EPA 533	1.0	10091619	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	FL	10/17/2023
EPA 533	1.0	10091619	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	FL	10/17/2023
EPA 533	1.0	10091619	Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	FL	10/17/2023
EPA 533	1.0	10091619	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	6956	NELAP	FL	10/17/2023
EPA 533	1.0	10091619	Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	6957	NELAP	FL	10/17/2023
EPA 533	1.0	10091619	Perfluoro-3-methoxypropanoic acid (PFMPA)	6965	NELAP	FL	10/17/2023
EPA 533	1.0	10091619	Perfluoro-4-methoxybutanoic acid (PFMBA)	6966	NELAP	FL	10/17/2023
EPA 533	1.0	10091619	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	FL	10/17/2023
EPA 533	1.0	10091619	Perfluorobutanoic acid (PFBA)	6915	NELAP	FL	10/17/2023
EPA 533	1.0	10091619	Perfluorodecanoic acid (PFDA)	6905	NELAP	FL	10/17/2023
EPA 533	1.0	10091619	Perfluorododecanoic acid (PFDoA)	6903	NELAP	FL	10/17/2023
EPA 533	1.0	10091619	Perfluoroheptanesulfonic acid (PFHpS)	9470	NELAP	FL	10/17/2023
EPA 533	1.0	10091619	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	FL	10/17/2023
EPA 533	1.0	10091619	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	FL	10/17/2023
EPA 533	1.0	10091619	Perfluorohexanoic acid (PFHxA)	6913	NELAP	FL	10/17/2023
EPA 533	1.0	10091619	Perfluorononanoic acid (PFNA)	6906	NELAP	FL	10/17/2023

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 007-001 expiration date 03/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Battelle Analytical Chemistry Services
141 Long Water Drive Suite 202
Norwell, MA 02061
(781) 681-5400

DEP Laboratory ID: 68-05687
EPA Lab Code: MA00056
TNI Code: TNI00280
PADWIS ID: 05687

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 533	1.0	10091619	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	FL	10/17/2023
EPA 533	1.0	10091619	Perfluorooctanoic acid (PFOA)	6912	NELAP	FL	10/17/2023
EPA 533	1.0	10091619	Perfluoropentane sulfonic acid (PFPeS)	6934	NELAP	FL	10/17/2023
EPA 533	1.0	10091619	Perfluoropentanoic acid (PFPeA)	6914	NELAP	FL	10/17/2023
EPA 533	1.0	10091619	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	FL	10/17/2023
EPA 537.1	1.0	10091642	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	FL	12/24/2019
EPA 537.1	1.0	10091642	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	FL	12/24/2019
EPA 537.1	1.0	10091642	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	FL	12/24/2019
EPA 537.1	1.0	10091642	Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	FL	12/24/2019
EPA 537.1	1.0	10091642	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	FL	10/23/2019
EPA 537.1	1.0	10091642	Perfluorodecanoic acid (PFDA)	6905	NELAP	FL	10/23/2019
EPA 537.1	1.0	10091642	Perfluorododecanoic acid (PFDoA)	6903	NELAP	FL	10/23/2019
EPA 537.1	1.0	10091642	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	FL	10/23/2019
EPA 537.1	1.0	10091642	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	FL	10/23/2019
EPA 537.1	1.0	10091642	Perfluorohexanoic acid (PFHxA)	6913	NELAP	FL	10/23/2019
EPA 537.1	1.0	10091642	Perfluorononanoic acid (PFNA)	6906	NELAP	FL	10/23/2019
EPA 537.1	1.0	10091642	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	FL	10/23/2019
EPA 537.1	1.0	10091642	Perfluorooctanoic acid (PFOA)	6912	NELAP	FL	10/23/2019
EPA 537.1	1.0	10091642	Perfluorotetradecanoic acid (PFTA)	6902	NELAP	FL	10/23/2019
EPA 537.1	1.0	10091642	Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	FL	10/23/2019

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DEP Laboratory ID: 68-05687
EPA Lab Code: MA00056
TNI Code: TNI00280
PADWIS ID: 05687

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 537.1	1.0	10091642	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	FL	10/23/2019
EPA 537.1	1.0	10091642	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	FL	10/23/2019
EPA 537.1	1.0	10091642	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	FL	10/23/2019

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1633 (draft)	3	10123441	Perfluorodecanesulfonic acid (PFDS)	6920	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluorododecanesulfonic acid (PFDoS)	6923	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluorononanesulfonic acid (PFNS)	6929	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluoropentanesulfonic acid (PFPeS)	6934	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	6948	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	6946	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	6947	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	2H,2H,3H,3H-Perfluorodecanoic acid (3-Perfluoroheptyl propanoic acid) (7:3 FTCA)	9340	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	9338	NELAP	PA	03/17/2023

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Battelle Analytical Chemistry Services
141 Long Water Drive Suite 202
Norwell, MA 02061
(781) 681-5400

DEP Laboratory ID: 68-05687
EPA Lab Code: MA00056
TNI Code: TNI00280
PADWIS ID: 05687

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1633 (draft)	3	10123441	4,4,5,5,6,6,6-Heptafluorohexanoic acid (3-Perfluoropropyl propanoic acid) (3:3 FTCA)	9353	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	N-Ethylperfluorooctanesulfonamide (EtFOSA)	9395	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	N-Methylperfluorooctanesulfonamide (MeFOSA)	9433	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	N-ethylperfluoro-1-octanesulfonamido ethanol (N-EtFOSE)	9431	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	N-methylperfluoro-1-octanesulfonamido ethanol (N-MeFOSE)	6949	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	6956	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	6957	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluoro-3-methoxypropanoic acid (PFMPA)	6965	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluoro-4-methoxybutanoic acid (PFMBA)	6966	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluorobutanoic acid (PFBA)	6915	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluoroheptanesulfonic acid (PFHpS)	9470	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	03/17/2023

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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DEP Laboratory ID: 68-05687
EPA Lab Code: MA00056
TNI Code: TNI00280
PADWIS ID: 05687

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1633 (draft)	3	10123441	Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluorononanoic acid (PFNA)	6906	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluorooctane sulfonamide (PFOSA)	6917	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluoropentanoic acid (PFPeA)	6914	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	03/17/2023
EPA 537.1 Isotope Dilution	1.0	10091620	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	04/08/2021

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Battelle Analytical Chemistry Services
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DEP Laboratory ID: 68-05687
EPA Lab Code: MA00056
TNI Code: TNI00280
PADWIS ID: 05687

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 537.1 Isotope Dilution	1.0	10091620	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	Perfluorononanoic acid (PFNA)	6906	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	04/08/2021
SOP (05687) 5-369	10		Ammonium 4,8-Dioxa-3H-Perfluorononanoate (ADONA)	6953	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		N-Methylperfluorooctanesulfonamidoethanol (MeFOSE)	9434	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorodecanesulfonic acid (PFDS)	6920	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorododecanesulfonic acid (PFDoS)	6923	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorononanesulfonic acid (PFNS)	6929	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorooctane sulfonate (PFOS)	6909	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	6948	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		1H, 1H, 2H, 2H-Perfluorododecane sulfonic acid (10:2-FTS)	9616	NELAP	PA	03/17/2023

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

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DEP Laboratory ID: 68-05687
EPA Lab Code: MA00056
TNI Code: TNI00280
PADWIS ID: 05687

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (05687) 5-369	10		1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	6946	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	6947	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		2-Amino-4,6-dinitrotoluene (2-Am-DNT)	9303	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		2H,2H,3H,3H-Perfluorodecanoic acid (3-Perfluoroheptyl propanoic acid) (7:3 FTCA)	9340	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	9338	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		4,4,5,5,6,6,6-Heptafluorohexanoic acid (3-Perfluoropropyl propanoic acid) (3:3 FTCA)	9353	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		N-Ethylperfluorooctanesulfonamide (EtFOSA)	9395	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		N-Methylperfluorooctanesulfonamide (MeFOSA)	9433	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		N-ethylperfluoro-1-octanesulfonamido ethanol (N-EtFOSE)	9431	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	6956	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	6957	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluoro-3-methoxypropanoic acid (PFMPA)	6965	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluoro-4-methoxybutanoic acid (PFMBA)	6966	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorobutanoic acid (PFBA)	6915	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	03/17/2023

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DEP Laboratory ID: 68-05687
EPA Lab Code: MA00056
TNI Code: TNI00280
PADWIS ID: 05687

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (05687) 5-369	10		Perfluoroheptanesulfonic acid (PFHpS)	9470	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorohexadecanoic acid (PFHxDA)	6901	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorononanoic acid (PFNA)	6906	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorooctane sulfonamide (PFOSA)	6917	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	03/17/2023

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1633 (draft)	3	10123441	Perfluorodecanesulfonic acid (PFDS)	6920	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluorododecanesulfonic acid (PFDoS)	6923	NELAP	PA	03/17/2023

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DEP Laboratory ID: 68-05687
EPA Lab Code: MA00056
TNI Code: TNI00280
PADWIS ID: 05687

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1633 (draft)	3	10123441	Perfluorononanesulfonic acid (PFNS)	6929	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluoropentanesulfonic acid (PFPeS)	6934	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	6948	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	6946	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	6947	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	2H,2H,3H,3H-Perfluorodecanoic acid (3-Perfluoroheptyl propanoic acid) (7:3 FTCA)	9340	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	9338	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	4,4,5,5,6,6,6-Heptafluorohexanoic acid (3-Perfluoropropyl propanoic acid) (3:3 FTCA)	9353	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	N-Ethylperfluorooctanesulfonamide (EtFOSA)	9395	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	N-Methylperfluorooctanesulfonamide (MeFOSA)	9433	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	N-ethylperfluoro-1-octanesulfonamido ethanol (N-EtFOSE)	9431	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	N-methylperfluoro-1-octanesulfonamido ethanol (N-MeFOSE)	6949	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	6956	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	6957	NELAP	PA	03/17/2023

Annmarie Beach

The Pennsylvania Department of Environmental Protection Laboratory Accreditation Program is a NELAP recognized Accreditation Body. Customers are urged to verify the laboratory's current accreditation standing.

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 007-001 expiration date 03/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Battelle Analytical Chemistry Services
141 Long Water Drive Suite 202
Norwell, MA 02061
(781) 681-5400

DEP Laboratory ID: 68-05687
EPA Lab Code: MA00056
TNI Code: TNI00280
PADWIS ID: 05687

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1633 (draft)	3	10123441	Perfluoro-3-methoxypropanoic acid (PFMPA)	6965	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluoro-4-methoxybutanoic acid (PFMBA)	6966	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluorobutanoic acid (PFBA)	6915	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluoroheptanesulfonic acid (PFHpS)	9470	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluorononanoic acid (PFNA)	6906	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluorooctane sulfonamide (PFOSA)	6917	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluoropentanoic acid (PFPeA)	6914	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	03/17/2023
EPA 1633 (draft)	3	10123441	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	03/17/2023

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 007-001 expiration date 03/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Battelle Analytical Chemistry Services
141 Long Water Drive Suite 202
Norwell, MA 02061
(781) 681-5400

DEP Laboratory ID: 68-05687
EPA Lab Code: MA00056
TNI Code: TNI00280
PADWIS ID: 05687

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (05687) 5-369	10		Ammonium 4,8-Dioxa-3H-Perfluorononanoate (ADONA)	6953	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		N-Methylperfluorooctanesulfonamidoethanol (MeFOSE)	9434	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorodecanesulfonic acid (PFDS)	6920	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorododecanesulfonic acid (PFDoS)	6923	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorononanesulfonic acid (PFNS)	6929	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorooctane sulfonate (PFOS)	6909	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	6948	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		1H, 1H, 2H, 2H-Perfluorododecane sulfonic acid (10:2-FTS)	9616	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	6946	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	6947	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		2-Amino-4,6-dinitrotoluene (2-Am-DNT)	9303	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		2H,2H,3H,3H-Perfluorodecanoic acid (3-Perfluoroheptyl propanoic acid) (7:3 FTCA)	9340	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	9338	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		4,4,5,5,6,6,6-Heptafluorohexanoic acid (3-Perfluoropropyl propanoic acid) (3:3 FTCA)	9353	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		N-Ethylperfluorooctanesulfonamide (EtFOSA)	9395	NELAP	PA	03/17/2023

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 007-001 expiration date 03/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Battelle Analytical Chemistry Services
141 Long Water Drive Suite 202
Norwell, MA 02061
(781) 681-5400

DEP Laboratory ID: 68-05687
EPA Lab Code: MA00056
TNI Code: TNI00280
PADWIS ID: 05687

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (05687) 5-369	10		N-Methylperfluorooctanesulfonamide (MeFOSA)	9433	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		N-ethylperfluoro-1-octanesulfonamido ethanol (N-EtFOSE)	9431	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	6956	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	6957	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluoro-3-methoxypropanoic acid (PFMPA)	6965	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluoro-4-methoxybutanoic acid (PFMBA)	6966	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorobutanoic acid (PFBA)	6915	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluoroheptanesulfonic acid (PFHpS)	9470	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorohexadecanoic acid (PFHxDA)	6901	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorononanoic acid (PFNA)	6906	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorooctane sulfonamide (PFOSA)	6917	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	03/17/2023

Annmarie Beach

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pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 007-001 expiration date 03/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Battelle Analytical Chemistry Services
141 Long Water Drive Suite 202
Norwell, MA 02061
(781) 681-5400

DEP Laboratory ID: 68-05687
EPA Lab Code: MA00056
TNI Code: TNI00280
PADWIS ID: 05687

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (05687) 5-369	10		n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	03/17/2023
SOP (05687) 5-370	13	60002655	Extraction of Poly-and Perfluoroalkyl Substances From Environmental Matrices		NELAP	PA	03/24/2022

Annmarie Beach

The Pennsylvania Department of Environmental Protection Laboratory Accreditation Program is a NELAP recognized Accreditation Body. Customers are urged to verify the laboratory's current accreditation standing.

PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc.
has assessed the Organization of:

Battelle
141 Longwater Drive, Suite 202, Norwell, MA 02061

(Hereinafter called the Organization) and hereby declares that Organization has met the requirements of ISO/IEC 17025:2017 General Requirements for the competence of Testing and Calibration Laboratories and the United States Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP) requirements identified within the DoD/DOE Quality Systems Manual (DoD/DOE QSM) Version 5.4 October 2021 and is accredited in accordance with the:

United States Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP)

This accreditation demonstrates the technical competence for the defined scope and the operation of a laboratory quality management system
(as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

Environmental Testing
(As detailed in the supplement)

Accreditation claims for such activities shall only be made from the addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation Body's duty to observe and comply with the said rules.

Initial Accreditation Date:	*Issue Date:*	*Expiration Date*
November 17, 2016	March 28, 2023	April 30, 2025

For PJLA

Tracy Szerszen
President

Accreditation No:	*Certificate No:*
91667	L23-262

Perry Johnson Laboratory Accreditation, Inc. (PJLA)
755 W. Big Beaver, Suite 1325
Troy, Michigan 48084

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: **www.pjlabs.com**

Certificate of Accreditation: Supplement

Battelle
141 Longwater Drive, Suite 202, Norwell, MA 02061
Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
Draft EPA Method 1633 by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)	10123429
Aqueous	
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	9490
1H, 1H, 2H, 2H-Perfluorodecanesulfonic Acid (8:2 Fluorotelomersulfonic Acid, 8:2FTS)	6948
1H, 1H, 2H, 2H-Perfluorohexanesulfonic Acid (4:2 Fluorotelomersulfonic Acid, 4:2FTS)	6946
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2 Fluorotelomersulfonic Acid, 6:2FTS)	6947
2H,2H,3H,3H-Perfluorodecanoic Acid (7:3 FTCA, 3-Perfluoroheptyl Propanoic Acid)	9340
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3 FTCA)	9338
4,4,5,5,6,6,6-Heptafluorohexanoi Acid (3:3 FTCA, 3-Perfluoropropyl Propanoic Acid)	9353
4,8-dioxa-3H-perfluorononanoic Acid (ADONA)	6951
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9-Cl-PF3ONS)	6952
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	9460
N-ethyl perfluorooctanesulfonamide (EtFOSA)	9395
N-ethyl perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	4847
N-ethyl perfluorooctanesulfonamidoethanol (EtFOSE)	9431
N-methyl perfluorooctanesulfonamide (MeFOSA)	9433
N-methyl perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	4846
N-methyl perfluorooctanesulfonamidoethanol (MeFOSE)	6949
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	6956
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	6957
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	6965
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	6966
Perfluorobutanesulfonic Acid (PFBS)	6918
Perfluorobutanoic Acid (PFBA)	6915
Perfluorodecanesulfonic Acid (PFDS)	6920
Perfluorodecanoic Acid (PFDA)	6905
Perfluorododecanesulfonic Acid (PFDoS)	6923
Perfluorododecanoic Acid (PFDoA)	6903
Perfluoroheptanesulfonic Acid (PFHpS)	9470
Perfluoroheptanoic Acid (PFHpA)	6908
Perfluorohexanesulfonic Acid (PFHxS)	6927
Perfluorohexanoic Acid (PFHxA)	6913
Perfluorononanesulfonic Acid (PFNS)	6929
Perfluorononanoic Acid (PFNA)	6906
Perfluorooctanesulfonamide (PFOSA)	6917
Perfluorooctanesulfonic Acid (PFOS)	6931
Perfluorooctanoic Acid (PFOA)	6912
Perfluoropentanesulfonic Acid (PFPeS)	6934

Certificate of Accreditation: Supplement

Battelle
141 Longwater Drive, Suite 202, Norwell, MA 02061
Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
Draft EPA Method 1633 by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)	10123429
Aqueous	
Perfluoropentanoic Acid (PFPeA)	6914
Perfluorotetradecanoic Acid (PFTeDA)	6902
Perfluorotridecanoic Acid (PFTrDA)	9563
Perfluoroundecanoic Acid (PFUnA)	6904
Solid	
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	9490
1H, 1H, 2H, 2H-Perfluorodecanesulfonic Acid (8:2 Fluorotelomersulfonic Acid, 8:2FTS)	6948
1H, 1H, 2H, 2H-Perfluorohexanesulfonic Acid (4:2 Fluorotelomersulfonic Acid, 4:2FTS)	6946
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2 Fluorotelomersulfonic Acid, 6:2FTS)	6947
2H,2H,3H,3H-Perfluorodecanoic Acid (7:3 FTCA, 3-Perfluoroheptyl Propanoic Acid)	9340
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3 FTCA)	9338
4,4,5,5,6,6,6-Heptafluorohexanoi Acid (3:3 FTCA, 3-Perfluoropropyl Propanoic Acid)	9353
4,8-dioxa-3H-perfluorononanoic Acid (ADONA)	6951
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9-Cl-PF3ONS)	6952
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	9460
N-ethyl perfluorooctanesulfonamide (EtFOSA)	9395
N-ethyl perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	4847
N-ethyl perfluorooctanesulfonamidoethanol (EtFOSE)	9431
N-methyl perfluorooctanesulfonamide (MeFOSA)	9433
N-methyl perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	4846
N-methyl perfluorooctanesulfonamidoethanol (MeFOSE)	6949
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	6956
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	6957
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	6965
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	6966
Perfluorobutanesulfonic Acid (PFBS)	6918
Perfluorobutanoic Acid (PFBA)	6915
Perfluorodecanesulfonic Acid (PFDS)	6920
Perfluorodecanoic Acid (PFDA)	6905
Perfluorododecanesulfonic Acid (PFDoS)	6923
Perfluorododecanoic Acid (PFDoA)	6903
Perfluoroheptanesulfonic Acid (PFHpS)	9470
Perfluoroheptanoic Acid (PFHpA)	6908
Perfluorohexanesulfonic Acid (PFHxS)	6927
Perfluorohexanoic Acid (PFHxA)	6913
Perfluorononanesulfonic Acid (PFNS)	6929

Certificate of Accreditation: Supplement

Battelle
141 Longwater Drive, Suite 202, Norwell, MA 02061
Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
Draft EPA Method 1633 by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)	10123429
Solid	
Perfluorononanoic Acid (PFNA)	6906
Perfluorooctanesulfonamide (PFOSA)	6917
Perfluorooctanesulfonic Acid (PFOS)	6931
Perfluorooctanoic Acid (PFOA)	6912
Perfluoropentanesulfonic Acid (PFPeS)	6934
Perfluoropentanoic Acid (PFPeA)	6914
Perfluorotetradecanoic Acid (PFTeDA)	6902
Perfluorotridecanoic Acid (PFTrDA)	9563
Perfluoroundecanoic Acid (PFUnA)	6904
Tissue	
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	9490
1H, 1H, 2H, 2H-Perfluorodecanesulfonic Acid (8:2 Fluorotelomersulfonic Acid, 8:2FTS)	6948
1H, 1H, 2H, 2H-Perfluorohexanesulfonic Acid (4:2 Fluorotelomersulfonic Acid, 4:2FTS)	6946
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2 Fluorotelomersulfonic Acid, 6:2FTS)	6947
2H,2H,3H,3H-Perfluorodecanoic Acid (7:3 FTCA, 3-Perfluoroheptyl Propanoic Acid)	9340
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3 FTCA)	9338
4,4,5,5,6,6,6-Heptafluorohexanoi Acid (3:3 FTCA, 3-Perfluoropropyl Propanoic Acid)	9353
4,8-dioxa-3H-perfluorononanoic Acid (ADONA)	6951
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9-Cl-PF3ONS)	6952
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	9460
N-ethyl perfluorooctanesulfonamide (EtFOSA)	9395
N-ethyl perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	4847
N-ethyl perfluorooctanesulfonamidoethanol (EtFOSE)	9431
N-methyl perfluorooctanesulfonamide (MeFOSA)	9433
N-methyl perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	4846
N-methyl perfluorooctanesulfonamidoethanol (MeFOSE)	6949
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	6956
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	6957
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	6965
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	6966
Perfluorobutanesulfonic Acid (PFBS)	6918
Perfluorobutanoic Acid (PFBA)	6915
Perfluorodecanesulfonic Acid (PFDS)	6920
Perfluorodecanoic Acid (PFDA)	6905
Perfluorododecanesulfonic Acid (PFDoS)	6923
Perfluorododecanoic Acid (PFDoA)	6903

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Battelle
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Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
Draft EPA Method 1633 by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)	10123429
Tissue	
Perfluoroheptanesulfonic Acid (PFHpS)	9470
Perfluoroheptanoic Acid (PFHpA)	6908
Perfluorohexanesulfonic Acid (PFHxS)	6927
Perfluorohexanoic Acid (PFHxA)	6913
Perfluorononanesulfonic Acid (PFNS)	6929
Perfluorononanoic Acid (PFNA)	6906
Perfluorooctanesulfonamide (PFOSA)	6917
Perfluorooctanesulfonic Acid (PFOS)	6931
Perfluorooctanoic Acid (PFOA)	6912
Perfluoropentanesulfonic Acid (PFPeS)	6934
Perfluoropentanoic Acid (PFPeA)	6914
Perfluorotetradecanoic Acid (PFTeDA)	6902
Perfluorotridecanoic Acid (PFTrDA)	9563
Perfluoroundecanoic Acid (PFUnA)	6904
EPA 533 by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)	10091619
Drinking Water	
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	9490
1H, 1H, 2H, 2H-Perfluorodecane Sulfonic Acid (8:2 FTS)	6948
1H, 1H, 2H, 2H-Perfluorohexane Sulfonic Acid (4:2 FTS)	6946
1H, 1H, 2H, 2H-Perfluorooctane Sulfonic Acid (6:2 FTS)	6947
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9-Cl-PF3ONS)	6952
Ammonium 4,8-Dioxa-3H-Perfluorononanoate (ADONA)	6953
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA) – GenX	9460
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	6956
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	6957
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	6965
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	6966
Perfluorobutanesulfonic Acid (PFBS)	6918
Perfluorobutanoic Acid (PFBA)	6915
Perfluorodecanoic Acid (PFDA)	6905
Perfluorododecanoic Acid (PFDoA)	6903
Perfluoroheptanesulfonic Acid (PFHpS)	9470
Perfluoroheptanoic Acid (PFHpA)	6908
Perfluorohexanesulfonic Acid (PFHxS)	6927
Perfluorohexanoic Acid (PFHxA)	6913
Perfluorononanoic Acid (PFNA)	6906

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Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
EPA 533 by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)	10091619
Drinking Water	
Perfluorooctanesulfonic Acid (PFOS)	6931
Perfluorooctanoic Acid (PFOA)	6912
Perfluoropentanesulfonic Acid (PFPeS)	6934
Perfluoropentanoic Acid (PFPeA)	6914
Perfluoroundecanoic Acid (PFUnA)	6904
EPA 537.1.1 by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)	10091642
Drinking Water	
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	9490
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9-Cl-PF3ONS)	6952
Ammonium 4,8-Dioxa-3H-Perfluorononanoate (ADONA)	6953
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA) – GenX	9460
N-Ethylperfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	4846
N-Methylperfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	4847
Perfluorobutanesulfonic Acid (PFBS)	6918
Perfluorodecanoic Acid (PFDA)	6905
Perfluorododecanoic Acid (PFDoA)	6903
Perfluoroheptanoic Acid (PFHpA)	6908
Perfluorohexanesulfonic Acid (PFHxS)	6927
Perfluorohexanoic Acid (PFHxA)	6913
Perfluorononanoic Acid (PFNA)	6906
Perfluorooctanesulfonic Acid (PFOS)	6931
Perfluorooctanoic Acid (PFOA)	6912
Perfluorotetradecanoic Acid (PFTeDA)	6902
Perfluorotridecanoic Acid (PFTrDA)	9563
Perfluoroundecanoic Acid (PFUnA)	6904
EPA 8081 MOD (Battelle SOP 5-128) by Gas Chromatography Electron Capture Detector (GC/ECD)	10178402
Aqueous	
2,4'-DDD	8580
2,4'-DDE	8585
2,4'-DDT	8590
4,4'-DDD	7355
4,4'-DDE	7360
4,4'-DDT	7365
Aldrin	7025
alpha-BHC (a-BHC, alpha-Hexachlorocyclohexane)	7110
alpha-Chlordane (cis-Chlordane)	7240

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	Code
Organic	
EPA 8081 MOD (Battelle SOP 5-128) by Gas Chromatography Electron Capture Detector (GC/ECD)	10178402
Aqueous	
beta-BHC (b-BHC, beta-Hexachlorocyclohexane)	7115
Chlorpyrifos (Dursban)	7300
cis-Nonachlor	7925
delta-BHC (d-BHC)	7105
Dieldrin	7470
Endosulfan I	7510
Endosulfan II	7515
Endosulfan Sulfate	7520
Endrin	7540
Endrin Aldehyde	7530
Endrin Ketone	7535
gamma-BHC (γ-BHC, Lindane)	7120
gamma-Chlordane	7245
Heptachlor	7685
Heptachlor Epoxide	7690
Hexachlorobenzene	6275
Methoxychlor	7810
Mirex	7870
Oxychlordane	3890
PCB-101 (2,2',4,5,5'-Pentachlorobiphenyl)	8980
PCB-105 (2,3,3',4,4'-Pentachlorobiphenyl)	8985
PCB-110 (2,3,3',4',6-Pentachlorobiphenyl)	8990
PCB-118 (2,3',4,4',5-Pentachlorobiphenyl)	8995
PCB-126 (3,3',4,4',5-Pentachlorobiphenyl)	9015
PCB-128 (2,2',3,3',4,4'-Hexachlorobiphenyl)	9020
PCB-129 (2,2',3,3',4,5-Hexachlorobiphenyl)	9118
PCB-138 (2,2',3,4,4',5'-Hexachlorobiphenyl)	9025
PCB-153 (2,2',4,4',5,5'-Hexachlorobiphenyl)	9040
PCB-169 (3,3',4,4',5,5'-Hexachlorobiphenyl)	9060
PCB-170 (2,2',3,3',4,4',5-Heptachlorobiphenyl)	9065
PCB-18 (2,2',5-Trichlorobiphenyl)	8930
PCB-180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl)	9134
PCB-183 (2,2',3,4,4',5',6-Heptachlorobiphenyl)	9075
PCB-184 (2,2',3,4,4',6,6'-Heptachlorobiphenyl)	9139
PCB-187 (2,2',3,4',5,5',6-Heptachlorobiphenyl)	9080
PCB-195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl)	9103

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	Code
Organic	
EPA 8081 MOD (Battelle SOP 5-128) by Gas Chromatography Electron Capture Detector (GC/ECD)	10178402
Aqueous	
PCB-206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)	9095
PCB-209 (2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl)	9105
PCB-28 (2,4,4'-Trichlorobiphenyl)	9252
PCB-44 (2,2',3,5'-Tetrachlorobiphenyl)	8945
PCB-49 (2,2',4,5'-Tetrachlorobiphenyl)	8950
PCB-52 (2,2',5,5'-Tetrachlorobiphenyl)	8955
PCB-66 (2,3',4,4'-Tetrachlorobiphenyl)	8960
PCB-77 (3,3',4,4'-Tetrachlorobiphenyl)	8965
PCB-8 (2,4'-Dichlorobiphenyl)	9256
PCB-87 (2,2',3,4,5'-Pentachlorobiphenyl)	8975
trans-Nonachlor	7910
Solid	
2,4'-DDD	8580
2,4'-DDE	8585
2,4'-DDT	8590
4,4'-DDD	7355
4,4'-DDE	7360
4,4'-DDT	7365
Aldrin	7025
alpha-BHC (a-BHC, alpha-Hexachlorocyclohexane)	7110
alpha-Chlordane (cis-Chlordane)	7240
beta-BHC (b-BHC, beta-Hexachlorocyclohexane)	7115
Chlorpyrifos (Dursban)	7300
cis-Nonachlor	7925
delta-BHC (d-BHC)	7105
Dieldrin	7470
Endosulfan I	7510
Endosulfan II	7515
Endosulfan Sulfate	7520
Endrin	7540
Endrin Aldehyde	7530
Endrin Ketone	7535
gamma-BHC (γ-BHC, Lindane)	7120
gamma-Chlordane	7245
Heptachlor	7685
Heptachlor Epoxide	7690

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	Code
Organic	
EPA 8081 MOD (Battelle SOP 5-128) by Gas Chromatography Electron Capture Detector (GC/ECD)	10178402
Solid	
Hexachlorobenzene	6275
Methoxychlor	7810
Mirex	7870
Oxychlordane	3890
PCB-101 (2,2',4,5,5'-Pentachlorobiphenyl)	8980
PCB-105 (2,3,3',4,4'-Pentachlorobiphenyl)	8985
PCB-110 (2,3,3',4',6-Pentachlorobiphenyl)	8990
PCB-118 (2,3',4,4',5-Pentachlorobiphenyl)	8995
PCB-126 (3,3',4,4',5-Pentachlorobiphenyl)	9015
PCB-128 (2,2',3,3',4,4'-Hexachlorobiphenyl)	9020
PCB-129 (2,2',3,3',4,5-Hexachlorobiphenyl)	9118
PCB-138 (2,2',3,4,4',5'-Hexachlorobiphenyl)	9025
PCB-153 (2,2',4,4',5,5'-Hexachlorobiphenyl)	9040
PCB-169 (3,3',4,4',5,5'-Hexachlorobiphenyl)	9060
PCB-170 (2,2',3,3',4,4',5-Heptachlorobiphenyl)	9065
PCB-18 (2,2',5-Trichlorobiphenyl)	8930
PCB-180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl)	9134
PCB-183 (2,2',3,4,4',5',6-Heptachlorobiphenyl)	9075
PCB-184 (2,2',3,4,4',6,6'-Heptachlorobiphenyl)	9139
PCB-187 (2,2',3,4',5,5',6-Heptachlorobiphenyl)	9080
PCB-195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl)	9103
PCB-206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)	9095
PCB-209 (2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl)	9105
PCB-28 (2,4,4'-Trichlorobiphenyl)	9252
PCB-44 (2,2',3,5'-Tetrachlorobiphenyl)	8945
PCB-49 (2,2',4,5'-Tetrachlorobiphenyl)	8950
PCB-52 (2,2',5,5'-Tetrachlorobiphenyl)	8955
PCB-66 (2,3',4,4'-Tetrachlorobiphenyl)	8960
PCB-77 (3,3',4,4'-Tetrachlorobiphenyl)	8965
PCB-8 (2,4'-Dichlorobiphenyl)	9256
PCB-87 (2,2',3,4,5'-Pentachlorobiphenyl)	8975
trans-Nonachlor	7910
Tissue	
2,4'-DDD	8580
2,4'-DDE	8585
2,4'-DDT	8590

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Battelle
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Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
EPA 8081 MOD (Battelle SOP 5-128) by Gas Chromatography Electron Capture Detector (GC/ECD)	10178402
Tissue	
4,4'-DDD	7355
4,4'-DDE	7360
4,4'-DDT	7365
Aldrin	7025
alpha-BHC (a-BHC, alpha-Hexachlorocyclohexane)	7110
alpha-Chlordane (cis-Chlordane)	7240
beta-BHC (b-BHC, beta-Hexachlorocyclohexane)	7115
Chlorpyrifos (Dursban)	7300
cis-Nonachlor	7925
delta-BHC (d-BHC)	7105
Dieldrin	7470
Endosulfan I	7510
Endosulfan II	7515
Endosulfan Sulfate	7520
Endrin	7540
Endrin Aldehyde	7530
Endrin Ketone	7535
gamma-BHC (γ-BHC, Lindane)	7120
gamma-Chlordane	7245
Heptachlor	7685
Heptachlor Epoxide	7690
Hexachlorobenzene	6275
Methoxychlor	7810
Mirex	7870
Oxychlordane	3890
PCB-101 (2,2',4,5,5'-Pentachlorobiphenyl)	8980
PCB-105 (2,3,3',4,4'-Pentachlorobiphenyl)	8985
PCB-110 (2,3,3',4',6-Pentachlorobiphenyl)	8990
PCB-118 (2,3',4,4',5-Pentachlorobiphenyl)	8995
PCB-126 (3,3',4,4',5-Pentachlorobiphenyl)	9015
PCB-128 (2,2',3,3',4,4'-Hexachlorobiphenyl)	9020
PCB-129 (2,2',3,3',4,5-Hexachlorobiphenyl)	9118
PCB-138 (2,2',3,4,4',5'-Hexachlorobiphenyl)	9025
PCB-153 (2,2',4,4',5,5'-Hexachlorobiphenyl)	9040
PCB-169 (3,3',4,4',5,5'-Hexachlorobiphenyl)	9060
PCB-170 (2,2',3,3',4,4',5-Heptachlorobiphenyl)	9065

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	Code
Organic	
EPA 8081 MOD (Battelle SOP 5-128) by Gas Chromatography Electron Capture Detector (GC/ECD)	10178402
Tissue	
PCB-18 (2,2',5-Trichlorobiphenyl)	8930
PCB-180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl)	9134
PCB-183 (2,2',3,4,4',5',6-Heptachlorobiphenyl)	9075
PCB-184 (2,2',3,4,4',6,6'-Heptachlorobiphenyl)	9139
PCB-187 (2,2',3,4',5,5',6-Heptachlorobiphenyl)	9080
PCB-195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl)	9103
PCB-206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)	9095
PCB-209 (2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl)	9105
PCB-28 (2,4,4'-Trichlorobiphenyl)	9252
PCB-44 (2,2',3,5'-Tetrachlorobiphenyl)	8945
PCB-49 (2,2',4,5'-Tetrachlorobiphenyl)	8950
PCB-52 (2,2',5,5'-Tetrachlorobiphenyl)	8955
PCB-66 (2,3',4,4'-Tetrachlorobiphenyl)	8960
PCB-77 (3,3',4,4'-Tetrachlorobiphenyl)	8965
PCB-8 (2,4'-Dichlorobiphenyl)	9256
PCB-87 (2,2',3,4,5'-Pentachlorobiphenyl)	8975
trans-Nonachlor	7910
EPA 8270E MOD (Battelle SOP 5-157) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Aqueous	
1,4-Dichlorobenzene	4620
1-Methylnaphthalene	6380
1-Methylphenanthrene	9501
2,3,5-Trimethylnaphthalene	6852
2,6-Dimethylnaphthalene	6188
2-Chloronaphthalene	5795
2-Methylnaphthalene	6385
2-Methylphenanthrene	4953
3,6-Dimethylphenanthrene	5957
Acenaphthene	5500
Acenaphthylene	5505
Anthracene	5555
Benzo(a)Anthracene	5575
Benzo(a)Pyrene	5580
Benzo(b)Fluoranthene	5585
Benzo(b)Thiophene	NC
Benzo(e)Pyrene	5605

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	Code
Organic	
EPA 8270E MOD (Battelle SOP 5-157) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Aqueous	
Benzo(g,h,i)Perylene	5590
Benzo(k)Fluoranthene	5600
Chrysene	5855
cis-Decalin	4621
Dibenz(a,h)Anthracene	5895
Dibenzofuran	5905
Dibenzothiophene	5910
Fluoranthene	6265
Fluorene	6270
Indeno(1,2,3,cd)Pyrene	6315
Naphthalene	5005
Perylene	6608
Phenanthrene	6615
Pyrene	6665
trans-Decalin	9587
Solid	
1,4-Dichlorobenzene	4620
1-Methylnaphthalene	6380
1-Methylphenanthrene	9501
2,3,5-Trimethylnaphthalene	6852
2,6-Dimethylnaphthalene	6188
2-Chloronaphthalene	5795
2-Methylnaphthalene	6385
2-Methylphenanthrene	4953
3,6-Dimethylphenanthrene	5957
Acenaphthene	5500
Acenaphthylene	5505
Anthracene	5555
Benzo(a)Anthracene	5575
Benzo(a)Pyrene	5580
Benzo(b)Fluoranthene	5585
Benzo(b)Thiophene	NC
Benzo(e)Pyrene	5605
Benzo(g,h,i)Perylene	5590
Benzo(k)Fluoranthene	5600
Chrysene	5855

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	Code
Organic	
EPA 8270E MOD (Battelle SOP 5-157) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Solid	
cis-Decalin	4621
Dibenz(a,h)Anthracene	5895
Dibenzofuran	5905
Dibenzothiophene	5910
Fluoranthene	6265
Fluorene	6270
Indeno(1,2,3,cd)Pyrene	6315
Naphthalene	5005
Perylene	6608
Phenanthrene	6615
Pyrene	6665
trans-Decalin	9587
Tissue	
1,4-Dichlorobenzene	4620
1-Methylnaphthalene	6380
1-Methylphenanthrene	9501
2,3,5-Trimethylnaphthalene	6852
2,6-Dimethylnaphthalene	6188
2-Chloronaphthalene	5795
2-Methylnaphthalene	6385
2-Methylphenanthrene	4953
3,6-Dimethylphenanthrene	5957
Acenaphthene	5500
Acenaphthylene	5505
Anthracene	5555
Benzo(a)Anthracene	5575
Benzo(a)Pyrene	5580
Benzo(b)Fluoranthene	5585
Benzo(b)Thiophene	NC
Benzo(e)Pyrene	5605
Benzo(g,h,i)Perylene	5590
Benzo(k)Fluoranthene	5600
Chrysene	5855
cis-Decalin	4621
Dibenz(a,h)Anthracene	5895
Dibenzofuran	5905

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Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
EPA 8270E MOD (Battelle SOP 5-157) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Tissue	
Dibenzothiophene	5910
Fluoranthene	6265
Fluorene	6270
Indeno(1,2,3,cd)Pyrene	6315
Naphthalene	5005
Perylene	6608
Phenanthrene	6615
Pyrene	6665
trans-Decalin	9587
EPA 8270E MOD (Battelle SOP 5-315) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Aqueous	
2,4'-DDD	8580
2,4'-DDE	8585
2,4'-DDT	8590
4,4'-DDD	7355
4,4'-DDE	7360
4,4'-DDT	7365
Biphenyl	5640
PCB-1 (2-Chlorobiphenyl, 2-Monochlorobiphenyl)	8915
PCB-100 (2,2',4,4',6-Pentachlorobiphenyl)	9177
PCB-101 (2,2',4,5,5'-Pentachlorobiphenyl)	8980
PCB-104 (2,2',4,6,6'-Pentachlorobiphenyl)	9182
PCB-105 (2,3,3',4,4'-Pentachlorobiphenyl)	8985
PCB-11 (3,3'-Dichlorobiphenyl)	8925
PCB-110 (2,3,3',4',6-Pentachlorobiphenyl)	8990
PCB-114 (2,3,4,4',5-Pentachlorobiphenyl)	9005
PCB-115 (2,3,4,4',6-Pentachlorobiphenyl)	9219
PCB-118 (2,3',4,4',5-Pentachlorobiphenyl)	8995
PCB-12 (3,4-Dichlorobiphenyl)	9270
PCB-123 (2,3',4,4',5'-Pentachlorobiphenyl)	9000
PCB-124 (2,3',4',5,5'-Pentachlorobiphenyl)	9222
PCB-125 (2,3',4',5',6-Pentachlorobiphenyl)	9224
PCB-126 (3,3',4,4',5-Pentachlorobiphenyl)	9015
PCB-127 (3,3',4,5,5'-Pentachlorobiphenyl)	9260
PCB-128 (2,2',3,3',4,4'-Hexachlorobiphenyl)	9020
PCB-13 (3,4'-Dichlorobiphenyl)	9269

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Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
EPA 8270E MOD (Battelle SOP 5-315) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Aqueous	
PCB-130 (2,2',3,3',4,5'-Hexachlorobiphenyl)	9117
PCB-131 (2,2',3,3',4,6-Hexachlorobiphenyl)	9121
PCB-134 (2,2',3,3',5,6-Hexachlorobiphenyl)	9128
PCB-135 (2,2',3,3',5,6'-Hexachlorobiphenyl)	9127
PCB-136 (2,2',3,3',6,6'-Hexachlorobiphenyl)	9130
PCB-137 (2,2',3,4,4',5-Hexachlorobiphenyl)	9138
PCB-138 (2,2',3,4,4',5'-Hexachlorobiphenyl)	9025
PCB-139 (2,2',3,4,4',6-Hexachlorobiphenyl)	9141
PCB-140 (2,2',3,4,4',6'-Hexachlorobiphenyl)	9140
PCB-141 (2,2',3,4,5,5'-Hexachlorobiphenyl)	9030
PCB-144 (2,2',3,4,5',6-Hexachlorobiphenyl)	9150
PCB-146 (2,2',3,4',5,5'-Hexachlorobiphenyl)	9144
PCB-149 (2,2',3,4',5',6-Hexachlorobiphenyl)	9151
PCB-15 (4,4'-Dichlorobiphenyl)	9273
PCB-151 (2,2',3,5,5',6-Hexachlorobiphenyl)	9035
PCB-153 (2,2’,4,4’,5,5’-Hexachlorobiphenyl)	9040
PCB-154 (2,2',4,4',5,6'-Hexachlorobiphenyl)	9174
PCB-155 (2,2',4,4',6,6'-Hexachlorobiphenyl)	9176
PCB-156 (2,3,3',4,4',5-Hexachlorobiphenyl)	9050
PCB-157 (2,3,3’,4,4’,5’-Hexachlorobiphenyl)	9045
PCB-158 (2,3,3',4,4',6-Hexachlorobiphenyl)	9193
PCB-16 (2,2',3-Trichlorobiphenyl)	9173
PCB-163 (2,3,3',4',5,6-Hexachlorobiphenyl)	9199
PCB-164 (2,3,3',4',5',6-Hexachlorobiphenyl)	9201
PCB-166 (2,3,4,4',5,6-Hexachlorobiphenyl)	9217
PCB-167 (2,3',4,4',5,5'-Hexachlorobiphenyl)	9055
PCB-169 (3,3',4,4',5,5'-Hexachlorobiphenyl)	9060
PCB-17 (2,2',4-Trichlorobiphenyl)	9185
PCB-170 (2,2',3,3',4,4',5-Heptachlorobiphenyl)	9065
PCB-171 (2,2',3,3',4,4',6-Heptachlorobiphenyl)	9106
PCB-172 (2,2',3,3',4,5,5'-Heptachlorobiphenyl)	9110
PCB-173 (2,2',3,3',4,5,6-Heptachlorobiphenyl)	9113
PCB-174 (2,2',3,3',4,5,6'-Heptachlorobiphenyl)	9116
PCB-175 (2,2',3,3',4,5',6-Heptachlorobiphenyl)	9115
PCB-176 (2,2',3,3',4,6,6'-Heptachlorobiphenyl)	9119
PCB-177 (2,2',3,3',4,5',6'-Heptachlorobiphenyl)	9114

Certificate of Accreditation: Supplement

Battelle
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Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
EPA 8270E MOD (Battelle SOP 5-315) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Aqueous	
PCB-178 (2,2',3,3',5,5',6-Heptachlorobiphenyl)	9124
PCB-179 (2,2',3,3',5,6,6'-Heptachlorobiphenyl)	9126
PCB-18 (2,2',5-Trichlorobiphenyl)	8930
PCB-180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl)	9134
PCB-183 (2,2',3,4,4',5',6-Heptachlorobiphenyl)	9075
PCB-184 (2,2',3,4,4',6,6'-Heptachlorobiphenyl)	9139
PCB-185 (2,2',3,4,5,5',6-Heptachlorobiphenyl)	9143
PCB-187 (2,2',3,4',5,5',6-Heptachlorobiphenyl)	9080
PCB-188 (2,2',3,4',5,6,6'-Heptachlorobiphenyl)	9146
PCB-189 (2,3,3',4,4',5,5'-Heptachlorobiphenyl)	9085
PCB-19 (2,2',6-Trichlorobiphenyl)	9188
PCB-190 (2,3,3',4,4',5,6-Heptachlorobiphenyl)	9191
PCB-191 (2,3,3',4,4',5',6-Heptachlorobiphenyl)	9192
PCB-193 (2,3,3',4',5,5',6-Heptachlorobiphenyl)	9195
PCB-194 (2,2',3,3',4,4',5,5'-Octachlorobiphenyl)	9090
PCB-195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl)	9103
PCB-197 (2,2',3,3',4,4',6,6'-Octachlorobiphenyl)	9104
PCB-198 (2,2',3,3',4,5,5',6-Octachlorobiphenyl)	9109
PCB-199 (2,2',3,3',4,5,5',6'-Octachlorobiphenyl)	9108
PCB-200 (2,2',3,3',4,5,6,6'-Octachlorobiphenyl)	9111
PCB-201 (2,2',3,3',4,5',6,6'-Octachlorobiphenyl)	9112
PCB-202 (2,2',3,3',5,5',6,6'-Octachlorobiphenyl)	9123
PCB-203 (2,2',3,4,4',5,5',6-Octachlorobiphenyl)	9133
PCB-205 (2,3,3',4,4',5,5',6-Octachlorobiphenyl)	9190
PCB-206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)	9095
PCB-207 (2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl)	9101
PCB-208 (2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl)	9107
PCB-209 (2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl)	9105
PCB-22 (2,3,4'-Trichlorobiphenyl)	9241
PCB-24 (2,3,6-Trichlorobiphenyl)	9247
PCB-25 (2,3',4-Trichlorobiphenyl)	9240
PCB-26 (2,3',5-Trichlorobiphenyl)	8935
PCB-27 (2,3',6-Trichlorobiphenyl)	9248
PCB-28 (2,4,4'-Trichlorobiphenyl)	9252
PCB-29 (2,4,5-Trichlorobiphenyl)	9253
PCB-3 (4-Chlorobiphenyl, 4-Monochlorobiphenyl)	9274

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Organic	
EPA 8270E MOD (Battelle SOP 5-315) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Aqueous	
PCB-30 (2,4,6-Trichlorobiphenyl)	9254
PCB-31 (2,4',5-Trichlorobiphenyl)	8940
PCB-32 (2,4',6-Trichlorobiphenyl)	9255
PCB-33 (2,3',4'-Trichlorobiphenyl)	9239
PCB-37 (3,4,4'-Trichlorobiphenyl)	9266
PCB-4 (2,2'-Dichlorobiphenyl)	9189
PCB-40 (2,2',3,3'-Tetrachlorobiphenyl)	9132
PCB-41 (2,2',3,4-Tetrachlorobiphenyl)	9163
PCB-42 (2,2',3,4'-Tetrachlorobiphenyl)	9162
PCB-43 (2,2',3,5-Tetrachlorobiphenyl)	9169
PCB-44 (2,2',3,5'-Tetrachlorobiphenyl)	8945
PCB-45 (2,2',3,6-Tetrachlorobiphenyl)	9172
PCB-46 (2,2',3,6'-Tetrachlorobiphenyl)	9171
PCB-47 (2,2',4,4'-Tetrachlorobiphenyl)	9178
PCB-48 (2,2',4,5-Tetrachlorobiphenyl)	9181
PCB-49 (2,2',4,5'-Tetrachlorobiphenyl)	8950
PCB-5 (2,3-Dichlorobiphenyl)	8920
PCB-50 (2,2',4,6-Tetrachlorobiphenyl)	9184
PCB-51 (2,2',4,6'-Tetrachlorobiphenyl)	9183
PCB-52 (2,2',5,5'-Tetrachlorobiphenyl)	8955
PCB-53 (2,2',5,6'-Tetrachlorobiphenyl)	9186
PCB-54 (2,2',6,6'-Tetrachlorobiphenyl)	9187
PCB-56 (2,3,3',4'-Tetrachlorobiphenyl)	9207
PCB-6 (2,3'-Dichlorobiphenyl)	9249
PCB-60 (2,3,4,4'-Tetrachlorobiphenyl)	9221
PCB-63 (2,3,4',5-Tetrachlorobiphenyl)	9233
PCB-64 (2,3,4',6-Tetrachlorobiphenyl)	9236
PCB-66 (2,3',4,4'-Tetrachlorobiphenyl)	8960
PCB-67 (2,3',4,5-Tetrachlorobiphenyl)	9232
PCB-7 (2,4-Dichlorobiphenyl)	9257
PCB-70 (2,3',4',5-Tetrachlorobiphenyl)	9230
PCB-71 (2,3',4',6-Tetrachlorobiphenyl)	9237
PCB-74 (2,4,4',5-Tetrachlorobiphenyl)	9250
PCB-75 (2,4,4',6-Tetrachlorobiphenyl)	9251
PCB-77 (3,3',4,4'-Tetrachlorobiphenyl)	8965
PCB-8 (2,4'-Dichlorobiphenyl)	9256

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Battelle
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Organic	
EPA 8270E MOD (Battelle SOP 5-315) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Aqueous	
PCB-80 (3,3',5,5'-Tetrachlorobiphenyl)	9264
PCB-81 (3,4,4',5-Tetrachlorobiphenyl)	8970
PCB-82 (2,2',3,3',4-Pentachlorobiphenyl)	9122
PCB-83 (2,2',3,3',5-Pentachlorobiphenyl)	9129
PCB-84 (2,2',3,3',6-Pentachlorobiphenyl)	9131
PCB-85 (2,2',3,4,4'-Pentachlorobiphenyl)	9142
PCB-87 (2,2',3,4,5'-Pentachlorobiphenyl)	8975
PCB-9 (2,5-Dichlorobiphenyl)	9258
PCB-91 (2,2',3,4',6-Pentachlorobiphenyl)	9160
PCB-92 (2,2',3,5,5'-Pentachlorobiphenyl)	9164
PCB-95 (2,2',3,5',6-Pentachlorobiphenyl)	9166
PCB-97 (2,2',3,4',5'-Pentachlorobiphenyl)	9154
PCB-99 (2,2',4,4',5-Pentachlorobiphenyl)	9175
Solid	
2,4'-DDD	8580
2,4'-DDE	8585
2,4'-DDT	8590
4,4'-DDD	7355
4,4'-DDE	7360
4,4'-DDT	7365
Biphenyl	5640
PCB-1 (2-Chlorobiphenyl, 2-Monochlorobiphenyl)	8915
PCB-100 (2,2',4,4',6-Pentachlorobiphenyl)	9177
PCB-101 (2,2',4,5,5'-Pentachlorobiphenyl)	8980
PCB-104 (2,2',4,6,6'-Pentachlorobiphenyl)	9182
PCB-105 (2,3,3',4,4'-Pentachlorobiphenyl)	8985
PCB-11 (3,3'-Dichlorobiphenyl)	8925
PCB-110 (2,3,3',4',6-Pentachlorobiphenyl)	8990
PCB-114 (2,3,4,4',5-Pentachlorobiphenyl)	9005
PCB-115 (2,3,4,4',6-Pentachlorobiphenyl)	9219
PCB-118 (2,3',4,4',5-Pentachlorobiphenyl)	8995
PCB-12 (3,4-Dichlorobiphenyl)	9270
PCB-123 (2,3',4,4',5'-Pentachlorobiphenyl)	9000
PCB-124 (2,3',4',5,5'-Pentachlorobiphenyl)	9222
PCB-125 (2,3',4',5',6-Pentachlorobiphenyl)	9224
PCB-126 (3,3',4,4',5-Pentachlorobiphenyl)	9015

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Organic	
EPA 8270E MOD (Battelle SOP 5-315) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Solid	
PCB-127 (3,3',4,5,5'-Pentachlorobiphenyl)	9260
PCB-128 (2,2',3,3',4,4'-Hexachlorobiphenyl)	9020
PCB-13 (3,4'-Dichlorobiphenyl)	9269
PCB-130 (2,2',3,3',4,5'-Hexachlorobiphenyl)	9117
PCB-131 (2,2',3,3',4,6-Hexachlorobiphenyl)	9121
PCB-134 (2,2',3,3',5,6-Hexachlorobiphenyl)	9128
PCB-135 (2,2',3,3',5,6'-Hexachlorobiphenyl)	9127
PCB-136 (2,2',3,3',6,6'-Hexachlorobiphenyl)	9130
PCB-137 (2,2',3,4,4',5-Hexachlorobiphenyl)	9138
PCB-138 (2,2',3,4,4',5'-Hexachlorobiphenyl)	9025
PCB-139 (2,2',3,4,4',6-Hexachlorobiphenyl)	9141
PCB-140 (2,2',3,4,4',6'-Hexachlorobiphenyl)	9140
PCB-141 (2,2',3,4,5,5'-Hexachlorobiphenyl)	9030
PCB-144 (2,2',3,4,5',6-Hexachlorobiphenyl)	9150
PCB-146 (2,2',3,4',5,5'-Hexachlorobiphenyl)	9144
PCB-149 (2,2',3,4',5',6-Hexachlorobiphenyl)	9151
PCB-15 (4,4'-Dichlorobiphenyl)	9273
PCB-151 (2,2',3,5,5',6-Hexachlorobiphenyl)	9035
PCB-153 (2,2’,4,4’,5,5’-Hexachlorobiphenyl)	9040
PCB-154 (2,2',4,4',5,6'-Hexachlorobiphenyl)	9174
PCB-155 (2,2',4,4',6,6'-Hexachlorobiphenyl)	9176
PCB-156 (2,3,3',4,4',5-Hexachlorobiphenyl)	9050
PCB-157 (2,3,3’,4,4’,5’-Hexachlorobiphenyl)	9045
PCB-158 (2,3,3',4,4',6-Hexachlorobiphenyl)	9193
PCB-16 (2,2',3-Trichlorobiphenyl)	9173
PCB-163 (2,3,3',4',5,6-Hexachlorobiphenyl)	9199
PCB-164 (2,3,3',4',5',6-Hexachlorobiphenyl)	9201
PCB-166 (2,3,4,4',5,6-Hexachlorobiphenyl)	9217
PCB-167 (2,3',4,4',5,5'-Hexachlorobiphenyl)	9055
PCB-169 (3,3',4,4',5,5'-Hexachlorobiphenyl)	9060
PCB-17 (2,2',4-Trichlorobiphenyl)	9185
PCB-170 (2,2',3,3',4,4',5-Heptachlorobiphenyl)	9065
PCB-171 (2,2',3,3',4,4',6-Heptachlorobiphenyl)	9106
PCB-172 (2,2',3,3',4,5,5'-Heptachlorobiphenyl)	9110
PCB-173 (2,2',3,3',4,5,6-Heptachlorobiphenyl)	9113
PCB-174 (2,2',3,3',4,5,6'-Heptachlorobiphenyl)	9116

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	Code
Organic	
EPA 8270E MOD (Battelle SOP 5-315) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Solid	
PCB-175 (2,2',3,3',4,5',6-Heptachlorobiphenyl)	9115
PCB-176 (2,2',3,3',4,6,6'-Heptachlorobiphenyl)	9119
PCB-177 (2,2',3,3',4,5',6'-Heptachlorobiphenyl)	9114
PCB-178 (2,2',3,3',5,5',6-Heptachlorobiphenyl)	9124
PCB-179 (2,2',3,3',5,6,6'-Heptachlorobiphenyl)	9126
PCB-18 (2,2',5-Trichlorobiphenyl)	8930
PCB-180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl)	9134
PCB-183 (2,2',3,4,4',5',6-Heptachlorobiphenyl)	9075
PCB-184 (2,2',3,4,4',6,6'-Heptachlorobiphenyl)	9139
PCB-185 (2,2',3,4,5,5',6-Heptachlorobiphenyl)	9143
PCB-187 (2,2',3,4',5,5',6-Heptachlorobiphenyl)	9080
PCB-188 (2,2',3,4',5,6,6'-Heptachlorobiphenyl)	9146
PCB-189 (2,3,3',4,4',5,5'-Heptachlorobiphenyl)	9085
PCB-19 (2,2',6-Trichlorobiphenyl)	9188
PCB-190 (2,3,3',4,4',5,6-Heptachlorobiphenyl)	9191
PCB-191 (2,3,3',4,4',5',6-Heptachlorobiphenyl)	9192
PCB-193 (2,3,3',4',5,5',6-Heptachlorobiphenyl)	9195
PCB-194 (2,2',3,3',4,4',5,5'-Octachlorobiphenyl)	9090
PCB-195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl)	9103
PCB-197 (2,2',3,3',4,4',6,6'-Octachlorobiphenyl)	9104
PCB-198 (2,2',3,3',4,5,5',6-Octachlorobiphenyl)	9109
PCB-199 (2,2',3,3',4,5,5',6'-Octachlorobiphenyl)	9108
PCB-200 (2,2',3,3',4,5,6,6'-Octachlorobiphenyl)	9111
PCB-201 (2,2',3,3',4,5',6,6'-Octachlorobiphenyl)	9112
PCB-202 (2,2',3,3',5,5',6,6'-Octachlorobiphenyl)	9123
PCB-203 (2,2',3,4,4',5,5',6-Octachlorobiphenyl)	9133
PCB-205 (2,3,3',4,4',5,5',6-Octachlorobiphenyl)	9190
PCB-206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)	9095
PCB-207 (2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl)	9101
PCB-208 (2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl)	9107
PCB-209 (2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl)	9105
PCB-22 (2,3,4'-Trichlorobiphenyl)	9241
PCB-24 (2,3,6-Trichlorobiphenyl)	9247
PCB-25 (2,3',4-Trichlorobiphenyl)	9240
PCB-26 (2,3',5-Trichlorobiphenyl)	8935
PCB-27 (2,3',6-Trichlorobiphenyl)	9248

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Organic	
EPA 8270E MOD (Battelle SOP 5-315) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Solid	
PCB-28 (2,4,4'-Trichlorobiphenyl)	9252
PCB-29 (2,4,5-Trichlorobiphenyl)	9253
PCB-3 (4-Chlorobiphenyl, 4-Monochlorobiphenyl)	9274
PCB-30 (2,4,6-Trichlorobiphenyl)	9254
PCB-31 (2,4',5-Trichlorobiphenyl)	8940
PCB-32 (2,4',6-Trichlorobiphenyl)	9255
PCB-33 (2,3',4'-Trichlorobiphenyl)	9239
PCB-37 (3,4,4'-Trichlorobiphenyl)	9266
PCB-4 (2,2'-Dichlorobiphenyl)	9189
PCB-40 (2,2',3,3'-Tetrachlorobiphenyl)	9132
PCB-41 (2,2',3,4-Tetrachlorobiphenyl)	9163
PCB-42 (2,2',3,4'-Tetrachlorobiphenyl)	9162
PCB-43 (2,2',3,5-Tetrachlorobiphenyl)	9169
PCB-44 (2,2',3,5'-Tetrachlorobiphenyl)	8945
PCB-45 (2,2',3,6-Tetrachlorobiphenyl)	9172
PCB-46 (2,2',3,6'-Tetrachlorobiphenyl)	9171
PCB-47 (2,2',4,4'-Tetrachlorobiphenyl)	9178
PCB-48 (2,2',4,5-Tetrachlorobiphenyl)	9181
PCB-49 (2,2',4,5'-Tetrachlorobiphenyl)	8950
PCB-5 (2,3-Dichlorobiphenyl)	8920
PCB-50 (2,2',4,6-Tetrachlorobiphenyl)	9184
PCB-51 (2,2',4,6'-Tetrachlorobiphenyl)	9183
PCB-52 (2,2',5,5'-Tetrachlorobiphenyl)	8955
PCB-53 (2,2',5,6'-Tetrachlorobiphenyl)	9186
PCB-54 (2,2',6,6'-Tetrachlorobiphenyl)	9187
PCB-56 (2,3,3',4'-Tetrachlorobiphenyl)	9207
PCB-6 (2,3'-Dichlorobiphenyl)	9249
PCB-60 (2,3,4,4'-Tetrachlorobiphenyl)	9221
PCB-63 (2,3,4',5-Tetrachlorobiphenyl)	9233
PCB-64 (2,3,4',6-Tetrachlorobiphenyl)	9236
PCB-66 (2,3',4,4'-Tetrachlorobiphenyl)	8960
PCB-67 (2,3',4,5-Tetrachlorobiphenyl)	9232
PCB-7 (2,4-Dichlorobiphenyl)	9257
PCB-70 (2,3',4',5-Tetrachlorobiphenyl)	9230
PCB-71 (2,3',4',6-Tetrachlorobiphenyl)	9237
PCB-74 (2,4,4',5-Tetrachlorobiphenyl)	9250

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Organic	
EPA 8270E MOD (Battelle SOP 5-315) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Solid	
PCB-75 (2,4,4',6-Tetrachlorobiphenyl)	9251
PCB-77 (3,3',4,4'-Tetrachlorobiphenyl)	8965
PCB-8 (2,4'-Dichlorobiphenyl)	9256
PCB-80 (3,3',5,5'-Tetrachlorobiphenyl)	9264
PCB-81 (3,4,4',5-Tetrachlorobiphenyl)	8970
PCB-82 (2,2',3,3',4-Pentachlorobiphenyl)	9122
PCB-83 (2,2',3,3',5-Pentachlorobiphenyl)	9129
PCB-84 (2,2',3,3',6-Pentachlorobiphenyl)	9131
PCB-85 (2,2',3,4,4'-Pentachlorobiphenyl)	9142
PCB-87 (2,2',3,4,5'-Pentachlorobiphenyl)	8975
PCB-9 (2,5-Dichlorobiphenyl)	9258
PCB-91 (2,2',3,4',6-Pentachlorobiphenyl)	9160
PCB-92 (2,2',3,5,5'-Pentachlorobiphenyl)	9164
PCB-95 (2,2',3,5',6-Pentachlorobiphenyl)	9166
PCB-97 (2,2',3,4',5'-Pentachlorobiphenyl)	9154
PCB-99 (2,2',4,4',5-Pentachlorobiphenyl)	9175
Tissue	
2,4'-DDD	8580
2,4'-DDE	8585
2,4'-DDT	8590
4,4'-DDD	7355
4,4'-DDE	7360
4,4'-DDT	7365
Biphenyl	5640
PCB-1 (2-Chlorobiphenyl, 2-Monochlorobiphenyl)	8915
PCB-100 (2,2',4,4',6-Pentachlorobiphenyl)	9177
PCB-101 (2,2',4,5,5'-Pentachlorobiphenyl)	8980
PCB-104 (2,2',4,6,6'-Pentachlorobiphenyl)	9182
PCB-105 (2,3,3',4,4'-Pentachlorobiphenyl)	8985
PCB-11 (3,3'-Dichlorobiphenyl)	8925
PCB-110 (2,3,3',4',6-Pentachlorobiphenyl)	8990
PCB-114 (2,3,4,4',5-Pentachlorobiphenyl)	9005
PCB-115 (2,3,4,4',6-Pentachlorobiphenyl)	9219
PCB-118 (2,3',4,4',5-Pentachlorobiphenyl)	8995
PCB-12 (3,4-Dichlorobiphenyl)	9270
PCB-123 (2,3',4,4',5'-Pentachlorobiphenyl)	9000

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	Code
Organic	
EPA 8270E MOD (Battelle SOP 5-315) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Tissue	
PCB-124 (2,3',4',5,5'-Pentachlorobiphenyl)	9222
PCB-125 (2,3',4',5',6-Pentachlorobiphenyl)	9224
PCB-126 (3,3',4,4',5-Pentachlorobiphenyl)	9015
PCB-127 (3,3',4,5,5'-Pentachlorobiphenyl)	9260
PCB-128 (2,2',3,3',4,4'-Hexachlorobiphenyl)	9020
PCB-13 (3,4'-Dichlorobiphenyl)	9269
PCB-130 (2,2',3,3',4,5'-Hexachlorobiphenyl)	9117
PCB-131 (2,2',3,3',4,6-Hexachlorobiphenyl)	9121
PCB-134 (2,2',3,3',5,6-Hexachlorobiphenyl)	9128
PCB-135 (2,2',3,3',5,6'-Hexachlorobiphenyl)	9127
PCB-136 (2,2',3,3',6,6'-Hexachlorobiphenyl)	9130
PCB-137 (2,2',3,4,4',5-Hexachlorobiphenyl)	9138
PCB-138 (2,2',3,4,4',5'-Hexachlorobiphenyl)	9025
PCB-139 (2,2',3,4,4',6-Hexachlorobiphenyl)	9141
PCB-140 (2,2',3,4,4',6'-Hexachlorobiphenyl)	9140
PCB-141 (2,2',3,4,5,5'-Hexachlorobiphenyl)	9030
PCB-144 (2,2',3,4,5',6-Hexachlorobiphenyl)	9150
PCB-146 (2,2',3,4',5,5'-Hexachlorobiphenyl)	9144
PCB-149 (2,2',3,4',5',6-Hexachlorobiphenyl)	9151
PCB-15 (4,4'-Dichlorobiphenyl)	9273
PCB-151 (2,2',3,5,5',6-Hexachlorobiphenyl)	9035
PCB-153 (2,2’,4,4’,5,5’-Hexachlorobiphenyl)	9040
PCB-154 (2,2',4,4',5,6'-Hexachlorobiphenyl)	9174
PCB-155 (2,2',4,4',6,6'-Hexachlorobiphenyl)	9176
PCB-156 (2,3,3',4,4',5-Hexachlorobiphenyl)	9050
PCB-157 (2,3,3’,4,4’,5’-Hexachlorobiphenyl)	9045
PCB-158 (2,3,3',4,4',6-Hexachlorobiphenyl)	9193
PCB-16 (2,2',3-Trichlorobiphenyl)	9173
PCB-163 (2,3,3',4',5,6-Hexachlorobiphenyl)	9199
PCB-164 (2,3,3',4',5',6-Hexachlorobiphenyl)	9201
PCB-166 (2,3,4,4',5,6-Hexachlorobiphenyl)	9217
PCB-167 (2,3',4,4',5,5'-Hexachlorobiphenyl)	9055
PCB-169 (3,3',4,4',5,5'-Hexachlorobiphenyl)	9060
PCB-17 (2,2',4-Trichlorobiphenyl)	9185
PCB-170 (2,2',3,3',4,4',5-Heptachlorobiphenyl)	9065
PCB-171 (2,2',3,3',4,4',6-Heptachlorobiphenyl)	9106

Battelle
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Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
EPA 8270E MOD (Battelle SOP 5-315) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Tissue	
PCB-172 (2,2',3,3',4,5,5'-Heptachlorobiphenyl)	9110
PCB-173 (2,2',3,3',4,5,6-Heptachlorobiphenyl)	9113
PCB-174 (2,2',3,3',4,5,6'-Heptachlorobiphenyl)	9116
PCB-175 (2,2',3,3',4,5',6-Heptachlorobiphenyl)	9115
PCB-176 (2,2',3,3',4,6,6'-Heptachlorobiphenyl)	9119
PCB-177 (2,2',3,3',4,5',6'-Heptachlorobiphenyl)	9114
PCB-178 (2,2',3,3',5,5',6-Heptachlorobiphenyl)	9124
PCB-179 (2,2',3,3',5,6,6'-Heptachlorobiphenyl)	9126
PCB-18 (2,2',5-Trichlorobiphenyl)	8930
PCB-180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl)	9134
PCB-183 (2,2',3,4,4',5',6-Heptachlorobiphenyl)	9075
PCB-184 (2,2',3,4,4',6,6'-Heptachlorobiphenyl)	9139
PCB-185 (2,2',3,4,5,5',6-Heptachlorobiphenyl)	9143
PCB-187 (2,2',3,4',5,5',6-Heptachlorobiphenyl)	9080
PCB-188 (2,2',3,4',5,6,6'-Heptachlorobiphenyl)	9146
PCB-189 (2,3,3',4,4',5,5'-Heptachlorobiphenyl)	9085
PCB-19 (2,2',6-Trichlorobiphenyl)	9188
PCB-190 (2,3,3',4,4',5,6-Heptachlorobiphenyl)	9191
PCB-191 (2,3,3',4,4',5',6-Heptachlorobiphenyl)	9192
PCB-193 (2,3,3',4',5,5',6-Heptachlorobiphenyl)	9195
PCB-194 (2,2',3,3',4,4',5,5'-Octachlorobiphenyl)	9090
PCB-195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl)	9103
PCB-197 (2,2',3,3',4,4',6,6'-Octachlorobiphenyl)	9104
PCB-198 (2,2',3,3',4,5,5',6-Octachlorobiphenyl)	9109
PCB-199 (2,2',3,3',4,5,5',6'-Octachlorobiphenyl)	9108
PCB-200 (2,2',3,3',4,5,6,6'-Octachlorobiphenyl)	9111
PCB-201 (2,2',3,3',4,5',6,6'-Octachlorobiphenyl)	9112
PCB-202 (2,2',3,3',5,5',6,6'-Octachlorobiphenyl)	9123
PCB-203 (2,2',3,4,4',5,5',6-Octachlorobiphenyl)	9133
PCB-205 (2,3,3',4,4',5,5',6-Octachlorobiphenyl)	9190
PCB-206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)	9095
PCB-207 (2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl)	9101
PCB-208 (2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl)	9107
PCB-209 (2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl)	9105
PCB-22 (2,3,4'-Trichlorobiphenyl)	9241
PCB-24 (2,3,6-Trichlorobiphenyl)	9247

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Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
EPA 8270E MOD (Battelle SOP 5-315) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Tissue	
PCB-25 (2,3',4-Trichlorobiphenyl)	9240
PCB-26 (2,3',5-Trichlorobiphenyl)	8935
PCB-27 (2,3',6-Trichlorobiphenyl)	9248
PCB-28 (2,4,4'-Trichlorobiphenyl)	9252
PCB-29 (2,4,5-Trichlorobiphenyl)	9253
PCB-3 (4-Chlorobiphenyl, 4-Monochlorobiphenyl)	9274
PCB-30 (2,4,6-Trichlorobiphenyl)	9254
PCB-31 (2,4',5-Trichlorobiphenyl)	8940
PCB-32 (2,4',6-Trichlorobiphenyl)	9255
PCB-33 (2,3',4'-Trichlorobiphenyl)	9239
PCB-37 (3,4,4'-Trichlorobiphenyl)	9266
PCB-4 (2,2'-Dichlorobiphenyl)	9189
PCB-40 (2,2',3,3'-Tetrachlorobiphenyl)	9132
PCB-41 (2,2',3,4-Tetrachlorobiphenyl)	9163
PCB-42 (2,2',3,4'-Tetrachlorobiphenyl)	9162
PCB-43 (2,2',3,5-Tetrachlorobiphenyl)	9169
PCB-44 (2,2',3,5'-Tetrachlorobiphenyl)	8945
PCB-45 (2,2',3,6-Tetrachlorobiphenyl)	9172
PCB-46 (2,2',3,6'-Tetrachlorobiphenyl)	9171
PCB-47 (2,2',4,4'-Tetrachlorobiphenyl)	9178
PCB-48 (2,2',4,5-Tetrachlorobiphenyl)	9181
PCB-49 (2,2',4,5'-Tetrachlorobiphenyl)	8950
PCB-5 (2,3-Dichlorobiphenyl)	8920
PCB-50 (2,2',4,6-Tetrachlorobiphenyl)	9184
PCB-51 (2,2',4,6'-Tetrachlorobiphenyl)	9183
PCB-52 (2,2',5,5'-Tetrachlorobiphenyl)	8955
PCB-53 (2,2',5,6'-Tetrachlorobiphenyl)	9186
PCB-54 (2,2',6,6'-Tetrachlorobiphenyl)	9187
PCB-56 (2,3,3',4'-Tetrachlorobiphenyl)	9207
PCB-6 (2,3'-Dichlorobiphenyl)	9249
PCB-60 (2,3,4,4'-Tetrachlorobiphenyl)	9221
PCB-63 (2,3,4',5-Tetrachlorobiphenyl)	9233
PCB-64 (2,3,4',6-Tetrachlorobiphenyl)	9236
PCB-66 (2,3',4,4'-Tetrachlorobiphenyl)	8960
PCB-67 (2,3',4,5-Tetrachlorobiphenyl)	9232
PCB-7 (2,4-Dichlorobiphenyl)	9257

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	Code
Organic	
EPA 8270E MOD (Battelle SOP 5-315) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Tissue	
PCB-70 (2,3',4',5-Tetrachlorobiphenyl)	9230
PCB-71 (2,3',4',6-Tetrachlorobiphenyl)	9237
PCB-74 (2,4,4',5-Tetrachlorobiphenyl)	9250
PCB-75 (2,4,4',6-Tetrachlorobiphenyl)	9251
PCB-77 (3,3',4,4'-Tetrachlorobiphenyl)	8965
PCB-8 (2,4'-Dichlorobiphenyl)	9256
PCB-80 (3,3',5,5'-Tetrachlorobiphenyl)	9264
PCB-81 (3,4,4',5-Tetrachlorobiphenyl)	8970
PCB-82 (2,2',3,3',4-Pentachlorobiphenyl)	9122
PCB-83 (2,2',3,3',5-Pentachlorobiphenyl)	9129
PCB-84 (2,2',3,3',6-Pentachlorobiphenyl)	9131
PCB-85 (2,2',3,4,4'-Pentachlorobiphenyl)	9142
PCB-87 (2,2',3,4,5'-Pentachlorobiphenyl)	8975
PCB-9 (2,5-Dichlorobiphenyl)	9258
PCB-91 (2,2',3,4',6-Pentachlorobiphenyl)	9160
PCB-92 (2,2',3,5,5'-Pentachlorobiphenyl)	9164
PCB-95 (2,2',3,5',6-Pentachlorobiphenyl)	9166
PCB-97 (2,2',3,4',5'-Pentachlorobiphenyl)	9154
PCB-99 (2,2',4,4',5-Pentachlorobiphenyl)	9175
PFAS by LC/MS/MS Compliant with Table B-15 of QSM 5.3 or Latest Version by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)	90000451
Aqueous	
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	9490
1H, 1H, 2H, 2H-Perfluorodecane Sulfonic Acid (8:2 FTS)	6948
1H, 1H, 2H, 2H-Perfluorododecane Sulfonic Acid (10:2 FTS)	9616
1H, 1H, 2H, 2H-Perfluorohexane Sulfonic Acid (4:2 FTS)	6946
1H, 1H, 2H, 2H-Perfluorooctane Sulfonic Acid (6:2 FTS)	6947
2H,2H,3H,3H-Perfluorodecanoic Acid (7:3 FTCA, 3-Perfluoroheptyl Propanoic Acid)	9340
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3 FTCA)	9338
4,4,5,5,6,6,6-Heptafluorohexanoi Acid (3:3 FTCA, 3-Perfluoropropyl Propanoic Acid)	9353
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9-Cl-PF3ONS)	6952
Ammonium 4,8-Dioxa-3H-Perfluorononanoate (ADONA)	6953
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA) – GenX	9460
N-Ethyl Perfluorooctanesulfonamide (NEtFOSA)	9395
N-Ethyl Perfluorooctanesulfonamidoethanol (NEtFOSE)	9431
N-Ethylperfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	4846

Certificate of Accreditation: Supplement

Battelle
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Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
PFAS by LC/MS/MS Compliant with Table B-15 of QSM 5.3 or Latest Version by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)	90000451
Aqueous	
N-Methylperfluorooctanesulfonamide (NMeFOSA)	6954
N-Methylperfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	4847
N-Methylperfluorooctanesulfonamidoethanol (MeFOSE)	6949
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	6956
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	6957
Perfluoro-1-Octanesulfonamide (PFOSA)	9665
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	6965
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	6966
Perfluorobutanesulfonic Acid (PFBS)	6918
Perfluorobutanoic Acid (PFBA)	6915
Perfluorodecanesulfonic Acid (PFDS)	6920
Perfluorodecanoic Acid (PFDA)	6905
Perfluorododecanesulfonic Acid (PFDoS)	6923
Perfluorododecanoic Acid (PFDoA)	6903
Perfluoroheptanesulfonic Acid (PFHpS)	9470
Perfluoroheptanoic Acid (PFHpA)	6908
Perfluorohexadecanoic Acid (PFHxDA)	6958
Perfluorohexanesulfonic Acid (PFHxS)	6927
Perfluorohexanoic Acid (PFHxA)	6913
Perfluorononanesulfonic Acid (PFNS)	6929
Perfluorononanoic Acid (PFNA)	6906
Perfluorooctadecanoic Acid (PFODA)	6916
Perfluorooctanesulfonic Acid (PFOS)	6931
Perfluorooctanoic Acid (PFOA)	6912
Perfluoropentanesulfonic Acid (PFPeS)	6934
Perfluoropentanoic Acid (PFPeA)	6914
Perfluorotetradecanoic Acid (PFTeDA)	6902
Perfluorotridecanoic Acid (PFTrDA)	9563
Perfluoroundecanoic Acid (PFUnA)	6904
Solid	
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	9490
1H, 1H, 2H, 2H-Perfluorodecane Sulfonic Acid (8:2 FTS)	6948
1H, 1H, 2H, 2H-Perfluorododecane Sulfonic Acid (10:2 FTS)	9616
1H, 1H, 2H, 2H-Perfluorohexane Sulfonic Acid (4:2 FTS)	6946
1H, 1H, 2H, 2H-Perfluorooctane Sulfonic Acid (6:2 FTS)	6947

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Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
PFAS by LC/MS/MS Compliant with Table B-15 of QSM 5.3 or Latest Version by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)	90000451
Solid	
2H,2H,3H,3H-Perfluorodecanoic Acid (7:3 FTCA, 3-Perfluoroheptyl Propanoic Acid)	9340
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3 FTCA)	9338
4,4,5,5,6,6,6-Heptafluorohexanoi Acid (3:3 FTCA, 3-Perfluoropropyl Propanoic Acid)	9353
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9-Cl-PF3ONS)	6952
Ammonium 4,8-Dioxa-3H-Perfluorononanoate (ADONA)	6953
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA) – GenX	9460
N-Ethyl Perfluorooctanesulfonamide (NEtFOSA)	9395
N-Ethyl Perfluorooctanesulfonamidoethanol (NEtFOSE)	9431
N-Ethylperfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	4846
N-Methylperfluorooctanesulfonamide (NMeFOSA)	6954
N-Methylperfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	4847
N-Methylperfluorooctanesulfonamidoethanol (MeFOSE)	6949
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	6956
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	6957
Perfluoro-1-Octanesulfonamide (PFOSA)	9665
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	6965
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	6966
Perfluorobutanesulfonic Acid (PFBS)	6918
Perfluorobutanoic Acid (PFBA)	6915
Perfluorodecanesulfonic Acid (PFDS)	6920
Perfluorodecanoic Acid (PFDA)	6905
Perfluorododecanesulfonic Acid (PFDoS)	6923
Perfluorododecanoic Acid (PFDoA)	6903
Perfluoroheptanesulfonic Acid (PFHpS)	9470
Perfluoroheptanoic Acid (PFHpA)	6908
Perfluorohexadecanoic Acid (PFHxDA)	6958
Perfluorohexanesulfonic Acid (PFHxS)	6927
Perfluorohexanoic Acid (PFHxA)	6913
Perfluorononanesulfonic Acid (PFNS)	6929
Perfluorononanoic Acid (PFNA)	6906
Perfluorooctadecanoic Acid (PFODA)	6916
Perfluorooctanesulfonic Acid (PFOS)	6931
Perfluorooctanoic Acid (PFOA)	6912
Perfluoropentanesulfonic Acid (PFPeS)	6934
Perfluoropentanoic Acid (PFPeA)	6914

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Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
PFAS by LC/MS/MS Compliant with Table B-15 of QSM 5.3 or Latest Version by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)	90000451
Solid	
Perfluorotetradecanoic Acid (PFTeDA)	6902
Perfluorotridecanoic Acid (PFTrDA)	9563
Perfluoroundecanoic Acid (PFUnA)	6904
Tissue	
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	9490
1H, 1H, 2H, 2H-Perfluorodecane Sulfonic Acid (8:2 FTS)	6948
1H, 1H, 2H, 2H-Perfluorohexane Sulfonic Acid (4:2 FTS)	6946
1H, 1H, 2H, 2H-Perfluorooctane Sulfonic Acid (6:2 FTS)	6947
2H,2H,3H,3H-Perfluorodecanoic Acid (7:3 FTCA, 3-Perfluoroheptyl Propanoic Acid)	9340
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3 FTCA)	9338
4,4,5,5,6,6,6-Heptafluorohexanoi Acid (3:3 FTCA, 3-Perfluoropropyl Propanoic Acid)	9353
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9-Cl-PF3ONS)	6952
Ammonium 4,8-Dioxa-3H-Perfluorononanoate (ADONA)	6953
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA) – GenX	9460
N-Ethylperfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	4846
N-Methylperfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	4847
Perfluoro-1-Octanesulfonamide (PFOSA)	9665
Perfluorobutanesulfonic Acid (PFBS)	6918
Perfluorobutanoic Acid (PFBA)	6915
Perfluorodecanesulfonic Acid (PFDS)	6920
Perfluorodecanoic Acid (PFDA)	6905
Perfluorododecanoic Acid (PFDoA)	6903
Perfluoroheptanesulfonic Acid (PFHpS)	9470
Perfluoroheptanoic Acid (PFHpA)	6908
Perfluorohexanesulfonic Acid (PFHxS)	6927
Perfluorohexanoic Acid (PFHxA)	6913
Perfluorononanesulfonic Acid (PFNS)	6929
Perfluorononanoic Acid (PFNA)	6906
Perfluorooctanesulfonic Acid (PFOS)	6931
Perfluorooctanoic Acid (PFOA)	6912
Perfluoropentanesulfonic Acid (PFPeS)	6934
Perfluoropentanoic Acid (PFPeA)	6914
Perfluorotetradecanoic Acid (PFTeDA)	6902
Perfluorotridecanoic Acid (PFTrDA)	9563
Perfluoroundecanoic Acid (PFUnA)	6904

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Accreditation is granted to the facility to perform the following testing:

		Code
Preparation		
Aqueous		
EPA 3510C	Separatory Funnel Liquid-Liquid Extraction	
EPA 3640A MOD (Battelle SOP 5-191)	Gel-Permeation Cleanup	
EPA 3660B MOD (Battelle SOP 5-328)	Sulfur Cleanup	
Solid		
EPA 3640A MOD (Battelle SOP 5-191)	Gel-Permeation Cleanup	
EPA 3660B MOD (Battelle SOP 5-328)	Sulfur Cleanup	
NOAA NOS ORCA 71	Orbital Shaker	
Tissue		
EPA 3640A MOD (Battelle SOP 5-191)	Gel-Permeation Cleanup	
EPA 3660B MOD (Battelle SOP 5-328)	Sulfur Cleanup	
NOAA NOS ORCA 71	Orbital Shaker Tissuemizer	

Footnotes:
> Method codes are typically based on The NELAC Institute (TNI) Laboratory Accreditation Management System (LAMS) and are used to compare to the laboratory reported Performance Test (PT) results. Although the method code may not represent the specific method version, it is the method code used to represent the method/technology used to report PTs. (NC = No Code)

APPENDIX E

BACKUP PFAS LABORATORY SAP WORKSHEETS AND CERTIFICATIONS

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SAP Worksheet #3: Distribution List

(UFP-QAPP Manual Section 2.3.1)

SAP Recipients	Title/Role	Organization	Telephone Number (optional)	Email Address
Brian Helland	Naval Facilities Engineering Systems Command (NAVFAC) Remedial Project Manager (RPM)/ Manages project activities for former Naval Air Station Joint Reserve Base (NASJRB) Willow Grove	NAVFAC	215-897-4912	brian.j.helland.civ@us.navy.mil
Dawn DeFreitas	NAVFAC Base Realignment and Closure (BRAC) Deputy Base Closure Manager (DBCM)/ Provides technical support	NAVFAC	215-897-4903	dawn.m.defreitas.civ@us.navy.mil
Jonathan Harris	NAVFAC BRAC Environmental Coordinator (BEC)/ Provides technical support	NAVFAC	215-897-4915	jonathan.i.harris5.civ@us.navy.mil
Jason Speicher	NAVFAC Technical Support/ Provides technical support	NAVFAC	215-897-4914	jason.a.speicher2.civ@us.navy.mil
Marty Schy	Site Caretaker/ Coordinates activities	Willow Grove Navy Caretaker Site Office (CSO)	215-293-4888	martin.s.schy.civ@us.navy.mil
Jim Rugh	Site Caretaker/ Coordinates activities	Willow Grove Navy CSO	215-293-4887	james.l.rugh.civ@us.navy.mil
Sarah Kloss	U.S. Environmental Protection Agency (EPA) RPM/ Provides regulatory input and oversight for former NASJRB Willow Grove	EPA Region 3	215-814-3379	kloss.sarah@epa.gov

SAP Recipients	Title/Role	Organization	Telephone Number (optional)	Email Address
Colin Wade	Pennsylvania Department of Environmental Protection (PADEP) Project Officer/ Provides regulatory input and oversight for former NASJRB Willow Grove	PADEP	484-250-5722	cowade@pa.gov
Lisa Senior	United States Geological Survey (USGS) Hydrogeologist / Provides technical support	USGS	610-518-7219	lasenior@usgs.gov
Dan Goode	USGS Hydrologist / Provides technical support	USGS	717-571-8783	djgoode@usgs.gov
Naval Installation Restoration Information Solution (NIRIS) records manager (final version only)	NIRIS/ Database	NAVFAC	NA	NIRIS@navy.mil
Catherine Kohler (copy of cover letter only)	Program Manager/ Manages Navy initiatives	Tetra Tech	757-461-3768	cathy.kohler@tetratech.com
Tricia Moore (copy of cover letter only)	Deputy Program Manager/ Manages program activities	Tetra Tech	609-277-5051	tricia.moore@tetratech.com
Stephen Mitchell (electronic copy)	Project Manager (PM)/ Manages project activities	Tetra Tech	301-528-5552	steve.mitchell@tetratech.com
Sue Herbert (electronic copy)	Deputy PM/ Provides additional oversight and daily management	Tetra Tech	610-382-1537	sue.herbert@tetratech.com
Matt Soltis (electronic copy)	Health and Safety Manager (HSM)/ Manages CLEAN health and safety program	Tetra Tech	412-921-8912	matt.soltis@tetratech.com
Michelle Coffman, (electronic copy)	Quality Assurance Manager (QAM)/ Implementation and oversight of Tetra Tech CLEAN quality program	Tetra Tech	412-921-8549	michelle.coffman@tetratech.com

SAP Recipients	Title/Role	Organization	Telephone Number (optional)	Email Address
Joseph Samchuck (electronic copy)	Data Validation Manager (DVM)/ Oversight of data validation (DV) process	Tetra Tech	412-921-8510	joseph.samchuck@tetratech.com
Theresa Thompson (electronic copy)	Per- and polyfluoroalkyl substances (PFAS) Point of Contact (POC)/ Serves as a single focal point for all PFAS matters regarding compliance with and implementation of NAVFAC and U.S Department of Defense (DoD) policy	Tetra Tech	832-251-5160	theresa.thompson@tetratech.com
Leroy Leonard (electronic copy)	Chief Technical Officer (CTO) QAO/ Technical support for reviewing planning documents, reports, graphics, and figures, including data analysis, interpretation, and statistical analyses for quality	Tetra Tech	865-220-4702	leroy.leonard@tetratech.com
Katherine Super (electronic copy)	Human Health Risk Assessor/ Serves as technical resource	Tetra Tech	412-921-8887	katherine.super@tetratech.com
Aaron Bernhardt (electronic copy)	Ecological Risk Assessor/ Serves as technical resource	Tetra Tech	412-921-8433	aaron.bernhardt@tetratech.com
Mandy Barnhart (electronic copy)	Project Chemist/ Interfaces with laboratory, coordinates DV; serves as focal point for chemistry-related issues Sampling Coordinator/ Coordinates start of sampling effort and tracks samples	Tetra Tech	610-382-1528	mandy.barnhart@tetratech.com

SAP Recipients	Title/Role	Organization	Telephone Number (optional)	Email Address
Chris Sinisi (electronic and hard copy)	Field Operations Leader (FOL)/ Coordination and oversight of daily field operations Site Safety and Health Officer (SSHO)/ On-site coordination and oversight of field health and safety	Tetra Tech	610-382-1524	chris.sinisi@tetratech.com
Stephen Gordon (electronic copy)	Laboratory PM/ Provides daily project management and coordinates activities for PFAS analysis	Eurofins Lancaster Laboratories Environment Testing LLC (ELLE)	412-525-0071	stephen.gordon@et.eurofinsus.com

Notes:
Managers for individual organizations shall ensure that support staff have access to the current SAP prior to conducting work.

SAP Worksheet #4: Project Personnel Sign-Off Sheet

(UFP-QAPP Manual Section 2.3.2)

Certification that project personnel have read the text will be obtained by one of the following methods as applicable:

1. In the case of regulatory agency personnel with oversight authority, approval letters or emails will constitute verification that applicable sections of this Field Task Modification Request (FTMR) and the Final SAP have been reviewed. Copies of regulatory agency approval letters/emails will be retained in the project files as project records (see Worksheet #29).

2. Emails will be sent to the listed Navy, Tetra Tech, and subcontractor project personnel whom will be requested to verify by email that they have read the applicable SAP/sections and the date on which they were reviewed. Copies of the verification email will be included in the project files (see Worksheet #29).

   A copy of the signed Worksheet #4 will be retained in the project files and is identified as a project record in Worksheet #29.

Key personnel (NAVFAC RPM, Tetra Tech PM, Tetra Tech Project Chemist, Tetra Tech FOL, and Tetra Tech SSHO) will be instructed to read the SAP portions indicated in this worksheet prior to attending an internal site-specific kick-off meeting for field activities. The Tetra Tech PM will track when the reviews have been completed, obtain signatures, and ensure that the completed sign-off sheet is included in the central project file.

Name[1]	Organization/Title/Role	Telephone Number	Signature/Email Receipt	FTMR/SAP Section Reviewed	Date Read
Navy and Regulator Project Team Personnel					
Brian Helland (electronic copy only)	NAVFAC/ RPM/ Manages project for former NASJRB Willow Grove	215-897-4912	See FTMR form for signature	All	
Dawn DeFreitas (electronic copy only)	NAVFAC/ BRAC DBCM/ Provides technical support	215-897-4903	Email receipt	All	
Jonathan Harris	NAVFAC/ BRAC BEC/ Provides technical support	215-897-4915	Email receipt	All	
Jason Speicher (electronic copy only)	NAVFAC/ Technical support/ Provides technical support	215-897-4914	Email receipt	All	
Marty Schy (electronic copy only)	NAVFAC/ Site Caretaker/ Coordinates activities	215-293-4888	E-mail receipt	All	

Name[(1)]	Organization/Title/Role	Telephone Number	Signature/Email Receipt	FTMR/SAP Section Reviewed	Date Read
Jim Rugh (electronic copy only)	NAVFAC/ Site Caretaker/ Coordinates activities	215-293-4887	E-mail receipt	All	
Sarah Kloss (electronic copy only)	EPA/ RPM/ Provides regulatory input and oversight for former NASJRB Willow Grove	215-814-3379	Email receipt	All	
Colin Wade (electronic copy only)	PADEP/ Project Officer/ Provides regulatory input	484-250-5722	Email receipt	All	
Lisa Senior (electronic copy only)	USGS / Hydrogeologist / Provides technical support	717-503-2367	E-mail receipt	All	
Dan Goode (electronic copy only)	USGS / Hydrologist / Provides technical support	717-571-8783	E-mail receipt	All	
Tetra Tech Project Team Personnel					
Catherine Kohler (electronic copy only)	Tetra Tech / Program Manager / Manages Navy initiatives	757-461-3768	E-mail receipt	All	
Tricia Moore (electronic copy only)	Tetra Tech / Deputy Program Manager / Manages program activities	610-382-1171	E-mail receipt	All	
Stephen Mitchell (electronic copy only)	Tetra Tech/ PM/ Provides oversight and daily management	301-528-5552	See FTMR form for signature	All	
Sue Herbert (electronic copy only)	Tetra Tech/ Deputy PM/ Provides oversight and daily management	610-382-1537	E-mail receipt	All	
Matt Soltis (electronic copy only)	Tetra Tech/ CLEAN HSM/ Manages CLEAN health and safety program	412-921-8912	See project-specific HASP for signature	HASP	
Michelle Coffman (electronic copy only)	Tetra Tech/ QAM/ Manages QA program and its Implementation	412-921-8549	E-mail receipt	All	
Joseph Samchuck (electronic copy only)	Tetra Tech/ DVM/ Manages DV	412-921-8510	Email receipt	All (emphasis on Worksheets #s 12, 14, 15, 19, 20, 23-28, 30, and 34-37)	

Name[1]	Organization/Title/Role	Telephone Number	Signature/Email Receipt	FTMR/SAP Section Reviewed	Date Read
Theresa Thompson (electronic copy only)	Tetra Tech/ PFAS POC/ Serves as a single focal point for all PFAS matters regarding compliance with and implementation of NAVFAC and DoD policy	832-251-5160	E-mail receipt	All	
Leroy Leonard (electronic copy only)	Tetra Tech/ CTO QAO/ Provides quality assurance oversight	865-323-5683	E-mail receipt	All	
Mandy Barnhart (electronic copy only)	Tetra Tech/ Project Chemist/ Provides coordination with laboratory and DV group. Tetra Tech/ Sampling Coordinator/ Coordinates beginning of sampling effort, tracks samples	610-382-1528	E-mail receipt	All	
Chris Sinisi	Tetra Tech/ FOL/ Oversees operational activities in the field Tetra Tech/ SSHO/ Oversees health and safety activities in the field	610-382-1524	Email receipt	All (emphasis on Worksheet #s 5, 6, 10, 11.1-11.4, 12, 14, 15, 17 to 22, and 27)	
Subcontractor Personnel (Laboratory)					
Stephen Gordon (electronic copy)	ELLE/ Laboratory PM/ Provides daily project management and coordinates activities for PFAS analysis	412-525-0071	Email receipt	Worksheet #s 6, 12, 14, 15, 19, 23-28, 30, and 34-36	

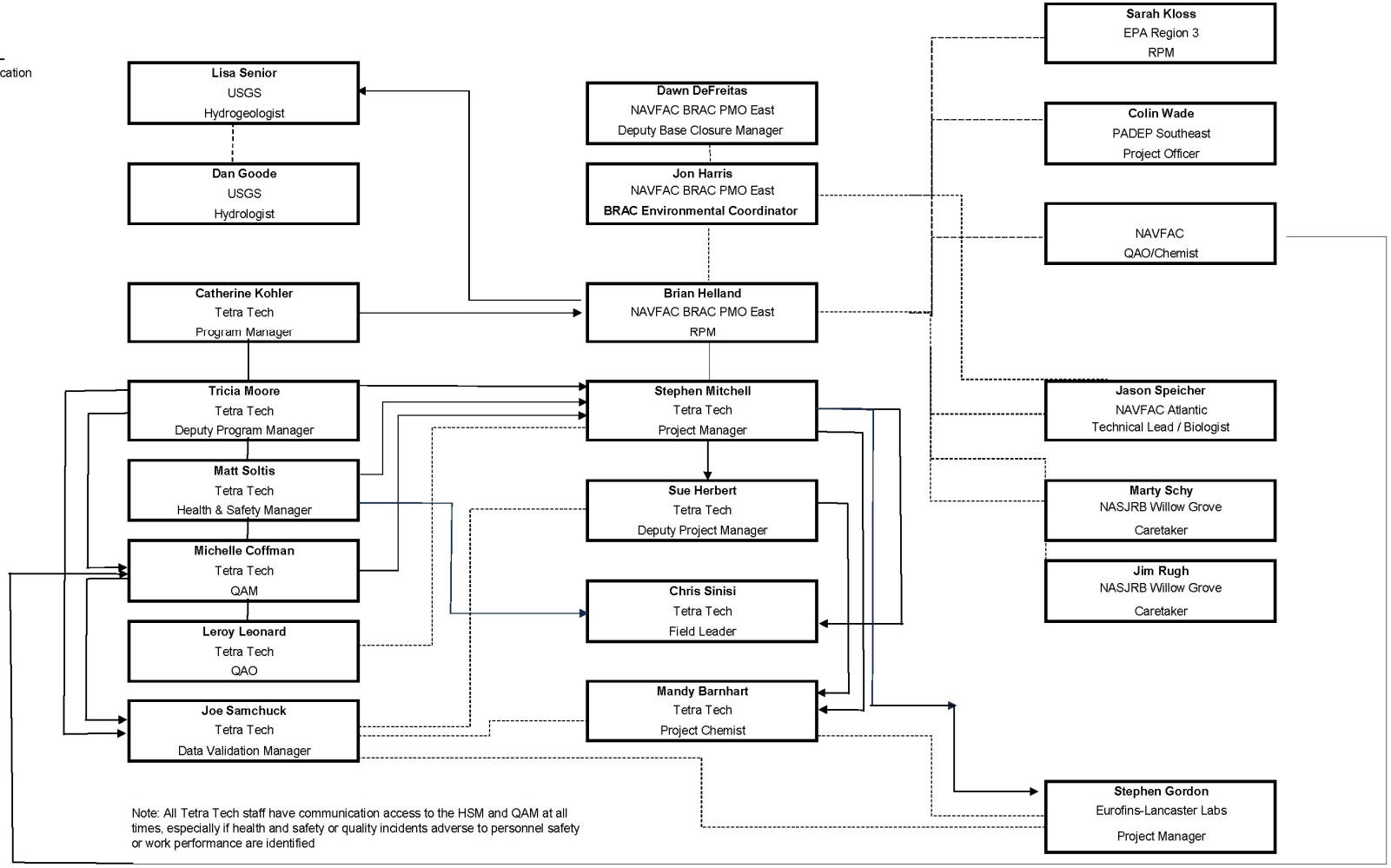
Notes:

1 Persons listed on this worksheet will be responsible for distributing the SAP to the appropriate people within their organization.

SAP Worksheet #5 -- Project Organizational Chart
(UFP-QAPP Manual Section 2.4.1

Lines of Authority

Lines of Communication



SAP Worksheet #6: Communication Pathways

(UFP-QAPP Manual Section 2.4.2)

Communication Drivers	Responsible Entity	Name	Phone Number	Procedure (Timing, Pathway To/From, etc.)
Draft SAP Review/Revisions	Tetra Tech PM Tetra Tech Deputy PM NAVFAC QAO/Chemist	Stephen Mitchell Sue Herbert NAVFAC QAO/Chemist	301-528-5552 610-382-1537 757-322-8341/ 757-322-4942/ 757-322-4112	Within two days of completing the draft SAP, the SAP will be submitted (with NAVFAC RPM approval) to NIRIS by the Tetra Tech PM. NAVFAC QAO/Chemist comments, received via NIRIS, will be resolved to the satisfaction of the QAO/Chemist, and the SAP will be uploaded to NIRIS for QAO/Chemist signature.
Regulatory Agency Review/Interface	NAVFAC RPM EPA RPM PADEP Project Officer	Brian Helland Sarah Kloss Colin Wade	215-897-4912 215-814-3379 484-250-5722	When due according to the project schedule the draft SAP will be submitted to the regulators by the NAVFAC RPM or designee. NAVFAC RPM will interface directly, via phone or via email with regulators as needed.
Field Progress Reports	Tetra Tech FOL/SSHO	Chris Sinisi	610-382-1524	The Tetra Tech FOL/SSHO will provide email or verbal reports to the Tetra Tech PM on a schedule arranged by the PM.
Preparation for Sampling	Tetra Tech Project Chemist ELLE Laboratory PM	Mandy Barnhart Stephen Gordon	610-382-1528 412-525-0071	At a time that ensures sample bottles will be available on-Base early enough to collect samples, the Tetra Tech Project Chemist will contact the Laboratory PM via e-mail or teleconference to order bottles. The Tetra Tech Project Chemist will maintain weekly contact with the laboratory throughout the project to ensure that project goals, including changes to laboratory-specific limits, are acceptable before and during the analyses.
Recommendations to stop work and start work upon corrective action	Tetra Tech FOL/SSHO Tetra Tech PM Tetra Tech Deputy PM Tetra Tech QAM Tetra Tech HSM NAVFAC RPM EPA RPM PADEP Project Officer	Chris Sinisi Stephen Mitchell Sue Herbert Michelle Coffman Matt Soltis Brian Helland Sarah Kloss Colin Wade	610-382-1524 301-528-5552 610-382-1537 412-921-8549 412-921-8912 215-897-4912 215-814-3379 484-250-5722	If Tetra Tech is the responsible party for a stop work command, the Tetra Tech FOL will inform on-Base personnel, subcontractor(s), the NAVFAC RPM, and the identified Project Team members within one hour (verbally or by e-mail) of recognizing the need to stop work. If a subcontractor is the responsible party, then the subcontractor PM must inform the Tetra Tech FOL within 15 minutes of recognizing the need to stop work, and the Tetra Tech FOL will then follow the procedure listed above. EPA and PADEP will be notified of the stop work and corrective action by e-mail within one business day.

Communication Drivers	Responsible Entity	Name	Phone Number	Procedure (Timing, Pathway To/From, etc.)
SAP Changes Before Field / Laboratory Work	NAVFAC RPM NAVFAC QAO/Chemist EPA RPM PADEP Project Officer Tetra Tech PM Tetra Tech Deputy PM Tetra Tech FOL/SSHO Tetra Tech QAM	Brian Helland NAVFAC QAO/Chemist Sarah Kloss Colin Wade Stephen Mitchell Sue Herbert Chris Sinisi Michelle Coffman	215-897-4912 757-322-8341/ 757-322-4942/ 757-322-4112 215-814-3379 484-250-5722 301-528-5552 610-382-1537 610-382-1524 412-921-8549	The Tetra Tech PM will document the required change via a Field Task Modification Request (FTMR) form within five days and send it to the NAVFAC RPM. If necessary, the PM will submit a concurrence letter within seven days of identifying the need for change. SAP changes will be submitted to the NAVFAC QAO/Chemist via NIRIS for approval when significant data quality objective [DQO]-related changes or significant changes to the conceptual site model (CSM) occur, analytes or matrices are added to the sampling plan, analytical methods are added, the laboratory DoD Environmental Laboratory Accreditation Program (ELAP) Quality Systems Manual (QSM) accreditation changes, or when the laboratory is changed. The SAP will be revised or updated at a minimum of every five years or sooner if the project objectives change. The Tetra Tech PM will communicate scope changes to the Project Team (NAVFAC RPM, EPA RPM, PADEP project officer, Tetra Tech QAM, and Tetra Tech FOL) via e-mail within one business day.
Changes in Schedule	NAVFAC RPM EPA RPM PADEP Project Officer Tetra Tech PM Tetra Tech Deputy PM	Brian Helland Sarah Kloss Colin Wade Stephen Mitchell Sue Herbert	215-897-4912 215-814-3379 484-250-5722 301-528-5552 610-382-1537	The Tetra Tech PM will verbally inform the NAVFAC RPM on the day that a schedule change is known and will document via schedule impact letter within one business day of when the impact is recognized.
SAP Changes in the Field	NAVFAC RPM EPA RPM PADEP Project Officer Tetra Tech PM Tetra Tech Deputy PM Tetra Tech FOL/SSHO	Brian Helland Sarah Kloss Colin Wade Stephen Mitchell Sue Herbert Chris Sinisi	215-897-4912 215-814-3379 484-250-5722 301-528-5552 610-382-1537 610-382-1524	The Tetra Tech FOL will verbally inform Tetra Tech PM on the day that the issue is discovered. The Tetra Tech PM will inform the NAVFAC RPM (verbally or via e-mail) within one business day. The Tetra Tech PM will document the change via a FTMR form within five days and send it to the NAVFAC RPM. If necessary, a concurrence letter will be submitted within seven days of identifying the need for change. SAP changes will be submitted to the

Communication Drivers	Responsible Entity	Name	Phone Number	Procedure (Timing, Pathway To/From, etc.)
				NAVFAC QAO/Chemist via NIRIS for approval when significant changes are made to DQOs or the CSM, analytes or matrices are added to the sampling plan, analytical methods are added, the laboratory DoD ELAP QSM accreditation changes, or the laboratory is changed. The NAVFAC RPM will issue a scope change (verbally or via e-mail), if warranted. The scope change is to be implemented before further work is executed. If scope changes are extensive, a SAP amendment will be issued at the discretion of the RPM. The Tetra Tech PM will communicate scope changes to the Project Team (NAVFAC RPM, EPA, RPM, PADEP Project Officer, Tetra Tech QAM, and Tetra Tech FOL) via e-mail within one business day.
Field Corrective Actions	Tetra Tech FOL Tetra Tech PM	Chris Sinisi Stephen Mitchell	610-382-1524 301-528-5552	The Tetra Tech FOL will start corrective actions and will notify the Tetra Tech PM verbally within one business day of taking action.
Sample Receipt Variances	ELLE Laboratory PM Tetra Tech FOL/SSHO Tetra Tech PM Tetra Tech Project Chemist	Stephen Gordon Chris Sinisi Stephen Mitchell Mandy Barnhart	412-525-0071 610-382-1524 301-528-5552 610-382-1528	The laboratory PM will report variances to the Tetra Tech FOL/SSHO, Tetra Tech Chemist, or PM within 24 hours of identifying a variance, and those individuals will attempt to resolve the variance with the laboratory. If the variance cannot be resolved, the Tetra Tech PM will notify the NAVFAC RPM within one business day of the variances being brought to his or her attention. If necessary, the NAVFAC RPM will take corrective action commensurate with the deficiency.

Communication Drivers	Responsible Entity	Name	Phone Number	Procedure (Timing, Pathway To/From, etc.)
Laboratory Quality Variances	ELLE Laboratory PM Tetra Tech Project Chemist Tetra Tech PM	Stephen Gordon Mandy Barnhart Stephen Mitchell	412-525-0071 610-382-1528 301-528-5552	The Laboratory PM will notify (verbally or via e-mail) the Tetra Tech Project Chemist within one business day of when an issue related to laboratory data is discovered. The Tetra Tech Project Chemist will notify (verbally or via e-mail) the data validation staff and the Tetra Tech PM within one business day. The Laboratory QAM will document all quality variances in the Case Narrative of the Analytical Laboratory Report. Corrective actions may include a consult with the NAVFAC RPM and, at the RPM's discretion, with the NAVFAC QAO/Chemist.
Analytical Corrective Actions	ELLE Laboratory PM Tetra Tech FOL/SSHO Tetra Tech Project Chemist Tetra Tech PM NAVFAC RPM	Stephen Gordon Chris Sinisi Mandy Barnhart Stephen Mitchell Brian Helland	412-525-0071 610-382-1524 610-382-1528 301-528-5552 215-897-4912 412-921-8549	If the impact of an identified deficiency is limited to this project, it will be resolved between the laboratory PM, Tetra Tech PM, and support staff and will be documented in the project report. If the deficiency is systemic and potentially affects other projects, the Tetra Tech PM will verbally advise the NAVFAC RPM within 24 hours of notification from the Project Chemist or DVM. The NAVFAC RPM will take corrective action appropriate for the identified deficiency. Corrective actions may include a consult with the NAVFAC QAO/Chemist and coordination with the laboratory.
Reporting DV Issues	Tetra Tech DVM Tetra Tech PM	Joseph Samchuck Stephen Mitchell	412-921-8510 301-528-5552	The Tetra Tech DV Chemist will document data qualifications in the data validation report and database. If the DV Chemist notices serious deficiencies in their opinion, then he/she will notify Tetra Tech PM verbally or via email within 48 hours of recognizing that a significant laboratory quality deficiency has been detected that could affect this project and/or other projects. The Tetra Tech PM will relay information to the NAVFAC RPM regarding serious data or laboratory concerns.

Communication Drivers	Responsible Entity	Name	Phone Number	Procedure (Timing, Pathway To/From, etc.)
DV Corrective Actions	Tetra Tech DVM Tetra Tech PM	Joseph Samchuck Stephen Mitchell	412-921-8510 301-528-5552	If a data validation issue cannot be resolved between the Tetra Tech DV Chemist and the laboratory or the issue appears to be systemic, the Tetra Tech PM will verbally advise the NAVFAC RPM within 24 hours of notification from the DV Chemist. The NAVFAC RPM will take corrective action that is appropriate for the identified deficiency. This may include a consult with the NAVFAC QAO/Chemist.
Project Report Review	Tetra Tech PM Tetra Tech Deputy PM Tetra Tech CTO/QAO Tetra Tech Project Team NAVFAC RPM	Stephen Mitchell Sue Herbert Leroy Leonard Various Brian Helland	301-528-5552 610-382-1537 865-323-5683 Various 215-897-4912	Internal reviews will be conducted by the Tetra Tech PM and project team. Comments will be resolved internally to the satisfaction of the Tetra Tech PM. When satisfied with the resolution of all comments, the report will be submitted by the Tetra Tech PM or designee to the NAVFAC RPM in accordance with the project scope of work requirements. Upon resolution of NAVFAC comments, the report will be submitted to the NAVFAC RPM for transmittal to the regulators for review. Comments will be resolved to the satisfaction of the NAVFAC RPM, revisions will be made, and the report will be finished for final distribution and submittal to NIRIS.
Very high or unexpected PFAS concentrations that could affect DoD's relationship with the public or are perceived to represent an unusually high environmental risk	Tetra Tech PFAS POC	Theresa Thompson	832-251-5160	The Tetra Tech POC will communicate immediately with their NAVFAC counterpart to explain the findings so NAVFAC can take appropriate action

SAP Worksheet #7: Personnel Responsibilities Table

(UFP-QAPP Manual Section 2.4.3)

Name	Title/Role	Organizational Affiliation	Responsibilities
Brian Helland	RPM/ Provides oversight and daily management	NAVFAC	Oversees project implementation, including contracting, scoping, and overall financial and technical implementation of project. Approves the SAP.
Sarah Kloss	RPM/ Provides federal regulatory input and oversight	EPA Region 3	Regulatory input and oversight.
Colin Wade	Project Officer/ Provides state regulatory support input and oversight	PADEP	Regulatory input and oversight.
Lisa Senior	Hydrogeologist/ Provides regulatory input	USGS	Participates in scoping.
Dan Goode	Hydrologist/ Provides regulatory input	USGS	Participates in scoping.
Stephen Mitchell	PM/ Provides oversight and daily management	Tetra Tech	Oversees project, financial, schedule, and technical day-to-day management of the project. Oversees project implementation, including scoping, data review, and evaluation for this project. Coordinates and oversees preparation and review of Tetra Tech project deliverables. Ensures that health and safety and QA requirements are implemented.
Sue Herbert	Deputy PM/ Provides oversight and daily management	Tetra Tech	Ensures that health and safety requirements are implemented. Oversees project, financial, schedule, and technical day to day management of the project. Oversees project implementation, including scoping, data review, and evaluation for this project. Coordinates and oversees preparation and review of Tetra Tech project deliverables.
Leroy Leonard	CTO QAO/ Provides quality assurance oversight	Tetra Tech	Technical support for reviewing planning documents, reports, graphics, and figures, including data analysis, interpretation, and statistical analyses for quality.
Michelle Coffman	QAM/ Manages the Tetra Tech CLEAN QA Program	Tetra Tech	Ensures that quality aspects of the Tetra Tech CLEAN QA Program are implemented. Oversees review of the SAP, approves the SAP, oversees preparation of laboratory scopes of work, coordinates with the laboratory, and conducts data quality reviews.
Joseph Samchuck	DVM/ Directs and provides oversight of DV activities	Tetra Tech	Manages DV activities within Tetra Tech, including ensuring QA of DV deliverables, providing technical advice on data usability, and coordinating and maintaining the DV review schedule.

Name	Title/Role	Organizational Affiliation	Responsibilities
Theresa Thompson	PFAS POC/ Serves as single focal point for PFAS matters regarding Tetra Tech compliance with and implementation of NAVFAC and DoD PFAS policy and instructions	Tetra Tech	Responsible for communication of PFAS-related NAVFAC and DoD instructions with Tetra Tech team and providing quality assurance reviews of UFP-SAPs for consistency with Navy PFAS policy/instructions.
Mandy Barnhart	Project Chemist/ Serves as focal point for chemistry-related issues Sampling Coordinator/ Coordinates beginning of sampling effort/tracks samples	Tetra Tech	Coordinates analyses with laboratory chemists, ensures that the laboratory scope of work is followed, and that QA has been performed for laboratory data packages, and communicates with Tetra Tech staff. Ensures that the project meets objectives from the standpoint of laboratory performance. Provides technical advice to the Tetra Tech team on project chemistry matters. Functions as the primary interface with the subcontracted laboratory and Tetra Tech PM. Ensures completion of Tetra Tech DV. Coordinates the start of each sampling effort, ensures that field crews have resources needed to complete their tasks successfully, reviews the scope of sampling with field crews prior to the start of fieldwork, resolves questions, and updates sample tracking lists.
Chris Sinisi	FOL, SSHO/ Directs and provides oversight of routine field activities and monitors health and safety aspects of field work	Tetra Tech	Supervises, coordinates, and performs field sampling activities. Ensures that health and safety requirements are implemented during field work. Functions as the on-base communications link between field staff members and Tetra Tech PM. Oversees mobilization and demobilization of all field equipment and subcontractors. Ensures proper maintenance of site logbooks, field logbooks, and field recordkeeping. Identifies and resolves problems in the field, resolving difficulties via consultation with the Navy RPM, implementing and documenting corrective action procedures, and facilitating communication between the field team and project management. Responsible for on-base project-specific health and safety training and monitoring site conditions. Details of health and safety responsibilities are presented in the project-specific HASP.
Ricky DePaul	Data Manager/ Manages data receipt, database uploads, and data archiving	Tetra Tech	Coordinates data receipt and upload to Tetra Tech and Navy databases and manages and controls the flow of data to ensure that data are secure.

Name	Title/Role	Organizational Affiliation	Responsibilities
Stephen Gordon	Laboratory PM/ Directs and provides oversight of laboratory activities	ELLE	Coordinates analyses with laboratory chemists, ensures that the laboratory scope of work is followed, performs QA of data packages, and communicates with Tetra Tech staff.
Katherine Super	Human Health Risk Assessor / serves as technical resource	Tetra Tech	Serves as technical resource, does not implement SAP

SAP Worksheet #15: Reference Limits and Evaluation Tables

(UFP-QAPP Manual Section 2.8.1)

Matrix: Surface Water

Analytical Group: PFAS by EPA Method 1633 (EPA, 2024) by LC/MS/MS compliant with QSM 6.0 Table B-24 (DoD, 2023b)

Analyte	Chemical Abstract Survey (CAS) Number	Human Health PAL[1] (ng/L)	PAL Reference[2]	Ecological PAL[2] (ng/L)	PAL Reference[2]	Laboratory Specific Limits[3]		
						LOQ (ng/L)	LOD (ng/L)	DL (ng/L)
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	140	RSL Calc	117	Grippo, et al., 2021	2	1	0.5
Perfluorooctanoic acid (PFOA)	335-67-1	210	RSL Calc	307,000	Grippo, et al., 2021	2	1.3	0.64
Perfluorobutanesulfonic acid (PFBS)	375-73-5	21,000	RSL Calc	400,000	Grippo, et al., 2021	2	1	0.3
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	NA	NA	NA	NA	2	1.4	0.7
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	NA	NA	NA	NA	4	2.4	1.2
Perfluorodecanoic acid (PFDA)	335-76-2	NA	NA	660	Grippo, et al., 2021	2	1	0.5
Perfluorododecanoic acid (PFDoA)	307-55-1	NA	NA	72,000	Divine, et al., 2020	2	1	0.5
Perfluoroheptanoic acid (PFHpA)	375-85-9	NA	NA	870,000	Divine, et al., 2020	2	1	0.52
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	1,200	RSL Calc	5,500	Grippo, et al. 2021	2	1.1	0.57
Perfluorohexanoic acid (PFHxA)	307-24-4	31,000	RSL Calc	28,800	Grippo, et al., 2021	2	1	0.5
Perfluorononanoic acid (PFNA)	375-95-1	170	RSL Calc	2,080	Grippo, et al., 2021	2	1	0.5
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	NA	NA	NA	NA	2	1	0.5
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	NA	NA	NA	NA	2	1	0.5
Perfluoroundecanoic acid (PFUnA)	2058-94-8	NA	NA	49,000	Divine, et al., 2020	2	1	0.5
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	5	RSL Calc	NA	NA	8	4	2
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	NA	NA	NA	NA	8	7.6	2

Analyte	Chemical Abstract Survey (CAS) Number	Human Health PAL[1] (ng/L)	PAL Reference[2]	Ecological PAL[2] (ng/L)	PAL Reference[2]	Laboratory Specific Limits[3]		
						LOQ (ng/L)	LOD (ng/L)	DL (ng/L)
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	756426-58-1	NA	NA	NA	NA	8	3.8	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	NA	NA	NA	NA	8	3.8	1.5
4:2 Fluorotelomersulfonic Acid (4:2 FTS)	757124-72-4	NA	NA	NA	NA	8	3.80	1.70
6:2 Fluorotelomersulfonic Acid (6:2 FTS)	27619-97-2	NA	NA	NA	NA	8	7.6	2.5
8:2 Fluorotelomersulfonic Acid (8:2 FTS)	39108-34-4	NA	NA	NA	NA	8	7.7	2.6
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	151772-58-6	NA	NA	NA	NA	4	2	1
Perfluorobutanoic acid (PFBA)	375-22-4	34,000	RSL Calc	64,600	Grippo, et al., 2021	8	4	2
Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	113507-82-7	NA	NA	NA	NA	4	1.8	0.5
Perfluoroheptanesulfonic acid (PFHpS)	375-92-8	NA	NA	NA	NA	2	1	0.4
Perfluoro-4-methoxybutanoic acid (PFMBA)	863090-89-5	NA	NA	NA	NA	4	2	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	377-73-1	NA	NA	NA	NA	4	2	0.5
Perfluoropentanoic acid (PFPeA)	2706-90-3	NA	NA	140,000	Divine, et al., 2020	4	2	1
Perfluoropentanesulfonic acid (PFPeS)	2706-91-4	NA	NA	NA	NA	2	1	0.5
Perfluorooctanesulfonamide (PFOSA)	754-91-6	NA	NA	NA	NA	2	1	0.5
Perfluorodecanesulfonic acid (PFDS)	335-77-3	NA	NA	NA	NA	2	1	0.5
Perfluorododecanesulfonic acid (PFDoS)	79780-39-5	NA	NA	NA	NA	2	1.9	0.9
Perfluorononanesulfonic acid (PFNS)	68259-12-1	NA	NA	NA	NA	2	1	0.4
N-methyl perfluorooctanesulfonamide (NMeFOSA)	31506-32-8	NA	NA	NA	NA	2	1	0.5
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	4151-50-2	NA	NA	NA	NA	2	1	0.5
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	24448-09-7	NA	NA	NA	NA	20	10	5

Analyte	Chemical Abstract Survey (CAS) Number	Human Health PAL[1] (ng/L)	PAL Reference[2]	Ecological PAL[2] (ng/L)	PAL Reference[2]	Laboratory Specific Limits[3]		
						LOQ (ng/L)	LOD (ng/L)	DL (ng/L)
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	1691-99-2	NA	NA	NA	NA	20	10	5
3-Perfluoropropyl propanoic acid (3:3 FTCA)	356-02-5	NA	NA	NA	NA	10	5	1.5
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	914637-49-3	NA	NA	NA	NA	50	25	10
3-Perfluoroheptyl propanoic acid (7:3 FTCA)	812-70-4	NA	NA	NA	NA	50	25	10

Notes:

1 If PALs change during the PFAS RI, the most recent values will be used for comparison, upon approval from the Navy.

2 HH: (EPA) RSL calculator target hazard quotient of 0.1 used for a recreational swimmer based on November 2023 tables (EPA, 2023) based on site-specific exposure assumptions.
Eco: EPA has not developed ecological screening levels for PFAS. Therefore, ecological PALs for aquatic invertebrates and wildlife values were identified based on a review of the literature. All ecological wildlife PALs are based on Grippo et al., 2021. The aquatic organism PALs for PFOA, PFOS, PFBS, PFBA, PFDA, PFHxA, and PFNA are based on Grippo et al., 2021, and PFDoA, PFHpA, and PFUNA are based on Divine et al., 2020. Divine et al. (2020) state that wildlife values are NOAEL-based. The lower of the aquatic invertebrate and the ecological wildlife values were used and referenced in the above table.

3 If any of the laboratory limits (DL, LOD, LOQ) change during the project, the laboratory will notify Tetra Tech so the changes can be evaluated for their impact on the project.

Matrix: Sediment
Analytical Group: PFAS by EPA Method 1633 (EPA, 2024) by LC/MS/MS Compliant with QSM 6.0 Table B-24 (DoD, 2023b)

Analyte	CAS Number	Human Health PAL [1] (µg/kg)	PAL Reference[1]	Ecological PAL [2] (µg/kg)	PAL Reference [2]	Laboratory Specific Limits[3]		
						LOQ (µg/kg)	LOD (µg/kg)	DL (µg/kg)
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	85	RSL Calc	1.4	Divine, et al., 2020	0.2	0.1	0.05
Perfluorooctanoic acid (PFOA)	335-67-1	130	RSL Calc	6	Divine, et al., 2020	0.2	0.1	0.05
Perfluorobutanesulfonic acid (PFBS)	375-73-5	13,000	RSL Calc	730	Divine, et al., 2020	0.2	0.1	0.05
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	NA	NA	NA	NA	0.2	0.1	0.05
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	NA	NA	NA	NA	0.2	0.1	0.05
Perfluorodecanoic acid (PFDA)	335-76-2	NA	NA	NA	NA	0.2	0.1	0.05
Perfluorododecanoic acid (PFDoA)	307-55-1	NA	NA	NA	NA	0.2	0.1	0.05
Perfluoroheptanoic acid (PFHpA)	375-85-9	NA	NA	NA	NA	0.2	0.1	0.05
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	850	RSL Calc	NA	NA	0.2	0.1	0.05
Perfluorohexanoic acid (PFHxA)	307-24-4	21,000	RSL Calc	1,800	Divine, et al., 2020	0.2	0.1	0.05
Perfluorononanoic acid (PFNA)	375-95-1	130	RSL Calc	10	Divine, et al., 2020	0.2	0.1	0.05
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	NA	NA	NA	NA	0.2	0.1	0.05
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	NA	NA	NA	NA	0.2	0.1	0.05
Perfluoroundecanoic acid (PFUnA)	2058-94-8	NA	NA	NA	NA	0.2	0.1	0.05
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	160	RSL Calc	NA	NA	0.8	0.4	0.1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	NA	NA	NA	NA	0.8	0.4	0.2
9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	756426-58-1	NA	NA	NA	NA	0.8	0.4	0.2
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	NA	NA	NA	NA	0.8	0.4	0.2
4:2 Fluorotelomersulfonic Acid (4:2 FTS)	757124-72-4	NA	NA	NA	NA	0.8	0.4	0.2

Analyte	CAS Number	Human Health PAL [1] (µg/kg)	PAL Reference[1]	Ecological PAL [2] (µg/kg)	PAL Reference [2]	Laboratory Specific Limits[3]		
						LOQ (µg/kg)	LOD (µg/kg)	DL (µg/kg)
6:2 Fluorotelomersulfonic Acid (6:2 FTS)	27619-97-2	NA	NA	NA	NA	1	0.8	0.35
8:2 Fluorotelomersulfonic Acid (8:2 FTS)	39108-34-4	NA	NA	NA	NA	1	0.8	0.35
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	151772-58-6	NA	NA	NA	NA	0.4	0.2	0.1
Perfluorobutanoic acid (PFBA)	375-22-4	53,000	RSL Calc	1,600	Divine, et al., 2020	0.8	0.4	0.1
Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	113507-82-7	NA	NA	NA	NA	0.4	0.2	0.1
Perfluoroheptanesulfonic acid (PFHpS)	375-92-8	NA	NA	NA	NA	0.2	0.1	0.05
Perfluoro-4-methoxybutanoic acid (PFMBA)	863090-89-5	NA	NA	NA	NA	0.4	0.2	0.1
Perfluoro-3-methoxypropanoic acid (PFMPA)	377-73-1	NA	NA	NA	NA	0.4	0.2	0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	NA	NA	NA	NA	0.4	0.2	0.1
Perfluoropentanesulfonic acid (PFPeS)	2706-91-4	NA	NA	NA	NA	0.2	0.1	0.05

Notes:

1 PALs change during the course of the RI, the most recent values will be used for comparison, upon approval from the Navy.

2 (HH): For human receptors, sediment PALs were calculated for PFOA, PFOS, PFBS, PFHxS, PFNA, HFPO-DA, PFHxA, and PFBA using the EPA's RSL Calculator Sediment Module for a recreational receptor with conservative assumptions for sediment exposure (see Appendix G for RSL calculator output file). (Eco): EPA has not developed ecological screening levels for PFAS. Therefore, ecological PALs were identified based on a review of the available literature.

3 If any of the laboratory limits (DL, LOD, LOQ) change during the project, the laboratory will notify Tetra Tech so the changes can be evaluated for their impact on the project.

HH= Human Health
Eco = Ecological

SAP Worksheet #19: Field Sampling Requirements Table

(UFP-QAPP Manual Section 3.1.1)

Matrix	Analytical Group	Analytical and Preparation Method/ SOP Reference	Containers (number, size, and type)	Sample Volume	Preservation Requirements (chemical, temperature, light protected)	Maximum Holding Time [1] (preparation/ analysis)
Surface Water	PFAS	EPA Method 1633/ WI46412	1 x 500 milliliter (mL) and 1 x 600 mL high-density polyethylene bottle, no Teflon lid liner, linerless high-density polyethylene or polypropylene caps	500 mL	Samples should be protected from light and kept between 0 and 6 ºC until shipped. Samples must be shipped with sufficient ice to maintain the sample temperature below 6 ºC for a period of at least 48 hours. The laboratory must confirm that the sample temperature is between 0 and 6 ºC. Once received by the laboratory, samples may be stored at ≤ -20ºC, or at 0 to 6 ºC until sample preparation.	Aqueous samples should be analyzed as soon as possible; however, samples may be held for up to 28 days[2] when stored at 0 - 6 ºC and protected from the light. When stored at ≤ -20ºC and protected from light; aqueous samples may be held for up to 90 days[3].
Sediment	PFAS	EPA Method 1633/ WI48593	One 4 ounce, wide-mouth, high-density polyethylene jar, no Teflon lid liner, linerless high-density polyethylene or polypropylene caps	10 grams	Samples should be protected from light and kept between 0 and 6 ºC until shipped. Samples must be shipped with sufficient ice to maintain the sample temperature below 6 ºC for a period of at least 48 hours. The laboratory must confirm that the sample temperature is between 0 and 6 ºC. Samples should be shipped to the laboratory as soon as possible. Once received by the laboratory, samples must be kept at ≤ -20ºC or between 0 and 6 ºC until sample preparation.	May be held for up to 90 days[4] when stored by the laboratory in the dark at either ≤ -20ºC or between 0 and 6 ºC.

Notes:

1 Maximum holding time is calculated from the time the sample is collected to the time the sample is prepared/extracted.

2 Issues were observed with certain perfluorooctane sulfonamide ethanols and perfluorooctane sulfonamidoacetic acids after seven days if stored 0 to 6°C.

3 Stored at 0 to 4°C, issues were observed for some ether sulfonates after 28 days.
4 Samples may need to be extracted as soon as possible if nonafluoro-3,6-dioxaheptanoic acid (NFDHA) is an important analyte; the preferred storage method is ≤ -20°C.

g = Gram
HDPE = High-Density polyethylene
mL = Milliliter
oz = Ounce

SAP Worksheet #23: Analytical SOP References Table

(UFP-QAPP Manual Section 3.2.1)

Laboratory SOP Number	Title, Revision Date, and/or Number	Definitive or Screening Data	Matrix and Analytical Group	Instrument	Organization Performing Analysis	Variance to QSM? (Y/N)	Modified for Project Work? (Y/N)
WI48593	Analysis of Per and Polyfluoroalkyl Substances (PFAS) in Solid Samples by LC-MS/MS Using Draft Method 1633/ QSM 5.4 Table B24, Revision 5.1, 03/26/2024.	Definitive	Sediment/PFAS	LC/MS/MS	ELLE	N	N
WI46412	Analysis of Per and Polyfluoroalkyl Substances (PFAS) in Aqueous Samples by LC-MS/MS Using Draft Method 1633/ QSM 5.4 Table B24, Revision 5, 03/06/2024.	Definitive	Surface Water/PFAS	LC/MS/MS	ELLE	N	N
WI23588	Preventative and Corrective Maintenance for the API 4000 and AB Sciex 4500, 5500, 5500+ Liquid Chromatograph Mass Spectrometers (LC/MS/MS), Revision 4, 04/18/2023.	NA	Surface Water and Sediment/PFAS	LC/MS/MS	ELLE	N	N

Laboratory SOPs provided upon request.

SAP Worksheet #24: Analytical Instrument Calibration Table

(UFP-QAPP Manual Section 3.2.2)

**All of the requirements contained in final version of EPA Method 1633 (EPA, 2024) and QSM 6.0, Table B-24 (DoD, 2023b) must be met.

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
LC/MS/MS – PFAS by EPA Method 1633	Mass Calibration	Instrument must have a valid mass calibration following the manufacturer specified procedure prior to any sample analysis. The mass calibration must be performed at least annually, or as recommended by the instrument manufacture, whichever is more frequent and repeated on an as-needed basis (e.g., QC failures, ion masses fall outside of the instrument required mass window, major instrument maintenance is performed, or the instrument is moved). Multiple Reaction Monitoring analysis is required to achieve better sensitivity than full-scan analysis.	Calibrate the mass scale of the mass spectrometer with calibration compounds and procedures specified by the manufacturer.	Problem must be corrected. No samples, standards or blanks may be analyzed under a failing mass calibration. Mass calibration is judged on the basis of the presence or absence of the exact calibration masses (e.g., a limit of the number of masses that are “missed”). If peaks are missing or not correctly identified, adjust the mass spectrometer/mass spectrometer, and repeat the test. If the mass calibration fails, then recalibrate. If it fails again, consult manufacturer instructions on corrective maintenance. Flagging is not appropriate.	Analyst	WI46412 and WI48593

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
LC/MS/MS – PFAS by EPA Method 1633	Mass Calibration Verification	The mass calibration must be verified prior to the analysis of any standards and samples and after each subsequent mass calibration.	Mass calibration must be performed per the instrument manufacturer's instructions. Mass calibration verification must be performed using standards specified by the manufacturer, the mass calibration must also be verified with respect to the ion masses monitored by this method. Check the instrument mass resolution to ensure that it is at least unit resolution. Unit resolution must meet the manufacturer's criteria	Check the mass calibration by measuring the amount of peak drift from the expected masses. If the peak apex has shifted more than approximately 0.2 Daltons, then the instrument will need to be recalibrated following the manufacturer's instructions.	Analyst	WI46412 and WI48593
LC/MS/MS – PFAS by EPA Method 1633	Sample PFAS ID (Peak Identification)	All analytes detected in a sample, standard, blank, or QC sample.	For target analytes or extracted internal standard (EIS) to be identified, peak responses of the quantitation and confirmation ions must be at least three times the background noise level (signal to noise ratio [S/N] of 3:1). The quantitation ion must have a S/N ≥ 10:1 if there is no confirmation ion. Target analyte, EIS analyte, and non-extracted internal standard (NIS) analyte retention times (RT) must fall within ± 0.4 minutes of the predicted retention times from the midpoint standard of the initial calibration (ICAL) or initial daily calibration verification (CV).	If the S/N ratio is not met due to high background noise, the laboratory must correct the issue. If the S/N ratio is not met but the background is low, then the analyte is to be considered a non-detect.	Analyst	WI46412 and WI48593

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
			For concentrations at or above the LOQ, in-house acceptance criteria for evaluation of ion abundance ratios (IAR) must be used if project limits are not established and must not exceed 50 to 150% of the midpoint ICAL standard. The total response of all isomers (branched and linear) in the quantitative standards should be used to define the IAR. In samples, the total response should include only the branched isomer peaks that have been identified in either the quantitative or qualitative standard. If standards (either quantitative or qualitative) are not available for purchase, only the linear isomer can be identified and quantitated in samples. The ratio requirement does not apply for PFBA, PFPeA, NMeFOSE, NEtFOSE, PFMPA, and PFMBA because suitable (not detectable or inadequate S/N) secondary transitions are unavailable.	If the field sample result does not all meet the criteria stated in Sections 15.1.1 through 15.1.3 of EPA Method 1633, and all sample preparation avenues have been exhausted, the result may only be reported with a data qualifier alerting the data user that the result could not be confirmed because it did not meet the method-required criteria and therefore should be considered a tentative identification and an estimated value. If the criteria are not met for the standards, the laboratory must stop analysis of samples and correct the issue.		
LC/MS/MS – PFAS by EPA Method 1633	ICAL Standards containing both branched and linear isomers must be used when commercially available.	Run initially prior to analysis of samples and after the mass calibration verification has met all criteria, and whenever the laboratory takes an action that changes the chromatographic conditions or might change or affect the ICAL criteria, or if either the CV	One of the following two approaches must be used to evaluate the linearity of the instrument calibration: Option 1: Calculate the relative standard deviation (RSD) of the response ratio (RR) or response factor (RF) values for each target analyte and isotopically labeled compound for all ICAL standards	If the instrument sensitivity or the instrument linearity criteria for ICAL are not met, inspect the system for problems and take corrective actions to achieve the criteria. This may require the preparation and analysis of fresh calibration standards. All ICAL criteria must be met before any samples or	Analyst	WI46412 and WI48593

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
		or Instrument Sensitivity Check (ISC) acceptance criteria have not been met. Minimum 6 calibration standards for linear model and 7 calibration standards for non-linear models. The initial calibration solutions contain the entire suite of EISs, NISs, and target compounds.	that were analyzed. The RSD must be ≤ 20% to establish instrument linearity. Option 2: Calculate the relative standard error (RSE) for each target analyte and EIS compound for all the ICAL standards that were analyzed. The RSE for all method analytes must be ≤ 20% to establish instrument linearity. In addition, although not required, it may be useful to compare the actual responses for each standard to the calibration model. Differences outside of a window of 70 – 130% of the modeled concentration may be cause for concern. Sufficient instrument sensitivity is established if a signal-to-noise ratio ≥ 3:1 for the quantitation ions and the confirmation ions, or ≥ 10:1 if the analyte only has a quantitation ion, can be achieved when analyzing the lowest concentration standard within the quantitation range that the laboratory includes in its assessment of calibration linearity (Table 4 of EPA Method 1633).	required blanks are analyzed. Flagging is not appropriate.		
LC/MS/MS – PFAS by EPA Method 1633	Initial calibration verification (ICV)	Once after each ICAL, prior to sample analysis. No samples shall be analyzed until acceptance criteria for ICV has been met.	Must be made from a second source standard. All analyte concentrations must be within 70% to 130% of their true values.	Correct problem, rerun ICV. If problem persists, repeat ICAL. Flagging is not appropriate.	Analyst	WI46412 and WI48593

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
LC/MS/MS – PFAS by EPA Method 1633	RT window position establishment	Once per ICAL and at the beginning of the analytical sequence for each analyte and EIS.	Position will be set using the midpoint standard of the ICAL curve when ICAL is performed. On days when ICAL is not performed, the initial calibration verification (CV) RT can be used.	NA	Analyst	
LC/MS/MS – PFAS by EPA Method 1633	RT window width	Every field sample, standard, blank, and QC sample. After ICAL and at the beginning of analytical sequence.	For all target analytes with exact corresponding isotopically labeled analogs, method analytes must elute within ± 0.1 minutes of the associated EIS. The RTs of each target analyte, EIS, and NIS compounds must fall within ± 0.4 minutes of the midpoint standard of the ICAL or initial CV used to establish the RT windows for the samples and batch QC.	When ICAL is not performed, the initial CV retention times or the midpoint standard of the ICAL curve can be used to establish the RT window position. Correct the problem and reanalyze the samples.	Analyst	WI46412 and WI48593
LC/MS/MS – PFAS by EPA Method 1633	CCV (or CV)	Prior to sample analysis, every 10 samples or less, and at the end of the analytical sequence, by analysis of a mid-level calibration solution. CV uses the mean RRs or RFs determined from the ICAL to calculate the analyte concentrations in the verification standard. Results may not be reported without valid CCV/CV. ISC can serve as a bracketing CCV/CV.	Recovery of target analytes must be within 70 to 130% of their true value.	If the CV criterion in Section 14.3.3 of EPA Method 1633 is not met, take corrective action and reanalyze any extracts that were analyzed between the last passing CV and the one that failed. However, if an analyte in the CV failed because of high recovery, but that analyte was not detected in a sample extract associate with that failure, then that sample extract need not be reanalyzed. In some instances the laboratory may need to recalibrate the LC/MS/MS instrument according to Section 10.3 of EPA Method 1633.	Analyst	WI46412 and WI48593

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
LC/MS/MS – PFAS by EPA Method 1633	ISC	Daily, at the beginning of each analytical sequence, prior to sample analysis. No samples shall be analyzed until acceptance criteria for ISC has been met.	The S/N of the ISC standard must be greater than or equal to 3:1 the quantitation and confirmation ions that exist and must meet the ion ratio requirements in Section 15.1.3. If the analyte has no confirmation ions, then a 10:1 S/N ratio is required. ISC standard concentrations must be at LOQ. All target analyte concentrations must be within ± 30% of their true values.	If the S/N ratio requirements cannot be met, the problem must be corrected before analyses can proceed. Correct problem, rerun ISC. If problem persists, repeat ICAL. Flagging is not appropriate.	Analyst	WI46412 and WI48593
LC/MS/MS – PFAS by EPA Method 1633	Instrument Blank	At the beginning of the analytical sequence and after the analysis of high concentration samples and standards (e.g., client samples, highest calibration standard, calibration verification standard).	No analytes detected >1/2 LOQ.	If acceptance criteria are not met after the highest calibration standard, calibration must be performed using a lower concentration for the highest standard until acceptance criteria are met. If field sample analyte concentrations exceed the highest calibration standard and the same analytes in the following field sample or in consecutive following field sample(s) also exceed the instrument blank acceptance criteria (>1/2 LOQ), the affected samples shall be reanalyzed using a fresh aliquot of the sample extract.	Analyst	WI46412 and WI48593

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
				If the extract cannot be reanalyzed and re-extraction is not possible, apply qualifier to affected results and explain in the case narrative.		
LC/MS/MS – PFAS by EPA Method 1633	Bile Salt Interference Check	Daily, after ICAL and during each analytical sequence prior to analysis of all matrix types (aqueous, solid, tissue, and AFFF). No samples shall be analyzed until acceptance criteria for the bile salt standard(s) has been met.	All EPA Method 1633 requirements for evaluation of the relationship of the retention time of the bile salt peak(s) to the retention time window of PFOS must be met for all matrix types. The retention time window of PFOS applies to the retention time of all isomers of PFOS. The retention time of the bile salt(s) peak must fall out of the retention time window of PFOS by at least one minute.	NA	Analyst, Supervisor	WI46412 and WI48593
LC/MS/MS – PFAS by EPA Method 1633	Ion Ratio	All analytes detected in a sample.	Must meet the ion requirements of Section 15.1.3 of EPA Method 1633. For concentrations at or above the LOQ, the IAR must fall within ± 50% of the IAR observed in the mid-point initial calibration standard. If project-specific requirements involve reporting sample concentrations below the LOQ, the IAR must fall within ± 50% of the IAR observed in either the mid-point initial calibration standard or the initial CV.	Recalibrate if acceptance criteria is not met. Document and discuss the failure in the case narrative.	Analyst	WI46412 and WI48593

SAP Worksheet #25: Analytical Instrument and Equipment Maintenance, Testing, and Inspection Table

(UFP-QAPP Manual Section 3.2.3)

Instrument/ Equipment	Maintenance Activity	Testing Activity	Inspection Activity	Frequency	Acceptance Criteria	Corrective Action	Responsible Person	SOP Reference
LC/MS/MS	Backflush of column, injection port and pre-columns, cleaning of ion spray cone, adjustment of collision energies, others as needed	Calibration checks	Visual	As needed	Initial calibration or calibration verification passes method specifications	Perform additional maintenance prior to instrument calibration or calibration verification	ELLE Analysts	WI23588 and W48593

SAP Worksheet #26: Sample Handling System

(UFP-QAPP Manual Appendix A)

Sample Handling System
SAMPLE COLLECTION, PACKAGING, AND SHIPMENT
Sample Collection (Personnel/Organization): FOL or designee/Tetra Tech
Sample Packaging (Personnel/Organization): FOL or designee/Tetra Tech
Coordination of Shipment (Personnel/Organization): FOL or designee/Tetra Tech
Type of Shipment/Carrier: FedEx
SAMPLE RECEIPT AND ANALYSIS
Sample Receipt (Personnel/Organization): Sample Custodians/ ELLE
Sample Custody and Storage (Personnel/Organization): Sample Custodians/ ELLE
Sample Preparation (Personnel/Organization): Organic Preparation Personnel/ ELLE
Sample Determinative Analysis (Personnel/Organization): Organic Preparation Personnel/ ELLE
SAMPLE ARCHIVING
Field Sample Storage (No. of days from sample collection): 60 days from receipt
Sample Extract/Digestate Storage (No. of days from extraction/digestion): 3 months from sample digestion/extraction
Biological Sample Storage (No. of days from sample collection): NA
SAMPLE DISPOSAL
Personnel/Organization: Sample Custodians/ ELLE

SAP Worksheet #28: Laboratory QC Samples Table

(UFP-QAPP Manual Section 3.4)

**All of the requirements contained in final version of EPA Method 1633 (EPA, 2024) and QSM 6.0, Table B-24 (DoD, 2023b) must be met.

Matrix	Aqueous and Solid
Analytical Group	PFAS
Analytical Method/ SOP Reference	EPA Method 1633/WI46412 and WI48593

QC Sample	Frequency & Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	DQI	MPC
EIS Compounds	Every field sample, standard, blank, and QC sample. An aliquot of EIS solution is added to each sample prior to extraction.	In additional to the requirements of EPA Method 1633, the following must be met: 1) Isotopically labeled analogs of analytes shall be used when they are commercially available. 2) Where EPA Method 1633 does not provide EIS recovery acceptance criteria for the sample matrix under evaluation, a laboratory shall use laboratory-developed recovery acceptance criteria no wider than any acceptance criteria provided by the client. Preliminary inhouse acceptance criteria of 20-150% shall be used until laboratory acceptance criteria are developed in accordance with EPA Method 1633. 3) Where EPA Method 1633 does not provide EIS recovery	Follow the requirements listed in EPA Method 1633, Section 15.3.2 for all sample matrices. If EIS recoveries still fall outside of the acceptance range, then a diluted sample extract must be analyzed, or a smaller sample mass/volume must be extracted (Section 15.3.1). If the recovery of any EIS in the diluted sample extract is below 5%, the method does not apply to the sample being analyzed and the result may not be reported or used for permitting or regulatory compliance purposes. If all cleanup procedures in this method and EIS recovery remains outside of the acceptance range, extraction and/or cleanup procedures that are beyond this scope of this method may be needed to analyze the sample.	Analyst, Supervisor	Accuracy/ Bias	Same as Method/SOP QC Acceptance Limits.

Matrix	Aqueous and Solid
Analytical Group	PFAS
Analytical Method/ SOP Reference	EPA Method 1633/WI46412 and WI48593

QC Sample	Frequency & Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	DQI	MPC
		acceptance criteria for the sample matrix under evaluation, the lower limit of laboratory-developed acceptance criteria cannot be < 20%.	Apply qualifier to affected analyte results and document and discuss the failure in the case narrative.			
NIS Compounds	Every field sample, standard, blank, and QC sample. An aliquot of labeled NIS PFAS solution is spiked into the concentrated extract immediately prior to injection of an aliquot of the extract into the LC/MS/MS.	In additional to the requirements of EPA Method 1633, the following must be met: The NIS areas in the field samples and QC samples must be within 50 to 200% of the mean area of the corresponding NIS in the most recent initial calibration (i.e., a factor of 2). If the areas are low for all the field samples and QC samples in the batch, it suggests a loss of instrument sensitivity, while low areas in only some field or QC samples suggests a possible bad injection.	Repeat the analysis using a fresh aliquot of the extract. If failure does not confirm, report the second analysis. If the failure confirms, examine the project-specific requirements. Contact the client as to additional measures to be taken. Document and discuss the failure in the case narrative. Apply Q-flag to the result associated with the failure.	Analyst, Supervisor	Accuracy/ Bias	Same as Method/SOP QC Acceptance Limits.
Method Blank (MB)	One per preparatory batch.	In additional to the requirements of EPA Method 1633, the following must be met: No analytes detected >1/2 LOQ.	Correct the problem. If required, re-prepare and reanalyze MB and all QC samples and field samples processed with the contaminated blank if sufficient sample material is available.	Analyst, Supervisor	Accuracy/ Bias/ Contamination	Same as Method/SOP QC Acceptance Limits.

Matrix	Aqueous and Solid
Analytical Group	PFAS
Analytical Method/ SOP Reference	EPA Method 1633/WI46412 and WI48593

QC Sample	Frequency & Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	DQI	MPC
			If samples cannot be reprepared and reanalyzed , apply B-flag to all results for the specific analyte(s) in all samples in the associated preparatory batch and explain in the case narrative.			
Laboratory Control Sample (LCS) and Low-Level Laboratory Control Sample (LLLCS)	One set per preparatory batch. Shall contain all EIS, NIS, and all analytes to be reported. EPA Method 1633 equivalent to the LCS is the Ongoing Precision and Recovery Standard. EPA Method 1633 equivalent to the LLLCS is Low-Level Ongoing Precision and Recovery Standard.	In additional to the requirements of EPA Method 1633, the following must be met: 1) Where EPA Method 1633 does not provide LCS and LLLCS recovery acceptance criteria for the sample matrix under evaluation, a laboratory shall use laboratory-developed recovery acceptance criteria no wider than any acceptance criteria provided by the client. Preliminary inhouse acceptance criteria of 40-150% shall be used until acceptance criteria are developed by the laboratory in accordance with EPA Method 1633. 2) Where EPA Method 1633 does not provide LCS and LLLCS recovery acceptance criteria for the sample matrix	In additional to the requirements of EPA Method 1633, the following must be met: Correct problem. If required, reprepare and analyze the LCS and/or LLLCS and all affected QC samples and field samples in the associated preparatory batch for failed analytes if sufficient sample material is available. If the samples cannot be reprepared and analyzed, apply Q-flag to specific analyte(s) in all samples in the associated preparatory batch and explain in the case narrative.	Analyst, Supervisor	Accuracy/ Bias	Same as Method/SOP QC Acceptance Limits.

Matrix	Aqueous and Solid
Analytical Group	PFAS
Analytical Method/ SOP Reference	EPA Method 1633/WI46412 and WI48593

QC Sample	Frequency & Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	DQI	MPC
		under evaluation, the laboratory-developed acceptance criteria shall not be < 40%.				
MS and MSD	One MS/MSD pair per preparatory batch, if required.	Analyte recoveries must be within in-house LCS limits if project limits are not provided; otherwise, project limits must be met. RPD ≤ 30% (between MS and MSD).	Examine the project-specific requirements. Contact the client as to additional measures to be taken. If the analyte(s) are not listed, use inhouse LCS limits if project limits are not specified. For the specific analyte(s) in the parent sample, apply J-flag if acceptance criteria are not met and explain in the case narrative. The data shall be evaluated to determine the source of difference.	Analyst, Supervisor	Accuracy/ Bias	Same as Method/SOP QC Acceptance Limits.
Matrix Duplicate (MD) EPA Method 1633 equivalent to the MD is the laboratory duplicate	Each AFFF sample prepared using an aliquot of the field sample must be prepared in duplicate. For all other matrices, one per preparatory batch.	In additional to the requirements of EPA Method 1633, the following must be met: RPD of all analytes ≤ 30% (between sample and MD). RPD does not apply if both results are below the LOQ.	If an assignable cause isolated to only the MD is identified, reanalyze the MD or reprepare and analyze the MD if sufficient sample material is available, as indicated by the cause. Otherwise, apply qualifier to affected analyte results in the parent sample and explain in the case narrative.	Analyst, Supervisor	Precision/ Accuracy/ Bias	Same as Method/SOP QC Acceptance Limits.
AFFF Samples	Each AFFF sample. Note: This does not include AFFF samples that are to be	AFFF samples shall be subsampled in duplicate for analysis in accordance with	NA	Analyst, Supervisor	Accuracy/ Bias	Same as Method/SOP QC Acceptance Limits.

Matrix	Aqueous and Solid
Analytical Group	PFAS
Analytical Method/ SOP Reference	EPA Method 1633/WI46412 and WI48593

QC Sample	Frequency & Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	DQI	MPC
	evaluated for MIL-PRF-14385 compliance. Those AFFF samples shall be evaluated in compliance with DoD AFFF01, not EPA Method 1633. A copy of the latest version of DoD AFFF01 can be found at https://denix.osd.mil/edqw/	DoD AFFF01, Section 11.2.1 through 11.2.9. All AFFF samples shall be prepared and analyzed in duplicate in the same manner as aqueous samples (e.g., solid phase extraction, extracted internal standards, carbon cleanup, etc.).				

SAP Worksheet #30: Analytical Services Table

(UFP-QAPP Manual Section 3.5.2.3)

Matrix	Analytical Group	Sample Locations/ID Numbers	Backup Laboratory Analytical SOP	Data Package Turnaround Time	Laboratory/Organization [1] (name and address, contact person and telephone number)	Backup Laboratory/ Organization (name and address, contact person and telephone number)
Aqueous	PFAS	See Worksheet #18	PFAS by EPA Method 1633/ WI46412	21 business days to Tetra Tech	Stephen Gordon Laboratory PM Eurofins Lancaster Laboratories Environment Testing, LLC 2425 New Holland Pike Lancaster, PA 17601 412-525-0071 stephen.gordon@et.eurofinsus.com	NA
Solid	PFAS	See Worksheet #18	PFAS by EPA Method 1633/ WI48593	21 business days to Tetra Tech	Stephen Gordon Laboratory PM Eurofins Lancaster Laboratories Environment Testing, LLC 2425 New Holland Pike Lancaster, PA 17601 412-525-0071 stephen.gordon@et.eurofinsus.com	NA

Notes:

1 If Saturday shipment to ELLE is necessary, field personnel should contact the laboratory for sample delivery instructions.

SAP Worksheet # 34-36: Data Verification and Validation (Steps I and IIa/IIb) Process Table

(UFP-QAPP Manual Section 5.2.1), (UFP-QAPP Manual Section 5.2.2), (Figure 37 UFP-QAPP Manual), (Table 9 UFP-QAPP Manual)

Data Review Input	Description	Responsible for Verification (name, organization)	Step I / IIa / IIb [1]	Internal/ External
Sample Log Sheets, Chain of Custody Forms, SAP, and Laboratory Sample Login Documentation	Verify that samples were correctly identified, chain of custody records are legible, data will be traceable to the corresponding samples, all samples listed in SAP Worksheets #12, #18, and #20 were collected from intended locations, and the correct sampling and analytical methods/SOPs were assigned to samples listed on the chain of custody record. The PM will verify that the sampling plan was implemented and carried out as written and will ensure that any significant deviations are documented in the project report.	FOL and PM, Tetra Tech	I	Internal
Chain of custody Forms	Verify that the chain of custody form is complete and accurate; and was signed and dated by the sampler relinquishing the samples and by the laboratory receiving the samples. Resolve discrepancies, if possible. Alert the Tetra Tech PM verbally or via email if discrepancies are unresolvable.	FOL, Tetra Tech	I	Internal
Chain of custody Forms	Verify sample shipment completeness against the chain of custody record, verify proper sample preservation/integrity, sign to indicate receipt, note any discrepancies, and correct them as necessary. Notify the Tetra Tech Project Chemist, FOL or PM of any deviations from sample shipping requirements such as damaged sample containers, or inappropriate temperature or pH. Note uncorrectable discrepancies in the data package case narrative.	Laboratory Sample Custodian, ELLE	I	External
Analytical Calibration Standards	Verify that standards are traceable and meet contract, method, and procedural requirements, as applicable, and include Certificates of Analysis in the laboratory data package to document the traceability. If discrepancies in traceability are found, bring the discrepancies to the attention of the laboratory PM for correction.	Laboratory Analyst, ELLE	I	Internal

Data Review Input	Description	Responsible for Verification (name, organization)	Step I / IIa / IIb [1]	Internal/ External
SAP, Analytical SOPs, and Analytical Data Packages	Verify that the correct analytical methods/SOPs were applied. Establish that all method QC samples were analyzed and in control as listed in the analytical SOPs. If method QC is not in control, the Laboratory PM will contact the Tetra Tech Project Chemist or PM verbally or via email for guidance prior to laboratory data package preparation.	Laboratory PM, ELLE	I	Internal
Laboratory Analytical Data Package	Verify the analytical data package for completeness and accuracy, including Certificates of Analysis for calibration and check standards. The Laboratory QAM will sign the case narrative for each data package.	Laboratory QAM, ELLE	I	Internal
Laboratory Analytical Data Package	Review chain of custody records to ensure that the required analytical samples were collected, appropriate sample identifications were used, and correct analytical methods were applied to each sample. Verify the analytical data package for completeness and accuracy, including certificates of analysis for calibration and check standards. Obtain missing data package elements from the laboratory. Document unrecoverable elements, if any, in the DV report submitted to the Tetra Tech PM and alert the Project Chemist or PM.	Data Validator, Tetra Tech	I/IIa	External
EDDs/ Analytical Data Packages	Verify 100% of EDD results for accuracy and completeness against hard copy data package and chain of custody records at the start of validation. If required elements are missing, obtain missing elements from the laboratory before completing the validation. If any element cannot be obtained, document the omission in the DV report and identify the missing elements to the Tetra Tech Project Chemist or PM as early as possible.	Data Validator, Tetra Tech	I/IIa	External
Sample Shipment and Storage Conditions; and Holding Times for Representativeness	Verify that sample shipping, storage conditions, and holding times satisfy Worksheet #19 requirements. Document deviations from requirements in the DV report and notify the Tetra Tech Project Chemist or PM if deviations from the SAP requirements are serious enough to warrant possible data rejection. If warranted, document findings in the DV report by using the X qualifier. The Project Team will make the final decision if data is useable or will be rejected. If the data are determined to be usable, final DV qualifiers of “J”, “J+”, “J-“, or “UJ” will be applied. If the data are determined to be unusable, a final DV qualifier of “R” will be applied.	Data Validator, Tetra Tech	I/IIa	External

Data Review Input	Description	Responsible for Verification (name, organization)	Step I / IIa / IIb [1]	Internal/ External
QC Samples/MPC Compliance	Ensure that the scheduled laboratory and field QC samples were submitted for analysis and that the MPCs listed in SAP Worksheets #12, #15, #24, and #28 were met for all field samples and QC samples. Document findings in the DV report. Evaluate sample results for laboratory contamination and qualify false detections using the laboratory method/preparation blank summaries. Qualify analyte concentrations between the DL and the LOQ as estimated ("J" qualifier). Replace laboratory flags with validation qualifiers on validated data in accordance with the DV process described below and document findings in the DV report. Retain laboratory flags in the database and provide them in the DV reports to document data as received from the laboratory.	Data Validators, Tetra Tech	IIa/IIb	External
Field and Laboratory Duplicate Analyses for Precision	Verify field sampling precision by checking RPDs for field duplicate samples. Verify laboratory precision by checking RPDs or Percent Difference values from calibrations, laboratory duplicates, MS/MSDs, and LCS/LCS duplicates (LCSD). Ensure compliance with MPC accuracy and precision goals listed in Worksheets #12, #24, and #28. Document findings in the DV report.	Data Validator, Tetra Tech	I/IIb	External
SAP/Laboratory Data Packages/ EDDs	Conduct EPA Stage 4 DV on 10 percent and Stage 2B DV on 90 percent of the definitive PFAS laboratory data generated by the selected methods in accordance with the requirements of the final version of EPA Method 1633 [EPA, 2024] and QSM 6.0 Table B-24 [DoD, 2023b]) and the QC criteria listed in Worksheet #s 12, 15, 24, and 28 per DoD's (2019) General Data Validation Guidelines, DoD Data Validation Guidelines Module 6: Data Validation Procedure for Per- and Polyfluoroalkyl Substances Analysis by QSM Table B-24, Environmental Data Quality Workgroup (DoD, 2022), and Data Validation Guidelines Modules 1, 2, 3, 4, and 6 Revised Table for Sample Qualification in the Presence of Blank Contamination (DOD, 2023a). Document findings in the data validation report.	Data Validator, Tetra Tech	IIa/IIb	External

Notes:
IIa=compliance with methods, procedures, and contracts [see Table 10, page 117, UFP-QAPP manual, V.1, March 2005] (EPA, 2005).
IIb=comparison with measurement performance criteria in the SAP [see Table 11, page 118, UFP-QAPP manual, V.1, March 2005] (EPA, 2005).

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

EUROFINS LANCASTER LABORATORIES ENVIRONMENT TESTING LLC
2425 New Holland Pike, Lancaster, PA 17601
Kenneth Boley Phone: 717-556-9413

ENVIRONMENTAL

Valid To: November 30, 2024 Certificate Number: 0001.01

In recognition of the successful completion of the A2LA evaluation process (including an assessment of the laboratory's compliance with the 2009 TNI Environmental Testing Laboratory Standard, the requirements of the DoD Environmental Laboratory Accreditation Program (DoD ELAP) as detailed in version 5.4 of the DoD/DOE Quality Systems Manual for Environmental Laboratories, and ISO/IEC 17025:2017, accreditation is granted to this laboratory to perform recognized EPA methods using the following testing technologies in the analyte catagories identified below, and on the following matrices as applicable: Drinking Water, Bottled Water, Water as a Component of Food and Beverage, Non-Potable Water, Food and Feed, Aqueous and Solid Hazardous Waste, and Tissue.

Testing Technologies

Atomic Absorption/ICP-AES Spectrometry, ICP-MS Spectrometry, Gas Chromatography, Gas Chromatography/Mass Spectrometry, Gravimetry, High Performance Liquid Chromatography, Ion Chromatography, Misc.-Electronic Probes (pH, F^-, O_2), Oxygen Demand, Spectrophotometry (Visible), Spectrophotometry (Automated), Titrimetry, TCLP, Total Organic Carbon, Turbidity, Liquid Chromatography/Mass Spectrometry/Mass Spectrometry, High Resolution Gas Chromatography/Mass Spectrometry

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Demands				
COD	----------	EPA 410.4	EPA 410.4	----------
Total Organic Carbon	----------	EPA 9060A SM 5310C-2014	EPA 9060A SM 5310C-2014	EPA 9060A Lloyd Kahn
Anions				
Ammonia	----------	EPA 350.1	EPA 350.1	SM 4500-NH3 B/C-2011
Fluoride	----------	EPA 300.0 EPA 9056A	EPA 300.0 EPA 9056A	EPA 300.0 EPA 9056A
Nitrate (as N)	----------	EPA 300.0 EPA 353.2 EPA 9056A	EPA 300.0 EPA 353.2 EPA 9056A	EPA 300.0 EPA 9056A
Nitrite (as N)	----------	EPA 300.0 EPA 353.2 EPA 9056A	EPA 300.0 EPA 353.2 EPA 9056A	EPA 300.0 EPA 9056A

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Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Nitrate Nitrite Total	----------	EPA 300.0 EPA 353.2 EPA 9056A	EPA 300.0 EPA 353.2 EPA 9056A	EPA 300.0 EPA 9056A
Bromide	----------	EPA 300.0 EPA 9056A	EPA 300.0 EPA 9056A	----------
Chloride	----------	EPA 300.0 EPA 9056A	EPA 300.0 EPA 9056A	EPA 300.0 EPA 9056A
Sulfate	----------	EPA 300.0 EPA 9056A	EPA 300.0 EPA 9056A	EPA 300.0 EPA 9056A
Wet Chemistry				
Acid Volatile Sulfide	----------	----------	EPA-821-R-91-100	EPA-821-R-91-100
AVS-SEM Distillation	----------	----------	EPA-821-R-91-100	EPA-821-R-91-100
Alkalinity	----------	SM 2320B-2011	SM 2320B-2011	----------
Biochemical Oxygen Demand (BOD)	----------	SM 5210B-2016	SM 5210B-2016	----------
Carbonaceous Biochemical Oxygen Demand (CBOD	----------	SM 5210B-2016	SM 5210B-2016	----------
Corrosivity	----------	----------	SW-846 Chapter 7	SW-846 Chapter 7
Conductivity	----------	SM 2510B-2011	SM 2510B-2011	----------
Cyanide	----------	EPA 9012B	EPA 9012B	EPA 9012B
Ferrous Iron	----------	SM 3500Fe B-2011	SM 3500Fe B-2011	----------
Filterable Residue (TDS)	----------	SM 2540C-2015	SM 2540C-2015	----------
Flashpoint	----------	EPA 1010A/B	EPA 1010A/B	EPA 1010A/B
Grain Size	----------	----------	----------	ASTM D422 MOD
Hardness	----------	EPA 130.2 SM 2340B-2011 SM 2340C-2011	EPA 130.2 SM 2340B-2011 SM 2340C-2011	----------
HEM (Oil&Grease)	----------	EPA 1664B	EPA 1664B	EPA 9071B
Hexavalent Chromium Digestion	----------	----------	----------	EPA 3060A
Hexavalent Chromium	----------	EPA 218.6 EPA 7196A EPA 7199	EPA 7196A EPA 7199	EPA 7196A EPA 7199
Ignitability	----------	----------	40 CFR 261.21	40 CFR 261.21
Non-filterable Residue (TSS)	----------	SM 2540D-2015	SM 2540D-2015	----------
Orthophosphate	----------	EPA 365.3	EPA 365.3	----------
Paint Filter	----------	----------	----------	EPA 9095B
pH	----------	SM 4500 H+B-2011 EPA 9040B/C	EPA 9040B/C	EPA 9045C/D
Phenol	----------	EPA 9066	EPA 9066	----------
Reactivity Prep	----------	----------	SW-846 Chapter 7.3	SW-846 Chapter 7.3
Reactive Cyanide	----------	----------	EPA 9012B	EPA 9012B
Reactive Sulfide	----------	----------	EPA 9034	EPA 9034

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
SGT-HEM (Total Petroleum Hydrocarbons)	----------	EPA 1664B	EPA 1664B	EPA 9071B
Sulfide	----------	EPA 376.1 EPA 376.2 SM 4500 S2D-2011 SM 4500 S2F-2011	EPA 376.1 EPA 376.2 SM 4500 S2D-2011 SM 4500 S2F-2011	----------
Total Kjeldahl Nitrogen (TKN)	----------	EPA 351.2	EPA 351.2	EPA 351.2
Total Phosphorus	----------	EPA 365.1 SM 4500P F-2011	EPA 365.1 SM 4500P F-2011	EPA 365.1 SM 4500P F-2011
Total Residue	----------	SM 2540B-2015	SM 2540B-2015	SM 2540G-2015
Metals				
Metals Digestion	----------	EPA 3005A	EPA 3005A	EPA 3050B
Aluminum	EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010D EPA 6020B	EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Antimony	EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010D EPA 6020B	EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Arsenic	EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010D EPA 6020B	EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Barium	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010D EPA 6020B	EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Beryllium	EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010D EPA 6020B	EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Boron	----------	EPA 200.7 EPA 6010D	EPA 6010D	EPA 6010D
Cadmium	EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010D EPA 6020B	EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Calcium	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010D EPA 6020B	EPA 6010D EPA 6020B	EPA 6010D EPA 6020B

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Chromium	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010D EPA 6020B	EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Cobalt	EPA 200.7	EPA 200.7 EPA 200.8 EPA 6010D EPA 6020B	EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Copper	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010D EPA 6020B	EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Iron	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010D EPA 6020B	EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Lead	EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010D EPA 6020B	EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Lithium	EPA 200.7	EPA 200.7 EPA 6010D	EPA 6010D	EPA 6010D
Molybdenum	----------	EPA 200.7 EPA 200.8 EPA 6010D EPA 6020B	EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Magnesium	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010D EPA 6020B	EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Manganese	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010D EPA 6020B	EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Mercury	EPA 245.1	EPA 245.1 EPA 7470A	EPA 245.1 EPA 7470A	EPA 7471B
Nickel	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010D EPA 6020B	EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Potassium	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010D EPA 6020B	EPA 6010D EPA 6020B	EPA 6010D EPA 6020B

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Selenium	EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010D EPA 6020B	EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Silicon	----------	EPA 200.7 EPA 6010D	EPA 6010D	EPA 6010D
Silver	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010D EPA 6020B	EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Sodium	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010D EPA 6020B	EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Strontium	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010D EPA 6020B	EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Sulfur	EPA 200.7	EPA 200.7 EPA 6010D	EPA 6010D	EPA 6010D
Thallium	EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010D EPA 6020B	EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Thorium	----------	EPA 6010D	EPA 6010D	EPA 6010D
Tin	EPA 200.7	EPA 200.7 EPA 6010D	EPA 6010D	EPA 6010D
Titanium	----------	EPA 200.7 EPA 200.8 EPA 6010D	EPA 6010D	EPA 6010D
Tungsten	----------	EPA 6010D	EPA 6010D	EPA 6010D
Uranium	----------	EPA 200.8 EPA 6020B	EPA 6020B	EPA 6020B
Vanadium	EPA 200.7	EPA 200.7 EPA 200.8 EPA 6010D EPA 6020B	EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Zinc	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010D EPA 6020B	EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Zirconium	----------	EPA 6010D	EPA 6010D	EPA 6010D
Simulatneously Extracted Metals (SEM) by EPA-821-R-91-100				
Aluminum			EPA 6010D EPA 6020B	EPA 6010D EPA 6020B

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Antimony			EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Arsenic			EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Barium			EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Beryllium			EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Cadmium			EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Calcium			EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Chromium			EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Cobalt			EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Copper			EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Iron			EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Lead			EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Molybdenum			EPA 6020B	EPA 6020B
Magnesium			EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Manganese			EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Mercury			EPA 7470A	EPA 7470A
Nickel			EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Potassium			EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Selenium			EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Silver			EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Sodium			EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Strontium			EPA 6020B	EPA 6020B

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Thallium			EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Tin			EPA 6020B	EPA 6020B
Titanium			EPA 6020B	EPA 6020B
Vanadium			EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Zinc			EPA 6010D EPA 6020B	EPA 6010D EPA 6020B
Purgeable Organics (Volatiles)				
Volatile Preparation	----------	EPA 5030C	EPA 5030C	EPA 5035A
Acetone	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Acetonitrile	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Acrolein	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Acrylonitrile	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Allyl chloride	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
tert-Amyl Alcohol	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
tert-Amyl Methyl Ether	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
tert-Butyl Alcohol	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
tert-Butyl Formate	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Benzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Bromobenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Bromochloromethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Bromodichloromethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Bromoform	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Bromomethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
2-Butanone	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
n-Butylbenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
sec-Butylbenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
tert-Butylbenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Carbon disulfide	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Carbon tetrachloride	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
2-Chloro-1,3-butadiene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Chloroacetonitrile	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Chlorobenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1-Chlorobutane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Chlorodifluoromethane	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Chloroethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
2-Chloroethyl Vinyl Ether	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Chloroform	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1-Chlorohexane	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Chloromethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
2-Chlorotoluene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
4-Chlorotoluene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Cyclohexane	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Cyclohexanone	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Di-Isopropyl ether	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Dibromochloromethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,2-Dibromo-3-chloropropane	EPA 524.2	EPA 8260C/D EPA 8011	EPA 8260C/D EPA 8011	EPA 8260C/D
Dibromomethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,2-Dibromoethane (EDB)	----------	EPA 8260C/D EPA 8011	EPA 8260C/D EPA 8011	EPA 8260C/D
1,2-Dichlorobenzene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,3-Dichlorobenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,4-Dichlorobenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
trans-1,4-dichloro-2-butene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Dichlorodi-fluoromethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,1-Dichloroethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,2-Dichloroethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,1-Dichloroethene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
cis-1,2-Dichloroethene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
trans-1,2-Dichloroethene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Dichlorofluoromethane	EPA 524.2	----------	----------	----------
1,2-Dichloropropane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,3-Dichloropropane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
2,2-Dichloropropane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,1-Dichloropropene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
cis-1,3-Dichloropropene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
trans-1,3-Dichloropropene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,4-Dioxane	----------	EPA 8260C/D EPA 8260C/D SIM	EPA 8260C/D EPA 8260C/D SIM	EPA 8260C/D EPA 8260C/D SIM
Ethanol	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Ethylbenzene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Ethyl ether	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Ethyl Methacrylate	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Ethyl Tert-Butyl Ether	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Freon-113	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Gasoline Range Organics (GRO) [Volatile Petroleum Hydrocarbons (VPH)]	----------	EPA 8015C EPA 8015D EPA 8260C/D NW TPH-Gx MA VPH AK101	EPA 8015C EPA 8015D EPA 8260C/D NW TPH-Gx MA VPH AK101	EPA 8015C EPA 8015D EPA 8260C/D NW TPH-Gx MA VPH AK101
Heptane	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Hexane	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
2-Hexanone	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Hexachlorobutadiene	EPA 524.2			
Hexachloroethane	EPA 524.2			
Isopropyl Alcohol	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Isopropylbenzene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,4-Isopropyltoluene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Methylacrylonitrile	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Methyl Acetate	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Methyl Acrylate	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Methyl Iodide	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Methylene Chloride	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Methyl Methacrylate	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Methyl Tert-Butyl Ether	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
4-Methyl-2-pentanone	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Methylcyclohexane	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
2-Nitropropane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Naphthalene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Pentachloroethane	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Propionitrile	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
n-Propylbenzene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Styrene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Tert-Amyl Ethyl Ether	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,1,1,2-Tetrachloroethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,1,2,2-Tetrachloroethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Tetrachloroethene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Tetrahydrofuran	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Toluene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,2,3-Trichlorobenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,2,4-Trichlorobenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,1,1-Trichloroethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,1,2-Trichloroethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Trichloroethene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Trichlorofluoromethane	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
1,2,3-Trichloropropane	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,2,4-Trimethylbenzene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,3,5-Trimethylbenzene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
130BVinyl Acetate	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Vinyl Chloride	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Xylenes, Total	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,2-Xylene (o-Xylene)	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,3+1,4-Xylene (m+p Xylene)	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Extractable Organics (Semivolatiles)				
Acenaphthene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Acenaphthylene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Acetophenone	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Acetylaminofluorene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Alkylated PAHs	----------	EPA 8270D/E SIM	EPA 8270D/E SIM	EPA 8270D/E SIM
4-Aminobiphenyl	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Amino-4,6-dinitrotoluene	----------	EPA 8330B	EPA 8330B	EPA 8330B MOD
4-Amino-2,6-dinitrotoluene	----------	EPA 8330B	EPA 8330B	EPA 8330B MOD
Aniline	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Anthracene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Atrazine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Benzaldehyde	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Benzidine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Benzoic acid	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Benzo (a) anthracene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Benzo (b) fluoranthene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Benzo (k) fluoranthene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Benzo (ghi) perylene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Benzo (a) pyrene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Benzo (e) pyrene	----------	EPA 8270D/E SIM	EPA 8270D/E SIM	EPA 8270D/E SIM
Benzyl Alcohol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Biphenyl	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
bis (2-Chloroethoxy) Methane	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
bis (2-Chloroethyl) Ether	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
bis (2-Ethylhexyl) Phthalate	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
4-Bromophenylphenyl Ether	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Butyl benzyl Phthalate	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Caprolactam	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Carbazole	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Carbon Range Organics C8-C44 (including subsets of this range i.e. HRO, MRO, ORO, RRO)	----------	EPA 8015C EPA 8015D	EPA 8015C EPA 8015D	EPA 8015C EPA 8015D
4-Chloroaniline	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
4-Chloro-3-methylphenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Chlorobenzilate	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1-Chloronaphthalene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Chloronaphthalene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Chlorophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
4-Chlorophenyl phenyl ether	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Chrysene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Cresols (Methyl phenols)	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
cis-/trans-Diallate	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2,4-Diamino-6-nitrotoluene	----------	EPA 8330B	EPA 8330B	EPA 8330B MOD
2,6-Diamino-4-nitrotoluene	----------	EPA 8330B	EPA 8330B	EPA 8330B MOD
Dibenzo (a,h) acridine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Dibenzo (a,h) anthracene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Dibenzofuran	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
1,2-Dichlorobenzene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1,3-Dichlorobenzene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1,4-Dichlorobenzene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
3,3-Dichlorobenzidine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Diesel Range Organics (DRO) [Extractable Petroleum Hydrocarbons (EPH)]	----------	EPA 8015C EPA 8015D NWTPH DX MA EPH TX1005 AK102/103 AK102/103-SV	EPA 8015C EPA 8015D NWTPH DX MA EPH TX1005 AK102/103 AK102/103-SV	EPA 8015C EPA 8015D NWTPH DX MA EPH TX1005 AK102/103

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
2,4-Dichlorophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2,6-Dichlorophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Diethyl Phthalate	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Dimethoate	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
p-Dimethylaminoazobenze	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
7,12-Dimethylbenz (a) anthracene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2,4-Dimethylphenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Dimethyl Phthalate	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
3,3'-Dimethylbenzidine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Di-n-butyl Phthalate	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Di-n-octyl phthalate	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
3,5-Dinitroaniline	----------	EPA 8330B	EPA 8330B	EPA 8330B MOD
1,3-Dinitrobenzene	----------	EPA 8270D/E EPA 8330B	EPA 8270D/E EPA 8330B	EPA 8270D/E EPA 8330B MOD
1,4-Dinitrobenzene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2,4-Dinitrophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2,4-Dinitrotoluene	----------	EPA 8270D/E EPA 8330B	EPA 8270D/E EPA 8330B	EPA 8270D/E EPA 8330B MOD
2,6-Dinitrotoluene	----------	EPA 8270D/E EPA 8330B	EPA 8270D/E EPA 8330B	EPA 8270D/E EPA 8330B MOD
1,4-Dioxane	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Diphenylamine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Diphenyl ether	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1,2-Diphenylhydrazine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Ethyl Methanesulfonate	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Fluoroanthene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Fluorene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Hexachlorobenzene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Hexachlorobutadiene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Hexachlorocyclo-pentadiene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Hexachloroethane	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Hexachloropropene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	----------	EPA 8330B	EPA 8330B	EPA 8330B MOD

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Indeno (1,2,3-cd) Pyrene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Isodrin	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Isophorone	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Isosafrole	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
3-Methycholanthrene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Methyl-4,6-dinitrophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Methyl methane sulfonate	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1-Methylnaphthalene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
2-Methylnaphthalene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
2-Methylphenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
4-Methylphenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Naphthalene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
1,4-Naphthoquinone	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1-Naphthylamine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Naphthylamine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
4-Nitroquinoline-1-oxide	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Nitroaniline	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
3-Nitroaniline	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
4-Nitroaniline	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Nitrobenzene	----------	EPA 8270D/E EPA 8330B	EPA 8270D/E EPA 8330B	EPA 8270D/E EPA 8330B MOD
Nitroglycerin	----------	EPA 8330B	EPA 8330B	EPA 8330B MOD
2-Nitrophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
4-Nitrophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Nitrotoluene	----------	EPA 8330B	EPA 8330B	EPA 8330B MOD
3-Nitrotoluene	----------	EPA 8330B	EPA 8330B	EPA 8330B MOD
4-Nitrotoluene	----------	EPA 8330B	EPA 8330B	EPA 8330B MOD
5-Nitro-o-toluidine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
n-Nitroso-di-n-butylamine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
n-Nitrosodiethylamine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
n-Nitrosodimethylamine	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
n-Nitrosomethylethylamine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
n-Nitrosomorpholine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
n-Nitrosodi-n-propylamine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
n-Nitrosodiphenylamine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
n-Nitrosopiperidine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
n-Nitrosopyrrolidine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	----------	EPA 8330B	EPA 8330B	EPA 8330B MOD
2,2-Oxybis (1-chloropropane)	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Pentachlorobenzene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Pentachloronitrobenzene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Pentachlorophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Pentaerythritol Tetranitrate (PETN)	----------	EPA 8330B	EPA 8330B	EPA 8330B MOD
Perylene	----------	EPA 8270D/E SIM	EPA 8270D/E SIM	EPA 8270D/E SIM
Phenacetin	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Phenanthrene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Phenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Picoline	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Pronamide	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Pyrene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Pyridine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Safrole	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1,2,4,5- Tetrachlorobenzene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2,3,4,6-Tetrachlorophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Tetraethyl dithiopyrophosphate	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Tetraethy lead	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Tetryl	----------	EPA 8330B	EPA 8330B	EPA 8330B MOD
Thionazin	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
o-Toluidine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1,2,4-Trichlorobenzene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1,3,5-Trinitrobenzene	----------	EPA 8330B	EPA 8330B	EPA 8330B MOD
2,4,5-Trichlorophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2,4,6-Trichlorophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
O,O,O-Tri-ethylphosphorothioate	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2,4,6-Trinitrotoluene	----------	EPA 8330B	EPA 8330B	EPA 8330B MOD
Organochlorine Pesticides				
Aldrin	----------	EPA 8081B	EPA 8081B	EPA 8081B
alpha-BHC	----------	EPA 8081B	EPA 8081B	EPA 8081B
beta-BHC	----------	EPA 8081B	EPA 8081B	EPA 8081B
delta-BHC	----------	EPA 8081B	EPA 8081B	EPA 8081B
gamma-BHC (Lindane)	----------	EPA 8081B	EPA 8081B	EPA 8081B
alpha-Chlordane	----------	EPA 8081B	EPA 8081B	EPA 8081B
Chlordane (Technical)	----------	EPA 8081B	EPA 8081B	EPA 8081B
2,4'-DDD	----------	EPA 8081B	EPA 8081B	EPA 8081B
2,4'-DDE	----------	EPA 8081B	EPA 8081B	EPA 8081B
2,4'-DDT	----------	EPA 8081B	EPA 8081B	EPA 8081B
4,4'-DDD	----------	EPA 8081B	EPA 8081B	EPA 8081B

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
4,4'-DDE	----------	EPA 8081B	EPA 8081B	EPA 8081B
4,4'-DDT	----------	EPA 8081B	EPA 8081B	EPA 8081B
Dieldrin	----------	EPA 8081B	EPA 8081B	EPA 8081B
Dinoseb	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Endosulfan I (alpha)	----------	EPA 8081B	EPA 8081B	EPA 8081B
Endosulfan II (beta)	----------	EPA 8081B	EPA 8081B	EPA 8081B
Endosulfan Sulfate	----------	EPA 8081B	EPA 8081B	EPA 8081B
Endrin	----------	EPA 8081B	EPA 8081B	EPA 8081B
Endrin Aldehyde	----------	EPA 8081B	EPA 8081B	EPA 8081B
Endrin Ketone	----------	EPA 8081B	EPA 8081B	EPA 8081B
gamma-Chlordane	----------	EPA 8081B	EPA 8081B	EPA 8081B
Heptachlor	----------	EPA 8081B	EPA 8081B	EPA 8081B
Heptachlor Epoxide	----------	EPA 8081B	EPA 8081B	EPA 8081B
Hexachlorobenzene	----------	EPA 8081B	EPA 8081B	EPA 8081B
Hexachlorocyclopentadiene	----------	EPA 8081B	EPA 8081B	EPA 8081B
Methoxychlor	----------	EPA 8081B	EPA 8081B	EPA 8081B
Mirex	----------	EPA 8081B	EPA 8081B	EPA 8081B
Toxaphene	----------	EPA 8081B	EPA 8081B	EPA 8081B
PCBs (Aroclors)				
PCB-1016 (Arochlor)	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB-1221	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB-1232	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB-1242	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB-1248	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB-1254	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB-1260	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB-1262	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB-1268	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB congeners (209)	----------	EPA 1668A EPA 1668C	EPA 1668A EPA 1668C	EPA 1668A EPA 1668C
Herbicides				
2,4,5-T	----------	EPA 8151A	EPA 8151A	EPA 8151A
2,4,5-TP (Silvex)	----------	EPA 8151A	EPA 8151A	EPA 8151A
2,4-D	----------	EPA 8151A	EPA 8151A	EPA 8151A
2,4-DB	----------	EPA 8151A	EPA 8151A	EPA 8151A
Dalapon	----------	EPA 8151A	EPA 8151A	EPA 8151A
Dicamba	----------	EPA 8151A	EPA 8151A	EPA 8151A
Dichlorprop	----------	EPA 8151A	EPA 8151A	EPA 8151A
Dinoseb	----------	EPA 8151A	EPA 8151A	EPA 8151A
MCPA	----------	EPA 8151A	EPA 8151A	EPA 8151A
MCPP	----------	EPA 8151A	EPA 8151A	EPA 8151A
Pentachlorophenol	----------	EPA 8151A	EPA 8151A	EPA 8151A
PCB Homologues				
Monochlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Dichlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Trichlorobiphenyls	----------	EPA 680	EPA 680	EPA 680

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Tetrachlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Pentachlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Hexachlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Heptachlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Octachlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Nonachlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Decachlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Dioxins/Furans				
2,3,7,8-TCDD	EPA 1613B	EPA 8290A	EPA 8290A	EPA 8290A
2,3,7,8-TCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,7,8-PeCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
2,3,4,7,8-PeCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,7,8-PeCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,4,7,8-HxCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,6,7,8-HxCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
2,3,4,6,7,8-HxCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,7,8,9-HxCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,4,7,8,-HxCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,6,7,8-HxCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,7,8,9-HxCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,4,6,7,8-HpCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,4,7,8,9-HpCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,4,6,7,8-HpCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
OCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
OCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
Total HpCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
Total HpCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
Total HxCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
Total HxCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
Total PeCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
Total PeCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
Total TCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
Total TCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
Misc. Headspace Analysis				
Carbon dioxide	----------	RSK-175	RSK-175	----------
Ethane	----------	RSK-175	RSK-175	----------
Ethene	----------	RSK-175	RSK-175	----------
Methane	----------	RSK-175	RSK-175	----------
Acetylene	----------	RSK-175	RSK-175	----------
Propane	----------	RSK-175	RSK-175	----------
Hazardous Waste Characteristics				
Toxicity Characteristic Leaching Procedure	----------	----------	EPA 1311	EPA 1311
Synthetic Precipitation Leaching Procedure	----------	----------	EPA 1312	EPA 1312

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
ASTM Leaching Procedure	----------	----------	ASTM D3987-12	ASTM D3987-12
Other				
Perchlorate	----------	EPA 6850	EPA 6850	EPA 6850
Hydrazine	----------	EPA 8315A MOD	EPA 8315A MOD	EPA 8315A MOD
Formaldehyde	----------	----------	EPA 8315A	EPA 8315A
Methylhydrazine	----------	EPA 8315A MOD	EPA 8315A MOD	EPA 8315A MOD
1,1-Dimethylhydrazine	----------	EPA 8315A MOD	EPA 8315A MOD	EPA 8315A MOD
Acetic Acid	----------	EPA 8015D	EPA 8015D	----------
Butryic acid	----------	EPA 8015D	EPA 8015D	----------
Lactic Acid	----------	EPA 8015D	EPA 8015D	----------
Propionic Acid	----------	EPA 8015D	EPA 8015D	----------
Pyruvic Acid	----------	EPA 8015D	EPA 8015D	----------
Citric Acid	----------	EPA 8015D	EPA 8015D	----------
Formic Acid	----------	EPA 8015D	EPA 8015D	----------
Oxalic Acid	----------	EPA 8015D	EPA 8015D	----------
Quinic Acid	----------	EPA 8015D	EPA 8015D	----------
Succinic Acid	----------	EPA 8015D	EPA 8015D	----------
Tartaric Acid	----------	EPA 8015D	EPA 8015D	----------
Volatile Preparation	----------	EPA 5030C	EPA 5030C	EPA 5035A
Organic Extraction/Cleanup	----------	EPA 3510C EPA 3511 EPA 3660B, 3620C, 3665A	EPA 3510C EPA 3511 EPA 3660B, 3620C, 3665A	EPA 3546 EPA 3550C EPA 3660B, 3620C, 3665A, 3640A

Parameter/Analyte	Drinking Water	Nonpotable Water	Solid Haz.Waste	Tissue
Per and Polyfluoroalkyl Substances (PFAS)				
N-ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	EPA 537 EPA 537.1	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
N-methyl perfluoroctanesulfonamidoacetic Acid (NMeFOSAA)	EPA 537 EPA 537.1	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
Perfluorobutanesulfonic Acid (PFBS)	EPA 537 EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	EPA Draft Method 1633 Draft 3

Parameter/Analyte	Drinking Water	Nonpotable Water	Solid Haz.Waste	Tissue
		Draft 3	Draft 3	
Perfluorodecanoic Acid (PFDA) CASRN: 335-76-2	EPA 537 EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
Perfluorododecanoic Acid (PFDoA)	EPA 537 EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
Perfluoroheptanoic Acid (PFHpA) CASRN: 375-85-9	EPA 537 EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
Perfluorohexanesulfonic Acid (PFHxS) CASRN: 355-46-4	EPA 537 EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
Perfluorohexanoic Acid (PFHxA)	EPA 537 EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
Perfluorononanoic Acid (PFNA)	EPA 537 EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
Perfluorooctanesulfonic Acid (PFOS)	EPA 537 EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
Perfluorooctanoic Acid (PFOA)	EPA 537 EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	EPA Draft Method 1633 Draft 3

Parameter/Analyte	Drinking Water	Nonpotable Water	Solid Haz.Waste	Tissue
		Draft 3	Draft 3	
Perfluorotetradecanoic Acid (PFTeDA) CASRN: 376-06-7	EPA 537 EPA 537.1	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
Perfluorotridecanoic Acid (PFTrDA) CASRN: 72629-94-8	EPA 537 EPA 537.1	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
Perfluoroundecanoic Acid (PFUnA) CASRN: 2058-94-8	EPA 537 EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
Hexafluoropropylene oxide dimer acid (HF- PODA)	EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
4,8-Dioxa-3*H*-perfluorononanoic acid (ADONA)	EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
9-Chlorohexadecafluoro-3-oxanonane-1- sulfonic acid (9Cl-PF3ONS)	EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
11-Chloroeicosafluoro-3-oxaundecane-1- sulfonic acid (11Cl-PF3OUdS)	EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
Perfluorobutanoic Acid (PFBA)	EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3

Parameter/Analyte	Drinking Water	Nonpotable Water	Solid Haz.Waste	Tissue
Perfluoropentanoic Acid (PFPeA) CASRN: 2706-90-3	EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2FTS)	EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS) CASRN: 39108-34-4	EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
Perfluoropentanesulfonic Acid (PFPeS)	EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS) CASRN: 27619-97-2	EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
Perfluoroheptanesulfonic Acid (PFHpS) CASRN: 375-92-8	EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
Perfluorononanesulfonic Acid (PFNS)	----------	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
Perfluorodecanesulfonic Acid (PFDS)	----------	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3

Parameter/Analyte	Drinking Water	Nonpotable Water	Solid Haz.Waste	Tissue
10:2 Fluorotelomersulfonic Acid (10:2-FTS)	----------	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15	----------
Perfluorododecanesulfonic Acid (PFDoS)	----------	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
Perfluorohexadecanoic Acid (PFHxDA)	----------	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15	----------
Perfluorooctadecanoic Acid (PFODA)	----------	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15	----------
Perfluorooctanesulfonamide (PFOSA)	----------	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE) CASRN: 24448-09-7	----------	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
N-methyl perfluorooctanesulfonamide (NMeFOSA)	----------	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	----------	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
N-ethylperfluorooctanesulfonamide (NEtFOSA)	----------	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3

Parameter/Analyte	Drinking Water	Nonpotable Water	Solid Haz.Waste	Tissue
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
Perfluoro-3-methoxypropanoic acid (PFMPA) CASRN: 377-73-1	EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
Perfluoro-4-methoxybutanoic acid (PFMBA)	EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
3-Perfluoropropylpropanoic acid (3:3 FTCA) CASRN: 356-02-5	---	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
2*H*,2*H*,3*H*,3*H*-Perfluorooctanoic acid (5:3 FTCA)	---	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3
3-Perfluoroheptylpropanoic acid (7:3 FTCA) CASRN: 812-70-4	---	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633 Draft 3	EPA Draft Method 1633 Draft 3

In addition, in recognition of the successful completion of the A2LA evaluation process including an assessment of the laboratory's compliance with ISO IEC 17025:2017, the 2009 TNI Environmental Testing Laboratory Standard, and for the test methods applicable to Kentucky Statute KRS 224.60-130(2)(a), and for the test methods applicable to the Wyoming Storage Tank Remediation Laboratory Accreditation Program), accreditation is granted to this laboratory to perform recognized EPA methods using the following testing technologies and in the analyte categories identified below:

Testing Technologies

Atomic Absorption/ICP-AES Spectrometry, ICP-MS Spectrometry, Gas Chromatography, Gas Chromatography/Mass Spectrometry, Gravimetry, High Performance Liquid Chromatography, Ion Chromatography, Misc.-Electronic Probes (pH, F^-, O_2), Oxygen Demand, Spectrophotometry (Visible), Spectrophotometry (Automated), Titrimetry, TCLP, Total Organic Carbon, Turbidity, Liquid Chromatography/Mass Spectrometry/Mass Spectrometry, High Resolution Gas Chromatography/Mass Spectrometry

Parameter/Analyte	Tissue	Nonpotable Water	Solid Hazardous Waste	
			Aqueous	Solid
Other				
Perchlorate	Food & Food Products EPA 6850	EPA 6850	EPA 6850	EPA 6850
Hydrazine	----------	EPA 8315A MOD	EPA 8315A MOD	EPA 8315A MOD
Methylhydrazine	----------	EPA 8315A MOD	EPA 8315A MOD	EPA 8315A MOD
1,1-Dimethylhydrazine	----------	EPA 8315A MOD	EPA 8315A MOD	EPA 8315A MOD
Volatile Preparation	----------	EPA 5030C	EPA 5030C	EPA 5035A
Organic Extraction/ Cleanup	EPA 3546 EPA 3550C EPA 3660B EPA 3620C EPA 3665A EPA 3640A	EPA 3510C EPA 3511 EPA 3660B EPA 3620C EPA 3665A	EPA 3510C EPA 3511 EPA 3660B EPA 3620C EPA 3665A	EPA 3546 EPA 3550C EPA 3660B EPA 3620C EPA 3665A EPA 3640A

Parameter/Analyte	Tissue	Nonpotable Water	Solid Hazardous Waste	
			Aqueous	Solid
Kentucky UST Program				
Metals				
Arsenic	----------	----------	EPA 6010B	EPA 6010B
Barium	----------	----------	EPA 6010B	EPA 6010B
Cadmium	----------	----------	EPA 6010B	EPA 6010B
Chromium	----------	----------	EPA 6010B	EPA 6010B
Lead	----------	----------	EPA 6010B	EPA 6010B
Mercury	----------	----------	EPA 7470A	EPA 7471A
Selenium	----------	----------	EPA 6010B	EPA 6010B
Silver	----------	----------	EPA 6010B	EPA 6010B
Purgeable Organics (Volatiles)				

Parameter/Analyte	Tissue	Nonpotable Water	Solid Hazardous Waste	
			Aqueous	Solid
Diesel Range Organics (DRO)	----------	EPA 8015C EPA 8015D	EPA 8015C EPA 8015D	EPA 8015C EPA 8015D
Gasoline Range Organics (GRO)	----------	EPA 8015C EPA 8015D	EPA 8015C EPA 8015D	EPA 8015C EPA 8015D
Wyoming Storage Tank Program				
Metals				
Cadmium	----------	----------	EPA 6010C	EPA 6010C
Chromium	----------	----------	EPA 6010C	EPA 6010C
Chromium (Total, hexavalent)	----------	----------	EPA 7196A	EPA 7196A
Lead	----------	----------	EPA 6010C	EPA 6010C
Purgeable Organics (Volatiles)				
Volatile Preparation	----------	----------	EPA 5030C	EPA 5035A
Benzene	----------	----------	EPA 8260D	EPA 8260D
1,2-Dichloroethane	----------	----------	EPA 8260D	EPA 8260D
1,2-Dibromoethane	----------	----------	EPA 8011	EPA 8011
Diisopropyl Ether	----------	----------	EPA 8260D	EPA 8260D
Ethyl Benzene	----------	----------	EPA 8260D	EPA 8260D
Ethyl tert-butyl Ether	----------	----------	EPA 8260D	EPA 8260D
Methyl tert-butyl Ether	----------	----------	EPA 8260D	EPA 8260D
Naphthalene	----------	----------	EPA 8260D	EPA 8260D
Toluene	----------	----------	EPA 5030C EPA 8260D	EPA 8260D
Tert-amyl Methyl Ether	----------	----------	EPA 8260D	EPA 8260D
Tert-butyl Alcohol	----------	----------	EPA 8260D	EPA 8260D
Xylenes, total	----------	----------	EPA 8260D	EPA 8260D
Gasoline Range Organics (GRO C6-C10)	----------	----------	EPA 8260D	EPA 8260D
Extractable Organics (Semivolatiles)				
Diesel Range Organics (DRO C10-C32)	----------	----------	EPA 8015C w/ EPA 3630 cleanup	EPA 8015C w/ EPA 3630 cleanup

In recognition of the successful completion of the A2LA evaluation process, including an assessment of the laboratory's compliance with ISO/IEC 17025:2017 accreditation is granted to this laboratory to perform recognized EPA methods using the following testing technologies and, in the analyte, categories identified below:

Food and Feed (WHO 29)	**Food/Feed**
2,3,7,8-TCDD	EPA 1613B
2,3,7,8-TCDF	EPA 1613B
1,2,3,7,8-PeCDF	EPA 1613B
2,3,4,7,8-PeCDF	EPA 1613B
1,2,3,7,8-PeCDD	EPA 1613B
1,2,3,4,7,8-HxCDF	EPA 1613B
1,2,3,6,7,8-HxCDF	EPA 1613B
2,3,4,6,7,8-HxCDF	EPA 1613B
1,2,3,7,8,9-HxCDF	EPA 1613B
1,2,3,4,7,8-HxCDD	EPA 1613B
1,2,3,6,7,8-HxCDD	EPA 1613B
1,2,3,7,8,9-HxCDD	EPA 1613B
1,2,3,4,6,7,8-HpCDF	EPA 1613B
1,2,3,4,7,8,9-HpCDF	EPA 1613B
1,2,3,4,6,7,8-HpCDD	EPA 1613B
OCDF	EPA 1613B
OCDD	EPA 1613B
Food and Feed (WHO 29)	**Food/Feed**
6 marker PCBs (PCB28, PCB52, PCB101, PCB138, PCB153, and PCB180)	EPA 1668C
(PCB77, PCB81, PCB105, PCB114, PCB118, PCB123, PCB126, PCB156, PCB157, PCB167, PCB169, and PCB189)	EPA 1668C

Parameter/Analyte	**Tissue**	**Nonpotable Water**	**Solid Hazardous Waste**	
			Aqueous	**Solid**
12 Dioxin-like PCBs (dl-PCBs)/coplanar PCBs (PCB77, PCB81, PCB105, PCB114, PCB118, PCB123, PCB126, PCB156, PCB157, PCB167, PCB169, & PCB189)	EPA 1668C	----------	----------	----------

Parameter/Analyte	Drinking Water	Nonpotable Water	Solid Haz.Waste
Per and Polyfluoroalkyl Substances (PFAS)			
N-ethyl perfluorooctane-sulfonamidoacetic acid (NetFOSAA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
N-methyl perfluoroctane-sulfonamidoacetic acid (NMeFOSAA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorobutanesulfonic acid (PFBS)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorodecanoic acid (PFDA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorododecanoic acid (PFDoDA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluoroheptanoic acid (PFHpA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorohexanesulfonic acid (PFHxS)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorohexanoic acid (PFHxA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorononanoic acid (PFNA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorooctanesulfonic acid (PFOS)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorooctanoic acid (PFOA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorotetradecanoic acid (PFTeDA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorotridecanoic acid (PFTrDA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluoroundecanoic acid (PFUnDA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid (HFPODA)	EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluoro-n-butanoic acid (PFBA)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluoro-n-pentanoic acid (PFPeA)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod

Parameter/Analyte	Drinking Water	Nonpotable Water	Solid Haz.Waste
8:2 Fluorotelomersulfonic acid (8:2FTS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
4:2 Fluorotelomersulfonic acid (4:2-FTS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluoropentanesulfonic acid (PFPeS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
6:2 Fluorotelomersulfonic acid (6:2-FTS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluoroheptanesulfonic acid (PFHpS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorononanesulfonic acid (PFNS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorodecanesulfonic acid (PFDS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
10:2 Fluorotelomersulfonic acid (10:2-FTS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorododecanesulfonic acid (PFDoDS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorohexadecanoic acid (PFHxDA)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorooctadecanoic acid (PFODA)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorooctanesulfonamide (PFOSA)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol (NMePFOSAE)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
N-methylperfluoro-1-octanesulfonamide (NMePFOSA)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol (NEtPFOSAE)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
N-ethylperfluoro-1-octanesulfonamide (NEtPFOSA)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod

Accredited Laboratory

A2LA has accredited

EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC

Lancaster, PA

for technical competence in the field of

Environmental Testing

In recognition of the successful completion of the A2LA evaluation process that includes an assessment of the laboratory's compliance with ISO/IEC 17025:2017, the 2009 TNI Environmental Testing Laboratory Standard, and the requirements of the Department of Defense Environmental Laboratory Accreditation Program (DoD ELAP) as detailed in version 5.4 of the DoD/DOE Quality System Manual for Environmental Laboratories (QSM), accreditation is granted to this laboratory to perform recognized EPA methods as defined on the associated A2LA Environmental Scope of Accreditation. This accreditation demonstrates technical competence for this defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated *April 2017*).

American Association for Laboratory Accreditation
CORPORATE SEAL 1978
DISTRICT OF COLUMBIA
A2LA

Presented this 21st day of November 2022.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 1.01
Valid to November 30, 2024

For the tests to which this accreditation applies, please refer to the laboratory's Environmental Scope of Accreditation.

COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BUREAU OF LABORATORIES

LABORATORY ACCREDITATION PROGRAM

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certifies That

36-00037

Eurofins Lancaster Laboratories Environment Testing, LLC

2425 New Holland Pike, Lancaster, PA, 17601-5994

Having duly met the requirement of
The act of June 29, 2002 (P.L. 596, No. 90)
dealing with Environmental Laboratories Accreditation
(27 Pa. C.S. 4104-4113) and the
National Environmental Laboratory Accreditation Program Standard
is hereby approved as an

Accredited Laboratory

to conduct analysis within the fields of accreditations more fully described in the attached Scope of Accreditation

NELAP accreditation granted by the PA DEP to an environmental laboratory is conditioned upon continued compliance with the current edition of the NELAC Standard or TNI Standard and the following Subchapters and Sections of 25 Pa. Code Chapter 252: Subchapter A (relating to general provisions); Subchapter B (relating to application, fees and supporting documents); Subchapter E (relating to proficiency test study requirements); Subchapter F (relating to assessment requirements); Subchapter G (relating to miscellaneous provisions); Section 252.307; and Section 252.401.

Expiration Date: **01/31/2025**

Certificate Number: **024**

Annmarie Beach

Annmarie Beach, Chief
Laboratory Accreditation Program
Bureau of Laboratories

Continued accreditation status depends on successful ongoing participation in the program
Certificate not transferable Surrender upon revocation
To be conspicuously displayed at the Laboratory
Not valid unless accompanied by a valid Scope of Accreditation
Shall not be used to imply endorsement by the Commonwealth of Pennsylvania
Customers are urged to verify the laboratory's current accreditation status
PA DEP is a NELAP recognized accreditation body

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 024-001 expiration date 01/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 110.2		10005604	Color	1605	NELAP	PA	04/04/2005
EPA 1613	B	10120602	2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	9618	NELAP	PA	10/05/2010
EPA 1664	A	10127807	Oil and grease	1803	NELAP	PA	05/24/2011
EPA 1664	B	10261617	Oil and grease	1803	NELAP	PA	01/27/2014
EPA 180.1	2	10011800	Turbidity	2055	NELAP	PA	04/04/2005
EPA 200.7	4.4	10013806	Barium	1015	NELAP	PA	01/22/2001
EPA 200.7	4.4	10013806	Calcium	1035	NELAP	PA	11/28/2001
EPA 200.7	4.4	10013806	Chromium	1040	NELAP	PA	01/22/2001
EPA 200.7	4.4	10013806	Cobalt	1050	NELAP	PA	10/16/2008
EPA 200.7	4.4	10013806	Copper	1055	NELAP	PA	01/22/2001
EPA 200.7	4.4	10013806	Iron	1070	NELAP	PA	04/04/2005
EPA 200.7	4.4	10013806	Lithium	1080	NELAP	PA	11/13/2012
EPA 200.7	4.4	10013806	Magnesium	1085	NELAP	PA	12/04/2007
EPA 200.7	4.4	10013806	Manganese	1090	NELAP	PA	04/04/2005
EPA 200.7	4.4	10013806	Nickel	1105	NELAP	PA	01/22/2001
EPA 200.7	4.4	10013806	Potassium	1125	NELAP	PA	05/24/2011
EPA 200.7	4.4	10013806	Silver	1150	NELAP	PA	01/26/2001
EPA 200.7	4.4	10013806	Sodium	1155	NELAP	PA	01/22/2001
EPA 200.7	4.4	10013806	Strontium	1160	NELAP	PA	05/24/2011
EPA 200.7	4.4	10013806	Sulfur	2017	NELAP	PA	11/09/2012
EPA 200.7	4.4	10013806	Tin	1175	NELAP	PA	11/03/2008
EPA 200.7	4.4	10013806	Vanadium	1185	NELAP	PA	10/16/2008

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The Pennsylvania Department of Environmental Protection Laboratory Accreditation Program is a NELAP recognized Accreditation Body. Customers are urged to verify the laboratory's current accreditation standing.

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Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 024-001 expiration date 01/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 200.7	4.4	10013806	Zinc	1190	NELAP	PA	04/04/2005
EPA 200.8	5.4	10014605	Aluminum	1000	NELAP	PA	01/25/2019
EPA 200.8	5.4	10014605	Antimony	1005	NELAP	PA	02/10/2005
EPA 200.8	5.4	10014605	Arsenic	1010	NELAP	PA	02/10/2005
EPA 200.8	5.4	10014605	Barium	1015	NELAP	PA	11/16/2011
EPA 200.8	5.4	10014605	Beryllium	1020	NELAP	PA	02/10/2005
EPA 200.8	5.4	10014605	Cadmium	1030	NELAP	PA	02/10/2005
EPA 200.8	5.4	10014605	Calcium	1035	NELAP	PA	11/16/2011
EPA 200.8	5.4	10014605	Chromium	1040	NELAP	PA	02/10/2005
EPA 200.8	5.4	10014605	Copper	1055	NELAP	PA	03/09/2007
EPA 200.8	5.4	10014605	Iron	1070	NELAP	PA	11/02/2012
EPA 200.8	5.4	10014605	Lead	1075	NELAP	PA	02/10/2005
EPA 200.8	5.4	10014605	Magnesium	1085	NELAP	PA	11/02/2012
EPA 200.8	5.4	10014605	Manganese	1090	NELAP	PA	11/16/2011
EPA 200.8	5.4	10014605	Nickel	1105	NELAP	PA	02/10/2005
EPA 200.8	5.4	10014605	Potassium	1125	NELAP	PA	11/16/2011
EPA 200.8	5.4	10014605	Selenium	1140	NELAP	PA	02/10/2005
EPA 200.8	5.4	10014605	Sodium	1155	NELAP	PA	11/16/2011
EPA 200.8	5.4	10014605	Strontium	1160	NELAP	PA	11/16/2011
EPA 200.8	5.4	10014605	Thallium	1165	NELAP	PA	02/10/2005
EPA 200.8	5.4	10014605	Zinc	1190	NELAP	PA	11/16/2011
EPA 245.1	3.0	10036609	Mercury	1095	NELAP	PA	08/29/2001

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Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 024-001 expiration date 01/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
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Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 300.0	2.1	10053200	Chloride	1575	NELAP	PA	05/17/2005
EPA 300.0	2.1	10053200	Fluoride	1730	NELAP	PA	11/10/2022
EPA 300.0	2.1	10053200	Nitrate as N	1810	NELAP	PA	10/31/2002
EPA 300.0	2.1	10053200	Nitrite as N	1840	NELAP	PA	10/31/2002
EPA 300.0	2.1	10053200	Sulfate	2000	NELAP	PA	07/07/2003
EPA 335.4	1.0	10061402	Cyanide	1635	NELAP	PA	07/11/2006
EPA 353.2	2.0	10067604	Nitrate as N	1810	NELAP	PA	02/28/2002
EPA 353.2	2.0	10067604	Nitrite as N	1840	NELAP	PA	02/28/2002
EPA 353.2	2.0	10067604	Total nitrate-nitrite	1820	NELAP	PA	05/24/2011
EPA 524.2	4.1	10088809	1,1,1,2-Tetrachloroethane	5105	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	1,1,1-Trichloroethane	5160	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	1,1,2,2-Tetrachloroethane	5110	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	1,1,2-Trichloroethane	5165	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	1,1-Dichloro-2-propanone (1,1-Dichloropropanone)	7450	NELAP	PA	05/17/2005
EPA 524.2	4.1	10088809	1,1-Dichloroethane	4630	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	1,1-Dichloroethene (1,1-Dichloroethylene)	4640	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	1,1-Dichloropropene	4670	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	1,2,3-Trichlorobenzene	5150	NELAP	PA	04/04/2005
EPA 524.2	4.1	10088809	1,2,3-Trichloropropane (1,2,3-TCP)	5180	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	1,2,4-Trichlorobenzene	5155	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	1,2,4-Trimethylbenzene	5210	NELAP	PA	04/04/2005
EPA 524.2	4.1	10088809	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	03/06/2018

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 024-001 expiration date 01/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 524.2	4.1	10088809	1,2-Dichloroethane	4635	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	1,2-Dichloropropane	4655	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	1,3,5-Trimethylbenzene	5215	NELAP	PA	05/17/2005
EPA 524.2	4.1	10088809	1,3-Dichlorobenzene (m-Dichlorobenzene)	4615	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	1,3-Dichloropropane	4660	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	1,4-Dichlorobenzene (p-Dichlorobenzene)	4620	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	1-Chlorobutane	4480	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	2,2-Dichloropropane	4665	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	2-Butanone (Methyl ethyl ketone, MEK)	4410	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	2-Chlorotoluene	4535	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	2-Hexanone	4860	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	2-Nitropropane	5020	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	4-Chlorotoluene	4540	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	4-Methyl-2-pentanone (MIBK)	4995	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	Acetone	4315	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	Acrylonitrile	4340	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	Allyl chloride (3-Chloropropene)	4355	NELAP	PA	07/03/2007
EPA 524.2	4.1	10088809	Benzene	4375	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	Bromobenzene	4385	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	Bromochloromethane	4390	NELAP	PA	04/04/2005
EPA 524.2	4.1	10088809	Bromodichloromethane	4395	NELAP	PA	11/03/2016
EPA 524.2	4.1	10088809	Bromoform	4400	NELAP	PA	11/03/2016

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 524.2	4.1	10088809	Carbon disulfide	4450	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	Carbon tetrachloride	4455	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	Chloroacetonitrile	4470	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	Chlorobenzene	4475	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	Chloroethane	4485	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	Chloroform	4505	NELAP	PA	11/03/2016
EPA 524.2	4.1	10088809	Dibromochloromethane	4575	NELAP	PA	11/03/2016
EPA 524.2	4.1	10088809	Dibromomethane	4595	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	Dichlorodifluoromethane (Freon 12)	4625	NELAP	PA	04/04/2005
EPA 524.2	4.1	10088809	Diethyl ether (Ethyl ether)	4725	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	Diisopropyl ether (DIPE)	9375	NELAP	PA	01/07/2010
EPA 524.2	4.1	10088809	Ethyl methacrylate	4810	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	Ethyl tert-butyl ether (ETBE)	4770	NELAP	PA	01/24/2007
EPA 524.2	4.1	10088809	Ethylbenzene	4765	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	4835	NELAP	PA	04/04/2005
EPA 524.2	4.1	10088809	Isopropylbenzene (Cumene)	4900	NELAP	PA	04/04/2005
EPA 524.2	4.1	10088809	Methacrylonitrile	4925	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	Methyl bromide (Bromomethane)	4950	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	Methyl chloride (Chloromethane)	4960	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	Methyl iodide (Iodomethane)	4870	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	Methyl tert-butyl ether (MTBE)	5000	NELAP	PA	04/04/2005
EPA 524.2	4.1	10088809	Methylacrylate	4945	NELAP	PA	05/24/2007

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 524.2	4.1	10088809	Methylene chloride (Dichloromethane)	4975	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	Methylmethacrylate	4990	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	Naphthalene	5005	NELAP	PA	05/17/2005
EPA 524.2	4.1	10088809	Nitrobenzene	5015	NELAP	PA	05/17/2005
EPA 524.2	4.1	10088809	Pentachloroethane	5035	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	Propionitrile (Ethyl cyanide)	5080	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	Styrene	5100	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	Tetrachloroethene (PCE, Perchloroethylene)	5115	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	Tetrahydrofuran (THF)	5120	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	Toluene	5140	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	Total trihalomethanes (TTHMs)	5205	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	Trichloroethene (TCE, Trichloroethylene)	5170	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	Trichlorofluoromethane (Freon 11)	5175	NELAP	PA	04/04/2005
EPA 524.2	4.1	10088809	Vinyl chloride (Chloroethene)	5235	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	Xylenes, total	5260	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	cis-1,2-Dichloroethene	4645	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	cis-1,3-Dichloropropene	4680	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	m+p-Xylene	5240	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	n-Butylbenzene	4435	NELAP	PA	04/04/2005
EPA 524.2	4.1	10088809	n-Propylbenzene	5090	NELAP	PA	05/17/2005
EPA 524.2	4.1	10088809	o-Xylene	5250	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	p-Isopropyltoluene (4-Isopropyltoluene)	4910	NELAP	PA	05/17/2005

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 524.2	4.1	10088809	sec-Butylbenzene	4440	NELAP	PA	04/04/2005
EPA 524.2	4.1	10088809	tert-Amyl methyl ether (TAME)	4370	NELAP	PA	01/24/2007
EPA 524.2	4.1	10088809	tert-Butyl alcohol (2-Methyl-2-propanol)	4420	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	tert-Butylbenzene	4445	NELAP	PA	04/04/2005
EPA 524.2	4.1	10088809	trans-1,2-Dichloroethene	4700	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	trans-1,3-Dichloropropene	4685	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	trans-1,4-Dichloro-2-butene	4605	NELAP	PA	05/24/2007
EPA 531.1	3.1	10091006	3-Hydroxycarbofuran	7710	NELAP	PA	11/07/2006
EPA 531.1	3.1	10091006	Aldicarb (Temik)	7010	NELAP	PA	04/14/2015
EPA 531.1	3.1	10091006	Aldicarb sulfone	7015	NELAP	PA	01/24/2001
EPA 531.1	3.1	10091006	Aldicarb sulfoxide	7020	NELAP	PA	01/24/2001
EPA 531.1	3.1	10091006	Carbaryl (Sevin)	7195	NELAP	PA	10/09/2002
EPA 531.1	3.1	10091006	Carbofuran (Furaden)	7205	NELAP	PA	01/24/2001
EPA 531.1	3.1	10091006	Methomyl (Lannate)	7805	NELAP	PA	01/24/2001
EPA 531.1	3.1	10091006	Oxamyl (Vydate)	7940	NELAP	PA	01/24/2001
EPA 533	1.0	10091619	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	6948	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	6946	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	6947	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	PA	11/03/2020

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 533	1.0	10091619	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	6956	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	6957	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluoro-3-methoxypropanoic acid (PFMPA)	6965	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluoro-4-methoxybutanoic acid (PFMBA)	6966	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluorobutanoic acid (PFBA)	6915	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluoroheptanesulfonic acid (PFHpS)	9470	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluorononanoic acid (PFNA)	6906	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluoropentane sulfonic acid (PFPeS)	6934	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluoropentanoic acid (PFPeA)	6914	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	11/03/2020

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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 537.1	1.0	10091642	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	Perfluorononanoic acid (PFNA)	6906	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	08/01/2019

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 537.1	2.0	10091595	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	07/21/2023
EPA 537.1	2.0	10091595	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	PA	07/21/2023
EPA 537.1	2.0	10091595	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	07/21/2023
EPA 537.1	2.0	10091595	Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	07/21/2023
EPA 537.1	2.0	10091595	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	07/21/2023
EPA 537.1	2.0	10091595	Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	07/21/2023
EPA 537.1	2.0	10091595	Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	07/21/2023
EPA 537.1	2.0	10091595	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	07/21/2023
EPA 537.1	2.0	10091595	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	07/21/2023
EPA 537.1	2.0	10091595	Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	07/21/2023
EPA 537.1	2.0	10091595	Perfluorononanoic acid (PFNA)	6906	NELAP	PA	07/21/2023
EPA 537.1	2.0	10091595	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	PA	07/21/2023
EPA 537.1	2.0	10091595	Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	07/21/2023
EPA 537.1	2.0	10091595	Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	07/21/2023
EPA 537.1	2.0	10091595	Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	07/21/2023
EPA 537.1	2.0	10091595	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	07/21/2023
EPA 537.1	2.0	10091595	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	07/21/2023
EPA 537.1	2.0	10091595	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	07/21/2023
EPA 8015	D	10305609	Nonhalogenated organics by GC/FID	9435	NELAP	PA	05/24/2011

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 024-001 expiration date 01/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8015	C	10173816	Ethane	4747	NELAP	PA	05/24/2011
EPA 8015	C	10173816	Methane	4926	NELAP	PA	05/24/2011
EPA 8015	C	10173816	Propane	5029	NELAP	PA	11/09/2012
EPA 8015	D	10305609	Acetylene (Ethyne)	4323	NELAP	PA	01/03/2024
EPA 8015	D	10305609	Ethane	4747	NELAP	PA	05/24/2011
EPA 8015	D	10305609	Ethene	4752	NELAP	PA	01/03/2024
EPA 8015	D	10305609	Isobutane (2-Methylpropane)	4942	NELAP	PA	01/03/2024
EPA 8015	D	10305609	Methane	4926	NELAP	PA	05/24/2011
EPA 8015	D	10305609	Propane	5029	NELAP	PA	11/09/2012
EPA 8015	D	10305609	n-Butane	5007	NELAP	PA	01/03/2024
RSK-175		10212905	Acetylene (Ethyne)	4323	NELAP	PA	11/19/2015
RSK-175		10212905	Carbon dioxide	3755	NELAP	PA	11/19/2015
RSK-175		10212905	Ethane	4747	NELAP	PA	11/19/2015
RSK-175		10212905	Ethene	4752	NELAP	PA	11/19/2015
RSK-175		10212905	Isobutane (2-Methylpropane)	4942	NELAP	PA	11/19/2015
RSK-175		10212905	Methane	4926	NELAP	PA	11/19/2015
RSK-175		10212905	Propane	5029	NELAP	PA	01/03/2024
RSK-175		10212905	n-Butane	5007	NELAP	PA	11/19/2015
SM 2120 B		20039014	Color	1605	NELAP	PA	05/25/2005
SM 2120B - 2001	Online ed.	20039309	Color	1605	NELAP	PA	05/25/2005
SM 2120B - 2011	Online ed.	20039310	Color	1605	NELAP	PA	05/25/2005
SM 2130 B		20042619	Turbidity	2055	NELAP	PA	05/17/2005

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SM 2130B - 2001	21st ed.	20042608	Turbidity	2055	NELAP	PA	05/17/2005
SM 2130B - 2011	Online ed.	20048220	Turbidity	2055	NELAP	PA	05/17/2005
SM 2320 B		20045414	Alkalinity as CaCO3	1505	NELAP	PA	01/24/2001
SM 2320B - 1997	Online ed.	20045607	Alkalinity as CaCO3	1505	NELAP	PA	01/24/2001
SM 2320B - 2011	Online ed.	20045618	Alkalinity as CaCO3	1505	NELAP	PA	01/24/2001
SM 2340C - 1997	Online ed.	20047603	Total hardness as CaCO3	1755	NELAP	PA	05/24/2011
SM 2340C - 2011	Online ed.	20047614	Total hardness as CaCO3	1755	NELAP	PA	05/24/2011
SM 2510 B		20048413	Conductivity	1610	NELAP	PA	05/17/2005
SM 2510B - 1997	21st ed.	20048402	Conductivity	1610	NELAP	PA	05/17/2005
SM 2510B - 2011	Online ed.	20048617	Conductivity	1610	NELAP	PA	05/17/2005
SM 2540 C		20050424	Total dissolved solids (TDS)	1955	NELAP	PA	06/02/2004
SM 2540B - 1997	20th ed.	20049007	Residue, total	1950	NELAP	PA	09/04/2018
SM 2540B - 2011	22nd ed.	20049212	Residue, total	1950	NELAP	PA	09/04/2018
SM 2540B - 2015	Online ed.	20049438	Residue, total	1950	NELAP	PA	09/04/2018
SM 2540C - 1997	Online ed.	20050402	Residue, filterable (TDS)	1955	NELAP	PA	06/02/2004
SM 2540C - 2011	Online ed.	20050413	Residue, filterable (TDS)	1955	NELAP	PA	06/02/2004
SM 2540C - 2015	Online ed.	20050435	Residue, filterable (TDS)	1955	NELAP	PA	06/02/2004
SM 2540D - 1997	21st ed.	20051007	Residue, nonfilterable (TSS)	1960	NELAP	PA	05/24/2011
SM 2540D - 2011	22nd ed.	20051018	Residue, nonfilterable (TSS)	1960	NELAP	PA	05/24/2011
SM 2540D - 2015	Online ed.	20051223	Residue, nonfilterable (TSS)	1960	NELAP	PA	05/24/2011
SM 2550 B		20053127	Temperature, deg. C	2030	NELAP	PA	04/04/2005
SM 2550B - 2000	21st ed.	20053003	Temperature, deg. C	2030	NELAP	PA	04/18/2023

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SM 2550B - 2010	Online ed.	20053229	Temperature, deg. C	2030	NELAP	PA	04/04/2005
SM 4500-Cl F		20080619	Total residual chlorine	1940	NELAP	PA	05/24/2011
SM 4500-Cl F - 2000	21st ed.	20080608	Total residual chlorine	1940	NELAP	PA	05/24/2011
SM 4500-Cl F - 2011	Online ed.	20080824	Total residual chlorine	1940	NELAP	PA	05/24/2011
SM 4500-F- C		20102210	Fluoride	1730	NELAP	PA	10/15/2003
SM 4500-F- C - 1997	Online ed.	20102403	Fluoride	1730	NELAP	PA	10/15/2003
SM 4500-F- C - 2011	Online ed.	20102414	Fluoride	1730	NELAP	PA	10/15/2003
SM 4500-H + B - 2000	21st ed.	20105004	pH	1900	NELAP	PA	05/16/2007
SM 4500-H + B - 2011	Online ed.	20105220	pH	1900	NELAP	PA	05/16/2007
SM 4500-H+ B		20105015	pH	1900	NELAP	PA	05/16/2007
SM 4500-P E		20124010	Orthophosphate as P	1870	NELAP	PA	06/12/2007
SM 4500-P E - 1999	21st ed.	20124009	Orthophosphate as P	1870	NELAP	PA	06/12/2007
SM 4500-P E - 2011	Online ed.	20124225	Orthophosphate as P	1870	NELAP	PA	06/12/2007
SM 4500-SiO2 C	20-22	20128410	Silica, dissolved	1995	NELAP	PA	05/24/2007
SM 4500-SiO2 C - 1997	21st ed.	20128409	Silica, dissolved	1995	NELAP	PA	05/24/2007
SM 4500-SiO2 C - 2011	Online ed.	20128614	Silica, dissolved	1995	NELAP	PA	05/24/2007
SM 5310 C		20138618	Total organic carbon (TOC)	2040	NELAP	PA	04/18/2013
SM 5310C - 2000	21st ed.	20138607	Total organic carbon (TOC)	2040	NELAP	PA	04/18/2013
SM 5310C - 2011	Online ed.	20138823	Total organic carbon (TOC)	2040	NELAP	PA	04/18/2013
SM 5310C - 2014	Online ed.	20138834	Total organic carbon (TOC)	2040	NELAP	PA	04/18/2013
SM 5540 C		20144814	Surfactants as MBAS	2025	NELAP	PA	05/24/2007
SM 5540C - 2000	Online ed.	20145055	Surfactants as MBAS	2025	NELAP	PA	05/24/2007

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DEP Laboratory ID: 36-00037
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PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SM 5540C - 2011	Online ed.	20145066	Surfactants as MBAS	2025	NELAP	PA	05/24/2007

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
AK-101		90015002	Gasoline-range organics (GRO)	9408	NELAP	PA	12/12/2005
AK-102		90015206	Diesel-range organics (DRO)	9369	NELAP	PA	12/12/2005
ASTM D7511-09		30032985	Total cyanide	1645	NELAP	PA	02/15/2013
ASTM D7511-12			Total cyanide	1645	NELAP	PA	01/25/2019
ASTM D7511-12 (17)		30033068	Total cyanide	1645	NELAP	PA	01/25/2019
EPA 1010	A	10234807	Ignitability	1780	NELAP	PA	08/30/2019
EPA 1010	B	10234830	Flashpoint	6117	NELAP	PA	09/14/2021
EPA 1010		10116606	Ignitability	1780	NELAP	PA	12/12/2005
EPA 130.2		10007202	Total hardness as CaCO3	1755	NELAP	PA	01/10/2023
EPA 1311		10118806	Toxicity characteristic leaching procedure (TCLP)	1466	NELAP	PA	12/12/2005
EPA 1312		10119003	Synthetic precipitation leaching procedure (SPLP)	1460	NELAP	PA	12/12/2005
EPA 160.1		10009208	Residue, filterable (TDS)	1955	NELAP	PA	01/19/2005
EPA 1613	B	10120602	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	9519	NELAP	PA	06/30/2010
EPA 1613	B	10120602	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	9516	NELAP	PA	06/30/2010
EPA 1613	B	10120602	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	9426	NELAP	PA	06/30/2010

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1613	B	10120602	1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	9420	NELAP	PA	06/30/2010
EPA 1613	B	10120602	1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	9423	NELAP	PA	06/30/2010
EPA 1613	B	10120602	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	9453	NELAP	PA	06/30/2010
EPA 1613	B	10120602	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	9471	NELAP	PA	06/30/2010
EPA 1613	B	10120602	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	9456	NELAP	PA	06/30/2010
EPA 1613	B	10120602	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	9474	NELAP	PA	06/30/2010
EPA 1613	B	10120602	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	9459	NELAP	PA	06/30/2010
EPA 1613	B	10120602	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	9477	NELAP	PA	06/30/2010
EPA 1613	B	10120602	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	9540	NELAP	PA	06/30/2010
EPA 1613	B	10120602	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	9543	NELAP	PA	06/30/2010
EPA 1613	B	10120602	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	9480	NELAP	PA	06/30/2010
EPA 1613	B	10120602	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	9549	NELAP	PA	06/30/2010
EPA 1613	B	10120602	2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)(Dioxin)	9618	NELAP	PA	06/30/2010
EPA 1613	B	10120602	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	9612	NELAP	PA	06/30/2010
EPA 1613	B	10120602	Total heptachlorodibenzo-p-dioxin (HpCDD)	9438	NELAP	PA	08/06/2010
EPA 1613	B	10120602	Total heptachlorodibenzofuran (HpCDF)	9444	NELAP	PA	08/06/2010
EPA 1613	B	10120602	Total hexachlorodibenzo-p-dioxin (HxCDD)	9468	NELAP	PA	08/06/2010
EPA 1613	B	10120602	Total hexachlorodibenzofuran (HxCDF)	9483	NELAP	PA	08/06/2010
EPA 1613	B	10120602	Total pentachlorodibenzo-p-dioxin (PeCDD)	9555	NELAP	PA	08/06/2010
EPA 1613	B	10120602	Total pentachlorodibenzofuran (PeCDF)	9552	NELAP	PA	08/06/2010

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1613	B	10120602	Total tetrachlorodibenzo-p-dioxin (TCDD)	9609	NELAP	PA	08/06/2010
EPA 1613	B	10120602	Total tetrachlorodibenzofuran (TCDF)	9615	NELAP	PA	08/06/2010
EPA 1633 (draft)	1	10123429	Perfluorodecanesulfonic acid (PFDS)	6920	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluorododecanesulfonic acid (PFDoS)	6923	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluorononanesulfonic acid (PFNS)	6929	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluoropentanesulfonic acid (PFPeS)	6934	NELAP	PA	07/27/2022
EPA 1633 (draft)	3	10123441	Perfluorodecanesulfonic acid (PFDS)	6920	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorododecanesulfonic acid (PFDoS)	6923	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorononanesulfonic acid (PFNS)	6929	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluoropentanesulfonic acid (PFPeS)	6934	NELAP	PA	07/07/2023
EPA 1633 (draft)	1	10123429	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	6948	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	6946	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	6947	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	2H,2H,3H,3H-Perfluorodecanoic acid (3-Perfluoroheptyl propanoic acid) (7:3 FTCA)	9340	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	9338	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	4,4,5,5,6,6,6-Heptafluorohexanoic acid (3-Perfluoropropyl propanoic acid) (3:3 FTCA)	9353	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	07/27/2022

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DEP Laboratory ID: 36-00037
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Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1633 (draft)	1	10123429	Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	N-Ethylperfluorooctanesulfonamide (EtFOSA)	9395	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	N-Methylperfluorooctanesulfonamide (MeFOSA)	9433	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	N-ethylperfluoro-1-octanesulfonamido ethanol (N-EtFOSE)	9431	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	N-methylperfluoro-1-octanesulfonamido ethanol (N-MeFOSE)	6949	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	6956	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	6957	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluoro-3-methoxypropanoic acid (PFMPA)	6965	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluoro-4-methoxybutanoic acid (PFMBA)	6966	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluorobutanoic acid (PFBA)	6915	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluoroheptanesulfonic acid (PFHpS)	9470	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluorononanoic acid (PFNA)	6906	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluorooctane sulfonamide (PFOSA)	6917	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	PA	07/27/2022

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Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1633 (draft)	1	10123429	Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluoropentanoic acid (PFPeA)	6914	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	07/27/2022
EPA 1633 (draft)	3	10123441	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	6948	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	6946	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	6947	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	2H,2H,3H,3H-Perfluorodecanoic acid (3-Perfluoroheptyl propanoic acid) (7:3 FTCA)	9340	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	9338	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	4,4,5,5,6,6,6-Heptafluorohexanoic acid (3-Perfluoropropyl propanoic acid) (3:3 FTCA)	9353	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	N-Ethylperfluorooctanesulfonamide (EtFOSA)	9395	NELAP	PA	07/07/2023

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Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 024-001 expiration date 01/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1633 (draft)	3	10123441	N-Methylperfluorooctanesulfonamide (MeFOSA)	9433	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	N-ethylperfluoro-1-octanesulfonamido ethanol (N-EtFOSE)	9431	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	N-methylperfluoro-1-octanesulfonamido ethanol (N-MeFOSE)	6949	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	6956	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	6957	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluoro-3-methoxypropanoic acid (PFMPA)	6965	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluoro-4-methoxybutanoic acid (PFMBA)	6966	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorobutanoic acid (PFBA)	6915	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluoroheptanesulfonic acid (PFHpS)	9470	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorononanoic acid (PFNA)	6906	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorooctane sulfonamide (PFOSA)	6917	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluoropentanoic acid (PFPeA)	6914	NELAP	PA	07/07/2023

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1633 (draft)	3	10123441	Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	07/07/2023
EPA 1664	A	10127807	Non-polar material	1853	NELAP	PA	03/27/2018
EPA 1664	A	10127807	Oil and grease	1803	NELAP	PA	01/19/2005
EPA 1664	B	10261617	Non-polar material	1853	NELAP	PA	01/31/2020
EPA 1664	B	10261617	Oil and grease	1803	NELAP	PA	01/27/2014
EPA 1666	A	10128208	4-Methyl-2-pentanone (MIBK)	4995	NELAP	PA	12/12/2005
EPA 1666	A	10128208	Diisopropyl ether (DIPE)	9375	NELAP	PA	01/19/2005
EPA 1666	A	10128208	Ethyl acetate	4755	NELAP	PA	01/19/2005
EPA 1666	A	10128208	Isobutyraldehyde	4880	NELAP	PA	01/19/2005
EPA 1666	A	10128208	Isopropyl acetate	4890	NELAP	PA	01/19/2005
EPA 1666	A	10128208	Isopropyl alcohol (2-Propanol)	4895	NELAP	PA	12/02/2009
EPA 1666	A	10128208	Methyl formate	4980	NELAP	PA	01/19/2005
EPA 1666	A	10128208	Tetrahydrofuran (THF)	5120	NELAP	PA	01/19/2005
EPA 1666	A	10128208	Xylenes, total	5260	NELAP	PA	01/19/2005
EPA 1666	A	10128208	m+p-Xylene	5240	NELAP	PA	01/11/2022
EPA 1666	A	10128208	n-Amyl acetate (n-Pentyl acetate)	4360	NELAP	PA	04/04/2005

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1666	A	10128208	n-Amyl alcohol (1-Pentanol)	4365	NELAP	PA	04/04/2005
EPA 1666	A	10128208	n-Butyl acetate	4403	NELAP	PA	04/04/2005
EPA 1666	A	10128208	n-Heptane	4825	NELAP	PA	01/19/2005
EPA 1666	A	10128208	n-Hexane	4855	NELAP	PA	01/19/2005
EPA 1666	A	10128208	o-Xylene	5250	NELAP	PA	01/11/2022
EPA 1666	A	10128208	tert-Butyl alcohol (2-Methyl-2-propanol)	4420	NELAP	PA	04/04/2005
EPA 1668	A	10262007	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ 206)	9095	NELAP	PA	02/01/2013
EPA 1668	A	10262007	2,2',3,3',4,4',5,5'-Octachlorobiphenyl (BZ 194)	9090	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4',5,6'-Octachlorobiphenyl (BZ 196)	9102	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (BZ 207)	9101	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4',5,6-Octachlorobiphenyl (BZ 195)	9103	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ 170)	9065	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4',6,6'-Octachlorobiphenyl (BZ 197)	9104	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4',6-Heptachlorobiphenyl (BZ 171)	9106	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4'-Hexachlorobiphenyl (BZ 128)	9020	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5',6'-Heptachlorobiphenyl (BZ 177)	9114	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5',6,6'-Octachlorobiphenyl (BZ 201)	9112	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5',6-Heptachlorobiphenyl (BZ 175)	9115	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5'-Hexachlorobiphenyl (BZ 130)	9117	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5,5',6'-Octachlorobiphenyl (BZ 199)	9108	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (BZ 208)	9107	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5,5',6-Octachlorobiphenyl (BZ 198)	9109	NELAP	PA	12/17/2012

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,2',3,3',4,5,5'-Heptachlorobiphenyl (BZ 172)	9110	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5,6'-Heptachlorobiphenyl (BZ 174)	9116	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5,6,6'-Octachlorobiphenyl (BZ 200)	9111	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5,6-Heptachlorobiphenyl (BZ 173)	9113	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5-Hexachlorobiphenyl (BZ 129)	9118	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,6'-Hexachlorobiphenyl (BZ 132)	9120	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,6,6'-Heptachlorobiphenyl (BZ 176)	9119	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,6-Hexachlorobiphenyl (BZ 131)	9121	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4-Pentachlorobiphenyl (BZ 82)	9122	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',5,5',6,6'-Octachlorobiphenyl (BZ 202)	9123	NELAP	PA	02/01/2013
EPA 1668	A	10262007	2,2',3,3',5,5',6-Heptachlorobiphenyl (BZ 178)	9124	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',5,5'-Hexachlorobiphenyl (BZ 133)	9125	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',5,6'-Hexachlorobiphenyl (BZ 135)	9127	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',5,6,6'-Heptachlorobiphenyl (BZ 179)	9126	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',5,6-Hexachlorobiphenyl (BZ 134)	9128	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',5-Pentachlorobiphenyl (BZ 83)	9129	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',6,6'-Hexachlorobiphenyl (BZ 136)	9130	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',6-Pentachlorobiphenyl (BZ 84)	9131	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3'-Tetrachlorobiphenyl (BZ 40)	9132	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5',6-Hexachlorobiphenyl (BZ 149)	9151	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5'-Pentachlorobiphenyl (BZ 97)	9154	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ 187)	9080	NELAP	PA	12/17/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,2',3,4',5,5'-Hexachlorobiphenyl (BZ 146)	9144	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5,6'-Hexachlorobiphenyl (BZ 148)	9147	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5,6,6'-Heptachlorobiphenyl (BZ 188)	9146	NELAP	PA	02/01/2013
EPA 1668	A	10262007	2,2',3,4',5,6-Hexachlorobiphenyl (BZ 147)	9149	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5-Pentachlorobiphenyl (BZ 90)	9155	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',6'-Pentachlorobiphenyl (BZ 98)	9159	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',6,6'-Hexachlorobiphenyl (BZ 150)	9157	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',6-Pentachlorobiphenyl (BZ 91)	9160	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4'-Tetrachlorobiphenyl (BZ 42)	9162	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5',6-Heptachlorobiphenyl (BZ 183)	9075	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5'-Hexachlorobiphenyl (BZ 138)	9025	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5,5',6-Octachlorobiphenyl (BZ 203)	9133	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5,5'-Heptachlorobiphenyl (BZ 180)	9134	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5,6'-Heptachlorobiphenyl (BZ 182)	9136	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5,6,6'-Octachlorobiphenyl (BZ 204)	9135	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5,6-Heptachlorobiphenyl (BZ 181)	9137	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5-Hexachlorobiphenyl (BZ 137)	9138	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',6'-Hexachlorobiphenyl (BZ 140)	9140	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',6,6'-Heptachlorobiphenyl (BZ 184)	9139	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',6-Hexachlorobiphenyl (BZ 139)	9141	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4'-Pentachlorobiphenyl (BZ 85)	9142	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5',6-Hexachlorobiphenyl (BZ 144)	9150	NELAP	PA	12/17/2012

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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,2',3,4,5'-Pentachlorobiphenyl (BZ 87)	8975	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5,5',6-Heptachlorobiphenyl (BZ 185)	9143	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5,5'-Hexachlorobiphenyl (BZ 141)	9030	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5,6'-Hexachlorobiphenyl (BZ 143)	9152	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5,6,6'-Heptachlorobiphenyl (BZ 186)	9145	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5,6-Hexachlorobiphenyl (BZ 142)	9148	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5-Pentachlorobiphenyl (BZ 86)	9153	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,6'-Pentachlorobiphenyl (BZ 89)	9161	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,6,6'-Hexachlorobiphenyl (BZ 145)	9156	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,6-Pentachlorobiphenyl (BZ 88)	9158	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4-Tetrachlorobiphenyl (BZ 41)	9163	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5',6-Pentachlorobiphenyl (BZ 95)	9166	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5'-Tetrachlorobiphenyl (BZ 44)	8945	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5,5',6-Hexachlorobiphenyl (BZ 151)	9035	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5,5'-Pentachlorobiphenyl (BZ 92)	9164	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5,6'-Pentachlorobiphenyl (BZ 94)	9167	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5,6,6'-Hexachlorobiphenyl (BZ 152)	9165	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5,6-Pentachlorobiphenyl (BZ 93)	9168	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5-Tetrachlorobiphenyl (BZ 43)	9169	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,6'-Tetrachlorobiphenyl (BZ 46)	9171	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,6,6'-Pentachlorobiphenyl (BZ 96)	9170	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,6-Tetrachlorobiphenyl (BZ 45)	9172	NELAP	PA	12/17/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,2',3-Trichlorobiphenyl (BZ 16)	9173	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,4',5,5'-Hexachlorobiphenyl (BZ 153)	9040	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,4',5,6'-Hexachlorobiphenyl (BZ 154)	9174	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,4',5-Pentachlorobiphenyl (BZ 99)	9175	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,4',6,6'-Hexachlorobiphenyl (BZ 155)	9176	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,4',6-Pentachlorobiphenyl (BZ 100)	9177	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,4'-Tetrachlorobiphenyl (BZ 47)	9178	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,5',6-Pentachlorobiphenyl (BZ 103)	9179	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,5'-Tetrachlorobiphenyl (BZ 49)	8950	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,5,5'-Pentachlorobiphenyl (BZ 101)	8980	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,5,6'-Pentachlorobiphenyl (BZ 102)	9180	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,5-Tetrachlorobiphenyl (BZ 48)	9181	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,6'-Tetrachlorobiphenyl (BZ 51)	9183	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,6,6'-Pentachlorobiphenyl (BZ 104)	9182	NELAP	PA	02/01/2013
EPA 1668	A	10262007	2,2',4,6-Tetrachlorobiphenyl (BZ 50)	9184	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4-Trichlorobiphenyl (BZ 17)	9185	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',5,5'-Tetrachlorobiphenyl (BZ 52)	8955	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',5,6'-Tetrachlorobiphenyl (BZ 53)	9186	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',5-Trichlorobiphenyl (BZ 18)	8930	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',6,6'-Tetrachlorobiphenyl (BZ 54)	9187	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',6-Trichlorobiphenyl (BZ 19)	9188	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2'-Dichlorobiphenyl (BZ 4)	9189	NELAP	PA	12/17/2012

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,3',4',5',6-Pentachlorobiphenyl (BZ 125)	9224	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4',5'-Tetrachlorobiphenyl (BZ 76)	9229	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4',5,5'-Pentachlorobiphenyl (BZ 124)	9222	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4',5-Tetrachlorobiphenyl (BZ 70)	9230	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4',6-Tetrachlorobiphenyl (BZ 71)	9237	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4'-Trichlorobiphenyl (BZ 33)	9239	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,4',5',6-Hexachlorobiphenyl (BZ 168)	9218	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,4',5'-Pentachlorobiphenyl (BZ 123)	9000	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,4',5,5'-Hexachlorobiphenyl (BZ 167)	9055	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,4',5-Pentachlorobiphenyl (BZ 118)	8995	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,4',6-Pentachlorobiphenyl (BZ 119)	9220	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,4'-Tetrachlorobiphenyl (BZ 66)	8960	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,5',6-Pentachlorobiphenyl (BZ 121)	9226	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,5'-Tetrachlorobiphenyl (BZ 68)	9231	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,5,5'-Pentachlorobiphenyl (BZ 120)	9223	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,5-Tetrachlorobiphenyl (BZ 67)	9232	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,6-Tetrachlorobiphenyl (BZ 69)	9235	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4-Trichlorobiphenyl (BZ 25)	9240	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',5',6-Tetrachlorobiphenyl (BZ 73)	9244	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',5'-Trichlorobiphenyl (BZ 34)	9246	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',5,5'-Tetrachlorobiphenyl (BZ 72)	9242	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',5-Trichlorobiphenyl (BZ 26)	8935	NELAP	PA	12/17/2012

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,3',6-Trichlorobiphenyl (BZ 27)	9248	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3'-Dichlorobiphenyl (BZ 6)	9249	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',5',6-Hexachlorobiphenyl (BZ 164)	9201	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',5'-Pentachlorobiphenyl (BZ 122)	9202	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',5,5',6-Heptachlorobiphenyl (BZ 193)	9195	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',5,5'-Hexachlorobiphenyl (BZ 162)	9197	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',5,6-Hexachlorobiphenyl (BZ 163)	9199	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',5-Pentachlorobiphenyl (BZ 107)	9205	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',6-Pentachlorobiphenyl (BZ 110)	8990	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4'-Tetrachlorobiphenyl (BZ 56)	9207	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4',5',6-Heptachlorobiphenyl (BZ 191)	9192	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4',5'-Hexachlorobiphenyl (BZ 157)	9045	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4',5,5',6-Octachlorobiphenyl (BZ 205)	9190	NELAP	PA	02/01/2013
EPA 1668	A	10262007	2,3,3',4,4',5,5'-Heptachlorobiphenyl (BZ 189)	9085	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4',5,6-Heptachlorobiphenyl (BZ 190)	9191	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4',5-Hexachlorobiphenyl (BZ 156)	9050	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4',6-Hexachlorobiphenyl (BZ 158)	9193	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4'-Pentachlorobiphenyl (BZ 105)	8985	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,5',6-Hexachlorobiphenyl (BZ 161)	9200	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,5'-Pentachlorobiphenyl (BZ 108)	9203	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,5,5',6-Heptachlorobiphenyl (BZ 192)	9194	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,5,5'-Hexachlorobiphenyl (BZ 159)	9196	NELAP	PA	12/17/2012

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Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,3,3',4,5,6-Hexachlorobiphenyl (BZ 160)	9198	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,5-Pentachlorobiphenyl (BZ 106)	9204	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,6-Pentachlorobiphenyl (BZ 109)	9206	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4-Tetrachlorobiphenyl (BZ 55)	9208	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',5',6-Pentachlorobiphenyl (BZ 113)	9212	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',5'-Tetrachlorobiphenyl (BZ 58)	9213	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',5,5',6-Hexachlorobiphenyl (BZ 165)	9209	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',5,5'-Pentachlorobiphenyl (BZ 111)	9210	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',5,6-Pentachlorobiphenyl (BZ 112)	9211	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',5-Tetrachlorobiphenyl (BZ 57)	9214	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',6-Tetrachlorobiphenyl (BZ 59)	9215	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3'-Trichlorobiphenyl (BZ 20)	9216	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4',5,6-Pentachlorobiphenyl (BZ 117)	9227	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4',5-Tetrachlorobiphenyl (BZ 63)	9233	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4',6-Tetrachlorobiphenyl (BZ 64)	9236	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4'-Trichlorobiphenyl (BZ 22)	9241	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4,4',5,6-Hexachlorobiphenyl (BZ 166)	9217	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4,4',5-Pentachlorobiphenyl (BZ 114)	9005	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4,4',6-Pentachlorobiphenyl (BZ 115)	9219	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4,4'-Tetrachlorobiphenyl (BZ 60)	9221	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4,5,6-Pentachlorobiphenyl (BZ 116)	9225	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4,5-Tetrachlorobiphenyl (BZ 61)	9228	NELAP	PA	12/17/2012

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,3,4,6-Tetrachlorobiphenyl (BZ 62)	9234	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4-Trichlorobiphenyl (BZ 21)	9238	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,5,6-Tetrachlorobiphenyl (BZ 65)	9243	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,5-Trichlorobiphenyl (BZ 23)	9245	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,6-Trichlorobiphenyl (BZ 24)	9247	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3-Dichlorobiphenyl (BZ 5)	8920	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4',5-Trichlorobiphenyl (BZ 31)	8940	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4',6-Trichlorobiphenyl (BZ 32)	9255	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4'-Dichlorobiphenyl (BZ 8)	9256	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4,4',5-Tetrachlorobiphenyl (BZ 74)	9250	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4,4',6-Tetrachlorobiphenyl (BZ 75)	9251	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4,4'-Trichlorobiphenyl (BZ 28)	9252	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4,5-Trichlorobiphenyl (BZ 29)	9253	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4,6-Trichlorobiphenyl (BZ 30)	9254	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4-Dichlorobiphenyl (BZ 7)	9257	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,5-Dichlorobiphenyl (BZ 9)	9258	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,6-Dichlorobiphenyl (BZ 10)	9259	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2-Chlorobiphenyl (BZ 1)	8915	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',4,4',5,5'-Hexachlorobiphenyl (BZ 169)	9060	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',4,4',5-Pentachlorobiphenyl (BZ 126)	9015	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',4,4'-Tetrachlorobiphenyl (BZ 77)	8965	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',4,5'-Tetrachlorobiphenyl (BZ 79)	9261	NELAP	PA	12/17/2012

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DEP Laboratory ID: 36-00037
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Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	3,3',4,5,5'-Pentachlorobiphenyl (BZ 127)	9260	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',4,5-Tetrachlorobiphenyl (BZ 78)	9262	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',4-Trichlorobiphenyl (BZ 35)	9263	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',5,5'-Tetrachlorobiphenyl (BZ 80)	9264	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',5-Trichlorobiphenyl (BZ 36)	9265	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3'-Dichlorobiphenyl (BZ 11)	8925	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,4',5-Trichlorobiphenyl (BZ 39)	9268	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,4'-Dichlorobiphenyl (BZ 13)	9269	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,4,4',5-Tetrachlorobiphenyl (BZ 81)	8970	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,4,4'-Trichlorobiphenyl (BZ 37)	9266	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,4,5-Trichlorobiphenyl (BZ 38)	9267	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,4-Dichlorobiphenyl (BZ 12)	9270	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,5-Dichlorobiphenyl (BZ 14)	9271	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3-Chlorobiphenyl (BZ 2)	9272	NELAP	PA	12/17/2012
EPA 1668	A	10262007	4,4'-Dichlorobiphenyl (BZ 15)	9273	NELAP	PA	12/17/2012
EPA 1668	A	10262007	4-Chlorobiphenyl (BZ 3)	9274	NELAP	PA	12/17/2012
EPA 1668	A	10262007	Decachlorobiphenyl	9105	NELAP	PA	02/01/2013
EPA 1668	C	10262109	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ 206)	9095	NELAP	PA	02/01/2013
EPA 1668	C	10262109	2,2',3,3',4,4',5,5'-Octachlorobiphenyl (BZ 194)	9090	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4',5,6'-Octachlorobiphenyl (BZ 196)	9102	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (BZ 207)	9101	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4',5,6-Octachlorobiphenyl (BZ 195)	9103	NELAP	PA	12/17/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 024-001 expiration date 01/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ 170)	9065	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4',6,6'-Octachlorobiphenyl (BZ 197)	9104	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4',6-Heptachlorobiphenyl (BZ 171)	9106	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4'-Hexachlorobiphenyl (BZ 128)	9020	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5',6'-Heptachlorobiphenyl (BZ 177)	9114	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5',6,6'-Octachlorobiphenyl (BZ 201)	9112	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5',6-Heptachlorobiphenyl (BZ 175)	9115	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5'-Hexachlorobiphenyl (BZ 130)	9117	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,5',6'-Octachlorobiphenyl (BZ 199)	9108	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (BZ 208)	9107	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,5',6-Octachlorobiphenyl (BZ 198)	9109	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,5'-Heptachlorobiphenyl (BZ 172)	9110	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,6'-Heptachlorobiphenyl (BZ 174)	9116	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,6,6'-Octachlorobiphenyl (BZ 200)	9111	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,6-Heptachlorobiphenyl (BZ 173)	9113	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5-Hexachlorobiphenyl (BZ 129)	9118	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,6'-Hexachlorobiphenyl (BZ 132)	9120	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,6,6'-Heptachlorobiphenyl (BZ 176)	9119	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,6-Hexachlorobiphenyl (BZ 131)	9121	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4-Pentachlorobiphenyl (BZ 82)	9122	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',5,5',6,6'-Octachlorobiphenyl (BZ 202)	9123	NELAP	PA	02/01/2013
EPA 1668	C	10262109	2,2',3,3',5,5',6-Heptachlorobiphenyl (BZ 178)	9124	NELAP	PA	12/17/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,2',3,3',5,5'-Hexachlorobiphenyl (BZ 133)	9125	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',5,6'-Hexachlorobiphenyl (BZ 135)	9127	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',5,6,6'-Heptachlorobiphenyl (BZ 179)	9126	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',5,6-Hexachlorobiphenyl (BZ 134)	9128	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',5-Pentachlorobiphenyl (BZ 83)	9129	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',6,6'-Hexachlorobiphenyl (BZ 136)	9130	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',6-Pentachlorobiphenyl (BZ 84)	9131	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3'-Tetrachlorobiphenyl (BZ 40)	9132	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5',6-Hexachlorobiphenyl (BZ 149)	9151	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5'-Pentachlorobiphenyl (BZ 97)	9154	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ 187)	9080	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5,5'-Hexachlorobiphenyl (BZ 146)	9144	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5,6'-Hexachlorobiphenyl (BZ 148)	9147	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5,6,6'-Heptachlorobiphenyl (BZ 188)	9146	NELAP	PA	02/01/2013
EPA 1668	C	10262109	2,2',3,4',5,6-Hexachlorobiphenyl (BZ 147)	9149	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5-Pentachlorobiphenyl (BZ 90)	9155	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',6'-Pentachlorobiphenyl (BZ 98)	9159	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',6,6'-Hexachlorobiphenyl (BZ 150)	9157	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',6-Pentachlorobiphenyl (BZ 91)	9160	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4'-Tetrachlorobiphenyl (BZ 42)	9162	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5',6-Heptachlorobiphenyl (BZ 183)	9075	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5'-Hexachlorobiphenyl (BZ 138)	9025	NELAP	PA	12/17/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,2',3,4,4',5,5',6-Octachlorobiphenyl (BZ 203)	9133	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5,5'-Heptachlorobiphenyl (BZ 180)	9134	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5,6'-Heptachlorobiphenyl (BZ 182)	9136	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5,6,6'-Octachlorobiphenyl (BZ 204)	9135	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5,6-Heptachlorobiphenyl (BZ 181)	9137	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5-Hexachlorobiphenyl (BZ 137)	9138	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',6'-Hexachlorobiphenyl (BZ 140)	9140	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',6,6'-Heptachlorobiphenyl (BZ 184)	9139	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',6-Hexachlorobiphenyl (BZ 139)	9141	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4'-Pentachlorobiphenyl (BZ 85)	9142	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5',6-Hexachlorobiphenyl (BZ 144)	9150	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5'-Pentachlorobiphenyl (BZ 87)	8975	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5,5',6-Heptachlorobiphenyl (BZ 185)	9143	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5,5'-Hexachlorobiphenyl (BZ 141)	9030	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5,6'-Hexachlorobiphenyl (BZ 143)	9152	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5,6,6'-Heptachlorobiphenyl (BZ 186)	9145	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5,6-Hexachlorobiphenyl (BZ 142)	9148	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5-Pentachlorobiphenyl (BZ 86)	9153	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,6'-Pentachlorobiphenyl (BZ 89)	9161	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,6,6'-Hexachlorobiphenyl (BZ 145)	9156	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,6-Pentachlorobiphenyl (BZ 88)	9158	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4-Tetrachlorobiphenyl (BZ 41)	9163	NELAP	PA	12/17/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,2',3,5',6-Pentachlorobiphenyl (BZ 95)	9166	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5'-Tetrachlorobiphenyl (BZ 44)	8945	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5,5',6-Hexachlorobiphenyl (BZ 151)	9035	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5,5'-Pentachlorobiphenyl (BZ 92)	9164	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5,6'-Pentachlorobiphenyl (BZ 94)	9167	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5,6,6'-Hexachlorobiphenyl (BZ 152)	9165	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5,6-Pentachlorobiphenyl (BZ 93)	9168	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5-Tetrachlorobiphenyl (BZ 43)	9169	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,6'-Tetrachlorobiphenyl (BZ 46)	9171	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,6,6'-Pentachlorobiphenyl (BZ 96)	9170	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,6-Tetrachlorobiphenyl (BZ 45)	9172	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3-Trichlorobiphenyl (BZ 16)	9173	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,4',5,5'-Hexachlorobiphenyl (BZ 153)	9040	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,4',5,6'-Hexachlorobiphenyl (BZ 154)	9174	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,4',5-Pentachlorobiphenyl (BZ 99)	9175	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,4',6,6'-Hexachlorobiphenyl (BZ 155)	9176	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,4',6-Pentachlorobiphenyl (BZ 100)	9177	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,4'-Tetrachlorobiphenyl (BZ 47)	9178	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,5',6-Pentachlorobiphenyl (BZ 103)	9179	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,5'-Tetrachlorobiphenyl (BZ 49)	8950	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,5,5'-Pentachlorobiphenyl (BZ 101)	8980	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,5,6'-Pentachlorobiphenyl (BZ 102)	9180	NELAP	PA	12/17/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,2',4,5-Tetrachlorobiphenyl (BZ 48)	9181	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,6'-Tetrachlorobiphenyl (BZ 51)	9183	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,6,6'-Pentachlorobiphenyl (BZ 104)	9182	NELAP	PA	02/01/2013
EPA 1668	C	10262109	2,2',4,6-Tetrachlorobiphenyl (BZ 50)	9184	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4-Trichlorobiphenyl (BZ 17)	9185	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',5,5'-Tetrachlorobiphenyl (BZ 52)	8955	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',5,6'-Tetrachlorobiphenyl (BZ 53)	9186	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',5-Trichlorobiphenyl (BZ 18)	8930	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',6,6'-Tetrachlorobiphenyl (BZ 54)	9187	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',6-Trichlorobiphenyl (BZ 19)	9188	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2'-Dichlorobiphenyl (BZ 4)	9189	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4',5',6-Pentachlorobiphenyl (BZ 125)	9224	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4',5'-Tetrachlorobiphenyl (BZ 76)	9229	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4',5,5'-Pentachlorobiphenyl (BZ 124)	9222	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4',5-Tetrachlorobiphenyl (BZ 70)	9230	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4',6-Tetrachlorobiphenyl (BZ 71)	9237	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4'-Trichlorobiphenyl (BZ 33)	9239	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,4',5',6-Hexachlorobiphenyl (BZ 168)	9218	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,4',5'-Pentachlorobiphenyl (BZ 123)	9000	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,4',5,5'-Hexachlorobiphenyl (BZ 167)	9055	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,4',5-Pentachlorobiphenyl (BZ 118)	8995	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,4',6-Pentachlorobiphenyl (BZ 119)	9220	NELAP	PA	12/17/2012

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,3',4,4'-Tetrachlorobiphenyl (BZ 66)	8960	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,5',6-Pentachlorobiphenyl (BZ 121)	9226	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,5'-Tetrachlorobiphenyl (BZ 68)	9231	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,5,5'-Pentachlorobiphenyl (BZ 120)	9223	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,5-Tetrachlorobiphenyl (BZ 67)	9232	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,6-Tetrachlorobiphenyl (BZ 69)	9235	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4-Trichlorobiphenyl (BZ 25)	9240	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',5',6-Tetrachlorobiphenyl (BZ 73)	9244	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',5'-Trichlorobiphenyl (BZ 34)	9246	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',5,5'-Tetrachlorobiphenyl (BZ 72)	9242	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',5-Trichlorobiphenyl (BZ 26)	8935	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',6-Trichlorobiphenyl (BZ 27)	9248	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3'-Dichlorobiphenyl (BZ 6)	9249	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',5',6-Hexachlorobiphenyl (BZ 164)	9201	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',5'-Pentachlorobiphenyl (BZ 122)	9202	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',5,5',6-Heptachlorobiphenyl (BZ 193)	9195	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',5,5'-Hexachlorobiphenyl (BZ 162)	9197	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',5,6-Hexachlorobiphenyl (BZ 163)	9199	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',5-Pentachlorobiphenyl (BZ 107)	9205	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',6-Pentachlorobiphenyl (BZ 110)	8990	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4'-Tetrachlorobiphenyl (BZ 56)	9207	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4',5',6-Heptachlorobiphenyl (BZ 191)	9192	NELAP	PA	12/17/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 024-001 expiration date 01/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,3,3',4,4',5'-Hexachlorobiphenyl (BZ 157)	9045	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4',5,5',6-Octachlorobiphenyl (BZ 205)	9190	NELAP	PA	02/01/2013
EPA 1668	C	10262109	2,3,3',4,4',5,5'-Heptachlorobiphenyl (BZ 189)	9085	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4',5,6-Heptachlorobiphenyl (BZ 190)	9191	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4',5-Hexachlorobiphenyl (BZ 156)	9050	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4',6-Hexachlorobiphenyl (BZ 158)	9193	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4'-Pentachlorobiphenyl (BZ 105)	8985	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,5',6-Hexachlorobiphenyl (BZ 161)	9200	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,5'-Pentachlorobiphenyl (BZ 108)	9203	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,5,5',6-Heptachlorobiphenyl (BZ 192)	9194	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,5,5'-Hexachlorobiphenyl (BZ 159)	9196	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,5,6-Hexachlorobiphenyl (BZ 160)	9198	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,5-Pentachlorobiphenyl (BZ 106)	9204	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,6-Pentachlorobiphenyl (BZ 109)	9206	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4-Tetrachlorobiphenyl (BZ 55)	9208	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',5',6-Pentachlorobiphenyl (BZ 113)	9212	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',5'-Tetrachlorobiphenyl (BZ 58)	9213	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',5,5',6-Hexachlorobiphenyl (BZ 165)	9209	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',5,5'-Pentachlorobiphenyl (BZ 111)	9210	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',5,6-Pentachlorobiphenyl (BZ 112)	9211	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',5-Tetrachlorobiphenyl (BZ 57)	9214	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',6-Tetrachlorobiphenyl (BZ 59)	9215	NELAP	PA	12/17/2012

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2425 New Holland Pike
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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,3,3'-Trichlorobiphenyl (BZ 20)	9216	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4',5,6-Pentachlorobiphenyl (BZ 117)	9227	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4',5-Tetrachlorobiphenyl (BZ 63)	9233	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4',6-Tetrachlorobiphenyl (BZ 64)	9236	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4'-Trichlorobiphenyl (BZ 22)	9241	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,4',5,6-Hexachlorobiphenyl (BZ 166)	9217	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,4',5-Pentachlorobiphenyl (BZ 114)	9005	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,4',6-Pentachlorobiphenyl (BZ 115)	9219	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,4'-Tetrachlorobiphenyl (BZ 60)	9221	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,5,6-Pentachlorobiphenyl (BZ 116)	9225	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,5-Tetrachlorobiphenyl (BZ 61)	9228	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,6-Tetrachlorobiphenyl (BZ 62)	9234	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4-Trichlorobiphenyl (BZ 21)	9238	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,5,6-Tetrachlorobiphenyl (BZ 65)	9243	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,5-Trichlorobiphenyl (BZ 23)	9245	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,6-Trichlorobiphenyl (BZ 24)	9247	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3-Dichlorobiphenyl (BZ 5)	8920	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4',5-Trichlorobiphenyl (BZ 31)	8940	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4',6-Trichlorobiphenyl (BZ 32)	9255	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4'-Dichlorobiphenyl (BZ 8)	9256	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4,4',5-Tetrachlorobiphenyl (BZ 74)	9250	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4,4',6-Tetrachlorobiphenyl (BZ 75)	9251	NELAP	PA	12/17/2012

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TNI Code: TNI02128
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Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,4,4'-Trichlorobiphenyl (BZ 28)	9252	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4,5-Trichlorobiphenyl (BZ 29)	9253	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4,6-Trichlorobiphenyl (BZ 30)	9254	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4-Dichlorobiphenyl (BZ 7)	9257	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,5-Dichlorobiphenyl (BZ 9)	9258	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,6-Dichlorobiphenyl (BZ 10)	9259	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2-Chlorobiphenyl (BZ 1)	8915	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4,4',5,5'-Hexachlorobiphenyl (BZ 169)	9060	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4,4',5-Pentachlorobiphenyl (BZ 126)	9015	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4,4'-Tetrachlorobiphenyl (BZ 77)	8965	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4,5'-Tetrachlorobiphenyl (BZ 79)	9261	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4,5,5'-Pentachlorobiphenyl (BZ 127)	9260	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4,5-Tetrachlorobiphenyl (BZ 78)	9262	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4-Trichlorobiphenyl (BZ 35)	9263	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',5,5'-Tetrachlorobiphenyl (BZ 80)	9264	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',5-Trichlorobiphenyl (BZ 36)	9265	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3'-Dichlorobiphenyl (BZ 11)	8925	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,4',5-Trichlorobiphenyl (BZ 39)	9268	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,4'-Dichlorobiphenyl (BZ 13)	9269	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,4,4',5-Tetrachlorobiphenyl (BZ 81)	8970	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,4,4'-Trichlorobiphenyl (BZ 37)	9266	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,4,5-Trichlorobiphenyl (BZ 38)	9267	NELAP	PA	12/17/2012

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
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PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	3,4-Dichlorobiphenyl (BZ 12)	9270	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,5-Dichlorobiphenyl (BZ 14)	9271	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3-Chlorobiphenyl (BZ 2)	9272	NELAP	PA	12/17/2012
EPA 1668	C	10262109	4,4'-Dichlorobiphenyl (BZ 15)	9273	NELAP	PA	12/17/2012
EPA 1668	C	10262109	4-Chlorobiphenyl (BZ 3)	9274	NELAP	PA	12/17/2012
EPA 1668	C	10262109	Decachlorobiphenyl	9105	NELAP	PA	02/01/2013
EPA 1671	A	10262201	Acetonitrile	4320	NELAP	PA	01/19/2005
EPA 1671	A	10262201	Diethylamine	4715	NELAP	PA	01/19/2005
EPA 1671	A	10262201	Dimethyl sulfoxide	4730	NELAP	PA	01/19/2005
EPA 1671	A	10262201	Ethanol	4750	NELAP	PA	01/19/2005
EPA 1671	A	10262201	Methanol	4930	NELAP	PA	01/19/2005
EPA 1671	A	10262201	Methyl cellosolve (2-Methoxyethanol)	4935	NELAP	PA	01/19/2005
EPA 1671	A	10262201	Triethylamine	5200	NELAP	PA	01/19/2005
EPA 1671	A	10262201	n-Propanol (1-Propanol)	5055	NELAP	PA	01/19/2005
EPA 1671		10130004	Acetonitrile	4320	NELAP	PA	01/20/2005
EPA 1671		10130004	Diethylamine	4715	NELAP	PA	01/20/2005
EPA 1671		10130004	Dimethyl sulfoxide	4730	NELAP	PA	01/20/2005
EPA 1671		10130004	Ethanol	4750	NELAP	PA	01/20/2005
EPA 1671		10130004	Methanol	4930	NELAP	PA	01/20/2005
EPA 1671		10130004	Methyl cellosolve (2-Methoxyethanol)	4935	NELAP	PA	01/20/2005
EPA 1671		10130004	Triethylamine	5200	NELAP	PA	01/20/2005
EPA 1671		10130004	n-Propanol (1-Propanol)	5055	NELAP	PA	01/20/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 170.1		10011208	Temperature, deg. C	2030	NELAP	PA	04/04/2005
EPA 180.1	2	10011800	Turbidity	2055	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Aluminum	1000	NELAP	PA	05/01/2020
EPA 200.7	4.4	10013806	Antimony	1005	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Arsenic	1010	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Barium	1015	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Beryllium	1020	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Boron	1025	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Cadmium	1030	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Calcium	1035	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Chromium	1040	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Cobalt	1050	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Copper	1055	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Iron	1070	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Lead	1075	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Lithium	1080	NELAP	PA	02/07/2012
EPA 200.7	4.4	10013806	Magnesium	1085	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Manganese	1090	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Molybdenum	1100	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Nickel	1105	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Potassium	1125	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Selenium	1140	NELAP	PA	01/19/2005

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PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 200.7	4.4	10013806	Silver	1150	NELAP	PA	04/04/2005
EPA 200.7	4.4	10013806	Sodium	1155	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Strontium	1160	NELAP	PA	05/24/2011
EPA 200.7	4.4	10013806	Tellurium	1162	NELAP	PA	02/04/2016
EPA 200.7	4.4	10013806	Thallium	1165	NELAP	PA	05/19/2023
EPA 200.7	4.4	10013806	Thorium	1170	NELAP	PA	11/19/2015
EPA 200.7	4.4	10013806	Tin	1175	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Titanium	1180	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Tungsten	1183	NELAP	PA	11/19/2015
EPA 200.7	4.4	10013806	Vanadium	1185	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Zinc	1190	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Zirconium	1192	NELAP	PA	07/29/2015
EPA 200.8	5.4	10014605	Aluminum	1000	NELAP	PA	01/07/2010
EPA 200.8	5.4	10014605	Antimony	1005	NELAP	PA	04/04/2005
EPA 200.8	5.4	10014605	Arsenic	1010	NELAP	PA	04/04/2005
EPA 200.8	5.4	10014605	Barium	1015	NELAP	PA	04/04/2005
EPA 200.8	5.4	10014605	Beryllium	1020	NELAP	PA	04/04/2005
EPA 200.8	5.4	10014605	Cadmium	1030	NELAP	PA	04/04/2005
EPA 200.8	5.4	10014605	Calcium	1035	NELAP	PA	01/07/2010
EPA 200.8	5.4	10014605	Chromium	1040	NELAP	PA	04/04/2005
EPA 200.8	5.4	10014605	Cobalt	1050	NELAP	PA	11/23/2010
EPA 200.8	5.4	10014605	Copper	1055	NELAP	PA	04/04/2005

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Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 200.8	5.4	10014605	Iron	1070	NELAP	PA	11/23/2010
EPA 200.8	5.4	10014605	Lead	1075	NELAP	PA	04/04/2005
EPA 200.8	5.4	10014605	Magnesium	1085	NELAP	PA	01/07/2010
EPA 200.8	5.4	10014605	Manganese	1090	NELAP	PA	11/23/2010
EPA 200.8	5.4	10014605	Molybdenum	1100	NELAP	PA	01/07/2010
EPA 200.8	5.4	10014605	Nickel	1105	NELAP	PA	04/04/2005
EPA 200.8	5.4	10014605	Potassium	1125	NELAP	PA	01/07/2010
EPA 200.8	5.4	10014605	Selenium	1140	NELAP	PA	12/12/2005
EPA 200.8	5.4	10014605	Silver	1150	NELAP	PA	11/10/2022
EPA 200.8	5.4	10014605	Sodium	1155	NELAP	PA	01/07/2010
EPA 200.8	5.4	10014605	Strontium	1160	NELAP	PA	01/07/2010
EPA 200.8	5.4	10014605	Thallium	1165	NELAP	PA	05/31/2006
EPA 200.8	5.4	10014605	Tin	1175	NELAP	PA	01/07/2010
EPA 200.8	5.4	10014605	Titanium	1180	NELAP	PA	09/19/2019
EPA 200.8	5.4	10014605	Uranium (mass)	1184	NELAP	PA	11/19/2015
EPA 200.8	5.4	10014605	Vanadium	1185	NELAP	PA	01/07/2010
EPA 200.8	5.4	10014605	Zinc	1190	NELAP	PA	01/18/2011
EPA 218.6	3.3	10028009	Chromium VI	1045	NELAP	PA	04/04/2005
EPA 245.1	3.0	10036609	Mercury	1095	NELAP	PA	01/19/2005
EPA 300.0	2.1	10053200	Bromide	1540	NELAP	PA	04/04/2005
EPA 300.0	2.1	10053200	Chloride	1575	NELAP	PA	01/19/2005
EPA 300.0	2.1	10053200	Fluoride	1730	NELAP	PA	05/25/2005

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Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 300.0	2.1	10053200	Nitrate as N	1810	NELAP	PA	01/19/2005
EPA 300.0	2.1	10053200	Nitrite as N	1840	NELAP	PA	01/19/2005
EPA 300.0	2.1	10053200	Sulfate	2000	NELAP	PA	01/19/2005
EPA 3005	A	10133207	Preconcentration under acid	1438	NELAP	PA	12/12/2005
EPA 3010	A	10133605	Hot plate acid digestion (HNO3 + HCl)	1420	NELAP	PA	12/12/2005
EPA 3020	A	10134404	Hot plate acid digestion (HNO3 only)	1422	NELAP	PA	12/12/2005
EPA 305.2		10054407	Acidity as CaCO3	1500	NELAP	PA	03/27/2018
EPA 3060	A	10136604	Alkaline digestion of Cr(VI)	1402	NELAP	PA	01/24/2007
EPA 310.1		10054805	Alkalinity as CaCO3	1505	NELAP	PA	11/19/2015
EPA 335.4	1.0	10061402	Total cyanide	1645	NELAP	PA	01/19/2005
EPA 350.1	2.0	10063602	Ammonia as N	1515	NELAP	PA	10/09/2013
EPA 350.3		10064401	Ammonia as N	1515	NELAP	PA	01/19/2016
EPA 351.2	2.0	10065404	Kjeldahl nitrogen, total (TKN)	1795	NELAP	PA	06/25/2020
EPA 3510	C	10138202	Separatory funnel liquid-liquid extraction	1444	NELAP	PA	12/12/2005
EPA 3511		10279819	Organic compounds in water by microextraction	7538	NELAP	PA	03/07/2012
EPA 3520	C	10139001	Continuous liquid-liquid extraction	1410	NELAP	PA	12/12/2005
EPA 353.2	2.0	10067604	Nitrate as N	1810	NELAP	PA	01/19/2005
EPA 353.2	2.0	10067604	Nitrite as N	1840	NELAP	PA	01/19/2005
EPA 353.2	2.0	10067604	Total nitrate-nitrite	1820	NELAP	PA	04/04/2005
EPA 3620	C	10146006	Florisil cleanup	1414	NELAP	PA	09/04/2018
EPA 3630	C	10146802	Silica gel cleanup	1446	NELAP	PA	12/12/2005
EPA 3640	A	10147203	Gel permeation cleanup (GPC)	1418	NELAP	PA	12/12/2005

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 024-001 expiration date 01/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 365.1	2.0	10070005	Phosphorus, total	1910	NELAP	PA	07/21/2020
EPA 365.3		10070801	Orthophosphate as P	1870	NELAP	PA	06/25/2020
EPA 3660	B	10148400	Sulfur cleanup	1456	NELAP	PA	12/12/2005
EPA 370.1		10072001	Silica, dissolved	1995	NELAP	PA	11/19/2015
EPA 375.4		10073800	Sulfate	2000	NELAP	PA	04/04/2005
EPA 410.4	2.0	10077404	Chemical oxygen demand (COD)	1565	NELAP	PA	04/01/2005
EPA 415.1		10078407	Total organic carbon (TOC)	2040	NELAP	PA	01/19/2005
EPA 420.4	1.0	10080203	Total phenolics	1905	NELAP	PA	04/17/2007
EPA 425.1		10080601	Surfactants as MBAS	2025	NELAP	PA	01/19/2005
EPA 5030	B	10153409	Aqueous-phase purge-and-trap	1406	NELAP	PA	12/12/2005
EPA 5030	C	10284603	Aqueous-phase purge-and-trap	1406	NELAP	PA	01/27/2014
EPA 524.2	4.1	10088809	1,2,4-Trimethylbenzene	5210	NELAP	PA	05/14/2018
EPA 524.2	4.1	10088809	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	01/18/2011
EPA 524.2	4.1	10088809	1,2-Dichloroethane	4635	NELAP	PA	01/18/2011
EPA 524.2	4.1	10088809	1,3,5-Trimethylbenzene	5215	NELAP	PA	05/14/2018
EPA 524.2	4.1	10088809	4-Methyl-2-pentanone (MIBK)	4995	NELAP	PA	05/24/2011
EPA 524.2	4.1	10088809	Acetone	4315	NELAP	PA	01/18/2011
EPA 524.2	4.1	10088809	Acrolein (Propenal)	4325	NELAP	PA	11/19/2015
EPA 524.2	4.1	10088809	Benzene	4375	NELAP	PA	01/18/2011
EPA 524.2	4.1	10088809	Chlorobenzene	4475	NELAP	PA	01/18/2011
EPA 524.2	4.1	10088809	Chloroform	4505	NELAP	PA	01/18/2011
EPA 524.2	4.1	10088809	Dichlorodifluoromethane (Freon 12)	4625	NELAP	PA	11/19/2015

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 524.2	4.1	10088809	Diisopropyl ether (DIPE)	9375	NELAP	PA	11/19/2015
EPA 524.2	4.1	10088809	Ethyl tert-butyl ether (ETBE)	4770	NELAP	PA	11/19/2015
EPA 524.2	4.1	10088809	Ethylbenzene	4765	NELAP	PA	05/14/2018
EPA 524.2	4.1	10088809	Isopropylbenzene (Cumene)	4900	NELAP	PA	05/14/2018
EPA 524.2	4.1	10088809	Methylene chloride (Dichloromethane)	4975	NELAP	PA	05/24/2011
EPA 524.2	4.1	10088809	Naphthalene	5005	NELAP	PA	05/14/2018
EPA 524.2	4.1	10088809	Tetrahydrofuran (THF)	5120	NELAP	PA	05/24/2011
EPA 524.2	4.1	10088809	Toluene	5140	NELAP	PA	01/18/2011
EPA 524.2	4.1	10088809	m+p-Xylene	5240	NELAP	PA	07/25/2011
EPA 524.2	4.1	10088809	n-Butylbenzene	4435	NELAP	PA	05/14/2018
EPA 524.2	4.1	10088809	n-Hexane	4855	NELAP	PA	11/19/2015
EPA 524.2	4.1	10088809	n-Propylbenzene	5090	NELAP	PA	05/14/2018
EPA 524.2	4.1	10088809	o-Xylene	5250	NELAP	PA	05/24/2011
EPA 524.2	4.1	10088809	p-Isopropyltoluene (4-Isopropyltoluene)	4910	NELAP	PA	05/14/2018
EPA 524.2	4.1	10088809	sec-Butylbenzene	4440	NELAP	PA	05/14/2018
EPA 524.2	4.1	10088809	tert-Amyl methyl ether (TAME)	4370	NELAP	PA	11/19/2015
EPA 531.1	3.1	10091006	3-Hydroxycarbofuran	7710	NELAP	PA	11/19/2015
EPA 531.1	3.1	10091006	Aldicarb (Temik)	7010	NELAP	PA	11/19/2015
EPA 531.1	3.1	10091006	Aldicarb sulfone	7015	NELAP	PA	11/19/2015
EPA 531.1	3.1	10091006	Aldicarb sulfoxide	7020	NELAP	PA	11/19/2015
EPA 531.1	3.1	10091006	Methiocarb (Mesurol)	7800	NELAP	PA	11/19/2015
EPA 531.1	3.1	10091006	Methomyl (Lannate)	7805	NELAP	PA	11/19/2015

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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 531.1	3.1	10091006	Propoxur (Baygon)	8080	NELAP	PA	11/19/2015
EPA 6010	C	10155905	Metals by ICP/AES	1097	NELAP	PA	12/12/2005
EPA 6010	D	10155916	Metals by ICP/AES	1097	NELAP	PA	07/09/2018
EPA 6010	C	10155905	Aluminum	1000	NELAP	PA	05/01/2020
EPA 6010	C	10155905	Antimony	1005	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Arsenic	1010	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Barium	1015	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Beryllium	1020	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Boron	1025	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Cadmium	1030	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Calcium	1035	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Chromium	1040	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Cobalt	1050	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Copper	1055	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Iron	1070	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Lead	1075	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Lithium	1080	NELAP	PA	01/18/2011
EPA 6010	C	10155905	Magnesium	1085	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Manganese	1090	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Molybdenum	1100	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Nickel	1105	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Potassium	1125	NELAP	PA	12/12/2005

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 6010	C	10155905	Selenium	1140	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Silver	1150	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Sodium	1155	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Strontium	1160	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Sulfur	2017	NELAP	PA	12/19/2011
EPA 6010	C	10155905	Tellurium	1162	NELAP	PA	02/04/2016
EPA 6010	C	10155905	Thallium	1165	NELAP	PA	05/19/2023
EPA 6010	C	10155905	Thorium	1170	NELAP	PA	11/19/2015
EPA 6010	C	10155905	Tin	1175	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Titanium	1180	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Tungsten	1183	NELAP	PA	11/19/2015
EPA 6010	C	10155905	Vanadium	1185	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Zinc	1190	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Zirconium	1192	NELAP	PA	07/29/2015
EPA 6010	D	10155916	Aluminum	1000	NELAP	PA	05/01/2020
EPA 6010	D	10155950	Aluminum	1000	NELAP	PA	07/07/2023
EPA 6010	D	10155950	Antimony	1005	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Antimony	1005	NELAP	PA	12/12/2005
EPA 6010	D	10155950	Arsenic	1010	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Arsenic	1010	NELAP	PA	12/12/2005
EPA 6010	D	10155950	Barium	1015	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Barium	1015	NELAP	PA	12/12/2005

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PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 6010	D	10155950	Beryllium	1020	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Beryllium	1020	NELAP	PA	12/12/2005
EPA 6010	D	10155950	Boron	1025	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Boron	1025	NELAP	PA	12/12/2005
EPA 6010	D	10155950	Cadmium	1030	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Cadmium	1030	NELAP	PA	12/12/2005
EPA 6010	D	10155950	Calcium	1035	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Calcium	1035	NELAP	PA	12/12/2005
EPA 6010	D	10155950	Chromium	1040	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Chromium	1040	NELAP	PA	12/12/2005
EPA 6010	D	10155950	Cobalt	1050	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Cobalt	1050	NELAP	PA	12/12/2005
EPA 6010	D	10155950	Copper	1055	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Copper	1055	NELAP	PA	12/12/2005
EPA 6010	D	10155950	Iron	1070	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Iron	1070	NELAP	PA	12/12/2005
EPA 6010	D	10155950	Lead	1075	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Lead	1075	NELAP	PA	12/12/2005
EPA 6010	D	10155916	Lithium	1080	NELAP	PA	01/18/2011
EPA 6010	D	10155950	Lithium	1080	NELAP	PA	07/07/2023
EPA 6010	D	10155950	Magnesium	1085	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Magnesium	1085	NELAP	PA	12/12/2005

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PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 6010	D	10155950	Manganese	1090	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Manganese	1090	NELAP	PA	12/12/2005
EPA 6010	D	10155950	Molybdenum	1100	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Molybdenum	1100	NELAP	PA	12/12/2005
EPA 6010	D	10155950	Nickel	1105	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Nickel	1105	NELAP	PA	12/12/2005
EPA 6010	D	10155950	Potassium	1125	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Potassium	1125	NELAP	PA	12/12/2005
EPA 6010	D	10155950	Selenium	1140	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Selenium	1140	NELAP	PA	12/12/2005
EPA 6010	D	10155950	Silver	1150	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Silver	1150	NELAP	PA	12/12/2005
EPA 6010	D	10155950	Sodium	1155	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Sodium	1155	NELAP	PA	12/12/2005
EPA 6010	D	10155950	Strontium	1160	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Strontium	1160	NELAP	PA	12/12/2005
EPA 6010	D	10155950	Sulfur	2017	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Sulfur	2017	NELAP	PA	12/19/2011
EPA 6010	D	10155916	Tellurium	1162	NELAP	PA	02/04/2016
EPA 6010	D	10155916	Thallium	1165	NELAP	PA	05/19/2023
EPA 6010	D	10155950	Thallium	1165	NELAP	PA	07/07/2023
EPA 6010	D	10155950	Thorium	1170	NELAP	PA	07/07/2023

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PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 6010	D	10155916	Thorium	1170	NELAP	PA	11/19/2015
EPA 6010	D	10155950	Tin	1175	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Tin	1175	NELAP	PA	12/12/2005
EPA 6010	D	10155950	Titanium	1180	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Titanium	1180	NELAP	PA	12/12/2005
EPA 6010	D	10155950	Tungsten	1183	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Tungsten	1183	NELAP	PA	11/19/2015
EPA 6010	D	10155950	Vanadium	1185	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Vanadium	1185	NELAP	PA	12/12/2005
EPA 6010	D	10155950	Zinc	1190	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Zinc	1190	NELAP	PA	12/12/2005
EPA 6010	D	10155950	Zirconium	1192	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Zirconium	1192	NELAP	PA	07/29/2015
EPA 6020	B	10156420	Metals by ICP/MS	1098	NELAP	PA	07/09/2018
EPA 6020	B	10156420	Aluminum	1000	NELAP	PA	01/07/2010
EPA 6020	B	10156420	Antimony	1005	NELAP	PA	12/12/2005
EPA 6020	B	10156420	Arsenic	1010	NELAP	PA	12/12/2005
EPA 6020	B	10156420	Barium	1015	NELAP	PA	12/12/2005
EPA 6020	B	10156420	Beryllium	1020	NELAP	PA	12/12/2005
EPA 6020	B	10156420	Cadmium	1030	NELAP	PA	12/12/2005
EPA 6020	B	10156420	Calcium	1035	NELAP	PA	01/07/2010
EPA 6020	B	10156420	Chromium	1040	NELAP	PA	12/12/2005

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DEP Laboratory ID: 36-00037
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PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 6020	B	10156420	Cobalt	1050	NELAP	PA	11/23/2010
EPA 6020	B	10156420	Copper	1055	NELAP	PA	12/12/2005
EPA 6020	B	10156420	Iron	1070	NELAP	PA	11/23/2010
EPA 6020	B	10156420	Lead	1075	NELAP	PA	12/12/2005
EPA 6020	B	10156420	Magnesium	1085	NELAP	PA	01/07/2010
EPA 6020	B	10156420	Manganese	1090	NELAP	PA	11/23/2010
EPA 6020	B	10156420	Molybdenum	1100	NELAP	PA	01/07/2010
EPA 6020	B	10156420	Nickel	1105	NELAP	PA	07/23/2008
EPA 6020	B	10156420	Potassium	1125	NELAP	PA	01/07/2010
EPA 6020	B	10156420	Selenium	1140	NELAP	PA	12/12/2005
EPA 6020	B	10156420	Silver	1150	NELAP	PA	11/10/2022
EPA 6020	B	10156420	Sodium	1155	NELAP	PA	01/07/2010
EPA 6020	B	10156420	Strontium	1160	NELAP	PA	01/07/2010
EPA 6020	B	10156420	Thallium	1165	NELAP	PA	12/12/2005
EPA 6020	B	10156420	Tin	1175	NELAP	PA	01/07/2010
EPA 6020	B	10156420	Titanium	1180	NELAP	PA	09/19/2019
EPA 6020	B	10156420	Uranium (mass)	1184	NELAP	PA	11/19/2015
EPA 6020	B	10156420	Vanadium	1185	NELAP	PA	01/07/2010
EPA 6020	B	10156420	Zinc	1190	NELAP	PA	01/18/2011
EPA 608.3		10296614	2,4'-DDD	8580	NELAP	PA	05/14/2018
EPA 608.3		10296614	2,4'-DDE	8585	NELAP	PA	05/14/2018
EPA 608.3		10296614	2,4'-DDT	8590	NELAP	PA	05/14/2018

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 024-001 expiration date 01/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 608.3		10296614	4,4'-DDD	7355	NELAP	PA	05/14/2018
EPA 608.3		10296614	4,4'-DDE	7360	NELAP	PA	05/14/2018
EPA 608.3		10296614	4,4'-DDT	7365	NELAP	PA	05/14/2018
EPA 608.3		10296614	Aldrin (HHDN)	7025	NELAP	PA	05/14/2018
EPA 608.3		10296614	Aroclor-1016 (PCB-1016)	8880	NELAP	PA	05/14/2018
EPA 608.3		10296614	Aroclor-1221 (PCB-1221)	8885	NELAP	PA	07/16/2018
EPA 608.3		10296614	Aroclor-1232 (PCB-1232)	8890	NELAP	PA	07/16/2018
EPA 608.3		10296614	Aroclor-1242 (PCB-1242)	8895	NELAP	PA	07/16/2018
EPA 608.3		10296614	Aroclor-1248 (PCB-1248)	8900	NELAP	PA	07/16/2018
EPA 608.3		10296614	Aroclor-1254 (PCB-1254)	8905	NELAP	PA	07/16/2018
EPA 608.3		10296614	Aroclor-1260 (PCB-1260)	8910	NELAP	PA	05/14/2018
EPA 608.3		10296614	Chlordane (tech.)	7250	NELAP	PA	05/14/2018
EPA 608.3		10296614	Dieldrin	7470	NELAP	PA	07/05/2018
EPA 608.3		10296614	Endosulfan I	7510	NELAP	PA	05/14/2018
EPA 608.3		10296614	Endosulfan II	7515	NELAP	PA	05/14/2018
EPA 608.3		10296614	Endosulfan sulfate	7520	NELAP	PA	05/14/2018
EPA 608.3		10296614	Endrin	7540	NELAP	PA	05/14/2018
EPA 608.3		10296614	Endrin aldehyde	7530	NELAP	PA	05/14/2018
EPA 608.3		10296614	Endrin ketone	7535	NELAP	PA	05/14/2018
EPA 608.3		10296614	Heptachlor	7685	NELAP	PA	05/14/2018
EPA 608.3		10296614	Heptachlor epoxide	7690	NELAP	PA	05/14/2018
EPA 608.3		10296614	Methoxychlor	7810	NELAP	PA	05/14/2018

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 608.3		10296614	Mirex	7870	NELAP	PA	05/14/2018
EPA 608.3		10296614	Telodrin	8177	NELAP	PA	05/14/2018
EPA 608.3		10296614	Toxaphene (Chlorinated camphene)	8250	NELAP	PA	05/14/2018
EPA 608.3		10296614	alpha-BHC (alpha-Hexachlorocyclohexane)	7110	NELAP	PA	05/14/2018
EPA 608.3		10296614	alpha-Chlordane	7240	NELAP	PA	05/14/2018
EPA 608.3		10296614	beta-BHC (beta-Hexachlorocyclohexane)	7115	NELAP	PA	05/14/2018
EPA 608.3		10296614	delta-BHC (delta-Hexachlorocyclohexane)	7105	NELAP	PA	05/14/2018
EPA 608.3		10296614	gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	7120	NELAP	PA	05/14/2018
EPA 608.3		10296614	gamma-Chlordane	7245	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,1,1,2-Tetrachloroethane	5105	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,1,1-Trichloro-2,2,2-trifluoroethane (Freon 113a)	5195	NELAP	PA	07/16/2018
EPA 624.1		10298121	1,1,1-Trichloroethane	5160	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,1,2,2-Tetrachloroethane	5110	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5185	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,1,2-Trichloroethane	5165	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,1-Dichloroethane	4630	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,1-Dichloroethene (1,1-Dichloroethylene)	4640	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,1-Dichloropropene	4670	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,2,3-Trichlorobenzene	5150	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,2,3-Trichloropropane (1,2,3-TCP)	5180	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,2,4-Trichlorobenzene	5155	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,2,4-Trimethylbenzene	5210	NELAP	PA	05/14/2018

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 624.1		10298121	1,2-Dibromo-3-chloropropane (DBCP, Dibromochloropropane)	4570	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,2-Dibromoethane (EDB, Ethylene dibromide)	4585	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,2-Dichloroethane	4635	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,2-Dichloropropane	4655	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,3,5-Trimethylbenzene	5215	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,3-Dichlorobenzene (m-Dichlorobenzene)	4615	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,3-Dichloropropane	4660	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,4-Dichlorobenzene (p-Dichlorobenzene)	4620	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	05/14/2018
EPA 624.1		10298121	2,2-Dichloropropane	4665	NELAP	PA	05/14/2018
EPA 624.1		10298121	2-Butanone (Methyl ethyl ketone, MEK)	4410	NELAP	PA	05/14/2018
EPA 624.1		10298121	2-Chloroethyl vinyl ether	4500	NELAP	PA	07/16/2018
EPA 624.1		10298121	2-Chlorotoluene	4535	NELAP	PA	05/14/2018
EPA 624.1		10298121	2-Hexanone	4860	NELAP	PA	05/14/2018
EPA 624.1		10298121	4-Chlorotoluene	4540	NELAP	PA	05/14/2018
EPA 624.1		10298121	4-Methyl-2-pentanone (MIBK)	4995	NELAP	PA	05/14/2018
EPA 624.1		10298121	Acetone	4315	NELAP	PA	05/14/2018
EPA 624.1		10298121	Acetonitrile	4320	NELAP	PA	05/14/2018
EPA 624.1		10298121	Acrolein (Propenal)	4325	NELAP	PA	05/14/2018
EPA 624.1		10298121	Acrylonitrile	4340	NELAP	PA	05/14/2018

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 624.1		10298121	Benzene	4375	NELAP	PA	05/14/2018
EPA 624.1		10298121	Benzyl chloride	5635	NELAP	PA	05/14/2018
EPA 624.1		10298121	Bromobenzene	4385	NELAP	PA	05/14/2018
EPA 624.1		10298121	Bromochloromethane	4390	NELAP	PA	05/14/2018
EPA 624.1		10298121	Bromodichloromethane	4395	NELAP	PA	05/14/2018
EPA 624.1		10298121	Bromoform	4400	NELAP	PA	05/14/2018
EPA 624.1		10298121	Carbon disulfide	4450	NELAP	PA	05/14/2018
EPA 624.1		10298121	Carbon tetrachloride	4455	NELAP	PA	05/14/2018
EPA 624.1		10298121	Chlorobenzene	4475	NELAP	PA	05/14/2018
EPA 624.1		10298121	Chlorodifluoromethane (Freon 22)	4577	NELAP	PA	05/14/2018
EPA 624.1		10298121	Chloroethane	4485	NELAP	PA	05/14/2018
EPA 624.1		10298121	Chloroform	4505	NELAP	PA	07/05/2018
EPA 624.1		10298121	Chloroprene (2-Chloro-1,3-butadiene)	4525	NELAP	PA	05/14/2018
EPA 624.1		10298121	Cyclohexane	4555	NELAP	PA	05/14/2018
EPA 624.1		10298121	Dibromochloromethane	4575	NELAP	PA	05/14/2018
EPA 624.1		10298121	Dibromomethane	4595	NELAP	PA	05/14/2018
EPA 624.1		10298121	Dichlorodifluoromethane (Freon 12)	4625	NELAP	PA	05/14/2018
EPA 624.1		10298121	Dichlorofluoromethane (Freon 21)	4627	NELAP	PA	05/14/2018
EPA 624.1		10298121	Diisopropyl ether (DIPE)	9375	NELAP	PA	05/14/2018
EPA 624.1		10298121	Ethyl acetate	4755	NELAP	PA	05/14/2018
EPA 624.1		10298121	Ethyl methacrylate	4810	NELAP	PA	05/14/2018
EPA 624.1		10298121	Ethylbenzene	4765	NELAP	PA	05/14/2018

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 624.1		10298121	Freon-123A	4697	NELAP	PA	05/14/2018
EPA 624.1		10298121	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	4835	NELAP	PA	05/14/2018
EPA 624.1		10298121	Isobutyl alcohol (2-Methyl-1-propanol)	4875	NELAP	PA	05/14/2018
EPA 624.1		10298121	Isopropyl acetate	4890	NELAP	PA	05/14/2018
EPA 624.1		10298121	Isopropyl alcohol (2-Propanol)	4895	NELAP	PA	05/14/2018
EPA 624.1		10298121	Isopropylbenzene (Cumene)	4900	NELAP	PA	05/14/2018
EPA 624.1		10298121	Methacrylonitrile	4925	NELAP	PA	05/14/2018
EPA 624.1		10298121	Methyl bromide (Bromomethane)	4950	NELAP	PA	05/14/2018
EPA 624.1		10298121	Methyl chloride (Chloromethane)	4960	NELAP	PA	05/14/2018
EPA 624.1		10298121	Methyl iodide (Iodomethane)	4870	NELAP	PA	05/14/2018
EPA 624.1		10298121	Methyl tert-butyl ether (MTBE)	5000	NELAP	PA	05/14/2018
EPA 624.1		10298121	Methylene chloride (Dichloromethane)	4975	NELAP	PA	05/14/2018
EPA 624.1		10298121	Methylmethacrylate	4990	NELAP	PA	05/14/2018
EPA 624.1		10298121	Naphthalene	5005	NELAP	PA	05/14/2018
EPA 624.1		10298121	Propionitrile (Ethyl cyanide)	5080	NELAP	PA	05/14/2018
EPA 624.1		10298121	Styrene	5100	NELAP	PA	05/14/2018
EPA 624.1		10298121	Tetrachloroethene (PCE, Perchloroethylene)	5115	NELAP	PA	05/14/2018
EPA 624.1		10298121	Tetrahydrofuran (THF)	5120	NELAP	PA	05/14/2018
EPA 624.1		10298121	Toluene	5140	NELAP	PA	05/14/2018
EPA 624.1		10298121	Trichloroethene (TCE, Trichloroethylene)	5170	NELAP	PA	05/14/2018
EPA 624.1		10298121	Trichlorofluoromethane (Freon 11)	5175	NELAP	PA	05/14/2018
EPA 624.1		10298121	Vinyl acetate	5225	NELAP	PA	05/14/2018

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 624.1		10298121	Vinyl chloride (Chloroethene)	5235	NELAP	PA	05/14/2018
EPA 624.1		10298121	Xylenes, total	5260	NELAP	PA	05/14/2018
EPA 624.1		10298121	cis-1,2-Dichloroethene	4645	NELAP	PA	05/14/2018
EPA 624.1		10298121	cis-1,3-Dichloropropene	4680	NELAP	PA	05/14/2018
EPA 624.1		10298121	cis-1,4-Dichloro-2-butene	4600	NELAP	PA	05/14/2018
EPA 624.1		10298121	m+p-Xylene	5240	NELAP	PA	05/14/2018
EPA 624.1		10298121	n-Butyl acetate	4403	NELAP	PA	05/14/2018
EPA 624.1		10298121	n-Butylbenzene	4435	NELAP	PA	05/14/2018
EPA 624.1		10298121	n-Heptane	4825	NELAP	PA	05/14/2018
EPA 624.1		10298121	n-Hexane	4855	NELAP	PA	05/14/2018
EPA 624.1		10298121	n-Propyl acetate	5057	NELAP	PA	05/14/2018
EPA 624.1		10298121	n-Propylbenzene	5090	NELAP	PA	05/14/2018
EPA 624.1		10298121	o-Xylene	5250	NELAP	PA	05/14/2018
EPA 624.1		10298121	p-Isopropyltoluene (4-Isopropyltoluene)	4910	NELAP	PA	05/14/2018
EPA 624.1		10298121	sec-Butylbenzene	4440	NELAP	PA	05/14/2018
EPA 624.1		10298121	tert-Amyl ethyl ether (TAEE)	4369	NELAP	PA	05/14/2018
EPA 624.1		10298121	tert-Amyl methyl ether (TAME)	4370	NELAP	PA	07/05/2018
EPA 624.1		10298121	tert-Butyl alcohol (2-Methyl-2-propanol)	4420	NELAP	PA	05/14/2018
EPA 624.1		10298121	tert-Butyl ethyl ether	4770	NELAP	PA	07/16/2018
EPA 624.1		10298121	tert-Butylbenzene	4445	NELAP	PA	05/14/2018
EPA 624.1		10298121	trans-1,2-Dichloroethene	4700	NELAP	PA	05/14/2018
EPA 624.1		10298121	trans-1,3-Dichloropropene	4685	NELAP	PA	05/14/2018

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 624.1		10298121	trans-1,4-Dichloro-2-butene	4605	NELAP	PA	05/14/2018
EPA 625.1		10300024	1,1'-Biphenyl (Biphenyl, Lemonene)	6703	NELAP	PA	05/14/2018
EPA 625.1		10300024	1,2,4,5-Tetrachlorobenzene	6715	NELAP	PA	05/14/2018
EPA 625.1		10300024	1,2,4-Trichlorobenzene	5155	NELAP	PA	05/14/2018
EPA 625.1		10300024	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	05/14/2018
EPA 625.1		10300024	1,2-Diphenylhydrazine	6220	NELAP	PA	05/14/2018
EPA 625.1		10300024	1,3-Dichlorobenzene (m-Dichlorobenzene)	4615	NELAP	PA	05/14/2018
EPA 625.1		10300024	1,4-Dichlorobenzene (p-Dichlorobenzene)	4620	NELAP	PA	05/14/2018
EPA 625.1		10300024	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	05/14/2018
EPA 625.1		10300024	1-Methylnaphthalene	6380	NELAP	PA	05/14/2018
EPA 625.1		10300024	1-Methylphenanthrene	9501	NELAP	PA	05/14/2018
EPA 625.1		10300024	2,2'-Oxybis(1-chloropropane) (bis(2-Chloro-1-methylethyl) ether)	4659	NELAP	PA	05/14/2018
EPA 625.1		10300024	2,3,4,6-Tetrachlorophenol	6735	NELAP	PA	05/14/2018
EPA 625.1		10300024	2,3-Dichloroaniline	9363	NELAP	PA	05/14/2018
EPA 625.1		10300024	2,3-Dinitrotoluene	6014	NELAP	PA	05/14/2018
EPA 625.1		10300024	2,4,5-Trichlorophenol	6835	NELAP	PA	05/14/2018
EPA 625.1		10300024	2,4,6-Trichlorophenol	6840	NELAP	PA	05/14/2018
EPA 625.1		10300024	2,4-Dichlorophenol	6000	NELAP	PA	05/14/2018
EPA 625.1		10300024	2,4-Dimethylphenol	6130	NELAP	PA	05/14/2018
EPA 625.1		10300024	2,4-Dinitrophenol	6175	NELAP	PA	05/14/2018
EPA 625.1		10300024	2,4-Dinitrotoluene (2,4-DNT)	6185	NELAP	PA	05/14/2018

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 625.1		10300024	2,6-Dichlorophenol	6005	NELAP	PA	05/14/2018
EPA 625.1		10300024	2,6-Dinitrotoluene (2,6-DNT)	6190	NELAP	PA	05/14/2018
EPA 625.1		10300024	2-Chloronaphthalene	5795	NELAP	PA	05/14/2018
EPA 625.1		10300024	2-Chlorophenol	5800	NELAP	PA	05/14/2018
EPA 625.1		10300024	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	6360	NELAP	PA	05/14/2018
EPA 625.1		10300024	2-Methylnaphthalene	6385	NELAP	PA	05/14/2018
EPA 625.1		10300024	2-Methylphenol (o-Cresol)	6400	NELAP	PA	05/14/2018
EPA 625.1		10300024	2-Nitroaniline	6460	NELAP	PA	05/14/2018
EPA 625.1		10300024	2-Nitrophenol	6490	NELAP	PA	05/14/2018
EPA 625.1		10300024	3+4-Methylphenol (m+p-Cresol)	6412	NELAP	PA	05/14/2018
EPA 625.1		10300024	3,3'-Dichlorobenzidine	5945	NELAP	PA	05/14/2018
EPA 625.1		10300024	3-Nitroaniline	6465	NELAP	PA	05/14/2018
EPA 625.1		10300024	4-Bromophenyl phenyl ether	5660	NELAP	PA	05/14/2018
EPA 625.1		10300024	4-Chloro-3-methylphenol	5700	NELAP	PA	05/14/2018
EPA 625.1		10300024	4-Chloroaniline	5745	NELAP	PA	05/14/2018
EPA 625.1		10300024	4-Chlorophenyl phenyl ether	5825	NELAP	PA	05/14/2018
EPA 625.1		10300024	4-Nitroaniline	6470	NELAP	PA	05/14/2018
EPA 625.1		10300024	4-Nitrophenol	6500	NELAP	PA	05/14/2018
EPA 625.1		10300024	Acenaphthene	5500	NELAP	PA	05/14/2018
EPA 625.1		10300024	Acenaphthylene	5505	NELAP	PA	05/14/2018
EPA 625.1		10300024	Acetophenone	5510	NELAP	PA	05/14/2018
EPA 625.1		10300024	Aniline	5545	NELAP	PA	05/14/2018

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 024-001 expiration date 01/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 625.1		10300024	Anthracene	5555	NELAP	PA	05/14/2018
EPA 625.1		10300024	Benzidine	5595	NELAP	PA	05/14/2018
EPA 625.1		10300024	Benzo[a]anthracene	5575	NELAP	PA	05/14/2018
EPA 625.1		10300024	Benzo[a]pyrene	5580	NELAP	PA	05/14/2018
EPA 625.1		10300024	Benzo[b]fluoranthene	5585	NELAP	PA	05/14/2018
EPA 625.1		10300024	Benzo[ghi]perylene	5590	NELAP	PA	05/14/2018
EPA 625.1		10300024	Benzo[k]fluoranthene	5600	NELAP	PA	05/14/2018
EPA 625.1		10300024	Benzoic acid	5610	NELAP	PA	05/14/2018
EPA 625.1		10300024	Benzyl alcohol	5630	NELAP	PA	05/14/2018
EPA 625.1		10300024	Butyl benzyl phthalate (Benzyl butyl phthalate)	5670	NELAP	PA	05/14/2018
EPA 625.1		10300024	Carbazole	5680	NELAP	PA	05/14/2018
EPA 625.1		10300024	Chrysene (Benzo[a]phenanthrene)	5855	NELAP	PA	05/14/2018
EPA 625.1		10300024	Di-n-butyl phthalate	5925	NELAP	PA	05/14/2018
EPA 625.1		10300024	Di-n-octyl phthalate	6200	NELAP	PA	05/14/2018
EPA 625.1		10300024	Dibenzo[a,h]anthracene	5895	NELAP	PA	05/14/2018
EPA 625.1		10300024	Dibenzofuran	5905	NELAP	PA	05/14/2018
EPA 625.1		10300024	Diethyl phthalate	6070	NELAP	PA	05/14/2018
EPA 625.1		10300024	Dimethyl phthalate	6135	NELAP	PA	05/14/2018
EPA 625.1		10300024	Diphenyl ether	6210	NELAP	PA	05/14/2018
EPA 625.1		10300024	Fluoranthene	6265	NELAP	PA	05/14/2018
EPA 625.1		10300024	Fluorene	6270	NELAP	PA	05/14/2018
EPA 625.1		10300024	Hexachlorobenzene	6275	NELAP	PA	05/14/2018

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 625.1		10300024	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	4835	NELAP	PA	05/14/2018
EPA 625.1		10300024	Hexachlorocyclopentadiene	6285	NELAP	PA	05/14/2018
EPA 625.1		10300024	Hexachloroethane	4840	NELAP	PA	05/14/2018
EPA 625.1		10300024	Indeno(1,2,3-cd)pyrene	6315	NELAP	PA	05/14/2018
EPA 625.1		10300024	Isophorone	6320	NELAP	PA	05/14/2018
EPA 625.1		10300024	N-Nitrosodi-n-butylamine	5025	NELAP	PA	05/14/2018
EPA 625.1		10300024	N-Nitrosodi-n-propylamine	6545	NELAP	PA	05/14/2018
EPA 625.1		10300024	N-Nitrosodiethylamine	6525	NELAP	PA	05/14/2018
EPA 625.1		10300024	N-Nitrosodimethylamine	6530	NELAP	PA	05/14/2018
EPA 625.1		10300024	N-Nitrosodiphenylamine	6535	NELAP	PA	05/14/2018
EPA 625.1		10300024	N-Nitrosopyrrolidine	6565	NELAP	PA	05/14/2018
EPA 625.1		10300024	Naphthalene	5005	NELAP	PA	05/14/2018
EPA 625.1		10300024	Nitrobenzene	5015	NELAP	PA	05/14/2018
EPA 625.1		10300024	Pentachlorobenzene	6590	NELAP	PA	05/14/2018
EPA 625.1		10300024	Pentachlorophenol (PCP)	6605	NELAP	PA	05/14/2018
EPA 625.1		10300024	Phenanthrene	6615	NELAP	PA	05/14/2018
EPA 625.1		10300024	Phenol	6625	NELAP	PA	05/14/2018
EPA 625.1		10300024	Pyrene	6665	NELAP	PA	05/14/2018
EPA 625.1		10300024	Pyridine	5095	NELAP	PA	05/14/2018
EPA 625.1		10300024	alpha-Terpineol	6700	NELAP	PA	05/14/2018
EPA 625.1		10300024	bis(2-Chloroethoxy)methane	5760	NELAP	PA	05/14/2018
EPA 625.1		10300024	bis(2-Chloroethyl) ether	5765	NELAP	PA	05/14/2018

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 625.1		10300024	bis(2-Chloroisopropyl)ether		NELAP	PA	07/16/2018
EPA 625.1		10300024	bis(2-Ethylhexyl) phthalate (DEHP)	6065	NELAP	PA	05/14/2018
EPA 625.1		10300024	n-Decane	5875	NELAP	PA	05/14/2018
EPA 625.1		10300024	n-Docosane	6230	NELAP	PA	05/14/2018
EPA 625.1		10300024	n-Eicosane	6240	NELAP	PA	05/14/2018
EPA 625.1		10300024	n-Hexadecane	6300	NELAP	PA	05/14/2018
EPA 625.1		10300024	n-Octadecane	6580	NELAP	PA	05/14/2018
EPA 625.1		10300024	n-Tetradecane	6745	NELAP	PA	05/14/2018
EPA 625.1		10300024	o-Toluidine (2-Toluidine, 2-Methylaniline)	5145	NELAP	PA	05/14/2018
EPA 625.1 SIM		10300035	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	1-Methylnaphthalene	6380	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	2-Methylnaphthalene	6385	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Acenaphthene	5500	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Acenaphthylene	5505	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Anthracene	5555	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Benzo[a]anthracene	5575	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Benzo[a]pyrene	5580	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Benzo[b]fluoranthene	5585	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Benzo[e]pyrene	5605	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Benzo[ghi]perylene	5590	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Benzo[k]fluoranthene	5600	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Butyl benzyl phthalate (Benzyl butyl phthalate)	5670	NELAP	PA	09/24/2020

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 625.1 SIM		10300035	Chrysene (Benzo[a]phenanthrene)	5855	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Di-n-butyl phthalate	5925	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Di-n-octyl phthalate	6200	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Dibenzo[a,h]anthracene	5895	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Dibenzofuran	5905	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Diethyl phthalate	6070	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Dimethyl phthalate	6135	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Diphenylamine	6205	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Fluoranthene	6265	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Fluorene	6270	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Hexachlorobenzene	6275	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Indeno(1,2,3-cd)pyrene	6315	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	N-Nitrosodimethylamine	6530	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	N-Nitrosodiphenylamine	6535	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Naphthalene	5005	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Perylene	6608	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Phenanthrene	6615	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Pyrene	6665	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Quinoline	6670	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	bis(2-Chloroethyl) ether	5765	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	bis(2-Ethylhexyl) phthalate (DEHP)	6065	NELAP	PA	09/24/2020
EPA 680		10112002	Decachlorobiphenyl	9105	NELAP	PA	01/19/2016

Annmarie Beach

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 680		10112002	Dichlorobiphenyls	8876	NELAP	PA	01/19/2016
EPA 680		10112002	Heptachlorobiphenyls	8877	NELAP	PA	01/19/2016
EPA 680		10112002	Hexachlorbiphenyls	8888	NELAP	PA	01/19/2016
EPA 680		10112002	Monochlorobiphenyls	8889	NELAP	PA	01/19/2016
EPA 680		10112002	Nonachlorobiphenyls	8891	NELAP	PA	01/19/2016
EPA 680		10112002	Octachlorobiphenyls	8892	NELAP	PA	01/19/2016
EPA 680		10112002	Pentachlorobiphenyls	8896	NELAP	PA	01/19/2016
EPA 680		10112002	Tetrachlorobiphenyls	8893	NELAP	PA	01/19/2016
EPA 680		10112002	Trichlorobiphenyls	8894	NELAP	PA	01/19/2016
EPA 6850		10304606	Perchlorate	1895	NELAP	PA	01/19/2011
EPA 7196	A	10162400	Chromium VI	1045	NELAP	PA	04/06/2006
EPA 7199		10163005	Chromium VI	1045	NELAP	PA	01/04/2006
EPA 7470	A	10165807	Mercury	1095	NELAP	PA	11/21/2005
EPA 8011		10173009	1,2-Dibromo-3-chloropropane (DBCP, Dibromochloropropane)	4570	NELAP	PA	05/02/2006
EPA 8011		10173009	1,2-Dibromoethane (EDB, Ethylene dibromide)	4585	NELAP	PA	12/12/2005
EPA 8015	D	10305609	Nonhalogenated organics by GC/FID	9435	NELAP	PA	07/29/2015
EPA 8015	C	10173816	Diesel-range organics (DRO)	9369	NELAP	PA	12/12/2005
EPA 8015	C	10173816	Diethylene glycol	4720	NELAP	PA	01/20/2012
EPA 8015	C	10173816	Ethane	4747	NELAP	PA	12/04/2007
EPA 8015	C	10173816	Ethanol	4750	NELAP	PA	12/04/2007
EPA 8015	C	10173816	Ethene	4752	NELAP	PA	12/04/2007

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8015	C	10173816	Ethylene glycol	4785	NELAP	PA	12/04/2007
EPA 8015	C	10173816	Gasoline-range organics (GRO)	9408	NELAP	PA	12/12/2005
EPA 8015	C	10173816	Isobutyl alcohol (2-Methyl-1-propanol)	4875	NELAP	PA	02/07/2012
EPA 8015	C	10173816	Isopropyl alcohol (2-Propanol)	4895	NELAP	PA	12/04/2007
EPA 8015	C	10173816	Methane	4926	NELAP	PA	12/04/2007
EPA 8015	C	10173816	Methanol	4930	NELAP	PA	12/04/2007
EPA 8015	C	10173816	Propane	5029	NELAP	PA	12/04/2007
EPA 8015	C	10173816	Propylene glycol	6657	NELAP	PA	01/20/2012
EPA 8015	C	10173816	Total petroleum hydrocarbons (TPH)	2050	NELAP	PA	12/04/2007
EPA 8015	C	10173816	Triethylene glycol	9646	NELAP	PA	01/20/2012
EPA 8015	C	10173816	n-Butyl alcohol (n-Butanol, 1-Butanol)	4425	NELAP	PA	02/07/2012
EPA 8015	C	10173816	n-Propanol (1-Propanol)	5055	NELAP	PA	02/07/2012
EPA 8015	D	10305609	Acetylene (Ethyne)	4323	NELAP	PA	01/03/2024
EPA 8015	D	10305609	Diesel-range organics (DRO)	9369	NELAP	PA	12/12/2005
EPA 8015	D	10305609	Diethylene glycol	4720	NELAP	PA	01/20/2012
EPA 8015	D	10305609	Ethane	4747	NELAP	PA	12/04/2007
EPA 8015	D	10305609	Ethanol	4750	NELAP	PA	12/04/2007
EPA 8015	D	10305609	Ethene	4752	NELAP	PA	12/04/2007
EPA 8015	D	10305609	Ethylene glycol	4785	NELAP	PA	12/04/2007
EPA 8015	D	10305609	Gasoline-range organics (GRO)	9408	NELAP	PA	12/12/2005
EPA 8015	D	10305609	Isobutane (2-Methylpropane)	4942	NELAP	PA	01/03/2024
EPA 8015	D	10305609	Isobutyl alcohol (2-Methyl-1-propanol)	4875	NELAP	PA	02/07/2012

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8015	D	10305609	Isopropyl alcohol (2-Propanol)	4895	NELAP	PA	12/04/2007
EPA 8015	D	10305609	Methane	4926	NELAP	PA	12/04/2007
EPA 8015	D	10305609	Methanol	4930	NELAP	PA	12/04/2007
EPA 8015	D	10305609	Propane	5029	NELAP	PA	12/04/2007
EPA 8015	D	10305609	Propylene glycol	6657	NELAP	PA	01/20/2012
EPA 8015	D	10305609	Total petroleum hydrocarbons (TPH)	2050	NELAP	PA	01/24/2007
EPA 8015	D	10305609	Triethylene glycol	9646	NELAP	PA	01/20/2012
EPA 8015	D	10305609	n-Butyl alcohol (n-Butanol, 1-Butanol)	4425	NELAP	PA	02/07/2012
EPA 8015	D	10305609	n-Propanol (1-Propanol)	5055	NELAP	PA	02/07/2012
EPA 8081	B	10178811	Organochlorine pesticides by GC/ECD	7937	NELAP	PA	01/01/2013
EPA 8081	B	10178811	2,4'-DDD	8580	NELAP	PA	11/19/2015
EPA 8081	B	10178811	2,4'-DDE	8585	NELAP	PA	11/19/2015
EPA 8081	B	10178811	2,4'-DDT	8590	NELAP	PA	11/19/2015
EPA 8081	B	10178811	4,4'-DDD	7355	NELAP	PA	02/10/2006
EPA 8081	B	10178811	4,4'-DDE	7360	NELAP	PA	12/12/2005
EPA 8081	B	10178811	4,4'-DDT	7365	NELAP	PA	12/12/2005
EPA 8081	B	10178811	Aldrin (HHDN)	7025	NELAP	PA	12/12/2005
EPA 8081	B	10178811	Chlordane (tech.)	7250	NELAP	PA	12/12/2005
EPA 8081	B	10178811	Dieldrin	7470	NELAP	PA	12/12/2005
EPA 8081	B	10178811	Endosulfan I	7510	NELAP	PA	02/10/2006
EPA 8081	B	10178811	Endosulfan II	7515	NELAP	PA	12/12/2005
EPA 8081	B	10178811	Endosulfan sulfate	7520	NELAP	PA	12/12/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8081	B	10178811	Endrin	7540	NELAP	PA	12/12/2005
EPA 8081	B	10178811	Endrin aldehyde	7530	NELAP	PA	12/12/2005
EPA 8081	B	10178811	Endrin ketone	7535	NELAP	PA	02/10/2006
EPA 8081	B	10178811	Heptachlor	7685	NELAP	PA	12/12/2005
EPA 8081	B	10178811	Heptachlor epoxide	7690	NELAP	PA	12/12/2005
EPA 8081	B	10178811	Kepone	7740	NELAP	PA	05/02/2006
EPA 8081	B	10178811	Methoxychlor	7810	NELAP	PA	12/12/2005
EPA 8081	B	10178811	Mirex	7870	NELAP	PA	12/12/2005
EPA 8081	B	10178811	Toxaphene (Chlorinated camphene)	8250	NELAP	PA	12/12/2005
EPA 8081	B	10178811	alpha-BHC (alpha-Hexachlorocyclohexane)	7110	NELAP	PA	02/10/2006
EPA 8081	B	10178811	alpha-Chlordane	7240	NELAP	PA	02/10/2006
EPA 8081	B	10178811	beta-BHC (beta-Hexachlorocyclohexane)	7115	NELAP	PA	02/10/2006
EPA 8081	B	10178811	delta-BHC (delta-Hexachlorocyclohexane)	7105	NELAP	PA	02/10/2006
EPA 8081	B	10178811	gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	7120	NELAP	PA	02/10/2006
EPA 8081	B	10178811	gamma-Chlordane	7245	NELAP	PA	02/10/2006
EPA 8082	A	10179358	Aroclor-1016 (PCB-1016)	8880	NELAP	PA	12/11/2006
EPA 8082	A	10179358	Aroclor-1221 (PCB-1221)	8885	NELAP	PA	12/11/2006
EPA 8082	A	10179358	Aroclor-1232 (PCB-1232)	8890	NELAP	PA	12/11/2006
EPA 8082	A	10179358	Aroclor-1242 (PCB-1242)	8895	NELAP	PA	12/11/2006
EPA 8082	A	10179358	Aroclor-1248 (PCB-1248)	8900	NELAP	PA	12/11/2006
EPA 8082	A	10179358	Aroclor-1254 (PCB-1254)	8905	NELAP	PA	12/11/2006
EPA 8082	A	10179358	Aroclor-1260 (PCB-1260)	8910	NELAP	PA	12/11/2006

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 024-001 expiration date 01/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8082	A	10179358	Aroclor-1262 (PCB-1262)	8912	NELAP	PA	07/23/2008
EPA 8082	A	10179358	Aroclor-1268 (PCB-1268)	8913	NELAP	PA	07/23/2008
EPA 8151	A	10183207	Chlorinated herbicides by GC/ECD	8542	NELAP	PA	03/26/2012
EPA 8151	A	10183207	2,4,5-T	8655	NELAP	PA	12/12/2005
EPA 8151	A	10183207	2,4,5-TP (Silvex)	8650	NELAP	PA	12/12/2005
EPA 8151	A	10183207	2,4-D	8545	NELAP	PA	12/12/2005
EPA 8151	A	10183207	2,4-DB (Butoxon)	8560	NELAP	PA	12/12/2005
EPA 8151	A	10183207	Dalapon (2,2-Dichloropropionic acid)	8555	NELAP	PA	12/12/2005
EPA 8151	A	10183207	Dicamba	8595	NELAP	PA	12/12/2005
EPA 8151	A	10183207	Dichloroprop (Dichlorprop)	8605	NELAP	PA	01/24/2007
EPA 8151	A	10183207	Dinoseb (2-sec-Butyl-4,6-dinitrophenol, DNBP)	8620	NELAP	PA	12/12/2005
EPA 8151	A	10183207	MCPA	7775	NELAP	PA	12/12/2005
EPA 8151	A	10183207	MCPP (Mecoprop)	7780	NELAP	PA	12/12/2005
EPA 8151	A	10183207	Pentachlorophenol (PCP)	6605	NELAP	PA	12/12/2005
EPA 8151	A	10183207	Picloram (4-Amino-3,5,6-trichloro-2-pyridinecarboxylic acid)	8645	NELAP	PA	12/12/2005
EPA 8260	D	10307127	2-Ethylhexylacrylate	4762	NELAP	PA	07/07/2023
EPA 8260	C	10307003	VOCs by GC/MS	5242	NELAP	PA	03/26/2012
EPA 8260	D	10307127	VOCs by GC/MS	5242	NELAP	PA	11/04/2019
EPA 8260	C	10307003	1,1,1,2-Tetrachloroethane	5105	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,1,1-Trichloroethane	5160	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,1,2,2-Tetrachloroethane	5110	NELAP	PA	12/12/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	C	10307003	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5185	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,1,2-Trichloroethane	5165	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,1-Dichloroethane	4630	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,1-Dichloroethene (1,1-Dichloroethylene)	4640	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,1-Dichloropropene	4670	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,2,3-Trichlorobenzene	5150	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,2,3-Trichloropropane (1,2,3-TCP)	5180	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,2,3-Trimethylbenzene	5182	NELAP	PA	01/19/2016
EPA 8260	C	10307003	1,2,4-Trichlorobenzene	5155	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,2,4-Trimethylbenzene	5210	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,2-Dibromo-3-chloropropane (DBCP, Dibromochloropropane)	4570	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,2-Dibromoethane (EDB, Ethylene dibromide)	4585	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,2-Dichloro-1,1,2-trifluoroethane	4697	NELAP	PA	03/19/2015
EPA 8260	C	10307003	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,2-Dichloroethane	4635	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,2-Dichloropropane	4655	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,2-Diethylbenzene	4656	NELAP	PA	01/19/2016
EPA 8260	C	10307003	1,3,5-Trichlorobenzene	6800	NELAP	PA	01/19/2016
EPA 8260	C	10307003	1,3,5-Trimethylbenzene	5215	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,3-Butadiene (Divinyl)	9318	NELAP	PA	01/19/2016
EPA 8260	C	10307003	1,3-Dichloro-2-butene	9319	NELAP	PA	01/19/2016

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	C	10307003	1,3-Dichlorobenzene (m-Dichlorobenzene)	4615	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,3-Dichloropropane	4660	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,3-Diethylbenzene	4676	NELAP	PA	01/19/2016
EPA 8260	C	10307003	1,4-Dichlorobenzene (p-Dichlorobenzene)	4620	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	12/12/2005
EPA 8260	C	10307003	2,2-Dichloropropane	4665	NELAP	PA	05/02/2006
EPA 8260	C	10307003	2-Butanone (Methyl ethyl ketone, MEK)	4410	NELAP	PA	05/02/2006
EPA 8260	C	10307003	2-Chloroethyl vinyl ether	4500	NELAP	PA	12/12/2005
EPA 8260	C	10307003	2-Chlorotoluene	4535	NELAP	PA	12/12/2005
EPA 8260	C	10307003	2-Hexanone	4860	NELAP	PA	12/12/2005
EPA 8260	C	10307003	2-Nitropropane	5020	NELAP	PA	01/19/2011
EPA 8260	C	10307003	3,3'-Dimethyl-1-butanol	6103	NELAP	PA	04/17/2009
EPA 8260	C	10307003	4-Chlorotoluene	4540	NELAP	PA	12/12/2005
EPA 8260	C	10307003	4-Methyl-2-pentanone (MIBK)	4995	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Acetone	4315	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Acetonitrile	4320	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Acrolein (Propenal)	4325	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Acrylonitrile	4340	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Allyl chloride (3-Chloropropene)	4355	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Benzene	4375	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Benzyl chloride	5635	NELAP	PA	07/03/2007
EPA 8260	C	10307003	Bromobenzene	4385	NELAP	PA	12/12/2005

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	C	10307003	Bromochloromethane	4390	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Bromodichloromethane	4395	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Bromoform	4400	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Carbon disulfide	4450	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Carbon tetrachloride	4455	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Chlorobenzene	4475	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Chloroethane	4485	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Chloroform	4505	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Chloroprene (2-Chloro-1,3-butadiene)	4525	NELAP	PA	07/03/2007
EPA 8260	C	10307003	Cyclohexane	4555	NELAP	PA	07/03/2007
EPA 8260	C	10307003	Cyclohexanone	4560	NELAP	PA	06/07/2012
EPA 8260	C	10307003	Dibromochloromethane	4575	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Dibromomethane	4595	NELAP	PA	05/02/2006
EPA 8260	C	10307003	Dichlorodifluoromethane (Freon 12)	4625	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Diethyl ether (Ethyl ether)	4725	NELAP	PA	02/01/2011
EPA 8260	C	10307003	Diisopropyl ether (DIPE)	9375	NELAP	PA	07/03/2007
EPA 8260	C	10307003	Dimethyl ether	4731	NELAP	PA	06/07/2012
EPA 8260	C	10307003	Ethanol	4750	NELAP	PA	01/24/2007
EPA 8260	C	10307003	Ethyl acetate	4755	NELAP	PA	01/24/2007
EPA 8260	C	10307003	Ethyl methacrylate	4810	NELAP	PA	01/24/2007
EPA 8260	C	10307003	Ethyl tert-butyl ether (ETBE)	4770	NELAP	PA	01/24/2007
EPA 8260	C	10307003	Ethylbenzene	4765	NELAP	PA	12/12/2005

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	C	10307003	Freon 113 (1,1,2-Trichloro-1,2,2-trifluoroethane)	5185	NELAP	PA	03/04/2015
EPA 8260	C	10307003	Gasoline-range organics (GRO)	9408	NELAP	PA	06/08/2006
EPA 8260	C	10307003	Heptane	4825	NELAP	PA	01/20/2012
EPA 8260	C	10307003	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	4835	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Isobutyl alcohol (2-Methyl-1-propanol)	4875	NELAP	PA	07/03/2007
EPA 8260	C	10307003	Isopropyl alcohol (2-Propanol)	4895	NELAP	PA	01/18/2011
EPA 8260	C	10307003	Isopropylbenzene (Cumene)	4900	NELAP	PA	05/02/2006
EPA 8260	C	10307003	Methacrylonitrile	4925	NELAP	PA	07/03/2007
EPA 8260	C	10307003	Methyl acetate	4940	NELAP	PA	01/24/2007
EPA 8260	C	10307003	Methyl bromide (Bromomethane)	4950	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Methyl chloride (Chloromethane)	4960	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Methyl iodide (Iodomethane)	4870	NELAP	PA	05/25/2007
EPA 8260	C	10307003	Methyl tert-butyl ether (MTBE)	5000	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Methylcyclohexane	4965	NELAP	PA	01/21/2009
EPA 8260	C	10307003	Methylene chloride (Dichloromethane)	4975	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Methylmethacrylate	4990	NELAP	PA	05/25/2007
EPA 8260	C	10307003	Naphthalene	5005	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Pentachloroethane	5035	NELAP	PA	01/24/2007
EPA 8260	C	10307003	Propionitrile (Ethyl cyanide)	5080	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Styrene	5100	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Tetrachloroethene (PCE, Perchloroethylene)	5115	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Tetrahydrofuran (THF)	5120	NELAP	PA	01/18/2011

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Laboratory Scope of Accreditation

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	C	10307003	Toluene	5140	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Trichloroethene (TCE, Trichloroethylene)	5170	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Trichlorofluoromethane (Freon 11)	5175	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Vinyl acetate	5225	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Vinyl chloride (Chloroethene)	5235	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Xylenes, total	5260	NELAP	PA	12/12/2005
EPA 8260	C	10307003	cis-1,2-Dichloroethene	4645	NELAP	PA	12/12/2005
EPA 8260	C	10307003	cis-1,3-Dichloropropene	4680	NELAP	PA	12/12/2005
EPA 8260	C	10307003	m+p-Xylene	5240	NELAP	PA	04/17/2009
EPA 8260	C	10307003	n-Butyl acetate	4403	NELAP	PA	01/19/2016
EPA 8260	C	10307003	n-Butyl alcohol (n-Butanol, 1-Butanol)	4425	NELAP	PA	04/17/2009
EPA 8260	C	10307003	n-Butylbenzene	4435	NELAP	PA	12/12/2005
EPA 8260	C	10307003	n-Hexane	4855	NELAP	PA	01/20/2012
EPA 8260	C	10307003	n-Propylamine	5085	NELAP	PA	12/12/2005
EPA 8260	C	10307003	n-Propylbenzene	5090	NELAP	PA	01/24/2007
EPA 8260	C	10307003	o-Xylene	5250	NELAP	PA	04/17/2009
EPA 8260	C	10307003	p-Isopropyltoluene (4-Isopropyltoluene)	4910	NELAP	PA	01/24/2007
EPA 8260	C	10307003	sec-Butylbenzene	4440	NELAP	PA	12/12/2005
EPA 8260	C	10307003	tert-Amyl alcohol (2-Methyl-2-butanol)	4368	NELAP	PA	04/17/2009
EPA 8260	C	10307003	tert-Amyl methyl ether (TAME)	4370	NELAP	PA	01/24/2007
EPA 8260	C	10307003	tert-Butyl alcohol (2-Methyl-2-propanol)	4420	NELAP	PA	12/12/2005
EPA 8260	C	10307003	tert-Butyl formate	9557	NELAP	PA	04/17/2009

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	C	10307003	tert-Butylbenzene	4445	NELAP	PA	12/12/2005
EPA 8260	C	10307003	trans-1,2-Dichloroethene	4700	NELAP	PA	12/12/2005
EPA 8260	C	10307003	trans-1,3-Dichloropropene	4685	NELAP	PA	12/12/2005
EPA 8260	C	10307003	trans-1,4-Dichloro-2-butene	4605	NELAP	PA	07/03/2007
EPA 8260	D	10307127	1,1,1,2-Tetrachloroethane	5105	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,1,1-Trichloroethane	5160	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,1,2,2-Tetrachloroethane	5110	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5185	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,1,2-Trichloroethane	5165	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,1-Dichloroethane	4630	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,1-Dichloroethene (1,1-Dichloroethylene)	4640	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,1-Dichloropropene	4670	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,2,3-Trichlorobenzene	5150	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,2,3-Trichloropropane (1,2,3-TCP)	5180	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,2,3-Trimethylbenzene	5182	NELAP	PA	01/19/2016
EPA 8260	D	10307127	1,2,4-Trichlorobenzene	5155	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,2,4-Trimethylbenzene	5210	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,2-Dibromo-3-chloropropane (DBCP, Dibromochloropropane)	4570	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,2-Dibromoethane (EDB, Ethylene dibromide)	4585	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,2-Dichloro-1,1,2-trifluoroethane	4697	NELAP	PA	03/19/2015
EPA 8260	D	10307127	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	12/12/2005

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	D	10307127	1,2-Dichloroethane	4635	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,2-Dichloropropane	4655	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,2-Diethylbenzene	4656	NELAP	PA	01/19/2016
EPA 8260	D	10307127	1,3,5-Trichlorobenzene	6800	NELAP	PA	01/19/2016
EPA 8260	D	10307127	1,3,5-Trimethylbenzene	5215	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,3-Butadiene (Divinyl)	9318	NELAP	PA	01/19/2016
EPA 8260	D	10307127	1,3-Dichlorobenzene (m-Dichlorobenzene)	4615	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,3-Dichloropropane	4660	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,3-Diethylbenzene	4676	NELAP	PA	01/19/2016
EPA 8260	D	10307127	1,4-Dichlorobenzene (p-Dichlorobenzene)	4620	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1-Chlorohexane	4510	NELAP	PA	07/07/2023
EPA 8260	D	10307127	2,2-Dichloropropane	4665	NELAP	PA	05/02/2006
EPA 8260	D	10307127	2-Butanone (Methyl ethyl ketone, MEK)	4410	NELAP	PA	05/02/2006
EPA 8260	D	10307127	2-Chloroethyl vinyl ether	4500	NELAP	PA	12/12/2005
EPA 8260	D	10307127	2-Chlorotoluene	4535	NELAP	PA	12/12/2005
EPA 8260	D	10307127	2-Hexanone	4860	NELAP	PA	12/12/2005
EPA 8260	D	10307127	2-Nitropropane	5020	NELAP	PA	01/19/2011
EPA 8260	D	10307127	4-Chlorotoluene	4540	NELAP	PA	12/12/2005
EPA 8260	D	10307127	4-Methyl-2-pentanone (MIBK)	4995	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Acetone	4315	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Acetonitrile	4320	NELAP	PA	12/12/2005

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 024-001 expiration date 01/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	D	10307127	Acrolein (Propenal)	4325	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Acrylonitrile	4340	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Allyl chloride (3-Chloropropene)	4355	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Benzene	4375	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Benzyl chloride	5635	NELAP	PA	07/03/2007
EPA 8260	D	10307127	Bromobenzene	4385	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Bromochloromethane	4390	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Bromodichloromethane	4395	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Bromoform	4400	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Carbon disulfide	4450	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Carbon tetrachloride	4455	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Chlorobenzene	4475	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Chloroethane	4485	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Chloroform	4505	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Chloroprene (2-Chloro-1,3-butadiene)	4525	NELAP	PA	07/03/2007
EPA 8260	D	10307127	Cyclohexane	4555	NELAP	PA	07/03/2007
EPA 8260	D	10307127	Cyclohexanone	4560	NELAP	PA	07/07/2023
EPA 8260	D	10307127	Dibromochloromethane	4575	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Dibromomethane	4595	NELAP	PA	05/02/2006
EPA 8260	D	10307127	Dichlorodifluoromethane (Freon 12)	4625	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Dichlorofluoromethane (Freon 21)	4627	NELAP	PA	07/07/2023
EPA 8260	D	10307127	Diethyl ether (Ethyl ether)	4725	NELAP	PA	02/01/2011

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	D	10307127	Diisopropyl ether (DIPE)	9375	NELAP	PA	07/03/2007
EPA 8260	D	10307127	Dimethyl ether	4731	NELAP	PA	01/03/2024
EPA 8260	D	10307127	Ethanol	4750	NELAP	PA	01/24/2007
EPA 8260	D	10307127	Ethyl acetate	4755	NELAP	PA	01/24/2007
EPA 8260	D	10307127	Ethyl acrylate	4760	NELAP	PA	07/07/2023
EPA 8260	D	10307127	Ethyl methacrylate	4810	NELAP	PA	01/24/2007
EPA 8260	D	10307127	Ethyl tert-butyl ether (ETBE)	4770	NELAP	PA	01/24/2007
EPA 8260	D	10307127	Ethylbenzene	4765	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Freon 113 (1,1,2-Trichloro-1,2,2-trifluoroethane)	5185	NELAP	PA	03/04/2015
EPA 8260	D	10307127	Heptane	4825	NELAP	PA	01/20/2012
EPA 8260	D	10307127	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	4835	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Isobutyl alcohol (2-Methyl-1-propanol)	4875	NELAP	PA	07/03/2007
EPA 8260	D	10307127	Isopropyl alcohol (2-Propanol)	4895	NELAP	PA	01/18/2011
EPA 8260	D	10307127	Isopropylbenzene (Cumene)	4900	NELAP	PA	05/02/2006
EPA 8260	D	10307127	Methacrylonitrile	4925	NELAP	PA	07/03/2007
EPA 8260	D	10307127	Methyl acetate	4940	NELAP	PA	01/24/2007
EPA 8260	D	10307127	Methyl acrylate	4945	NELAP	PA	07/07/2023
EPA 8260	D	10307127	Methyl bromide (Bromomethane)	4950	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Methyl chloride (Chloromethane)	4960	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Methyl iodide (Iodomethane)	4870	NELAP	PA	05/25/2007
EPA 8260	D	10307127	Methyl tert-butyl ether (MTBE)	5000	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Methylcyclohexane	4965	NELAP	PA	01/21/2009

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	D	10307127	Methylene chloride (Dichloromethane)	4975	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Methylmethacrylate	4990	NELAP	PA	05/25/2007
EPA 8260	D	10307127	Naphthalene	5005	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Pentachloroethane	5035	NELAP	PA	01/24/2007
EPA 8260	D	10307127	Propionitrile (Ethyl cyanide)	5080	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Styrene	5100	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Tetrachloroethene (PCE, Perchloroethylene)	5115	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Tetrahydrofuran (THF)	5120	NELAP	PA	01/18/2011
EPA 8260	D	10307127	Toluene	5140	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Trichloroethene (TCE, Trichloroethylene)	5170	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Trichlorofluoromethane (Freon 11)	5175	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Vinyl acetate	5225	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Vinyl chloride (Chloroethene)	5235	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Xylenes, total	5260	NELAP	PA	12/12/2005
EPA 8260	D	10307127	cis-1,2-Dichloroethene	4645	NELAP	PA	12/12/2005
EPA 8260	D	10307127	cis-1,3-Dichloropropene	4680	NELAP	PA	12/12/2005
EPA 8260	D	10307127	m+p-Xylene	5240	NELAP	PA	04/17/2009
EPA 8260	D	10307127	n-Butyl acetate	4403	NELAP	PA	01/19/2016
EPA 8260	D	10307127	n-Butyl acrylate	4406	NELAP	PA	07/07/2023
EPA 8260	D	10307127	n-Butyl alcohol (n-Butanol, 1-Butanol)	4425	NELAP	PA	04/17/2009
EPA 8260	D	10307127	n-Butylbenzene	4435	NELAP	PA	12/12/2005
EPA 8260	D	10307127	n-Hexane	4855	NELAP	PA	01/20/2012

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	D	10307127	n-Propylbenzene	5090	NELAP	PA	01/24/2007
EPA 8260	D	10307127	o-Xylene	5250	NELAP	PA	04/17/2009
EPA 8260	D	10307127	p-Isopropyltoluene (4-Isopropyltoluene)	4910	NELAP	PA	01/24/2007
EPA 8260	D	10307127	sec-Butylbenzene	4440	NELAP	PA	12/12/2005
EPA 8260	D	10307127	tert-Amyl methyl ether (TAME)	4370	NELAP	PA	01/24/2007
EPA 8260	D	10307127	tert-Butyl alcohol (2-Methyl-2-propanol)	4420	NELAP	PA	12/12/2005
EPA 8260	D	10307127	tert-Butylbenzene	4445	NELAP	PA	12/12/2005
EPA 8260	D	10307127	trans-1,2-Dichloroethene	4700	NELAP	PA	12/12/2005
EPA 8260	D	10307127	trans-1,3-Dichloropropene	4685	NELAP	PA	12/12/2005
EPA 8260	D	10307127	trans-1,4-Dichloro-2-butene	4605	NELAP	PA	07/03/2007
EPA 8260 SIM	D	10307138	VOCs by GC/MS	5242	NELAP	PA	09/29/2020
EPA 8260 SIM	B	10184904	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	12/04/2007
EPA 8260 SIM	C	10307105	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	12/04/2007
EPA 8260 SIM	D	10307138	1,1-Dichloroethene (1,1-Dichloroethylene)	4640	NELAP	PA	07/07/2023
EPA 8260 SIM	D	10307138	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	12/04/2007
EPA 8260 SIM	D	10307138	Tetrachloroethene (PCE, Perchloroethylene)	5115	NELAP	PA	07/07/2023
EPA 8260 SIM	D	10307138	Trichloroethene (TCE, Trichloroethylene)	5170	NELAP	PA	07/07/2023
EPA 8260 SIM	D	10307138	Vinyl chloride (Chloroethene)	5235	NELAP	PA	07/07/2023
EPA 8260 SIM	D	10307138	cis-1,2-Dichloroethene	4645	NELAP	PA	07/07/2023
EPA 8270	D	10186002	SOCs by GC/MS	6687	NELAP	PA	03/26/2012
EPA 8270	E	10242543	SOCs by GC/MS	6687	NELAP	PA	06/25/2020
EPA 8270	D	10186002	1,1'-Biphenyl (Biphenyl, Lemonene)	6703	NELAP	PA	04/17/2009

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	1,2,3,4-Tetrachlorobenzene	6705	NELAP	PA	07/03/2007
EPA 8270	D	10186002	1,2,3,4-Tetrahydronaphthalene	6707	NELAP	PA	04/17/2009
EPA 8270	D	10186002	1,2,3,5-Tetrachlorobenzene	6710	NELAP	PA	07/03/2007
EPA 8270	D	10186002	1,2,4,5-Tetrachlorobenzene	6715	NELAP	PA	12/12/2005
EPA 8270	D	10186002	1,2,4-Trichlorobenzene	5155	NELAP	PA	12/12/2005
EPA 8270	D	10186002	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	12/12/2005
EPA 8270	D	10186002	1,2-Diphenylhydrazine	6220	NELAP	PA	12/12/2005
EPA 8270	D	10186002	1,3,5-Trinitrobenzene (1,3,5-TNB)	6885	NELAP	PA	12/12/2005
EPA 8270	D	10186002	1,3-Dichlorobenzene (m-Dichlorobenzene)	4615	NELAP	PA	12/12/2005
EPA 8270	D	10186002	1,3-Dinitrobenzene (1,3-DNB)	6160	NELAP	PA	12/12/2005
EPA 8270	D	10186002	1,4-Dichlorobenzene (p-Dichlorobenzene)	4620	NELAP	PA	12/12/2005
EPA 8270	D	10186002	1,4-Dinitrobenzene (1,4-DNB)	6165	NELAP	PA	04/17/2009
EPA 8270	D	10186002	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	04/17/2009
EPA 8270	D	10186002	1,4-Naphthoquinone	6420	NELAP	PA	12/12/2005
EPA 8270	D	10186002	1,4-Phenylenediamine	6630	NELAP	PA	12/12/2005
EPA 8270	D	10186002	1-Chloronaphthalene	5790	NELAP	PA	12/12/2005
EPA 8270	D	10186002	1-Methylnaphthalene	6380	NELAP	PA	04/17/2009
EPA 8270	D	10186002	1-Naphthylamine (alpha-Naphthylamine)	6425	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2,2'-Oxybis(1-chloropropane) (bis(2-Chloro-1-methylethyl) ether)	4659	NELAP	PA	01/19/2011
EPA 8270	D	10186002	2,3,4,6-Tetrachlorophenol	6735	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2,4,5-Trichlorophenol	6835	NELAP	PA	12/12/2005

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
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PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	2,4,6-Trichlorophenol	6840	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2,4-Dichlorophenol	6000	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2,4-Dimethylphenol	6130	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2,4-Dinitrophenol	6175	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2,4-Dinitrotoluene (2,4-DNT)	6185	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2,6-Dichlorophenol	6005	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2,6-Dinitrotoluene (2,6-DNT)	6190	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2-Acetylaminofluorene	5515	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2-Butoxyethanol	9322	NELAP	PA	02/07/2012
EPA 8270	D	10186002	2-Chloronaphthalene	5795	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2-Chlorophenol	5800	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	6360	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2-Methylnaphthalene	6385	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2-Methylphenol (o-Cresol)	6400	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2-Naphthylamine (beta-Naphthylamine)	6430	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2-Nitroaniline	6460	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2-Nitrophenol	6490	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2-Picoline (2-Methylpyridine)	5050	NELAP	PA	05/02/2006
EPA 8270	D	10186002	3+4-Methylphenol (m+p-Cresol)	6412	NELAP	PA	12/12/2005
EPA 8270	D	10186002	3,3'-Dichlorobenzidine	5945	NELAP	PA	12/12/2005
EPA 8270	D	10186002	3,3'-Dimethylbenzidine	6120	NELAP	PA	07/03/2007
EPA 8270	D	10186002	3-Methylcholanthrene	6355	NELAP	PA	12/12/2005

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DEP Laboratory ID: 36-00037
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PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	3-Nitroaniline	6465	NELAP	PA	12/12/2005
EPA 8270	D	10186002	4,4'-Methylenebis(2-chloroaniline)	6365	NELAP	PA	12/12/2005
EPA 8270	D	10186002	4-Aminobiphenyl	5540	NELAP	PA	12/12/2005
EPA 8270	D	10186002	4-Bromophenyl phenyl ether	5660	NELAP	PA	12/12/2005
EPA 8270	D	10186002	4-Chloro-3-methylphenol	5700	NELAP	PA	12/12/2005
EPA 8270	D	10186002	4-Chloroaniline	5745	NELAP	PA	12/12/2005
EPA 8270	D	10186002	4-Chlorophenyl phenyl ether	5825	NELAP	PA	12/12/2005
EPA 8270	D	10186002	4-Nitroaniline	6470	NELAP	PA	12/12/2005
EPA 8270	D	10186002	4-Nitrophenol	6500	NELAP	PA	12/12/2005
EPA 8270	D	10186002	4-Nitroquinoline-1-oxide	6510	NELAP	PA	07/03/2007
EPA 8270	D	10186002	5-Nitro-o-toluidine	6570	NELAP	PA	12/12/2005
EPA 8270	D	10186002	6-Methylchrysene	6112	NELAP	PA	01/19/2011
EPA 8270	D	10186002	7,12-Dimethylbenz(a)anthracene	6115	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Acenaphthene	5500	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Acenaphthylene	5505	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Acetophenone	5510	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Aniline	5545	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Anthracene	5555	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Aramite	5560	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Atrazine	7065	NELAP	PA	01/22/2007
EPA 8270	D	10186002	Benzaldehyde	5570	NELAP	PA	04/17/2009
EPA 8270	D	10186002	Benzenethiol	5567	NELAP	PA	04/17/2009

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	Benzidine	5595	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Benzo[a]anthracene	5575	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Benzo[a]pyrene	5580	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Benzo[b]fluoranthene	5585	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Benzo[ghi]perylene	5590	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Benzo[k]fluoranthene	5600	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Benzoic acid	5610	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Benzyl alcohol	5630	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Butyl benzyl phthalate (Benzyl butyl phthalate)	5670	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Caprolactam	7180	NELAP	PA	04/17/2009
EPA 8270	D	10186002	Carbazole	5680	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Chlorobenzilate	7260	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Chrysene (Benzo[a]phenanthrene)	5855	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Di-n-butyl phthalate	5925	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Di-n-octyl phthalate	6200	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Diallate (cis or trans)	7405	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Dibenz[a,h]acridine	9354	NELAP	PA	04/17/2009
EPA 8270	D	10186002	Dibenz[a,j]acridine	5900	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Dibenzo[a,h]anthracene	5895	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Dibenzofuran	5905	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Diethyl phthalate	6070	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Dimethoate	7475	NELAP	PA	12/12/2005

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 024-001 expiration date 01/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	Dimethyl phthalate	6135	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Dimethylaminoazobenzene (4-Dimethylaminoazobenzene)	6105	NELAP	PA	05/02/2006
EPA 8270	D	10186002	Dinoseb (2-sec-Butyl-4,6-dinitrophenol, DNBP)	8620	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Diphenylamine	6205	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Disulfoton	8625	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Ethyl methanesulfonate	6260	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Famphur	7580	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Fluoranthene	6265	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Fluorene	6270	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Hexachlorobenzene	6275	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	4835	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Hexachlorocyclopentadiene	6285	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Hexachloroethane	4840	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Hexachloropropene	6295	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Indene	6312	NELAP	PA	04/17/2009
EPA 8270	D	10186002	Indeno(1,2,3-cd)pyrene	6315	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Isodrin	7725	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Isophorone	6320	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Isosafrole	6325	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Kepone	7740	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Methapyrilene	6345	NELAP	PA	12/12/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	Methyl methanesulfonate	6375	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Methyl parathion (Parathion, methyl)	7825	NELAP	PA	05/25/2007
EPA 8270	D	10186002	N,N-Dimethylacetamide	6443	NELAP	PA	04/17/2009
EPA 8270	D	10186002	N,N-Dimethylformamide	5010	NELAP	PA	04/17/2009
EPA 8270	D	10186002	N-Nitrosodi-n-butylamine	5025	NELAP	PA	12/12/2005
EPA 8270	D	10186002	N-Nitrosodi-n-propylamine	6545	NELAP	PA	12/12/2005
EPA 8270	D	10186002	N-Nitrosodiethylamine	6525	NELAP	PA	12/12/2005
EPA 8270	D	10186002	N-Nitrosodimethylamine	6530	NELAP	PA	12/12/2005
EPA 8270	D	10186002	N-Nitrosodiphenylamine	6535	NELAP	PA	12/12/2005
EPA 8270	D	10186002	N-Nitrosomethylethylamine	6550	NELAP	PA	12/12/2005
EPA 8270	D	10186002	N-Nitrosomorpholine	6555	NELAP	PA	12/12/2005
EPA 8270	D	10186002	N-Nitrosopiperidine	6560	NELAP	PA	12/12/2005
EPA 8270	D	10186002	N-Nitrosopyrrolidine	6565	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Naphthalene	5005	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Nitrobenzene	5015	NELAP	PA	12/12/2005
EPA 8270	D	10186002	O,O,O-Triethyl phosphorothioate	8290	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Parathion, ethyl (Ethyl parathion, Parathion)	7955	NELAP	PA	05/25/2007
EPA 8270	D	10186002	Pentachlorobenzene	6590	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Pentachloronitrobenzene (PCNB)	6600	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Pentachlorophenol (PCP)	6605	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Phenacetin	6610	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Phenanthrene	6615	NELAP	PA	12/12/2005

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Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	Phenol	6625	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Phorate (Thimet)	7985	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Phthalic anhydride	6640	NELAP	PA	01/21/2009
EPA 8270	D	10186002	Pronamide (Kerb)	6650	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Pyrene	6665	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Pyridine	5095	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Quinoline	6670	NELAP	PA	04/17/2009
EPA 8270	D	10186002	Safrole	6685	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Sulfotepp (Tetraethyl dithiopyrophosphate)	8155	NELAP	PA	04/17/2009
EPA 8270	D	10186002	Tetraethyl lead	1211	NELAP	PA	03/07/2012
EPA 8270	D	10186002	Thionazine (Thionazin, Zinophos)	8235	NELAP	PA	12/12/2005
EPA 8270	D	10186002	a,a-Dimethylphenethylamine (Phentermine)	6125	NELAP	PA	12/12/2005
EPA 8270	D	10186002	a-Methylstyrene	4357	NELAP	PA	04/17/2009
EPA 8270	D	10186002	bis(2-Chloroethoxy)methane	5760	NELAP	PA	12/12/2005
EPA 8270	D	10186002	bis(2-Chloroethyl) ether	5765	NELAP	PA	12/12/2005
EPA 8270	D	10186002	bis(2-Chloromethyl) ether		NELAP	PA	01/21/2009
EPA 8270	D	10186002	bis(2-Ethylhexyl) phthalate (DEHP)	6065	NELAP	PA	12/12/2005
EPA 8270	D	10186002	o-Toluidine (2-Toluidine, 2-Methylaniline)	5145	NELAP	PA	12/12/2005
EPA 8270	D	10186002	p-(Dimethylamino)azobenzene	6105	NELAP	PA	04/17/2009
EPA 8270	D	10186002	tris-(2,3-Dibromopropyl) phosphate (tris-BP)	8310	NELAP	PA	04/17/2009
EPA 8270	E	10242543	1,1'-Biphenyl (Biphenyl, Lemonene)	6703	NELAP	PA	04/17/2009
EPA 8270	E	10242543	1,2,4,5-Tetrachlorobenzene	6715	NELAP	PA	12/12/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	1,2,4-Trichlorobenzene	5155	NELAP	PA	12/12/2005
EPA 8270	E	10242543	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	12/12/2005
EPA 8270	E	10242543	1,2-Diphenylhydrazine	6220	NELAP	PA	12/12/2005
EPA 8270	E	10242543	1,3,5-Trinitrobenzene (1,3,5-TNB)	6885	NELAP	PA	12/15/2022
EPA 8270	E	10242543	1,3-Dichlorobenzene (m-Dichlorobenzene)	4615	NELAP	PA	12/12/2005
EPA 8270	E	10242543	1,3-Dinitrobenzene (1,3-DNB)	6160	NELAP	PA	12/12/2005
EPA 8270	E	10242543	1,4-Dichlorobenzene (p-Dichlorobenzene)	4620	NELAP	PA	12/12/2005
EPA 8270	E	10242543	1,4-Dinitrobenzene (1,4-DNB)	6165	NELAP	PA	04/17/2009
EPA 8270	E	10242543	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	04/17/2009
EPA 8270	E	10242543	1,4-Naphthoquinone	6420	NELAP	PA	12/12/2005
EPA 8270	E	10242543	1-Chloronaphthalene	5790	NELAP	PA	12/12/2005
EPA 8270	E	10242543	1-Methylnaphthalene	6380	NELAP	PA	04/17/2009
EPA 8270	E	10242543	1-Naphthylamine (alpha-Naphthylamine)	6425	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2,2'-Oxybis(1-chloropropane) (bis(2-Chloro-1-methylethyl) ether)	4659	NELAP	PA	01/19/2011
EPA 8270	E	10242543	2,3,4,6-Tetrachlorophenol	6735	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2,4,5-Trichlorophenol	6835	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2,4,6-Trichlorophenol	6840	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2,4-Dichlorophenol	6000	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2,4-Dimethylphenol	6130	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2,4-Dinitrophenol	6175	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2,4-Dinitrotoluene (2,4-DNT)	6185	NELAP	PA	12/12/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	2,6-Dichlorophenol	6005	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2,6-Dinitrotoluene (2,6-DNT)	6190	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2-Acetylaminofluorene	5515	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2-Butoxyethanol	9322	NELAP	PA	07/07/2023
EPA 8270	E	10242543	2-Chloronaphthalene	5795	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2-Chlorophenol	5800	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	6360	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2-Methylnaphthalene	6385	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2-Methylphenol (o-Cresol)	6400	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2-Naphthylamine (beta-Naphthylamine)	6430	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2-Nitroaniline	6460	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2-Nitrophenol	6490	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2-Picoline (2-Methylpyridine)	5050	NELAP	PA	05/02/2006
EPA 8270	E	10242543	3+4-Methylphenol (m+p-Cresol)	6412	NELAP	PA	12/12/2005
EPA 8270	E	10242543	3,3'-Dichlorobenzidine	5945	NELAP	PA	12/12/2005
EPA 8270	E	10242543	3,3'-Dimethylbenzidine	6120	NELAP	PA	07/03/2007
EPA 8270	E	10242543	3-Methylcholanthrene	6355	NELAP	PA	12/12/2005
EPA 8270	E	10242543	3-Nitroaniline	6465	NELAP	PA	12/12/2005
EPA 8270	E	10242543	4,4'-Methylenebis(2-chloroaniline)	6365	NELAP	PA	12/12/2005
EPA 8270	E	10242543	4-Aminobiphenyl	5540	NELAP	PA	12/12/2005
EPA 8270	E	10242543	4-Bromophenyl phenyl ether	5660	NELAP	PA	12/12/2005
EPA 8270	E	10242543	4-Chloro-3-methylphenol	5700	NELAP	PA	12/12/2005

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DEP Laboratory ID: 36-00037
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PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	4-Chloroaniline	5745	NELAP	PA	12/12/2005
EPA 8270	E	10242543	4-Chlorophenyl phenyl ether	5825	NELAP	PA	12/12/2005
EPA 8270	E	10242543	4-Nitroaniline	6470	NELAP	PA	12/12/2005
EPA 8270	E	10242543	4-Nitrophenol	6500	NELAP	PA	12/12/2005
EPA 8270	E	10242543	4-Nitroquinoline-1-oxide	6510	NELAP	PA	07/03/2007
EPA 8270	E	10242543	5-Nitro-o-toluidine	6570	NELAP	PA	12/12/2005
EPA 8270	E	10242543	6-Methylchrysene	6112	NELAP	PA	01/19/2011
EPA 8270	E	10242543	7,12-Dimethylbenz(a)anthracene	6115	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Acenaphthene	5500	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Acenaphthylene	5505	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Acetophenone	5510	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Aniline	5545	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Anthracene	5555	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Aramite	5560	NELAP	PA	12/15/2022
EPA 8270	E	10242543	Atrazine	7065	NELAP	PA	01/22/2007
EPA 8270	E	10242543	Benzaldehyde	5570	NELAP	PA	04/17/2009
EPA 8270	E	10242543	Benzidine	5595	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Benzo[a]anthracene	5575	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Benzo[a]pyrene	5580	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Benzo[b]fluoranthene	5585	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Benzo[ghi]perylene	5590	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Benzo[k]fluoranthene	5600	NELAP	PA	12/12/2005

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	Benzoic acid	5610	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Benzyl alcohol	5630	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Butyl benzyl phthalate (Benzyl butyl phthalate)	5670	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Caprolactam	7180	NELAP	PA	04/17/2009
EPA 8270	E	10242543	Carbazole	5680	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Chlorobenzilate	7260	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Chrysene (Benzo[a]phenanthrene)	5855	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Di-n-butyl phthalate	5925	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Di-n-octyl phthalate	6200	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Diallate (cis or trans)	7405	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Dibenz[a,h]acridine	9354	NELAP	PA	04/17/2009
EPA 8270	E	10242543	Dibenz[a,j]acridine	5900	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Dibenzo[a,h]anthracene	5895	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Dibenzofuran	5905	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Diethyl phthalate	6070	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Dimethoate	7475	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Dimethyl phthalate	6135	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Dimethylaminoazobenzene (4-Dimethylaminoazobenzene)	6105	NELAP	PA	05/02/2006
EPA 8270	E	10242543	Dinoseb (2-sec-Butyl-4,6-dinitrophenol, DNBP)	8620	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Diphenylamine	6205	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Disulfoton	8625	NELAP	PA	12/15/2022

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 024-001 expiration date 01/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	Ethyl methanesulfonate	6260	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Famphur	7580	NELAP	PA	12/15/2022
EPA 8270	E	10242543	Fluoranthene	6265	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Fluorene	6270	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Hexachlorobenzene	6275	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	4835	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Hexachlorocyclopentadiene	6285	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Hexachloroethane	4840	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Hexachloropropene	6295	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Indene	6312	NELAP	PA	04/17/2009
EPA 8270	E	10242543	Indeno(1,2,3-cd)pyrene	6315	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Isodrin	7725	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Isophorone	6320	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Isosafrole	6325	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Kepone	7740	NELAP	PA	12/15/2022
EPA 8270	E	10242543	Methyl methanesulfonate	6375	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Methyl parathion (Parathion, methyl)	7825	NELAP	PA	05/25/2007
EPA 8270	E	10242543	N,N-Dimethylaniline	6445	NELAP	PA	12/15/2022
EPA 8270	E	10242543	N-Nitrosodi-n-butylamine	5025	NELAP	PA	12/12/2005
EPA 8270	E	10242543	N-Nitrosodi-n-propylamine	6545	NELAP	PA	12/12/2005
EPA 8270	E	10242543	N-Nitrosodiethylamine	6525	NELAP	PA	12/12/2005
EPA 8270	E	10242543	N-Nitrosodimethylamine	6530	NELAP	PA	12/12/2005

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	N-Nitrosodiphenylamine	6535	NELAP	PA	12/12/2005
EPA 8270	E	10242543	N-Nitrosomethylethylamine	6550	NELAP	PA	12/12/2005
EPA 8270	E	10242543	N-Nitrosomorpholine	6555	NELAP	PA	12/12/2005
EPA 8270	E	10242543	N-Nitrosopiperidine	6560	NELAP	PA	12/12/2005
EPA 8270	E	10242543	N-Nitrosopyrrolidine	6565	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Naphthalene	5005	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Nitrobenzene	5015	NELAP	PA	12/12/2005
EPA 8270	E	10242543	O,O,O-Triethyl phosphorothioate	8290	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Parathion, ethyl (Ethyl parathion, Parathion)	7955	NELAP	PA	05/25/2007
EPA 8270	E	10242543	Pentachlorobenzene	6590	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Pentachloronitrobenzene (PCNB)	6600	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Pentachlorophenol (PCP)	6605	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Phenacetin	6610	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Phenanthrene	6615	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Phenol	6625	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Phorate (Thimet)	7985	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Pronamide (Kerb)	6650	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Pyrene	6665	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Pyridine	5095	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Quinoline	6670	NELAP	PA	04/17/2009
EPA 8270	E	10242543	Safrole	6685	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Sulfotepp (Tetraethyl dithiopyrophosphate)	8155	NELAP	PA	04/17/2009

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	Thionazine (Thionazin, Zinophos)	8235	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Triethylamine	5200	NELAP	PA	12/15/2022
EPA 8270	E	10242543	alpha-Terpineol	6700	NELAP	PA	12/15/2022
EPA 8270	E	10242543	bis(2-Chloroethoxy)methane	5760	NELAP	PA	12/12/2005
EPA 8270	E	10242543	bis(2-Chloroethyl) ether	5765	NELAP	PA	12/12/2005
EPA 8270	E	10242543	bis(2-Ethylhexyl) phthalate (DEHP)	6065	NELAP	PA	12/12/2005
EPA 8270	E	10242543	o-Toluidine (2-Toluidine, 2-Methylaniline)	5145	NELAP	PA	12/12/2005
EPA 8270	E	10242543	p-(Dimethylamino)azobenzene	6105	NELAP	PA	04/17/2009
EPA 8270 SIM	E	10242565	SOCs by GC/MS	6687	NELAP	PA	09/29/2020
EPA 8270 SIM	D	10242509	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	08/01/2018
EPA 8270 SIM	D	10242509	1-Methylnaphthalene	6380	NELAP	PA	07/25/2011
EPA 8270 SIM	D	10242509	2-Methylnaphthalene	6385	NELAP	PA	05/23/2012
EPA 8270 SIM	D	10242509	Acenaphthene	5500	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Acenaphthylene	5505	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Anthracene	5555	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Benzo[a]anthracene	5575	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Benzo[a]pyrene	5580	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Benzo[b]fluoranthene	5585	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Benzo[ghi]perylene	5590	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Benzo[k]fluoranthene	5600	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Chrysene (Benzo[a]phenanthrene)	5855	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Dibenzo[a,h]anthracene	5895	NELAP	PA	12/04/2007

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270 SIM	D	10242509	Fluoranthene	6265	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Fluorene	6270	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Indeno(1,2,3-cd)pyrene	6315	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Naphthalene	5005	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Phenanthrene	6615	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Pyrene	6665	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	08/01/2018
EPA 8270 SIM	E	10242565	1-Methylnaphthalene	6380	NELAP	PA	07/25/2011
EPA 8270 SIM	E	10242565	2-Methylnaphthalene	6385	NELAP	PA	05/23/2012
EPA 8270 SIM	E	10242565	Acenaphthene	5500	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Acenaphthylene	5505	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Anthracene	5555	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Benzo[a]anthracene	5575	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Benzo[a]pyrene	5580	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Benzo[b]fluoranthene	5585	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Benzo[e]pyrene	5605	NELAP	PA	01/03/2024
EPA 8270 SIM	E	10242565	Benzo[ghi]perylene	5590	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Benzo[k]fluoranthene	5600	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Butyl benzyl phthalate (Benzyl butyl phthalate)	5670	NELAP	PA	01/03/2024
EPA 8270 SIM	E	10242565	Chrysene (Benzo[a]phenanthrene)	5855	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Di-n-butyl phthalate	5925	NELAP	PA	01/03/2024
EPA 8270 SIM	E	10242565	Di-n-octyl phthalate	6200	NELAP	PA	01/03/2024

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270 SIM	E	10242565	Dibenzo[a,h]anthracene	5895	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Dibenzofuran	5905	NELAP	PA	01/03/2024
EPA 8270 SIM	E	10242565	Diethyl phthalate	6070	NELAP	PA	01/03/2024
EPA 8270 SIM	E	10242565	Dimethyl phthalate	6135	NELAP	PA	01/03/2024
EPA 8270 SIM	E	10242565	Fluoranthene	6265	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Fluorene	6270	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Hexachlorobenzene	6275	NELAP	PA	01/03/2024
EPA 8270 SIM	E	10242565	Indeno(1,2,3-cd)pyrene	6315	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	N-Nitrosodimethylamine	6530	NELAP	PA	01/03/2024
EPA 8270 SIM	E	10242565	N-Nitrosodiphenylamine	6535	NELAP	PA	01/03/2024
EPA 8270 SIM	E	10242565	Naphthalene	5005	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Perylene	6608	NELAP	PA	01/03/2024
EPA 8270 SIM	E	10242565	Phenanthrene	6615	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Pyrene	6665	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	bis(2-Chloroethyl) ether	5765	NELAP	PA	01/03/2024
EPA 8270 SIM	E	10242565	bis(2-Ethylhexyl) phthalate (DEHP)	6065	NELAP	PA	01/03/2024
EPA 8290	A	10187403	PCDDs and PCDFs by HRGC-HRMS	6126	NELAP	PA	03/04/2015
EPA 8290	A	10187403	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	9519	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	9516	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	9426	NELAP	PA	06/30/2010

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8290	A	10187403	1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	9420	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	9423	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	9453	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	9471	NELAP	PA	08/06/2010
EPA 8290	A	10187403	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	9456	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	9474	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	9459	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	9477	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	9540	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	9543	NELAP	PA	06/30/2010
EPA 8290	A	10187403	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	9480	NELAP	PA	06/30/2010
EPA 8290	A	10187403	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	9549	NELAP	PA	08/06/2010
EPA 8290	A	10187403	2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)(Dioxin)	9618	NELAP	PA	06/30/2010
EPA 8290	A	10187403	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	9612	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total TCDD	9609	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total TCDF	9615	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total heptachlorodibenzo-p-dioxin (HpCDD)	9438	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total heptachlorodibenzofuran (HpCDF)	9444	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total hexachlorodibenzo-p-dioxin (HxCDD)	9468	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total hexachlorodibenzofuran (HxCDF)	9483	NELAP	PA	06/30/2010

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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2425 New Holland Pike
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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8290	A	10187403	Total pentachlorodibenzo-p-dioxin (PeCDD)	9555	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total pentachlorodibenzofuran (PeCDF)	9552	NELAP	PA	06/30/2010
EPA 8315	A	10188008	Carbonyl compounds by HPLC	6658	NELAP	PA	03/26/2012
EPA 8315	A	10188008	Acetaldehyde	4300	NELAP	PA	12/12/2005
EPA 8315	A	10188008	Formaldehyde	4815	NELAP	PA	12/12/2005
EPA 8330	B	10308006	Nitroaromatics and nitramines by HPLC/UV	9355	NELAP	PA	07/29/2015
EPA 8330	B	10308006	1,3,5-Trinitrobenzene (1,3,5-TNB)	6885	NELAP	PA	12/12/2005
EPA 8330	B	10308006	1,3-Dinitrobenzene (1,3-DNB)	6160	NELAP	PA	12/12/2005
EPA 8330	B	10308006	2,4,6-Trinitrotoluene (2,4,6-TNT)	9651	NELAP	PA	12/12/2005
EPA 8330	B	10308006	2,4-Diamino-6-nitrotoluene	5882	NELAP	PA	07/29/2015
EPA 8330	B	10308006	2,4-Dinitrotoluene (2,4-DNT)	6185	NELAP	PA	06/11/2007
EPA 8330	B	10308006	2,6-Diamino-4-nitrotoluene	6181	NELAP	PA	07/29/2015
EPA 8330	B	10308006	2,6-Dinitrotoluene (2,6-DNT)	6190	NELAP	PA	06/11/2007
EPA 8330	B	10308006	2-Amino-4,6-dinitrotoluene (2-Am-DNT)	9303	NELAP	PA	12/12/2005
EPA 8330	B	10308006	2-Nitrotoluene	9507	NELAP	PA	12/12/2005
EPA 8330	B	10308006	3,5-Dinitroaniline	6150	NELAP	PA	07/29/2015
EPA 8330	B	10308006	3-Nitrotoluene	9510	NELAP	PA	12/12/2005
EPA 8330	B	10308006	4-Amino-2,6-dinitrotoluene (4-Am-DNT)	9306	NELAP	PA	12/12/2005
EPA 8330	B	10308006	4-Nitrotoluene	9513	NELAP	PA	12/12/2005
EPA 8330	B	10308006	Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	6415	NELAP	PA	12/12/2005
EPA 8330	B	10308006	Nitrobenzene	5015	NELAP	PA	06/11/2007
EPA 8330	B	10308006	Nitroglycerin	6485	NELAP	PA	01/24/2007

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Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8330	B	10308006	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	9522	NELAP	PA	12/12/2005
EPA 8330	B	10308006	Pentaerythritol tetranitrate (PETN)	9558	NELAP	PA	05/02/2006
EPA 8330	B	10308006	RDX (Hexahydro-1,3,5-trinitro-1,3,5-triazine)	9432	NELAP	PA	12/12/2005
EPA 9012	A	10193405	Total cyanide	1645	NELAP	PA	05/24/2011
EPA 9012	B	10243206	Total cyanide	1645	NELAP	PA	05/24/2011
EPA 9040	C	10244403	pH	1900	NELAP	PA	12/12/2005
EPA 9050	A	10198808	Conductivity	1610	NELAP	PA	01/27/2014
EPA 9056	A	10199607	Anions by IC	1522	NELAP	PA	03/19/2015
EPA 9056	A	10199607	Bromide	1540	NELAP	PA	12/12/2005
EPA 9056	A	10199607	Chloride	1575	NELAP	PA	12/12/2005
EPA 9056	A	10199607	Fluoride	1730	NELAP	PA	12/12/2005
EPA 9056	A	10199607	Nitrate as N	1810	NELAP	PA	12/12/2005
EPA 9056	A	10199607	Nitrite as N	1840	NELAP	PA	01/19/2005
EPA 9056	A	10199607	Sulfate	2000	NELAP	PA	12/12/2005
EPA 9060	A	10244823	Total organic carbon (TOC)	2040	NELAP	PA	12/12/2005
EPA 9066		10200609	Total phenolics	1905	NELAP	PA	12/12/2005
HACH 10360	1.2	60027852	Oxygen (dissolved)	1880	NELAP	PA	06/01/2020
MA DEP EPH	1.1	90017202	C11-C22 Aromatics	6232	NELAP	PA	07/15/2013
MA DEP EPH	1.1	90017202	C19-C36 Aliphatics	6218	NELAP	PA	07/15/2013
MA DEP EPH	1.1	90017202	C9-C18 Aliphatics	6222	NELAP	PA	07/15/2013
MA DEP VPH	1.1	90017406	C5-C8 Aliphatics	6237	NELAP	PA	07/15/2013
MA DEP VPH	1.1	90017406	C9-C10 Aromatics	6238	NELAP	PA	07/29/2015

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
MA DEP VPH	1.1	90017406	C9-C12 Aliphatics	9670	NELAP	PA	07/15/2013
MA DEP VPH	2.1	90017451	C5-C8 Aliphatics	6237	NELAP	PA	07/16/2018
MA DEP VPH	2.1	90017451	C9-C10 Aromatics	6238	NELAP	PA	07/16/2018
MA DEP VPH	2.1	90017451	C9-C12 Aliphatics	9670	NELAP	PA	07/16/2018
NWTPH-Dx		90018409	Diesel-range organics (DRO)	9369	NELAP	PA	12/12/2005
NWTPH-Gx		90018603	Gasoline-range organics (GRO)	9408	NELAP	PA	12/12/2005
OIA 1677-09		60031450	Available cyanide	1523	NELAP	PA	10/09/2013
OIA 1677-09		60031450	Free cyanide	1640	NELAP	PA	10/09/2013
RSK-175		10212905	Acetylene (Ethyne)	4323	NELAP	PA	01/20/2012
RSK-175		10212905	Carbon dioxide	3755	NELAP	PA	11/19/2015
RSK-175		10212905	Ethane	4747	NELAP	PA	06/29/2010
RSK-175		10212905	Ethene	4752	NELAP	PA	06/29/2010
RSK-175		10212905	Isobutane (2-Methylpropane)	4942	NELAP	PA	11/19/2015
RSK-175		10212905	Methane	4926	NELAP	PA	06/29/2010
RSK-175		10212905	Propane	5029	NELAP	PA	06/29/2010
RSK-175		10212905	n-Butane	5007	NELAP	PA	12/22/2011
SM 2120B - 2011	Online ed.	20039310	Color	1605	NELAP	PA	07/21/2020
SM 2130B - 2011	Online ed.	20048220	Turbidity	2055	NELAP	PA	12/15/2022
SM 2310B - 2011	Online ed.	20044615	Acidity as CaCO3	1500	NELAP	PA	03/27/2018
SM 2320B - 2011	Online ed.	20045618	Alkalinity as CaCO3	1505	NELAP	PA	01/19/2005
SM 2340C - 2011	Online ed.	20047614	Total hardness as CaCO3	1755	NELAP	PA	01/10/2023
SM 2510B - 2011	Online ed.	20048617	Conductivity	1610	NELAP	PA	12/12/2005

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
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PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SM 2540B - 2015	Online ed.	20049438	Residue, total	1950	NELAP	PA	04/17/2007
SM 2540C - 2015	Online ed.	20050435	Residue, filterable (TDS)	1955	NELAP	PA	04/17/2007
SM 2540D - 2015	Online ed.	20051223	Residue, nonfilterable (TSS)	1960	NELAP	PA	10/20/2021
SM 2540F - 2015	Online ed.	20052226	Residue, settleable	1965	NELAP	PA	04/17/2007
SM 2550B - 2010	Online ed.	20053229	Temperature, deg. C	2030	NELAP	PA	08/30/2019
SM 3500-Cr B - 2011	Online ed.	20066266	Chromium VI	1045	NELAP	PA	05/24/2007
SM 3500-Fe B - 2011	Online ed.	20069016	Ferrous iron	1073	NELAP	PA	06/15/2009
SM 4500-Cl F - 2011	Online ed.	20080824	Total residual chlorine	1940	NELAP	PA	01/11/2012
SM 4500-Cl- C - 2011	Online ed.	20085216	Chloride	1575	NELAP	PA	04/17/2007
SM 4500-F- B - 2011	Online ed.	20101411	Preliminary distillation of fluoride	1477	NELAP	PA	04/28/2010
SM 4500-F- C - 2011	Online ed.	20102414	Fluoride	1730	NELAP	PA	01/19/2005
SM 4500-H + B - 2011	Online ed.	20105220	pH	1900	NELAP	PA	04/17/2007
SM 4500-NH3 B - 2011	Online ed.	20106018	Ammonia distillation	1404	NELAP	PA	04/17/2007
SM 4500-NH3 C - 2011	Online ed.	20108412	Ammonia as N	1515	NELAP	PA	07/05/2018
SM 4500-NH3 D - 2011	Online ed.	20109415	Ammonia as N	1515	NELAP	PA	04/17/2007
SM 4500-P B - 2011	Online ed.	20123368	Preliminary treatment of phosphate samples	1479	NELAP	PA	04/28/2010
SM 4500-P E - 2011	Online ed.	20124225	Orthophosphate as P	1870	NELAP	PA	06/25/2020
SM 4500-P F - 2011	Online ed.	20125024	Phosphorus, total	1910	NELAP	PA	07/21/2020
SM 4500-S2- D - 2011	Online ed.	20125864	Sulfide	2005	NELAP	PA	04/17/2007
SM 4500-S2- F - 2011	Online ed.	20126663	Sulfide	2005	NELAP	PA	04/17/2007
SM 4500-SO3- B - 2011	Online ed.	20130636	Sulfite, SO3	2015	NELAP	PA	04/17/2007
SM 4500-SiO2 C - 2011	Online ed.	20128614	Silica, as SiO2	1990	NELAP	PA	05/25/2007

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Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SM 4500-SiO2 C - 2011	Online ed.	20128614	Silica, dissolved	1995	NELAP	PA	05/25/2007
SM 5210B - 2016	Online ed.	20135039	Biochemical oxygen demand (BOD)	1530	NELAP	PA	04/04/2005
SM 5210B - 2016	Online ed.	20135039	Carbonaceous BOD (CBOD)	1555	NELAP	PA	05/04/2018
SM 5310C - 2014	Online ed.	20138834	Dissolved organic carbon (DOC)	1710	NELAP	PA	01/11/2022
SM 5310C - 2014	Online ed.	20138834	Total organic carbon (TOC)	2040	NELAP	PA	05/24/2007
SM 5540C - 2011	Online ed.	20145066	Surfactants as MBAS	2025	NELAP	PA	04/17/2007
SOP (00037) T-PFAS-WI14355	14	60002917	1,1,2,2-Tetrafluoro-2-(1,2,2,2-tetrafluoroethoxy)ethane-1-sulfonic acid (NVHOS)	9281	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	1,1,2,2-Tetrafluoro-2-[1,2,2,3,3-pentafluoro-1-(trifluoromethyl)propoxy]ethanesulfonic acid (R-PSDCA)	9282	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2,2,3,3-Tetrafluoro-3-{[1,1,1,2,3,3-hexafluoro-3-(1,2,2,2-tetrafluoroethoxy)propan-2yl]oxy}propanoic acid (Hydro-EVE Acid)	9283	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2,2-Difluoro-2-(trifluoromethoxy)acetic acid (PFMOAA)	9284	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2-Perfluorodecylethanoic acid (10:2 FTCA)	9285	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2-Perfluorohexylethanoic acid (6:2 FTCA)	9286	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2-Perfluorooctyl ethanoic acid (FOEA) (8:2 FTCA)	9316	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) (PFECA B)	6956	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoro-2-ethoxypropanoic acid (PEPA)	9289	NELAP	PA	12/15/2022

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DEP Laboratory ID: 36-00037
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TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoro-2-methoxypropanoic acid (PMPA)	9290	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoro-2-{[perfluoro-3-(perfluoroethoxy)-2-propanyl]oxy}ethanesulfonic acid (Hydro-PS Acid)	9288	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoro-3,5,7,9,11-pentaoxadodecanoic acid (PFO5DAO) (TAF)	9291	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoro-3,5,7,9-butaoxadecanoic acid (PFO4DAO)	9293	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoro-3,5,7-trioxaoctanoic acid (PFO3OA)	9294	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoro-3,5-dioxahexanoic acid (PFO2HxA)	9295	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoro-4-ethylcyclohexanesulfonic acid (PFecHS)	9296	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoro-4-isopropoxybutanoic acid (PFPE-1) (PFECAG)	9298	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorobutylsulfonamide (FBSA)	6967	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorodecanesulfonic acid (PFDS)	6920	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorododecanesulfonic acid (PFDoS)	6923	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorononanesulfonic acid (PFNS)	6929	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoropropanesulfonic acid (PFPrS)	9320	NELAP	PA	12/15/2022

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoropropionic acid (PFPrA) (PPF Acid)	9323	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	13	60002893	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	6948	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	1H, 1H, 2H, 2H-Perfluorododecane sulfonic acid (10:2-FTS)	9616	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	6946	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	6947	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	N-Ethylperfluorooctanesulfonamide (EtFOSA)	9395	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	N-Methylperfluorooctanesulfonamide (MeFOSA)	9433	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	N-ethylperfluoro-1-octanesulfonamido ethanol (N-EtFOSE)	9431	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	N-methylperfluoro-1-octanesulfonamido ethanol (N-MeFOSE)	6949	NELAP	PA	11/03/2020

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DEP Laboratory ID: 36-00037
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PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorobutanoic acid (PFBA)	6915	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorodecane sulfonic acid (PFDS)	6920	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorododecane sulfonic acid (PFDoS)	6923	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluoroheptanesulfonic acid (PFHpS)	9470	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorohexadecanoic acid (PFHxDA)	6901	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorononane sulfonic acid (PFNS)	6929	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorononanoic acid (PFNA)	6906	NELAP	PA	11/03/2020

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SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorooctadecanoic acid (PFODA)	6916	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorooctane sulfonamide (PFOSA)	6917	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluoropentane sulfonic acid (PFPeS)	6934	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluoropentanoic acid (PFPeA)	6914	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	14	60002917	1,1,2,2,3,3,4,4,4-Nonafluoro-N,N-bis(2-hydroxyethyl)butane-1-sulfonamide	9925	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	12/15/2022

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Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (00037) T-PFAS-WI14355	14	60002917	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	6948	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	1H, 1H, 2H, 2H-Perfluorododecane sulfonic acid (10:2-FTS)	9616	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	6946	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	6947	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2,2,3,3,4,5,5,5-octafluoro-4-(1,1,2,2-tetrafluoro-2-sulfoethoxy)pentanoic acid (R-PSDA)	9927	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2,2,3,3-Tetrafluoro-3-[1,1,1,2,3,3-hexafluoro-3-(1,2,2-trifluoroethenoxy)propan-2-yl]oxypropanoic acid (EVE Acid)	9928	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2,2,3,3-Tetrafluoro-3-methoxy propanoic acid (MTP)	9929	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2-Fluoro-2-[1,1,2,3,3,3-hexafluoro-2-(1,1,2,2,-tetrafluoro-2-sulfoethoxy)propoxy]acetic acid (Hydrolyzed PSDA)	9930	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2-{1-[difluoro(1,2,2-trifluoroethenyl)oxy]methyl}-1,2,2,2-tetrafluoroethoxy}-1,1,2,2-tetrafluoroethanesulfonic acid (PS Acid)	9926	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2H,2H,3H,3H-Perfluorodecanoic acid (3-Perfluoroheptyl propanoic acid) (7:3 FTCA)	9340	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	9338	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2H-Perfluoro-2-decenoic acid (FOUEA) (8:2 FTUCA)	4866	NELAP	PA	12/15/2022

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 024-001 expiration date 01/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (00037) T-PFAS-WI14355	14	60002917	2H-Perfluoro-2-dodecenoic acid (10:2 FTUCA)	9931	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2H-Perfluoro-2-octenoic acid (FHUEA) (6:2 FTUCA)	4869	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	4,4,5,5,6,6,6-Heptafluorohexanoic acid (3-Perfluoropropyl propanoic acid) (3:3 FTCA)	9353	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	4-(2-carboxy-1,1,2,2-tetrafluoroethoxy)-2,2,3,3,4,5,5,5-octafluoro-pentanoic acid (R-EVE)	9287	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	N-Ethylperfluorooctanesulfonamide (EtFOSA)	9395	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	N-Methylperfluorooctanesulfonamide (MeFOSA)	9433	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	N-ethylperfluoro-1-octanesulfonamido ethanol (N-EtFOSE)	9431	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	N-methylperfluoro-1-octanesulfonamido ethanol (N-MeFOSE)	6949	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	6957	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoro-3-methoxypropanoic acid (PFMPA)	6965	NELAP	PA	12/15/2022

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoro-4-methoxybutanoic acid (PFMBA)	6966	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorobutanoic acid (PFBA)	6915	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoroheptanesulfonic acid (PFHpS)	9470	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorohexadecanoic acid (PFHxDA)	6901	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorohexanesulfonamide (FHxSA)	6968	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorononanoic acid (PFNA)	6906	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorooctadecanoic acid (PFODA)	6916	NELAP	PA	12/15/2022

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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorooctane sulfonamide (PFOSA)	6917	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoropentane sulfonic acid (PFPeS)	6934	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoropentanoic acid (PFPeA)	6914	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	12/15/2022
TX1005 (TNRCC)	3	90019208	Total petroleum hydrocarbons (TPH)	2050	NELAP	PA	12/12/2005
TX1006 (TNRCC)		90019220	Total petroleum hydrocarbons (TPH)	2050	NELAP	PA	12/12/2005

Matrix: Solid and Chemical Materials

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DEP Laboratory ID: 36-00037
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TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
AK-101		90015002	Gasoline-range organics (GRO)	9408	NELAP	PA	12/12/2005
AK-102		90015206	Diesel-range organics (DRO)	9369	NELAP	PA	12/12/2005
AK-103		90015400	Residual-range organics (RRO)	6751	NELAP	PA	03/19/2015
ASTM D3987-12		30030718	Shake extraction of solid waste with water	1386	NELAP	PA	08/30/2019
ASTM D3987-85		30030730	Shake extraction of solid waste with water	1386	NELAP	PA	07/21/2017
EPA 1010	A	10234807	Ignitability	1780	NELAP	PA	11/19/2015
EPA 1010	B	10234830	Flashpoint	6117	NELAP	PA	09/14/2021
EPA 1010		10116606	Ignitability	1780	NELAP	PA	01/19/2005
EPA 1311		10118806	Toxicity characteristic leaching procedure (TCLP)	1466	NELAP	PA	12/12/2005
EPA 1312		10119003	Synthetic precipitation leaching procedure (SPLP)	1460	NELAP	PA	12/12/2005
EPA 1613	B	10120602	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	9519	NELAP	PA	07/05/2018
EPA 1613	B	10120602	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	9516	NELAP	PA	07/05/2018
EPA 1613	B	10120602	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	9426	NELAP	PA	07/05/2018
EPA 1613	B	10120602	1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	9420	NELAP	PA	07/05/2018
EPA 1613	B	10120602	1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	9423	NELAP	PA	07/05/2018
EPA 1613	B	10120602	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	9453	NELAP	PA	07/05/2018
EPA 1613	B	10120602	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	9471	NELAP	PA	07/05/2018
EPA 1613	B	10120602	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	9456	NELAP	PA	07/05/2018

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1613	B	10120602	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	9474	NELAP	PA	07/05/2018
EPA 1613	B	10120602	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	9459	NELAP	PA	07/05/2018
EPA 1613	B	10120602	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	9477	NELAP	PA	07/05/2018
EPA 1613	B	10120602	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	9540	NELAP	PA	07/05/2018
EPA 1613	B	10120602	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	9543	NELAP	PA	07/05/2018
EPA 1613	B	10120602	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	9480	NELAP	PA	07/05/2018
EPA 1613	B	10120602	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	9549	NELAP	PA	07/05/2018
EPA 1613	B	10120602	2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)(Dioxin)	9618	NELAP	PA	07/05/2018
EPA 1613	B	10120602	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	9612	NELAP	PA	07/05/2018
EPA 1633 (draft)	1	10123429	Perfluorodecanesulfonic acid (PFDS)	6920	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluorododecanesulfonic acid (PFDoS)	6923	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluorononanesulfonic acid (PFNS)	6929	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluoropentanesulfonic acid (PFPeS)	6934	NELAP	PA	07/27/2022
EPA 1633 (draft)	3	10123441	Perfluorodecanesulfonic acid (PFDS)	6920	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorododecanesulfonic acid (PFDoS)	6923	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorononanesulfonic acid (PFNS)	6929	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluoropentanesulfonic acid (PFPeS)	6934	NELAP	PA	07/07/2023
EPA 1633 (draft)	1	10123429	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	6948	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	6946	NELAP	PA	07/27/2022

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1633 (draft)	1	10123429	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	6947	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	2H,2H,3H,3H-Perfluorodecanoic acid (3-Perfluoroheptyl propanoic acid) (7:3 FTCA)	9340	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	9338	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	4,4,5,5,6,6,6-Heptafluorohexanoic acid (3-Perfluoropropyl propanoic acid) (3:3 FTCA)	9353	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	N-Ethylperfluorooctanesulfonamide (EtFOSA)	9395	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	N-Methylperfluorooctanesulfonamide (MeFOSA)	9433	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	N-ethylperfluoro-1-octanesulfonamido ethanol (N-EtFOSE)	9431	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	N-methylperfluoro-1-octanesulfonamido ethanol (N-MeFOSE)	6949	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	6956	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	6957	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluoro-3-methoxypropanoic acid (PFMPA)	6965	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluoro-4-methoxybutanoic acid (PFMBA)	6966	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluorobutanoic acid (PFBA)	6915	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	07/27/2022

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Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1633 (draft)	1	10123429	Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluoroheptanesulfonic acid (PFHpS)	9470	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluorononanoic acid (PFNA)	6906	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluorooctane sulfonamide (PFOSA)	6917	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluoropentanoic acid (PFPeA)	6914	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	07/27/2022
EPA 1633 (draft)	1	10123429	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	07/27/2022
EPA 1633 (draft)	3	10123441	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	6948	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	6946	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	6947	NELAP	PA	07/07/2023

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 024-001 expiration date 01/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1633 (draft)	3	10123441	2H,2H,3H,3H-Perfluorodecanoic acid (3-Perfluoroheptyl propanoic acid) (7:3 FTCA)	9340	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	9338	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	4,4,5,5,6,6,6-Heptafluorohexanoic acid (3-Perfluoropropyl propanoic acid) (3:3 FTCA)	9353	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	N-Ethylperfluorooctanesulfonamide (EtFOSA)	9395	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	N-Methylperfluorooctanesulfonamide (MeFOSA)	9433	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	N-ethylperfluoro-1-octanesulfonamido ethanol (N-EtFOSE)	9431	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	N-methylperfluoro-1-octanesulfonamido ethanol (N-MeFOSE)	6949	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	6956	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	6957	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluoro-3-methoxypropanoic acid (PFMPA)	6965	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluoro-4-methoxybutanoic acid (PFMBA)	6966	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorobutanoic acid (PFBA)	6915	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	07/07/2023

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Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1633 (draft)	3	10123441	Perfluoroheptanesulfonic acid (PFHpS)	9470	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorononanoic acid (PFNA)	6906	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorooctane sulfonamide (PFOSA)	6917	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluoropentanoic acid (PFPeA)	6914	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	07/07/2023
EPA 1633 (draft)	3	10123441	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	07/07/2023
EPA 1668	A	10262007	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ 206)	9095	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4',5,5'-Octachlorobiphenyl (BZ 194)	9090	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4',5,6'-Octachlorobiphenyl (BZ 196)	9102	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (BZ 207)	9101	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4',5,6-Octachlorobiphenyl (BZ 195)	9103	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ 170)	9065	NELAP	PA	12/17/2012

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PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,2',3,3',4,4',6,6'-Octachlorobiphenyl (BZ 197)	9104	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4',6-Heptachlorobiphenyl (BZ 171)	9106	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4'-Hexachlorobiphenyl (BZ 128)	9020	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5',6'-Heptachlorobiphenyl (BZ 177)	9114	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5',6,6'-Octachlorobiphenyl (BZ 201)	9112	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5',6-Heptachlorobiphenyl (BZ 175)	9115	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5'-Hexachlorobiphenyl (BZ 130)	9117	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5,5',6'-Octachlorobiphenyl (BZ 199)	9108	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (BZ 208)	9107	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5,5',6-Octachlorobiphenyl (BZ 198)	9109	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5,5'-Heptachlorobiphenyl (BZ 172)	9110	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5,6'-Heptachlorobiphenyl (BZ 174)	9116	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5,6,6'-Octachlorobiphenyl (BZ 200)	9111	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5,6-Heptachlorobiphenyl (BZ 173)	9113	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5-Hexachlorobiphenyl (BZ 129)	9118	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,6'-Hexachlorobiphenyl (BZ 132)	9120	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,6,6'-Heptachlorobiphenyl (BZ 176)	9119	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,6-Hexachlorobiphenyl (BZ 131)	9121	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4-Pentachlorobiphenyl (BZ 82)	9122	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',5,5',6,6'-Octachlorobiphenyl (BZ 202)	9123	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',5,5',6-Heptachlorobiphenyl (BZ 178)	9124	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',5,5'-Hexachlorobiphenyl (BZ 133)	9125	NELAP	PA	12/17/2012

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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,2',3,3',5,6'-Hexachlorobiphenyl (BZ 135)	9127	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',5,6,6'-Heptachlorobiphenyl (BZ 179)	9126	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',5,6-Hexachlorobiphenyl (BZ 134)	9128	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',5-Pentachlorobiphenyl (BZ 83)	9129	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',6,6'-Hexachlorobiphenyl (BZ 136)	9130	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',6-Pentachlorobiphenyl (BZ 84)	9131	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3'-Tetrachlorobiphenyl (BZ 40)	9132	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5',6-Hexachlorobiphenyl (BZ 149)	9151	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5'-Pentachlorobiphenyl (BZ 97)	9154	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ 187)	9080	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5,5'-Hexachlorobiphenyl (BZ 146)	9144	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5,6'-Hexachlorobiphenyl (BZ 148)	9147	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5,6,6'-Heptachlorobiphenyl (BZ 188)	9146	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5,6-Hexachlorobiphenyl (BZ 147)	9149	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5-Pentachlorobiphenyl (BZ 90)	9155	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',6'-Pentachlorobiphenyl (BZ 98)	9159	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',6,6'-Hexachlorobiphenyl (BZ 150)	9157	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',6-Pentachlorobiphenyl (BZ 91)	9160	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4'-Tetrachlorobiphenyl (BZ 42)	9162	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5',6-Heptachlorobiphenyl (BZ 183)	9075	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5'-Hexachlorobiphenyl (BZ 138)	9025	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5,5',6-Octachlorobiphenyl (BZ 203)	9133	NELAP	PA	12/17/2012

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,2',3,4,4',5,5'-Heptachlorobiphenyl (BZ 180)	9134	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5,6'-Heptachlorobiphenyl (BZ 182)	9136	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5,6,6'-Octachlorobiphenyl (BZ 204)	9135	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5,6-Heptachlorobiphenyl (BZ 181)	9137	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5-Hexachlorobiphenyl (BZ 137)	9138	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',6'-Hexachlorobiphenyl (BZ 140)	9140	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',6,6'-Heptachlorobiphenyl (BZ 184)	9139	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',6-Hexachlorobiphenyl (BZ 139)	9141	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4'-Pentachlorobiphenyl (BZ 85)	9142	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5',6-Hexachlorobiphenyl (BZ 144)	9150	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5'-Pentachlorobiphenyl (BZ 87)	8975	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5,5',6-Heptachlorobiphenyl (BZ 185)	9143	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5,5'-Hexachlorobiphenyl (BZ 141)	9030	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5,6'-Hexachlorobiphenyl (BZ 143)	9152	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5,6,6'-Heptachlorobiphenyl (BZ 186)	9145	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5,6-Hexachlorobiphenyl (BZ 142)	9148	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5-Pentachlorobiphenyl (BZ 86)	9153	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,6'-Pentachlorobiphenyl (BZ 89)	9161	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,6,6'-Hexachlorobiphenyl (BZ 145)	9156	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,6-Pentachlorobiphenyl (BZ 88)	9158	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4-Tetrachlorobiphenyl (BZ 41)	9163	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5',6-Pentachlorobiphenyl (BZ 95)	9166	NELAP	PA	12/17/2012

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Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,2',3,5'-Tetrachlorobiphenyl (BZ 44)	8945	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5,5',6-Hexachlorobiphenyl (BZ 151)	9035	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5,5'-Pentachlorobiphenyl (BZ 92)	9164	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5,6'-Pentachlorobiphenyl (BZ 94)	9167	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5,6,6'-Hexachlorobiphenyl (BZ 152)	9165	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5,6-Pentachlorobiphenyl (BZ 93)	9168	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5-Tetrachlorobiphenyl (BZ 43)	9169	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,6'-Tetrachlorobiphenyl (BZ 46)	9171	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,6,6'-Pentachlorobiphenyl (BZ 96)	9170	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,6-Tetrachlorobiphenyl (BZ 45)	9172	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3-Trichlorobiphenyl (BZ 16)	9173	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,4',5,5'-Hexachlorobiphenyl (BZ 153)	9040	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,4',5,6'-Hexachlorobiphenyl (BZ 154)	9174	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,4',5-Pentachlorobiphenyl (BZ 99)	9175	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,4',6,6'-Hexachlorobiphenyl (BZ 155)	9176	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,4',6-Pentachlorobiphenyl (BZ 100)	9177	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,4'-Tetrachlorobiphenyl (BZ 47)	9178	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,5',6-Pentachlorobiphenyl (BZ 103)	9179	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,5'-Tetrachlorobiphenyl (BZ 49)	8950	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,5,5'-Pentachlorobiphenyl (BZ 101)	8980	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,5,6'-Pentachlorobiphenyl (BZ 102)	9180	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,5-Tetrachlorobiphenyl (BZ 48)	9181	NELAP	PA	12/17/2012

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,2',4,6'-Tetrachlorobiphenyl (BZ 51)	9183	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,6,6'-Pentachlorobiphenyl (BZ 104)	9182	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,6-Tetrachlorobiphenyl (BZ 50)	9184	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4-Trichlorobiphenyl (BZ 17)	9185	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',5,5'-Tetrachlorobiphenyl (BZ 52)	8955	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',5,6'-Tetrachlorobiphenyl (BZ 53)	9186	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',5-Trichlorobiphenyl (BZ 18)	8930	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',6,6'-Tetrachlorobiphenyl (BZ 54)	9187	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',6-Trichlorobiphenyl (BZ 19)	9188	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2'-Dichlorobiphenyl (BZ 4)	9189	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4',5',6-Pentachlorobiphenyl (BZ 125)	9224	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4',5'-Tetrachlorobiphenyl (BZ 76)	9229	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4',5,5'-Pentachlorobiphenyl (BZ 124)	9222	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4',5-Tetrachlorobiphenyl (BZ 70)	9230	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4',6-Tetrachlorobiphenyl (BZ 71)	9237	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4'-Trichlorobiphenyl (BZ 33)	9239	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,4',5',6-Hexachlorobiphenyl (BZ 168)	9218	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,4',5'-Pentachlorobiphenyl (BZ 123)	9000	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,4',5,5'-Hexachlorobiphenyl (BZ 167)	9055	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,4',5-Pentachlorobiphenyl (BZ 118)	8995	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,4',6-Pentachlorobiphenyl (BZ 119)	9220	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,4'-Tetrachlorobiphenyl (BZ 66)	8960	NELAP	PA	12/17/2012

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Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,3',4,5',6-Pentachlorobiphenyl (BZ 121)	9226	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,5'-Tetrachlorobiphenyl (BZ 68)	9231	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,5,5'-Pentachlorobiphenyl (BZ 120)	9223	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,5-Tetrachlorobiphenyl (BZ 67)	9232	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,6-Tetrachlorobiphenyl (BZ 69)	9235	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4-Trichlorobiphenyl (BZ 25)	9240	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',5',6-Tetrachlorobiphenyl (BZ 73)	9244	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',5'-Trichlorobiphenyl (BZ 34)	9246	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',5,5'-Tetrachlorobiphenyl (BZ 72)	9242	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',5-Trichlorobiphenyl (BZ 26)	8935	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',6-Trichlorobiphenyl (BZ 27)	9248	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3'-Dichlorobiphenyl (BZ 6)	9249	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',5',6-Hexachlorobiphenyl (BZ 164)	9201	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',5'-Pentachlorobiphenyl (BZ 122)	9202	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',5,5',6-Heptachlorobiphenyl (BZ 193)	9195	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',5,5'-Hexachlorobiphenyl (BZ 162)	9197	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',5,6-Hexachlorobiphenyl (BZ 163)	9199	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',5-Pentachlorobiphenyl (BZ 107)	9205	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',6-Pentachlorobiphenyl (BZ 110)	8990	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4'-Tetrachlorobiphenyl (BZ 56)	9207	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4',5',6-Heptachlorobiphenyl (BZ 191)	9192	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4',5'-Hexachlorobiphenyl (BZ 157)	9045	NELAP	PA	12/17/2012

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Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,3,3',4,4',5,5',6-Octachlorobiphenyl (BZ 205)	9190	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4',5,5'-Heptachlorobiphenyl (BZ 189)	9085	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4',5,6-Heptachlorobiphenyl (BZ 190)	9191	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4',5-Hexachlorobiphenyl (BZ 156)	9050	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4',6-Hexachlorobiphenyl (BZ 158)	9193	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4'-Pentachlorobiphenyl (BZ 105)	8985	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,5',6-Hexachlorobiphenyl (BZ 161)	9200	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,5'-Pentachlorobiphenyl (BZ 108)	9203	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,5,5',6-Heptachlorobiphenyl (BZ 192)	9194	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,5,5'-Hexachlorobiphenyl (BZ 159)	9196	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,5,6-Hexachlorobiphenyl (BZ 160)	9198	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,5-Pentachlorobiphenyl (BZ 106)	9204	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,6-Pentachlorobiphenyl (BZ 109)	9206	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4-Tetrachlorobiphenyl (BZ 55)	9208	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',5',6-Pentachlorobiphenyl (BZ 113)	9212	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',5'-Tetrachlorobiphenyl (BZ 58)	9213	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',5,5',6-Hexachlorobiphenyl (BZ 165)	9209	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',5,5'-Pentachlorobiphenyl (BZ 111)	9210	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',5,6-Pentachlorobiphenyl (BZ 112)	9211	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',5-Tetrachlorobiphenyl (BZ 57)	9214	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',6-Tetrachlorobiphenyl (BZ 59)	9215	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3'-Trichlorobiphenyl (BZ 20)	9216	NELAP	PA	12/17/2012

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PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,3,4',5,6-Pentachlorobiphenyl (BZ 117)	9227	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4',5-Tetrachlorobiphenyl (BZ 63)	9233	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4',6-Tetrachlorobiphenyl (BZ 64)	9236	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4'-Trichlorobiphenyl (BZ 22)	9241	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4,4',5,6-Hexachlorobiphenyl (BZ 166)	9217	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4,4',5-Pentachlorobiphenyl (BZ 114)	9005	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4,4',6-Pentachlorobiphenyl (BZ 115)	9219	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4,4'-Tetrachlorobiphenyl (BZ 60)	9221	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4,5,6-Pentachlorobiphenyl (BZ 116)	9225	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4,5-Tetrachlorobiphenyl (BZ 61)	9228	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4,6-Tetrachlorobiphenyl (BZ 62)	9234	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4-Trichlorobiphenyl (BZ 21)	9238	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,5,6-Tetrachlorobiphenyl (BZ 65)	9243	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,5-Trichlorobiphenyl (BZ 23)	9245	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,6-Trichlorobiphenyl (BZ 24)	9247	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3-Dichlorobiphenyl (BZ 5)	8920	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4',5-Trichlorobiphenyl (BZ 31)	8940	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4',6-Trichlorobiphenyl (BZ 32)	9255	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4'-Dichlorobiphenyl (BZ 8)	9256	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4,4',5-Tetrachlorobiphenyl (BZ 74)	9250	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4,4',6-Tetrachlorobiphenyl (BZ 75)	9251	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4,4'-Trichlorobiphenyl (BZ 28)	9252	NELAP	PA	12/17/2012

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EPA 1668	A	10262007	2,4,5-Trichlorobiphenyl (BZ 29)	9253	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4,6-Trichlorobiphenyl (BZ 30)	9254	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4-Dichlorobiphenyl (BZ 7)	9257	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,5-Dichlorobiphenyl (BZ 9)	9258	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,6-Dichlorobiphenyl (BZ 10)	9259	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2-Chlorobiphenyl (BZ 1)	8915	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',4,4',5,5'-Hexachlorobiphenyl (BZ 169)	9060	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',4,4',5-Pentachlorobiphenyl (BZ 126)	9015	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',4,4'-Tetrachlorobiphenyl (BZ 77)	8965	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',4,5'-Tetrachlorobiphenyl (BZ 79)	9261	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',4,5,5'-Pentachlorobiphenyl (BZ 127)	9260	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',4,5-Tetrachlorobiphenyl (BZ 78)	9262	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',4-Trichlorobiphenyl (BZ 35)	9263	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',5,5'-Tetrachlorobiphenyl (BZ 80)	9264	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',5-Trichlorobiphenyl (BZ 36)	9265	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3'-Dichlorobiphenyl (BZ 11)	8925	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,4',5-Trichlorobiphenyl (BZ 39)	9268	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,4'-Dichlorobiphenyl (BZ 13)	9269	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,4,4',5-Tetrachlorobiphenyl (BZ 81)	8970	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,4,4'-Trichlorobiphenyl (BZ 37)	9266	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,4,5-Trichlorobiphenyl (BZ 38)	9267	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,4-Dichlorobiphenyl (BZ 12)	9270	NELAP	PA	12/17/2012

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EPA 1668	A	10262007	3,5-Dichlorobiphenyl (BZ 14)	9271	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3-Chlorobiphenyl (BZ 2)	9272	NELAP	PA	12/17/2012
EPA 1668	A	10262007	4,4'-Dichlorobiphenyl (BZ 15)	9273	NELAP	PA	12/17/2012
EPA 1668	A	10262007	4-Chlorobiphenyl (BZ 3)	9274	NELAP	PA	12/17/2012
EPA 1668	A	10262007	Decachlorobiphenyl	9105	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ 206)	9095	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4',5,5'-Octachlorobiphenyl (BZ 194)	9090	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4',5,6'-Octachlorobiphenyl (BZ 196)	9102	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (BZ 207)	9101	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4',5,6-Octachlorobiphenyl (BZ 195)	9103	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ 170)	9065	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4',6,6'-Octachlorobiphenyl (BZ 197)	9104	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4',6-Heptachlorobiphenyl (BZ 171)	9106	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4'-Hexachlorobiphenyl (BZ 128)	9020	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5',6'-Heptachlorobiphenyl (BZ 177)	9114	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5',6,6'-Octachlorobiphenyl (BZ 201)	9112	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5',6-Heptachlorobiphenyl (BZ 175)	9115	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5'-Hexachlorobiphenyl (BZ 130)	9117	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,5',6'-Octachlorobiphenyl (BZ 199)	9108	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (BZ 208)	9107	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,5',6-Octachlorobiphenyl (BZ 198)	9109	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,5'-Heptachlorobiphenyl (BZ 172)	9110	NELAP	PA	12/17/2012

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EPA 1668	C	10262109	2,2',3,3',4,5,6'-Heptachlorobiphenyl (BZ 174)	9116	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,6,6'-Octachlorobiphenyl (BZ 200)	9111	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,6-Heptachlorobiphenyl (BZ 173)	9113	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5-Hexachlorobiphenyl (BZ 129)	9118	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,6'-Hexachlorobiphenyl (BZ 132)	9120	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,6,6'-Heptachlorobiphenyl (BZ 176)	9119	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,6-Hexachlorobiphenyl (BZ 131)	9121	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4-Pentachlorobiphenyl (BZ 82)	9122	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',5,5',6,6'-Octachlorobiphenyl (BZ 202)	9123	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',5,5',6-Heptachlorobiphenyl (BZ 178)	9124	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',5,5'-Hexachlorobiphenyl (BZ 133)	9125	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',5,6'-Hexachlorobiphenyl (BZ 135)	9127	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',5,6,6'-Heptachlorobiphenyl (BZ 179)	9126	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',5,6-Hexachlorobiphenyl (BZ 134)	9128	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',5-Pentachlorobiphenyl (BZ 83)	9129	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',6,6'-Hexachlorobiphenyl (BZ 136)	9130	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',6-Pentachlorobiphenyl (BZ 84)	9131	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3'-Tetrachlorobiphenyl (BZ 40)	9132	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5',6-Hexachlorobiphenyl (BZ 149)	9151	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5'-Pentachlorobiphenyl (BZ 97)	9154	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ 187)	9080	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5,5'-Hexachlorobiphenyl (BZ 146)	9144	NELAP	PA	12/17/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 024-001 expiration date 01/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,2',3,4',5,6'-Hexachlorobiphenyl (BZ 148)	9147	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5,6,6'-Heptachlorobiphenyl (BZ 188)	9146	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5,6-Hexachlorobiphenyl (BZ 147)	9149	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5-Pentachlorobiphenyl (BZ 90)	9155	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',6'-Pentachlorobiphenyl (BZ 98)	9159	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',6,6'-Hexachlorobiphenyl (BZ 150)	9157	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',6-Pentachlorobiphenyl (BZ 91)	9160	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4'-Tetrachlorobiphenyl (BZ 42)	9162	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5',6-Heptachlorobiphenyl (BZ 183)	9075	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5'-Hexachlorobiphenyl (BZ 138)	9025	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5,5',6-Octachlorobiphenyl (BZ 203)	9133	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5,5'-Heptachlorobiphenyl (BZ 180)	9134	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5,6'-Heptachlorobiphenyl (BZ 182)	9136	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5,6,6'-Octachlorobiphenyl (BZ 204)	9135	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5,6-Heptachlorobiphenyl (BZ 181)	9137	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5-Hexachlorobiphenyl (BZ 137)	9138	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',6'-Hexachlorobiphenyl (BZ 140)	9140	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',6,6'-Heptachlorobiphenyl (BZ 184)	9139	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',6-Hexachlorobiphenyl (BZ 139)	9141	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4'-Pentachlorobiphenyl (BZ 85)	9142	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5',6-Hexachlorobiphenyl (BZ 144)	9150	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5'-Pentachlorobiphenyl (BZ 87)	8975	NELAP	PA	12/17/2012

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,2',3,4,5,5',6-Heptachlorobiphenyl (BZ 185)	9143	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5,5'-Hexachlorobiphenyl (BZ 141)	9030	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5,6'-Hexachlorobiphenyl (BZ 143)	9152	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5,6,6'-Heptachlorobiphenyl (BZ 186)	9145	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5,6-Hexachlorobiphenyl (BZ 142)	9148	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5-Pentachlorobiphenyl (BZ 86)	9153	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,6'-Pentachlorobiphenyl (BZ 89)	9161	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,6,6'-Hexachlorobiphenyl (BZ 145)	9156	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,6-Pentachlorobiphenyl (BZ 88)	9158	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4-Tetrachlorobiphenyl (BZ 41)	9163	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5',6-Pentachlorobiphenyl (BZ 95)	9166	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5'-Tetrachlorobiphenyl (BZ 44)	8945	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5,5',6-Hexachlorobiphenyl (BZ 151)	9035	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5,5'-Pentachlorobiphenyl (BZ 92)	9164	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5,6'-Pentachlorobiphenyl (BZ 94)	9167	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5,6,6'-Hexachlorobiphenyl (BZ 152)	9165	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5,6-Pentachlorobiphenyl (BZ 93)	9168	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5-Tetrachlorobiphenyl (BZ 43)	9169	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,6'-Tetrachlorobiphenyl (BZ 46)	9171	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,6,6'-Pentachlorobiphenyl (BZ 96)	9170	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,6-Tetrachlorobiphenyl (BZ 45)	9172	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3-Trichlorobiphenyl (BZ 16)	9173	NELAP	PA	12/17/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,2',4,4',5,5'-Hexachlorobiphenyl (BZ 153)	9040	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,4',5,6'-Hexachlorobiphenyl (BZ 154)	9174	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,4',5-Pentachlorobiphenyl (BZ 99)	9175	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,4',6,6'-Hexachlorobiphenyl (BZ 155)	9176	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,4',6-Pentachlorobiphenyl (BZ 100)	9177	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,4'-Tetrachlorobiphenyl (BZ 47)	9178	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,5',6-Pentachlorobiphenyl (BZ 103)	9179	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,5'-Tetrachlorobiphenyl (BZ 49)	8950	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,5,5'-Pentachlorobiphenyl (BZ 101)	8980	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,5,6'-Pentachlorobiphenyl (BZ 102)	9180	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,5-Tetrachlorobiphenyl (BZ 48)	9181	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,6'-Tetrachlorobiphenyl (BZ 51)	9183	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,6,6'-Pentachlorobiphenyl (BZ 104)	9182	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,6-Tetrachlorobiphenyl (BZ 50)	9184	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4-Trichlorobiphenyl (BZ 17)	9185	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',5,5'-Tetrachlorobiphenyl (BZ 52)	8955	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',5,6'-Tetrachlorobiphenyl (BZ 53)	9186	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',5-Trichlorobiphenyl (BZ 18)	8930	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',6,6'-Tetrachlorobiphenyl (BZ 54)	9187	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',6-Trichlorobiphenyl (BZ 19)	9188	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2'-Dichlorobiphenyl (BZ 4)	9189	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4',5',6-Pentachlorobiphenyl (BZ 125)	9224	NELAP	PA	12/17/2012

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,3',4',5'-Tetrachlorobiphenyl (BZ 76)	9229	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4',5,5'-Pentachlorobiphenyl (BZ 124)	9222	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4',5-Tetrachlorobiphenyl (BZ 70)	9230	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4',6-Tetrachlorobiphenyl (BZ 71)	9237	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4'-Trichlorobiphenyl (BZ 33)	9239	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,4',5',6-Hexachlorobiphenyl (BZ 168)	9218	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,4',5'-Pentachlorobiphenyl (BZ 123)	9000	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,4',5,5'-Hexachlorobiphenyl (BZ 167)	9055	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,4',5-Pentachlorobiphenyl (BZ 118)	8995	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,4',6-Pentachlorobiphenyl (BZ 119)	9220	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,4'-Tetrachlorobiphenyl (BZ 66)	8960	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,5',6-Pentachlorobiphenyl (BZ 121)	9226	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,5'-Tetrachlorobiphenyl (BZ 68)	9231	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,5,5'-Pentachlorobiphenyl (BZ 120)	9223	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,5-Tetrachlorobiphenyl (BZ 67)	9232	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,6-Tetrachlorobiphenyl (BZ 69)	9235	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4-Trichlorobiphenyl (BZ 25)	9240	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',5',6-Tetrachlorobiphenyl (BZ 73)	9244	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',5'-Trichlorobiphenyl (BZ 34)	9246	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',5,5'-Tetrachlorobiphenyl (BZ 72)	9242	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',5-Trichlorobiphenyl (BZ 26)	8935	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',6-Trichlorobiphenyl (BZ 27)	9248	NELAP	PA	12/17/2012

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,3'-Dichlorobiphenyl (BZ 6)	9249	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',5',6-Hexachlorobiphenyl (BZ 164)	9201	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',5'-Pentachlorobiphenyl (BZ 122)	9202	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',5,5',6-Heptachlorobiphenyl (BZ 193)	9195	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',5,5'-Hexachlorobiphenyl (BZ 162)	9197	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',5,6-Hexachlorobiphenyl (BZ 163)	9199	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',5-Pentachlorobiphenyl (BZ 107)	9205	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',6-Pentachlorobiphenyl (BZ 110)	8990	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4'-Tetrachlorobiphenyl (BZ 56)	9207	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4',5',6-Heptachlorobiphenyl (BZ 191)	9192	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4',5'-Hexachlorobiphenyl (BZ 157)	9045	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4',5,5',6-Octachlorobiphenyl (BZ 205)	9190	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4',5,5'-Heptachlorobiphenyl (BZ 189)	9085	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4',5,6-Heptachlorobiphenyl (BZ 190)	9191	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4',5-Hexachlorobiphenyl (BZ 156)	9050	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4',6-Hexachlorobiphenyl (BZ 158)	9193	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4'-Pentachlorobiphenyl (BZ 105)	8985	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,5',6-Hexachlorobiphenyl (BZ 161)	9200	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,5'-Pentachlorobiphenyl (BZ 108)	9203	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,5,5',6-Heptachlorobiphenyl (BZ 192)	9194	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,5,5'-Hexachlorobiphenyl (BZ 159)	9196	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,5,6-Hexachlorobiphenyl (BZ 160)	9198	NELAP	PA	12/17/2012

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
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Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,3,3',4,5-Pentachlorobiphenyl (BZ 106)	9204	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,6-Pentachlorobiphenyl (BZ 109)	9206	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4-Tetrachlorobiphenyl (BZ 55)	9208	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',5',6-Pentachlorobiphenyl (BZ 113)	9212	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',5'-Tetrachlorobiphenyl (BZ 58)	9213	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',5,5',6-Hexachlorobiphenyl (BZ 165)	9209	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',5,5'-Pentachlorobiphenyl (BZ 111)	9210	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',5,6-Pentachlorobiphenyl (BZ 112)	9211	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',5-Tetrachlorobiphenyl (BZ 57)	9214	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',6-Tetrachlorobiphenyl (BZ 59)	9215	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3'-Trichlorobiphenyl (BZ 20)	9216	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4',5,6-Pentachlorobiphenyl (BZ 117)	9227	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4',5-Tetrachlorobiphenyl (BZ 63)	9233	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4',6-Tetrachlorobiphenyl (BZ 64)	9236	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4'-Trichlorobiphenyl (BZ 22)	9241	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,4',5,6-Hexachlorobiphenyl (BZ 166)	9217	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,4',5-Pentachlorobiphenyl (BZ 114)	9005	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,4',6-Pentachlorobiphenyl (BZ 115)	9219	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,4'-Tetrachlorobiphenyl (BZ 60)	9221	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,5,6-Pentachlorobiphenyl (BZ 116)	9225	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,5-Tetrachlorobiphenyl (BZ 61)	9228	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,6-Tetrachlorobiphenyl (BZ 62)	9234	NELAP	PA	12/17/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,3,4-Trichlorobiphenyl (BZ 21)	9238	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,5,6-Tetrachlorobiphenyl (BZ 65)	9243	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,5-Trichlorobiphenyl (BZ 23)	9245	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,6-Trichlorobiphenyl (BZ 24)	9247	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3-Dichlorobiphenyl (BZ 5)	8920	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4',5-Trichlorobiphenyl (BZ 31)	8940	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4',6-Trichlorobiphenyl (BZ 32)	9255	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4'-Dichlorobiphenyl (BZ 8)	9256	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4,4',5-Tetrachlorobiphenyl (BZ 74)	9250	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4,4',6-Tetrachlorobiphenyl (BZ 75)	9251	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4,4'-Trichlorobiphenyl (BZ 28)	9252	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4,5-Trichlorobiphenyl (BZ 29)	9253	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4,6-Trichlorobiphenyl (BZ 30)	9254	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4-Dichlorobiphenyl (BZ 7)	9257	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,5-Dichlorobiphenyl (BZ 9)	9258	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,6-Dichlorobiphenyl (BZ 10)	9259	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2-Chlorobiphenyl (BZ 1)	8915	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4,4',5,5'-Hexachlorobiphenyl (BZ 169)	9060	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4,4',5-Pentachlorobiphenyl (BZ 126)	9015	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4,4'-Tetrachlorobiphenyl (BZ 77)	8965	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4,5'-Tetrachlorobiphenyl (BZ 79)	9261	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4,5,5'-Pentachlorobiphenyl (BZ 127)	9260	NELAP	PA	12/17/2012

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PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	3,3',4,5-Tetrachlorobiphenyl (BZ 78)	9262	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4-Trichlorobiphenyl (BZ 35)	9263	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',5,5'-Tetrachlorobiphenyl (BZ 80)	9264	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',5-Trichlorobiphenyl (BZ 36)	9265	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3'-Dichlorobiphenyl (BZ 11)	8925	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,4',5-Trichlorobiphenyl (BZ 39)	9268	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,4'-Dichlorobiphenyl (BZ 13)	9269	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,4,4',5-Tetrachlorobiphenyl (BZ 81)	8970	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,4,4'-Trichlorobiphenyl (BZ 37)	9266	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,4,5-Trichlorobiphenyl (BZ 38)	9267	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,4-Dichlorobiphenyl (BZ 12)	9270	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,5-Dichlorobiphenyl (BZ 14)	9271	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3-Chlorobiphenyl (BZ 2)	9272	NELAP	PA	12/17/2012
EPA 1668	C	10262109	4,4'-Dichlorobiphenyl (BZ 15)	9273	NELAP	PA	12/17/2012
EPA 1668	C	10262109	4-Chlorobiphenyl (BZ 3)	9274	NELAP	PA	12/17/2012
EPA 1668	C	10262109	Decachlorobiphenyl	9105	NELAP	PA	12/17/2012
EPA 300.0	2.1	10053200	Chloride	1575	NELAP	PA	11/27/2019
EPA 300.0	2.1	10053200	Fluoride	1730	NELAP	PA	10/16/2012
EPA 300.0	2.1	10053200	Nitrate as N	1810	NELAP	PA	11/27/2019
EPA 300.0	2.1	10053200	Nitrite as N	1840	NELAP	PA	10/16/2012
EPA 300.0	2.1	10053200	Sulfate	2000	NELAP	PA	10/16/2012
EPA 3050	B	10135601	Acid digestion of solids	1400	NELAP	PA	04/04/2005

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 3060	A	10136604	Alkaline digestion of Cr(VI)	1402	NELAP	PA	04/04/2005
EPA 351.2	2.0	10065404	Kjeldahl nitrogen, total (TKN)	1795	NELAP	PA	08/30/2019
EPA 3510	C	10138202	Separatory funnel liquid-liquid extraction	1444	NELAP	PA	04/04/2005
EPA 3540	C	10140202	Soxhlet extraction	1452	NELAP	PA	04/04/2005
EPA 3546		10141205	Microwave extraction	1428	NELAP	PA	09/25/2009
EPA 3550	B	10141807	Ultrasonic extraction	1468	NELAP	PA	04/04/2005
EPA 3550	C	10142004	Ultrasonic extraction	1468	NELAP	PA	03/04/2015
EPA 3580	A	10143007	Waste dilution	1470	NELAP	PA	06/25/2020
EPA 3620	C	10146006	Florisil cleanup	1414	NELAP	PA	09/04/2018
EPA 3630	C	10146802	Silica gel cleanup	1446	NELAP	PA	04/04/2005
EPA 3640	A	10147203	Gel permeation cleanup (GPC)	1418	NELAP	PA	04/04/2005
EPA 365.1	2.0	10070005	Phosphorus, total	1910	NELAP	PA	11/19/2015
EPA 3660	B	10148400	Sulfur cleanup	1456	NELAP	PA	04/04/2005
EPA 3665	A	10148808	Sulfuric acid/permanganate clean-up	1458	NELAP	PA	04/04/2005
EPA 5030		10153001	Bulk purge-and-trap (methanol)	1417	NELAP	PA	12/04/2007
EPA 5035	A	10284807	Closed-system purge-and-trap (bisulfate option)	1390	NELAP	PA	09/04/2018
EPA 5035	A	10284807	Closed-system purge-and-trap (methanol option)	1392	NELAP	PA	09/04/2018
EPA 5035	A	10284807	Closed-system purge-and-trap (unpreserved)	1393	NELAP	PA	09/04/2018
EPA 5035		10154004	Closed-system purge-and-trap (bisulfate option)	1390	NELAP	PA	12/12/2005
EPA 5035		10154004	Closed-system purge-and-trap (methanol option)	1392	NELAP	PA	04/04/2005
EPA 5035		10154004	Closed-system purge-and-trap (unpreserved)	1393	NELAP	PA	04/04/2005
EPA 6010	C	10155905	Metals by ICP/AES	1097	NELAP	PA	01/19/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 6010	D	10155916	Metals by ICP/AES	1097	NELAP	PA	07/09/2018
EPA 6010	C	10155905	Aluminum	1000	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Antimony	1005	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Arsenic	1010	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Barium	1015	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Beryllium	1020	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Boron	1025	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Cadmium	1030	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Calcium	1035	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Chromium	1040	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Cobalt	1050	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Copper	1055	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Iron	1070	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Lead	1075	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Lithium	1080	NELAP	PA	01/20/2012
EPA 6010	C	10155905	Magnesium	1085	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Manganese	1090	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Molybdenum	1100	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Nickel	1105	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Potassium	1125	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Selenium	1140	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Silica, as SiO2	1990	NELAP	PA	01/20/2012

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2425 New Holland Pike
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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 6010	C	10155905	Silver	1150	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Sodium	1155	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Strontium	1160	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Sulfur	2017	NELAP	PA	12/19/2011
EPA 6010	C	10155905	Tellurium	1162	NELAP	PA	02/04/2016
EPA 6010	C	10155905	Thallium	1165	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Thorium	1170	NELAP	PA	11/19/2015
EPA 6010	C	10155905	Tin	1175	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Titanium	1180	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Tungsten	1183	NELAP	PA	11/19/2015
EPA 6010	C	10155905	Vanadium	1185	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Zinc	1190	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Zirconium	1192	NELAP	PA	07/29/2015
EPA 6010	D	10155916	Aluminum	1000	NELAP	PA	01/19/2005
EPA 6010	D	10155950	Aluminum	1000	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Antimony	1005	NELAP	PA	01/19/2005
EPA 6010	D	10155950	Antimony	1005	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Arsenic	1010	NELAP	PA	01/19/2005
EPA 6010	D	10155950	Arsenic	1010	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Barium	1015	NELAP	PA	01/19/2005
EPA 6010	D	10155950	Barium	1015	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Beryllium	1020	NELAP	PA	01/19/2005

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DEP Laboratory ID: 36-00037
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Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 6010	D	10155950	Beryllium	1020	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Boron	1025	NELAP	PA	01/19/2005
EPA 6010	D	10155950	Boron	1025	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Cadmium	1030	NELAP	PA	01/19/2005
EPA 6010	D	10155950	Cadmium	1030	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Calcium	1035	NELAP	PA	01/19/2005
EPA 6010	D	10155950	Calcium	1035	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Chromium	1040	NELAP	PA	01/19/2005
EPA 6010	D	10155950	Chromium	1040	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Cobalt	1050	NELAP	PA	01/19/2005
EPA 6010	D	10155950	Cobalt	1050	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Copper	1055	NELAP	PA	01/19/2005
EPA 6010	D	10155950	Copper	1055	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Iron	1070	NELAP	PA	01/19/2005
EPA 6010	D	10155950	Iron	1070	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Lead	1075	NELAP	PA	01/19/2005
EPA 6010	D	10155950	Lead	1075	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Lithium	1080	NELAP	PA	01/20/2012
EPA 6010	D	10155950	Lithium	1080	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Magnesium	1085	NELAP	PA	01/19/2005
EPA 6010	D	10155950	Magnesium	1085	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Manganese	1090	NELAP	PA	01/19/2005

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Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 6010	D	10155950	Manganese	1090	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Molybdenum	1100	NELAP	PA	01/19/2005
EPA 6010	D	10155950	Molybdenum	1100	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Nickel	1105	NELAP	PA	01/19/2005
EPA 6010	D	10155950	Nickel	1105	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Potassium	1125	NELAP	PA	01/19/2005
EPA 6010	D	10155950	Potassium	1125	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Selenium	1140	NELAP	PA	01/19/2005
EPA 6010	D	10155950	Selenium	1140	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Silica, as SiO2	1990	NELAP	PA	01/20/2012
EPA 6010	D	10155950	Silica, as SiO2	1990	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Silver	1150	NELAP	PA	01/19/2005
EPA 6010	D	10155950	Silver	1150	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Sodium	1155	NELAP	PA	01/19/2005
EPA 6010	D	10155950	Sodium	1155	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Strontium	1160	NELAP	PA	01/19/2005
EPA 6010	D	10155950	Strontium	1160	NELAP	PA	07/07/2023
EPA 6010	D	10155950	Sulfur	2017	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Sulfur	2017	NELAP	PA	12/19/2011
EPA 6010	D	10155916	Tellurium	1162	NELAP	PA	02/04/2016
EPA 6010	D	10155916	Thallium	1165	NELAP	PA	01/19/2005
EPA 6010	D	10155950	Thallium	1165	NELAP	PA	07/07/2023

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Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 6010	D	10155950	Thorium	1170	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Thorium	1170	NELAP	PA	11/19/2015
EPA 6010	D	10155916	Tin	1175	NELAP	PA	01/19/2005
EPA 6010	D	10155950	Tin	1175	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Titanium	1180	NELAP	PA	01/19/2005
EPA 6010	D	10155950	Titanium	1180	NELAP	PA	07/07/2023
EPA 6010	D	10155950	Tungsten	1183	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Tungsten	1183	NELAP	PA	11/19/2015
EPA 6010	D	10155916	Vanadium	1185	NELAP	PA	01/19/2005
EPA 6010	D	10155950	Vanadium	1185	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Zinc	1190	NELAP	PA	01/19/2005
EPA 6010	D	10155950	Zinc	1190	NELAP	PA	07/07/2023
EPA 6010	D	10155950	Zirconium	1192	NELAP	PA	07/07/2023
EPA 6010	D	10155916	Zirconium	1192	NELAP	PA	07/29/2015
EPA 6020	B	10156420	Metals by ICP/MS	1098	NELAP	PA	07/09/2018
EPA 6020	B	10156420	Aluminum	1000	NELAP	PA	04/29/2010
EPA 6020	B	10156420	Antimony	1005	NELAP	PA	01/19/2005
EPA 6020	B	10156420	Arsenic	1010	NELAP	PA	01/19/2005
EPA 6020	B	10156420	Barium	1015	NELAP	PA	01/20/2012
EPA 6020	B	10156420	Beryllium	1020	NELAP	PA	01/19/2005
EPA 6020	B	10156420	Cadmium	1030	NELAP	PA	01/19/2005
EPA 6020	B	10156420	Calcium	1035	NELAP	PA	04/29/2010

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 024-001 expiration date 01/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 6020	B	10156420	Chromium	1040	NELAP	PA	01/19/2005
EPA 6020	B	10156420	Cobalt	1050	NELAP	PA	04/29/2010
EPA 6020	B	10156420	Copper	1055	NELAP	PA	01/19/2005
EPA 6020	B	10156420	Iron	1070	NELAP	PA	04/29/2010
EPA 6020	B	10156420	Lead	1075	NELAP	PA	01/19/2005
EPA 6020	B	10156420	Magnesium	1085	NELAP	PA	04/29/2010
EPA 6020	B	10156420	Manganese	1090	NELAP	PA	04/29/2010
EPA 6020	B	10156420	Molybdenum	1100	NELAP	PA	07/25/2011
EPA 6020	B	10156420	Nickel	1105	NELAP	PA	04/04/2005
EPA 6020	B	10156420	Potassium	1125	NELAP	PA	04/29/2010
EPA 6020	B	10156420	Selenium	1140	NELAP	PA	04/04/2005
EPA 6020	B	10156420	Silver	1150	NELAP	PA	02/23/2010
EPA 6020	B	10156420	Sodium	1155	NELAP	PA	04/29/2010
EPA 6020	B	10156420	Strontium	1160	NELAP	PA	04/29/2010
EPA 6020	B	10156420	Thallium	1165	NELAP	PA	01/19/2005
EPA 6020	B	10156420	Tin	1175	NELAP	PA	04/29/2010
EPA 6020	B	10156420	Titanium	1180	NELAP	PA	04/29/2010
EPA 6020	B	10156420	Uranium (mass)	1184	NELAP	PA	11/19/2015
EPA 6020	B	10156420	Vanadium	1185	NELAP	PA	01/07/2010
EPA 6020	B	10156420	Zinc	1190	NELAP	PA	02/01/2011
EPA 680		10112002	Decachlorobiphenyl	9105	NELAP	PA	01/19/2016
EPA 680		10112002	Dichlorobiphenyls	8876	NELAP	PA	01/19/2016

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 680		10112002	Heptachlorobiphenyls	8877	NELAP	PA	01/19/2016
EPA 680		10112002	Hexachlorbiphenyls	8888	NELAP	PA	01/19/2016
EPA 680		10112002	Monochlorobiphenyls	8889	NELAP	PA	01/19/2016
EPA 680		10112002	Nonachlorobiphenyls	8891	NELAP	PA	01/19/2016
EPA 680		10112002	Octachlorobiphenyls	8892	NELAP	PA	01/19/2016
EPA 680		10112002	Pentachlorobiphenyls	8896	NELAP	PA	01/19/2016
EPA 680		10112002	Tetrachlorobiphenyls	8893	NELAP	PA	01/19/2016
EPA 680		10112002	Trichlorobiphenyls	8894	NELAP	PA	01/19/2016
EPA 6850		10304606	Perchlorate	1895	NELAP	PA	01/19/2011
EPA 7.3.3.2		10001204	Reactive cyanide	1923	NELAP	PA	12/12/2005
EPA 7.3.4.2		10001408	Reactive sulfide	1925	NELAP	PA	12/12/2005
EPA 7196	A	10162400	Chromium VI	1045	NELAP	PA	07/09/2018
EPA 7199		10163005	Chromium VI	1045	NELAP	PA	05/02/2006
EPA 7471	A	10166208	Mercury	1095	NELAP	PA	10/17/2007
EPA 7471	B	10166457	Mercury	1095	NELAP	PA	10/17/2007
EPA 8011		10173009	1,2-Dibromo-3-chloropropane (DBCP, Dibromochloropropane)	4570	NELAP	PA	07/05/2018
EPA 8011		10173009	1,2-Dibromoethane (EDB, Ethylene dibromide)	4585	NELAP	PA	08/03/2021
EPA 8015	B	10173601	Nonhalogenated organics by GC/FID	9435	NELAP	PA	03/26/2012
EPA 8015	D	10305609	Nonhalogenated organics by GC/FID	9435	NELAP	PA	07/29/2015
EPA 8015	B	10173601	Diesel-range organics (DRO)	9369	NELAP	PA	04/04/2005
EPA 8015	B	10173601	Ethanol	4750	NELAP	PA	01/19/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8015	B	10173601	Ethylene glycol	4785	NELAP	PA	12/04/2007
EPA 8015	B	10173601	Gasoline-range organics (GRO)	9408	NELAP	PA	04/04/2005
EPA 8015	B	10173601	Isopropyl alcohol (2-Propanol)	4895	NELAP	PA	12/04/2007
EPA 8015	B	10173601	Methanol	4930	NELAP	PA	01/19/2005
EPA 8015	B	10173601	Triethylene glycol	9646	NELAP	PA	07/05/2018
EPA 8015	C	10173816	Diesel-range organics (DRO)	9369	NELAP	PA	04/04/2005
EPA 8015	C	10173816	Ethanol	4750	NELAP	PA	01/19/2005
EPA 8015	C	10173816	Ethylene glycol	4785	NELAP	PA	12/04/2007
EPA 8015	C	10173816	Gasoline-range organics (GRO)	9408	NELAP	PA	04/04/2005
EPA 8015	C	10173816	Isopropyl alcohol (2-Propanol)	4895	NELAP	PA	12/04/2007
EPA 8015	C	10173816	Methanol	4930	NELAP	PA	01/19/2005
EPA 8015	C	10173816	Triethylene glycol	9646	NELAP	PA	07/05/2018
EPA 8015	D	10305609	Diesel-range organics (DRO)	9369	NELAP	PA	04/04/2005
EPA 8015	D	10305609	Ethanol	4750	NELAP	PA	01/19/2005
EPA 8015	D	10305609	Ethylene glycol	4785	NELAP	PA	12/04/2007
EPA 8015	D	10305609	Gasoline-range organics (GRO)	9408	NELAP	PA	04/04/2005
EPA 8015	D	10305609	Isopropyl alcohol (2-Propanol)	4895	NELAP	PA	12/04/2007
EPA 8015	D	10305609	Methanol	4930	NELAP	PA	01/19/2005
EPA 8015	D	10305609	Triethylene glycol	9646	NELAP	PA	07/05/2018
EPA 8081	B	10178811	Organochlorine pesticides by GC/ECD	7937	NELAP	PA	01/01/2013
EPA 8081	B	10178811	2,4'-DDD	8580	NELAP	PA	11/19/2015
EPA 8081	B	10178811	2,4'-DDE	8585	NELAP	PA	11/19/2015

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8081	B	10178811	2,4'-DDT	8590	NELAP	PA	11/19/2015
EPA 8081	B	10178811	4,4'-DDD	7355	NELAP	PA	01/19/2005
EPA 8081	B	10178811	4,4'-DDE	7360	NELAP	PA	01/19/2005
EPA 8081	B	10178811	4,4'-DDT	7365	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Aldrin (HHDN)	7025	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Chlordane (tech.)	7250	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Dieldrin	7470	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Endosulfan I	7510	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Endosulfan II	7515	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Endosulfan sulfate	7520	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Endrin	7540	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Endrin aldehyde	7530	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Endrin ketone	7535	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Heptachlor	7685	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Heptachlor epoxide	7690	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Kepone	7740	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Methoxychlor	7810	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Mirex	7870	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Toxaphene (Chlorinated camphene)	8250	NELAP	PA	01/19/2005
EPA 8081	B	10178811	alpha-BHC (alpha-Hexachlorocyclohexane)	7110	NELAP	PA	01/19/2005
EPA 8081	B	10178811	alpha-Chlordane	7240	NELAP	PA	04/04/2005
EPA 8081	B	10178811	beta-BHC (beta-Hexachlorocyclohexane)	7115	NELAP	PA	01/19/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8081	B	10178811	delta-BHC (delta-Hexachlorocyclohexane)	7105	NELAP	PA	01/19/2005
EPA 8081	B	10178811	gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	7120	NELAP	PA	01/19/2005
EPA 8081	B	10178811	gamma-Chlordane	7245	NELAP	PA	04/04/2005
EPA 8082	A	10179358	Aroclor-1016 (PCB-1016)	8880	NELAP	PA	01/02/2007
EPA 8082	A	10179358	Aroclor-1016 (in oil)	8880	NELAP	PA	07/09/2018
EPA 8082	A	10179358	Aroclor-1221 (PCB-1221)	8885	NELAP	PA	01/02/2007
EPA 8082	A	10179358	Aroclor-1221 (in oil)	8885	NELAP	PA	07/09/2018
EPA 8082	A	10179358	Aroclor-1232 (PCB-1232)	8890	NELAP	PA	01/02/2007
EPA 8082	A	10179358	Aroclor-1232 (in oil)	8890	NELAP	PA	07/09/2018
EPA 8082	A	10179358	Aroclor-1242 (PCB-1242)	8895	NELAP	PA	01/02/2007
EPA 8082	A	10179358	Aroclor-1242 (in oil)	8895	NELAP	PA	07/09/2018
EPA 8082	A	10179358	Aroclor-1248 (PCB-1248)	8900	NELAP	PA	01/02/2007
EPA 8082	A	10179358	Aroclor-1248 (in oil)	8900	NELAP	PA	07/09/2018
EPA 8082	A	10179358	Aroclor-1254 (PCB-1254)	8905	NELAP	PA	01/02/2007
EPA 8082	A	10179358	Aroclor-1254 (in oil)	8905	NELAP	PA	07/09/2018
EPA 8082	A	10179358	Aroclor-1260 (PCB-1260)	8910	NELAP	PA	01/02/2007
EPA 8082	A	10179358	Aroclor-1260 (in oil)	8910	NELAP	PA	07/09/2018
EPA 8082	A	10179358	Aroclor-1262 (PCB-1262)	8912	NELAP	PA	07/23/2008
EPA 8082	A	10179358	Aroclor-1268 (PCB-1268)	8913	NELAP	PA	07/23/2008
EPA 8151	A	10183207	Chlorinated herbicides by GC/ECD	8542	NELAP	PA	03/26/2012
EPA 8151	A	10183207	2,4,5-T	8655	NELAP	PA	01/19/2005
EPA 8151	A	10183207	2,4,5-TP (Silvex)	8650	NELAP	PA	01/19/2005

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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8151	A	10183207	2,4-D	8545	NELAP	PA	01/19/2005
EPA 8151	A	10183207	2,4-DB (Butoxon)	8560	NELAP	PA	04/04/2005
EPA 8151	A	10183207	Dalapon (2,2-Dichloropropionic acid)	8555	NELAP	PA	01/19/2005
EPA 8151	A	10183207	Dicamba	8595	NELAP	PA	01/19/2005
EPA 8151	A	10183207	Dichloroprop (Dichlorprop)	8605	NELAP	PA	01/19/2005
EPA 8151	A	10183207	Dinoseb (2-sec-Butyl-4,6-dinitrophenol, DNBP)	8620	NELAP	PA	01/19/2005
EPA 8151	A	10183207	MCPA	7775	NELAP	PA	01/19/2005
EPA 8151	A	10183207	MCPP (Mecoprop)	7780	NELAP	PA	05/02/2006
EPA 8151	A	10183207	Pentachlorophenol (PCP)	6605	NELAP	PA	01/19/2005
EPA 8151	A	10183207	Picloram (4-Amino-3,5,6-trichloro-2-pyridinecarboxylic acid)	8645	NELAP	PA	01/19/2005
EPA 8260	D	10307127	1-Bromo-2-Chloroethane	5522	NELAP	PA	07/07/2023
EPA 8260	D	10307127	2-Ethylhexylacrylate	4762	NELAP	PA	07/07/2023
EPA 8260	C	10307003	VOCs by GC/MS	5242	NELAP	PA	03/26/2012
EPA 8260	D	10307127	VOCs by GC/MS	5242	NELAP	PA	11/04/2019
EPA 8260	C	10307003	1,1,1,2-Tetrachloroethane	5105	NELAP	PA	06/25/2020
EPA 8260	C	10307003	1,1,1-Trichloroethane	5160	NELAP	PA	01/19/2005
EPA 8260	C	10307003	1,1,2,2-Tetrachloroethane	5110	NELAP	PA	01/19/2005
EPA 8260	C	10307003	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5185	NELAP	PA	05/02/2006
EPA 8260	C	10307003	1,1,2-Trichloroethane	5165	NELAP	PA	06/25/2020
EPA 8260	C	10307003	1,1-Dichloroethane	4630	NELAP	PA	01/19/2005
EPA 8260	C	10307003	1,1-Dichloroethene (1,1-Dichloroethylene)	4640	NELAP	PA	01/19/2005

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	C	10307003	1,1-Dichloropropene	4670	NELAP	PA	01/19/2005
EPA 8260	C	10307003	1,2,3-Trichlorobenzene	5150	NELAP	PA	01/19/2005
EPA 8260	C	10307003	1,2,3-Trichloropropane (1,2,3-TCP)	5180	NELAP	PA	06/25/2020
EPA 8260	C	10307003	1,2,3-Trimethylbenzene	5182	NELAP	PA	09/04/2018
EPA 8260	C	10307003	1,2,4-Trichlorobenzene	5155	NELAP	PA	06/25/2020
EPA 8260	C	10307003	1,2,4-Trimethylbenzene	5210	NELAP	PA	01/19/2005
EPA 8260	C	10307003	1,2-Dibromo-3-chloropropane (DBCP, Dibromochloropropane)	4570	NELAP	PA	06/25/2020
EPA 8260	C	10307003	1,2-Dibromoethane (EDB, Ethylene dibromide)	4585	NELAP	PA	06/25/2020
EPA 8260	C	10307003	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	06/25/2020
EPA 8260	C	10307003	1,2-Dichloroethane	4635	NELAP	PA	06/25/2020
EPA 8260	C	10307003	1,2-Dichloropropane	4655	NELAP	PA	01/19/2005
EPA 8260	C	10307003	1,3,5-Trimethylbenzene	5215	NELAP	PA	01/19/2005
EPA 8260	C	10307003	1,3-Dichlorobenzene (m-Dichlorobenzene)	4615	NELAP	PA	01/19/2005
EPA 8260	C	10307003	1,3-Dichloropropane	4660	NELAP	PA	01/19/2005
EPA 8260	C	10307003	1,4-Dichlorobenzene (p-Dichlorobenzene)	4620	NELAP	PA	06/25/2020
EPA 8260	C	10307003	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	01/19/2005
EPA 8260	C	10307003	2,2-Dichloropropane	4665	NELAP	PA	01/19/2005
EPA 8260	C	10307003	2-Butanone (Methyl ethyl ketone, MEK)	4410	NELAP	PA	01/19/2005
EPA 8260	C	10307003	2-Chloroethyl vinyl ether	4500	NELAP	PA	01/19/2005
EPA 8260	C	10307003	2-Chlorotoluene	4535	NELAP	PA	05/02/2006
EPA 8260	C	10307003	2-Hexanone	4860	NELAP	PA	06/25/2020

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Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	C	10307003	2-Nitropropane	5020	NELAP	PA	12/17/2012
EPA 8260	C	10307003	3,3'-Dimethyl-1-butanol	6103	NELAP	PA	04/17/2009
EPA 8260	C	10307003	4-Chloro-2-nitrophenol	5712	NELAP	PA	05/02/2006
EPA 8260	C	10307003	4-Chlorotoluene	4540	NELAP	PA	01/19/2005
EPA 8260	C	10307003	4-Methyl-2-pentanone (MIBK)	4995	NELAP	PA	06/25/2020
EPA 8260	C	10307003	Acetone	4315	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Acetonitrile	4320	NELAP	PA	01/04/2006
EPA 8260	C	10307003	Acrolein (Propenal)	4325	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Acrylonitrile	4340	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Allyl chloride (3-Chloropropene)	4355	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Benzene	4375	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Benzyl chloride	5635	NELAP	PA	01/04/2006
EPA 8260	C	10307003	Bromobenzene	4385	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Bromochloromethane	4390	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Bromodichloromethane	4395	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Bromoform	4400	NELAP	PA	06/25/2020
EPA 8260	C	10307003	Carbon disulfide	4450	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Carbon tetrachloride	4455	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Chlorobenzene	4475	NELAP	PA	06/25/2020
EPA 8260	C	10307003	Chloroethane	4485	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Chloroform	4505	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Chloroprene (2-Chloro-1,3-butadiene)	4525	NELAP	PA	04/17/2009

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 024-001 expiration date 01/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	C	10307003	Crotonaldehyde	4545	NELAP	PA	10/30/2014
EPA 8260	C	10307003	Cyclohexane	4555	NELAP	PA	06/29/2010
EPA 8260	C	10307003	Cyclohexanone	4560	NELAP	PA	07/03/2007
EPA 8260	C	10307003	Dibromochloromethane	4575	NELAP	PA	06/25/2020
EPA 8260	C	10307003	Dibromomethane	4595	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Dichlorodifluoromethane (Freon 12)	4625	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Diisopropyl ether (DIPE)	9375	NELAP	PA	07/03/2007
EPA 8260	C	10307003	Epichlorohydrin (1-Chloro-2,3-epoxypropane)	4745	NELAP	PA	01/04/2006
EPA 8260	C	10307003	Ethanol	4750	NELAP	PA	01/04/2006
EPA 8260	C	10307003	Ethyl acetate	4755	NELAP	PA	01/04/2006
EPA 8260	C	10307003	Ethyl methacrylate	4810	NELAP	PA	01/04/2006
EPA 8260	C	10307003	Ethyl tert-butyl ether (ETBE)	4770	NELAP	PA	07/03/2007
EPA 8260	C	10307003	Ethylbenzene	4765	NELAP	PA	06/25/2020
EPA 8260	C	10307003	Ethylene oxide	4795	NELAP	PA	10/30/2014
EPA 8260	C	10307003	Gasoline-range organics (GRO)	9408	NELAP	PA	06/08/2006
EPA 8260	C	10307003	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	4835	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Isobutyl alcohol (2-Methyl-1-propanol)	4875	NELAP	PA	07/03/2007
EPA 8260	C	10307003	Isopropyl alcohol (2-Propanol)	4895	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Isopropylbenzene (Cumene)	4900	NELAP	PA	08/07/2005
EPA 8260	C	10307003	Methacrylonitrile	4925	NELAP	PA	01/24/2007
EPA 8260	C	10307003	Methyl acetate	4940	NELAP	PA	06/29/2010
EPA 8260	C	10307003	Methyl bromide (Bromomethane)	4950	NELAP	PA	01/19/2005

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	C	10307003	Methyl chloride (Chloromethane)	4960	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Methyl iodide (Iodomethane)	4870	NELAP	PA	05/02/2006
EPA 8260	C	10307003	Methyl tert-butyl ether (MTBE)	5000	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Methylcyclohexane	4965	NELAP	PA	01/21/2009
EPA 8260	C	10307003	Methylene chloride (Dichloromethane)	4975	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Methylmethacrylate	4990	NELAP	PA	05/02/2006
EPA 8260	C	10307003	Naphthalene	5005	NELAP	PA	06/25/2020
EPA 8260	C	10307003	Pentachloroethane	5035	NELAP	PA	01/24/2007
EPA 8260	C	10307003	Propionitrile (Ethyl cyanide)	5080	NELAP	PA	01/24/2007
EPA 8260	C	10307003	Styrene	5100	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Tetrachloroethene (PCE, Perchloroethylene)	5115	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Tetrahydrofuran (THF)	5120	NELAP	PA	06/07/2012
EPA 8260	C	10307003	Toluene	5140	NELAP	PA	06/25/2020
EPA 8260	C	10307003	Trichloroethene (TCE, Trichloroethylene)	5170	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Trichlorofluoromethane (Freon 11)	5175	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Vinyl acetate	5225	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Vinyl chloride (Chloroethene)	5235	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Xylenes, total	5260	NELAP	PA	01/19/2005
EPA 8260	C	10307003	cis-1,2-Dichloroethene	4645	NELAP	PA	01/19/2005
EPA 8260	C	10307003	cis-1,3-Dichloropropene	4680	NELAP	PA	06/25/2020
EPA 8260	C	10307003	m+p-Xylene	5240	NELAP	PA	01/24/2007
EPA 8260	C	10307003	n-Butyl acetate	4403	NELAP	PA	01/19/2016

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	C	10307003	n-Butyl alcohol (n-Butanol, 1-Butanol)	4425	NELAP	PA	01/19/2005
EPA 8260	C	10307003	n-Butylbenzene	4435	NELAP	PA	01/19/2005
EPA 8260	C	10307003	n-Hexane	4855	NELAP	PA	09/04/2018
EPA 8260	C	10307003	n-Propylbenzene	5090	NELAP	PA	01/04/2006
EPA 8260	C	10307003	o-Xylene	5250	NELAP	PA	01/24/2007
EPA 8260	C	10307003	p-Isopropyltoluene (4-Isopropyltoluene)	4910	NELAP	PA	01/24/2007
EPA 8260	C	10307003	sec-Butylbenzene	4440	NELAP	PA	01/19/2005
EPA 8260	C	10307003	tert-Amyl alcohol (2-Methyl-2-butanol)	4368	NELAP	PA	04/17/2009
EPA 8260	C	10307003	tert-Amyl methyl ether (TAME)	4370	NELAP	PA	07/03/2007
EPA 8260	C	10307003	tert-Butyl alcohol (2-Methyl-2-propanol)	4420	NELAP	PA	01/19/2005
EPA 8260	C	10307003	tert-Butyl ethyl ether	4770	NELAP	PA	05/25/2007
EPA 8260	C	10307003	tert-Butyl formate	9557	NELAP	PA	04/17/2009
EPA 8260	C	10307003	tert-Butylbenzene	4445	NELAP	PA	01/19/2005
EPA 8260	C	10307003	trans-1,2-Dichloroethene	4700	NELAP	PA	01/19/2005
EPA 8260	C	10307003	trans-1,3-Dichloropropene	4685	NELAP	PA	01/19/2005
EPA 8260	C	10307003	trans-1,4-Dichloro-2-butene	4605	NELAP	PA	07/03/2007
EPA 8260	D	10307127	1,1,1,2-Tetrachloroethane	5105	NELAP	PA	06/25/2020
EPA 8260	D	10307127	1,1,1-Trichloroethane	5160	NELAP	PA	01/19/2005
EPA 8260	D	10307127	1,1,2,2-Tetrachloroethane	5110	NELAP	PA	01/19/2005
EPA 8260	D	10307127	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5185	NELAP	PA	05/02/2006
EPA 8260	D	10307127	1,1,2-Trichloroethane	5165	NELAP	PA	06/25/2020
EPA 8260	D	10307127	1,1-Dichloroethane	4630	NELAP	PA	01/19/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	D	10307127	1,1-Dichloroethene (1,1-Dichloroethylene)	4640	NELAP	PA	01/19/2005
EPA 8260	D	10307127	1,1-Dichloropropene	4670	NELAP	PA	01/19/2005
EPA 8260	D	10307127	1,2,3-Trichlorobenzene	5150	NELAP	PA	01/19/2005
EPA 8260	D	10307127	1,2,3-Trichloropropane (1,2,3-TCP)	5180	NELAP	PA	06/25/2020
EPA 8260	D	10307127	1,2,3-Trimethylbenzene	5182	NELAP	PA	09/04/2018
EPA 8260	D	10307127	1,2,4-Trichlorobenzene	5155	NELAP	PA	06/25/2020
EPA 8260	D	10307127	1,2,4-Trimethylbenzene	5210	NELAP	PA	01/19/2005
EPA 8260	D	10307127	1,2-Dibromo-3-chloropropane (DBCP, Dibromochloropropane)	4570	NELAP	PA	06/25/2020
EPA 8260	D	10307127	1,2-Dibromoethane (EDB, Ethylene dibromide)	4585	NELAP	PA	06/25/2020
EPA 8260	D	10307127	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	06/25/2020
EPA 8260	D	10307127	1,2-Dichloroethane	4635	NELAP	PA	06/25/2020
EPA 8260	D	10307127	1,2-Dichloropropane	4655	NELAP	PA	01/19/2005
EPA 8260	D	10307127	1,3,5-Trimethylbenzene	5215	NELAP	PA	01/19/2005
EPA 8260	D	10307127	1,3-Dichlorobenzene (m-Dichlorobenzene)	4615	NELAP	PA	01/19/2005
EPA 8260	D	10307127	1,3-Dichloropropane	4660	NELAP	PA	01/19/2005
EPA 8260	D	10307127	1,4-Dichlorobenzene (p-Dichlorobenzene)	4620	NELAP	PA	06/25/2020
EPA 8260	D	10307127	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	01/19/2005
EPA 8260	D	10307127	1-Chlorohexane	4510	NELAP	PA	07/07/2023
EPA 8260	D	10307127	2,2-Dichloropropane	4665	NELAP	PA	01/19/2005
EPA 8260	D	10307127	2-Butanone (Methyl ethyl ketone, MEK)	4410	NELAP	PA	01/19/2005
EPA 8260	D	10307127	2-Chloroethyl vinyl ether	4500	NELAP	PA	05/01/2020

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	D	10307127	2-Chlorotoluene	4535	NELAP	PA	05/02/2006
EPA 8260	D	10307127	2-Hexanone	4860	NELAP	PA	06/25/2020
EPA 8260	D	10307127	2-Nitropropane	5020	NELAP	PA	12/17/2012
EPA 8260	D	10307127	4-Chlorotoluene	4540	NELAP	PA	01/19/2005
EPA 8260	D	10307127	4-Methyl-2-pentanone (MIBK)	4995	NELAP	PA	06/25/2020
EPA 8260	D	10307127	Acetone	4315	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Acetonitrile	4320	NELAP	PA	01/04/2006
EPA 8260	D	10307127	Acrolein (Propenal)	4325	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Acrylonitrile	4340	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Allyl chloride (3-Chloropropene)	4355	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Benzene	4375	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Benzyl chloride	5635	NELAP	PA	01/04/2006
EPA 8260	D	10307127	Bromobenzene	4385	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Bromochloromethane	4390	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Bromodichloromethane	4395	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Bromoform	4400	NELAP	PA	06/25/2020
EPA 8260	D	10307127	Carbon disulfide	4450	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Carbon tetrachloride	4455	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Chlorobenzene	4475	NELAP	PA	06/25/2020
EPA 8260	D	10307127	Chlorodifluoromethane (Freon 22)	4577	NELAP	PA	07/07/2023
EPA 8260	D	10307127	Chloroethane	4485	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Chloroform	4505	NELAP	PA	01/19/2005

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	D	10307127	Chloroprene (2-Chloro-1,3-butadiene)	4525	NELAP	PA	04/17/2009
EPA 8260	D	10307127	Chlorotrifluoroethene	4526	NELAP	PA	07/07/2023
EPA 8260	D	10307127	Cyclohexane	4555	NELAP	PA	06/29/2010
EPA 8260	D	10307127	Cyclohexanone	4560	NELAP	PA	07/03/2007
EPA 8260	D	10307127	Dibromochloromethane	4575	NELAP	PA	06/25/2020
EPA 8260	D	10307127	Dibromomethane	4595	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Dichlorodifluoromethane (Freon 12)	4625	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Diisopropyl ether (DIPE)	9375	NELAP	PA	07/03/2007
EPA 8260	D	10307127	Ethanol	4750	NELAP	PA	01/04/2006
EPA 8260	D	10307127	Ethyl acetate	4755	NELAP	PA	01/04/2006
EPA 8260	D	10307127	Ethyl acrylate	4760	NELAP	PA	07/07/2023
EPA 8260	D	10307127	Ethyl methacrylate	4810	NELAP	PA	01/04/2006
EPA 8260	D	10307127	Ethyl tert-butyl ether (ETBE)	4770	NELAP	PA	07/03/2007
EPA 8260	D	10307127	Ethylbenzene	4765	NELAP	PA	06/25/2020
EPA 8260	D	10307127	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	4835	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Isobutyl alcohol (2-Methyl-1-propanol)	4875	NELAP	PA	07/03/2007
EPA 8260	D	10307127	Isopropyl acetate	4890	NELAP	PA	07/07/2023
EPA 8260	D	10307127	Isopropyl alcohol (2-Propanol)	4895	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Isopropylbenzene (Cumene)	4900	NELAP	PA	08/07/2005
EPA 8260	D	10307127	Methacrylonitrile	4925	NELAP	PA	01/24/2007
EPA 8260	D	10307127	Methyl acetate	4940	NELAP	PA	06/29/2010
EPA 8260	D	10307127	Methyl acrylate	4945	NELAP	PA	07/07/2023

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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	D	10307127	Methyl bromide (Bromomethane)	4950	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Methyl chloride (Chloromethane)	4960	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Methyl iodide (Iodomethane)	4870	NELAP	PA	05/02/2006
EPA 8260	D	10307127	Methyl tert-butyl ether (MTBE)	5000	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Methylcyclohexane	4965	NELAP	PA	01/21/2009
EPA 8260	D	10307127	Methylene chloride (Dichloromethane)	4975	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Methylmethacrylate	4990	NELAP	PA	05/02/2006
EPA 8260	D	10307127	Naphthalene	5005	NELAP	PA	06/25/2020
EPA 8260	D	10307127	Pentachloroethane	5035	NELAP	PA	01/24/2007
EPA 8260	D	10307127	Pentane	5028	NELAP	PA	07/07/2023
EPA 8260	D	10307127	Propionitrile (Ethyl cyanide)	5080	NELAP	PA	01/24/2007
EPA 8260	D	10307127	Styrene	5100	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Tetrachloroethene (PCE, Perchloroethylene)	5115	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Tetrahydrofuran (THF)	5120	NELAP	PA	06/07/2012
EPA 8260	D	10307127	Toluene	5140	NELAP	PA	06/25/2020
EPA 8260	D	10307127	Trichloroethene (TCE, Trichloroethylene)	5170	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Trichlorofluoromethane (Freon 11)	5175	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Vinyl acetate	5225	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Vinyl chloride (Chloroethene)	5235	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Xylenes, total	5260	NELAP	PA	01/19/2005
EPA 8260	D	10307127	cis-1,2-Dichloroethene	4645	NELAP	PA	01/19/2005
EPA 8260	D	10307127	cis-1,3-Dichloropropene	4680	NELAP	PA	06/25/2020

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DEP Laboratory ID: 36-00037
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TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	D	10307127	m+p-Xylene	5240	NELAP	PA	01/24/2007
EPA 8260	D	10307127	n-Butyl acetate	4403	NELAP	PA	01/19/2016
EPA 8260	D	10307127	n-Butyl acrylate	4406	NELAP	PA	07/07/2023
EPA 8260	D	10307127	n-Butyl alcohol (n-Butanol, 1-Butanol)	4425	NELAP	PA	01/19/2005
EPA 8260	D	10307127	n-Butylbenzene	4435	NELAP	PA	01/19/2005
EPA 8260	D	10307127	n-Hexane	4855	NELAP	PA	09/04/2018
EPA 8260	D	10307127	n-Propyl acetate	5057	NELAP	PA	07/07/2023
EPA 8260	D	10307127	n-Propylbenzene	5090	NELAP	PA	01/04/2006
EPA 8260	D	10307127	o-Xylene	5250	NELAP	PA	01/24/2007
EPA 8260	D	10307127	p-Diethylbenzene	5253	NELAP	PA	07/07/2023
EPA 8260	D	10307127	p-Isopropyltoluene (4-Isopropyltoluene)	4910	NELAP	PA	01/24/2007
EPA 8260	D	10307127	sec-Butylbenzene	4440	NELAP	PA	01/19/2005
EPA 8260	D	10307127	tert-Amyl methyl ether (TAME)	4370	NELAP	PA	07/03/2007
EPA 8260	D	10307127	tert-Butyl alcohol (2-Methyl-2-propanol)	4420	NELAP	PA	01/19/2005
EPA 8260	D	10307127	tert-Butylbenzene	4445	NELAP	PA	01/19/2005
EPA 8260	D	10307127	trans-1,2-Dichloroethene	4700	NELAP	PA	01/19/2005
EPA 8260	D	10307127	trans-1,3-Dichloropropene	4685	NELAP	PA	01/19/2005
EPA 8260	D	10307127	trans-1,4-Dichloro-2-butene	4605	NELAP	PA	07/03/2007
EPA 8260 SIM	B	10184904	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	04/17/2009
EPA 8260 SIM	C	10307105	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	04/17/2009
EPA 8270	D	10186002	SOCs by GC/MS	6687	NELAP	PA	03/26/2012
EPA 8270	E	10242543	SOCs by GC/MS	6687	NELAP	PA	06/25/2020

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 024-001 expiration date 01/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	1,1'-Biphenyl (Biphenyl, Lemonene)	6703	NELAP	PA	12/04/2007
EPA 8270	D	10186002	1,2,3,4-Tetrachlorobenzene	6705	NELAP	PA	07/03/2007
EPA 8270	D	10186002	1,2,3,4-Tetrahydronaphthalene	6707	NELAP	PA	12/04/2007
EPA 8270	D	10186002	1,2,3,5-Tetrachlorobenzene	6710	NELAP	PA	07/03/2007
EPA 8270	D	10186002	1,2,4,5-Tetrachlorobenzene	6715	NELAP	PA	04/04/2005
EPA 8270	D	10186002	1,2,4-Trichlorobenzene	5155	NELAP	PA	01/19/2005
EPA 8270	D	10186002	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	01/19/2005
EPA 8270	D	10186002	1,2-Dinitrobenzene (1,2-DNB)	6155	NELAP	PA	01/19/2005
EPA 8270	D	10186002	1,2-Diphenylhydrazine	6220	NELAP	PA	05/02/2006
EPA 8270	D	10186002	1,3,5-Trinitrobenzene (1,3,5-TNB)	6885	NELAP	PA	01/04/2006
EPA 8270	D	10186002	1,3-Dichlorobenzene (m-Dichlorobenzene)	4615	NELAP	PA	01/19/2005
EPA 8270	D	10186002	1,3-Dinitrobenzene (1,3-DNB)	6160	NELAP	PA	01/19/2005
EPA 8270	D	10186002	1,4-Dichlorobenzene (p-Dichlorobenzene)	4620	NELAP	PA	01/19/2005
EPA 8270	D	10186002	1,4-Dinitrobenzene (1,4-DNB)	6165	NELAP	PA	05/02/2006
EPA 8270	D	10186002	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	12/04/2007
EPA 8270	D	10186002	1,4-Naphthoquinone	6420	NELAP	PA	01/19/2005
EPA 8270	D	10186002	1,4-Phenylenediamine	6630	NELAP	PA	01/19/2005
EPA 8270	D	10186002	1-Chloronaphthalene	5790	NELAP	PA	01/04/2006
EPA 8270	D	10186002	1-Methylnaphthalene	6380	NELAP	PA	12/04/2007
EPA 8270	D	10186002	1-Naphthylamine (alpha-Naphthylamine)	6425	NELAP	PA	04/04/2005
EPA 8270	D	10186002	2,2'-Oxybis(1-chloropropane) (bis(2-Chloro-1-methylethyl) ether)	4659	NELAP	PA	10/30/2014

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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	2,3,4,6-Tetrachlorophenol	6735	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2,4,5-Trichlorophenol	6835	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2,4,6-Trichlorophenol	6840	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2,4-Dichlorophenol	6000	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2,4-Dimethylphenol	6130	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2,4-Dinitrophenol	6175	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2,4-Dinitrotoluene (2,4-DNT)	6185	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2,6-Dichlorophenol	6005	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2,6-Dinitrotoluene (2,6-DNT)	6190	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2-Acetylaminofluorene	5515	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2-Chloronaphthalene	5795	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2-Chlorophenol	5800	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	6360	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2-Methylnaphthalene	6385	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2-Methylphenol (o-Cresol)	6400	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2-Naphthylamine (beta-Naphthylamine)	6430	NELAP	PA	05/17/2005
EPA 8270	D	10186002	2-Nitroaniline	6460	NELAP	PA	04/04/2005
EPA 8270	D	10186002	2-Nitrophenol	6490	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2-Picoline (2-Methylpyridine)	5050	NELAP	PA	01/19/2005
EPA 8270	D	10186002	3+4-Methylphenol (m+p-Cresol)	6412	NELAP	PA	01/19/2005
EPA 8270	D	10186002	3,3'-Dichlorobenzidine	5945	NELAP	PA	01/19/2005
EPA 8270	D	10186002	3,3'-Dimethoxybenzidine	6100	NELAP	PA	04/17/2009

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	3,3'-Dimethylbenzidine	6120	NELAP	PA	01/19/2005
EPA 8270	D	10186002	3-Methylcholanthrene	6355	NELAP	PA	01/19/2005
EPA 8270	D	10186002	3-Nitroaniline	6465	NELAP	PA	01/19/2005
EPA 8270	D	10186002	4,4'-Methylenebis(2-chloroaniline)	6365	NELAP	PA	01/19/2005
EPA 8270	D	10186002	4-Aminobiphenyl	5540	NELAP	PA	01/19/2005
EPA 8270	D	10186002	4-Bromophenyl phenyl ether	5660	NELAP	PA	01/19/2005
EPA 8270	D	10186002	4-Chloro-3-methylphenol	5700	NELAP	PA	01/19/2005
EPA 8270	D	10186002	4-Chloroaniline	5745	NELAP	PA	01/19/2005
EPA 8270	D	10186002	4-Chlorophenyl phenyl ether	5825	NELAP	PA	01/19/2005
EPA 8270	D	10186002	4-Nitroaniline	6470	NELAP	PA	04/04/2005
EPA 8270	D	10186002	4-Nitrophenol	6500	NELAP	PA	01/19/2005
EPA 8270	D	10186002	4-Nitroquinoline-1-oxide	6510	NELAP	PA	07/03/2007
EPA 8270	D	10186002	5-Nitro-o-toluidine	6570	NELAP	PA	04/04/2005
EPA 8270	D	10186002	6-Methylchrysene	6112	NELAP	PA	12/04/2007
EPA 8270	D	10186002	7,12-Dimethylbenz(a)anthracene	6115	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Acenaphthene	5500	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Acenaphthylene	5505	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Acetophenone	5510	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Aniline	5545	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Anthracene	5555	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Aramite	5560	NELAP	PA	05/17/2005
EPA 8270	D	10186002	Atrazine	7065	NELAP	PA	01/12/2007

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	Benzaldehyde	5570	NELAP	PA	12/04/2007
EPA 8270	D	10186002	Benzenethiol	5567	NELAP	PA	12/04/2007
EPA 8270	D	10186002	Benzidine	5595	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Benzo[a]anthracene	5575	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Benzo[a]pyrene	5580	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Benzo[b]fluoranthene	5585	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Benzo[ghi]perylene	5590	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Benzo[k]fluoranthene	5600	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Benzoic acid	5610	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Benzyl alcohol	5630	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Butyl benzyl phthalate (Benzyl butyl phthalate)	5670	NELAP	PA	05/17/2005
EPA 8270	D	10186002	Caprolactam	7180	NELAP	PA	12/04/2007
EPA 8270	D	10186002	Carbazole	5680	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Chlorobenzilate	7260	NELAP	PA	05/02/2006
EPA 8270	D	10186002	Chrysene (Benzo[a]phenanthrene)	5855	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Di-n-butyl phthalate	5925	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Di-n-octyl phthalate	6200	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Diallate (cis or trans)	7405	NELAP	PA	05/02/2006
EPA 8270	D	10186002	Dibenz[a,h]acridine	9354	NELAP	PA	12/04/2007
EPA 8270	D	10186002	Dibenz[a,j]acridine	5900	NELAP	PA	05/17/2005
EPA 8270	D	10186002	Dibenzo[a,h]anthracene	5895	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Dibenzofuran	5905	NELAP	PA	01/19/2005

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	Diethyl phthalate	6070	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Dimethoate	7475	NELAP	PA	05/02/2006
EPA 8270	D	10186002	Dimethyl phthalate	6135	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Diphenylamine	6205	NELAP	PA	05/02/2006
EPA 8270	D	10186002	Disulfoton	8625	NELAP	PA	07/01/2007
EPA 8270	D	10186002	Ethyl methanesulfonate	6260	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Famphur	7580	NELAP	PA	05/02/2006
EPA 8270	D	10186002	Fluoranthene	6265	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Fluorene	6270	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Hexachlorobenzene	6275	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	4835	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Hexachlorocyclopentadiene	6285	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Hexachloroethane	4840	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Hexachloropropene	6295	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Indene	6312	NELAP	PA	12/04/2007
EPA 8270	D	10186002	Indeno(1,2,3-cd)pyrene	6315	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Isodrin	7725	NELAP	PA	05/02/2006
EPA 8270	D	10186002	Isophorone	6320	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Isosafrole	6325	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Kepone	7740	NELAP	PA	05/02/2006
EPA 8270	D	10186002	Malononitrile	4920	NELAP	PA	05/23/2013
EPA 8270	D	10186002	Methapyrilene	6345	NELAP	PA	01/19/2005

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Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	Methyl methanesulfonate	6375	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Methyl parathion (Parathion, methyl)	7825	NELAP	PA	05/25/2007
EPA 8270	D	10186002	N,N-Dimethylacetamide	6443	NELAP	PA	12/04/2007
EPA 8270	D	10186002	N,N-Dimethylformamide	5010	NELAP	PA	12/04/2007
EPA 8270	D	10186002	N-Nitrosodi-n-butylamine	5025	NELAP	PA	01/19/2005
EPA 8270	D	10186002	N-Nitrosodi-n-propylamine	6545	NELAP	PA	01/19/2005
EPA 8270	D	10186002	N-Nitrosodiethylamine	6525	NELAP	PA	01/19/2005
EPA 8270	D	10186002	N-Nitrosodimethylamine	6530	NELAP	PA	01/19/2005
EPA 8270	D	10186002	N-Nitrosodiphenylamine	6535	NELAP	PA	01/19/2005
EPA 8270	D	10186002	N-Nitrosomethylethylamine	6550	NELAP	PA	01/19/2005
EPA 8270	D	10186002	N-Nitrosomorpholine	6555	NELAP	PA	01/19/2005
EPA 8270	D	10186002	N-Nitrosopiperidine	6560	NELAP	PA	01/19/2005
EPA 8270	D	10186002	N-Nitrosopyrrolidine	6565	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Naphthalene	5005	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Nitrobenzene	5015	NELAP	PA	01/04/2006
EPA 8270	D	10186002	O,O,O-Triethyl phosphorothioate	8290	NELAP	PA	05/02/2006
EPA 8270	D	10186002	Parathion, ethyl (Ethyl parathion, Parathion)	7955	NELAP	PA	05/25/2007
EPA 8270	D	10186002	Pentachlorobenzene	6590	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Pentachloronitrobenzene (PCNB)	6600	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Pentachlorophenol (PCP)	6605	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Phenacetin	6610	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Phenanthrene	6615	NELAP	PA	01/19/2005

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DEP Laboratory ID: 36-00037
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PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	Phenol	6625	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Phorate (Thimet)	7985	NELAP	PA	05/02/2006
EPA 8270	D	10186002	Phthalic anhydride	6640	NELAP	PA	01/21/2009
EPA 8270	D	10186002	Pronamide (Kerb)	6650	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Pyrene	6665	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Pyridine	5095	NELAP	PA	04/04/2005
EPA 8270	D	10186002	Quinoline	6670	NELAP	PA	12/04/2007
EPA 8270	D	10186002	Safrole	6685	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Sulfotepp (Tetraethyl dithiopyrophosphate)	8155	NELAP	PA	12/04/2007
EPA 8270	D	10186002	Tetraethyl lead	1211	NELAP	PA	03/07/2012
EPA 8270	D	10186002	Thionazine (Thionazin, Zinophos)	8235	NELAP	PA	05/02/2006
EPA 8270	D	10186002	a,a-Dimethylphenethylamine (Phentermine)	6125	NELAP	PA	05/02/2006
EPA 8270	D	10186002	bis(2-Chloroethoxy)methane	5760	NELAP	PA	01/19/2005
EPA 8270	D	10186002	bis(2-Chloroethyl) ether	5765	NELAP	PA	01/19/2005
EPA 8270	D	10186002	bis(2-Chloromethyl) ether		NELAP	PA	01/21/2009
EPA 8270	D	10186002	bis(2-Ethylhexyl) adipate (di(2-Ethylhexyl) adipate)	6062	NELAP	PA	01/21/2009
EPA 8270	D	10186002	bis(2-Ethylhexyl) phthalate (DEHP)	6065	NELAP	PA	01/19/2005
EPA 8270	D	10186002	o-Toluidine (2-Toluidine, 2-Methylaniline)	5145	NELAP	PA	01/19/2005
EPA 8270	D	10186002	p-(Dimethylamino)azobenzene	6105	NELAP	PA	05/02/2006
EPA 8270	D	10186002	p-Chloronitrobenzene	9330	NELAP	PA	01/21/2009
EPA 8270	D	10186002	tris-(2,3-Dibromopropyl) phosphate (tris-BP)	8310	NELAP	PA	12/04/2007
EPA 8270	E	10242543	1,1'-Biphenyl (Biphenyl, Lemonene)	6703	NELAP	PA	12/04/2007

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 024-001 expiration date 01/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	1,2,4,5-Tetrachlorobenzene	6715	NELAP	PA	04/04/2005
EPA 8270	E	10242543	1,2,4-Trichlorobenzene	5155	NELAP	PA	01/19/2005
EPA 8270	E	10242543	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	01/19/2005
EPA 8270	E	10242543	1,2-Diphenylhydrazine	6220	NELAP	PA	05/02/2006
EPA 8270	E	10242543	1,3,5-Trinitrobenzene (1,3,5-TNB)	6885	NELAP	PA	12/15/2022
EPA 8270	E	10242543	1,3-Dichlorobenzene (m-Dichlorobenzene)	4615	NELAP	PA	01/19/2005
EPA 8270	E	10242543	1,3-Dinitrobenzene (1,3-DNB)	6160	NELAP	PA	01/19/2005
EPA 8270	E	10242543	1,4-Dichlorobenzene (p-Dichlorobenzene)	4620	NELAP	PA	01/19/2005
EPA 8270	E	10242543	1,4-Dinitrobenzene (1,4-DNB)	6165	NELAP	PA	05/02/2006
EPA 8270	E	10242543	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	12/04/2007
EPA 8270	E	10242543	1,4-Naphthoquinone	6420	NELAP	PA	01/19/2005
EPA 8270	E	10242543	1-Chloronaphthalene	5790	NELAP	PA	01/04/2006
EPA 8270	E	10242543	1-Methylnaphthalene	6380	NELAP	PA	12/04/2007
EPA 8270	E	10242543	1-Naphthylamine (alpha-Naphthylamine)	6425	NELAP	PA	04/04/2005
EPA 8270	E	10242543	2,2'-Oxybis(1-chloropropane) (bis(2-Chloro-1-methylethyl) ether)	4659	NELAP	PA	10/30/2014
EPA 8270	E	10242543	2,3,4,6-Tetrachlorophenol	6735	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2,4,5-Trichlorophenol	6835	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2,4,6-Trichlorophenol	6840	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2,4-Dichlorophenol	6000	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2,4-Dimethylphenol	6130	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2,4-Dinitrophenol	6175	NELAP	PA	01/19/2005

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DEP Laboratory ID: 36-00037
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TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	2,4-Dinitrotoluene (2,4-DNT)	6185	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2,6-Dichlorophenol	6005	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2,6-Dinitrotoluene (2,6-DNT)	6190	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2-Acetylaminofluorene	5515	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2-Butoxyethanol	9322	NELAP	PA	07/07/2023
EPA 8270	E	10242543	2-Chloronaphthalene	5795	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2-Chlorophenol	5800	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	6360	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2-Methylnaphthalene	6385	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2-Methylphenol (o-Cresol)	6400	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2-Naphthylamine (beta-Naphthylamine)	6430	NELAP	PA	05/17/2005
EPA 8270	E	10242543	2-Nitroaniline	6460	NELAP	PA	04/04/2005
EPA 8270	E	10242543	2-Nitrophenol	6490	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2-Picoline (2-Methylpyridine)	5050	NELAP	PA	01/19/2005
EPA 8270	E	10242543	3+4-Methylphenol (m+p-Cresol)	6412	NELAP	PA	01/19/2005
EPA 8270	E	10242543	3,3'-Dichlorobenzidine	5945	NELAP	PA	01/19/2005
EPA 8270	E	10242543	3,3'-Dimethylbenzidine	6120	NELAP	PA	01/19/2005
EPA 8270	E	10242543	3-Methylcholanthrene	6355	NELAP	PA	01/19/2005
EPA 8270	E	10242543	3-Nitroaniline	6465	NELAP	PA	01/19/2005
EPA 8270	E	10242543	4,4'-Methylenebis(2-chloroaniline)	6365	NELAP	PA	01/19/2005
EPA 8270	E	10242543	4-Aminobiphenyl	5540	NELAP	PA	01/19/2005
EPA 8270	E	10242543	4-Bromophenyl phenyl ether	5660	NELAP	PA	01/19/2005

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	4-Chloro-3-methylphenol	5700	NELAP	PA	01/19/2005
EPA 8270	E	10242543	4-Chloroaniline	5745	NELAP	PA	01/19/2005
EPA 8270	E	10242543	4-Chlorophenyl phenyl ether	5825	NELAP	PA	01/19/2005
EPA 8270	E	10242543	4-Nitroaniline	6470	NELAP	PA	04/04/2005
EPA 8270	E	10242543	4-Nitrophenol	6500	NELAP	PA	01/19/2005
EPA 8270	E	10242543	4-Nitroquinoline-1-oxide	6510	NELAP	PA	07/03/2007
EPA 8270	E	10242543	5-Nitro-o-toluidine	6570	NELAP	PA	04/04/2005
EPA 8270	E	10242543	6-Methylchrysene	6112	NELAP	PA	12/04/2007
EPA 8270	E	10242543	7,12-Dimethylbenz(a)anthracene	6115	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Acenaphthene	5500	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Acenaphthylene	5505	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Acetophenone	5510	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Aniline	5545	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Anthracene	5555	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Atrazine	7065	NELAP	PA	01/12/2007
EPA 8270	E	10242543	Benzaldehyde	5570	NELAP	PA	12/04/2007
EPA 8270	E	10242543	Benzenethiol	5567	NELAP	PA	12/15/2022
EPA 8270	E	10242543	Benzidine	5595	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Benzo[a]anthracene	5575	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Benzo[a]pyrene	5580	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Benzo[b]fluoranthene	5585	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Benzo[ghi]perylene	5590	NELAP	PA	01/19/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	Benzo[k]fluoranthene	5600	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Benzoic acid	5610	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Benzyl alcohol	5630	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Butyl benzyl phthalate (Benzyl butyl phthalate)	5670	NELAP	PA	05/17/2005
EPA 8270	E	10242543	Caprolactam	7180	NELAP	PA	12/04/2007
EPA 8270	E	10242543	Carbazole	5680	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Chlorobenzilate	7260	NELAP	PA	05/02/2006
EPA 8270	E	10242543	Chrysene (Benzo[a]phenanthrene)	5855	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Di-n-butyl phthalate	5925	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Di-n-octyl phthalate	6200	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Diallate (cis or trans)	7405	NELAP	PA	05/02/2006
EPA 8270	E	10242543	Dibenz[a,h]acridine	9354	NELAP	PA	12/04/2007
EPA 8270	E	10242543	Dibenz[a,j]acridine	5900	NELAP	PA	05/17/2005
EPA 8270	E	10242543	Dibenzo[a,h]anthracene	5895	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Dibenzofuran	5905	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Diethyl phthalate	6070	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Dimethoate	7475	NELAP	PA	05/02/2006
EPA 8270	E	10242543	Dimethyl phthalate	6135	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Dinoseb (2-sec-Butyl-4,6-dinitrophenol, DNBP)	8620	NELAP	PA	12/15/2022
EPA 8270	E	10242543	Diphenyl ether	6210	NELAP	PA	12/15/2022
EPA 8270	E	10242543	Diphenylamine	6205	NELAP	PA	05/02/2006
EPA 8270	E	10242543	Ethyl methanesulfonate	6260	NELAP	PA	01/19/2005

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Laboratory Scope of Accreditation

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	Fluoranthene	6265	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Fluorene	6270	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Hexachlorobenzene	6275	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	4835	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Hexachlorocyclopentadiene	6285	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Hexachloroethane	4840	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Hexachloropropene	6295	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Indene	6312	NELAP	PA	12/04/2007
EPA 8270	E	10242543	Indeno(1,2,3-cd)pyrene	6315	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Isodrin	7725	NELAP	PA	05/02/2006
EPA 8270	E	10242543	Isophorone	6320	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Isosafrole	6325	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Methapyrilene	6345	NELAP	PA	12/15/2022
EPA 8270	E	10242543	Methyl methanesulfonate	6375	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Methyl parathion (Parathion, methyl)	7825	NELAP	PA	05/25/2007
EPA 8270	E	10242543	N-Nitrosodi-n-butylamine	5025	NELAP	PA	01/19/2005
EPA 8270	E	10242543	N-Nitrosodi-n-propylamine	6545	NELAP	PA	01/19/2005
EPA 8270	E	10242543	N-Nitrosodiethylamine	6525	NELAP	PA	01/19/2005
EPA 8270	E	10242543	N-Nitrosodimethylamine	6530	NELAP	PA	01/19/2005
EPA 8270	E	10242543	N-Nitrosodiphenylamine	6535	NELAP	PA	01/19/2005
EPA 8270	E	10242543	N-Nitrosomethylethylamine	6550	NELAP	PA	01/19/2005
EPA 8270	E	10242543	N-Nitrosomorpholine	6555	NELAP	PA	01/19/2005

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Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	N-Nitrosopiperidine	6560	NELAP	PA	01/19/2005
EPA 8270	E	10242543	N-Nitrosopyrrolidine	6565	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Naphthalene	5005	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Nitrobenzene	5015	NELAP	PA	01/04/2006
EPA 8270	E	10242543	O,O,O-Triethyl phosphorothioate	8290	NELAP	PA	05/02/2006
EPA 8270	E	10242543	Parathion, ethyl (Ethyl parathion, Parathion)	7955	NELAP	PA	05/25/2007
EPA 8270	E	10242543	Pentachlorobenzene	6590	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Pentachloronitrobenzene (PCNB)	6600	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Pentachlorophenol (PCP)	6605	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Phenacetin	6610	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Phenanthrene	6615	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Phenol	6625	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Phorate (Thimet)	7985	NELAP	PA	05/02/2006
EPA 8270	E	10242543	Pronamide (Kerb)	6650	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Pyrene	6665	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Pyridine	5095	NELAP	PA	04/04/2005
EPA 8270	E	10242543	Quinoline	6670	NELAP	PA	12/04/2007
EPA 8270	E	10242543	Safrole	6685	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Sulfotepp (Tetraethyl dithiopyrophosphate)	8155	NELAP	PA	12/04/2007
EPA 8270	E	10242543	Thionazine (Thionazin, Zinophos)	8235	NELAP	PA	05/02/2006
EPA 8270	E	10242543	bis(2-Chloroethoxy)methane	5760	NELAP	PA	01/19/2005
EPA 8270	E	10242543	bis(2-Chloroethyl) ether	5765	NELAP	PA	01/19/2005

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PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	bis(2-Ethylhexyl) phthalate (DEHP)	6065	NELAP	PA	01/19/2005
EPA 8270	E	10242543	o-Toluidine (2-Toluidine, 2-Methylaniline)	5145	NELAP	PA	01/19/2005
EPA 8270	E	10242543	p-(Dimethylamino)azobenzene	6105	NELAP	PA	05/02/2006
EPA 8270 SIM	E	10242565	SOCs by GC/MS	6687	NELAP	PA	09/29/2020
EPA 8270 SIM	D	10242509	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	05/14/2018
EPA 8270 SIM	D	10242509	1-Methylnaphthalene	6380	NELAP	PA	07/25/2011
EPA 8270 SIM	D	10242509	2-Methylnaphthalene	6385	NELAP	PA	05/23/2012
EPA 8270 SIM	D	10242509	Acenaphthene	5500	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Acenaphthylene	5505	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Anthracene	5555	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Benzo[a]anthracene	5575	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Benzo[a]pyrene	5580	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Benzo[b]fluoranthene	5585	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Benzo[ghi]perylene	5590	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Benzo[k]fluoranthene	5600	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Chrysene (Benzo[a]phenanthrene)	5855	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Dibenzo[a,h]anthracene	5895	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Fluoranthene	6265	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Fluorene	6270	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Indeno(1,2,3-cd)pyrene	6315	NELAP	PA	11/04/2021
EPA 8270 SIM	D	10242509	Naphthalene	5005	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Phenanthrene	6615	NELAP	PA	12/04/2007

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PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270 SIM	D	10242509	Pyrene	6665	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	05/14/2018
EPA 8270 SIM	E	10242565	1-Methylnaphthalene	6380	NELAP	PA	07/25/2011
EPA 8270 SIM	E	10242565	2-Methylnaphthalene	6385	NELAP	PA	05/23/2012
EPA 8270 SIM	E	10242565	Acenaphthene	5500	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Acenaphthylene	5505	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Anthracene	5555	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Benzo[a]anthracene	5575	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Benzo[a]pyrene	5580	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Benzo[b]fluoranthene	5585	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Benzo[ghi]perylene	5590	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Benzo[k]fluoranthene	5600	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Chrysene (Benzo[a]phenanthrene)	5855	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Dibenzo[a,h]anthracene	5895	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Fluoranthene	6265	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Fluorene	6270	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Indeno(1,2,3-cd)pyrene	6315	NELAP	PA	11/04/2021
EPA 8270 SIM	E	10242565	Naphthalene	5005	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Phenanthrene	6615	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Pyrene	6665	NELAP	PA	12/04/2007
EPA 8290	A	10187403	PCDDs and PCDFs by HRGC-HRMS	6126	NELAP	PA	03/04/2015
EPA 8290	A	10187403	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	9519	NELAP	PA	06/30/2010

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 024-001 expiration date 01/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8290	A	10187403	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	9516	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	9426	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	9420	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	9423	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	9453	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	9471	NELAP	PA	08/06/2010
EPA 8290	A	10187403	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	9456	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	9474	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	9459	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	9477	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	9540	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	9543	NELAP	PA	06/30/2010
EPA 8290	A	10187403	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	9480	NELAP	PA	06/30/2010
EPA 8290	A	10187403	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	9549	NELAP	PA	08/06/2010
EPA 8290	A	10187403	2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)(Dioxin)	9618	NELAP	PA	06/30/2010
EPA 8290	A	10187403	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	9612	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total TCDD	9609	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total TCDF	9615	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total heptachlorodibenzo-p-dioxin (HpCDD)	9438	NELAP	PA	06/30/2010

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8290	A	10187403	Total heptachlorodibenzofuran (HpCDF)	9444	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total hexachlorodibenzo-p-dioxin (HxCDD)	9468	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total hexachlorodibenzofuran (HxCDF)	9483	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total pentachlorodibenzo-p-dioxin (PeCDD)	9555	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total pentachlorodibenzofuran (PeCDF)	9552	NELAP	PA	06/30/2010
EPA 8315	A	10188008	Carbonyl compounds by HPLC	6658	NELAP	PA	03/26/2012
EPA 8315	A	10188008	Acetaldehyde	4300	NELAP	PA	01/21/2009
EPA 8315	A	10188008	Formaldehyde	4815	NELAP	PA	01/19/2005
EPA 8318	A	10188600	3-Hydroxycarbofuran	7710	NELAP	PA	04/04/2005
EPA 8318	A	10188600	Aldicarb (Temik)	7010	NELAP	PA	04/04/2005
EPA 8318	A	10188600	Aldicarb sulfone	7015	NELAP	PA	04/04/2005
EPA 8318	A	10188600	Aldicarb sulfoxide	7020	NELAP	PA	12/12/2005
EPA 8318	A	10188600	Carbaryl (Sevin)	7195	NELAP	PA	04/04/2005
EPA 8318	A	10188600	Carbofuran (Furaden)	7205	NELAP	PA	04/04/2005
EPA 8318	A	10188600	Methiocarb (Mesurol)	7800	NELAP	PA	04/04/2005
EPA 8318	A	10188600	Methomyl (Lannate)	7805	NELAP	PA	04/04/2005
EPA 8318	A	10188600	N-Methylcarbamates by HPLC	7930	NELAP	PA	10/15/2012
EPA 8318	A	10188600	Oxamyl (Vydate)	7940	NELAP	PA	12/12/2005
EPA 8318	A	10188600	Propoxur (Baygon)	8080	NELAP	PA	04/04/2005
EPA 8318		10307605	3-Hydroxycarbofuran	7710	NELAP	PA	04/05/2005
EPA 8318		10307605	Aldicarb (Temik)	7010	NELAP	PA	04/05/2005
EPA 8318		10307605	Aldicarb sulfone	7015	NELAP	PA	04/05/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8318		10307605	Aldicarb sulfoxide	7020	NELAP	PA	12/13/2005
EPA 8318		10307605	Carbaryl (Sevin)	7195	NELAP	PA	04/05/2005
EPA 8318		10307605	Carbofuran (Furaden)	7205	NELAP	PA	04/05/2005
EPA 8318		10307605	Methiocarb (Mesurol)	7800	NELAP	PA	04/05/2005
EPA 8318		10307605	Methomyl (Lannate)	7805	NELAP	PA	04/05/2005
EPA 8318		10307605	N-Methylcarbamates by HPLC	7930	NELAP	PA	04/05/2005
EPA 8318		10307605	Oxamyl (Vydate)	7940	NELAP	PA	12/13/2005
EPA 8318		10307605	Propoxur (Baygon)	8080	NELAP	PA	04/05/2005
EPA 8330	B	10308006	Nitroaromatics and nitramines by HPLC/UV	9355	NELAP	PA	07/29/2015
EPA 8330	B	10308006	1,3,5-Trinitrobenzene (1,3,5-TNB)	6885	NELAP	PA	01/19/2005
EPA 8330	B	10308006	1,3-Dinitrobenzene (1,3-DNB)	6160	NELAP	PA	01/19/2005
EPA 8330	B	10308006	2,4,6-Trinitrotoluene (2,4,6-TNT)	9651	NELAP	PA	01/19/2005
EPA 8330	B	10308006	2,4-Diamino-6-nitrotoluene	5882	NELAP	PA	07/29/2015
EPA 8330	B	10308006	2,4-Dinitrotoluene (2,4-DNT)	6185	NELAP	PA	01/19/2005
EPA 8330	B	10308006	2,6-Diamino-4-nitrotoluene	6181	NELAP	PA	07/29/2015
EPA 8330	B	10308006	2,6-Dinitrotoluene (2,6-DNT)	6190	NELAP	PA	01/19/2005
EPA 8330	B	10308006	2-Amino-4,6-dinitrotoluene (2-Am-DNT)	9303	NELAP	PA	01/19/2005
EPA 8330	B	10308006	2-Nitrotoluene	9507	NELAP	PA	01/19/2005
EPA 8330	B	10308006	3,5-Dinitroaniline	6150	NELAP	PA	07/29/2015
EPA 8330	B	10308006	3-Nitrotoluene	9510	NELAP	PA	01/19/2005
EPA 8330	B	10308006	4-Amino-2,6-dinitrotoluene (4-Am-DNT)	9306	NELAP	PA	01/19/2005
EPA 8330	B	10308006	4-Nitrotoluene	9513	NELAP	PA	01/19/2005

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Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8330	B	10308006	Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	6415	NELAP	PA	01/19/2005
EPA 8330	B	10308006	Nitrobenzene	5015	NELAP	PA	01/19/2005
EPA 8330	B	10308006	Nitroglycerin	6485	NELAP	PA	10/09/2013
EPA 8330	B	10308006	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	9522	NELAP	PA	01/24/2006
EPA 8330	B	10308006	Pentaerythritol tetranitrate (PETN)	9558	NELAP	PA	11/21/2005
EPA 8330	B	10308006	RDX (Hexahydro-1,3,5-trinitro-1,3,5-triazine)	9432	NELAP	PA	01/19/2005
EPA 9012	A	10193405	Total cyanide	1645	NELAP	PA	05/24/2011
EPA 9012	B	10243206	Total cyanide	1645	NELAP	PA	05/24/2011
EPA 9034		10196006	Reactive sulfide	1925	NELAP	PA	01/11/2022
EPA 9045	C	10198400	Corrosivity (pH)	1625	NELAP	PA	11/19/2008
EPA 9045	D	10198455	Corrosivity (pH)	1625	NELAP	PA	11/19/2008
EPA 9050	A	10198808	Conductivity	1610	NELAP	PA	01/27/2014
EPA 9056	A	10199607	Anions by IC	1522	NELAP	PA	07/05/2018
EPA 9056	A	10199607	Chloride	1575	NELAP	PA	11/27/2019
EPA 9056	A	10199607	Fluoride	1730	NELAP	PA	07/05/2018
EPA 9056	A	10199607	Nitrate as N	1810	NELAP	PA	11/27/2019
EPA 9056	A	10199607	Nitrite as N	1840	NELAP	PA	07/05/2018
EPA 9056	A	10199607	Sulfate	2000	NELAP	PA	07/05/2018
EPA 9071	B	10201806	Oil and grease	1803	NELAP	PA	01/19/2005
EPA 9071	B	10201806	Total petroleum hydrocarbons (TPH)	2050	NELAP	PA	11/19/2015
EPA 9095	A	10204203	Paint filter liquids test	1434	NELAP	PA	01/24/2007
EPA 9095	B	10245600	Paint filter liquids test	1434	NELAP	PA	11/19/2015

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA Lloyd Kahn Method		60041001	Total organic carbon (TOC)	2040	NELAP	PA	10/09/2013
MA DEP EPH	1.1	90017202	C11-C22 Aromatics	6232	NELAP	PA	07/15/2013
MA DEP EPH	1.1	90017202	C19-C36 Aliphatics	6218	NELAP	PA	07/15/2013
MA DEP EPH	1.1	90017202	C9-C18 Aliphatics	6222	NELAP	PA	07/15/2013
MA DEP VPH	1.1	90017406	C5-C8 Aliphatics	6237	NELAP	PA	07/15/2013
MA DEP VPH	1.1	90017406	C9-C10 Aromatics	6238	NELAP	PA	07/15/2013
MA DEP VPH	1.1	90017406	C9-C12 Aliphatics	9670	NELAP	PA	07/15/2013
MA DEP VPH	2.1	90017451	C5-C8 Aliphatics	6237	NELAP	PA	07/16/2018
MA DEP VPH	2.1	90017451	C9-C10 Aromatics	6238	NELAP	PA	07/16/2018
MA DEP VPH	2.1	90017451	C9-C12 Aliphatics	9670	NELAP	PA	07/16/2018
NWTPH-Dx		90018409	Diesel-range organics (DRO)	9369	NELAP	PA	12/12/2005
NWTPH-Gx		90018603	Gasoline-range organics (GRO)	9408	NELAP	PA	12/12/2005
SM 2540E - 1997	20th ed.	20051654	Fixed suspended solids	1948	NELAP	PA	01/19/2016
SM 2540E - 1997	20th ed.	20051654	Residue, volatile	1970	NELAP	PA	01/19/2016
SM 2540E - 1997	20th ed.	20051654	Volatile dissolved solids	2056	NELAP	PA	01/19/2016
SM 2540E - 1997	20th ed.	20051654	Volatile suspended solids	2070	NELAP	PA	01/19/2016
SM 2540E - 2011	22nd ed.	20051665	Fixed suspended solids	1948	NELAP	PA	01/19/2016
SM 2540E - 2011	22nd ed.	20051665	Residue, volatile	1970	NELAP	PA	01/19/2016
SM 2540E - 2011	22nd ed.	20051665	Volatile dissolved solids	2056	NELAP	PA	01/19/2016
SM 2540E - 2011	22nd ed.	20051665	Volatile suspended solids	2070	NELAP	PA	01/19/2016
SM 2540G - 1991	19th ed.	20005236	Percent moisture in soil	8641	NELAP	PA	11/19/2015
SM 2540G - 1991	19th ed.	20005236	Residue, total	1950	NELAP	PA	02/25/2014

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SM 2540G - 1991	19th ed.	20005236	Residue, volatile	1970	NELAP	PA	11/19/2015
SM 2540G - 1991	19th ed.	20005236	Total, fixed, and volatile residue	1725	NELAP	PA	03/19/2015
SM 2540G - 1997	Online ed.	20005269	Percent moisture in soil	8641	NELAP	PA	11/19/2015
SM 2540G - 1997	Online ed.	20005269	Residue, total	1950	NELAP	PA	02/25/2014
SM 2540G - 1997	Online ed.	20005269	Residue, volatile	1970	NELAP	PA	11/19/2015
SM 2540G - 1997	Online ed.	20005269	Total, fixed, and volatile residue	1725	NELAP	PA	03/19/2015
SM 2540G - 2011	Online ed.	20005270	Percent moisture in soil	8641	NELAP	PA	11/19/2015
SM 2540G - 2011	Online ed.	20005270	Residue, total	1950	NELAP	PA	02/25/2014
SM 2540G - 2011	Online ed.	20005270	Residue, volatile	1970	NELAP	PA	11/19/2015
SM 2540G - 2011	Online ed.	20005270	Total, fixed, and volatile residue	1725	NELAP	PA	03/19/2015
SM 2540G - 2015	Online ed.	20005281	Percent moisture in soil	8641	NELAP	PA	11/19/2015
SM 2540G - 2015	Online ed.	20005281	Residue, total	1950	NELAP	PA	02/25/2014
SM 2540G - 2015	Online ed.	20005281	Residue, volatile	1970	NELAP	PA	11/19/2015
SM 2540G - 2015	Online ed.	20005281	Total, fixed, and volatile residue	1725	NELAP	PA	03/19/2015
SM 4500-NH3 B - 2011	Online ed.	20106018	Ammonia distillation	1404	NELAP	PA	08/30/2019
SM 4500-NH3 C - 2011	Online ed.	20108412	Ammonia as N	1515	NELAP	PA	08/30/2019
SOP (00037) T-PFAS-WI12031	10	60002890	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	6948	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	1H, 1H, 2H, 2H-Perfluorododecane sulfonic acid (10:2-FTS)	9616	NELAP	PA	11/03/2020

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DEP Laboratory ID: 36-00037
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PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (00037) T-PFAS-WI12031	10	60002890	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	6946	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	6947	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	N-Ethylperfluorooctanesulfonamide (EtFOSA)	9395	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	N-Methylperfluorooctanesulfonamide (MeFOSA)	9433	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	N-ethylperfluoro-1-octanesulfonamido ethanol (N-EtFOSE)	9431	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	N-methylperfluoro-1-octanesulfonamido ethanol (N-MeFOSE)	6949	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorobutanoic acid (PFBA)	6915	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorodecane sulfonic acid (PFDS)	6920	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	11/03/2020

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DEP Laboratory ID: 36-00037
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TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorododecane sulfonic acid (PFDoS)	6923	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluoroheptanesulfonic acid (PFHpS)	9470	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorohexadecanoic acid (PFHxDA)	6901	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorononane sulfonic acid (PFNS)	6929	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorononanoic acid (PFNA)	6906	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorooctadecanoic acid (PFODA)	6916	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorooctane sulfonamide (PFOSA)	6917	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	11/03/2020

Annmarie Beach

The Pennsylvania Department of Environmental Protection Laboratory Accreditation Program is a NELAP recognized Accreditation Body. Customers are urged to verify the laboratory's current accreditation standing.

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 024-001 expiration date 01/31/2025. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluoropentane sulfonic acid (PFPeS)	6934	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluoropentanoic acid (PFPeA)	6914	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	11/03/2020
TX1005 (TNRCC)	3	90019208	Total petroleum hydrocarbons (TPH)	2050	NELAP	PA	12/12/2005
TX1006 (TNRCC)		90019220	Total petroleum hydrocarbons (TPH)	2050	NELAP	PA	12/12/2005

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Eurofins Lancaster

Analyte	CAS Number	RL	MDL	LOD	Units
PES	113507-82-7	4.00	0.500	1.80	ng/L
Perfluoro(2-propoxypropanoic) acid	13252-13-6	8.00	2.00	4.00	ng/L
PFECA B	151772-58-6	4.00	1.00	2.00	ng/L
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	1691-99-2	20.0	5.00	10.0	ng/L
Perfluorooctanesulfonic acid	1763-23-1	2.00	0.500	1.00	ng/L
Perfluoroundecanoic acid	2058-94-8	2.00	0.500	1.00	ng/L
N-methylperfluorooctanesulfonamidoacetic acid	2355-31-9	4.00	1.20	2.40	ng/L
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	24448-09-7	20.0	5.00	10.0	ng/L
Perfluoropentanoic acid	2706-90-3	4.00	1.00	2.00	ng/L
Perfluoropentanesulfonic acid	2706-91-4	2.00	0.500	1.00	ng/L
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	27619-97-2	8.00	2.50	7.60	ng/L
N-ethylperfluorooctanesulfonamidoacetic acid	2991-50-6	2.00	0.700	1.40	ng/L
Perfluorohexanoic acid	307-24-4	2.00	0.500	1.00	ng/L
Perfluorododecanoic acid	307-55-1	2.00	0.500	1.00	ng/L
NMeFOSA	31506-32-8	2.00	0.500	1.00	ng/L
Perfluorooctanoic acid	335-67-1	2.00	0.640	1.30	ng/L
Perfluorodecanoic acid	335-76-2	2.00	0.500	1.00	ng/L
Perfluorodecanesulfonic acid	335-77-3	2.00	0.500	1.00	ng/L
Perfluorohexanesulfonic acid	355-46-4	2.00	0.570	1.10	ng/L
3:3 FTCA	356-02-5	10.0	1.50	5.00	ng/L
Perfluorobutanoic acid	375-22-4	8.00	2.00	4.00	ng/L
Perfluorobutanesulfonic acid	375-73-5	2.00	0.300	1.00	ng/L
Perfluoroheptanoic acid	375-85-9	2.00	0.520	1.00	ng/L
Perfluoroheptanesulfonic acid	375-92-8	2.00	0.400	1.00	ng/L
Perfluorononanoic acid	375-95-1	2.00	0.500	1.00	ng/L
Perfluorotetradecanoic acid	376-06-7	2.00	0.500	1.00	ng/L
PFECA F	377-73-1	4.00	0.500	2.00	ng/L
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	39108-34-4	8.00	2.60	7.70	ng/L
N-ethylperfluoro-1-octanesulfonamide	4151-50-2	2.00	0.500	1.00	ng/L
Perfluorononanesulfonic acid	68259-12-1	2.00	0.400	1.00	ng/L
Perfluorotridecanoic acid	72629-94-8	2.00	0.500	1.00	ng/L
Perfluorooctanesulfonamide	754-91-6	2.00	0.500	1.00	ng/L
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	756426-58-1	8.00	1.00	3.80	ng/L
1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)	757124-72-4	8.00	1.70	3.80	ng/L
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	763051-92-9	8.00	2.00	7.60	ng/L
Perfluorododecanesulfonic acid (PFDoS)	79780-39-5	2.00	0.900	1.90	ng/L
7:3 FTCA	812-70-4	50.0	10.0	25.0	ng/L
PFECA A	863090-89-5	4.00	1.00	2.00	ng/L
5:3 FTCA	914637-49-3	50.0	10.0	25.0	ng/L
DONA	919005-14-4	8.00	1.50	3.80	ng/L

Eurofins Lancaster

Analyte	CAS Number	RL	MDL	LOD	Units
PES	113507-82-7	0.400	0.100	0.200	ng/g
Perfluoro(2-propoxypropanoic) acid	13252-13-6	0.800	0.100	0.400	ng/g
PFECA B	151772-58-6	0.400	0.104	0.200	ng/g
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	1691-99-2	2.00	0.500	1.00	ng/g
Perfluorooctanesulfonic acid	1763-23-1	0.200	0.0510	0.100	ng/g
Perfluoroundecanoic acid	2058-94-8	0.200	0.0500	0.100	ng/g
N-methylperfluorooctanesulfonamidoacetic acid	2355-31-9	0.200	0.0500	0.100	ng/g
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	24448-09-7	2.00	0.500	1.00	ng/g
Perfluoropentanoic acid	2706-90-3	0.400	0.100	0.200	ng/g
Perfluoropentanesulfonic acid	2706-91-4	0.200	0.0500	0.100	ng/g
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	27619-97-2	1.00	0.350	0.800	ng/g
N-ethylperfluorooctanesulfonamidoacetic acid	2991-50-6	0.200	0.0500	0.100	ng/g
Perfluorohexanoic acid	307-24-4	0.200	0.0590	0.120	ng/g
Perfluorododecanoic acid	307-55-1	0.200	0.0500	0.100	ng/g
NMeFOSA	31506-32-8	0.200	0.0500	0.100	ng/g
Perfluorooctanoic acid	335-67-1	0.200	0.0510	0.100	ng/g
Perfluorodecanoic acid	335-76-2	0.200	0.0500	0.100	ng/g
Perfluorodecanesulfonic acid	335-77-3	0.200	0.0500	0.100	ng/g
Perfluorohexanesulfonic acid	355-46-4	0.200	0.0500	0.100	ng/g
3:3 FTCA	356-02-5	1.00	0.250	0.500	ng/g
Perfluorobutanoic acid	375-22-4	0.800	0.100	0.400	ng/g
Perfluorobutanesulfonic acid	375-73-5	0.200	0.0500	0.100	ng/g
Perfluoroheptanoic acid	375-85-9	0.200	0.0500	0.100	ng/g
Perfluoroheptanesulfonic acid	375-92-8	0.200	0.0500	0.100	ng/g
Perfluorononanoic acid	375-95-1	0.200	0.0500	0.100	ng/g
Perfluorotetradecanoic acid	376-06-7	0.200	0.0500	0.100	ng/g
PFECA F	377-73-1	0.400	0.100	0.200	ng/g
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	39108-34-4	1.00	0.350	0.800	ng/g
N-ethylperfluoro-1-octanesulfonamide	4151-50-2	0.200	0.0500	0.100	ng/g
Perfluorononanesulfonic acid	68259-12-1	0.200	0.0500	0.100	ng/g
Perfluorotridecanoic acid	72629-94-8	0.200	0.0500	0.100	ng/g
Perfluorooctanesulfonamide	754-91-6	0.200	0.0500	0.100	ng/g
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	756426-58-1	0.800	0.200	0.400	ng/g
1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)	757124-72-4	0.800	0.200	0.400	ng/g
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	763051-92-9	0.800	0.200	0.400	ng/g
Perfluorododecanesulfonic acid (PFDoS)	79780-39-5	0.200	0.0500	0.100	ng/g
7:3 FTCA	812-70-4	5.00	1.00	2.50	ng/g
PFECA A	863090-89-5	0.400	0.100	0.200	ng/g
5:3 FTCA	914637-49-3	5.00	1.00	2.50	ng/g
DONA	919005-14-4	0.800	0.200	0.400	ng/g

APPENDIX F
FINAL SAP AND PREVIOUS FTMRs

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BRAC Program Management Office East
Philadelphia, Pennsylvania

Final
Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan) for PFAS Surface Water and Sediment Sampling

Basewide

Former Naval Air Station Joint Reserve Base Willow Grove
Horsham, Pennsylvania

March 2020

Approved for public release: distribution unlimited

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SAP Worksheet #1 -- Title and Approval Page

(UFP-QAPP Manual Section 2.1)

Document Title: Sampling and Analysis Plan, (Field Sampling Plan and Quality Assurance Project Plan), PFAS Surface Water and Sediment Sampling

Lead Organization: Naval Facilities Engineering Command (NAVFAC) Atlantic (BRAC PMO East)

Preparer's Name and Organizational Affiliation: Tetra Tech

Preparer's Address and Telephone Number:
Twin Oaks I, Suite 102
5700 Lake Wright Drive
Norfolk, Virginia 23502-1860
(757) 461-3768

Preparation Date (Day/Month/Year): 11 March 2020

Investigative Organization's Project Manager:
Tricia E Moore 03/11/20
Signature/Date
Tricia Moore /Project Manager/ Tetra Tech

Investigative Organization's Project QA Manager:
T.E. Johnston 03/16/2020
Signature/Date
Tom Johnston, PhD/QAM/ Tetra Tech

Lead Organization's Project Manager:

Signature/Date
Brian J Helland /Technical Representative/ NAVFAC

Lead Organization QA Officer:
Signed during internal draft
Signature/Date
NAVFAC Chemist/ NAVFAC Atlantic

Executive Summary

This Sampling and Analysis Plan (SAP) encompasses Field Sampling Plan and Quality Assurance Project Plan (QAPP) requirements for surface water and sediment sampling at the Former Naval Air Station Joint Reserve Base Willow Grove, Pennsylvania.

This SAP has been prepared by Tetra Tech on behalf of the United States Department of the Navy, Naval Facilities Engineering Command, Comprehensive Long-term Environmental Action Navy Contract Number N6247016D9008, Contract Task Order WE04. This SAP was generated for, and complies with, applicable United States Environmental Protection Agency (EPA) and Pennsylvania Department of Environmental Protection requirements, regulations, guidance, and technical standards. This SAP is presented in the format of 37 standard worksheets specified in the EPA Uniform Federal Policy (UFP) for QAPPs guidance documents.

The scope of work governed by this SAP is the collection of surface water and sediment for analysis of per- and polyfluoroalkyl substances to determine whether contaminated groundwater is impacting these media. Tetra Tech was tasked to prepare and implement a UFP-SAP for quarterly sampling of surface water and annual sampling of sediment at previously sampled locations in Park, Little Neshaminy, and Pennypack Creeks; and at various reference stations in the Neshaminy and Pennypack Creek watersheds.

Field activities conducted under this SAP shall meet the requirements of the accompanying Site-Specific Accident Prevention Plan/Site Safety and Health Plan. The field procedures utilized will comply with Tetra Tech standard operating procedures. The field work and sampling activities covered by this SAP are scheduled to begin in July 2020. A complete schedule is detailed in Worksheet #16.

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APPENDICES

A CONCEPTUAL SITE MODEL WIRE DIAGRAM FROM PHASE I REMEDIAL INVESTIGATION
B SITE-SPECIFIC PROJECT SCREENING LEVELS
C TETRA TECH STANDARD OPERATING PROCEDURES
D LABORATORY ACCREDITATION DOCUMENTATION AND IN-HOUSE QC LIMITS

LIST OF FIGURES

NUMBER

1 Site Location Map
2 Potential Source Areas
3 Proposed Surface Water and Sediment Sample Locations
4 Proposed Reference Surface Water and Sediment Sample Locations

Acronyms and Abbreviations

°C	Degrees Celsius
%D	Percent Difference or Percent Drift
%R	Percent Recovery
AFFF	Aqueous Film Forming Foam
amu	atomic mass unit
ANG	Air National Guard
bgs	Below Ground Surface
BRAC	Base Realignment and Closure
CA	Corrective Action
CAS	Chemical Abstracts Service
CCC	Continuing Calibration Check
CCV	Continuing Calibration Verification
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CIH	Certified Industrial Hygienist
CLEAN	Comprehensive Long-Term Environmental Action Navy
CLP	Contract Laboratory Program
COD	Coefficient of Determination
CSF	cancer slope factor
CSM	Conceptual Site Model
CSP	Certified Safety Professional
CTO	Contract Task Order
DL	Detection Limit
DO	dissolved oxygen
DoD	Department of Defense
DON	Department of the Navy
DOT	Department of Transportation
DPT	Direct-Push Technology
DQI	Data Quality Indicator
DQO	Data Quality Objective
DVM	Data Validation Manager
EDD	Electronic Data Deliverable
ELAP	Environmental Laboratory Accreditation Program
EPA	Environmental Protection Agency
EtFOSAA	N-ethyl perfluorooctanesulfonamidoacetic acid
FB	Field Blank
FEQG	federal environmental quality guideline
FFTU	Firefighter Training Unit
FOL	Field Operations Leader
FRC	Federal Records Center
FS	Feasibility Study
FSP	Field Sampling Plan
FTMR	Field Task Modification Request
GIS	Geological Information System
GPS	Global Positioning System
HA	Health Advisory
HASP	Health and Safety Plan

Acronyms and Abbreviations (continued)

HAZWOPER	Hazardous Waste Operations and Emergency Response Standard
HDPE	High Density Polyethylene
HSM	Health and Safety Manager
HWSA	Horsham Water and Sewer Authority
IAS	Initial Assessment Study
ICAL	Initial Calibration
ICV	Initial Calibration Verification
IDC	Initial Demonstration of Capability
IDW	investigation-derived waste
IS	Internal Standard
ITRC	Interstate Technology Regulatory Council
LC/MS/MS	Liquid Chromatograph/Tandem Mass Spectroscopy
LCS	Laboratory Control Standard
LFB	Laboratory Fortified Blank
LFSM	Laboratory Fortified Sample Matrix
LFSMD	Laboratory Fortified Sample Matrix Duplicate
LHAL	Lifetime Health Advisory Level
LOD	Limit of Detection
LOQ	Limit of Quantitation
LRB	Laboratory Reagent Blank
MeFOSAA	N-methylperfluorooctanesulfonamidoacetic acid
mL	Milliliter
MPC	Measurement Performance Criteria
MRL	Minimum Reporting Level
MS/MSD	Matrix Spike/Matrix Spike Duplicate
MSL	Mean Sea Level
NA	Not Applicable
NAD83	North American Datum 1983
NADC	Naval Air Development Center
NAS	Naval Air Station
NAVFAC	Naval Facilities Engineering Command
NC	No Criterion
NEDD	NIRIS Electronic Data Deliverable
NEESA	Naval Energy and Environmental Support Activity
NERP	Navy Environmental Restoration Program
NFA	No Further Action
ng/g	Nanograms per Gram
ng/L	Nanograms per Liter
NIRIS	Naval Installation Restoration Information Solution
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NSP	Naval Station Philadelphia
NTR	Navy Technical Representative
NTU	nephelometric turbidity unit
ORP	oxidation-reduction potential
OSHA	Occupational Safety and Health Administration
PADEP	Pennsylvania Department of Environmental Protection
PAL	Project Action Limit
PDF	Portable Document Format
PFAA	Perfluorinated Alkyl Acids

Acronyms and Abbreviations (continued)

PFAS	Per- and Polyfluoroalkyl Substances
PFBS	Perfluorobutanesulfonic acid
PFDa	Perfluorodecanoic acid
PFDoA	Perfluorododecanoic acid
PFHpA	Perfluoroheptanoic acid
PFHxA	Perfluorohexanoic acid
PFHxS	Perfluorohexanesulfonic acid
PFNA	Perfluorononanoic acid
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctanesulfonic acid
PFPeA	Perfluoro-n-pentanoic acid
PFTeDA	Perfluorotetradecanoic acid
PFTrDA	Perfluorotridecanoic acid
PFUnA	Perfluoroundecanoic acid
PID	photoionization detector
PIDC	Philadelphia Industrial Development Corporation
PM	Project Manager
PMO	Program Management Office
POC	Point of Contact
PPE	personal protective equipment
ppt	Parts per trillion
PQLG	Project Quantitation Limit Goal
PSL	Project Screening Level
PVC	polyvinyl chloride
QA	Quality Assurance
QAM	Quality Assurance Manager
QAO	Quality Assurance Officer
QAPP	Quality Assurance Project Plan
QC	Quality Control
QCS	Quality Control Sample
RCRA	Resource Conservation and Recovery Act
RfD	reference dose
RI	Remedial Investigation
RPD	Relative Percent Difference
RPM	Remedial Project Manager
RSD	Relative Standard Deviation
RSL	regional screening level
SAP	Sampling and Analysis Plan
SDG	Sample Delivery Group
SOP	Standard Operating Procedure
SOW	Statement of Work
SPE	Solid Phase Extraction
SQL	Structured Query Language
SSHO	Site Safety and Health Officer
SUR	Surrogate Standards
TBD	To Be Determined
TOC	total organic carbon
UFP-QAPP	Uniform Federal Policy - Quality Assurance Project Plan
UNT	unnamed tributary
UPLC	Ultra Performance Liquid Chromatograph
U.S.	United States
USGS	United States Geological Survey

SAP Worksheet #2 -- Sampling and Analysis Plan Identifying Information

(UFP-QAPP Manual Section 2.2.4)

Site Name/Number: Basewide Surface Water and Sediment Sampling

Operable Unit: NA

Contractor Name: Tetra Tech

Contract Number: N6247016D9008

Contract Title: Comprehensive Long-term Environmental Action Navy (CLEAN)

Work Assignment (WA) Number: Contract Task Order (CTO) WE04

1. This Sampling and Analysis Plan (SAP) was prepared in accordance with the requirements of the *Uniform Federal Policy for Quality Assurance Project Plans (UFP-QAPP)* (EPA, 2005) and *EPA Guidance for Quality Assurance Project Plans, EPA QA/G-5, QAMS* (EPA, 2002).

2. Identify regulatory program:

- Naval Facilities Engineering Command (NAVFAC) Atlantic (Base Realignment and Closure [BRAC] Program Management Office [PMO] East) CLEAN.
- Department of the Navy Environmental Restoration Program Manual 2018" (DON, 2018); "Memorandum: Interim Per- and Polyfluoroalkyl substances (PFAS) Site Guidance for NAVFAC Remedial Project Managers (RPMs)/September 2017 Update (DoD, 2017)."

3. This SAP is a project-specific SAP.

4. List organizational partners (stakeholders) and connection with lead organization:

Organization Partners/Stakeholders	Connection
Naval Facilities Engineering Command (NAVFAC) Mid-Atlantic	Lead Organization
United States Environmental Protection Agency (EPA)	Federal Regulator – provides technical input
Pennsylvania Department of Environmental Protection (PADEP)	State Regulator – provides technical input
Tetra Tech	Contractor – supports lead organization

5. Lead organization

NAVFAC Atlantic (BRAC PMO East)

6. If any required SAP elements or required information are not applicable to the project or are provided elsewhere, then note the omitted SAP elements and provide an explanation for their exclusion below:

NA, as there are no exclusions.

UFP-SAP Worksheet #	Required Information	Crosswalk to Related Information
A. Project Management		
Documentation		
1	Title and Approval Page	NA, Worksheet Included
2	SAP Identifying Information	NA, Worksheet Included
3	Distribution List	NA, Worksheet Included
4	Project Personnel Sign-Off Sheet	NA, Worksheet Included
Project Organization		
5	Project Organizational Chart	NA, Worksheet Included
6	Communication Pathways	NA, Worksheet Included
7	Personnel Responsibilities Table	NA, Worksheet Included
8	Special Personnel Training Requirements Table	Training requirements are detailed in the project specific Health and Safety Plan (HASP)
Project Planning/ Problem Definition		
9	Project Scoping Session Participants Sheet	NA, Worksheet Included
10	Conceptual Site Model	NA, Worksheet Included
11	Project Quality Objectives/Systematic Planning Process Statements	NA, Worksheet Included
12	Field Quality Control Samples	NA, Worksheet Included
13	Secondary Data Criteria and Limitations Table	NA, Worksheet Included
14	Summary of Project Tasks	NA, Worksheet Included
15	Reference Limits and Evaluation Table	NA, Worksheet Included
16	Project Schedule/Timeline Table	NA, Worksheet Included
B. Measurement Data Acquisition		
Sampling Tasks		
17	Sampling Design and Rationale	NA, Worksheet Included
18	Location-Specific Sampling Methods/ Standard Operating Procedure (SOP) Requirements Table	NA, Worksheet Included
19	Field Sampling Requirements Table	NA, Worksheet Included
20	Field Quality Control Sample Summary Table	NA, Worksheet Included
21	Project Sampling SOP References Table	NA, Worksheet Included
22	Field Equipment Calibration, Maintenance, Testing, and Inspection Table	NA, Worksheet Included
Analytical Tasks		
23	Analytical SOP References Table	NA, Laboratory to provide SOPs separately
24	Analytical Instrument Calibration Table	NA, Worksheet Included
25	Analytical Instrument and Equipment Maintenance, Testing, and Inspection Table	NA, Worksheet Included
Sample Collection		
26	Sample Handling System	NA, Worksheet Included
27	Sample Custody Requirements	NA, Worksheet Included
Quality Control Samples		
28	Laboratory QC Samples Table	NA, Worksheet Included
Data Management Tasks		
29	Project Documents and Records Table	NA, Worksheet Included
30	Analytical Services Table	NA, Worksheet Included

UFP-SAP Worksheet #	Required Information	Crosswalk to Related Information
C. Assessment Oversight		
31	Planned Project Assessments Table	NA, Worksheet Included
32	Assessment Findings and Corrective Action Responses Table	NA, Worksheet Included
33	QA Management Reports Table	NA, Worksheet Included
D. Data Review		
34-36	Data Verification and Validation (Steps I and IIa/IIb) Process Table	NA, Worksheet Included
37	Usability Assessment	NA, Worksheet Included

SAP Worksheet #3 -- Distribution List

(UFP-QAPP Manual Section 2.3.1)

Name of SAP Recipients	Title/Role	Organization	Telephone Number	E-mail Address or Mailing Address
Brian J. Helland, PE	Navy Technical Representative (NTR)/Daily project management for Naval Station Philadelphia (NSP)	NAVFAC	215-897-4912	brian.helland@navy.mil
Willie Lin	BRAC Environmental Coordinator	BRAC PMO East	215-897-4904	Willie.lin@navy.mil
Jason Speicher	Biologist	NAVFAC Atlantic	215-897-4914	Jason.a.speicher@navy.mil
Sarah Kloss	Remedial Project Manager (RPM) / Provides Regulator Input	EPA Region 3	215-814-3379	Kloss.sarah@epa.gov
Mark Leipert	Hydrogeologist/Provides Regulator input	EPA Region 3	215-814-3341	Leipert.mark@epa.gov
Linda Watson	Toxicologist/Provides Regulator Input	EPA Region 3	215-814-3116	Watson.linda@wpa.gov
Kimberly Plank	Biological Technical Assistance Group/Provides regulator input	EPA Region 3	215-814-3205	Plank.kimberly@epa.gov
Colin Wade	Project Officer/ Provides Regulator Input and oversight	PADEP	484-250-5722	cowade@pa.gov
Jessica Kasmari	Hydrogeologist/Provides Regulator input	PADEP	484-250-5900	jkasmari@pa.gov
Ken Bowers	Quality Assurance Officer (QAO) / Chemist//project oversight	NAVFAC	757-322-8341	kenneth.a.bowers@navy.mil

Name of SAP Recipients	Title/Role	Organization	Telephone Number	E-mail Address or Mailing Address
Naval Installation Restoration Information Solution (final version only)	NIRIS/Database	NAVFAC	NA	NA
Tricia Moore	Project Manager (PM) / Manages Project Activities	Tetra Tech	610-382-1171	tricia.moore@tetratech.com
Seth Oshier	Field Operations Leader (FOL) / Site Safety and Health Officer (SSHO)	Tetra Tech	610-382-1526	seth.oshier@tetratech.com
Steve Ruffing, PE (copy of cover letter only)	Program Manager/Manages Navy Initiatives	Tetra Tech	757-466-4906	steve.ruffing@tetratech.com
John Trepanowski, PE (copy of cover letter only)	Deputy Program Manager/ Manages Program Activities	Tetra Tech	610-382-1532	john.trepanowski@tetratech.com
Tom Johnston, PhD (electronic copy)	Quality Assurance Manager (QAM)/ implementation and oversight of Tetra Tech CLEAN quality program	Tetra Tech	412-921-8615	tom.johnston@tetratech.com
Megan Ritchie (electronic copy)	Project Chemist/Interface with laboratory	Tetra Tech	610-382-1527	megan.ritchie@tetratech.com
Joe Samchuck (electronic copy)	Data Validation Manager (DVM)/ coordination and oversight of data validation process	Tetra Tech	412-921-8510	joseph.samchuck@tetratech.com
Lee Leck (electronic copy)	Data Manager/ Coordinates data management activities	Tetra Tech	412-921-8856	lee.leck@tetratech.com

Name of SAP Recipients	Title/Role	Organization	Telephone Number	E-mail Address or Mailing Address
Stan Liang, Certified Industrial Hygienist (CIH)/Certified Safety Professional (CSP) Health and Safety Plan [HASP] only) (electronic copy)	Health and Safety Manager (HSM) /Manages CLEAN Health and Safety Program	Tetra Tech	412-921-4037	stan.liang@tetratech.com
Theresa Thompson (electronic copy)	PFAS Point of Contact (POC), technical resource	Tetra Tech	832-251-6022	theresa.thompson@tetratech.com
Jonathan Thorn (electronic copy)	Project Manager/ Directs Laboratory Operations for this project	Battelle	781-681-5565	thorn@battelle.org
Heather Manz (electronic copy)	Project Manager/ Oversees project-specific laboratory operations	Katahdin Analytical Services, Inc.	207-874-2400	hmanz@katahdinlab.com

Managers for individual organizations shall ensure that support staff have access to the current SAP prior to conducting work.

SAP Worksheet #4 -- Project Personnel Sign-Off Sheet
(UFP-QAPP Manual Section 2.3.2)

Certification that project personnel have read the text will be obtained by one of the following methods as applicable:

1. In the case of regulatory agency personnel with oversight authority, approval letters or e-mails will constitute verification that applicable sections of the SAP have been reviewed. Copies of regulatory agency approval letters / e-mails will be retained in the project files as project records (see Worksheet #29). Note that PADEP and EPA will be provided copies of the SAP; however, regulatory approval signature is not anticipated.

2. E-mails will be sent to the listed Navy, Tetra Tech, and subcontractor project personnel who will be requested to verify by e-mail that they have read the applicable SAP / sections and the date on which they were reviewed. Copies of the verification e-mail will be included in the project files (see Worksheet #29).

A copy of the signed Worksheet #4 will be retained in the project files and is identified as a project record in Worksheet #29.

Key personnel will be instructed to read the SAP portions indicated in this worksheet prior to attending an internal site-specific kick-off meeting for field activities. The Tetra Tech PM will track when the reviews have been completed, obtain signatures, and ensure that the completed sign-off sheet is included in the central project file.

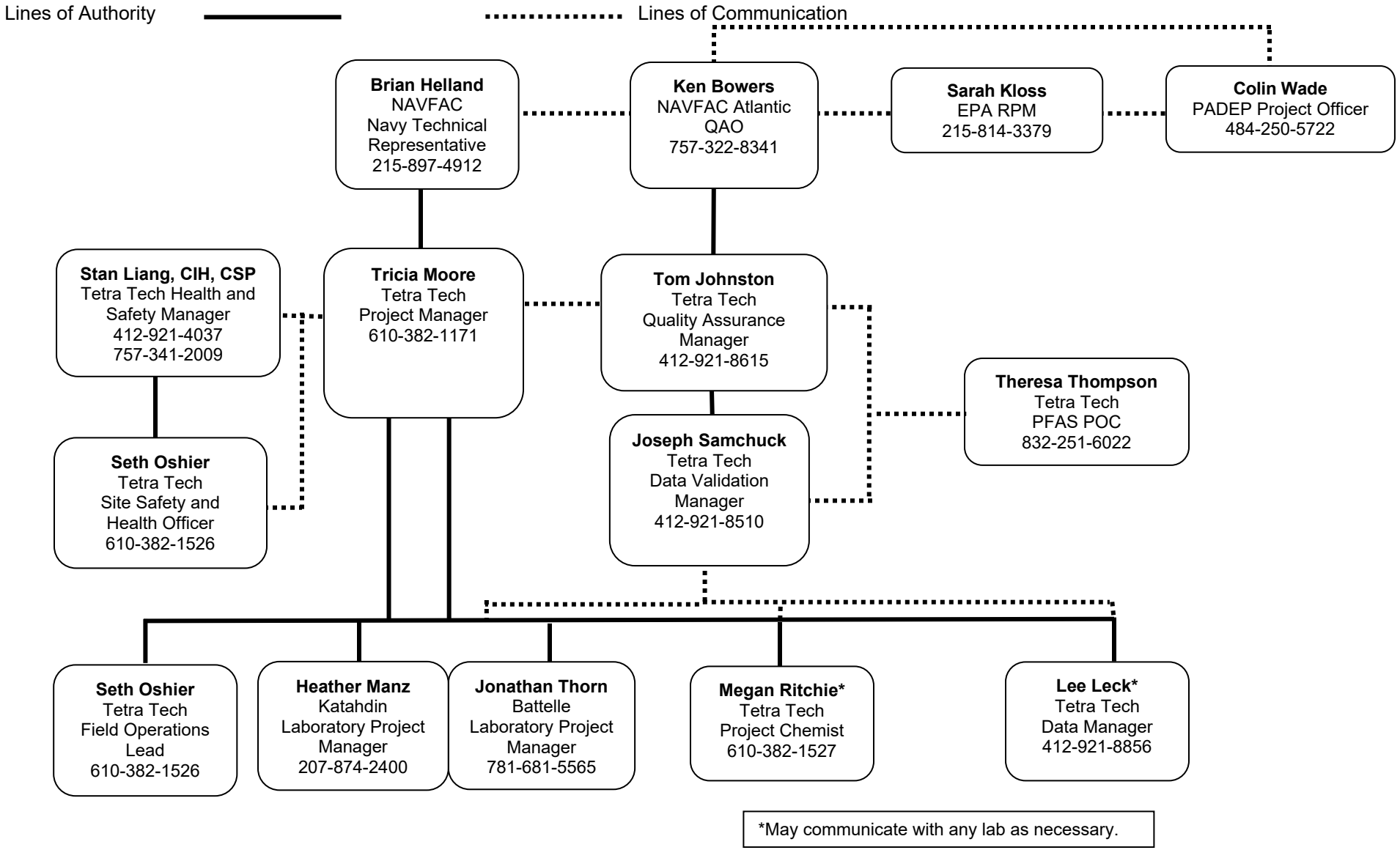
Name	Organization/Title/Role (1)	Telephone Number	Signature/email receipt	SAP Section Reviewed	Date SAP Read
Navy and Regulator Partnering Team Personnel					
Brian J. Helland, PE	NAVFAC/ NTR/ Manages Project for NAVFAC	215-897-4912	Signature on Worksheet #1	All	
Sarah Kloss	EPA RPM/ Provides technical input	215-814-3379	See item No. 1 above top of this table	All	
Colin Wade	PADEP Project Officer/ Provides technical input	484-250-5722	See item No. 1 above top of this table	All	
Ken Bowers	NAVFAC/ QAO/ Quality Assurance oversight	757-322-8341	Signature on Worksheet #1	All	

Name	Organization/Title/Role (1)	Telephone Number	Signature/email receipt	SAP Section Reviewed	Date SAP Read
Tetra Tech Project Team Personnel					
Tricia Moore	Tetra Tech / PM/ Manages Project Activities	610-382-1171	Signature on Worksheet #1	All	
Tom Johnston, PhD	Tetra Tech/ QAM/ Manages QA Program and its Implementation	412-921-8615	Signature on Worksheet #1	All	
Seth Oshier	Tetra Tech/ FOL/ SSHO/ Oversees Operational and Health and Safety Activities in the Field	610-382-1526		All	
Stan Liang	Tetra Tech/CLEAN HSM/ Manages CLEAN Health and Safety Program	412-921-4037	See HASP for signature	HASP	
Megan Ritchie	Tetra Tech/ Project Chemist/ Provides Coordination with Laboratory	610-382-1527		All	
Joseph Samchuck	Tetra Tech/ DVM/ Manages Data Validation	412-921-8510		Worksheets #s 12, 14, 15, 19, 20, 23-28, 30, and 34-37	
Lee Leck	Tetra Tech/ Data Manager/Coordinates Data Management Activities	412-921-8856		Worksheet #s 6, 12, 14, 15, 19, 23-28, 30, and 34-37	

Name	Organization/Title/Role (1)	Telephone Number	Signature/email receipt	SAP Section Reviewed	Date SAP Read
Subcontractor Personnel					
Jonathan Thorn (electronic copy)	Battelle Laboratory/ Project Manager/ Oversees project-specific laboratory operations	781-681-5565	See Item No. 2 above top of this table	Worksheets #s 5, 6, 14, 15, 19, 23-28, 30, 34-36	
Heather Manz (electronic copy)	Katahdin Laboratory/ Project Manager/ Oversees project-specific laboratory operations	207-874-2400	See Item No. 2 above top of this table	Worksheets #s 5, 6, 14, 15, 19, 23-28, 30, 34-36	

(1) See Worksheet #3 for descriptions of roles. Persons listed on this worksheet will be responsible for distributing the SAP to the appropriate people within their organization.

SAP Worksheet #5 -- Project Organizational Chart
(UFP-QAPP Manual Section 2.4.1)



SAP Worksheet #6 -- Communication Pathways
(UFP-QAPP Manual Section 2.4.2)

Communication Drivers	Responsible Entity	Name	Phone Number	Procedure (timing, pathways, etc.)
Draft SAP Review/Revisions	Tetra Tech PM NAVFAC QAO/Chemist	Tricia Moore Ken Bowers	610-382-1171 757-322-8341	Within two days of completing the draft SAP, the SAP will be submitted to NIRIS by the Tetra Tech PM. NAVFAC QAO/Chemist comments will be resolved to the satisfaction of the QAO/Chemist and the SAP will be uploaded to NIRIS for QAO/Chemist signature.
Regulatory Agency Review/Interface	NAVFAC NTR NAVFAC QAO/Chemist EPA RPM PADEP Project Officer	Brian Helland Ken Bowers Sarah Kloss Colin Wade	215-897-4912 757-322-8341 215-814-3379 484-250-5722	The draft SAP will be submitted to the regulatory agency when due according to the project schedule by the NAVFAC NTR or designee. NAVFAC NTR will interface directly, via phone or via email as needed.
Field Progress Reports	Tetra Tech FOL/SSHO	Seth Oshier	610-382-1526	The Tetra Tech FOL/SSHO will provide email or verbal reports to the Tetra Tech PM on a schedule arranged by the PM.
Recommendations to stop work and initiate work upon corrective action	Tetra Tech FOL/SSHO Tetra Tech PM Tetra Tech QAM Tetra Tech HSM NAVFAC NTR EPA RPM PADEP Project Officer	Seth Oshier Tricia Moore Tom Johnston Stan Liang Brian Helland Sarah Kloss Colin Wade	610-382-1526 610-382-1171 412-921-8615 412-921-4037 215-897-4912 215-814-3379 484-250-5722	If Tetra Tech is the responsible party for a stop work command, the Tetra Tech FOL will inform on-site personnel, subcontractor(s), the NAVFAC NTR, and the identified Project Team members within one hour (verbally or by e-mail) of recognizing the need to stop work. If a subcontractor is the responsible party, the subcontractor PM must inform the Tetra Tech FOL within 15 minutes of recognizing the need to stop work, and the Tetra Tech FOL will then follow the procedure listed above. EPA and PADEP will be notified of the stop work and corrective action by email within 1 business day.

Communication Drivers	Responsible Entity	Name	Phone Number	Procedure (timing, pathways, etc.)
SAP Changes Prior to Field/ Laboratory Work	NAVFAC NTR NAVFAC QAO/Chemist EPA RPM PADEP Project Officer Tetra Tech PM Tetra Tech FOL/SSHO Tetra Tech QAM	Brian Helland Ken Bowers Sarah Kloss Colin Wade Tricia Moore Seth Oshier Tom Johnston	215-897-4912 757-322-8341 215-814-3379 484-250-5722 610-382-1171 610-382-1526 412-921-8615	The Tetra Tech PM will document the required change via a Field Task Modification Request (FTMR) form within 5 days and send it to the NAVFAC NTR. If necessary, the PM will submit a concurrence letter within 7 days of identifying the need for change. SAP amendments will be submitted by the Tetra Tech PM to the NAVFAC NTR for review and approval. At the NTR's discretion, submit SAP changes to the NAVFAC QAO for approval (e.g., when significant DQO-related changes occur, or the laboratory is changed). The SAP will be revised or updated at a minimum of every 5 years or earlier if the project objectives change. The Tetra Tech PM will communicate scope changes to the Project Team (NAVFAC NTR, EPA RPM, PADEP project officer. Tetra Tech QAM, Tetra Tech FOL) via e-mail within 1 business day.
Changes in Schedule	NAVFAC NTR EPA RPM PADEP Project Officer Tetra Tech PM	Brian Helland Sarah Kloss Colin Wade Tricia Moore	215-897-4912 215-814-3379 484-250-5722 610-382-1171	The Tetra Tech PM will verbally inform the NAVFAC NTR on the day that a schedule change is known and will document via schedule impact letter within 1 business day of when the impact is realized.
SAP Changes in the Field	NAVFAC NTR EPA RPM PADEP Project Officer Tetra Tech PM Tetra Tech FOL/SSHO	Brian Helland Sarah Kloss Colin Wade Tricia Moore Seth Oshier	215-897-4912 215-814-3379 484-250-5722 610-382-1171 610-382-1526	The Tetra Tech FOL will verbally inform Tetra Tech PM on the day that the issue is discovered. The Tetra Tech PM will inform the NAVFAC NTR (verbally or via e-mail) within 1 business day. The Tetra Tech PM will document the change via a FTMR form within 5 days and send it to the NAVFAC NTR. If necessary, a concurrence letter will be submitted within 7 days of identifying the need for change. The NAVFAC NTR will issue a scope change (verbally or via e-mail), if warranted. The scope change is to be implemented before further work is executed. If scope changes are extensive, a SAP amendment will be issued at the discretion of the NTR. The Tetra Tech PM will communicate scope changes to the Project Team (NAVFAC NTR, EPA, RPM, PADEP project officer. Tetra Tech QAM. Tetra Tech FOL) via e-mail within 1 business day.
Field Corrective Actions	Tetra Tech FOL Tetra Tech PM	Seth Oshier Tricia Moore	610-382-1526 610-382-1171	The Tetra Tech FOL will initiate corrective actions and will notify the Tetra Tech PM verbally within 1 business day of taking action.

Communication Drivers	Responsible Entity	Name	Phone Number	Procedure (timing, pathways, etc.)
Sample Receipt Variances	Laboratory Sample Custodians Tetra Tech FOL/SSHO Tetra Tech PM Tetra Tech Project Chemist	Jonathon Thorn Heather Manz Seth Oshier Tricia Moore Megan Ritchie	781-681-5565 207-874-2400 610-382-1526 610-382-1171 610-382-1527	The laboratory sample custodian will report variances to the Tetra Tech FOL/SSHO, Tetra Tech Chemist, or PM within 24 hours of identifying a variance and those individuals will attempt to resolve the variance with the laboratory. If the variance cannot be resolved, the Tetra Tech PM will notify the NAVFAC NTR within 1 business day of the variances being brought to his or her attention. If necessary, the NAVFAC NTR will take corrective action commensurate with the deficiency.
Laboratory Quality Variances	Laboratory PM Laboratory PM Tetra Tech Project Chemist Tetra Tech PM	Jonathan Thorn Heather Manz Megan Ritchie Tricia Moore	781-681-5565 207-874-2400 610-382-1527 610-382-1171	The Laboratory PM will notify (verbally or via e-mail) the Tetra Tech Project Chemist within 1 business day of when an issue related to laboratory data is discovered. The Tetra Tech Project Chemist will notify (verbally or via e-mail) the data validation staff and the Tetra Tech PM within 1 business day. The Laboratory QAM will document all quality variances in the Case Narrative of the Analytical Laboratory Report. Corrective actions may include a consult with the NAVFAC NTR and, at the NTR's discretion, with the NAVFAC QAO/Chemist.
Analytical Corrective Actions	Laboratory PM Laboratory PM Tetra Tech FOL/SSHO Tetra Tech Project Chemist Tetra Tech PM NAVFAC NTR	Jonathan Thorn Heather Manz Seth Oshier Megan Ritchie Tricia Moore Brian Helland	781-681-5565 207-874-2400 610-382-1526 610-382-1527 610-382-1171 215-897-4912	If the impact of an identified deficiency is limited to this project, it will be resolved between the laboratory PM and Tetra Tech PM and support staff and will be documented in the project report. If the deficiency is systemic and potentially affects other projects, the Tetra Tech PM will verbally advise the NAVFAC NTR within 24 hours of notification from the Project Chemist or DVM. The NAVFAC NTR will take corrective action appropriate for the identified deficiency. Corrective actions may include a consult with the NAVFAC QAO/Chemist and coordination with the laboratory.
Reporting Data Validation Issues	Tetra Tech DVM Tetra Tech PM	Joe Samchuck Tricia Moore	412-921-8510 610-382-1171	Tetra Tech DV Chemist will document data qualifications in the data validation report and database. For serious deficiencies the DV Chemist will notify Tetra Tech PM verbally or via e-mail within 48 hours of recognizing that a significant laboratory quality deficiency has been detected that could affect this project and/or other projects. The Tetra Tech PM will relay information regarding serious data concerns or laboratory concerns to the NAVFAC NTR.

Communication Drivers	Responsible Entity	Name	Phone Number	Procedure (timing, pathways, etc.)
Data Validation Corrective Actions	Tetra Tech DV Manager Tetra Tech PM	Joe Samchuck Tricia Moore	412-921-8510 610-382-1171	If a data validation issue cannot be resolved between the Tetra Tech DV Chemist and the laboratory or the issue appears to be systemic, the Tetra Tech PM will verbally advise the NAVFAC NTR within 24 hours of notification from the DV Chemist. The NAVFAC NTR will take corrective action that is appropriate for the identified deficiency. This may include a consult with the NAVFAC QAO/Chemist.
Project Report Review	Tetra Tech PM Tetra Tech support staff NAVFAC NTR	Tricia Moore TBD Brian Helland	610-382-1171 TBD 215-897-4912	Internal reviews will be conducted by the Tetra Tech PM and support staff. Comments will be resolved internally to the satisfaction of the Tetra Tech PM. When satisfied with resolution of all comments, the report will be submitted by the Tetra Tech PM or designee to the NAVFAC NTR in accordance with the project scope of work requirements. Upon resolution of NAVFAC comments, the report will be submitted to the NAVFAC NTR for transmittal to the regulators for review. Comments will be resolved to the satisfaction of the NAVFAC NTR, revisions will be made, and the report will be finalized for final distribution and submittal to NIRIS.
Very high or unexpected PFAS concentrations that could affect DoD's relationship with the public or are perceived to represent an unusually high environmental risk.	Tetra Tech PFAS POC	Theresa Thompson	832-251-5160	The Tetra Tech POC will communicate immediately with their NAVFAC counterpart to explain the findings so NAVFAC can take appropriate action.

SAP Worksheet #7 -- Personnel Responsibilities Table
(UFP-QAPP Manual Section 2.4.3)

Resumes of personnel below are maintained by their respective organizations and can be provided under separate cover by request.

Name	Title/Role	Organizational Affiliation	Responsibilities
Brian Helland	NTR/ Provides oversight and daily management	NAVFAC	Oversees overall project implementation, including contracting, scoping, and overall financial and technical implementation of project.
Sarah Kloss	RPM/ Provides technical input and daily management	EPA	Participates in scoping, data review, evaluation, and approves the SAP.
Colin Wade	Project Officer/ Provides technical input and daily management	PADEP	Participates in scoping, data review, evaluation, and approves the SAP.
Mark Leipert	Hydrologist/ Provides regulatory input	EPA	Participates in scoping.
Linda Watson	Toxicologist/ Provides regulator input	EPA	Participates in scoping.
Tricia Moore	PM/ Provides oversight and daily management	Tetra Tech	Ensures that health and safety requirements are implemented. Oversees project, financial, schedule, and technical day to day management of the project. Oversees project implementation, including scoping, data review, and evaluation for this project. Coordinates and oversees preparation and review of Tetra Tech project deliverables.
Seth Oshier	FOL, SSHO/ Directs and provides oversight of routine field activities and monitors health and safety aspects of field work	Tetra Tech	Supervises, coordinates, and performs field sampling activities. Ensures that health and safety requirements are implemented during field work. Functions as the on-site communications link between field staff members, the Site POC, and the Tetra Tech PM. Oversees mobilization and demobilization of all field equipment and subcontractors. Ensures proper maintenance of site logbooks, field logbooks, and field recordkeeping. Identifies and resolves problems in the field, resolving difficulties via consultation with the NAVFAC NTR, implementing and documenting corrective action procedures, and facilitating communication between the field team and project management. Responsible for on-site project-specific health and safety training and monitoring site conditions. Details of health and safety responsibilities are presented in the project-specific HASP.

Name	Title/Role	Organizational Affiliation	Responsibilities
Tom Johnston	QAM/ Directs the Tetra Tech CLEAN QA Program	Tetra Tech	Ensures that quality aspects of the Tetra Tech CLEAN QA program are implemented. Oversees review of the SAP, approves the SAP, oversees preparation of the laboratory scopes of work, and coordinates with the laboratory, and conducts data quality reviews.
Stan Liang, CIH, CSP	HSM/ Directs the Health and Safety Program	Tetra Tech	Ensures that health and safety aspects of the Tetra Tech CLEAN Health and Safety Program are implemented. Oversees review of health and safety documents and approves health and safety documents.
Megan Ritchie	Chemist/ Serves as focal point for chemistry-related issues	Tetra Tech	Coordinates analyses with laboratory chemists, ensures that the laboratory scope of work is followed, and that QA has been performed for QA data packages, and communicates with Tetra Tech staff. Ensures that the project meets objectives from the standpoint of laboratory performance. Provides technical advice to the Tetra Tech team on project chemistry matters. Functions as the primary interface with the subcontracted laboratory and the Tetra Tech PM. Ensures completion of Tetra Tech data validation.
Joe Samchuck	DVM/Directs and provides oversight of routine field activities	Tetra Tech	Manages data validation activities within Tetra Tech, including ensuring QA of data validation deliverables, providing technical advice on data usability, and coordinating and maintaining the data validation review schedule.
Lee Leck	Data Manager/Manages data receipt, database uploads, data archiving	Tetra Tech	Coordinates data receipt and upload to Tetra Tech and Navy databases; manages and controls flow of data to ensure data are secure.
Jonathan Thorn	Laboratory PM/ Directs and provides oversight of laboratory activities	Battelle	Coordinates analyses with Battelle laboratory chemists, ensures that the laboratory scope of work is followed, reviews data packages, and communicates with Tetra Tech staff.
Heather Manz	Laboratory PM/ Directs and provides oversight of laboratory activities	Katahdin	Coordinates analyses with Katahdin laboratory chemists, ensures that the laboratory scope of work is followed, reviews data packages, and communicates with Tetra Tech staff.
Theresa Thompson	PFAS POC/Serves as single focal point for all PFAS matters regarding compliance with and implementation of NAVFAC and DoD policy	Tetra Tech	Programmatic liaison and coordinator for PFAS-related matters. Maintains schedules, allocated resources, coordinates meetings, and is responsible for daily management and communication of PFAS-related information.

SAP Worksheet #8 -- Special Personnel Training Requirements Table
(UFP-QAPP Manual Section 2.4.4)

Project-specific safety requirements are addressed in detail in the project-specific HASP.

SAP Worksheet #9 -- Project Scoping Session Participants Sheet
(UFP-QAPP Manual Section 2.5.1)

The surface water and sediment sampling events were discussed during Willow Grove Team Meetings on December 11, 2018 and during a data coordination meeting on March 13, 2019. Attendees included Brian Helland (Navy NTR), Colin Wade (PADEP Project Officer), Sarah Kloss (EPA RPM), Andrew Frebowitz (former Tetra Tech Project Manager) and technical support staff from Navy, EPA, and PADEP, and USGS. Tetra Tech was tasked to prepare and implement a UFP SAP for quarterly surface water and sediment monitoring at outfalls and previously sampled locations in Park and Pennypack Creeks, and prepare annual Technical Memoranda documenting the sampling results.

SAP Worksheet #10 -- Conceptual Site Model

10.1 CONCEPTUAL SITE MODEL (CSM)

The table below presents the CSM for the site. Specific information regarding PFAS follows the table.

NAS JRB WILLOW GROVE HANGAR AREA

Site Name	Basewide
Site Location	The former NAS JRB Willow Grove is in Horsham Township, Montgomery County, in southeastern Pennsylvania, approximately 20 miles north of Philadelphia. The site includes many unused buildings, runways, and grassy areas around the runways (Figure 1).
Site History	The primary mission of NAS JRB Willow Grove was to provide support for operations involving aviation training activities, and to train Navy reservists. NAS JRB Willow Grove also supported DoD tenants including the Marine Reserve and the Army Reserve, and shared facilities/services with the Air Force Reserve. The Air Force presence was reduced on September 28, 2007, when the Air Force 913th Airlift Wing disestablished. NAS JRB Willow Grove was officially disestablished on March 30, 2011, and it was transferred to Navy Base Realignment and Closure (BRAC) Act Project Management Office (PMO) Northeast and entered caretaker status in September 2011. Only personnel required for caretaking of the base remain. The Hangar Area around Building 680 (see Figure 2) is located adjacent to the property boundary with the Horsham Air National Guard (ANG) facility. The hangar area was used for aircraft maintenance. Aqueous film forming foam (AFFF) fire suppression systems were used in the hangar and AFFF concentrate was stored in above ground tanks. A fire station was also located approximately 1,000 feet upgradient of the hangar area. A Basewide Remedial Investigation (RI) for PFAS was conducted by Resolution Consultants in 2016. Results showed the highest levels of PFAS in soils and groundwater in the area near Building 680 (Hangar) and nearby structures including the former fire station. This area is referred to as the Hangar Area. The Navy is implementing, under separate projects, interim actions including an ongoing soil removal action and implementation of a groundwater source control/treatment pilot action as part of the groundwater action. The purpose of this SAP is to describe and govern sampling and analysis of PFAS in surface water and sediment surrounding the site to determine whether surface water or sediment have been impacted by site operations. The majority of sample locations are in streams with perennial flow; however, locations along ephemeral or intermittent flow pathways are proposed. Any samples collected from ephemeral locations will be considered as soils for exposure evaluation. Surface water and sediment samples collected during the Phase I RI had PFAS concentrations above the screening criteria established for the RI. Exceedances of human health screening levels were detected in aqueous samples only at locations SW-01, SW-26, SW-27, SW-28, SW-49, SW-51, and SW-54 (Figure 3). No exceedances of human health screening levels were detected in sediments. The locations of SW-26, SW-27, and SW-28 are downstream of the discharge from the retention pond on the Horsham Air Guard Station. A carbon filter system for treating PFAS was installed at the discharge point after samples for the Phase I RI were collected.

Current Use		The Site is currently unused. Routine maintenance activities including limited mowing of grassy areas, and snow removal from the perimeter roads are conducted on an as needed basis.
Site Conditions	**Physical Characteristics**	Former NAS JRB Willow Grove lies within the Triassic Lowlands Section of the Piedmont Physiographic Province. This section is characterized by rolling topography. Broad northeast-southwest-trending ridges in the area reflect resistant conglomeratic sandstone beds or diabase dikes. The Base occupies a relative topographic high, which for the most part precludes surface water flow onto the facility from surrounding areas. Surface elevations range from 240 feet above mean sea level (MSL) in the northern portion of the Base to approximately 370 feet above MSL in the central portion of the Base. Slopes are generally less than 3 percent. In areas where the land has been regraded, however, some slopes are steeper. Former NAS JRB Willow Grove is situated within an upland area that forms a local drainage divide between the Little Neshaminy Creek drainage basin to the north and the Pennypack Creek drainage basin to the south. Both local drainage basins lie within the regional drainage basin of the Delaware River. Most of the Base property drains toward the north through several unnamed ephemeral, intermittent, and perennial drainage ways into Park Creek, which is a tributary of Little Neshaminy Creek. The extreme southern portion of the Base, including the Antenna Field Landfill and a portion of the Fire Training Area, lies within the Pennypack Creek drainage basin. The Ninth Street Landfill lies within the Park Creek drainage basin. Runoff from surface areas is primarily channeled through open drainage swales and enclosed storm sewers to one of five primary outfall areas. Three of these outfalls drain to Park Creek. The fourth outfall is a tributary to Pennypack Creek. The fifth outfall receives runoff from the airfield and the northern portion of the Base's storm sewer system (Figure 2). Additional details are presented in the Hydrogeology section below.
Site Conditions	**Geology and Hydrogeology**	Former NAS JRB Willow Grove is located within the Triassic Basin of southeastern Pennsylvania. The bedrock underlying NAS JRB consists of the middle arkose member of the Late Triassic age Stockton Formation. The Stockton Formation locally is about 5,000 feet thick and is unconformably underlain by Ordovician to Precambrian age basement rocks. Current and previous environmental investigations indicate that the top of bedrock at the Air Station is generally found in the range of 4 feet to 25 feet below ground surface (bgs). Surface water and groundwater flow directions are generally similar, and regional groundwater divides coincide with regional surface water divides. To determine the regional groundwater flow patterns on and near the Base, the United States Geological Survey (USGS) performed a regional groundwater study for the Navy and constructed a regional potentiometric surface map. The results confirm that a topographic ridge trends from southwest toward northeast through the former Base forming both a surface water divide and a groundwater divide. Groundwater north of the divide flows regionally in a northwest direction toward the Neshaminy Creek watershed, and groundwater south of the divide flows regionally in a southeast direction toward the Pennypack Creek watershed. Site 5 (the fire training area), various hangars, and Site 3 and Site 12 landfills are all south of the divide. Artesian conditions have been observed previously at Site 3 monitoring wells. These conditions, when present, increase the likelihood of discharge of groundwater to nearby surface water (unnamed tributary to Park Creek).

		As mentioned above, surface water from the base is channeled via outfalls to various receiving streams. Outfalls from the southern portion of the Base flow to tributaries to the Pennypack Creek. There are no reaches of these tributaries upstream from the Base. Flow from the tributaries is to the south for approximately 3000 feet to a confluence with the Pennypack Creek which subsequently flows in an easterly direction. Surface water drainage from the remaining area of the Base flows to either one of two unnamed tributaries to Park Creek. These perennial tributaries flow north-northwest to their confluence with Park Creek which flows northeast toward Little Neshaminy Creek (Figure 3).
Drinking Water Source Evaluation		The area adjacent to the Base is served by a combination of municipal supplies and private wells. Groundwater serves as the source for the municipal drinking water supply. Groundwater from the southern portion of the Base flows toward the municipal supply wells and regional watersheds, while groundwater from the northern portion of the Base flows toward the ANG supply wells, Park Creek, and regional watersheds.
Source Areas		Potential PFAS source areas have been identified on-site. Based on results to date, the source areas with known AFFF use and/or soil or groundwater samples containing PFAS are the Hangar area (which includes numerous buildings and associated structures), Site 5 (Fire Training Area), Building 177, and Site 4 (North End Landfill). PFAS may also be potentially present in the storm sewers and the northern basins as they received discharge from the source areas. Soil and groundwater results greater than project screening levels established to protect human health (e.g., Hazard Quotient of 0.1) have also been detected at Site 7 (Abandoned Rifle Range). There are no known historical operations at Site 7 that would explain these exceedances (Resolution, 2019). No exceedances were identified in soils from other sites that are undergoing other Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) action including Sites 3 and 12. A soil removal action is ongoing at the former fire station and Hangar 175 where PFAS-impacted soils have been found.
Contaminants of Potential Concern		PFAS (identified in Worksheet #15).

Migration Pathways	A limited number of migration pathways are likely for PFAS in the NAS JRB Willow Grove environment. In addition, potential release mechanisms such as volatilization do not significantly impact surface water. The primary release mechanisms are: • PFAS historically released directly to surface soil, subsurface soil, and impervious surfaces (asphalt and concrete) migrate overland (historically or currently) via transport of soil, surface water, and sediment run-off to the facility's drainage and storm water retention system. • PFAS released from source areas to groundwater are transported to surface water through upwelling to Park Creek, Pennypack Creek, or associated unnamed tributaries. • PFAS released to groundwater infiltrate into select underground portions of the base storm water management system and are transported to surface water. • PFAS-contaminated surface water or sediment leaches to groundwater. In summary, shallow groundwater downgradient of PFAS release points (i.e., source areas) is considered the eventual recipient of PFAS contamination originating from the source areas. While some low concentrations of residual PFAS may exist in soils, the groundwater is an integrating medium that accumulates PFAS contamination from source areas and environmental media. Surface water and sediment in drainage channels may be impacted from groundwater discharging into the channels. The volume of overland runoff and shallow groundwater discharge into channels may vary depending on temporal and seasonal variations. Periodic monitoring of surface water and sediment PFAS concentrations is needed. Sediment data collected previously do not indicate significant accumulation or fluctuations of PFAS concentrations. Therefore, while sediment sampling should still occur annually, surface water sampling should be more frequent because of likely seasonal fluctuations.

Potential Receptors/Exposure Routes	Off-site exposure pathways through groundwater consumption have been limited through treating public system water, connecting private residents to the public water distribution system, or through providing bottled water. No current operation activities (e.g., fire training) are being conducted at the base, and security is in place to prevent trespassing. The primary significant route of exposure for PFAS is ingestion of offsite groundwater. In addition, runoff from Site 5 during its use for fire training was directed to the nearby storm sewer (see Figure 2). Soils containing elevated residual concentrations of PFAS in proximity to Building 608 (former base Fire Station) and Building 175 (former Hangar) were recently excavated and removed and disposed at an approved offsite facility to reduce continuing migration of PFAS to underlying groundwater. The various potential exposure routes are listed below. A wire diagram CSM has been included as Appendix A. Note that volatilization (e.g., via dust) is not believed to be a significant exposure pathway for PFAS released to surface water via runoff of groundwater discharge. Human Health Receptors (Resolution, 2019): • Current on-site maintenance worker who could be exposed to surface soils, sediment, or surface water through incidental ingestion and dermal contact of soil and sediment. • Future on-site worker who could be exposed to surface soil, subsurface soil, or sediment through incidental ingestion; groundwater through ingestion of drinking water; and dermal contact of soil and sediment. • Current/future construction/utility worker who may be exposed to surface soil, subsurface soil, or sediment through incidental ingestion, groundwater in an excavation trench through incidental ingestion, surface water through incidental ingestion, and dermal contact of soil and sediment. • Future trespasser who may be exposed to surface soils, surface water or sediment through incidental ingestion, and dermal contact of soil and sediment. • Future recreational user through exposure to surface soils, surface water or sediment through incidental ingestion, and dermal contact of soil and sediment. • Hypothetical future on-site resident who may be exposure to surface soil and subsurface soil through incidental ingestion, groundwater through ingestion of drinking water, surface water or sediment through incidental ingestion, and dermal contact of soil and sediment. Ecological Receptors: • Plants and soil invertebrates may be directly exposed to PFAS released to the surface soil. • Benthic invertebrates and aquatic receptors such as invertebrates, fish, or amphibians may be directly exposed to PFAS in on- or off-Site waterbodies that may receive runoff from the Site. • Ecological receptors are not directly exposed to groundwater but may be indirectly exposed to groundwater if it discharges into a waterbody. • Wildlife such as amphibians, reptiles, birds, and mammals may be exposed to PFAS in surface soil, sediment, and surface water through ingestion of these media or ingestion of PFAS-contaminated food items.

10.2 PFAS CONTAMINANT DESCRIPTION

PFAS are a class of anthropogenic compounds characterized by hydrocarbon chains of varying lengths containing carbon-fluorine bonds. The strong electronegative force of the carbon-fluorine bond requires a large amount of energy to break, which make PFAS extremely resistant to biodegradation, photo-oxidation, direct photolysis, and hydrolysis (EPA, 2014). Additionally, the chemical properties of PFAS make them useful surfactants and advantageous surface-active agents able to repel oil, grease, and water. For these reasons, PFAS have been manufactured for use in many products including firefighting foams, nonstick cookware, stain protection, food packaging, and personal care products (3M, 1999; Giesy and Kannan, 2001).

10.3 PFAS BACKGROUND

PFAS have been identified by the U.S. Department of Defense (DoD) and the USEPA as "emerging contaminants." PFAS are of environmental concern because of their persistence in the environment and in organisms, their migration potential in aqueous systems (e.g., groundwater), their historically widespread use in commercial products, and their possible health effects at low levels of exposure. PFAS are anthropogenic compounds with multiple strong carbon-fluorine bonds.

10.3.1 General Uses of PFAS

The chemical properties of PFAS make them useful for many commercial products because they are heat resistant and can repel oil, grease, and water. PFAS have been manufactured for use in a wide variety of products including fire-fighting foam, non-stick cookware, fiber and fabric stain protection, food packaging, and personal care products. The pervasive use of PFAS in commercial and industrial products has led to the discovery of PFAS in soil, air, and groundwater worldwide.

10.3.2 Key PFAS Sources at Naval Installations and NAS JRB Willow Grove

PFAS have been used in a variety of military applications, including as a component of AFFF, which was routinely used at fire-fighting training areas and firefighting equipment test areas. In addition, current and historical AFFF concentrate storage and transfer areas are of potential concern for release to the environment. As such, identification of areas where AFFF was released to the environment, either as repeated small releases or as a significant one-time release, is key to determining potential PFAS sources to environmental media.

Of the likely sources of PFAS at Department of the Navy (DON) installations, PFAS from AFFF used in firefighting, firefighting training, and fire suppression systems are considered to have the greatest potential for release of PFAS to the environment in terms of mass or concentration. Other potential sources of PFAS to the environment include operations wastes (e.g., from chromium electroplating), historical on-site land disposal areas/landfills of PFAS-containing materials, wastewater treatment sludges and effluents, etc. Areas of immediate interest therefore generally include current and former fire training areas, equipment testing and cleanout areas, buildings with fire-fighting infrastructure (e.g., hangars, AFFF storage/handling areas, pump houses, etc.), unplanned release areas (e.g., crash sites), and fire suppression systems located at fuel storage area(s). At NAS JRB Willow Grove, the site operational history suggests that use of AFFF in fire suppression and use at the former fire training area (Site 5) are the most likely sources of PFAS detected in groundwater. Groundwater near the Hangar Area has been determined to exhibit detectable levels of PFAS.

10.4 ENVIRONMENTAL FATE AND TRANSPORT, AND EXPOSURE PATHWAYS AND RECEPTORS

PFAS are a class of anthropogenic compounds characterized by carbon chains of varying lengths containing carbon-fluorine bonds. The strong electronegative force of the carbon-fluorine bond requires a large amount of energy to break, which makes PFAS extremely resistant to biodegradation, photo-oxidation, direct photolysis, and hydrolysis. In addition to their environmental persistence, PFAS are readily soluble in aqueous solution and therefore have the potential for migration to groundwater from concrete, soil, sediment, and surface water, and with groundwater flow to off-site locations. Due to their persistence and mobility, releases of PFAS to the environment present a unique set of challenges and concerns.

10.5 POTENTIAL HEALTH EFFECTS

Additional research is needed to more clearly understand the potential health effects that may be caused by exposure to PFAS compounds. To date, there is limited information on only a few out of the thousands of total PFAS. To date, there are no Tier 1 toxicity values for any PFAS. Tier 1 toxicity values are the preferred source for toxicity factors in CERCLA and Resource Conservation and Recovery Act (RCRA) human health risk assessments.

The EPA's Superfund Health Risk Technical Support Center has estimated a Tier 2 noncarcinogenic toxicity value for perfluorobutanesulfonic acid (PFBS) (EPA, 2014). The oral reference dose (RfD) is based on kidney effects observed in female rats. Because of a lack of information in the current literature, toxicity values for inhalation exposure and cancer endpoints could not be estimated for PFBS.

The EPA Office of Water developed an RfD for perfluorooctanoic acid (PFOA) which is based on a developmental toxicity study using mice. The critical effects included reduced ossification in parts of the hand/feet and accelerated puberty in male pups following exposure during gestation and lactation (EPA, 2016). The EPA Office of Water also determined that PFOA should be classified as "suggestive evidence of carcinogenic potential" and estimated an oral cancer slope factor (CSF) based on tumor development in rat testes.

The EPA Office of Water estimated an RfD for perfluorooctanesulfonic acid (PFOS) based on a developmental toxicity study in rats; the critical effect was decreased pup body weight following exposure during gestation and lactation (EPA, 2016).

Formal ecological screening levels for PFAS have not been developed by USEPA. As discussed in Section 11.2, literature developed by other countries (e.g., Canada, Australia, United Kingdom, and the Netherlands) were considered.

10.6 EPA LIFETIME HEALTH ADVISORIES

In May 2016, the EPA Office of Water issued a drinking water lifetime health advisory for PFOA and PFOS. Health advisories are not enforceable regulatory levels; rather, they are levels that would provide Americans, including sensitive populations, with a margin of protection from a lifetime of exposure to PFOA and PFOS from drinking water. No health advisories have been established for surface water or sediment, but PFAS concentration data collected for surface water and sediment can be used to understand the direction and degree of PFAS migration (if any) from NAS JRB Willow Grove.

SAP Worksheet #11 -- Project Quality Objectives/Systematic Planning Process Statements

(UFP-QAPP Manual Section 2.6.1)

This section presents the Data Quality Objectives (DQOs) that were developed in accordance with EPA Guidance for the DQO Process, commonly known as QA/G-4 (EPA, 2006).

11.1 PROBLEM STATEMENT

A Phase I Basewide Remedial Investigation for PFAS was conducted from 2014 to 2018 at the former NAS JRB Willow Grove. Results showed the highest concentrations of PFAS in soils and groundwater in the area near Building 680 (Hangar) and nearby structures including the former fire station. This area is referred to as the Hangar Area. The Navy is implementing an interim action including conducting a soil removal and implementing a groundwater source control/treatment remedy as a separate investigation. Downstream sediment and surface water could be impacted by site runoff or discharge of contaminated groundwater. Surface water and sediment PFAS data are needed to determine the PFAS concentrations in surface water and sediment, and if contaminated groundwater and surface water discharge from Base outfalls is impacting these media. Results from the Phase I RI showed PFAS concentrations above human health screening criteria at locations SW-01, SW-26, SW-27, SW-28, SW-49, SW-51, and SW-54 (Figure 3). Surface water samples from these locations should be collected to observe if seasonal changes to PFAS concentrations are occurring. Locations at outfalls and at the receiving streams should be sampled to assess the levels of PFAS contamination in surface water and sediment and if seasonal changes are occurring. PFAS were detected intermittently in RI sediment samples at concentrations typically below screening levels. Unlike PFAS concentrations in surface water (which vary as a result of flow and discharges from groundwater), PFAS concentrations in sediments are not likely to exhibit seasonal changes. Therefore, annual sampling of sediment and quarterly monitoring of surface water will be conducted.

11.2 INFORMATION INPUTS

The physical and chemical data to be collected to meet the study goals of the investigation, and the Project Screening Levels (PSLs) are described below.

11.2.1 Chemical Data

Surface water and sediment analytical data are needed to determine temporal PFAS concentrations and to assess trends. Laboratory analyses will be conducted for PFAS in surface water and sediment and for total organic carbon (TOC) in sediment. These analytes are listed in Worksheet #15.

The sampling methods are presented in Worksheet #18 and the analytical methods are presented in Worksheet #19.

11.2.2 Sample Location Data

Latitude and longitude recorded for all surface water and sediment sampling locations were surveyed in the field during the Phase I RI with a portable global positioning system (GPS) unit to sub-meter accuracy. Sampling locations will be re-located at the same coordinates using a portable GPS. New sampling locations will be surveyed using a portable GPS unit to sub-meter accuracy.

11.2.3 Project Screening Levels

To assess whether PFAS concentrations in surface water or sediment samples are potentially unacceptable, laboratory results must be compared to PSLs. The PSLs were developed as described below.

Human Health

Human health surface water and sediment PSLs were derived for PFOS, PFOA, and PFBS using the USEPA Regional Screening Level (RSL) Calculator (USEPA, 2019) based on a target cancer risk level of 1E-6 (applicable to PFOA only); and a target hazard quotient of 0.1 (for all three PFAS). Human health screening levels were not developed for other PFAS because of the lack of available toxicity values for these analytes. Default exposure assumptions for a recreational soil exposure scenario recommended in the RSL calculator were used (where available) to represent potential exposure to sediment for preliminary screening purposes. The use of soil exposure inputs to represent sediment exposure is likely to overestimate adverse health effects. Default exposure assumptions for a recreational surface water exposure scenario recommended in the RSL Calculator were used for PFOS, PFOA and PFBS to represent potential exposure to surface water for preliminary screening purposes. Where default values are not available or appropriate, conservative inputs protective of a potential site-specific sediment exposure scenario were selected by the RI Phase I risk assessor. These values were for exposure frequency (contact with sediment two times per week, for 26 weeks with a contact time of 3 hours per exposure). The inputs used to derive the surface water and sediment PSLs can be found in the RI report (Resolution, 2019) and are provided in Appendix B.

Ecological

Ecological screening levels for PFAS have not been developed by USEPA. Therefore, ecological PSLs were identified based on a review of the available literature. Canadian federal environmental quality guidelines, when available, were selected preferentially as ecological screening levels (Environment and Climate Change Canada, 2017) because they are the most recent values published. When Canadian values were not available, ecological screening levels identified in the literature or developed by the Environment Agency of the United Kingdom, the Norwegian Pollution Control Authority, the Dutch National Institute for Public Health and Environment, and academic research (Giesy, et al., 2010) were used. The derivation of ecological PSLs for sediment and surface water used in this screening assessment are detailed in Section 7.0 the Phase I RI (Resolution, 2019) and included in Appendix B, but may be subject to change based on new published values.

The evaluation of the ecological effects of PFAS is an expanding field of study and additional information relevant to PFAS at this Site may be identified in the future. For the initial evaluation of data, PSLs for PFOS and PFOA were identified for benthic invertebrates, aquatic receptors (e.g., aquatic invertebrates, fish), birds, and mammals. Surface water PSLs for aquatic receptors and birds were also identified for PFBS.

Screening levels for benthic invertebrates are based on direct exposure to PFAS in sediment and only two sediment screening levels for PFOS were identified in the literature. A wet weight-based screening level of 67 micrograms per kilogram (µg/kg) (Environment Agency, 2004) was derived using equilibrium partitioning and a surface water screening level. For screening purposes, the wet weight-based screening level of 67 µg/kg was converted to a sample-specific dry weight-based screening level (Resolution, 2019).

A second sediment screening level of 220 µg/kg (NPCA, 2008) was also considered to further evaluate PFOS in sediments. Concentrations below this level are classified as “Good” and are not associated with toxic effects on benthic invertebrates.

Sediment screening levels were not available for other PFAS compounds. Screening levels for benthic invertebrates are based on direct exposure to PFAS in sediment. The ecological sediment PSLs used in the screening assessment are discussed below.

Surface water samples must be screened against fish/aquatic invertebrate screening levels of 6.8 micrograms per liter (µg/L) for PFOS (Environment and Climate Change Canada, 2017); 2,900 µg/L for PFOA (Giesy et al., 2010); and 24,000 µg/L for PFBS (Giesy et al., 2010). These levels were derived based on direct exposure to PFAS in the water column. The PFOS federal environmental quality guideline (FEQG) of 6.8 µg/L derived by Canada is similar to the value of 5.1 µg/L derived previously (Giesy et al., 2010). Toxicity to leopard frogs has occurred within the concentration range that has been shown to cause effects

in fish and invertebrates (Giesy et al., 2010); therefore, it is assumed that these PFOS screening levels are also protective of amphibians.

Screening levels identified for bird and mammal exposure to PFOS in surface water were 0.047 µg/L (Giesy et al., 2010) and 0.0026 µg/L (RIVM, 2010), respectively. A PFBS screening level of 17,000 µg/L (Giesy et al., 2010) was also identified for birds. These levels assume exposure to PFAS in prey items (e.g., fish that have bioaccumulated PFAS) through the food chain. The PFOS and PFBS screening levels derived for birds (Giesy et al., 2010) are protective of piscivorous birds such as herring gull, bald eagle, or kingfisher and may be overly protective of birds feeding on small fish. Similarly, the screening level for mammals is conservative based on the lowest identified toxicity value for mammals and assumes ingestion of prey items that have bioaccumulated PFOS. No food chain surface water screening levels were identified for PFOA for birds or mammals, and no surface water screening levels were identified for other PFAS compounds.

PFAS compounds listed in Worksheet #15 are the 14 PFAS in the Interim PFAS Guidance for NAVFAC (DON, 2017) and four additional PFAS that are commonly analyzed for in drinking water under EPA method 537.1 (EPA, 2018). These 18 PFAS represent a default list of PFAS that are analyzed in multiple environmental matrices so that relationships such as migration from one matrix to another can be evaluated. PFOA, PFOS, and PFBS are the only PFAS to have a PSL at this time, and are the only PFAS to be used for decision-making for this project. However, analyzing for all the compounds on the method list provides a basis for future regulatory actions to protect public health, allows temporal trends to be studied (e.g., seasonal), and is helpful when developing and refining the CSM.

The following conventions must be used to report analytical laboratory data:

- Report all results for sediment on a dry-weight basis.
- Report results of percent moisture determinations in each analytical data package and electronic data deliverable (EDD).
- Classify all results less than the Detection Limit (DL) as non-detects.
- Report non-detects at the Limit of Detection (LOD) with a "U" qualifier on the final EDDs used for internal reports and other reports not provided to the public.
- Report positive results at concentrations between the DL and Limit of Quantitation (LOQ) with a “J” qualifier. These results will be used as reported but with consideration for the additional uncertainty represented by the J qualifiers. Reports for public release will have a glossary of data qualifiers including identifying “U” as non-detect.

All analytical data results will be captured in the project database, and eventually uploaded to NIRIS.

11.2.4 Field Measurements

Field parameters (temperature, dissolved oxygen [DO], pH, specific conductance, oxidation-reduction potential [ORP], and turbidity) will be measured at surface water locations to ensure sampling conditions are stable prior to collecting a sample and to provide additional surface water characterization data. Stream flow measurements will be manually recorded at staff plate gauges to be installed by USGS, or at existing USGS staff gauges at select locations to assist in mass loading evaluations to the segments of the study boundary.

11.3 STUDY AREA BOUNDARIES

Surface water and sediment samples must be collected from creeks, drainage pathways, outfalls, and catch basins located horizontally upgradient and downgradient of the site discharges. Emphasis should be placed on investigating areas where surface water or sediment would most likely to be contaminated with PFAS if PFAS had been released., Allowances will be made for adjusting the investigative strategy based on field conditions. Figure 2 shows the storm sewer outfalls, streams, and drainage swale culvert system. The

watershed divide is outlined on the figure near the southern end of Runway 10/28. Samples will be collected downstream of the watershed divide going in both the northern and southern directions from the divide where surface water may be present.

Surface water samples will be collected quarterly from onsite the base and at offsite locations to evaluate concentrations of PFAS in surface water over time. Select sample locations will only be sampled one or two times. Sediment samples will be collected annually at the surface water sampling locations. These locations need to be representative of the upstream background surface water and sediment along Park Creek, Pennypack Creek, and Little Neshaminy Creek; and the downgradient surface water and sediment which may be impacted by PFAS-contaminated releases. Sampling should be biased to locations that showed elevated levels of PFAS during the Phase I RI. Availability of sediment or surface water at each location is based on temporal conditions. At locations where surface water may not be present because of dry conditions, only sediment samples will be collected during the annual sediment sampling event.

Surface water and sediment samples must also be collected from reference locations that are approximately 0.5 miles to 5 miles outside the potential impact area from site activities. Reference location surface water samples will be collected at a frequency of twice per year. Sediment samples from the reference locations will be collected once per year.

Sediment collected on an annual basis must be collected from the top 6 inches of the stream beds because this is the most active benthic zone. Surface water must be collected from below the water surface but above the bottom sediment to ensure that the collected material only represents surface water.

11.4 ANALYTIC APPROACH

The analytic approach described below explains how the Project Team will use the chemical data for decision making. Concentrations of PFAS will be used to determine if contaminated groundwater is impacting surface water and sediment in downstream locations.

Decision Rule:

If any PFAS concentration in any surface water or sediment sample exceeds its applicable PSL during any sampling event, then:

(1) convene the project team to evaluate PFAS concentration patterns and groundwater and surface water flow patterns to determine whether GW could be the source of PFAS in surface water or sediment and,
(2) take appropriate action in accordance with Navy policy; otherwise,
(3) continue surface water sampling on a quarterly basis and sediment sampling on an annual basis.

If during every sampling event through at least one annual cycle the PFAS concentrations in all surface water and sediment samples are below their applicable PSLs, then conclude that there is no PFAS impact to surface water or sediment and recommend no further sampling.

11.5 PERFORMANCE CRITERIA

The data acquired in accordance with this SAP will be used to map the spatial distribution of PFAS contaminant concentrations in surface water and sediment. The Project Team will use the reported results of this investigation to determine whether the quality of data collected is sufficient to support the attainment of project objectives and to decide whether further investigation is required. Performance criteria for laboratory-generated data are analysis-specific laboratory quality assurance (QA) limits and detection limits for target analytes that are listed in Worksheet #15.

The data quality will be reviewed to ensure that performance criteria have been met and that the data are sufficient for decision-making purposes. If all data are collected as planned and no data points are missing or rejected for quality reasons, then the investigation completeness will be considered satisfactory. If any data gaps are identified, including missing or rejected data, the Project Team will assess whether a claim

of having obtained project objectives is reasonable based on the quantity and types of data gaps. Project Team members will be involved in rendering the conclusion by consensus regarding adequacy of the data.

To limit uncertainty and promote consistency in field and laboratory data, performance criteria for field collection and laboratory analysis will be measured and standard operating procedure for key sampling and analysis activities will be used. Performance criteria for calibration and measurement are described in Worksheets #12, 15, 22, 24, and 28.

11.6 SAMPLING DESIGN

The data collection plan for the sampling is included in Worksheet #17.

SAP Worksheet #12 -- Measurement Performance Criteria Table

(UFP-QAPP Manual Section 2.6.2)

QC Sample	Analytical Group	Frequency	Data Quality Indicators (DQIs)	Measurement Performance Criteria
Field Duplicate	PFAS	1 per 10 field samples	Precision	If both the original and duplicate results are ≥ 2x the LOQ Relative Percent Difference (RPD) must be ≤ 30% for aqueous samples and ≤50% for sediment. If either the original or duplicate result is < 2x the LOQ, use professional judgment.
Equipment Rinsate Blank (1)	PFAS	1 per 20 field samples per sampling equipment (e.g., pump)	Accuracy/Bias/ Contamination	No analytes ≥ ½ the LOQ.
Field Blank (FB)(2)	PFAS	With each aqueous sample set (i.e., per day of sampling)	Accuracy/Bias/ Contamination	Analysis required only if associated field sample PFAS target analyte concentration is greater than the LOQ. If target analyte(s) detected in a field sample have FB concentration >1/3 the LOQ, flag data and review with project team to assess whether samples should be recollected.
Cooler Temperature Indicator (3)	PFAS	1 per cooler	Representativeness	Upon arrival at the laboratory samples may not exceed 10 degrees Celsius (ºC); During laboratory storage and shipment samples must be maintained at a temperature between 0 and 6 °C, and samples must not be frozen.
Matrix Spike (MS) (4)	PFAS	1 per 20 discrete field samples collected	Accuracy/Bias	See Worksheet #28.
Matrix Spike Duplicate (MSD) (4)	PFAS	1 per 20 discrete field samples collected	Accuracy/Bias and precision	See Worksheet #28.

1. Water used for equipment rinsate and field blanks will be PFAS-free water provided by the laboratory. Equipment rinsate blank will only be needed if non-disposable sampling equipment is used.
2. At the sampling site, when ready to collect an FB, the FB water provided by the laboratory will be opened, along with a corresponding empty bottle, also provided by the laboratory. The FB water will be poured into the empty sample bottle, the cap will be closed, and this filled bottle will be labeled as the FB. The FB will be packed and shipped along with site samples and the required documentation (e.g., chain of custody form) to the laboratory.
3. Upon arrival at the laboratory samples designated for PFAS analysis may not exceed 10 degrees Celsius (ºC). PFAS samples that are significantly greater than 10°C at the time of collection, may need to be iced or refrigerated for a period to chill them prior to shipping. This will allow them to be shipped with sufficient ice to meet the above requirements.
4. MS/MSDs are prepared in the laboratory, but additional sample volume must be collected to support these analyses.

SAP Worksheet #13 -- Secondary Data Criteria and Limitations Table
(UFP-QAPP Manual Section 2.7)

Secondary Data	Data Source (originating organization, report title and date)	Data Generator(s) (originating organization, data types, data generation / collection dates)	How Data Will Be Used	Limitations on Data Use
On-Site Surface Water and Sediment Data	Resolution Phase I RI Report 2018	Resolution Surface Water and Sediment data 2014-2017 generated under documents: SAP Addendum for PFC Groundwater Investigation (2014) SAP for PFC Investigation Activities (2016) Draft Phase II Remedial Investigation Work Plan for PFAS (2017)	Data will be used to select sampling locations for surface water and sediment monitoring and to determine if the PFAS plume has been laterally bound.	All data from previous events are considered usable unless qualified as rejected (“R”). Positive results reported between the LOQ and the DL and qualified as “J” are considered usable data.

SAP Worksheet #14 -- Summary of Project Tasks
(UFP-QAPP Manual Section 2.8.1)

The field tasks and other project-related tasks are summarized below. A brief description of these tasks is also provided.

- Mobilizing/demobilizing (including conducting site-Specific health and safety training)
- Calibrating monitoring equipment
- Collecting field measurements and surface water samples
- Collecting sediment samples
- Managing samples
- Decontaminating personnel and field equipment
- Managing investigation-derived waste (IDW)
- Following sample custody and shipment procedures
- Collecting quality control samples
- Conducting analytical and reporting tasks

14.1 MOBILIZATION AND DEMOBILIZATION

This task involves preparing for the field activities and demobilizing from the site upon their completion. Following approval of the project plans, Tetra Tech will identify the necessary field support equipment, supplies and facilities, and begin mobilization activities.

14.1.1 Mobilization/Demobilization Tasks

Site mobilization will consist of preparation for field activities and will include (but is not limited to) the completion of the following tasks:

- Coordinate site access.
- Perform sampling training and orientation.
- Obtain all equipment and supplies required to perform field activities.
- Identify and prepare locations for all field activities.
- Coordinate sample types, analyses, and sampling schedule with the laboratory.

As part of demobilization, equipment and supplies will be collected, inventoried, and returned as appropriate. All field investigation paperwork will be filed and docketed in the project file.

Tetra Tech will prepare a list of all equipment and supplies necessary for the field team to perform the field activities. The equipment and supplies needed include but are not limited to:

- All documents, forms, logbooks, logsheets, labels, custody seals, airbills, and other paperwork required by the SAP and HASP.
- Vehicles for personnel, equipment, and sample transport.
- Personnel and equipment decontamination supplies and equipment required by the SAP and HASP.
- Media sampling field analytical equipment and calibration standards for all required parameters of the SAP.
- All required sample containers.

- Equipment and supplies for sample custody, preservation, and packaging.
- Other miscellaneous office and field supplies.

Site access will be coordinated through the Navy. Tetra Tech will contact the NAVFAC NTR with the proposed schedule for field activities. The NAVFAC NTR will contact onsite and offsite property owners to secure access to the sampling locations.

The field team will obtain the required equipment and supplies from the Tetra Tech warehouse or offices and transport it to and stage it at the base of operations. Any equipment not available at the Tetra Tech warehouse or offices will be purchased or rented by Tetra Tech. Equipment will be calibrated as required by this SAP and HASP on an as-needed basis. Equipment will be re-stocked, replaced, or repaired as needed.

Site demobilization will consist of removing from the site all facilities, supplies, and equipment no longer needed at the end of field work. The base of operations and field work locations will be restored as closely as possible to their original conditions by the field team or the responsible subcontractor.

14.1.2 Site-Specific Health and Safety Training

Orientation and site-specific health and safety training will be performed for the field crew as they mobilize at the site. During the required training and orientation, all field team members will review this SAP and will be given site-specific health and safety training based on the HASP. A field team orientation meeting will be held to familiarize personnel with the scope of the field activities. The orientation will include a drive around the main roads of the base to familiarize personnel with the physical layout of the sampling areas. It will also be necessary to provide orientation and health and safety training for any additional or replacement field team members assigned after the initial mobilization.

14.2 MONITORING EQUIPMENT CALIBRATION

The calibration of monitoring, measuring, and test equipment is necessary to ensure the proper operation and response of equipment; to document the accuracy, sensitivity, and precision of the measurements; and to determine if correction should be applied to the readings. Each instrument requiring calibration will have its own equipment calibration log documenting the calibration including the frequency and type of standard or calibration procedure. Monitoring equipment calibration procedures and requirements are identified in Worksheet #22.

14.3 COLLECTING FIELD MEASUREMENTS AND SURFACE WATER SAMPLES

Quarterly surface water sampling is planned for most sampling locations. Sampling of identified reference locations will occur semiannually during expected seasonal high (late spring) and low (late summer) flow conditions. Additionally, surface water samples will be collected from select locations on the facility (not previously sampled during the Phase I RI or only sampled once) during a single event to determine if these locations should be included in more frequent sampling. See Worksheet #18 for a list of the specific locations and frequencies of sampling. Surface water samples will be obtained following Tetra Tech SOPs SA-1.2 and SA-1.8. The sampling SOPs are listed in Worksheets #18 and #21, and are in Appendix C. A new pair of nitrile gloves will be worn for each sample collected. Surface water samples will be placed in laboratory-provided containers, preserved as required per analytical methods, stored on ice, and transported under chain-of-custody to Battelle. Refer to Worksheets #15, #18, #20 and #30 for analytical parameters, methods, and procedures.

Stream flow at select sampling locations will be measured with support from USGS following manual measurement methods at existing or newly installed permanent USGS staff plate gauges. Field measurements of surface water pH, specific conductance, turbidity, temperature, ORP, and DO will be recorded per Section 11.2.4. The following instruments are expected to be used for field data collection:

- Horiba U-50 (or equivalent) water quality meter
- Lamotte Model 2020 (or equivalent) turbidity meter

Field instruments will be calibrated according to the manufacturers' procedures as specified in Worksheet #22. All instrument calibration will be recorded on an equipment calibration log sheet, which will be included in the sampling report. During calibration, a maintenance check will be performed on each piece of equipment. If damaged or defective parts are identified during the maintenance check and it is determined that the damage could have an impact on the instrument's performance, the instrument will be removed from service until the defective parts can be repaired or the instrument replaced.

14.4 COLLECTING SEDIMENT SAMPLES

Annual sediment sampling is planned. Sediment samples will be collected at the same locations as surface water samples. Aqueous samples will be collected first immediately followed by collection of sediment samples. Sediment samples will be obtained following Tetra Tech SOP SA-1.2 with a variance: SOP SA-1.2 states that the "sampling location shall be approximately at the center of the water body, in a depositional area if possible based on sample location restraints (see below), unless the SAP states otherwise." For this SAP, depositional areas with fine-grained sediments should be prioritized over the center of the water body. Depositional areas with fine-grained sediments will be targeted at each location. SOP SA-1.8 will be followed for PFAS considerations. The sampling SOPs are listed in Worksheets #18 and #21 and are in Appendix C. A new pair of nitrile gloves will be worn for each sample collected. Sediment samples will be placed in laboratory-provided containers, preserved as required per analytical methods, stored on ice, and transported under chain-of-custody to Battelle. Refer to Worksheets #15, #18, #20 and #30 for analytical parameters, methods, and procedures.

14.5 SAMPLE MANAGEMENT TASKS

All sampling events will include completing chain-of-custody records and proper packaging to comply with Tetra Tech SOP SA-6.3 and ensure safe arrival at the designated laboratory. Compliance with this SOP will ensure compliance with Department of Transportation (DOT) regulations.

Sample labeling will be performed in accordance with Tetra Tech SOP SA-6.3 and the sample numbering scheme will be in accordance with Worksheet #18. Methods for recording field data will be in accordance with Tetra Tech SOP SA-6.3, and selection of sample containers, sample preservation, packaging, and shipping will be in accordance with Tetra Tech SOP SA-6.1 and the laboratory SOPs. Tetra Tech SOPs are in Appendix C.

The sampling and analysis program is outlined in Worksheet #18. Sampling requirements for each type of analysis (e.g., container type, preservation method, holding time) are listed in Worksheet #19. Field and laboratory QC samples will also be collected as outlined in Worksheet #20.

14.6 DECONTAMINATION OF EQUIPMENT AND PERSONNEL

Equipment and personnel decontamination will be conducted in accordance with Tetra Tech SOP SA-7.1 and SA-1.8. PFAS-specific procedures outlined in the SOP will be followed. Potentially PFAS-containing decontamination steps such as solvent and acid rinse steps will be omitted. Decontamination procedures are not expected to be used for this event because disposable equipment can be used; however, they are documented here in case decontamination is necessary.

14.7 INVESTIGATION-DERIVED WASTE MANAGEMENT

It is anticipated that investigation-derived waste (IDW) materials will be generated during the field investigation. These wastes must be disposed in such a manner that does not contribute to further environmental contamination or pose a threat to public health or safety. Tetra Tech SOP SA-7.1 (Appendix C) provides

information on the handling of IDW including material potentially containing PFAS. Disposal of the IDW following receipt of the analytical data will be coordinated with the Navy.

IDW that will be generated from the field activities includes personal protective equipment (PPE) and decontamination fluids. Decontamination fluids are not expected to be generated because disposable field equipment will be used.

PPE-related waste and disposable equipment waste will be double-bagged and disposed of as municipal solid waste.

14.8 SAMPLE CUSTODY AND SHIPMENT TASKS

Sample custody and shipment tasks and procedures are defined in Tetra Tech SOP SA-6.1 (Appendix C) and are discussed in Worksheet #27.

14.9 COLLECTING QUALITY CONTROL SAMPLES

Field QC samples will be collected at frequencies listed in Worksheet #12.

14.10 ADDITIONAL ANALYTICAL AND REPORTING TASKS

Additional project-related analytical and reporting tasks will include:

- Analyzing samples and generating data.
- Handling and managing data.
- Tracking, storing, archiving and retrieving data and records.
- Reviewing and Assessing Data.
- Preparing Project Reports.

14.10.1 Analyzing Samples and Generating Data

Fixed-base laboratory chemical analyses will be performed by Battelle Laboratories and Katahdin Analytical Services, Inc., which is accredited by the DoD Environmental Laboratory Accreditation Program (ELAP). Copies of the laboratory accreditations are provided in Appendix D. Analyses will be performed in accordance with the analytical methods specified in Worksheet #19. The laboratory will meet the PSLs as shown in Worksheet #15. The laboratory will perform chemical analysis following laboratory-specific SOPs (to be provided separately by the laboratory) developed based on the analytical methods listed in Worksheet #19.

Laboratory data will be delivered to Tetra Tech in the form of an EDD. This information will be captured in the project database that will be uploaded NIRIS.

14.10.2 Data Handling and Management

After the field investigation is completed, the field sampling log sheets will be organized by date and filed in the project files. The field logbooks for this project will be used only for this site and will also be categorized and maintained in the project files after the completion of the field program. Project personnel completing concurrent field sampling activities may maintain multiple field logbooks. The field logbooks will be titled based on date and activity. The data handling procedures to be followed by the laboratory will meet the requirements of the laboratory technical specification. The electronic data will be automatically downloaded into the Tetra Tech database in accordance with proprietary Tetra Tech processes.

14.10.3 Tracking, storing, archiving and retrieving data and records

Data will be tracked from generation to archiving in the Tetra Tech project-specific files. The Tetra Tech Project Chemist (or designee) is responsible for tracking the samples collected and shipped to the subcontracted laboratory. Upon receipt of the data packages from the analytical laboratory, the Tetra Tech Project Chemist

will coordinate the data validation effort, which includes verifying that the data packages are complete and results for all samples have been delivered by the analytical laboratory.

After the data are validated, the data packages will be entered into the Tetra Tech Navy CLEAN file system and archived in secure files. The field records including field log books, sample logs, chain-of-custody records, and field calibration logs will be submitted by the Tetra Tech FOL to be entered into the Tetra Tech Navy CLEAN file system prior to archiving in secure project files. As documents are finalized, all relevant data and records will be uploaded electronically to NIRIS and retained there indefinitely. Tetra Tech will submit Administrative Record Files, Site Files, and Post Decision Files in accordance with the specifications defined in the NAVFAC Environmental Restoration Program Recordkeeping Manual (NAVFAC, 2019). Upon project completion, paper copies will be submitted to the Federal Records Center (FRC) for long-term storage (50 years archival).

The Tetra Tech project files are restricted to designated personnel only. Records may only be borrowed temporarily from the project file using a sign-out system. The Tetra Tech Data Manager maintains the electronic data files. Access to the data files is restricted to qualified personnel only. File and data backup procedures are routinely performed.

14.10.4 Reviewing and Assessing Electronic Data

All electronic results will be verified against the hardcopy data package Form Is for accuracy. One hundred percent of the laboratory data (electronic and PDF report) will be validated in accordance with specifications in Worksheet #36, and qualifiers will be manually added to the database. The manually entered qualifiers will be verified by the DVM or designee, as well as an electronic verification step using proprietary Tetra Tech processes. Then data will be compiled into a NIRIS Electronic Data Deliverable (NEDD) and loaded into NIRIS in accordance with Navy procedures. This process includes a QA review of the data to ensure that the content and format of the data satisfy the requirements of NIRIS uploads. The NEDD is submitted through a data checker into NIRIS, which also ensures the format is acceptable.

Data verification, validation, and usability assessment processes are described on Worksheets #34 through #37.

14.10.5 Project Reports

An annual summary report evaluating and discussing all quarterly rounds of surface water sampling, annual sediment sampling, and semiannual reference station sampling will be prepared. A report of results will be prepared and submitted for review. The statement of work (SOW) provided by the Navy did not include an example of the report format required for this project. This guidance has not yet been provided by the Navy, but the report, regardless of the format, will include the following elements:

- Introduction and Background - a brief description of the history of the site and the rationale for performing this work.

- Description of Field Investigation - a summary of the work performed in accordance with the approved SAP, any approved SAP addenda, and any field modifications as documented by the Tetra Tech FOL.

- Data Usability Assessment - a summary of quantitative analytical performance indicators such as completeness, precision, bias, and sensitivity; and qualitative indicators such as representativeness and comparability. This section will also include a reconciliation of project data with the DQOs and identification of deviations from this SAP. A data usability assessment will be used to identify significant deviations in analytical performance that could affect the ability to meet project objectives. The elements of this review are presented in Worksheet #37.

- Discussion of Results - a discussion of the analytical results and a comparison to PSLs. Detected contaminant concentrations will be tabulated and depicted on a tag map showing the sampling locations and results.

- Summary and Conclusions - a summary of the findings, conclusions as to whether project objectives were met or if significant data gaps remain, and recommendations for further investigations (if needed).

- Attachments - Boring logs, copies of field log books, sample logs, data validation reports and all other appropriate documentation will be included in separate attachments.

Additionally, an annual technical memorandum reporting results will be prepared and submitted to the regulatory team following the completion of four rounds of sampling. This report is expected to be in technical memorandum format and provide a brief summary of sampling activities with the validated results provided in table format. Data evaluation will not be included in the quarterly technical memorandum.

SAP Worksheet #15 -- Reference Limits and Evaluation Table
(UFP-QAPP Manual Section 2.8.1)

Matrix: Surface Water
Analytical Group: PFAS by Liquid Chromatograph/Tandem Mass Spectroscopy (LC/MS/MS) Compliant with QSM 5.1.1 Table B-15 [1]

Analyte	CAS Number	Human Health Project Screening Level (PSL)[2]	PSL Reference[3]	Ecological PSL[2] (ng/L)	PSL Reference[4]	Practical Quantitation Limit Goals (PQLG) (ng/L)	Battelle		
							LOQ (ng/L)	LOD (ng/L)	DL (ng/L)
PFAS by LC/MS/MS Compliant with QSM 5.1.1 Table B-15									
Perfluorooctanoic acid (PFOA)	335-67-1	1,400	RSL Calc	2,900,000	Giesy	NA	5.0	0.5	0.18
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	1,400	RSL Calc	2.6	RIVM	NA	5.0	0.5	0.19
Perfluorobutanesulfonic acid (PFBS)	375-73-5	1,400,000	RSL Calc	17,000,000	Giesy	NA	5.0	0.5	0.13
Perfluorodecanoic acid (PFDA)	335-76-2	NA	NA	NA	NA	NA	5.0	0.5	0.16
Perfluorododecanoic acid (PFDoA)	307-55-1	NA	NA	NA	NA	NA	5.0	0.5	0.18
Perfluoroheptanoic acid (PFHpA)	375-85-9	NA	NA	NA	NA	NA	5.0	0.5	0.16
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	NA	NA	NA	NA	NA	5.0	0.4	0.11
Perfluorohexanoic acid (PFHxA)	307-24-4	NA	NA	NA	NA	NA	5.0	0.5	0.19
Perfluorononanoic acid (PFNA)	375-95-1	NA	NA	NA	NA	NA	5.0	1.0	0.26
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	NA	NA	NA	NA	NA	5.0	1.0	0.25
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	NA	NA	NA	NA	NA	5.0	0.5	0.15
Perfluoroundecanoic acid (PFUnA)	2058-94-8	NA	NA	NA	NA	NA	5.0	1.0	0.29
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	NA	NA	NA	NA	NA	5.0	2.0	0.56
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	NA	NA	NA	NA	NA	5.0	1.0	0.49
Hexafluoropropylene oxide dimer acid, (HFPO-DA)	13252-13-6	NA	NA	NA	NA	NA	5.0	0.4	0.20
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	NA	NA	NA	NA	NA	5.0	0.4	0.18
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	NA	NA	NA	NA	NA	5.0	0.4	0.10
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	NA	NA	NA	NA	NA	5.0	0.4	0.18

(1) The DoD QSM version 5.1.1 is being used to govern this effort (DoD, 2018a). Analysis will be completed in accordance with Battelle SOPs to be submitted separately. Battelle's accreditation meets the requirements of QSM 5.1.1 Table B-15.
(2) If screening levels change during the PFAS investigations, the most recent values will be used for comparison.

(3) The screening levels for human health were derived using the EPA RSL Calculator based on a target cancer risk of 1E-6 (applicable to PFOA only) and a target hazard quotient of 0.1 with default exposure assumptions for a recreational receptor (Resolution, 2019). Additional detail is presented in Appendix B.

(4) The screening levels for ecological receptors are the most stringent of those used in the RI (Resolution, 2019). Giesy – (Giesy, et al., 2010) and (RIVM - Dutch National Institute for Public Health and the Environment, 2010). Additional detail is presented in Appendix B.

Results less than the DL will be reported as the LOD value followed by a “U” qualifier to indicate that the analyte was not detected at the indicated concentration level.

Matrix: Sediment
Analytical Group: PFAS by Liquid Chromatograph/Tandem Mass Spectroscopy (LC/MS/MS) Compliant with QSM 5.1.1 Table B-15 [1]

Analyte	CAS Number	Human Health PSL[2] (ng/g)	PSL Reference[3]	Ecological PSL[2] (ng/g)	PSL Reference[4]	PQLG (ng/g)	Battelle		
							LOQ (ng/g)	LOD (ng/g)	DL (ng/g)
PFAS by LC/MS/MS Compliant with QSM 5.1.1 Table B-15									
Perfluorooctanoic acid (PFOA)	335-67-1	851	RSL Calc	NA	NA	NA	5.0	1.0	0.50
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	851	RSL Calc	67	EA 2004	NA	5.0	1.0	0.27
Perfluorobutanesulfonic acid (PFBS)	375-73-5	851,000	RSL Calc	NA	NA	NA	5.0	1.0	0.36
Perfluorodecanoic acid (PFDA)	335-76-2	NA	NA	NA	NA	NA	5.0	1.0	0.27
Perfluorododecanoic acid (PFDoA)	307-55-1	NA	NA	NA	NA	NA	5.0	5.0	0.24
Perfluoroheptanoic acid (PFHpA)	375-85-9	NA	NA	NA	NA	NA	5.0	1.0	0.44
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	NA	NA	NA	NA	NA	5.0	5.0	0.22
Perfluorohexanoic acid (PFHxA)	307-24-4	NA	NA	NA	NA	NA	5.0	1.0	0.33
Perfluorononanoic acid (PFNA)	375-95-1	NA	NA	NA	NA	NA	5.0	1.0	0.43
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	NA	NA	NA	NA	NA	5.0	2.0	0.63
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	NA	NA	NA	NA	NA	5.0	1.0	0.28
Perfluoroundecanoic acid (PFUnA)	2058-94-8	NA	NA	NA	NA	NA	5.0	1.0	0.41
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	NA	NA	NA	NA	NA	5.0	2.5	1.12
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	NA	NA	NA	NA	NA	5.0	2.0	0.57
Hexafluoropropylene oxide dimer acid, (HFPO-DA)	13252-13-6	NA	NA	NA	NA	NA	5.0	2.0	0.57
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	NA	NA	NA	NA	NA	5.0	1.0	0.40
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	NA	NA	NA	NA	NA	5.0	1.0	0.45
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	NA	NA	NA	NA	NA	5.0	1.0	0.32

(1) The DoD QSM version 5.1.1 is being used to govern this effort (DoD, 2018a). Analysis will be completed in accordance with Battelle SOPs to be submitted separately. Battelle's accreditation meets the requirements of QSM 5.1.1 Table B-15.
(2) If screening levels change during the PFAS investigations, the most recent values will be used for comparison.
(3) The screening levels for human health were derived using the EPA RSL Calculator based on a target cancer risk of 1E-6 (applicable to PFOA only) and a target hazard quotient of 0.1 with default exposure assumptions for a recreational receptor (Resolution, 2019). Additional detail is presented in Appendix B.

(4) The screening level for ecological receptors is the most stringent of those used in the RI (Resolution, 2019). EA 2004 – (Environment Agency, 2004). Additional detail is presented in Appendix B.

Results less than the DL will be reported as the LOD value followed by a "U" qualifier to indicate that the analyte was not detected at the indicated concentration level.

Matrix: Sediment
Analytical Group: Total Organic Carbon

Analyte	CAS Number	Human Health PSL[2] (mg/kg)	PSL Reference[3]	Ecological PSL[2] (mg/kg)	PSL Reference[4]	PQLG (mg/kg)	Katahdin		
							LOQ (mg/kg)	LOD (mg/kg)	DL (mg/kg)
TOC by SW-846 9060A									
Total Organic Carbon	NA	NC	NA	NC	NA	NA	400	300	84.8

Results less than the DL will be reported as the LOD value followed by a “U” flag to indicate that the analyte was not detected at the indicated concentration level.

SAP Worksheet #16 -- Project Schedule / Timeline Table
(UFP-QAPP Manual Section 2.8.2)

Activities	Organization	Dates		Deliverable	Deliverable Due Date
		Anticipated Date(s) of Initiation	Anticipated Date of Completion		
SAP Development	Tetra Tech	February 2019	July 2019	SAP	July 2019
Surface Water and Sediment Sampling Event 1	Tetra Tech	July 2019	August 2019	NA	NA
Analytical Data	Battelle Lab and Katahdin Analytical Services, Inc.	July 2019	August 2019	Laboratory Report	August 2019
Data Validation	Tetra Tech	August 2019	September 2019	Data Validation Report	September 2019
Surface Water Sampling Event 2	Tetra Tech	October 2019	October 2019	NA	NA
Analytical Data	Battelle Lab	October 2019	November 2019	Laboratory Report	November 2019
Data Validation	Tetra Tech	November 2019	December 2019	Data Validation Report	December 2019
Surface Water Sampling Event 3	Tetra Tech	January 2020	January 2020	NA	NA
Analytical Data	Battelle Lab	January 2020	February 2020	Laboratory Report	February 2020
Data Validation	Tetra Tech	February 2020	March 2020	Data Validation Report	March 2020
Surface Water Sampling Event 4	Tetra Tech	April 2020	April 2020	NA	NA
Analytical Data	Battelle Lab	April 2020	May 2020	Laboratory Report	May 2020
Data Validation	Tetra Tech	May 2020	June 2020	Data Validation Report	June 2020
2019-2020 Annual Report	Tetra Tech	January 2020	July 2020	Draft Report	July 2020

Note: The first annual report will include results from four rounds of surface water sampling and one round of sediment sampling.

SAP Worksheet #17 -- Sampling Design and Rationale
(UFP-QAPP Manual Section 3.1.1)

Co-located surface water and sediment samples will be collected from 30 locations and analyzed for the PFAS compounds listed in Worksheet #15. Surface water samples will be collected on a quarterly basis and sediment samples will be collected annually. The proposed locations, as shown on Figure 3, were chosen to provide representative coverage of the area that could possibly be impacted by PFAS contamination. Rationale for inclusion of each location is located in Worksheet #18. An additional six locations, SW/SED-02, SW/SED-21A, SW/SED-66, SW/SED-68, SW/SED-72, and SW/SED-73, will be collected for a single event only. The project team will determine if these locations will be added to the quarterly program based on an evaluation of the results.

Co-located surface water and sediment samples will be collected from 13 additional reference locations for the PFAS compounds listed in Worksheet #15. The proposed reference locations, as shown on Figure 4, were chosen to provide coverage of areas outside the impact of PFAS contamination from the site. Rationale for inclusion of each reference location is located in Worksheet #18.

Surface water will be collected from within the water column, not from the surface of the water. When collecting more than one sample in moving water, collect the farthest downstream sample first, and continue sample collection in an upstream direction. In general, work from zones suspected of low contamination to zones of high contamination. Sediment samples will be collected from the top six inches of the stream bed from areas with fine-grained sediment deposits (not the center of the stream bed as stated in SOP SA-1.2). See Worksheets #14 and #21 for more details about the sampling procedures.

Surface water sampling will occur quarterly for near-site locations, and semiannually for reference locations (a total of 154 surface water samples annually); and sediment sampling will be conducted annually at all locations (50 sediment samples annually). NAVFAC and Tetra Tech will be the primary users of the data generated. EPA and PADEP will be provided the data as part of the report submittal.

Field Quality Control Samples

Worksheets #12 and #20 present the field QC sample summary. Additional sample volume will be collected as necessary for the laboratory QC analysis of MS/MSDs.

SAP Worksheet #18 -- Location-Specific Sampling Methods/SOP Requirements Table
(UFP-QAPP Manual Section 3.1.1)

Sampling Location	Sampling ID Number	Matrix	Analytical Group	Concentration Level	Number of Samples (identify field duplicates)(1)	Sampling SOP Reference	Rationale for Sampling Location
Quarterly Surface Water / Annual Sediment Sampling Locations (Collocated)							
SW/SED-01	Example[2,3]: WGNA-SW-01-YYYYMMDD WGNA-SD-01-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Elevated	1 SW 1 SED (One FB will be collected for PFAS analysis per day of sampling)[3]	SA-1.2 and SA-1.8	Onsite Outfall #6A; PFOS exceedance
SW/SED-03	WGNA-SW-03-YYYYMMDD WGNA-SD-03-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Onsite Outfall #5
SW/SED-05	WGNA-SW-05-YYYYMMDD WGNA-SD-05-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Downstream from base boundary on unnamed tributary (UNT) to Park Creek
SW/SED-10	WGNA-SW-10-YYYYMMDD WGNA-SD-10-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Upstream reference for Park Creek; upstream of confluence with UNT
SW/SED-14	WGNA-SW-14-YYYYMMDD WGNA-SD-14-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Park Creek upstream from Log College wastewater treatment plant and directly downstream of northern ponding area along Park Creek.
SW/SED-16	WGNA-SW-16-YYYYMMDD WGNA-SD-16-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Park Creek downstream from Log College wastewater treatment plant

Sampling Location	Sampling ID Number	Matrix	Analytical Group	Concentration Level	Number of Samples (identify field duplicates)(1)	Sampling SOP Reference	Rationale for Sampling Location
SW/SED-18	WGNA-SW-18-YYYYMMDD WGNA-SD-18-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Park Creek Downstream from UNT 2 to Park Creek and SW-28
SW/SED-19	WGNA-SW-19-YYYYMMDD WGNA-SD-19-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Park Creek downstream from Log College wastewater treatment plant
SW/SED-20	WGNA-SW-20- YYYYMMDD WGNA-SD-20-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW + 1 field duplicate 1 SED + 1 field duplicate	SA-1.2 and SA-1.8	Little Neshaminy Creek upstream of confluence with UNT from Northwest
SW/SED-26	WGNA-SW-26-YYYYMMDD WGNA-SD-26-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Elevated	1 SW + 1 field duplicate 1 SED + 1 field duplicate	SA-1.2 and SA-1.8	Outfall #9; UNT 2 to Park Creek: PFOS exceedance; Northwest ANG boundary
SW/SED-27	WGNA-SW-27-YYYYMMDD WGNA-SD-27-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Elevated	1 SW 1 SED	SA-1.2 and SA-1.8	UNT 2 to Park Creek: PFOS exceedance. Downstream ANG.
SW/SED-28	WGNA-SW-28-YYYYMMDD WGNA-SD-28-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Elevated	1 SW 1 SED	SA-1.2 and SA-1.8	Park Creek upstream of UNT 2 confluence; PFOS exceedance
SW/SED-30	WGNA-SW-30-YYYYMMDD WGNA-SD-30-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW + 1 field duplicate 1 SED + 1 field duplicate	SA-1.2 and SA-1.8	UNT upstream of confluence with Little Neshaminy Creek
SW/SED-31	WGNA-SW-31-YYYYMMDD WGNA-SD-31-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Little Neshaminy Creek downstream of confluence with Park Creek and UNT
SW/SED-34	WGNA-SW-34-YYYYMMDD WGNA-SD-34-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Little Neshaminy Creek downstream of confluence with UNT from eastern side of site

Sampling Location	Sampling ID Number	Matrix	Analytical Group	Concentration Level	Number of Samples (identify field duplicates)(1)	Sampling SOP Reference	Rationale for Sampling Location
SW/SED-34A	WGNA-SW-34A-YYYYMMDD WGNA-SD-34A-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Little Neshaminy Creek downstream of confluence with UNT from eastern side of site
SW/SED-41	WGNA-SW-41-YYYYMMDD WGNA-SD-41-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Downstream of UNT and UNT to Little Neshaminy
SW/SED-42	WGNA-SW-42-YYYYMMDD WGNA-SD-42-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	UNT from eastern side of site upstream of confluence with Little Neshaminy Creek
SW/SED-45	WGNA-SW-45-YYYYMMDD WGNA-SD-45-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Onsite Outfall #2
SW/SED-46	WGNA-SW-46-YYYYMMDD WGNA-SD-46-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	UNT to Pennypack Creek downstream of Outfall #2.
SW/SED-48	WGNA-SW-48-YYYYMMDD WGNA-SD-48-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Pennypack Creek upstream of confluence with tributaries from site
SW/SED-49	WGNA-SW-49-YYYYMMDD WGNA-SD-49-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Elevated	1 SW 1 SED	SA-1.2 and SA-1.8	PFOS exceedance; UNT to Pennypack Creek upstream of confluence with Captain's Pond tributary
SW/SED-51	WGNA-SW-51-YYYYMMDD WGNA-SD-51-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Elevated	1 SW 1 SED	SA-1.2 and SA-1.8	Onsite North Ponding Area Southeast Basin at Outfall #8; PFOS exceedance
SW/SED-52	WGNA-SW-52-YYYYMMDD WGNA-SD-52-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Onsite Outfall #7

Sampling Location	Sampling ID Number	Matrix	Analytical Group	Concentration Level	Number of Samples (identify field duplicates)(1)	Sampling SOP Reference	Rationale for Sampling Location
SW/SED-53	WGNA-SW-53-YYYYMMDD WGNA-SD-53-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Immediately downstream of base boundary along Horsham Road; intermittent tributary to Pennypack Creek
SW/SED-54	WGNA-SW-54-YYYYMMDD WGNA-SD-54-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Elevated	1 SW 1 SED	SA-1.2 and SA-1.8	Elevated PFOS; intermittent tributary to Pennypack Creek; to monitor impact to shallow groundwater downstream at Horsham Water and Sewer Authority (HWSA) well (not shown on Figure 3).
SW/SED-57	WGNA-SW-57-YYYYMMDD WGNA-SD-57-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Onsite Outfall #14; Sometimes dry at southernmost location; Sample will be taken from first location where there is standing water along this UNT to Little Neshaminy Creek.
SW/SED-63	WGNA-SW-63-YYYYMMDD WGNA-SD-63-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Park Creek upstream of northern base boundary
SW/SED-64	WGNA-SW-64-YYYYMMDD WGNA-SD-64-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Second UNT to Park Creek upstream of confluence with site UNT
NESHAMINY REF4	WGNA-SW- NCREF4-YYYYMMDD WGNA-SD- NCREF4-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Downstream Neshaminy Creek reference location; USGS Station 01465200 Neshaminy Creek near Penns Park, PA

Sampling Location	Sampling ID Number	Matrix	Analytical Group	Concentration Level	Number of Samples (identify field duplicates)(1)	Sampling SOP Reference	Rationale for Sampling Location
Single Event Surface Water / Sediment Sampling Locations (Collocated)							
SW/SED-02	WGNA-SW-02-YYYYMMDD WGNA-SD-02-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Ponding upstream of Outfall #5; Data will be used to evaluate trends
SW/SED-21A	WGNA-SW-21A-YYYYMMDD WGNA-SD-21A-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Elevated	1 SW 1 SED	SA-1.2 and SA-1.8	Outfall from Northwestern base boundary to monitor groundwater resurfacing at Park Creek
SW/SED-66	WGNA-SW-66-YYYYMMDD WGNA-SD-66-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Onsite Captain's Pond near southeastern boundary fed by groundwater seep; Upstream of Outfall #2
SW/SED-68	WGNA-SW-68-YYYYMMDD WGNA-SD-68-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Onsite northern ponding basin between Graeme Park Road and Keith Valley Road; Separate from Outfall #8
SW/SED-72	WGNA-SW-72-YYYYMMDD WGNA-SD-72-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Neshaminy Creek upstream of waterfall
SW/SED-73	WGNA-SW-72-YYYYMMDD WGNA-SD-72-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Neshaminy Creek downstream of waterfall

Sampling Location	Sampling ID Number	Matrix	Analytical Group	Concentration Level	Number of Samples (identify field duplicates)[(1)]	Sampling SOP Reference	Rationale for Sampling Location
Semiannual Reference Surface Water (Spring and Summer Only)/ Annual Sediment Sampling Locations (Collocated) *Listed in order from upstream to downstream locations*							
PARK CREEK REF1	WGNA-SW-PCREF1-YYYYMMDD WGNA-SD- PCREF1-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Upstream Park Creek reference location; West of site
Little Neshaminy REF1	WGNA-SW- LNCREF1-YYYYMMDD WGNA-SD- LNCREF1-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Upstream Little Neshaminy reference location; West of site. Location of former SW/SED-29
SW/SED-56	WGNA-SW-56-YYYYMMDD WGNA-SD-56-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	First downstream Pennypack Creek reference location; Southeast of site
SW/SED-69	WGNA-SW-69-YYYYMMDD WGNA-SD-69-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Second downstream Pennypack Creek reference location; Southeast of site
SW/SED-70	WGNA-SW-70-YYYYMMDD WGNA-SD-70-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Third downstream Pennypack Creek reference location; Southeast of site
PENNYPACK REF1	WGNA-SW-PPREF1-YYYYMMDD WGNA-SD-PPREF1-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Unnamed tributary of Pennypack (Source: PADEP eMaps) located south of PA Turnpike upstream of Pennypack Creek
PENNYPACK REF2	WGNA-SW-PPREF2-YYYYMMDD WGNA-SD-PPREF2-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Unnamed tributary upstream of Pennypack Creek.

Sampling Location	Sampling ID Number	Matrix	Analytical Group	Concentration Level	Number of Samples (identify field duplicates)[(1)]	Sampling SOP Reference	Rationale for Sampling Location
SW/SED-36	WGNA-SW-36-YYYYMMDD WGNA-SD-36-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	First downstream Little Neshaminy Creek reference location; Northeast of site; USGS Station 01464907 Little Neshaminy C at Valley Road nr Neshaminy PA
SW/SED-67	WGNA-SW-67-YYYYMMDD WGNA-SD-67-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Second downstream Little Neshaminy Creek reference location; northeast of site
SW/SED-65	WGNA-SW-65-YYYYMMDD WGNA-SD-65-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Third downstream Little Neshaminy Creek reference location; Northeast of site
SW/SED-71	WGNA-SW-71ANG-YYYYMMDD WGNA-SD-71ANG-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Fourth downstream Little Neshaminy Creek reference location; Northeast of site. Adjacent to former SW/SED-33 ANG Station.
NESHAMINY REF1	WGNA-SW- NCREF1-YYYYMMDD WGNA-SD- NCREF1-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	First Neshaminy Creek reference location; Upstream of confluence with Little Neshaminy Creek; USGS Station 01464750 Neshaminy Creek near Rushland, PA
NESHAMINY REF2	WGNA-SW- NCREF2-YYYYMMDD WGNA-SD- NCREF2-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Mill Creek tributary to Neshaminy Creek. Downstream confluence with Little Neshaminy Creek to monitor Mill Creek discharges to Neshaminy Creek.

Sampling Location	Sampling ID Number	Matrix	Analytical Group	Concentration Level	Number of Samples (identify field duplicates)(1)	Sampling SOP Reference	Rationale for Sampling Location
NESHAMINY REF3	WGNA-SW- NCREF3-YYYYMMDD WGNA-SD- NCREF3-YYYYMMDD	Surface Water / Sediment	PFAS and TOC[4]	Trace	1 SW 1 SED	SA-1.2 and SA-1.8	Newtown Creek tributary to Neshaminy Creek; Farthest downstream reference location

(1) Field duplicate locations will be determined in the field.

(2) Example Sample Designations: WGNA-SW-02-20190501 represents a surface water sample collected at the NAS JRB Willow Grove site from surface water sampling location 02 on May 1, 2019.

(3) Example FB Designation: WGNA-FB-02-20190501 represents a field blank collected at the NAS JRB Willow Grove site from surface water/sediment sampling location 02 on May 1, 2019. Only one FB is needed for surface water per day of sampling; FBs are not collected for sediment. This nomenclature style can be applied to equipment rinsate blanks by replacing the "FB" with "RB".

(4) TOC will be analyzed in sediment only.

SAP Worksheet #19 -- Field Sampling Requirements Table

(UFP-QAPP Manual Section 3.1.1)

Matrix	Analytical Group	Analytical and Preparation Method / SOP Reference	Containers (number, size, and type)	Sample Volume (units)	Preservation Requirements (chemical, temperature, light protected)[1]	Maximum Holding Time[2] (preparation / analysis)
Surface water and aqueous QC	PFAS	PFAS by LCMSMS Compliant with QSM 5.1.1 Table B-15 / 5-370-07, 5-369-07	2-250-milliliter (mL) HDPE	250 mL	Temperature must be above freezing and less than or equal to 10°C when received at the laboratory. Samples stored in the lab must be held at or below 6 °C until extraction but should not be frozen.	14 days from sampling to extraction/ 28 days from extraction to analysis
Sediment	PFAS	PFAS by LCMSMS Compliant with QSM 5.1.1 Table B-15 / 5-370-07, 5-369-07	2-250-gram Glass Jar	250 grams	Temperature must be above freezing and less than or equal to 10°C when received at the laboratory. Samples stored in the lab must be held at or below 6 °C until extraction but should not be frozen.	14 days from sampling to extraction/ 28 days from extraction to analysis
Sediment	TOC	SW-846 9060A / CA-741	2-ounce wide-mouth jar	0.5 gram	Cool to ≤ 6 ° C	14 days to analysis

Notes:

(1) For PFAS sampling, samples with temperatures significantly greater than 10° C at the time of collection may need to be iced or refrigerated for a period of time in order to chill them prior to shipping. This will allow them to be shipped with enough ice to meet the above requirements.

(2) Maximum holding time is calculated from the time the sample is collected to the time the sample is prepared/extracted.

SAP Worksheet #20 -- Field Quality Control Sample Summary Table
(UFP-QAPP Manual Section 3.1.1)

Matrix	Analytical Group	Conc. Level	No. of Sampling Locations	No. of Field Duplicates	No. of MS/MSD[1]	No. of FRBs	No. of Equip. Blanks	No. of Trip Blank Samples	Total No. of Samples to Lab
Quarterly Surface Water / Annual Sediment Sampling Locations (Collocated)									
Surface Water	PFAS	Trace[(2)]	30/event	3/event	2/2 (per event)	1/day (per event)	1/day (per non-disposable sampling equipment used per event)	NA	39/event
Sediment	PFAS	Trace[(2)]	30/event	3/event	2/2 (per event)	See above	1/day (per non-disposable sampling equipment used per event)	NA	39/event
Sediment	TOC	Low	30/event	3/event	2/2 (per event)	NA	1/day (per non-disposable sampling equipment used per event)	NA	39/event
Single Event Surface Water / Sediment Sampling Locations (Collocated)									
Surface Water	PFAS	Trace[(2)]	6	Included above	Included above	Included above	Included above	NA	6
Sediment	PFAS	Trace[(2)]	6	Included above	Included above	Included above	Included above	NA	6
Sediment	TOC	Low	6	Included above	Included above	NA	Included above	NA	6
Semiannual Reference Surface Water / Annual Reference Sediment Sampling Locations (Collocated)									
Surface Water	PFAS	Trace	13/event	2/event	1/1 (per event)	1/day (per event, unless included in quarterly event frequency)	1/day (per non-disposable sampling equipment used per event)	NA	18/event
Sediment	PFAS	Trace	13/event	2/event	1/1 (per event)	See above	Included above	NA	18/event
Sediment	TOC	Low	13/event	2/event	1/1 (per event)	NA	Included above	NA	18/event

(1) Although the MS/MSD is not typically considered a field QC, it is included here, the sample counts for both the MS and MSD are included in the "Total No. of Samples to Laboratory." Locations where MS/MSD samples are collected, as well as other field QC samples, may be altered at the discretion of the Tetra Tech FOL as long as the re-allocations support attainment of project objectives.

(2) The PFAS analytical method analyzes at trace levels (DL and LODs = <1 part per trillion [ppt], LOQ = 5 ppt), therefore sample results that are not detected or detected below or near the reporting limits of the method are considered trace levels. Locations where PFOS has exceeded screening criteria in the Phase I RI, will be considered elevated and are indicated in Worksheet #18.

SAP Worksheet #21 -- Project Sampling SOP References Table
(UFP-QAPP Manual Section 3.1.2)

Methods for sample collection that are described in SOPs listed in the table below have been developed to ensure sample quality (integrity and representativeness).

Reference Number	Title, Revision Date and / or Number	Originating Organization	Equipment Type	Modified for Project Work? (Y/N)	Comments
SA-1.1	Groundwater Sample Acquisition and Onsite Water Quality Testing (Revision 9, 7/15/2016)	Tetra Tech	Water quality meter, turbidity meter	Y	Contained in Appendix C. **Use only the portion of the SOP for field measurement of water quality parameters**.
SA-1.2	Surface Water and Sediment Sampling (Revision 8, 9/12/2016)	Tetra Tech	Disposable sample trowels, bottleware	Y	Contained in Appendix C. **Sediment samples will be collected from areas of depositional fine-grained sediment, not from the center of the stream bed.**
SA-1.8	Sample Acquisition for PFAS Analysis (Revision 4, 5/18/2018)	Tetra Tech	Sample Bottleware	N	This SOP is a supplement to SOP SA-1.1 and SA-1.2 which is the sampling procedure. Contained in Appendix C.
SA-6.1	Non-Radiological Sample Handling (Revision 5, 7/15/2016)	Tetra Tech	Sample Bottleware, Packaging Material, Shipping Materials	N	Contained in Appendix C.
SA-6.3	Field Documentation (Revision 6, 9/28/2017)	Tetra Tech	Field Logbook, Field Sample Forms, Boring Logs	N	Contained in Appendix C.
SA-7.1	Decontamination of Field Equipment and Management of Investigation Derived Waste (Revision 8, 7/15/2016)	Tetra Tech	Buckets, detergent, PFAS-free water, and brushes.	Y	Contained in Appendix C. **Liquinox will be used as the detergent because it is PFAS free; solvent- and acid-rinse steps will be omitted.**

SAP Worksheet #22 -- Field Equipment Calibration, Maintenance, Testing, and Inspection Table
(UFP-QAPP Manual Section 3.1.2.4)

REQUIREMENTS FOR INSPECTION AND ACCEPTANCE OF SUPPLIES AND CONSUMABLES

Supplies and consumables are those items necessary to support the sampling and analytical operation, including but not limited to: bottleware (cleaned to the IChem 300 cleanliness standard), HDPE tubing, preservatives, various types of water (potable, deionized, organic-free, etc.). Upon receipt of supplies, the Tetra Tech PM will ensure that types and quantities of supplies received are consistent with what was ordered and what is indicated on the packing list and invoice for the material. The supplier will be contacted immediately if there is any discrepancy identified.

Field Equipment	Activity	Frequency	Acceptance Criteria	Corrective Action	Resp. Person	SOP Reference	Comments
Multi-parameter Water Quality Meter	Visual Inspection and calibration in accordance with manufacturer's instructions. Calibration verification with second source standard; use calibration check standard in middle of calibration range. Keep spare batteries and calibration solutions in carrying case.	Calibration prior to use on each day of use. Calibration verification immediately after calibration and at end of day of use.	Calibration in accordance with manufacturer's instructions. Calibration Check values should fall within these tolerances of the true value: Temperature: Calibrated by instrument supplier; verify calibration is valid during use. pH: ± 0.2 Specific Conductance: ± 5.0% Dissolved Oxygen: ±0.3 mg/L.	Adjust calibration. If unable to calibrate, replace meter.	FOL or Designee	Manufacturer's Guidance	Horiba U-50 (or equivalent)
Turbidity Meter	Same as multi-parameter meter calibrations and calibration checks. Acceptance limits do not apply to turbidity–free water sold as a standard by a vendor (i.e., a blank), but water must meet the vendor's stated value (typically < 0.1 NTU). This water may be used to set the zero point according to the instrument manufacturer's manual.	Same as multi-parameter meter calibrations and calibration checks	Calibration in accordance with manufacturer's instructions. Calibration Check value should fall within these tolerances of the true value: 0.1-10 NTUs: ±10% 11-40 NTUs: ±8% 41-100 NTUs ±6.5% >100 NTUs: ±5%	Reattempt calibration. If it does not calibrate, replace meter.	FOL or Designee	Manufacturer's Guidance	LaMotte 2020 (or equivalent); keep spare batteries in carrying case.

Field Equipment	Activity	Frequency	Acceptance Criteria	Corrective Action	Resp. Person	SOP Reference	Comments
Peristaltic Pump	Visual inspection for functionality; no calibration.	Daily before use.	Pump is operational and flow rate appears to be constant and is sufficiently low to not draw down the water level too quickly.	Replace pump.	FOL or Designee	Manufacturer's Guidance	GeoTech Series II (or equivalent)
GPS	Visual inspection and operation in accordance with manufacturer's instructions. Calibration not required according to manufacturer; however, no fewer than six satellite signals must be acquired.	Daily before use.	GPS is operational.	Replace if not operational.	Tetra Tech FOL or designee	Manufacturer's Guidance	Trimble Geoexplorer 6000 Series or equivalent

SAP Worksheet #23 -- Analytical SOP References Table

(UFP-QAPP Manual Section 3.2.1)

Lab SOP Number[1]	Title, Revision Date, and/or Number	Definitive or Screening Data	Matrix and Analytical Group	Instrument	Organization Performing Analysis	Variance to QSM? (Y/N)	Modified for Project Work? (Y/N)
5-369-07	Analysis of Poly and Perfluoroalkyl Substances in Environmental Samples by Liquid Chromatography and Tandem Mass Spectrometry (LC-MS/MS) Revision 7, 3/6/2019	Definitive	Surface Water Sediment PFAS	LCMSMS	Battelle	N	N
5-370-07	Extraction of Poly and Perfluoroalkyl Substances from Environmental Matrices, 05/11/2018 Revision 7, 10/16/2018	Definitive	Extraction, Surface Water Sediment PFAS	NA	Battelle	N	N
6-010-19	Sample Receipt, Custody, and Handling, 10/2018, revision 19	NA	Sample Receipt	NA	Battelle	N	N
5-114-09	The Storage and Disposal of Regulated and Non-Regulated Waste, 1/2015 (reviewed 7/18), Revision 9	NA	Sample Disposal	NA	Battelle	N	N
CA-741	Determination of Total Organic Carbon in Solids Using the EPA Region II Method Lloyd Kahn and SW-846 9060 Mod., 01/19, Revision 8.	Definitive	Sediment TOC	Total Organic Carbon Analyzer	Katahdin	N	N

[1] Laboratory SOPs will be submitted directly by the laboratory

SAP Worksheet #24 -- Analytical Instrument Calibration Table

(UFP-QAPP Manual Section 3.2.2)

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference (SOPs to be provided by the laboratory)
LCMSMS – PFAS by LCMSMS Compliant with QSM 5.1.1 Table B-15	Aqueous Sample Preparation	Each sample and associated batch QC samples.	Solid Phase Extraction (SPE) must be used unless samples are known to contain high PFAS concentrations (e.g., AFFF formulations). Inline SPE is acceptable. Samples of known high PFAS concentrations can be prepared by serial dilution instead of SPE, with documented project approval.	NA	NA	5-370-07
LCMSMS – PFAS by LCMSMS Compliant with QSM 5.1.1 Table B-15	Soil and Sediment Sample Preparation.	Each sample and associated batch QC samples.	Entire sample received by the laboratory must be homogenized prior to subsampling.	NA	NA	5-370-07
LCMSMS – PFAS by LCMSMS Compliant with QSM 5.1.1 Table B-15	Sample Cleanup Procedure using ENVI-Carb™ or equivalent	Each sample and associated batch QC samples. Not applicable to AFFF formulation samples.	Removal of interferences from matrix. Cleanup should reduce bias from matrix background	NA. Flagging is not appropriate.	NA	5-370-07
LCMSMS – PFAS by LCMSMS Compliant with QSM 5.1.1 Table B-15	Mass calibration	Initially prior to use and after performing major maintenance, as required to maintain documented instrument sensitivity and stability performance.	Calibrate the mass scale of the MS with calibration compounds and procedures described by the manufacturer. Entire range needs to be mass calibrated.	NA. Flagging is not appropriate.	Analyst	5-369-07

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference (SOPs to be provided by the laboratory)
LCMSMS – PFAS by Modified Method 537 LCMSMS Compliant with QSM 5.1.1 Table B-15	Tune check	When the masses fall outside of the ±0.5 atomic mass unit (amu) of the true value (as determined by the product ion formulas).	Mass assignments of tuning standard within 0.5 amu of true value. No samples will be analyzed without a valid tune.	Retune instrument and verify. If the tuning will not meet acceptance criteria, an instrument mass calibration must be performed and the tune check repeated. Flagging is not appropriate.	Analyst	5-369-07
LCMSMS – PFAS by LCMSMS Compliant with QSM 5.1.1 Table B-15	Mass spectral acquisition rate	Each analyte, extracted internal standard analyte, and injection internal standard analyte.	A minimum of 10 spectra scans are acquired across each chromatographic peak.	NA. Flagging is not appropriate.	Analyst	5-369-07
LCMSMS – PFAS by LCMSMS Compliant with QSM 5.1.1 Table B-15	Calibration, calibration verification, and spiking standards	All analytes.	Standards containing both branched and linear isomers must be used when commercially available. If not available, the total response of the analyte must be integrated (i.e., accounting for peaks that are identified as linear and branched isomers) and quantitated using a calibration curve that includes the linear isomer only for that analyte (e.g., PFOA). Standards containing both branched and linear isomers are to be used during method validation to ensure that the total response is quantitated for that analyte. Technical grade standards cannot be used for quantitative analysis.	NA. Flagging is not appropriate.	Analyst	5-369-07

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference (SOPs to be provided by the laboratory)
LCMSMS – PFAS by LCMSMS Compliant with QSM 5.1.1 Table B-15	Ion Transitions (Parent-> Product)	Prior to method implementation.	The chemical derivation of the ion transitions, both those used for quantitation and those used for confirmation, must be documented. Two transitions and the ion transition ratio per analyte will be monitored and documented except for PFBA and PFPeA. To avoid biasing results high due to known interferences for some transitions, the following transitions must be used for quantification of the following analytes: PFOA: 413 —› 369 PFOS: 499 —› 80 PFHxS: 399 —› 80 PFBS: 299 —› 80 4:2 FTS: 327 —› 307 6:2 FTS: 427 —› 407 8:2 FTS: 527 —› 507 NEtFOSAA: 584 —› 419 NMeFOSAA: 570 —›419 If these transitions are not used, the reason must be technically justified and documented (e.g., alternate transition was used due to observed interferences).	NA. Flagging is not appropriate.	Analyst	5-369-07

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference (SOPs to be provided by the laboratory)
LCMSMS – PFAS by LCMSMS Compliant with QSM 5.1.1 Table B-15	ICAL	At instrument set-up and after initial calibration verification (ICV) or CCV failure, prior to sample analysis. Isotope dilution or internal standard calibration is required for all analytes.	The isotopically labeled analog of an analyte (extracted internal standard analyte) must be used for quantitation if commercially available (isotope dilution quantitation). If a labeled analog is not commercially available, the extracted internal standard analyte with the closest retention time to the analyte must be used for quantitation. (internal standard quantitation) S/N Ratio: ≥ 10:1 for all ions used for quantification. For analytes having a promulgated standard, (e.g., HAs for PFOA and PFOS), the qualitative (confirmation) transition ion must have an S/N Ratio of ≥ 3:1. The %RSD of the retention factors for all analytes must be <20%. Linear or non-linear calibrations must have $r^2 \geq 0.99$ for each analyte. Analytes must be within 70-130% of their true value for each calibration standard. No samples shall be analyzed until ICAL has passed. External calibration is not allowed. Calibration can be linear (minimum of five standards) or quadratic (minimum of six standards); weighting is allowed.	Correct problem then repeat ICAL. Flagging is not appropriate.	Analyst	5-369-07

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference (SOPs to be provided by the laboratory)
LCMSMS – PFAS by LCMSMS Compliant with QSM 5.1.1 Table B-15	Instrument sensitivity check (ISC)	Prior to analysis and at least once every 12 hours.	Analyte concentrations must be at LOQ; concentrations must be within 70% to 130% of their true values. No samples will be analyzed until ISC has met acceptance criteria. ISC can serve as the initial daily CCV.	Correct problem, rerun ISC. If problem persists, repeat ICAL. Flagging is not appropriate.	Analyst	5-369-07
LC/MS/MS – PFAS by LCMSMS Compliant with QSM 5.1.1 Table B-15	ICV	Once after each ICAL, analysis of a second source standard prior to sample analysis.	Analyte concentrations must be within 70% to 130% of their true value. No samples shall be analyzed until calibration has been verified.	Correct problem, rerun ICV. If that fails, repeat ICAL. Flagging is not appropriate.	Analyst	5-369-07

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference (SOPs to be provided by the laboratory)
LCMSMS – PFAS by LCMSMS Compliant with QSM 5.1.1 Table B-15	CCV	Prior to sample analysis, after every 10 field samples, and at the end of the analytical sequence.	Concentration of analytes must range from the LOQ to the mid-level calibration concentration. Analyte concentrations must be within 70% to 130% of their true value. Results may not be reported without valid CCVs. ISC can serve as a bracketing CCV.	Immediately analyze two additional consecutive CCVs. If both pass, samples may be reported without reanalysis. If either fails, or if two consecutive CCVs cannot be run, perform corrective action(s) and repeat CCV and all associated samples since last successful CCV. Alternately, recalibrate if necessary; then reanalyze all associated samples since the last acceptable CCV. If reanalysis cannot be performed, data must be qualified and explained in the Case Narrative. Apply Q-flag to all results for the specific analyte(s) in all samples since the last acceptable calibration verification.	Analyst	5-369-07
TOC Analyzer / TOC	ICAL – Minimum of a 5-point calibration curve plus a blank is prepared.	Initially, when the daily CCV does not pass, but, no longer than every 3 months.	Correlation coefficient ≤ 0.995	Recalibrate and/or perform necessary equipment maintenance. Check calibration standards	Analyst, Department Manager	CA-741
TOC Analyzer / TOC	ICV	Once after each ICAL, prior to beginning a sample run.	%R must within 80%-120%	(1) If the ICV fails high, report samples that are <LOQ. (2) Re-digest, recalibrate and/or reanalyze other samples.	Analyst, Department Manager	CA-741

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference (SOPs to be provided by the laboratory)
TOC Analyzer / TOC	CCV	Every 10 samples and at the end of the run	%R must within 80%-120%	If the CCV fails high, report samples that are <LOQ. Recalibrate and/or reanalyze samples back to last acceptable CCV recovery.	Analyst, Department Manager	CA-741

SAP Worksheet #25 -- Analytical Instrument and Equipment Maintenance, Testing, and Inspection Table
(UFP-QAPP Manual Section 3.2.3)

Instrument/ Equipment	Maintenance Activity	Testing Activity	Inspection Activity	Frequency	Acceptance Criteria	Corrective Action	Responsible Person	SOP Reference (To be provided by the laboratory)
LC/MS/MS	Preventative maintenance	PFAS (groundwater, surface water and sediment)	NA	6 months	NA	NA	Battelle Analyst/ Supervisor	3-200-01
LC/MS/MS	Clean Curtain Plate	LC/MS/MS	Visual inspection of curtain plate for residue.	As needed when curtain plate has visible residue present	No visible residue on curtain plate	Remove and clean the instrument curtain plate	Analyst/ Supervisor	5-369-07
LC/MS/MS	Replace analytical column	LC/MS/MS	Degradation of instrument performance	Every six months or when instrument performance deteriorates	ICAL within acceptance criteria on Worksheet #24 and internal standards (IS) recovery within acceptance criteria on Worksheet #28	Service provider performs Preventative Maintenance and mass calibration. Run tune check. Reanalyze samples with new ICAL, ICC, ISC, and instrument blank.	Service Provider/ Analyst/ Supervisor	5-369-07
LC/MS/MS	Replace analytical column	LC/MS/MS	Review peak shape, retention times, and peak separation on ICAL, ICC, and CCV samples.	Performed when chromatography deteriorates	ICAL within acceptance criteria on Worksheet #24 and internal standards (IS) recovery within acceptance criteria on Worksheet #28	Replace analytical column. Reanalyze samples with new ICAL, ICC, ISC, and instrument blank.	Analyst/ Supervisor	5-369-07

Instrument/ Equipment	Maintenance Activity	Testing Activity	Inspection Activity	Frequency	Acceptance Criteria	Corrective Action	Responsible Person	SOP Reference (To be provided by the laboratory)
TOC Combustion Analyzer	Check level of dilution water. Drain vessel water, humidifier water, auto sampler rinse water and phosphoric acid vessel and fill as needed. Replace oxygen cylinder.	TOC	Tubing, sample boat, syringe, humidifier, rinse reservoir, phosphoric acid vessel, oxygen pressure	Prior to initial calibration and as necessary	Acceptable calibration or CCV	Correct the problem and repeat calibration or CCV	Analyst, Department Manager	CA-741

SAP Worksheet #26 -- Sample Handling System

(UFP-QAPP Manual Appendix A)

SAMPLE COLLECTION, PACKAGING, AND SHIPMENT
Sample Collection (Personnel/Organization): FOL / Tetra Tech
Sample Packaging (Personnel/Organization): FOL / Tetra Tech
Coordination of Shipment (Personnel/Organization): FOL / Tetra Tech
Type of Shipment/Carrier: Overnight courier service (Federal Express)
SAMPLE RECEIPT AND ANALYSIS
Sample Receipt (Personnel/Organization): Sample Custodians/ Battelle/ Katahdin (or backup laboratory if necessary)
Sample Custody and Storage (Personnel/Organization): Sample Custodians/ Battelle/ Katahdin (or backup laboratory if necessary)
Sample Preparation (Personnel/Organization): Extraction Laboratory / Battelle/ Katahdin (or backup laboratory if necessary)
Sample Determinative Analysis (Personnel/Organization): LCMSMS Laboratory/ Battelle/ Katahdin (or backup laboratory if necessary)
SAMPLE ARCHIVING
Field Sample Storage (No. of days from sample collection): 60 days from receipt
Sample Extract/Digestate Storage (No. of days from extraction/digestion): 3 months from sample digestion/extraction
Biological Sample Storage (No. of days from sample collection): NA
SAMPLE DISPOSAL
Personnel/Organization: Sample Custodians/ Battelle (or backup laboratory if necessary)

SAP Worksheet #27 -- Sample Custody Requirements Table
(UFP-QAPP Manual Section 3.3.3)

Field Sample Custody Procedures

The Tetra Tech FOL is responsible for care and custody of the samples until they are delivered to the laboratory or are entrusted to a carrier. The samples will then remain in the custody of the commercial courier until they reach the laboratory and the location of the sample cooler(s) will be tracked by the Tetra Tech Project Manager or designee via the commercial courier's tracking number. When transferring samples, the individuals relinquishing and receiving them must sign, date, and note the time of transfer on the chain-of-custody form. Chain of custody forms should be provided to the Tetra Tech Project Manager as soon as possible after sample collection. Following sample collection into the appropriate bottleware, all samples will be immediately placed on ice in a cooler. Bubble-wrap will be used to protect the bottle ware during shipment. The cooler will be secured using strapping tape along with a signed custody seal. Sample handling is described in Worksheet #26. Sample coolers will be delivered to a local courier location for priority overnight delivery to the selected laboratory for analysis. Samples must be sent to the laboratory within 72 hours of being collected. Under no circumstances should sample holding times be exceeded. Samples will be preserved as appropriate based on the analytical method. Samples will be maintained at less than or equal to 10 °C within 48 hours of collection until delivery to the laboratory. Samples stored in the lab must be held at or below 6 °C until extraction but should not be frozen. Proper custody procedures will be followed throughout all phases of sample collection and handling.

If the field crew suspects that high concentrations of target analytes exist in any of the samples, the chain of custody form should be marked to identify to the laboratory those samples that potentially contain high concentrations. This will help the laboratory prevent cross-contamination of other samples and instrument down time that can be caused when high concentration samples are analyzed. In the case of PFAS, samples from areas where AFFF was released directly to environmental media (e.g., during fire training) are areas that are particularly prone to having high PFAS concentrations.

Chain-of-custody protocols will be used throughout sample handling to establish the evidentiary integrity of sample containers. These protocols will be used to demonstrate that the samples were handled and transferred in a manner that would eliminate possible tampering. Samples for the laboratory will be packaged and shipped in accordance with the Tetra Tech SOP SA-6.1.

Chain-of-Custody Procedures

To ensure the integrity of a sample from collection through analysis, it is necessary to have an accurate written record that traces the possession and handling of the sample. This record, the chain of custody form, is designed to provide documentation of collection, preservation, packaging, handling, storage, and shipping of all samples collected.

A sample is under proper custody if:

- The sample is in the physical possession of an authorized person.
- The sample is in view of an authorized person after being in his/her possession.
- The sample is placed in a secure area by an authorized person after being in his/her possession.
- The sample is in a secure area, restricted to authorized personnel only.

Proper chain of custody begins at the time of sample collection and links data obtained from analysis of the samples to the samples themselves, and to the locations from which the samples were collected. After collection, each sample will be maintained in the sampler's custody until formally transferred to another party (e.g., FedEx). For all samples collected, custody records will document the date and time of sample collection, the sampler's name, and the names of all others who subsequently held custody of the samples. Specification for chemical analyses will also be documented on the custody record. Tetra Tech SOP SA-6.3 provides further details on the chain-of-custody documentation procedure (Appendix C).

In addition to the required documentation (e.g., chain-of-custody documents) and QC of samples, certain standard forms will be completed for sample description and documentation. These will include the sample log sheet and project sample shipping logs. Examples of these forms can be found in Tetra Tech

SOP SA-6.3 (Appendix C). The type of preservative(s) used for each sample will be noted on the sample log sheet. The source of the preservatives and any other reagents will be documented in the site logbook.

Laboratory Sample Custody Procedures

Chain-of-custody procedures will be followed according to Tetra Tech SOP SA-6.3.

Sample Nomenclature

Each sample collected for analysis will be assigned a unique sample tracking number. This number will consist of a multi-segment alphanumeric code that identifies the site, the matrix, the sample location, and the sample date. Tetra Tech Worksheet #18 addresses sample nomenclature using the logic below.

The alphanumeric coding system developed for the well sampling is:

BASE – MATRIX – LOCATION – DATE

BASE: NAS JRB Willow Grove is identified as WGNA

MATRIX: Matrix abbreviation (SW- surface water sample point, SD- sediment sample point).

LOCATION: Refers to the alphanumeric sample station (location) identifier (see Worksheet #18).

DATE: Indicates the month, day, and year (YYYYMMDD) that the sample was collected in the field to act as a discriminator to distinguish these samples from previous or subsequent data.

EXAMPLE: A surface water sample collected at location 02 on May 1, 2019 at NAS JRB Willow Grove: WGNA-SW02-20190501

Notice that a zero is used as a place holder for locations numbered 1 through 9.

QC Sample Number:

The QA/QC type codes used for this field event are “FB” for Field Blanks, “RB” for equipment rinsate blanks, and “DUP” for Field Duplicates. Field QC blanks will be labeled according to the associated sample location proceeded by the date (i.e., WGNA-FB-02-20190501). Samples to be used for MS/MSD will be labeled MS/MSD on the bottle label and noted on the chain-of-custody, as required in the laboratory QA Plan.

The field duplicate will be given the same type of sample designation as the samples so that it will be “blind” to the laboratory. The sampling time recorded on the chain-of-custody form, labels and tags for the duplicate samples will be 0000. Notes detailing the sample number, time, date, and type will be recorded on the routine sample log sheets and will document the location of the duplicate sample (sample log sheets are not provided to the laboratory).

Sample Documentation

All pertinent information regarding sample identification will be recorded in the field logbooks and on sample log sheets where appropriate.

The following types of information will be recorded in the field logbook, as appropriate:

- Site name and location.
- Date and time.
- Personnel and their affiliations.
- Weather conditions.
- Activities associated with sampling and sampling times.
- Site observations including site entry and exit times and descriptions of photographs.
- Visitor names, affiliations, and arrival and departure times.
- Health and safety issues including personal protection equipment.
- Significant deviations from planned work processes.

Bound, water-resistant, field logbooks will **not** be used for this project because of the potential for PFAS cross-contamination from the water-resistant coating. A spiral bound notebook will be used. The FOL or his designee will record all information related to sampling or field activities. If changes become necessary because of field conditions (e.g., weather problems, obstructions to sampling, etc.), or other unanticipated conditions, the planned change will be communicated by the FOL to the PM, and then to Navy personnel. Upon agreement of the best corrective action, the method will be implemented, and the change will be documented on a FTMR form, with the FTMR placed in the project file.

At the completion of field activities, the FOL will submit to the PM all field records, data, field notebooks, logbooks, chain-of-custody receipts, sample log sheets, drilling logs, daily logs, etc. The PM will ensure that these materials are entered into the NAVFAC CLEAN program document control system in accordance with administrative guidelines.

Sample Packing and Shipping Procedures

Samples will be packaged and shipped in accordance with the instructions from the subcontracted laboratory and Tetra Tech SOPs and will be managed under strict chain of custody. Sample labels will be completed for each sample container. Appropriate sample description and other pertinent information, such as preservation method, must be recorded in the field logbook. The FOL will be responsible for contacting the laboratory for each shipment.

SAP Worksheet #28 -- Laboratory QC Samples Table

(UFP-QAPP Manual Section 3.4)

Matrix	Surface Water and Sediment
Analytical Group	LC/MS/MS
Analytical Method/ SOP Reference	PFAS by LCMSMS Compliant with QSM 5.1.1 Table B-15 / 5-369-07

QC Sample	Frequency/Number	Method/SOPQC Acceptance Limits	Corrective Action	Person(s) Responsible for CA	DQIs	MPCs
Instrument Blanks	Immediately following the highest standard analyzed and daily prior to sample analysis.	Concentration of each analyte must be ≤ ½ the LOQ. Note: Successful analysis following the highest standard analyzed determines the highest concentration that carryover does not occur. The highest standard analyzed may be analyzed as part of the calibration curve or following the calibration curve. If analyzed following the calibration curve, it is not used to extend out the calibration range. It is used only to document a higher concentration at which carryover still does not occur. If sample concentrations exceed this range and the sample(s) following exceed this acceptance criteria (>1/2 LOQ), they must be reanalyzed.	If acceptance criteria are not met after the highest calibration standard, calibration must be performed using a lower concentration for the highest standard until acceptance criteria are met. If acceptance criteria are not met after the highest standard which is not included in the calibration, the standard cannot be used to determine the highest concentration in samples at which carryover does not occur. If acceptance criteria are not met after sample, additional instrument blanks must be analyzed until acceptance criteria are met. Additional samples shall not be analyzed until acceptance criteria are met. Flagging is only appropriate in cases when the sample cannot be reanalyzed and when there is no more sample left.	Analyst, Supervisor	Accuracy/Bias/ Contamination	Same as Method/SOP QC Acceptance Limits.

Matrix	Surface Water and Sediment
Analytical Group	LC/MS/MS
Analytical Method/ SOP Reference	PFAS by LCMSMS Compliant with QSM 5.1.1 Table B-15 / 5-369-07

QC Sample	Frequency/Number	Method/SOPQC Acceptance Limits	Corrective Action	Person(s) Responsible for CA	DQIs	MPCs
Extracted Internal Standard Analytes	Every field sample, standard, blank, and QC sample.	Added to sample prior to extraction. For aqueous samples prepared by serial dilution instead of SPE, added to samples prior to analysis. Extracted Internal Standard Analyte recoveries must be within 50% to 150% of the true value.	If recoveries are acceptable for QC samples, but not field samples, the field samples must be re-prepared and reanalyzed (greater dilution may be needed). If recoveries are unacceptable for QC samples, correct problem, and reanalyze all associated failed field samples. Apply Q-flag and discuss in the Case Narrative only if reanalysis confirms failures in exactly the same manner. Failing analytes shall be thoroughly documented in the Case Narrative.	Analyst, Supervisor	Accuracy/Bias	Same as Method/SOP QC Acceptance Limits.
Injection Internal Standard Analytes	Every field sample, standard, blank, and QC sample. Alternative Injection Internal Standard Analytes are recommended when there is obvious chromatographic interference.	Added to aliquot of sample dilutions, QC samples, and standards just prior to analysis. Peak areas must be within -50% to +50% of the area measured in the ICAL midpoint standard. On days when ICAL is not performed, the peak areas must be within -50% to +50% of the peak area measured in daily initial CCV.	If peak areas are unacceptable, analyze a second aliquot of the extract or sample if enough extract remains. If there is not enough extract, reanalyze the first aliquot. If second analysis meets acceptance criteria, report the second analysis. If it fails, either analysis may be reported with the appropriate flags. Apply Q-flag and discuss in the Case Narrative.	Analyst, Supervisor	Accuracy/Bias	Same as Method/SOP QC Acceptance Limits.

Matrix	Surface Water and Sediment
Analytical Group	LC/MS/MS
Analytical Method/ SOP Reference	PFAS by LCMSMS Compliant with QSM 5.1.1 Table B-15 / 5-369-07

QC Sample	Frequency/Number	Method/SOPQC Acceptance Limits	Corrective Action	Person(s) Responsible for CA	DQIs	MPCs
Method Blank (MB)	One per preparatory batch.	No analytes detected >1/2 LOQ or > 1/10 the amount measured in any sample or 1/10 the regulatory limit, whichever is greater.	Correct problem. If required, re-prepare and reanalyze MB and all QC samples and field samples processed with the contaminated blank. If reanalysis cannot be performed, data must be qualified and explained in the case narrative. Apply B-flag to all results for the specific analyte(s) in all samples in the associated preparatory batch. Results may not be reported without a valid MB. Flagging is only appropriate in cases where the samples cannot be reanalyzed.	Analyst, Supervisor	Accuracy/Bias/ Contamination	Same as Method/SOP QC Acceptance Limits.
Laboratory Control Sample (LCS)	One per preparatory batch. Results may not be reported without a valid LCS.	Blank spiked with all analytes at a concentration ≥ LOQ and ≤ the mid-level calibration concentration. Use in-house LCS limits provided in Appendix D.	Correct problem, then re-prepare and reanalyze the LCS and all samples in the associated preparatory batch for failed analytes, if sufficient sample material is available. If reanalysis cannot be performed, data must be qualified and explained in the case narrative. Apply Q-flag to specific analyte(s) in all samples in the associated preparatory batch. Flagging is only appropriate in cases where the samples cannot be reanalyzed.	Analyst, Supervisor	Accuracy/Bias	Same as Method/SOP QC Acceptance Limits.

Matrix	Surface Water and Sediment
Analytical Group	LC/MS/MS
Analytical Method/ SOP Reference	PFAS by LCMSMS Compliant with QSM 5.1.1 Table B-15 / 5-369-07

QC Sample	Frequency/Number	Method/SOPQC Acceptance Limits	Corrective Action	Person(s) Responsible for CA	DQIs	MPCs
Matrix Spike (MS)	One per preparatory batch. Not required for aqueous samples prepared by serial dilution instead of solid phase extraction.	Sample spiked with all analytes at a concentration ≥ LOQ and ≤ the mid-level calibration concentration. Use in-house LCS limits provided in Appendix D.	Examine the project- specific requirements. Contact the client as to additional measures to be taken. For the specific analyte(s) in the parent sample, apply J-flag if acceptance criteria are not met and explain in the case narrative. For matrix evaluation only. If MS results are outside the limits, the data shall be evaluated to determine the source(s) of difference, i.e., matrix effect or analytical error.	Analyst, Supervisor	Accuracy/Bias	Same as Method/SOP QC Acceptance Limits.
Matrix Spike Duplicate (MSD) or Matrix Duplicate (MD)	For MSD: One per preparatory batch. The MD is a second aliquot of the field sample that has been prepared by serial dilution. For MD: Each aqueous sample prepared by serial dilution instead of solid phase extraction.	For MSD: Sample spiked with all analytes at a concentration ≥ LOQ and ≤ the mid-level calibration concentration. For MSD: Use in-house LCS limits provided in Appendix D. For Sample/MD: RPD criteria only apply to analytes whose concentration in the sample is greater than or equal to the LOQ.	Examine the project- specific requirements. Contact the client as to additional measures to be taken. The data shall be evaluated to determine the source of difference. For the specific analyte(s) in the parent sample, apply J-flag if acceptance criteria are not met and explain in the case narrative.	Analyst, Supervisor	Precision/ Accuracy/Bias	Same as Method/SOP QC Acceptance Limits.

Matrix	Surface Water and Sediment
Analytical Group	LC/MS/MS
Analytical Method/ SOP Reference	PFAS by LCMSMS Compliant with QSM 5.1.1 Table B-15 / 5-369-07

QC Sample	Frequency/Number	Method/SOPQC Acceptance Limits	Corrective Action	Person(s) Responsible for CA	DQIs	MPCs
Post Spike Sample	Only applies to aqueous samples prepared by serial dilution instead of solid phase extraction that have reported value of "<LOQ" for analyte(s).	Spike aliquot(s) of sample at the final dilution(s) reported for sample with all analytes that have reported value of "<LOQ" in the final dilution. The spike must be at the LOQ concentration to be reported with the sample (the "<LOQ" value). When analyte concentrations are calculated as "<LOQ," the spike must recover within 70-130% of its true value. When analyte concentrations are calculated as "<LOQ," results may not be reported without acceptable post spike recoveries.	When analyte concentrations are calculated as "<LOQ," and the spike recovery does not meet the 70-130% acceptance criteria, the sample, sample duplicate, and post spike sample must be reanalyzed at consecutively higher dilutions until the criteria are met. Flagging is not appropriate.	Analyst, Supervisor	Accuracy/Bias	Same as Method/SOP QC Acceptance Limits.

SAP Worksheet #28 – Laboratory QC Samples Table

(UFP-QAPP Manual Section 3.4)

Matrix	Sediment
Analytical Group	TOC
Analytical Method/ SOP Reference	SW-846 9060A / CA-741

QC Sample:	Frequency/ Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	Data Quality Indicator (DQI)	Measurement Performance Criteria (MPC)
Method Blank	One per analytical batch of 20 or fewer samples.	No target analytes > ½ LOQ and > 1/10 the amount measured in any sample or 1/10 the regulatory limit, whichever is greater.	Correct the problem. Report sample results that are <LOD or >10x the blank concentration. Re-prepare and reanalyze the method blank and all associated samples with results > LOD and < 10x the contaminated blank result.	Analyst, Laboratory Department Manager	Bias/contamination	Same as Method/SOP QC Acceptance Limits.
LCS	One per analytical batch of 20 or fewer samples.	%R must be within 80-120	(1) Investigate source of problem. (2) If the LCS recovery is high but the sample results are <LOQ, narrate. Otherwise, re-prepare a blank and the remaining samples.	Analyst, Laboratory Department Manager	Accuracy/Bias/ Contamination	Same as Method/SOP QC Acceptance Limits.
MS	One for every set 10 samples	%R must be within: 75-125	(1) Evaluate the samples and associated QC: i.e. If the LCS results are acceptable, narrate. (2) If both the LCS and MS are unacceptable re-prepare and reanalyze the samples and QC. (3) Notate sample result in raw data if matrix interference suspected.	Analyst, Laboratory Department Manager	Accuracy/Bias	Same as Method/SOP QC Acceptance Limits.
Laboratory Quadruplicate	One sample duplicate per 20 samples.	RPD ≤30 for samples >3X the LOQ, <100% RPD for samples <3X the LOQ.	(1) Investigate problem and reanalyze sample in duplicate (2) If RPD still >20, report original result with notation or narration.	Analyst, Laboratory Department Manager	Precision	Same as Method/SOP QC Acceptance Limits.

SAP Worksheet #29 -- Project Documents and Records Table
(UFP-QAPP Manual Section 3.5.1)

Document	Where Maintained
• Sample Collection Documents and Records: • Project Personnel Sign-off Record • Field logbook (and sampling notes) • Field sample forms (e.g., sample log sheets, etc.) • Chain-of-custody records • Sample shipment airbills • Equipment calibration logs • Photographs • FTMR forms • Field Sampling SOPs • HASP	Sample collection documents and records (may include printed copies and electronic information) will be maintained in the project file located in the Tetra Tech King of Prussia, Pennsylvania office. Project files will be kept in a secured limited-access area and transmitted to the NAVFAC Regional Data Manager, who will subsequently forward the data to the Federal Records Center (FRC) for storage, where the files will remain until 50 years after the last decision document for the facility. Personnel training records and health and safety certificates will be stored in personnel records and electronically in the Tetra Tech training database in Pittsburgh, Pennsylvania.
Laboratory Documents and Records in the Form of Analytical Data Packages: • Sample receipt/login, custody, and tracking forms • Standards traceability logs • Sample storage and disposal records • Sample preparation logs • Equipment calibration, maintenance, testing, and inspection logs • Sample analysis run logs • Reported results for samples, standards, QC checks, and QC samples • Data completeness checklists • Telephone logs • Extraction/clean-up records • Raw data • Electronic Data Deliverables (EDDs)	Analytical results, documents, and records will be provided by the laboratory in printed and electronic formats. Project files will be kept in a secured limited-access area and transmitted to the NAVFAC Regional Data Manager, who will subsequently forward the data to the FRC for storage, where the files will remain until 50 years after the last decision document for the facility. Electronic laboratory results will also be verified, entered, and maintained in a database on a password-protected Structured Query Language server. Data qualifiers will be added to the database during data validation. After validation, the validated data files will be uploaded to the Naval Installation Restoration Information Solutions (NIRIS) data management system. Although available in the Administrative Record file, laboratory reports are typically filed at a separate location and are available upon request.
Other Documents: • SAP including laboratory SOPs • All letter and email correspondence with regulatory agencies, including approvals and comments • Telephone logs • Field investigation data packages • Data Validation and Review Reports (includes tabulated data summary forms) • All versions of project reports	Personnel training records and health and safety certificates will be stored in personnel records and electronically in the Tetra Tech training database in Pittsburgh, Pennsylvania. Project files will be kept in a secured limited-access area and transmitted to the NAVFAC Regional Data Manager, who will subsequently forward the data to the FRC for storage, where the files will remain until 50 years after the last decision document for the facility. Field Audit Checklists are not considered part of the Administrative Record file and will be stored in the Tetra Tech project file at 661 Andersen Drive, Pittsburgh, Pennsylvania, 15220, and electronically in the server library. Analytical laboratory audit checklists will be retained by the respective accreditation authorities.

SAP Worksheet #30 -- Analytical Services Table

(UFP-QAPP Manual Section 3.5.2.3)

Matrix	Analytical Group	Sample Locations/ID Numbers	Analytical SOP	Data Package Turnaround Time	Laboratory/Organization[(1)] (name and address, contact person and telephone number)	Backup Laboratory/Organization (name and address, contact person and telephone number)
Surface Water and Sediment	PFAS	See Worksheet #18	PFAS by LCMSMS Compliant with QSM 5.1.1 Table B-15 / 5-369-07	21 days	Jonathan Thorn Project Manager Battelle Memorial Institute 141 Longwater Drive, Suite 202 Norwell, Massachusetts 02061 781-681-5565 Thorn@battelle.org	David Alltucker TestAmerica Sacramento 880 Riverside Parkway West Sacramento, CA 95605-1500 916.373.5600
Sediment	TOC	See Worksheet #18	TOC by SW-846 9060A / CA-741	21 days	Heather Manz Project Manager Katahdin Analytical 600 Technology Way P.O. Box 540 Scarborough, ME 04070 207-874-2400	NA

Note: [(1)] Laboratory meets accreditation requirements to support project needs. See footnote, Worksheet #31.

SAP Worksheet #31 -- Planned Project Assessments Table

(UFP-QAPP Manual Section 4.1.1)

Assessment Type	Frequency	Internal or External	Organization Performing Assessment	Person(s) Responsible for Performing Assessment (title and organizational affiliation)	Person(s) Responsible for Responding to Assessment Findings (title and organizational affiliation)	Person(s) Responsible for Identifying and Implementing Corrective Action (title and organizational affiliation)	Person(s) Responsible for Monitoring Effectiveness of Corrective Action (title and organizational affiliation)
Field Readiness Review	Before mobilization for the project and before major phases of work are initiated	Internal	Tetra Tech	Project Manager, Tetra Tech	Project Manager, Tetra Tech	Project Manager, Tetra Tech	Project QAM, Tetra Tech
Laboratory Systems Audit(1)	Every 2 years	External	DoD Environmental Laboratory Accreditation Program (ELAP) Accrediting Body	DoD ELAP Accrediting Body Auditor	Laboratory QA Manager or Laboratory Manager, Battelle and Katahdin Analytical Services, Inc.	Laboratory QA Manager or Laboratory Manager, Battelle and Katahdin Analytical Services, Inc.	Laboratory QA Manager or Laboratory Manager, Battelle and Katahdin Analytical Services, Inc.
Field Supervisions	During fieldwork	Internal	Tetra Tech	FOL	Tetra Tech PM and QAM (if additional support is needed)	Tetra Tech PM and QAM (if additional support is needed)	Tetra Tech PM and QAM (if additional support is needed)

(1) The selected analytical laboratory (Battelle and Katahdin Analytical Services, Inc.) has successfully completed the laboratory assessment process required as part of the Department of Defense Environmental Laboratory Accreditation Program (DoD ELAP) and as described in the "Department of Defense Quality Systems Manual for Environmental Laboratories (DoD QSM)", Version 5.1.1, February 2018 (DoD, 2018a). The DoD ELAP accreditation documentation is included in Appendix D.

SAP Worksheet #32 -- Assessment Findings and Corrective Action Responses

(UFP-QAPP Manual Section 4.1.2)

Assessment Type	Nature of Deficiencies Documentation	Individual(s) Notified of Findings (name, title, organization)	Timeframe of Notification	Nature of Corrective Action Response Documentation	Individual(s) Receiving Corrective Action Response (name, title, organization)	Timeframe for Response
Field Readiness Review	E-mail documentation	Project Manager, Project QAM, Field Team Lead, and Analytical Coordinator, Tetra Tech	2 days	E-mail documentation	Project Manager, Project QAM, Field Team Lead, and Analytical Coordinator, Tetra Tech	2 days
Laboratory Systems Audit	Written audit report	QA Manager, Battelle and Katahdin Analytical Services, Inc.	Specified by DoD ELAP Accrediting Body	Letter	DoD ELAP Accrediting Body	Specified by DoD ELAP Accrediting Body
Field Supervision	Site log book and sample collection logs	PM, Tetra Tech; FOL, Tetra Tech QAM, Tetra Tech, for systemic deficiencies	Immediately, when discovered	Entry in site log book, potential retraining, systemic changes if necessary	PM, Tetra Tech QAM, Tetra Tech, for systemic deficiencies	Within 24 hours for readily rectified deficiencies; longer as appropriate for systemic deficiencies

SAP Worksheet #33 -- QA Management Reports Table
(UFP QAPP Manual Section 4.2)

Type of Report	Frequency (daily, weekly monthly, quarterly, annually, etc.)	Projected Delivery Date(s)	Person(s) Responsible for Report Preparation (Title and Organizational Affiliation)	Report Recipient(s) (Title and Organizational Affiliation)
Data Validation Report	Per SDG	Within 3 weeks after receiving the data from the laboratory	DVM or designee, Tetra Tech	PM and project file, Tetra Tech
Major analysis problem identification (Internal Memorandum)	When persistent analysis problems are detected	Immediately upon detection of problem – on the same day	QAM, Tetra Tech	PM, Tetra Tech; QAM, Tetra Tech; Program Manager, Tetra Tech; project file
Project Monthly Progress Report	Monthly for duration of the project	Monthly	PM, Tetra Tech	PM, Tetra Tech; QAM, Tetra Tech; Program Manager, Tetra Tech; NAVFAC NTR; project file
Laboratory QA Report	When significant plan deviations result from unanticipated circumstances	Immediately upon detection of problem (on the same day)	Laboratory PM, Battelle	PM and project file, Tetra Tech

SAP Worksheets #34-36 -- Data Verification and Validation (Steps I and IIa/IIb) Process Table
(UFP-QAPP Manual Section 5.2.1), (UFP-QAPP Manual Section 5.2.2), (Figure 37 UFP-QAPP Manual), (Table 9 UFP-QAPP Manual)

Data Review Input	Description	Responsible for Verification (name, organization)	Step I / IIa / IIb [1]	Internal/ External
Sample Log Sheets, Chain of Custody Forms, SAP, and Laboratory Sample Login Documentation	The FOL will verify that samples were correctly identified, chain of custody records are legible, data will be traceable to the corresponding samples, all samples listed in SAP Worksheets #12, #18, and #20 were collected from intended locations, and the correct sampling and analytical methods/SOPs were assigned to samples listed on the chain of custody record. The PM will verify that the sampling plan was implemented and carried out as written and will ensure that any significant deviations are documented in the project report.	FOL and PM, Tetra Tech	I	Internal
Chain-of-Custody Forms	Verify that the chain-of-custody form is complete and accurate; and was signed and dated by the sampler relinquishing the samples and by the laboratory receiving the samples. Resolve discrepancies, if possible. Alert the Tetra Tech PM verbally or via email if discrepancies are unresolvable.	FOL, Tetra Tech	I	Internal
Chain-of-Custody Forms	Verify sample shipment completeness against the chain-of-custody record, verify proper sample preservation/integrity, sign to indicate receipt, note any discrepancies, and correct them as necessary. Notify the Tetra Tech FOL or PM of any deviations from sample shipping requirements such as damaged sample containers, or inappropriate temperature or pH. Note uncorrectable discrepancies in the data package case narrative.	Laboratory Sample Custodian	I/IIa	External
Analytical Calibration Standards	Verify that standards are traceable and meet contract, method, and procedural requirements, as applicable, and include Certificates of Analysis in the laboratory data package to document the traceability. If discrepancies in traceability are found, bring the discrepancies to the laboratory PM attention for correction.	Laboratory analyst, Battelle Laboratories and Katahdin Analytical Services, Inc.	IIa	Internal
SAP, Analytical SOPs, and Analytical Data Packages	Verify that the correct analytical methods/SOPs were applied. Establish that all method QC samples were analyzed and in control as listed in the analytical SOPs. If method QC is not in control, the Laboratory PM will contact the Tetra Tech Project Chemist or PM verbally or via e-mail for guidance prior to laboratory data package preparation.	Laboratory PM, Battelle Laboratories and Katahdin Analytical Services, Inc.	IIa	Internal

Data Review Input	Description	Responsible for Verification (name, organization)	Step I / IIa / IIb [1]	Internal/ External
Laboratory Analytical Data Package	Verify the analytical data package for completeness and accuracy, including certificates of analysis for calibration and check standards. The Laboratory QAM will sign the case narrative for each data package.	Laboratory QAM, Analytical Laboratory	I	Internal
Laboratory Analytical Data Package	Review chain-of-custody records to ensure that the required analytical samples were collected, appropriate sample identifications were used, and correct analytical methods were applied to each sample. Verify the analytical data package for completeness and accuracy, including certificates of analysis for calibration and check standards. Obtain missing data package elements from the laboratory. Document unrecoverable elements, if any, in the data validation report submitted to the Tetra Tech PM and alert the Project Chemist or PM.	Data Validator, Tetra Tech	I/IIa	External
EDDs/ Analytical Data Packages	Verify 100% of EDD results for accuracy and completeness against hard copy data package and chain of custody records at the start of validation. If required elements are missing, obtain missing elements form the laboratory before completing the validation. If any element cannot be obtained, document the omission in the data validation report and identify the missing elements to the Tetra Tech Project Chemist or PM as early as possible.	Data Validator, Tetra Tech	I/IIa	External
Sample Shipment and Storage Conditions; and Holding Times for Representativeness	Verify that sample shipping and storage conditions satisfy Worksheet #19 requirements. Document deviations from requirements in the data validation report and notify the Tetra Tech Project Chemist or PM if deviations from the SAP requirements are serious enough to warrant data rejection. Document findings in the data validation report.	Data Validator, Tetra Tech	IIa	External
QC Samples/MPC Compliance	Ensure that the scheduled laboratory and field QC samples were submitted for analysis and that the MPCs listed in SAP Worksheets #12, #15, #22, #24, and #28 were met for all field samples and QC samples. Document findings in the data validation report. Evaluate sample results for laboratory contamination and qualify false detections using the laboratory method/preparation blank summaries. Qualify analyte concentrations between the DL and the LOQ as estimated (“J” qualifier). Remove extraneous laboratory qualifiers from the validated data and document findings in the data validation report.	Data Validators, Tetra Tech	IIa/IIb	External

Data Review Input	Description	Responsible for Verification (name, organization)	Step I / IIa / IIb [1]	Internal/ External
Field and Laboratory Duplicate Analyses for Precision	Verify field sampling precision by checking RPDs for field duplicate samples. Verify laboratory precision by checking RPDs or %D values from calibrations, laboratory duplicates, MS/MSDs, and LCS/LCSDs. Ensure compliance with MPC accuracy and precision goals listed in Worksheets # 12, #24, and #28. Document findings in the data validation report.	Data Validator, Tetra Tech	IIb	External
SAP/Laboratory Data Packages/ EDDs	Conduct USEPA Stage 2B data validation on 90% of the definitive laboratory data and USEPA Stage 4 data validation on 10% of the definitive laboratory data generated by the selected methods using QC criteria listed in Worksheets #s 12, 15, 24, and 28. Apply validation qualifiers in accordance with logic provided in DoD General Data Validation Guidelines (EPA, 2018), and Data Review and Validation Guidelines for Perfluoroalkyl Substances (PFASs) Analyzed Using EPA 537. If DoD guidelines and National Functional Guidelines, defer to the logic in the DoD guidelines. Document findings in the data validation report. If DoD guidelines become available for non-drinking water matrices prior to the start of validation, use those guidelines and the General DoD guidelines in place of EPA Guidelines.	Data Validator, Tetra Tech	IIa/IIb	External

Notes: [(1)] IIa=compliance with methods, procedures, and contracts [see Table 10, page 117, UFP-QAPP manual, V.1] (EPA, 2005).
IIb=comparison with measurement performance criteria in the SAP [see Table 11, page 118, UFP-QAPP manual, V.1] (EPA, 2005).

SAP Worksheet #37 -- Usability Assessment
(UFP-QAPP Manual Section 5.2.3)

Data Usability Assessment

The usability of the data generated during this project directly affects whether project objectives are achieved. The following characteristics will be evaluated at a minimum, and the results of these evaluations will be included in the project report. The characteristics will be evaluated for multiple concentration levels if the evaluator determines that this is necessary. To the extent required by the type of data being reviewed, the evaluator will consult with other technically competent individuals to render sound technical assessments of these data characteristics.

- **Completeness**
  For each matrix scheduled to be sampled, the Tetra Tech PM will designate an individual who, acting on behalf of the Project Team, will prepare a table to compare planned samples and analyses to actual samples and analyses. If deviations from the scheduled sample collection or analyses are identified, the Tetra Tech PM will determine whether the deviations compromise the ability to meet project objectives. If they do, the Tetra Tech PM will consult with the NAVFAC NTR and other Project Team members, as necessary (determined by the NAVFAC NTR), to develop appropriate corrective actions. The completeness goal for sampling and data is 90%. Completeness for sampling (Cs) will be expressed as the percent of samples collected divided by samples planned for collection and analytical completeness (Ca) will be computed as the percent of valid data points divided by the planned number of data points as follows:

$$\%Cs = \frac{No.\,of\ Valid\ Samples}{No.\,of\ Planned\ Samples} x100\%$$

$$\%Ca = \frac{No.\,of\ Valid\ Analytical\ Results}{\text{No. of Planned Analytical Results}} x100\%$$

- **Precision**
  The Tetra Tech Project Chemist, acting on behalf of the Project Team, will determine whether precision goals for field duplicates and laboratory duplicates were met for each matrix, analytical fraction, and concentration level, as applicable. This will be accomplished by comparing duplicate results to precision goals identified in Worksheet #s 12 and 28. This will also include a comparison of field and laboratory precision, with the expectation that laboratory duplicate results will be no less precise than field duplicate results. If the goals are not met, or if data have been flagged as estimated (J qualifier), limitations on the use of the data will be described in the project report. RPD will be computed as follows for original/duplicate pairs of results:

$$RPD = \frac{200 * |\text{Result}_A - Result_B|}{(\text{Result}_A + Result_B)}$$

- **Accuracy**
  The Tetra Tech Project Chemist, acting on behalf of the Project Team, will determine whether the accuracy/bias goals were met for project data. This will be accomplished by comparing percent recoveries of LCS, LCSD, MS, MSD, and surrogate compounds to accuracy goals identified in Worksheet #28. This assessment will include an evaluation of field and laboratory contamination; instrument calibration variability; and analyte recoveries for surrogates, MSs, and LCSs. If the goals are not met, limitations on the use of the data will be described in the project report. Bias of the qualified results and a description of the impact of identified non-compliances on a specific data package or on the overall project data will also be described in the project report and may focus on individual sample matrices, analytical fraction, or other logical data groupings. Accuracy will be computed as follows for MS/MSD samples:

$$\%R = \frac{\text{Amount in Spiked Sample} - \text{Amount in Sample}}{\text{Known Amount Added}} \times 100\ \%$$

The %R calculation for LCSs and surrogate spikes will be as follows:

$$\%R = \frac{\text{Experimental Concentration}}{\text{Certified or Known Concentration}} \times 100$$

- **Representativeness**
  A Tetra Tech Project Scientist, identified by the Tetra Tech PM and acting on behalf of the Project Team, will determine whether the data are adequately representative of intended populations, both spatially and temporally. This will be accomplished by verifying that samples were collected and processed for analysis in accordance with the SAP, by reviewing spatial and temporal data variations (as applicable), and by comparing these characteristics to expectations, including adherence to factors that affect sample integrity such as holding times, preservation, and storage conditions. The usability report will describe the representativeness of the data and may include matrix- or analytical fraction-specific descriptions when only subsets of the data are affected. This will not require quantitative comparisons unless professional judgment of the Project Scientist indicates that a quantitative analysis is required.

- **Comparability**
  The Tetra Tech Project Chemist, acting on behalf of the Project Team, will determine whether the data generated under this project are sufficiently comparable to historical site data generated by different methods and for samples collected using different procedures and under different site conditions. This will be accomplished by comparing overall precision and bias among data sets for each matrix and analytical fraction. This will not require quantitative comparisons unless professional judgment of the Tetra Tech Project Chemist indicates that such quantitative analysis is required. If comparability deficiencies are identified, limitations on the data will be described in the project report.

- **Sensitivity**
  The Tetra Tech Project Chemist, acting on behalf of the Project Team, will determine whether project sensitivity goals listed in Worksheet #15 were achieved. The overall sensitivity and LOQs from multiple data sets for each matrix and analysis will be compared. If sensitivity goals are not achieved, the limitations on the data will be described in the project report.

- **Project Assumptions and Data Outliers**
  The Tetra Tech PM and designated Project Team members will evaluate whether project assumptions are valid. This will typically be a qualitative evaluation but may be supported by quantitative evaluations. The type of evaluation depends on the assumption being tested. Quantitative assumptions may include those related to data distributions (e.g., normal or log-normal) and estimates of data variability. Potential data outliers will be excluded from data analyses if a review of the associated data indicates that the results have an assignable cause that renders them inconsistent with the remainder of the data. During this evaluation, the team will consider whether outliers could be indications of unanticipated site conditions.

Describe the evaluative procedures used to assess overall measurement error associated with the project:

After the completion of data validation, the data and data quality will be reviewed to determine whether sufficient data of acceptable quality are available for decision making. In addition to the evaluations described above, a series of inspections and statistical analyses will be performed to estimate these DQI characteristics. The statistical evaluations will include simple summary statistics for target analytes, such as maximum concentration, minimum concentration, number of samples with non-detected results, number of samples with detected results, and the proportion of samples with detected and non-detected results. The Project Team members, identified by the Tetra Tech PM, will assess whether the data collectively support the attainment of project objectives. Data validators apply "X" qualifiers to results that are seriously compromised and potentially unusable from a quality perspective. The Project Team will consider whether any missing or "X"-flagged data have compromised the ability to make decisions or to make decisions with the desired level of confidence. "X"-flagged data will be qualified with an "R" qualifier if rejected. The data will be evaluated to determine whether missing or rejected data can be compensated for by other data.

Identify the personnel responsible for performing the usability assessment:

The Tetra Tech PM, Project Chemist, FOL, and project scientists will be responsible for conducting the listed data usability assessments. The data usability assessment will be reviewed with the NAVFAC NTR, EPA, and PADEP. If deficiencies affecting the attainment of project objectives are identified, the review will take place either in a face-to-face meeting or teleconference, depending on the extent of identified deficiencies. If no significant deficiencies are identified, the data usability assessment will simply be documented in the project report and reviewed during the normal document review cycle.

Describe the documentation that will be generated during usability assessment and how usability assessment results will be presented so that they identify trends, relationships (correlations), and anomalies:

The data will be presented in tabular format, including data qualifications such as estimation (J, UJ, X) or rejection (R). Written documentation will support the non-compliance estimated or rejected data results. The project report will identify and describe the data usability limitations and suggest resampling or other corrective actions, if necessary. Potential data anomalies will be investigated to determine whether they represent unanticipated site conditions, or they are true outliers and warrant further investigation and findings will be included in the project report.

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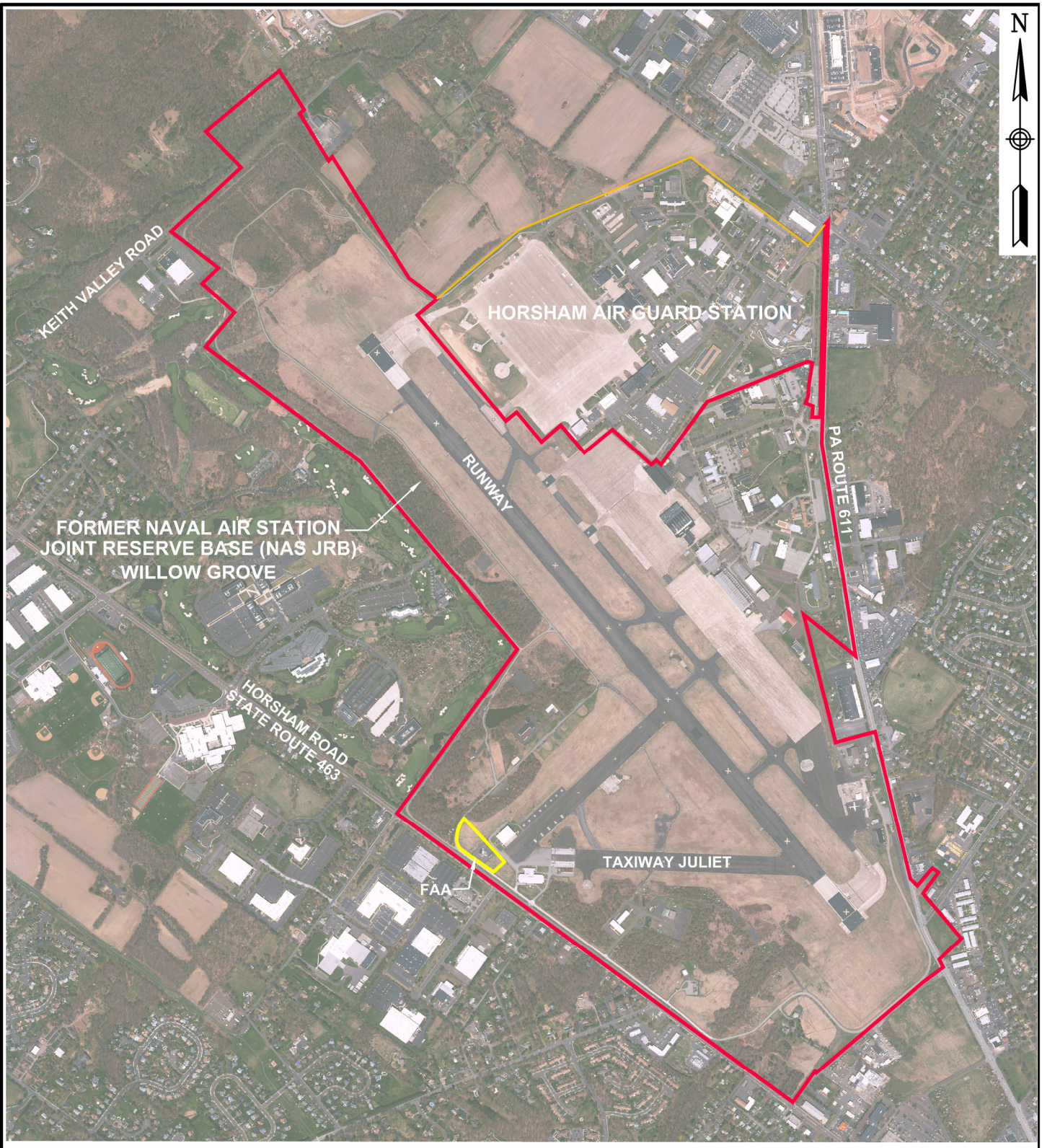
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FIGURES

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AERIAL BASE MAP PROVIDED BY THE PAMAP PROGRAM, PA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES, BUREAU OF TOPOGRAPHIC AND GEOLOGIC SURVEY



0 1,500 3,000

SCALE IN FEET

NAVFAC

SITE LOCATION MAP
FORMER NAS JRB WILLOW GROVE
WILLOW GROVE, PENNSYLVANIA

SCALE	AS NOTED
FILE	112G08005BM03
REV	0
DATE	4/1/19
FIGURE NUMBER	FIGURE 1

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Little Neshaminy

Unnamed Tributary to Little Neshaminy Creek

Unnamed Tributary to Park Creek

Park Creek

Horsham Air Guard Station

Building 13
(Former Fire and Rescue Building)

Building 608
(Fire and Rescue Building)

Building 681

Building 680

North End Landfill
(IR SITE 4)

Building 80

Building 175 and
Adjacent Grassy Area

Airfield

7/26/79

8/26/79

3/28/97

Runway 15/33

Agricultural
Pad

Runway 06/24

Runway 10/28

South Landfill
(NAS Site 12)

Fire Training Area
(IR SITE 5)

Recreation Pond

Abandoned Rifle Range No. 2
(IR SITE 7)

Commonwealth National Golf Course

Irrigation Well

Ninth Street Landfill
(IR Site 3)

Building 177

6/18/00

Antenna Field Landfill
(NAS Site 2)

Unnamed Tributary to Pennypack Creek

Pennypack Creek

N

1,000 500 0 1,000
Feet

Legend

- NAS JB Willow Grove Boundary
- Horsham Air Station Boundary
- Northern Ponding Area Feature
- Irrigation Well
- Aircraft Accident Location
- Outfall
- Recovery Tank Outfall
- Wastewater Treatment Plant NPDES Discharge
- Drainage - Divide
- Drainage Swale/Culvert System
- Fire Ring
- Intermittent Stream
- Stream
- Watershed - Divide
- Storm Sewer
- Williams Pipeline
- Groundwater Flow Direction

NAVFAC

POTENTIAL SOURCE AREAS
FORMER NAS JRB WILLOW GROVE
MONTGOMERY COUNTY, PENNSYLVANIA

SCALE	AS NOTED
FILE	WGNA SITE LAYOUT
REV	0
DATE	05/18/19
FIGURE NUMBER	FIGURE 2

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N

Little Neshaminy

SW/SED-30
SW/SED-20
SW/SED-31
SW/SED-42
SW/SED-34A
SW/SED-34
SW/SED-41
SW/SED-19
SW/SED-18
SW/SED-28
SW/SED-16
SW/SED-14
SW/SED-27
SW/SED-68
SW/SED-21A
SW/SED-63
SW/SED-51
SW/SED-26
SW/SED-10
SW/SED-05
Unnamed Trib to Park Creek
Park Creek
Unnamed Trib to Little Neshaminy
SW/SED-52
SW/SED-57
SW/SED-01
SW/SED-64
SW/SED-02
SW/SED-03
SW/SED-53
SW/SED-54
SW/SED-49
SW/SED-66
SW/SED-45
Pennypack Creek
SW/SED-46
SW/SED-48
Pennypack Creek
Pennypack Creek

LEGEND

- QUARTERLY SURFACE WATER/ANNUAL SEDIMENT SAMPLING LOCATION
- SEMIANNUAL REFERENCE SURFACE WATER (SPRING AND SUMMER ONLY)/ANNUAL SEDIMENT SAMPLING LOCATION
- SINGLE EVENT SURFACE WATER/SEDIMENT SAMPLING LOCATION
- USGS FLOW MEASUREMENT STATION
- HORSHAM AIR GUARD STATION
- FORMER NAS JRB WILLOW GROVE

1,500 750 0 1,500 3,000
Feet

NAVFAC

PROPOSED SURFACE WATER AND SEDIMENT SAMPLE LOCATIONS
FORMER NAS JRB WILLOW GROVE
MONTGOMERY COUNTY, PENNSYLVANIA

CTO	
WE04	
FILE	
WGNA PFOS SW SED LOCATION	
REV	DATE
3	01/25/20
FIGURE NUMBER	
3	

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N

NESHAMINY REF1
NESHAMINY REF2
SW/SED-71
NESHAMINY REF4
SW/SED-65
SW/SED-67
SW/SED-36
SW/SED-72
SW/SED-73
LITTLE NESHAMINY REF1
NESHAMINY REF3
PENNYPACK REF2
PARK CREEK REF1
SW/SED-70
SW/SED-69
SW/SED-56
PENNYPACK REF1

Mill Creek
Warrington
Warwick Twp
Wrightstown Twp
Newtown Grant
Newtown
Richboro
Northampton Twp
Village Shires
Warminster Twp
Horsham
Willow Grove
Harboro
Naval Air Station JRB Willow Grove
Park Creek
Pine Run
Mill Creek
Neshaminy Creek
Newtown-Richboro-Rd
W-Street-Rd
E-Street-Rd
Street-Rd
Easton-Rd
2nd-St-Pike
N-2nd-St-Pike
Pennsylvania-Tpke
Bristol Rd
Durham-Rd
Worthington-Mill-Rd
Swamp-Rd
Pickertown Rd
Kelly Rd
Almshouse Rd
Meetinghouse Rd
Rushland Rd
Old Jacksonville Rd
Spencer Rd
Halboro Rd
Pulinski Rd
Jacksonville Rd
Means Rd
Tulip Dr
Tanyard Rd
Upper Holland Rd
Middle Holland Rd
Lower Holland Rd
E Holland Rd
Storey Ford Rd
Langhorne-Newtown-Rd
Ironworks Creek
Jarrettown Rd
Davisville Rd
Centennial Rd
Maple Ave
Churchville Rd
Rocksville Rd
W Maple Ave
Bridgetown Pike
Old Lincoln Hwy
Gilpin Rd
Huntingdon Rd
Terwood Rd
Southampton Creek
Masons Mill Park
Tyler State Park
Bucks County Community College
Village at Newtown
Playwicki Farm
Spring Mill Country Club
Five Ponds Golf Club
Fairways Golf & Country Club
Heritage Creek Golf Club
Neshaminy Valley Golf Club
Limekiln Golf Club
Whitemarsh Memorial Park
Deep Meadow Park
Carl Kohler Park
Maple Park
Lukens Park
Munro Park
Warminster Community Park
Tamenend Park
Churchville Park
Talamore Country Club
Commonwealth National Country Club
Squires Golf Club
Old York Road Country Club
Willow Grove Park Mall
Bucks Club
Guinea Ln Warwick Park
Gilmore State Park
Linvilla Orchards
Lower State Rd
Limekiln Pike
Folly Rd
Street Rd
Turkey Trot Rd
Bristol Rd
Paddock Dr
Old York Rd
Tulip Dr
Byberry Rd
Pioneer Rd
Wilmer Rd
Dresher Rd
Welsh Rd
Norristown Rd
Horsham Rd
McKean Rd
Meetinghouse Rd
Madison Ave
Elm Ave
Churchville Ln
Chinquapin Rd
Gravel Hill Rd
Fairhill Dr
Addis Dr
Matthew Cir
Wrights Rd
Linton Hill Rd
Eagle Rd
Stoopville Rd
North Dr
Buck Rd
Pine Run
Bridgetown Pike
Old Lincoln Hwy
Lower
391 ft
431 ft
250 ft
260 ft

LEGEND

- QUARTERLY SURFACE WATER/ANNUAL SEDIMENT SAMPLING LOCATION
- SEMIANNUAL REFERENCE SURFACE WATER (SPRING AND SUMMER ONLY)/ANNUAL SEDIMENT SAMPLING LOCATION
- SINGLE EVENT SURFACE WATER/SEDIMENT SAMPLING LOCATION
- USGS FLOW MEASUREMENT STATION
- USGS STATION
- HORSHAM AIR GUARD STATION
- FORMER NAS JRB WILLOW GROVE

5,000 2,500 0 5,000 10,000
Feet

NAVFAC

PROPOSED SURFACE WATER AND SEDIMENT SAMPLE LOCATIONS FORMER NAS JRB WILLOW GROVE MONTGOMERY COUNTY, PENNSYLVANIA

CTO	WE04
FILE	WGNA SW SED LOCATION REGION
REV	3
DATE	01/27/20
FIGURE NUMBER	4

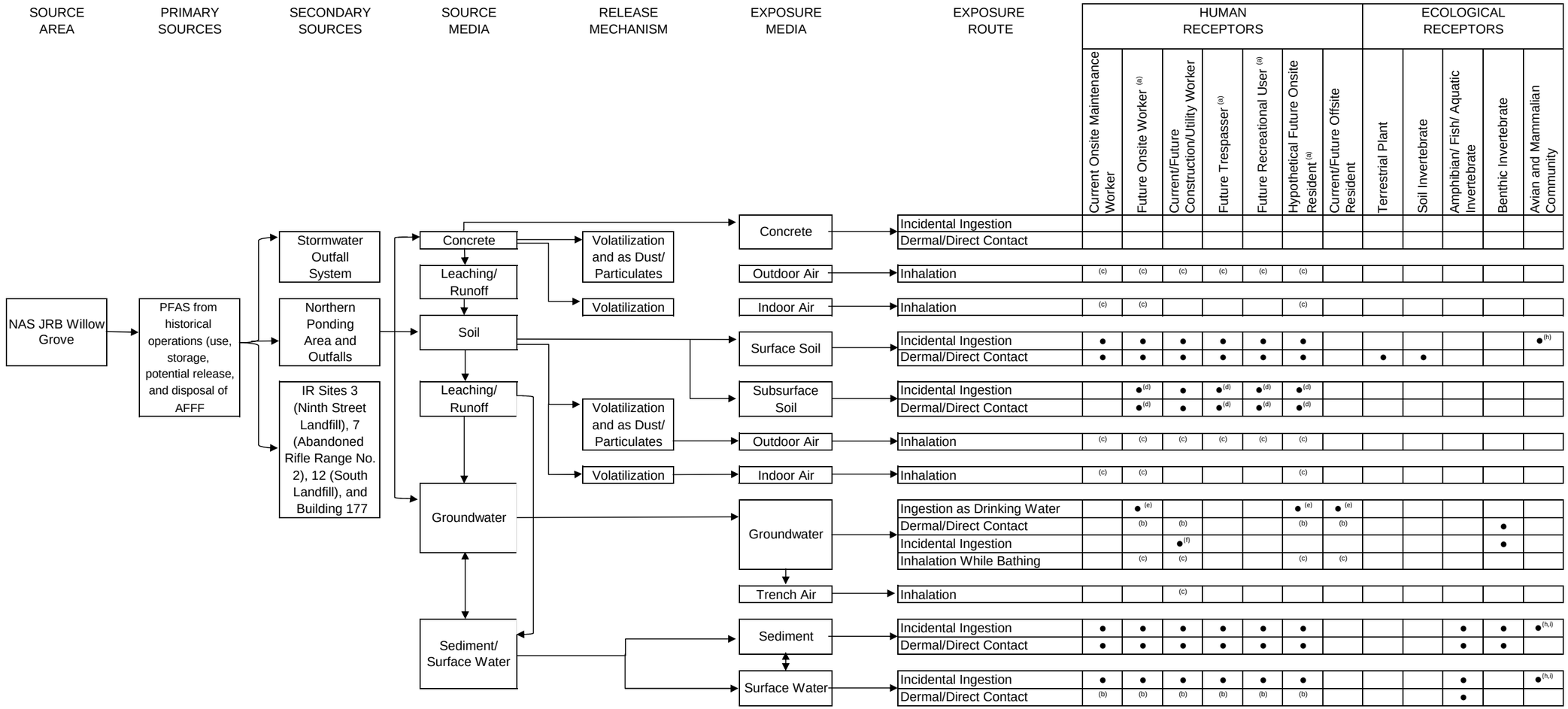
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APPENDIX A

CONCEPTUAL SITE MODEL WIRE DIAGRAM FROM PHASE I REMEDIAL INVESTIGATION

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FIGURE 6-1
CONCEPTUAL SITE MODEL
NAS JRB WILLOW GROVE, WILLOW GROVE, PENNSYLVANIA



LEGEND

● = Complete exposure pathway.

A blank space indicates that the exposure route is not complete for this receptor.

KEY

(a) Based on potential future Site use. The Site is fenced in, access is restricted, and the Site is patrolled by police. Therefore, a current trespasser scenario is not considered a potentially complete pathway.

(b) Dermal contact with PFOS, PFOA, and PFBS in water is not considered a complete pathway due to the lack of chemical-specific information to calculate their absorption through the skin. The dermal exposure pathway cannot be estimated using US EPA's Risk Assessment Guidance for Superfund (RAGS) Part E Dermal Risk Assessment Guidance methodology (US EPA, 2004) as these chemicals are said to be outside of the model's effective predictive domain (EPD) and use of the model is not recommended due to high uncertainty.

(c) Inhalation toxicity values are not currently available for PFAS, therefore the inhalation pathway cannot be quantified.

(d) Exposure to subsurface soil is considered a potentially complete pathway for the future use scenario only, assuming deeper soils may be brought to the surface and made available for contact during development for future use.

(e) Drinking water is currently provided to the area by municipal water. Onsite groundwater is not currently used for potable use. However, with the exception of IR Site 5, there are no restrictions on groundwater, therefore groundwater ingestion as drinking water is a potentially complete pathway (excluding IR Site 5) under a hypothetical future use scenario if onsite groundwater becomes a source of potable water.

(f) The associated pathway is potentially complete if the water table is equal or less than 15 feet below ground surface, making it available for contact by a construction/utility worker.

(g) Sediment and surface water pathways are assumed to be potentially complete for on and offsite water bodies as applicable.

(h) Bioaccumulation pathway also expected to be potentially complete for onsite and offsite water bodies and for terrestrial areas which provide habitat for wildlife. Areas developed for industrial, commercial, or residential use are unlikely to provide significant habitat for avian and mammalian communities so exposure pathways would not be complete under those scenarios.

(i) Bioaccumulation pathway for aquatic reptiles (e.g., turtles) may also be complete for onsite and offsite water bodies.

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APPENDIX B
SITE-SPECIFIC PROJECT SCREENING LEVELS

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7.0 PROJECT SCREENING LEVELS

The analytical soil, groundwater, sediment, and surface water data collected at the Site were compared to human health and ecological PSLs to determine whether PFAS were in Site media above PSLs and whether further sampling and/or evaluation is recommended.

Concentrations equal to or below the PSLs do not pose an unacceptable risk/hazard to human health or ecological receptors, as applicable, and do not require further evaluation of potential risk/hazard. Concentrations greater than the PSLs do not necessarily pose an unacceptable risk/hazard, but indicate further evaluation is needed to make a determination of the associated potential risk/hazard.

7.1 Human Health Screening Levels

The human health PSLs for soil, groundwater, sediment, and surface water used in this screening assessment are detailed below by media. Human health screening levels were not developed for PFAS other than PFOS, PFOA, and PFBS due to the lack of available toxicity values for these compounds from USEPA's hierarchy of sources of dose-response values (USEPA 2003; 2018a and b). Human health screening levels for PFOS, PFOA, and PFBS were obtained from published sources, or were calculated based on published toxicity values, as discussed further below.

Toxicity Values

The following toxicity values were utilized in the calculation of soil, groundwater, sediment, and surface water PSLs:

- The chronic reference dose (RfD) for PFOA and PFOS (2E-5 milligrams per kilogram ([mg/kg-day]) published in USEPA Office of Water's Drinking Water Health Advisories for PFOA and PFOS (USEPA 2016a and b);
- The oral cancer slope factor (CSF) for PFOA (7E-2 per mg/kg-day) published in USEPA Office of Water's Drinking Water Health Advisories for PFOA (USEPA 2016a); and
- The chronic RfD for PFBS (2E-2 mg/kg-day) published in USEPA's Provisional Peer-Reviewed Toxicity Values (PPRTV) paper (USEPA 2014d).

7.1.1 Soil

For PFBS, soil PSLs protective of residential and commercial/industrial exposure scenarios are equal to the USEPA Regional Screening Levels (RSLs) for residential soil and industrial soil (USEPA

2018b), respectively, based on a target hazard quotient of 0.1 to account for potential cumulative effects per target organ. Published soil RSLs are not available for PFOS and PFOA. Therefore, soil screening levels protective of residential and commercial/industrial exposure scenarios were calculated for PFOS and PFOA using USEPA's RSL Calculator (USEPA 2018a) based on a target cancer risk level of 1E-6 (applicable to PFOA only) and a target hazard quotient of 0.1. Default exposure assumptions for residential and industrial soil exposure scenarios provided by USEPA in the RSL calculator were used. The human health soil PSLs used in the screening assessment are summarized below:

Compound	CAS	Units	Human Health Soil PSLs	
			Residential	Industrial Worker
Perfluorobutanesulfonic Acid (PFBS)	375-73-5	µg/kg	126,000 (a)	1,640,000 (a)
Perfluorooctanesulfonate (PFOS)	1763-23-1	µg/kg	126	1,640
Perfluorooctanoic Acid (PFOA)	335-67-1	µg/kg	126	1,640

CAS – Chemical Abstracts Service.

(a) Published soil RSLs for PFBS are available and presented on the USEPA RSL Table (2018). The published values differ slightly from those calculated using the RSL calculator (presented in this table) due to rounding of the RSL Table values.

7.1.2 Groundwater

For PFOS and PFOA, two sources of groundwater PSLs were used, as follows:

- USEPA's Lifetime Drinking Water HA levels for PFOS and PFOA of (0.07 µg/L), as individual compounds and the combined PFOS + PFOA concentration (USEPA, 2016a and b);
- Published USEPA tap water RSLs are not available for PFOS and PFOA. Therefore, groundwater screening levels protective of a residential drinking water pathway were calculated for PFOS and PFOA using USEPA's RSL Calculator (USEPA 2018a) based on a target cancer risk level of 1E-6 (applicable to PFOA only) and a target hazard quotient of 0.1. Default exposure assumptions for a residential drinking water ingestion exposure scenario provided by USEPA in the RSL calculator were used.

For PFBS, the groundwater PSL protective of a residential drinking water pathway is equal to the USEPA RSL for tap water (USEPA 2018b), based on a target hazard quotient of 0.1 to account for potential cumulative effects per target organ.

The human health groundwater PSLs used in the screening assessment are summarized below:

Compound	CAS	Units	Human Health Groundwater PSLs	
			Risk Based Tapwater Screening Level	Drinking Water Health Advisory
Perfluorobutanesulfonic Acid (PFBS)	375-73-5	µg/L	40	NA
Perfluorooctanesulfonate (PFOS)	1763-23-1	µg/L	0.04	0.07
Perfluorooctanoic Acid (PFOA)	335-67-1	µg/L	0.04	0.07
Total PFOS and PFOA	TOTPFOAPFOS	µg/L	NA	0.07

CAS – Chemical Abstracts Service.

NA – Not available.

7.1.3 Sediment

Sediment PSLs were derived for PFOS, PFOA, and PFBS using the USEPA RSL Calculator (USEPA 2018a) based on a target cancer risk level of 1E-6 (applicable to PFOA only) and a target hazard quotient of 0.1. Default exposure assumptions for a recreator soil exposure scenario recommended in the RSL calculator were used, where available, to represent potential exposure to sediment for preliminary screening purposes. The use of soil exposure inputs to represent sediment exposure is conservative. Where default values are not available/appropriate, conservative inputs protective of a potential Site-specific sediment exposure scenario were selected using professional judgment. The inputs used to derive the sediment PSLs are as follows:

- Exposure frequency (days/year) – 52 [Assumes contact occurs 2 days per week for 26 weeks (6 warmer months) of the year, based on professional judgment];
- Exposure duration (years) – Adult – 20; Child – 6 (USEPA 2018a);
- Exposure time (hours/day) – 3 (Assumes receptors spend 3 hours per day contacting sediment, based on professional judgment);
- Skin surface area [square centimeters (cm^2)/day] – Adult – 6,032; Child – 2,373 (USEPA 2018a);
- Adherence factor [milligrams (mg)/cm^2] – Adult - 0.07; Child - 0.2 (USEPA 2018a);
- Ingestion/intake rate (mg/day) – Adult – 100; Child – 200 (USEPA, 2018a);
- Body Weight [kilograms (kg)] – Adult – 80; Child – 15 (USEPA 2018a).

The human health sediment PSLs used in the screening assessment are summarized below:

Compound	CAS	Units	Human Health Sediment PSLs
Perfluorobutanesulfonic Acid (PFBS)	375-73-5	µg/kg	851,000
Perfluorooctanesulfonate (PFOS)	1763-23-1	µg/kg	851
Perfluorooctanoic Acid (PFOA)	335-67-1	µg/kg	851

CAS – Chemical Abstracts Service.

NA – Not available.

7.1.4 Surface Water

Surface water PSLs were derived for PFOS, PFOA, and PFBS using the USEPA RSL Calculator (USEPA 2018a) based on a target cancer risk level of 1E-6 (applicable to PFOA only) and a target hazard quotient of 0.1. Default exposure assumptions for a recreator surface water exposure scenario recommended in the RSL Calculator were used, where available, to represent potential exposure to surface water for preliminary screening purposes. Where default values are not available/appropriate, conservative inputs protective of a potential Site-specific surface water exposure scenario were selected using professional judgment. The inputs used to derive the surface water PSLs are as follows:

- Exposure frequency (days/year) – 52 (Assumes contact occurs 2 days per week for 26 weeks (6 warmer months) of the year, based on professional judgment);
- Exposure duration (years) – Adult – 20; Child – 6 (USEPA 2018a);
- Exposure time (hours/day) – 3 (Assumes receptors spend 3 hours per day contacting surface water, based on professional judgment);
- Ingestion/intake rate [liters (l)/hour] – 0.05 (USEPA 2014c);
- Body Weight (kg) – Adult – 80; Child – 15 (USEPA 2018a).

The human health surface water PSLs used in the screening assessment are summarized below:

Compound	CAS	Units	Human Health Surface Water PSLs
Perfluorobutanesulfonic Acid (PFBS)	375-73-5	µg/L	1,400
Perfluorooctanesulfonate (PFOS)	1763-23-1	µg/L	1.4
Perfluorooctanoic Acid (PFOA)	335-67-1	µg/L	1.4

CAS – Chemical Abstracts Service.

NA – Not available.

7.2 Ecological Screening Levels

Ecological screening levels for PFAS have not been developed by USEPA. Therefore, ecological PSLs were identified based on a review of the available literature. Recent Canadian federal environmental quality guidelines, when available, were selected preferentially as ecological screening levels (Environment and Climate Change Canada, 2017). When Canadian values were not available, ecological screening levels identified in the literature or developed by other countries (e.g., Canada, Australia, United Kingdom, and the Netherlands) were considered.

The evaluation of the ecological effects of PFAS is an expanding field of study and additional information relevant to PFAS at this Site may be identified. For the initial evaluation of data, PSLs for PFOS and PFOA were identified for terrestrial plants, soil invertebrates, benthic invertebrates, aquatic receptors (e.g., aquatic invertebrates, fish), birds, and mammals. Surface water PSLs for aquatic receptors and birds were also identified for PFBS. The ecological PSLs for surface soil, sediment, and surface water used in this screening assessment are detailed below.

7.2.1 Soil

Soil samples collected from 0 to 2 ft. bgs were compared to PFOS soil screening levels recently derived by Canada. These include a direct contact federal soil quality guideline (FSQG) of 11,000 µg/kg and soil screening levels of 330 µg/kg for birds and 12 µg/kg for mammals based on incidental ingestion of soil and ingestion of contaminated food items (Environment and Climate Change Canada 2017). The screening level for the bird is based on an American robin with a diet of plants (60%), and soil invertebrates (40%) and the screening level for the mammal is based on a common shrew with a diet of plants (2.5%), soil invertebrates (95%), and small mammals (2.5%).

Soil samples were compared to a PFOA soil invertebrate screening level of 160 µg/kg (Norwegian Pollution Control Authority (NPCA) 2008). The screening level derivation process used by NPCA applies an uncertainty factor of 100 to the available soil invertebrate toxicity data for PFOA.

Therefore, an experimental, reproduction-based, no observed effect concentration (NOEC) of 16,000 µg/kg becomes a soil screening level of 160 µg/kg. Given that NPCA (2008) reported that PFOA was less toxic to soil invertebrates than PFOS and that the Canadian direct contact screening level for PFOS is 11,000 µg/kg, the PFOA soil invertebrate screening level of 160 µg/kg is very conservative.

A terrestrial plant screening level was not available for PFOA and soil screening levels were not identified for other PFAS compounds. Screening levels for plants and soil invertebrates are based on direct exposure to PFAS in soil and the screening levels for birds and mammals include ingestion and bioaccumulation pathways. The ecological soil PSLs used in the screening assessment are summarized below:

Compound	CAS	Units	Ecological Soil PSLs		
			Soil Invertebrates/ Terrestrial Plants	Birds	Mammals
Perfluorooctanesulfonate (PFOS)	1763-23-1	µg/kg	11,000	330	12
Perfluorooctanoic Acid (PFOA)	335-67-1	µg/kg	160 (invertebrates)	NA	NA

7.2.2 Sediment

Screening levels for benthic invertebrates are based on direct exposure to PFAS in sediment and only two sediment screening levels for PFOS were identified in the literature. These two values are discussed below.

A wet weight based screening level of 67 µg/kg (Environment Agency 2004) was derived using equilibrium partitioning and a surface water screening level. For screening purposes, the wet weight based screening level of 67 µg/kg was converted to a sample-specific dry weight based screening level based on percent moisture for each sample using the following equation:

$$C_D = \frac{C_W}{P_S} \, x \, 100$$

Where:

C_D = Concentration corrected for dry weight

C_w = Concentration in wet weight

P_s = Percent solids

Calculated dry weight based screening levels for each sample are presented in the ecological sediment screening table (Table 7-1).

A second sediment screening level of 220 µg/kg (NPCA 2008) was also considered to further evaluate PFOS in sediments. Concentrations below this level are classified as "Good" and are not associated with toxic effects on benthic invertebrates.

Sediment screening levels were not available for other PFAS compounds. Screening levels for benthic invertebrates are based on direct exposure to PFAS in sediment. The ecological sediment PSLs used in the screening assessment are summarized below.

Compound	CAS	Units	Ecological Sediment PSLs
			Benthic Invertebrates
Perfluorooctanesulfonate (PFOS)	1763-23-1	µg/kg wet weight	67
		µg/kg dry weight	220

7.2.3 Surface Water

Surface water samples were screened against fish/aquatic invertebrate screening levels of 6.8 µg/L for PFOS (Environment and Climate Change Canada, 2017), 2900 µg/L for PFOA (Giesy et al. 2010), and 24000 µg/L for PFBS (Giesy et al. 2010). These levels were derived based on direct exposure to PFAS in the water column. The PFOS federal environmental quality guideline (FEQG) of 6.8 µg/L derived by Canada is similar to the value of 5.1 µg/L derived previously by Giesy et al. (2010). Toxicity to leopard frogs has occurred within the concentration range that has been shown to cause effects in fish and invertebrates (Giesy et al. 2010), so it is assumed that these PFOS screening levels are also protective of amphibians.

Screening levels identified for birds and mammals exposure to PFOS in surface water were 0.047 µg/L (Giesy et al. 2010) and 0.0026 µg/L (RIVM 2010), respectively. A PFBS screening level of 17000 µg/L (Giesy et al. 2010) was also identified for birds. These levels assume exposure to PFAS in prey items (e.g., fish that have bioaccumulated PFAS) through the food chain. The PFOS and PFBS screening levels for birds derived by Giesy et al. (2010) are protective of piscivorous birds such as herring gull, bald eagle, or kingfisher and may be overly protective of birds feeding on small fish. Similarly, the screening level for mammals is conservatively based on the lowest identified toxicity value for mammals and assumes ingestion of prey items that have bioaccumulated PFOS. No food chain based surface water screening levels were identified for PFOA for birds or mammals and no surface water screening levels were identified for other PFAS compounds.

The ecological surface water PSLs used in the screening assessment are summarized below:

Compound	CAS	Units	Ecological Surface Water PSLs		
			Fish / Aquatic Invertebrates	Birds	Mammals
Perfluorobutanesulfonic Acid (PFBS)	375-73-5	µg/L	24000	17000	NA
Perfluorooctanesulfonate (PFOS)	1763-23-1	µg/L	6.8	0.047	0.0026
Perfluorooctanoic Acid (PFOA)	335-67-1	µg/L	2900	NA	NA

APPENDIX C
TETRA TECH STANDARD OPERATING PROCEDURES

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TETRA TECH	STANDARD OPERATING PROCEDURE	Number SA-1.1	Page 1 of 36
		Effective Date 7/15/2016	Revision 9
		Applicability Tetra Tech, Inc., NUS Operating Unit	
		Prepared Earth Sciences Department	
Subject GROUNDWATER SAMPLE ACQUISITION AND ONSITE WATER QUALITY TESTING		Approved T. Johnston	tom. johnston @tetratec h.com Digitally signed by: tom. johnston@tetratech.com DN: CN = tom. johnston@tetratech.com Date: 2016.07.14 10:17:45 -05'00'

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1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the process to be used for purging groundwater monitoring wells prior to sampling, for collecting groundwater samples, and for measuring groundwater quality parameters.

2.0 SCOPE AND APPLICABILITY

This document provides information on proper sampling equipment, onsite water quality testing, safety measures to ensure the safety of the field technician(s), and techniques for groundwater sampling. All personnel are encouraged to review the information contained herein to facilitate planning of the field sampling effort. The techniques described shall be followed whenever applicable, noting that site-specific conditions or project-specific plans may require modifications to methodology.

WARNING:

- Sample containers can be contaminated during storage if nearby volatile substances infiltrate the surrounding air and migrate into the containers. This can occur even when containers are capped. Therefore, containers that have been stored onsite for longer than 6 months should not be used.

Note: Whereas most air-borne contamination is likely to be associated with organic substances, inorganic substances such as hydrochloric acid (muriatic acid) can emit inorganic vapors that infiltrate sample containers.

3.0 GLOSSARY

Conductivity – Conductivity is a numerical expression of the ability of an aqueous solution to carry an electric current. This ability depends on the presence of ions and their total concentration, mobility, valence, and relative concentrations and on temperature. Conductivity is highly dependent on temperature and should be reported at a particular temperature, e.g., 20.2 milliSiemens per centimeter (mS/cm) at 14 degrees Celsius (°C).

Dissolved Oxygen (DO) – DO concentrations in natural water (including groundwater and surface water) and wastewater depend on the physical, chemical, and biochemical activities in the water sample.

Groundwater Sample – A quantity of water removed from the ground, usually via a monitoring well that may or may not be lined with a well casing, and typically in a manner that is designed to represent the in-situ quality of one or more parameters of interest regarding the water in the ground.

Oxidation-Reduction Potential (ORP) - A measure of the activity ratio of oxidizing and reducing species as determined by the electromotive force developed by a noble metal electrode immersed in water, as referenced against a reference electrode. Also commonly referred to as redox potential or Eh. A reference electrode commonly used in the field is the silver/silver chloride electrode, which has a voltage offset of about 210 millivolts (mV) from the standard hydrogen electrode (SHE). To convert field ORP measurements to equivalent SHE values, approximately 210 mV must be added to the ORP values obtained using the silver/silver chloride electrode. The actual offset depends on the concentration of the potassium chloride (KCl) solution in the field reference electrode and the temperature. Offsets typically range from 199 (saturated KCl) to 205 (3.5 Molar KCl) to 222 mV (1 Molar KCl) at 25°C and are greater at lower temperatures.

pH – A unitless number equal to the negative logarithm (base 10) of the hydrogen ion activity, expressed in moles per liter. The hydrogen ion activity is related to the hydrogen ion concentration, and, in a relatively weak solution, the two are nearly equal. Thus, for all practical purposes, pH is related to the hydrogen ion

concentration. This is an inverse relationship, meaning that the pH decrease with increasing hydrogen ion concentration.

pH Paper - Indicator paper that turns different colors depending on the pH of the solution to which it is exposed. Comparison with color standards supplied by the manufacturer will then give an indication of the solution's pH.

Representativeness – A qualitative description of the degree to which an individual sample accurately reflects population characteristics or parameter variations at a sampling point. It is therefore an important characteristic not only of assessment and quantification of environmental threats posed by the site, but also for providing information for engineering design and construction. Proper sample location selection and proper sample collection methods are important to ensure that a truly representative sample has been collected.

Salinity – The measurement of dissolved salts in a given mass of solution. Note: most field meters determine salinity automatically from conductivity and temperature. The value will be displayed in either parts per thousand (ppt) or percent (e.g., 35 ppt equals 3.5 percent). The parts per thousand symbol ($^0/_{00}$) is not the same as the percent symbol (%).

Specific Conductance – Specific conductance is the electrical conductivity across an electrical cell of specified geometry in an electrolyte solution. The electrical current is carried by charged atoms or molecules in the solution (i.e., ions). Standard measurements are commonly made at, or normalized to, a standard temperature of 25°C. Temperature normalizations commonly are automated by the specific conductance meters used to make these measurements. Temperature compensation, however, adjusts only for changes in instrument response caused by temperature changes. The temperature compensation does not correct for changes in conductance that result from changes in ion mobility. Hence the reason most measurements are made at the standard temperature of 25°C.

Turbidity – Turbidity in water is caused by suspended matter such as clay, silt, and fine organic and inorganic matter. Turbidity is an expression of the optical property that causes light to be scattered and absorbed rather than transmitted in a straight line through the sample.

4.0 RESPONSIBILITIES AND PERSONNEL QUALIFICATIONS

Project Manager - The Project Manager is responsible for determining the sampling objectives, initial sampling locations, and field procedures used in the collection of groundwater samples. Additionally, in consultation with other project personnel (geologist, hydrogeologist, etc.), the Project Manager identifies sampling locations.

Site Safety Officer (SSO) - The SSO (or a qualified designee) is responsible for providing the technical support necessary to implement the project Health and Safety Plan (HASP) or equivalent. This includes but is not be limited to performing air quality monitoring during sampling, boring and excavation activities, and ensuring that workers and offsite (downwind) individuals are not exposed to hazardous levels of airborne contaminants. The SSO or SSO designee may also be required to advise the Field Operations Leader (FOL) on other safety-related matters regarding sampling, such as mitigative measures to address potential hazards from hazardous objects or conditions.

Project Geologist/Sampler - The project geologist/sampler is responsible for the proper acquisition of samples in accordance with this SOP or other project-specific documents. In addition, this individual is responsible for the completion of all required paperwork (e.g., sample log sheets, field notebook, boring logs, container labels, custody seals, and chain-of-custody forms) associated with the collection of those samples.

Project Hydrogeologist – This individual is responsible for selecting and detailing the specific groundwater sampling techniques, onsite water quality testing (type, frequency, and location), equipment to be used, and providing detailed input in this regard to the project planning documents. The project hydrogeologist is also responsible for properly briefing and overseeing the performance of site sampling personnel.

Field Operations Leader (FOL) – This individual is primarily responsible for the execution of the planning document containing the Sampling and Analysis Plan (SAP). This is accomplished through management of a field sampling team for the proper acquisition of samples. He or she is responsible for the supervision of onsite analyses; ensuring proper instrument calibration, care, and maintenance; sample collection and handling; the completion and accuracy of all field documentation; and making sure that custody of all samples obtained is maintained according to proper procedures. When appropriate and as directed by the FOL, such responsibilities may be performed by other qualified personnel (e.g., field technicians) where credentials and time permit. The FOL is ultimately responsible for adherence to Occupational Safety and Health Administration (OSHA) regulations during these operations through self-acquisition or through the management of a field team of samplers.

General personnel qualifications for groundwater sample collection and onsite water quality testing include the following:

- OSHA 40-hour and applicable refresher training.
- Capability of performing field work under the expected physical and environmental (i.e., weather) conditions.
- Familiarity with appropriate procedures for sample documentation, handling, packaging, and shipping.

5.0 HEALTH AND SAFETY

Specific safety and health precautions are identified throughout this SOP. In addition to those precautions, the following general hazards may be incurred during sampling activities:

- Knee injuries from kneeling on hard surfaces.
- Slips, trips, and falls.
- Cuts and lacerations.
- Traffic hazards associated with sampling in parking areas and roadways and along highways and railways.

Methods of avoiding these hazards are provided below.

Knee injuries – Many monitoring wells are installed as flush mounts. Personnel are required to kneel to open these wells and to take groundwater level measurements, etc. This could result in knee injuries from kneeling on stones/foreign objects and general damage due to stress on the joints. To combat this hazard:

- Clear any foreign objects from the work area.
- Wear hard-sided knee pads.

Slips, Trips, and Falls – These hazards exist while traversing varying terrains carrying equipment to sample wells. To minimize these hazards:

- Pre-survey well locations. Eliminate, barricade, or otherwise mark physical hazards leading to the locations.
- Carry small loads that do not restrict the field of vision.
- Travel the safest and clearest route (not necessarily the shortest).

Cuts and Lacerations – To prevent cuts and lacerations associated with groundwater sampling, the following provisions are required:

- Always cut away from yourself and others when cutting tubing or rope. This will prevent injury to yourself and others if the knife slips.
- Do not place items to be cut in your hand or on your knee.
- Change blades as necessary to maintain a sharp cutting edge. Many accidents result from struggling with dull cutting attachments.
- Whenever practical, wear cut-resistant gloves (e.g., leather or heavy cotton work gloves) at least on the hand not using the knife.
- Keep cutting surfaces clean and smooth.
- Secure items to be cut -- do not hold them against the opposing hand, a leg, or other body part.
- When transporting glassware, keep it in a hard-sided container such as a cooler so that if there is a fall, you will be less likely to get cut by broken glass.
- DO NOT throw broken glass or glass ampoules into garbage bags. Place broken glass and glass ampoules in hard-sided containers such as a cardboard box or directly into a dumpster. DO NOT reach into garbage bags to retrieve any item accidentally thrown away. Empty the contents onto a flat surface to avoid punctures and lacerations from reaching where you cannot see.

Vehicular and Foot Traffic Hazards – When sampling along the roadway or near traffic patterns, follow the following precautions:

- Motorists may be distracted by onsite activities – ASSUME THEY DO NOT SEE YOU OR MEMBERS OF YOUR FIELD CREW.
- DO NOT place obstructions (such as vehicles) along the sides of the road that may cause site personnel to move into the flow of traffic to avoid your activities or equipment or that will create a blind spot.
- **Provide a required free space of travel**. Maintain at least 6 feet of space between you and moving traffic. Where this is not possible, use flaggers and/or signs to warn oncoming traffic of activities near or within the travel lanes.
- Face Traffic. Whenever feasible, if you must move within the 6 feet of the required free space or into traffic, attempt to face moving traffic at all times. Always leave yourself an escape route.
- Wear high-visibility vests to increase visual recognition by motorists.

- Do not rely on the vehicle operator's visibility, judgment, or ability. Make eye contact with the driver. Carefully and deliberately use hand signals so they will not startle or confuse motorists or be mistaken for a flagger's direction before moving into traffic.

- Your movements may startle a motorist and cause an accident, so move deliberately. Do not make sudden movements that might confuse a motorist.

6.0 PROCEDURES

6.1 General

For information derived from a groundwater sample to be useful and accurate, the sample must be representative of the particular zone being sampled. The physical, chemical, and bacteriological integrity of the sample must be maintained from the time of sampling to the time of analysis to keep any changes in water quality parameters to a minimum.

CAUTION

A closed well may generate and accumulate gases due to biological degradation, evolution of volatile chemicals from groundwater into the air, or other chemical actions. These gases may also be artificially generated, such as in the case of air sparging or extraction wells, which may take several days to depressurize. See Section 6.6.2 for safety measures to be employed to protect sampling personnel.

Methods for withdrawing samples from completed wells include the use of pumps, compressed air or nitrogen, bailers, and various types of samplers. The primary considerations in obtaining a representative sample of groundwater are to avoid collection of stagnant (standing) water in the well and to avoid physical or chemical alteration of the water sample due to external influences of the sampling technique(s). In a non-pumping well, there will be little or no vertical mixing of water in the well pipe or casing, and stratification will occur. The well water in the screened section will mix with groundwater due to normal flow patterns, but the well water above the screened section will remain isolated and become stagnant. Concentration gradients resulting from mixing and dispersion processes, layers of variable geologic permeability, and the presence of separate-phase product (e.g., floating hydrocarbons) may cause stratification. Excessive pumping or improper sampling methods can dilute or increase contaminant concentrations in the collected sample compared to what is representative of the integrated water column as it naturally occurs at that point, resulting in the collection of a non-representative sample.

To safeguard against collecting non-representative samples, the following approach shall be followed prior to sample acquisition:

CAUTION

Mechanical agitation of well water may cause off-gas generation of volatile contaminants, creating an inhalation exposure to the sampler(s). Where avoiding an inhalation exposure is not possible and mechanical agitation is possible, pump into closed-top containers to control potential air emissions.

1. If possible, position yourself (and the sampling equipment) upwind of the well head.

2. Purge the monitoring well to be sampled prior to obtaining any samples from it. Evacuation of three to five well volumes is recommended prior to sampling, unless low-flow purging and sampling methods are utilized as described in Section 6.7 (Consult the site-specific SAP for exact purging parameters). In a high-yielding groundwater formation and where there is no stagnant water in the well above the

screened section, extensive evacuation prior to sample withdrawal is not as critical as it is in a low-yielding well or in wells containing stagnant water.

3. For wells with low yields that are purged dry during sampling, evacuate the well and allow it to recover to 75 percent of full capacity prior to sample acquisition. If the recovery rate is fairly rapid [generally 300 milliliters (mL) per minute or greater], attempt to continue evacuation until the number of well volumes specified in the SAP is achieved. If this cannot be accomplished, allow recovery to 75 percent of capacity and begin sampling.

> ***CAUTION***
> For moderate to high-yielding monitoring wells, an evacuation rate that does not cause excessive turbulence in the well should be selected. There is no absolute safeguard against contaminating the sample with stagnant water; hence, special techniques are required for purging to minimize the potential for sample contamination (see below).

4. For moderate to high-yielding monitoring wells, use one of the following purge techniques:

   - Place a submersible pump or the intake line of a surface pump or bailer just below the water surface when removing the stagnant water.

   - While purging and as the water level decreases, lower the pump or intake line as the water level drops in the well. Three to five volumes of water shall be removed to provide reasonable assurance that all stagnant water has been evacuated. After this is accomplished, a bailer or other approved device may be used to collect the sample for analysis.

   - Unless otherwise directed, place the intake line of the sampling pump (or the submersible pump itself) near the center of the screened section, and pump approximately one casing volume of water from the well at a low purge rate equal to the well's recovery rate (low-flow sampling).

6.2 Sampling, Monitoring, and Evacuation Equipment

Sample containers shall conform to the guidelines in SOP SA-6.1.

The following equipment shall be on hand when sampling groundwater wells (reference SOPs SA-6.1 and SA-7.1):

- Sample packaging and shipping equipment – Coolers for sample shipping and cooling, chemical preservatives, appropriate sampling containers and filler materials, ice, labels, and chain-of-custody documents.

- Field tools and instrumentation

  – Multi-parameter water quality meter with an in-line sample chamber capable of measuring ORP, pH, temperature, DO, specific conductance, turbidity, and salinity, or individual meters (as applicable).

  – pH Paper.

  – Camera and film (if appropriate). Approval prior to use may be required (see SOP SA-6.3).

  – Appropriate keys (for locked wells).

- Water level indicator and/or oil-water interface probe if separate-phase product is expected.

- Pumps

  - Shallow-well pumps: Centrifugal, bladder, suction, or peristaltic pumps with drop lines and air-lift apparatus (compressor and tubing) where applicable.

  - Deep-well pumps: Submersible pump and electrical power-generating unit, or bladder pumps where applicable.

- Other sampling equipment – Bailers, graduated cylinder, stopwatch, and inert line with tripod-pulley assembly (if necessary).

- Pails – Plastic, graduated.

- Clean paper or cotton towels for cleaning equipment.

- Buckets with lids for collecting purge water.

- Decontamination solutions – Deionized water, potable water, phosphate-free laboratory-grade detergent, and analytical-grade solvent (e.g., pesticide-grade isopropanol), as required.

Ideally, sample withdrawal equipment shall be completely inert, economical, easily cleaned, cleaned prior to use, reusable, able to operate at remote sites in the absence of power sources, and capable of delivering variable rates for well purging and sample collection.

6.3 Calculations of Well Volume

To ensure that the proper volume of water has been removed from the well prior to sampling, it is first necessary to know the volume of standing water in the well pipe (including well screen where applicable). This volume can be easily calculated by the following method. Calculations shall be entered in the site logbook or field notebook or on a sample log sheet form or equivalent electronic form(s) (see SOP SA-6.3):

1. Obtain all available information on well construction (location, casing, screen, etc.).

2. Determine well or inner casing diameter.

3. Measure and record static water level (depth below ground level or top of casing reference point).

4. Determine depth of well by sounding using a clean, decontaminated, weighted tape measure or water level indicator.

5. Calculate number of linear feet of static water (total depth or length of well pipe minus the depth to static water level).

6. Calculate one static well volume in gallons $V = (0.163)(T)(r^2)$

   where: V = Static volume of well in gallons.
   T = Linear feet of water in the well.
   r = Inside radius of well casing in inches.
   0.163 = Conversion factor (compensates for conversion of casing radius from inches to feet; cubic feet to gallons; and pi (π)).

7. Per evacuation volumes discussed above, determine the minimum amount to be evacuated before sampling.

Measuring devices may become contaminated when gathering the above information if they are submerged in contaminated water. Decontamination of the tape or water level indicator must be conducted between measurements in different wells as follows:

1. Saturate a paper towel or clean cotton towel with deionized water.

2. As the measuring device is extracted, wipe the tape, changing the cleaning surface frequently.

3. After it is extracted, rinse the probe or tape using a spray bottle of deionized water over a bucket or similar collection container.

Based on the contaminant (oily, etc.), it may be necessary to use a soap and water wash and rinse to remove contaminants. Isopropanol can be used on the probe/tape. However, it is recommended that the use of solvents on the tape be minimized because they could degrade the protective covering or possibly remove the scale designations. If isopropanol (or some other solvent) is used, assure that the manufacturer/supplier Safety Data Sheet (SDS) is obtained, kept onsite at a readily available location with other SDSs, and reviewed by personnel prior to the first usage of the solvent. Also, add the substance to the site-specific Hazardous Chemical Inventory list (see Section 5 of the Tetra Tech Health and Safety Manual (available on the Health and Safety link of the My Tetra Tech intranet site, Tetra Tech Hazard Communication Program, and OSHA Standard 29 Code of Federal Regulations [CFR] 1910.1200).

6.4 Evacuation of Static Water – Purging

6.4.1 General

The amount to be purged from each well will be determined prior to sample collection. This amount will depend on the intent of the monitoring program and the hydrogeologic conditions. Programs to determine overall quality of water resources may require long pumping periods to obtain a sample that is representative of a large volume of the aquifer. The pumped volume may be specified prior to sampling so that the sample can be a composite of a known volume of the aquifer. Alternately, the well can be pumped until parameters such as temperature, specific conductance, pH, and turbidity (as applicable) have stabilized. Onsite measurements of these parameters shall be recorded in the site logbook or field notebook or on standardized data sheets or an equivalent electronic form(s).

6.4.2 Evacuation Devices

The following discussion is limited to those devices commonly used at hazardous waste sites. Attachment A provides guidance on the proper evacuation device to use for given sampling situations. All of these techniques involve equipment that is portable and readily available.

Bailers

Bailers are the simplest evacuation devices used and have many advantages. They generally consist of a length of tubing equipped with a base plate and ball check-valve at the bottom. Bailers are typically comprised of stainless steel and plastic. They come in a variety of sizes, but the two most often used are 2 inches and 4 inches in diameter. An inert non-absorbent line such as polyethylene rope is used to lower and then raise the bailer to retrieve the sample. As the bailer is lowered into the water column, the ball is

pushed up allowing the tube to be filled. When the bailer is pulled upward, the ball seats in the base plate preventing water from escaping.

Advantages of bailers include the following:

- There are few limitations on size and materials used.
- No external power source is needed.
- Bailers are inexpensive and can be dedicated and hung in a well to reduce the chances of cross-contamination.
- Bailers are relatively easy to decontaminate.

Limitations on the use of bailers include the following:

- It is time consuming to remove stagnant water using a bailer.
- Splashing the bailer into the water or transfer of sample may cause aeration.
- The use of a bailer does not permit constant in-line monitoring of groundwater parameters.
- Use of bailers is physically demanding, especially in warm temperatures at personal protection equipment (PPE) levels above Level D.

Safety concerns using a bailer include the following:

- Muscle stress and strain, especially when using 4-inch bailers and when pulling from excessively deep wells.
- Entanglement, possible hand/finger injuries, and rope burns during a sudden release of the bailer back down the well.
- Direct contact with contaminants of concern and sample preservatives when discharging the bailer contents because there is not a high level of control during a direct pour, and splashing and indirect contact with contaminants/preservatives could occur.

Control measures for these hazards are provided in Section 6.6.2.

Suction Pumps

There are many different types of inexpensive suction pumps including centrifugal, diaphragm, and peristaltic pumps. Centrifugal and diaphragm pumps can be used for well evacuation at a fast pumping rate and for sampling at a low pumping rate. The peristaltic pump is a low-volume pump that uses rollers to squeeze flexible tubing to create suction. This tubing can be dedicated to a well to prevent cross-contamination from well to well. Suction pumps are all portable, inexpensive, and readily available. However, because they are based on suction, their use is restricted to areas with water levels within 20 to 25 feet of the ground surface. A significant limitation is that the vacuum created by these pumps can cause loss of dissolved gases and volatile organics. Another limitation of these pumps is that they require a secondary energy source to drive them. Electrically driven pumps may require portable generators as energy sources. Air diaphragm pumps require air compressors and/or compressed gas cylinders to drive

them. The advantage of the peristaltic pump is that it can operate from either a built in power source or a portable battery source. Safety measures associated with these pumps are provided below.

Air-Lift and Gas-Lift Samplers

This group of pump samplers uses gas pressure either in the annulus of the well or in a Venturi to force groundwater up a sampling tube. These pumps are also relatively inexpensive. Air- or gas-lift samplers are more suitable for well development than for sampling because the samples may be aerated as a result of pump action. Aeration can cause pH changes and subsequent trace metal precipitation or loss of volatile organics.

Submersible Pumps

Submersible pumps take in water and push the sample up a sample tube to the surface. The power sources for these samplers may be compressed gas or electricity. Operation principles vary, and displacement of the sample can be by an inflatable bladder, sliding piston, gas bubble, or impeller. Pumps are available for 2-inch-diameter wells and larger. These pumps can lift water from considerable depths (several hundred feet).

Limitations of this class of pumps include the following:

- They may have low delivery rates.
- Many models are expensive.
- Compressed gas or electric power is needed.
- Sediment in water may cause clogging of the valves or eroding of the impellers with some of these pumps.
- Decontamination of internal components can be difficult and time consuming.

Compressed Gases

Safety concerns using compressed gases as an energy source in these pumps are numerous. The nitrogen gas or compressed air is provided in a compressed gas cylinder at a pressure of approximately 2,000 pounds per square inch (psi). If damaged, these cylinders can become dangerous projectiles. Additionally, a sudden release of a cylinder's contents can involve considerable force that could cause significant damage to the eyes and/or skin. Protective measures include the following:

- Always wear safety impact glasses when handling compressed gases.
- Always administer compressed gases through an appropriate pressure-reducing regulator.
- When clearing the cylinder connection port, open the cylinder valve only enough to clear foreign debris. During this process, always position the cylinder valve so that it faces away from you and others.
- If the cylinder is designed to accept a valve protection cap, always keep that protection cap in place, except when the cylinder is connected for use.

- When using the cylinder, lay the cylinder on its side to avoid the potential of it falling and knocking the valve off (and becoming a missile).

- DO NOT use the compressed nitrogen or air to clean clothing or to spray off the skin. Small cuts in the protective layer of the skin may permit the gas to enter into the bloodstream, presenting the potential danger of an embolism.

See the project-specific HASP (or equivalent) for additional direction concerning cylinder safe handling procedures pertaining to the safe handling, transportation, and storage of compressed gas cylinders.

Electrical Shock

Even in situations where portable batteries are used, the potential for electrical shock exists. This potential risk is increased in groundwater sampling activities because of the presence of groundwater near the batteries. This potential is also increased in (prohibited) situations where jury-rigging of electrical connections is performed. Other potential hazards occur when field samplers open the hood of a running car to access the battery as a power source. To control these hazards:

- If you are unfamiliar with electrical devices, do not experiment, get help, and get the proper equipment necessary to power your device.

- Use the proper portable power inverters for cigarette lighter connections to minimize the need to access the battery under the hood of your vehicle.

- Use of electrical generators may pose a number of hazards including noise, those associated with fueling, and indirect sample influence.

To minimize or eliminate electrical generator hazards:

- Inspect the generator before use. Ensure that the generator and any extension cords are rated for the intended operation and have a Ground Fault Circuit Interrupter (GFCI) in line to control potential electrical shock.

- Fuel the generator before purging and sampling to avoid loss of power during sampling.

- Fuel engines only when they are turned OFF and have cooled sufficiently to prevent a fire hazard.

- Place the generator and any fuel source at least 50 feet from the well to be sampled to avoid indirect influence to the sample from fuel vapors or emission gases.

Lifting Hazards

This hazard may be experienced when moving containers of purge water, equipment, cylinders, etc. To control these potential hazards:

- Do not fill purge buckets to more than 80 percent of their capacity.

- Obtain a gas cylinder of sufficient size to complete the designated task but not too large to handle. K-size cylinders weigh approximately 135 pounds and are difficult to handle. M-size cylinders weigh approximately 50 pounds and are easier to handle and move.

- When necessary, get help lifting and moving gas cylinders and other heavy objects. Minimize twisting and turning while lifting. If it is necessary to move these cylinders or generators over significant distance, use mechanical means (carts, etc.).

- Use proper lifting techniques as described in Section 4.4 of the Tetra Tech Health and Safety Manual.

6.5 Onsite Water Quality Testing

This section describes the procedures and equipment required to measure the following parameters of an aqueous sample in the field:

- pH
- Specific conductance
- Temperature
- DO
- ORP
- Turbidity
- Salinity

This section is applicable for use in an onsite groundwater quality monitoring program to be conducted at a hazardous or nonhazardous waste site. The procedures and equipment described are applicable to groundwater samples and are not, in general, subject to solution interferences from color, turbidity, or colloidal material or other suspended matter.

This section provides general information for measuring the parameters listed above with instruments and techniques in common use. Because instruments from different manufacturers may vary, review of the manufacturer's literature pertaining to the use of a specific instrument is required before use. Most meters used to measure field parameters require calibration on a daily basis. Refer to SOP SA-6.3 for an example equipment calibration log.

6.5.1 Measurement of pH

6.5.1.1 General

Measurement of pH is one of the most important and frequently used tests in water chemistry. Practically every phase of water supply and wastewater treatment such as acid-base neutralization, water softening, and corrosion control is pH dependent. Likewise, the pH of leachate can be correlated with other chemical analyses to determine the probable source of contamination. It is therefore important that reasonably accurate pH measurements be taken and recorded on the groundwater sample log sheet (Attachment B) or equivalent electronic form.

Two methods are given for pH measurement: the pH meter and pH indicator paper. Indicator paper is used when only an approximation of the pH is required or when pH meter readings need to be verified, and the pH meter is used when a more accurate measurement is needed. The response of a pH meter can be affected by high levels of colloidal or suspended solids, but the effect is generally of little significance. Consequently, specific methods to overcome this interference are not described. The response of pH paper is unaffected by solution interferences from color, turbidity, or colloidal or suspended materials unless extremely high levels capable of coating or masking the paper are encountered. In such cases, use of a pH meter is recommended.

6.5.1.2 Principles of Equipment Operation

Use of pH papers for pH measurement relies on a chemical reaction caused by the acidity or alkalinity of the solution created by the addition of the water sample reacting with the indicator compound on the paper. Various types of pH papers are available, including litmus (for general acidity or alkalinity determination) and specific, or narrower range, pH range paper.

Use of a pH meter relies on the same principle as other ion-specific electrodes. Measurement relies on establishment of a potential difference across a glass or other type of membrane in response to (in this instance, hydrogen) ion activity (which is usually similar to concentration) across that membrane. The membrane is conductive to ionic species and, in combination with a standard or reference electrode, a potential difference proportional to the ion concentration is generated and measured.

6.5.1.3 Equipment

The following equipment is to be used for obtaining pH measurements:

- A stand-alone portable pH meter or combination meter equipped with an in-line sample chamber (e.g., YSI 600 series and Horiba U-22).
- Combination electrode with polymer body to fit the above meter. Alternately, a pH electrode and a reference electrode can be used if the pH meter is equipped with suitable electrode inputs.
- Buffer solutions, as specified by the manufacturer. If the buffer solutions are considered hazardous per 29 CFR 1910.1200 (Hazard Communication) or the volumes used are greater than consumer commodity levels, the SSO shall obtain SDSs from the manufacturer for the specific buffer solutions (see Section 4 of the Tetra Tech Health and Safety Manual regarding the Hazard Communication Program).
- pH indicator paper to cover the pH range 2 through 12.
- Manufacturer's operation manual. All personnel must be familiar with the equipment operation to ensure that the integrity of samples is preserved and that the equipment is operated safely.

6.5.1.4 Measurement Techniques for Field Determination of pH

pH Meter

The following procedure shall be used for measuring pH with a pH meter (meter standardization is according to manufacturer's instructions):

1. Inspect the instrument and batteries prior to initiation of the field effort.
2. Check that the buffer solutions are used for field calibration prior to their expiration dates. Buffer solutions need to be changed often as a result of degradation upon exposure to the atmosphere.
3. If applicable, make sure all electrolyte solutions within the electrode(s) are at their proper levels and that no air bubbles are present within the electrode(s).

4. Calibrate the meter and electrode(s) on a daily use basis (or as recommended by manufacturer) following manufacturer's instructions. Record calibration data on a water quality meter calibration log sheet (Attachment C) or equivalent electronic form.

5. Immerse the electrode(s) in the sample. Stabilization may take several seconds to minutes. If the pH continues to drift, the sample temperature may not be stable, a physical reaction (e.g., degassing) may be taking place in the sample, or the meter or electrode may be malfunctioning. The failure of the measurements to stabilize must be clearly noted in the logbook or equivalent electronic form.

6. Read and record the pH of the sample. pH shall be recorded to the nearest 0.01 pH standard unit. Also record the sample temperature (unless otherwise specified in the SAP, record temperatures to the nearest whole degree Fahrenheit or 0.5 degree Celsius).

7. Rinse the electrode(s) with deionized water.

8. Store the electrode(s) in an accordance with manufacturer’s instructions when not in use.

Any visual observation of conditions that may interfere with pH measurement, such as oily materials or turbidity, shall be noted and avoided as much as possible.

pH Paper

Use of pH paper is very simple and requires no sample preparation, standardization, etc. pH paper is available in several ranges, including wide-range (indicating approximately pH 1 to 12), mid-range (approximately pH 0 to 6, 6 to 9, or 8 to 14) and narrow-range (many available, with ranges as narrow as 1.5 pH units). The appropriate range of pH paper shall be selected. If the pH is unknown, then the investigation shall start with wide-range paper and proceed with successively narrower range paper until the sample pH is determined. To measure the pH with pH paper:

1. Collect a small portion of sample into a clean container.

2. Dip the pH paper into this small portion of sample.

3. Compare the color of the paper to the color chart that is provided with the pH paper and read the corresponding pH from the chart.

4. Record the pH value from the chart on the sample log sheet.

5. Discard the used pH paper as trash.

6. Discard the small volume of sample that was used for the pH measurement with the other investigative-derived waste.

6.5.2 Measurement of Specific Conductance

6.5.2.1 General

Conductance provides a measure of dissolved ionic species in water and can be used to identify the direction and extent of migration of contaminants in groundwater or surface water. It can also be used as a measure of subsurface biodegradation or to indicate alternate sources of groundwater contamination.

Conductivity is a numerical expression of the ability of a water sample to carry an electric current. This value depends on the total concentration of ionized substances dissolved in the water and the temperature at which the measurement is made. The mobility of each of the various dissolved ions, their valences, and their actual and relative concentrations affect conductivity.

Specific conductance at 25°C is used as a standard of comparison for different water sources as conductivity changes with temperature. It is important to obtain a specific conductance measurement soon after taking a sample because temperature changes, precipitation reactions, and absorption of carbon dioxide from the air all affect specific conductance. Most conductivity meters in use today display specific conductance in units of mS/cm, which is the conductivity normalized to a temperature of 25°C. These are the required units to be recorded on the groundwater sample log field form or equivalent electronic form. If a sample cannot be cooled or warmed (as appropriate) to 25°C, this should be noted in the field documentation

6.5.2.2 Principles of Equipment Operation

An aqueous system containing ions will conduct an electric current. In a direct-current field, the positive ions migrate toward the negative electrode, and the negatively charged ions migrate toward the positive electrode. Most inorganic acids, bases, and salts such as hydrochloric acid, sodium carbonate, and sodium chloride, respectively, are relatively good conductors. Conversely, organic compounds such as sucrose or benzene, which do not dissociate in aqueous solution, conduct a current very poorly if at all.

A conductance cell and a Wheatstone Bridge (for the measurement of potential difference) may be used for measurement of electrical resistance. The ratio of current applied to voltage across the cell may also be used as a measure of conductance. The core element of the apparatus is the conductivity cell containing the solution of interest. Depending on the ionic strength of the aqueous solution to be tested, a potential difference is developed across the cell, which can be converted directly or indirectly (depending on instrument type) to a measurement of specific conductance.

6.5.2.3 Equipment

The following equipment is needed for taking specific conductance measurements:

- Stand-alone portable conductivity meter or combination meter equipped with an in-line sample chamber (e.g., YSI 600 series and Horiba U-22).
- Calibration solution, as specified by the manufacturer.
- Manufacturer's operation manual.

A variety of conductivity meters are available that may also be used to monitor salinity and temperature. Probe types and cable lengths vary, so equipment must be obtained to meet the specific requirements of the sampling program.

6.5.2.4 Measurement Techniques for Specific Conductance

The steps involved in taking specific conductance measurements are as follows (calibration shall be conducted according to manufacturer's instructions):

1. Check batteries and calibrate instrument before going into the field.

2. Calibrate on a daily use basis (or as recommended by manufacturer), according to the manufacturer's instructions and record all pertinent information on a water quality meter calibration log sheet or equivalent electronic form. Potassium chloride solutions with a specific conductance closest to the values expected in the field shall be used for calibration.

3. Rinse the cell with one or more portions of the sample to be tested or with deionized water and shake excess water from the cell.

4. Immerse the electrode in the sample and measure the conductivity.

5. Read and record the results in a field logbook or on a sample log sheet or equivalent electronic form.

6. Rinse the electrode with deionized water.

If the specific conductance measurements become erratic, recalibrate the instrument and see the manufacturer's instructions for troubleshooting assistance.

6.5.3 Measurement of Temperature

6.5.3.1 General

In combination with other parameters, temperature can be a useful indicator of the likelihood of biological action in a water sample. It can also be used to trace the flow direction of contaminated groundwater. Temperature measurements shall be taken in-situ, or as quickly as possible in the field because collected water samples may rapidly equilibrate with the temperature of their surroundings.

6.5.3.2 Equipment

Temperature measurements may be taken with alcohol-toluene, mercury-filled, dial-type thermometers or combination meters equipped with an in-line sample chamber (e.g., YSI 600 series and Horiba U-22). In addition, various meters such as specific conductance or DO meters that have temperature measurement capabilities may also be used. Using such instrumentation along with suitable probes and cables, in-situ measurements of temperature at great depths can be performed.

6.5.3.3 Measurement Techniques for Water Temperature

If a thermometer is used to determine the temperature for a water sample, use the following procedure:

1. Immerse the thermometer in the sample until temperature equilibrium is obtained (1 to 3 minutes). To avoid the possibility of cross-contamination, the thermometer shall not be inserted into samples that will undergo subsequent chemical analysis.

2. Record values in a field logbook or on a sample log sheet or equivalent electronic form.

If a temperature meter or probe is used:

1. Calibrate the instrument according to manufacturer's recommendations prior to use.

2. Immerse the meter/probe in the sample until temperature equilibrium is obtained (1 to 3 minutes). To avoid the possibility of cross-contamination, the meter/probe shall not be inserted into samples that will undergo subsequent chemical analysis.

3. Record values in a field logbook or on a sample log sheet or equivalent electronic form.

6.5.4 Measurement of Dissolved Oxygen

6.5.4.1 General

DO levels in natural water and wastewater depend on the physical, chemical, and biochemical activities in the water body. In addition, the growth of many aquatic organisms and the rate of corrosivity are dependent on DO concentrations. Thus, analysis for DO is a key test in water pollution and waste treatment process control. If at all possible, DO measurements shall be taken in-situ because concentrations may show a large change in a short time if the sample is not adequately preserved.

The monitoring method discussed herein is limited to the use of DO meters. Chemical methods of analysis (i.e., Winkler methods) are available, but require more equipment and greater sample manipulation. Furthermore, DO meters using a membrane electrode are suitable for highly polluted waters because the probe is completely submersible and is not susceptible to interference caused by color, turbidity, or colloidal material or suspended matter.

6.5.4.2 Principles of Equipment Operation

DO probes are normally electrochemical cells that have two solid metal electrodes of different nobility immersed in an electrolyte. The electrolyte is retained by an oxygen-permeable membrane. The metal of highest nobility (the cathode) is positioned at the membrane. When a suitable potential exists between the two metals, reduction of oxygen to hydroxide ion (OH^-) occurs at the cathode surface. An electrical current is developed that is directly proportional to the rate of arrival of oxygen molecules at the cathode. This rate is proportional to the oxygen concentration in the water being measured.

Because the current produced in the probe is directly proportional to the rate of arrival of oxygen at the cathode, it is important that a fresh supply of sample always be in contact with the membrane. Otherwise, the oxygen in the aqueous layer along the membrane is quickly depleted and false low readings are obtained. It is therefore necessary to stir the sample (or the probe) constantly to maintain fresh solution near the membrane interface. Stirring, however, shall not be so vigorous that additional oxygen is introduced through the air-water interface at the sample surface. To avoid this possibility, some probes are equipped with stirrers to agitate the solution near the probe, leaving the surface of the solution undisturbed.

DO probes are relatively unaffected by interferences. Interferences that can occur are reactions with oxidizing gases such as chlorine or with gases such as hydrogen sulfide that are not easily depolarized from the indicating electrode. If a gaseous interference is suspected, it shall be noted in the field logbook and checked if possible. Temperature variations can also cause interference because probes exhibit temperature sensitivity. Automatic temperature compensation is normally provided by the manufacturer. This compensation can counteract some of the temperature effects, but not all of them.

6.5.4.3 Equipment

The following equipment is needed to measure DO concentrations:

- A stand-alone portable DO meter or combination meter equipped with an in-line sample chamber (e.g., YSI 600 series and Horiba U-22).
- Sufficient cable to allow the probe to contact the sample.

- Manufacturer's operation manual.

6.5.4.4 Measurement Techniques for Dissolved Oxygen Determination

DO probes differ as to instructions for use. Follow the manufacturer's instructions to obtain an accurate reading. The following general steps shall be used to measure DO concentrations:

1. Check the DO meter batteries before going to the field.
2. Condition the probe in a water sample for as long a period as practical before use in the field. Long periods of dry storage followed by short periods of use in the field may result in inaccurate readings.
3. Calibrate the instrument in the field according to manufacturer's recommendations or in a freshly air-saturated water sample of known temperature.
4. Record all pertinent information on a water quality meter calibration log sheet or equivalent electronic form.
5. Rinse the probe with deionized water.
6. Immerse the probe in the sample. Be sure to provide for sufficient flow past the membrane by stirring the sample. Probes without stirrers placed in wells may be moved up and down to achieve the required mixing.
7. Record the DO content and temperature of the sample in a field logbook or on a sample log sheet or equivalent electronic form.
8. Rinse the probe with deionized water.
9. Recalibrate the probe when the membrane is replaced, or as needed. Follow the manufacturer's instructions.

Note that in-situ placement of the probe is preferable because sample handling is not involved. This however may not always be practical.

Special care shall be taken during sample collection to avoid turbulence that can lead to increased oxygen solubilization and positive test interferences.

6.5.5 Measurement of Oxidation-Reduction Potential

6.5.5.1 General

ORP provides a measure of the tendency of organic or inorganic chemicals to exist in an oxidized state. The ORP parameter therefore provides evidence of the likelihood of anaerobic degradation of biodegradable organics or the ratio of activities of reduced to oxidized species in the sample.

6.5.5.2 Principles of Equipment Operation

When an inert metal electrode, such as platinum, is immersed in a solution, a potential is developed at that electrode depending on the ions present in the solution. If a reference electrode is placed in the same solution, an ORP electrode pair is established. This electrode pair allows the potential difference between

the two electrodes to be measured and is dependent on the concentration of the ions in solution. By this measurement, the ability to oxidize or reduce species in solution may be determined. Supplemental measurements, such as DO, may be correlated with ORP to provide knowledge of the quality of the solution, water, or wastewater.

6.5.5.3 Equipment

The following equipment is needed for measuring the ORP of a solution:

- A combination meter with an in-line sample chamber (e.g., YSI 600 series and Horiba U-22).
- Reference solution as specified by the manufacturer.
- Manufacturer's operation manual.

6.5.5.4 Measurement Techniques for Oxidation-Reduction Potential

The following procedure is used for measuring ORP:

1. Check the equipment using the manufacturer's recommended reference solution and check its batteries before going to the field.
2. Thoroughly rinse the electrode with deionized water.
3. If the probe does not respond properly to the recommended reference solution, verify the sensitivity of the electrodes by noting the change in millivolts when the pH of a test solution is altered. The ORP will increase when the pH of a test solution decreases, and the ORP will decrease when the test solution pH is increased. Place the sample in a clean container and agitate the sample. Insert the electrodes and note that the ORP drops sharply when the caustic is added (i.e., pH increases) thus indicating that the electrodes are sensitive and operating properly. If the ORP increases sharply when the caustic is added, the polarity is reversed and must be corrected in accordance with the manufacturer's instructions or the probe should be replaced.
4. Record all pertinent information on a water quality meter calibration log sheet or equivalent electronic form.

6.5.6 Measurement of Salinity

6.5.6.1 General

Salinity is a unitless property of industrial and natural waters. It is the measurement of dissolved salts in a given mass of solution. Most field meters determine salinity automatically from conductivity and temperature. The displayed value will be displayed in either parts per thousand (ppt) or percent (e.g., 35 ppt equals 3.5 percent).

6.5.6.2 Principles of Equipment Operation

Salinity is determined automatically from the meter's conductivity and temperature readings according to algorithms (such as are found in Standard Methods for the Examination of Water and Wastewater).

Depending on the meter, the results are displayed in either ppt or percent. The salinity measurements are carried out in reference to the conductivity of standard seawater (corrected to salinity = 35 ppt).

6.5.6.3 Equipment

The following equipment is needed for salinity measurements:

- A multi-parameter water quality meter capable of measuring conductivity and temperature and converting them to salinity (e.g., Horiba U-22 or YSI 600 series).
- Calibration solution as specified by the manufacturer.
- Manufacturer's operation manual.

6.5.6.4 Measurement Techniques for Salinity

The steps involved in taking salinity measurements are as follows (standardization shall be conducted according to manufacturer's instructions):

1. Check the expiration date of the solutions used for field calibration and replace them if they are expired.
2. Check batteries and calibrate the meter before going into the field.
3. Calibrate on a daily use basis, according to the manufacturer's instructions and record all pertinent information on a water quality meter calibration log sheet or equivalent electronic form.
4. Rinse the cell with the sample to be tested. This is typically accomplished as the probe is placed in line during the collection of the purge water up to the time of sample acquisition.
5. Immerse the multi-probe in the sample and measure the salinity. Read and record the results in a field logbook or on a sample log sheet or equivalent electronic form.
6. Rinse the probes with deionized water.

6.5.7 Measurement of Turbidity

6.5.7.1 General

Turbidity is an expression of the optical property that causes light to be scattered and absorbed rather than transmitted in a straight line through the sample. Turbidity in water is caused by suspended matter such as clay, silt, or other finely divided organic and inorganic matter and microscopic organisms including plankton.

It is important to obtain a turbidity reading immediately after taking a sample because irreversible changes in turbidity may occur if the sample is stored too long.

6.5.7.2 Principles of Equipment Operation

Turbidity is measured by the Nephelometric Method, which is based on a comparison of the intensity of light scattered by the sample under defined conditions with the intensity of light scattered by a standard

reference suspension under the same conditions. The higher the scattered light intensity, the higher the turbidity.

Formazin polymer is used as the reference turbidity standard suspension because of its ease of preparation combined with a higher reproducibility of its light-scattering properties than clay or turbid natural water. The turbidity of a specified concentration of formazin suspension is defined as 40 nephelometric units. This same suspension has an approximate turbidity of 40 Jackson units when measured on the candle turbidimeter. Therefore, nephelometric turbidity units (NTUs) based on the formazin preparation will approximate units derived from the candle turbidimeter, but will not be identical to them.

6.5.7.3 Equipment

The following equipment is needed for turbidity measurements:

- A turbidity meter (preferably a stand-alone meter such as a LaMotte 2020) that calibrates easily using test cells with standards such as 0.0, 1.0, and 10 NTUs, or a combination meter equipped with an in-line sample chamber (e.g., YSI 600 series and Horiba U-22). The range of calibration standards should bracket the measured sample turbidities.
- Calibration solution and sample tubes, as specified by the manufacturer.
- Manufacturer's operation manual.

6.5.7.4 Measurement Techniques for Turbidity

The steps involved in taking turbidity measurements utilizing an electrode (e) or light meter (l) are listed below (standardization shall be done according to manufacturer's instructions):

1. Check the expiration date of the solutions used for field calibration and replace them if they are expired.
2. Check batteries and calibrate the instrument before going into the field.
3. Calibrate on a daily basis according to the manufacturer's instructions, and record all pertinent information on a turbidity meter calibration log sheet (Attachment C) or equivalent electronic form.
4. When using the YSI 600 and/or Horiba U-22, rinse the electrode with one or more portions of the sample to be tested or with deionized water.
5. When using the Lamotte 2020, fill the light meter’s glass test cell with approximately 5 mL of sample, screw on the cap, wipe off glass to remove all residue that could intercept the instrument’s light beam, place the test cell in the light meter, aligning the arrow on the cap of the test cell to the arrow on the meter, and close the lid.
6. Immerse the electrode in the sample and measure the turbidity.
7. The reading must be taken immediately because suspended solids will settle over time resulting in a lower, inaccurate turbidity reading.
8. Read and record the results in a field logbook or on a sample log sheet or equivalent electronic form. Include a physical description of the sample, including color, qualitative estimate of turbidity, etc.
9. Rinse the electrode or test cell with deionized water.

6.6 Sampling

6.6.1 Sampling Plan

The sampling approach consisting of the following shall be developed as part of the project planning documents approved prior to beginning work in the field:

- Background and objectives of sampling.
- Brief description of area and waste characterization.
- Identification of sampling locations, with map or sketch, and applicable well construction data (well size, depth, screened interval, reference elevation).
- Intended number, sequence, volumes, and types of samples. If the relative degree of contamination between wells is insignificant, a sampling sequence that facilitates sampling logistics may be followed. Where some wells are known or strongly suspected of being highly contaminated, these shall be sampled last to reduce the risk of cross-contamination between wells. In situations where the well is not well-characterized and the nature or extent of airborne contamination is unknown, it is recommended that head space analysis using a photoionization detector (PID) or flame ionization detector (FID) is performed to rate the wells, sampling from least contaminated to most contaminated. Refer to the project-specific HASP (or equivalent) for appropriate information and direction on air monitoring requirements.
- Sample preservation requirements.
- Work schedule.
- List of team members.
- List of observers and contacts.
- Other information, such as the necessity for a warrant or permission of entry, requirements for split samples, access problems, location of keys, etc.
- The FOL shall ensure that the sampling method(s) to be employed is accurately represented in the HASP (or equivalent), indicating the types of sampling to be employed and the hazards. If the methods are not accurately represented, the FOL should rectify this with the HASP (or equivalent) author.
- The FOL shall ensure that sampling teams understand the sampling approach that they are to follow. Where sampling teams are made up of personnel from multiple locations, personal sampling experiences may vary. Therefore, the FOL shall review project-specific requirements, SOPs, and protocol to be followed. The FOL will conduct periodic surveys to ensure that these methods are being completed per his/her direction.

6.6.2 Sampling Methods as Related to Low-Flow Sampling

The collection of a groundwater sample consists of the following steps:

1. Ensure the safety of the sample location. Take a few minutes to evaluate the area for physical hazards (trip hazards, uneven ground, overhanging branches, etc.) and natural hazards (snakes, bees, spiders, etc.) that may exist in the area or that may have constructed nests in the well head. Snakes often like

to sun themselves on concrete well pads. Follow provisions in the project-specific HASP (or equivalent) and/or Tetra Tech Health and Safety Manual for addressing natural hazards.

2. As indicated earlier, some monitoring wells have the potential to contain pressurized headspace (e.g., through the generation of gases form contaminated groundwater, due to biological processes, degradation of contaminants, or simply based on location such as near a landfill or in areas that intersect lithological abnormalities) or through intentional artificial means such as those associated with air sparging systems. Injection or extraction wells may be artificially pressurized and may remain so for several days after the system has been turned off. This presents a hazard to people opening these wells. The Field Sampling Technician shall employ the following practices to minimize these hazards:

   - Wear safety glasses to protect the eyes. If site-specific observations and conditions indicate that the wells may be pressurized, wear a full-face shield over the safety impact eye protection.

   - DO NOT place your face or any other part of your body over the well when opening because this may place you in a strike zone.

   - Open the well cover at arms' length, then step away and allow the well to off gas and stabilize.

   Follow directions provided in the project-specific HASP (or equivalent), Work Plan, and/or SAP pertaining to the use of volatile chemical detection equipment (PID or FID) within the breathing zone of the sampler during sampling to determine the need to retreat from the work area and/or for the use of respiratory protection (as specified in the HASP or equivalent).

3. When proper respiratory protection has been donned, sound the well for total depth and water level (using clean equipment) and record these data on a groundwater sampling log sheet or equivalent electronic form; then calculate the fluid volume in the well pipe (as previously described in this SOP). It is imperative that downhole equipment be adequately decontaminated between wells to prevent cross-contamination. Just as sampling occurs from the least contaminated to the most contaminated, it is also recommended that groundwater level measurements be taken in this manner.

4. Calculate volume of well water to be removed as described in Section 6.3.

5. Select the appropriate purging equipment (see Attachment A) or as designated within the governing Work Plan/SAP. If an electric submersible pump with packer is chosen, go to Step 10.

6. Lower the purging equipment or intake into the well to a short distance below the water level or mid-screen as indicated in project-specific documentation and begin water removal. Remember that some contaminants are "bottom dwellers," and in these cases, project-specific direction may specify placing the intake just above (1 to 2 feet) the well bottom. Secure the pump intake at the well and secure the effluent at the collection container and begin pumping. The pumping rate will be determined based on the decrease in the water level (see Section 6.7) or as directed in your project-specific documents or this SOP. Purge water is generally collected in a 5-gallon bucket or similar open- or closed-top container. To minimize the potential for spills and back injuries, do not fill 5-gallon buckets beyond approximately 80 percent of their capacity. Dispose of purge water as indicated in the planning document(s). Where necessary, slow the pumping rate or lower the pump intake as required to maintain submergence.

7. Estimate the approximate rate of discharge frequently and record it on the Low Flow Purge Data Sheet (see Attachment D). Estimate flow rate by noting the amount of discharge in a bucket or graduated cylinder per unit time using a watch with a second hand or a stopwatch.

8. Observe the peristaltic pump tubing intake for degassing "bubbles." If bubbles are abundant and the intake is fully submerged, this pump is not suitable for collecting samples for volatile organics.

9. Purge a minimum of three to five well casing volumes before sampling (or as directed by the site-specific SAP). In low-permeability strata (i.e., if the well is pumped to dryness), one volume will suffice. Allow the well to recover to 75 percent of initial water level before sampling. Do not overfill purge containers because this increases the potential for spills and lifting injuries.

10. If sampling using a submersible pump, lower the pump intake to mid-screen (or the middle of the open section in uncased wells) and collect the sample. If sampling with a bailer, lower the bailer to just below the water surface.

11. For pump and packer assemblies only: Lower the assembly into the well so that the packer is positioned just above the screen or open section. Inflate the packer. Purge a volume equal to at least twice the screened interval (or unscreened open section volume below the packer) before sampling. Packers shall always be tested in a casing section above ground to determine proper inflation pressures for good sealing.

12. If the recovery time of the well is very slow (e.g., 24 hours or greater), sample collection can be delayed until the following day. If the well has been purged early in the morning, sufficient water may be standing in the well by the day's end to permit sample collection. If the well is incapable of producing a sufficient volume of sample at any time, take the largest quantity available and record this occurrence in the site logbook or equivalent electronic form. When this occurs, contact the analytical laboratory to alert them that a reduced sample volume(s) will be submitted for analysis.

13. Fill sample containers and preserve and label them as described in SOP SA-6.1. Many sample bottles will contain preservative when they are shipped to the field. In those cases, do not add preservative.

14. Replace the well cap and lock it as appropriate. Make sure the well is readily identifiable as the source of the sample.

15. Process sample containers as described in SOP SA-6.1.

16. Decontaminate equipment as described in SOP SA-7.1.

6.7 Low-Flow Purging and Sampling

6.7.1 Scope and Application

Low-flow purging and sampling techniques may be required for groundwater sampling activities. The purpose of low-flow purging and sampling is to collect groundwater samples that contain "representative" amounts of mobile organic and inorganic constituents in the vicinity of the selected open well interval, at or near natural flow conditions. This minimum-stress procedure emphasizes negligible water level drawdown and low pumping rates to collect samples with minimal alterations in water chemistry. This procedure is designed primarily to be used in wells with a casing diameter of 1 inch or more and a saturated screen length, or open interval, of 10 feet or less. Samples obtained are suitable for analyses of common types of groundwater contaminants (volatile and semivolatile organic compounds [VOCs and SVOCs], pesticides, polychlorinated biphenyls [PCBs], metals, and other inorganic ions [cyanide, chloride, sulfate, etc.]). This low-flow procedure is not designed for collection of non-aqueous phase liquid samples from wells containing light or dense non-aqueous phase liquids (LNAPLs or DNAPLs).

This procedure is flexible for various well construction types and groundwater yields. The goal of the procedure is to obtain a turbidity level of less than 10 NTUs and to achieve a water level drawdown of less

than 0.3 foot during purging and sampling. If these goals cannot be achieved, sample collection can take place provided that the remaining criteria in this procedure are met.

6.7.2 Equipment

The following equipment is required (as applicable) for low-flow purging and sampling:

- Adjustable rate submersible pump (e.g., centrifugal or bladder pump constructed of stainless steel or Teflon).
- Disposable clear plastic bottom-filling bailers to be used to check for and obtain samples of LNAPLs or DNAPLs.
- Tubing – Teflon, Teflon-lined polyethylene, polyethylene, polyvinyl chloride (PVC), Tygon, or stainless steel tubing can be used to collect samples for analysis, depending on the analyses to be performed and regulatory requirements.
- Water level measuring device with 0.01-foot accuracy (electronic devices are preferred for tracking water level drawdown during all pumping operations).
- Interface probe.
- Flow measurement supplies.
- Power source (generator, nitrogen tank, etc.). If a gasoline generator is used, it must be located downwind and at a safe distance from the well so that the exhaust fumes do not contaminate the samples.
- Indicator parameter monitoring instruments – pH, turbidity, specific conductance, and temperature. Use of a flow-through cell is recommended. Optional indicators - ORP, salinity, and DO. A flow-through cell (also referred to as an in-line sample chamber) is required.
- Standards to perform field calibration of instruments.
- Decontamination supplies.
- Logbook(s) and other forms (see Attachments B through D) or equivalent electronic form(s).
- Sample bottles.
- Sample preservation supplies (as required by the analytical methods).
- Sample tags and/or labels.
- Well construction data, location map, field data from last sampling event (if available).
- Field Sampling Plan.
- PID or FID instrument for measuring volatile organic vapors per the HASP (or equivalent).

6.7.3 Purging and Sampling Procedure

1. Open the monitoring well as stated earlier and step away. Prepare sampling equipment while allowing 3 to 5 minutes to allow the water level to reach equilibrium. In situations where VOCs are the primary contaminants of concern, air monitoring of the samplers' breathing zone areas may be required by the HASP or equivalent (typically with a PID or FID).

2 Measure the water level immediately prior to placing the pump in the well and record the water level on the Low-Flow Purge Data Form or equivalent electronic form immediately prior to placing the pump or tubing into the well.

3. Lower the measuring device further into the well to collect the total depth measurement. Again wait 3 to 5 minutes to allow the well to equilibrate to the initial water level prior to placing the pump or pump intake in the well.

4. Record the total well depth on the Low-Flow Purge Data Form or equivalent electronic form immediately prior to placing the pump or tubing into the well.

5. Lower the pump or tubing slowly into the well so that the pump intake is located at the center of the saturated screen length of the well. If possible, keep the pump intake at least 2 feet above the bottom of the well to minimize mobilization of sediment that may be present in the bottom of the well. Collection of turbidity-free water samples may be difficult if there is 3 feet or less of standing water in the well.

6. Start with the initial pump rate set at approximately 0.1 liter per minute. Use a graduated cylinder and stopwatch to measure the pumping rate. Adjust the pumping rate as necessary to prevent drawdown from exceeding 0.3 foot during purging. If no drawdown is noted, the pump rate may be increased (to a maximum of 0.4 liter per minute) to expedite the purging and sampling event. The pump rate will be reduced if turbidity is greater than 10 NTUs after all other field parameters have stabilized. If groundwater is drawn down below the top of the well screen, purging shall cease or the well shall be pumped to dryness and then allowed to recover before purging continues. Well recovery to 75 percent is necessary prior to sampling. Slow-recovering wells should be identified and purged at the beginning of the workday to maximize field work efficiency. If possible, samples should be collected from these wells within the same workday and no later than 24 hours after the end of purging.

7. Measure the water level in the well every 5 to 10 minutes using the water level meter. Record the well water level on the Low Flow Purge Data Form (Attachment D) or equivalent electronic form.

8. Record on the Low Flow Purge Data Form every 5 to 10 minutes the water quality parameters (pH, specific conductance, temperature, turbidity, ORP, DO, and salinity or as specified by the approved site-specific planning document) measured by the water quality meter and turbidity meter. If the cell needs to be cleaned during purging operations, continue pumping (allow the pump to discharge into a container) and disconnect the cell. Rinse the cell with distilled/deionized water. After cleaning is completed, reconnect the flow-through cell and continue purging. Document the cell cleaning on the Low-Flow Purge Data Form or equivalent electronic form.

9. Estimate the flow rate by noting the amount of discharge in a graduated cylinder per unit time using a watch with a second hand. Remeasure the flow rate any time the pump rate is adjusted and periodically during purging. This will determine if a reduction in rate has occurred due to possible battery depletion.

10. During purging, check for the presence of bubbles in the flow-through cell. The presence of bubbles is an indication that connections are not tight. If bubbles are observed, check for loose connections and tighten, repair, or replace them as necessary to achieve a tight connection.

11. Wait until stabilization is achieved, or a minimum of two saturated screen volumes have been removed and three consecutive readings, taken at 5 to 10 minute intervals, are within the following limits, then begin sampling:

    - pH ±0.2 standard units
    - Specific conductance ±10%
    - Temperature ±10%
    - Turbidity less than 10 NTUs
    - DO ±10%

12. If the above conditions have not been met after the well has been purged for 4 hours, purging will be considered complete and sampling can begin. Record the final well stabilization parameters from the Low-Flow Purge Data Form onto the Groundwater Sample Log Form or equivalent electronic form.

NOTE: VOC samples are preferably collected first, directly into pre-preserved sample containers. Fill all sample containers by allowing the pump discharge to flow gently down the inside of the container with minimal turbulence.

13. If the water column in the pump tubing collapses (water does not completely fill the tubing) before exiting the tubing, use one of the following procedures to collect VOC samples:

    - Collect samples for non-VOC analyses first, then increase the flow rate incrementally until the water column completely fills the tubing, collect the sample for VOCs, and record the new flow rate.

    - Reduce the diameter of the existing tubing until the water column fills the tubing either by adding a connector (Teflon or stainless steel) or clamp, which should reduce the flow rate by constricting the end of the tubing. Proceed with sample collection.

    - Insert a narrow-diameter Teflon tube into the pump's tubing so that the end of the tubing is in the water column and the other end of the tubing protrudes beyond the pump's tubing, then collect the sample from the narrow diameter tubing.

    - Prepare samples for shipping as per SOP SA-6.1.

7.0 REFERENCES

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ATTACHMENT A

PURGING EQUIPMENT SELECTION

Diameter Casing		Bailer	Peristaltic Pump	Vacuum Pump	Air-lift	Diaphragm "Trash" Pump	Submersible Diaphragm Pump	Submersible Electric Pump	Submersible Electric Pump w/Packer
1.25-Inch	Water level <25 feet	X	X	X	X	X			
	Water Level >25 feet	X			X				
2-Inch	Water level <25 feet	X	X	X	X	X	X		
	Water Level >25 feet	X			X		X		
4-Inch	Water level <25 feet	X	X	X	X	X	X	X	X
	Water Level >25 feet	X			X		X	X	X
6-Inch	Water level <25 feet				X	X		X	X
	Water Level >25 feet				X			X	X
8-Inch	Water level <25 feet				X	X		X	X
	Water Level >25 feet				X			X	X

ATTACHMENT A
Purging and Sampling Equipment Selection (Updated July 2016)

Manufacturer	Model Name/ Number	Principle of Operation	I/E[1]	Maximum Outer Diameter (OD)/ Length (L)[2]	Construction Materials[3] (with Lines and Tubing)	Lift Range (Feet)	Delivery Rates or Volumes[4]	Main Source(s) of Information[5]	Comments
Commonly Used Purging/Sampling Equipment									
GeoTech Environmental Equipment, Inc.	Geopump (Series I or II)	Portable; peristaltic vacuum (suction) or pressure - reversible pump	E	3.5" x 8" x 8"	Not applicable (NA)	0 - 27	0 - 1,000 mL/min	Mfg./Pine	Variable speed; operate with 12 volt (V) direct current (DC) or 120V alternating current (AC) power source.
Grundfos Pumps Corporation	Redi-Flo2	Portable; submersible pump	I	1.8" OD x 11"L	SS, PTFE (i.e., Teflon®)	0 - 250	100 mL/min to 9 gpm	Pine/PNNL	Variable speed (adjustable flow rate); ideal for purging or sampling.
QED Environmental Systems	Sample Pro	Portable; bladder pump (positive displacement)	I	1.75" OD x 12" L	SS; PTFE or PE disposable bladder	0 - 250	0 - 800 mL/min	Mfg.	First pump developed specifically to bring the advantages of low-flow sampling to sites with non-dedicated pumps.
QED Environmental Systems	Well Wizard	Dedicated; bladder pump (positive displacement)	I	1.66" OD x 41" L	SS, PTFE bladder, HDPE, PP	0 - 1,000	0 - 2,000 mL/min	Pine/PNNL	Ideal for deep well applications and long-term monitoring. Available in a variety of sizes and materials.
Less Commonly Used Purging/Sampling Equipment									
Bennett Sample Pumps, Inc.	Bennett 1800-8	Portable; piston pump (positive displacement)	I	1.8" OD x 23.625" L	SS; PTFE, PP, Nylon	0 - 1,000	100 mL/min to 2.6 gpm	Mfg./PNNL	Variable speed (adjustable flow rate); ideal for purging or sampling. Discharge rates are difficult to control.
Cole-Parmer Instl. Co.	Masterflex 7571-00	Portable; peristaltic vacuum (suction) or pressure - reversible pump	E	16" x 10.25" x 11"	NA	0 - 27	0.06 - 680 mL/min	Mfg./Pine	Peristaltic pumps are not recommended for sampling volatile organic compounds (VOCs).
Fultz Pumps, Inc.	Fultz SP300	Portable; gear driven pump (positive displacement)	I	1.75" OD x 9.16" L	SS; PTFE gears, Viton®	0 - 200	100 mL/min to 2.4 gpm	Mfg./PNNL	Variable speed (adjustable flow rate); ideal for purging or sampling. Low extraction rates are difficult to control.
GeoTech Environmental Equipment, Inc.	Keck SP12	Portable; progressive cavity pump (positive displacement)	I	1.75" OD x 25"L	SS; EPDM stator, PE	0 - 150	100 mL/min to 1.2 gpm	Mfg./PNNL	Variable speed (adjustable flow rate); ideal for purging or sampling. Low extraction rates are difficult to control.
GeoTech Environmental Equipment, Inc.	SS Geosub	Portable; single speed submersible purge pump	I	1.75" OD x 13.2" L	SS; PTFE, Viton®	0 - 200	low flow to 10 mL/min	Mfg./Pine	Only 12V SS pump with Teflon® cable according to GeoTech brochure.
GeoTech Environmental Equipment, Inc.	NA	Portable; centrifugal purge pump		NA	NA	0 - 55	2.5 gpm max.	Mfg.	Not recommended for sampling.
GeoTech Environmental Equipment, Inc.	Various	Portable; bladder pump (positive displacement)	I	0.675-1.66" OD	SS or PVC; PTFE or PE bladder; FEP or PE tubing	0 - 200 SS; 0 - 250 PVC	NA	Mfg.	Various sizes are available. Pump is also available in PVC instead of SS.
GeoTech Environmental Equipment, Inc.	Bailer	Portable; grab (positive displacement)	I	Various sizes	Various materials - HDPE, PVC, SS, or fluoropolymer	No limit	NA	Mfg.	Low cost, easy operation; potential churning could increase turbidity. Typically a last-resort option.
Grundfos Pumps Corporation	Redi-Flo3	Portable; submersible pump	I	2.9" OD	SS, PVDF, Viton®, Tefzel®	0 - 360	8 gpm max.	Pine/PNNL	Not designed for low flow use.
Grundfos Pumps Corporation	Redi-Flo4	Portable; submersible pump	I	3.8" OD	SS; PTFE	0 - 600	100 mL/min to 10 gpm	Pine/PNNL	Variable speed (adjustable flow rate); ideal for purging or sampling.
KYB	HydroStar™	Portable; single-action piston pump (positive displacement)	I	1.66" OD	SS; PTFE	0 - 400	100 mL/min to 5 gpm	Mfg./PNNL	Variable speed (adjustable flow rate); ideal for purging or sampling. Discharge rates are difficult to control.

ATTACHMENT A
Purging and Sampling Equipment Selection (Updated July 2016)

Manufacturer	Model Name/ Number	Principle of Operation	I/E[1]	Maximum Outer Diameter (OD)/ Length (L)[2]	Construction Materials[3] (with Lines and Tubing)	Lift Range (Feet)	Delivery Rates or Volumes[4]	Main Source(s) of Information[5]	Comments
Landtec North America	Nu-Matic 4	Dedicated; pneumatic displacement pump	I	3.5" OD x 43.25" L	SS	0 - 275	10 gpm max.	Pine	Float activated, fully automatic; ideal for the harsh environment of landfill conditions.
ProActive Environmental Products	SS Monsoon (and others)	Portable; Low Flow pumps available in a variety of sizes	I	1.82" OD x 7.5" L	SS, PE	0 - 120	10 mL/min to 3.5 gpm	Pine/GeoTech	12V DC - designed for continuous purging and low flow sampling.
QED Environmental Systems	Eliminator	Portable; bladder pump (positive displacement)	I	3" OD x 40" L	SS; PTFE or elastomer bladder, Q-Tal®, Viton®	0 - 230	6 gpm max.	Pine	High capacity; designed for light non-aqueous phase liquid (LNAPL) and dense non-aqueous phase liquid (DNAPL) removal in 4" wells.
QED Environmental Systems	Pulse Pump	Portable; pneumatic displacement pump	I	1.66" OD x 20" L	SS; PTFE	0 - 230	2 gpm max.	Pine	Especially suited for DNAPL recovery. Requires compressed air, external timer.
Solinst Canada Ltd.	404 WaTerra	Portable; inertial reciprocating pump (positive displacement)	I	Various sizes	SS or Delrin® footvalve; HDPE tubing	0 - 200	2 gpm max.	Pine	Low cost, easy operation; potential churning could increase turbidity. Simple alternative to a bailer.
Solinst Canada Ltd.	407 Integra	Portable; bladder pump	I	1" or 1.66" OD	SS or PVC; FEP bladder (disposable PE available)	SS - 0 - 500 PVC - 0-100	3.3 L/min at 150'	Pine	Regular or low flow applications.
Solinst Canada Ltd.	408 DVP	Portable; pneumatic drive pump	I	1.66" OD x 24" L	SS or PVC; FEP bladder	SS - 0 - 500 PVC - 0-100	3.3 L/min at 150'	Pine	Regular or low flow applications - can deliver high flow rates.
Solinst Canada Ltd.	408M DVP	Portable; micro pneumatic drive pump	I	0.375" OD	FEP tubing	0 - 240	20 - 150 mL/min	Pine	Uses coaxial FEP tubing, easy to transport and install; ideal for low flow and narrow down-hole applications.
Solinst Canada Ltd.	410	Portable; peristaltic (negative pressure) pump	E	13" x 5" x 6"	NA	0 - 27	120 - 3,500 mL/min	Pine	Ideal for vapor sampling, water from shallow wells, or surface water.
TIMCO Mfg. Co., Inc.	Bailer	Portable; grab (positive displacement)	I	Various sizes	PVC, PP, others	No limit	250 mL/foot of bailer	Old SOP	Other sizes, materials, models available; optional bottom-emptying device available, no solvents used.
No-Purge Sampling Equipment (Available Options on Some Projects)									
Amplified Geochemical Imaging (AGI), LLC	AGI Universal Sampler (formerly Gore-Sorber™ Module)	Passive container, diffusion-type sampler	I	0.25" OD x 8" L	Waterproof, vapor-permeable GORE-TEX™ polymer membrane of expanded PTFE	0 - 32	NA	ITRC PSC-5	Demonstrated to be applicable to a variety of (but not all) VOCs, semivolatile organic compounds (SVOCs), and polycyclic aromatic hydrocarbons (PAHs); not designed for inorganics.
GeoInsight, Inc.	HydraSleeve™	Passive container, grab-type sampler	I	1.5-2.6" OD x 30" L	PE tubing with PE reed-valve	No limit	650 - 1,250 mL	ITRC PSC-5	Demonstrated to be applicable to a variety of VOCs and inorganics.
Mutiple Manufacturers	RPPS	Rigid Porous Polyethylene Sampler (RPPS); diffusion-type sampler	I	1.5" OD x 5" L	Rigid PE tube - thin sheets of foamlike porous PE with a Delrin® plug	No limit	80 - 100 mL	ITRC PSC-5	Developed by Don Vroblesky (USGS). Demonstrated to be applicable to a variety of water-soluble organics and inorganics.
Mutiple Manufacturers	PDB	Passive Diffusion Bag (PDB) Sampler; diffusion-type sampler	I	1.2-2" OD, 18-24" L	LDPE with HDPE cap; some vendors use other materials and sizes	No limit	75 - 350 mL	ITRC PSC-3	Developed by Don Vroblesky (USGS) and Thomas Hyde (GE). Demonstrated to be applicable to a variety of (but not all) VOCs; not for inorganics.

ATTACHMENT A
Purging and Sampling Equipment Selection (Updated July 2016)

Manufacturer	Model Name/ Number	Principle of Operation	I/E[1]	Maximum Outer Diameter (OD)/ Length (L)[2]	Construction Materials[3] (with Lines and Tubing)	Lift Range (Feet)	Delivery Rates or Volumes[4]	Main Source(s) of Information[5]	Comments
ProHydro, Inc.	Snap Sampler™	Pneumatic actuator, grab-type sampler	I	1.7-3.4" OD x 19-22+" L	Acetal with PFA-coated SS spring; optional SS weight; 40 mL glass vials or 125-350 mL PP bottles	0 - 2,500	40 - 1,400 mL	ITRC PSC-5	Demonstrated to be applicable to a variety of VOCs and inorganics. Up to 4 bottles may be employed together.
Multi-Level Groundwater Monitoring System (MLS) (Used on Some Projects based on Stakeholder Agreement)									
FLUT, Ltd. Co.	Water FLUTe™	Dedicated, gas drive sampling, liner seals entire borehole wall.	I	Various sizes	NA	NA	NA	Mfg.	Practical to collect large volumes; can use low flow method; minimizes investigation-derived waste (IDW); proven technology.
Solinst Canada Ltd.	Continuous Multichannel Tubing (CMT)	Dedicated, 3 or 7-channel tubing designed to isolate and monitor depth discrete zones.	I	Up to 7 ports	NA	NA	NA	Mfg.	Low cost and easy to install; ideal for shallow applications; single tube for effective sealing.
Solinst Canada Ltd.	Waterloo	Dedicated, double valve or bladder pump sampling, packers separate ports at multiple depths.	I	Various sizes	NA	NA	NA	Mfg.	Practical to collect large volumes; can use low flow method; minimizes IDW; proven technology.
Schlumberger	Westbay	Dedicated, packers separate ports at multiple depths.	I	Various sizes	NA	NA	NA	Mfg.	Transducer and sampler are on a wire line; minimizes IDW; proven technology. Low long-time maintenance costs.

Footnotes:
1 - I/E - Internal (I) or external (E) to the well.
2 - For external pumps, the size is given in three dimensions (i.e. length, width, height); for internal pumps, the size is given in outside diameter (OD) and length (L) (in inches).
3 - Construction materials for pumps and associated equipment include: SS = stainless steel; PTFE = polytetrafluoroethylene; HDPE = high density polyethylene; PP = polypropylene; PE = polyethylene; PVC = polyvinyl chloride; FEP = fluorinated ethylene propylene; PVDF = polyvinylidene difluoride; EPDM = ethylene-propylene-diene elastomr; LDPE = low density polyethylene; PFA = perfluoroalkoxy.
4 - Rate or volume abbreviations: mL/min = milliliters per minute; gpm = gallons per minute; L/min = liters per minute; max. = maximum; mL = milliliters.
5 - Sources of information include specification sheets from the manufacturer (i.e., "Mfg."); equipment rental company websites - Pine Environmental (www.pine-environmental.com); GeoTech (www.geoenvtech.com); and guidance documents from Pacific Northwest National Laboratory (PNNL) (i.e., PNNL-13560) and Interstate Technology & Regulatory Council (ITRC) (i.e., PSC-3 and PSC-5 available at www.itrcweb.org).

ATTACHMENT B
GROUNDWATER SAMPLE LOG SHEET (EXAMPLE)

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: _____
Project No.: _____

[ ] Domestic Well Data
[x] Monitoring Well Data
[ ] Other Well Type: _____
[ ] QA Sample Type: _____

Sample ID No.: _____
Sample Location: _____
Sampled By: _____
C.O.C. No.: _____
Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA:

Date: / Time: / Method:	Color Visual	pH Standard	S.C. mS/cm	Temp. Degrees C	Turbidity NTU	DO mg/l	ORP mV	Other NA

PURGE DATA:

Date:	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	ORP	Other
Method:								
Monitor Reading (ppm):			SEE LOW FLOW PURGE DATA SHEET					
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs):								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected

OBSERVATIONS / NOTES:

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

ATTACHMENT C
EQUIPMENT CALIBRATION LOG (EXAMPLE)

Tetra Tech

EQUIPMENT CALIBRATION LOG

PROJECT NAME : _____ INSTRUMENT NAME/MODEL: _____

SITE NAME: _____ MANUFACTURER: _____

PROJECT No.: _____ SERIAL NUMBER: _____

Date of Calibration	Instrument I.D. Number	Person Performing Calibration	Instrument Settings		Instrument Readings		Calibration Standard (Lot No.)	Remarks and Comments
			Pre-calibration	Post-calibration	Pre-calibration	Post-calibration		

ATTACHMENT D (EXAMPLE)
LOW FLOW PURGE DATA SHEET

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: ____________ WELL ID: ____________

PROJECT NUMBER: ____________ DATE: ____________

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments

SIGNATURE(S): ____________ PAGE___OF___

TETRA TECH	STANDARD OPERATING PROCEDURE	Number SA-1.2	Page 1 of 23
		Effective Date 9/12/2016	Revision 8
		Applicability Tetra Tech, Inc., NUS Operating Unit	
		Prepared Earth Sciences Department	
Subject SURFACE WATER AND SEDIMENT SAMPLING		Approved T. Johnston	tom. johnston @tetratech.com Digitally signed by: tom. johnston@tetratech.com DN: CN = tom. johnston@tetratech.com Date: 2016.09.12 13:25:51 -05'00'

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1.0 PURPOSE

This Standard Operating Procedure (SOP) describes procedures and equipment commonly used for collecting environmental samples of surface water and aquatic sediment either for onsite examination and chemical testing or for offsite laboratory analysis.

2.0 SCOPE AND APLICABILITY

The information presented in this document is applicable to all environmental sampling of surface waters (Section 5.3) and aquatic sediments (Section 5.5), except where the analyte(s) may interact with the sampling equipment or may leach from the sampling equipment into the collected samples. The collection of concentrated sludges or hazardous waste samples from disposal or process lagoons often requires methods, precautions, and equipment different from those described herein and should be described in site-specific planning documents.

WARNING:

Sample containers can be contaminated during storage if nearby volatile substances infiltrate the surrounding air and migrate into the containers. This can occur even when containers are capped. Therefore, containers that have been stored on site for longer than 6 months should not be used.

Note: Whereas most air-borne contamination is likely to be associated with organic substances, inorganic substances such as hydrochloric acid (muriatic acid) can emit inorganic vapors that infiltrate sample containers.

3.0 GLOSSARY

Analyte – Chemical or radiochemical material whose concentration, activity, or mass is measured.

Composite Sample – A sample representing a physical average of grab samples.

Environmental Sample – A quantity of material collected in support of an environmental investigation that does not require special handling or transport considerations as detailed in SOP SA-6.1.

Grab Sample – A portion of material collected to represent material or conditions present at a single unit of space and time.

Hazardous Waste Sample – A sample containing (or suspected to contain) concentrations of contaminants that are high enough to require special handling and/or transport considerations per SOP SA-6.1.

Representativeness – A qualitative description of the degree to which an individual sample accurately reflects population characteristics or parameter variations at a sampling point. It is therefore an important characteristic not only of assessment and quantification of environmental threats posed by the site, but also for providing information for engineering design and construction. Proper sample location selection and proper sample collection methods are important to ensure that a truly representative sample has been collected.

4.0 RESPONSIBILITIES AND PERSONNEL QUALIFICATIONS

Project Manager - The Project Manager is responsible for determining the sampling objectives, initial sampling locations, and field procedures used in the collection of soil samples. The Project Manager also

has the overall responsibility for seeing that all surface water and sediment sampling activities are properly conducted by appropriately trained personnel in accordance with applicable planning documents.

Field Operations Leader (FOL) - This individual is primarily responsible for the execution of the planning document containing the Sampling and Analysis Plan (SAP). This is accomplished through management of a field sampling team for the proper acquisition of samples. He or she is responsible for the supervision of onsite analyses; ensuring proper instrument calibration, care, and maintenance; sample collection and handling; the completion and accuracy of all field documentation; and making sure that custody of all samples obtained is maintained according to proper procedures. When appropriate and as directed by the FOL, such responsibilities may be performed by other qualified personnel (e.g., field technicians) where credentials and time permit. The FOL is responsible for finalizing the locations for collection of surface water and sediment samples. The FOL is ultimately responsible for adherence to Occupational Safety and Health Administration (OSHA) regulations during these operations through self-acquisition or through the management of a field team of samplers.

Site Safety Officer (SSO) - The SSO (or a qualified designee) is responsible for providing the technical support necessary to implement the project Health and Safety Plan (HASP). This includes ensuring that workers and offsite (downwind) individuals are not exposed to hazardous levels of airborne contaminants. The SSO or SSO designee may also be required to advise the FOL on other safety-related matters such as mitigative measures to address potential hazards from hazardous objects or conditions.

Project Geologist/Sampler - The project geologist/sampler is responsible for the proper acquisition of samples in accordance with this SOP and other project-specific documents. In addition, this individual is responsible for the completion of all required paperwork (e.g., sample log sheets, field notebook, container labels, custody seals, and chain-of-custody forms) associated with the collection of those samples.

General personnel qualifications for groundwater sample collection and onsite water quality testing include the following:

- OSHA 40-hour and applicable refresher training.
- Capability of performing field work under the expected physical and environmental (i.e., weather) conditions.
- Familiarity with appropriate procedures for sample documentation, handling, packaging, and shipping.

5.0 HEALTH AND SAFETY

Precautions to preserve the health and safety of field personnel implementing this SOP are distributed throughout. The following general hazards may also exist during field activities, and the means of avoiding them must be used to preserve the health and safety of field personnel:

Bridge/Boat Sampling – Potential hazards associated with this activity include:

- Traffic – one of the primary concerns as samplers move across a bridge because free space of travel is not often provided. Control measures should include:
    - When sampling from a bridge, if the samplers do not have at least 6 feet of free travel space or physical barriers separating them and the traffic patterns, the HASP will include a Traffic Control Plan.
    - The use of warning signs and high-visibility vests are required to warn oncoming traffic and to increase the visibility of sample personnel.

- Slips, trips, and falls from elevated surfaces are a primary concern. Fall protection shall be worn when or if samplers must lean over a rail to obtain sample material. A Fall Protection Competent Person (in accordance with OSHA fall protection standards) must be assigned to ensure that fall protection is appropriately and effectively employed.

- Water hazards/drowning – if someone enters the water from an elevated surface (such as a bridge or dock) and when sampling from a boat. To minimize this potential, personnel shall wear United states Coast Guard (USCG)-approved floatation devices, and the sampling crew must also have on hand a Type IV Throwable Personal Floatation Device with at least 90 feet of 3/8-inch rope. See Section 5.5.2 of this SOP.

- Within the HASP, provisions will also be provided concerning the requirement of a Safe Vessel Certification or the necessity to conduct a boat inspection prior to use. In addition, the HASP shall also specify requirements as to whether the operator must be certified as a commercial boat operator and whether members of the sampling team must have a state-specific safe boating certification.

Entering Water to Collect Samples – Several hazards are associated with this activity and can be mitigated as follows:

- Personnel must wear a USCG-approved Floatation Device (selected and identified in the HASP). The SSO shall ensure that the device selected is in acceptable condition and suitable for the individual using it. This includes consideration of the weight of the individual.

- Lifelines shall be employed from a point on the shore. This activity will always be conducted with a Buddy. See Section 6.5.2.

- Personnel shall carry a probe to monitor the bottom ahead of them for drop offs or other associated hazards.

- The person in the water shall exercise caution concerning the path traveled so that the lifeline does not become entangled in underwater obstructions such as logs, branches, stumps, etc., thereby restricting its effectiveness in extracting the person from the water.

- Personnel shall not enter waters on foot in situations where natural hazards including alligators, snakes, as well as sharks, gars, and other predators within inland waterways may exist.

- In all cases, working along and/or entering the water during high currents or flood conditions shall be prohibited.

- Personnel shall not enter bodies of water where known debris exists that could result in injuries from cuts and lacerations.

Sampling in marshes or tidal areas in some instances can be accomplished using an all-terrain vehicle (ATV). This is not the primary recommended approach because the vehicle may become disabled, or weather conditions or tidal changes could result in environmental damage as well as loss of the vehicle. The primary approach is recommended to be on foot where minimal disturbance would occur. The same precautions specified above with regard to sediment disturbance apply as well as the previously described safety concerns associated with natural hazards. The natural hazards include alligators, bees (nests in dead falls and tree trunks), snakes, etc. In addition, moving through and over this terrain is difficult and could result in muscle strain and slips, trips, and falls. Common sense dictates that the sampler selects the most open accessible route over moderate terrain. Move slowly and deliberately through challenging terrain to minimize falls. Mud boots or other supportive personal protective equipment (PPE) should be considered and specified in the HASP to permit samplers to move over soft terrain with the least amount of effort. In

these situations, it is also recommended, as the terrain allows, that supplies be loaded and transported in a sled over the soft ground.

Working in these areas, also recognize the following hazards and means of protection against them:

Insects are also a primary concern. These include mosquitoes, ticks, spiders, bees, ants, etc. The HASP will identify those particular to your area. Typical preventative measures include:

- Use insect repellant. Approval of various repellants should be approved by the Project Chemist or Project Manager.
- Wearing light-colored clothing to control heat load due to excessive temperatures. In addition, it makes it easier to detect crawling insects on your clothing.
- Taping pants to boots to deny access. Again, this is recommended to control access to the skin by crawling insects. Consultation with the Project Health and Safety Officer SSO/Health and Safety Manager is recommended under extreme heat loads because this will create conditions of heat stress.
- Performing a body check to remove insects. The quicker you remove ticks, the less likely they will become attached and transfer bacteria to your bloodstream. Have your Buddy check areas inaccessible to yourself. This includes areas such as the upper back and between shoulder blades where it is difficult for you to examine and even more difficult for you to remove.

Safety Reminder

If you are allergic to bee or ant stings, it is especially critical that you carry your doctor-recommended antidote with you in these remote sampling locations due to the extended time required to extract incapacitated individuals as well as the effort required to extract them. In these scenarios, instruct your Buddy in the proper administration of the antidote. In all cases, if you have received a sting, administer the antidote regardless of the immediate reaction, evacuate, and seek medical attention as necessary. The FOL and/or SSO will determine when and if you may return to the field based on the extent of the immune response and hazards or potential hazards identified in these locations. To the FOL and SSO, this is a serious decision you have to make as to whether to take someone vulnerable to these hazards into a remote location where you may not be able to carry them out. Consider it wisely.

Poisonous Plants – To minimize the potential of encountering poisonous plants in the field, at least one member of the field team needs to have basic knowledge of what these plants look like so that they can be recognized, pointed out to other field personnel, and avoided if at all possible. If the field team cannot avoid contact and must move through an area where these plants exist, the level of PPE shall include Tyvek coveralls and enhanced decontamination procedures for the removal of oils from the tooling and/or equipment.

Temperature-Related Stress – Excessively cold temperatures may result in cold stress, especially when entering the water either intentionally or by accident. Provisions for combating this hazard should be maintained at the sample location during this activity. Excessively hot temperatures may result in heat stress especially in scenarios where equipment is packed through the marsh.

Because all of these activities are conducted outside, electrical storms are a significant concern. The following measures will be incorporated to minimize this hazard:

- Where possible, utilize commercial warning systems and weather alerts to detect storms moving into the area.

- If on or in the water, get out of the water. Move to vehicles or preferably into enclosed buildings with plumbing and wiring.

- Where warning systems are not available, follow the 30/30 Rule (i*f there are less than 30 seconds between thunder and lightning, go inside for at least 30 minutes after the last thunder).*

See the Tetra Tech Health and Safety Manual (available at the Health and Safety link of the "My Tetra Tech" intranet page) for additional protective measures.

6.0 PROCEDURES

NOTE: If documentation such as a Certificate of Analysis is provided with sample containers to demonstrate their cleanliness, submit the documentation to the project manager for inclusion in the project file.

NOTE: If sample containers that have been stored on site for more than 6 months are used for sampling, a note should be entered into the field log to explain why the containers were used. In such cases, collection of additional field blanks may be useful. These blanks may be used to identify the contamination source.

6.1 Introduction

Collecting a representative sample of surface water or sediment may be difficult because of water movement, stratification, or heterogeneous distribution of the targeted analytes. To collect representative samples, one must standardize sampling methods related to site selection, sampling frequency, sample collection, sampling devices, and sample handling, preservation, and identification. Regardless of quality control applied during laboratory analyses and subsequent scrutiny of analytical data packages, reported data are no better than the confidence that can be placed in the representativeness of the samples. Consult Appendix C for guidance on sampling that should be considered during project planning and that may be helpful to field personnel.

6.1.1 Surface Water Sampling Technique

Samples collected during site investigations may be grab samples or composite samples. The following general procedures apply to various types of surface water and sediment collection techniques:

- If a pre-preserved sample container is not used and the container is not pre-cleaned (See Section 6.1.2), rinse the sample container at least once with the surface water to be sampled before the sample is collected. This is not applicable when sample containers are provided pre-preserved with chemicals because doing so will wash some or all of the preservative out of the bottle. For sample containers that are certified to be clean, pre-rinsing is not recommended.

- For sampling moving water, collect the farthest downstream sample first, and continue sample collection in an upstream direction. In general, work from zones suspected of low contamination to zones of high contamination.

- Take care to avoid excessive agitation of water samples because loss of volatile constituents could result.

- When obtaining water samples in 40 mL vials with septum-lined lids for volatile organics analysis, fill the container completely (with a meniscus) to exclude any air space in the top of the vial and to be sure that the Teflon liner of the septum faces in after the vial is filled and capped. Turn the vial upside down and tap gently on your wrist to check for air bubbles. If air bubbles rise in the bottle, add additional sample volume to the container or recollect the sample to obtain a representative sample that has not lost VOCs through volatilization.

- Do not sample at a water surface, unless sampling specifically for a known constituent that is immiscible with, and on top of, the water.

- Do not sample at the bottom of the water column, unless sampling specifically for a known constituent that is immiscible with, and is expected to be found at the bottom of, the water column.

6.1.2 Surface Water Sampling Equipment

The selection of sampling equipment depends on the site conditions and sample type to be acquired. In general, the most representative surface water samples are obtained from mid-channel at a stream depth of 0.5 foot below water surface in a well-mixed stream; however, project-specific planning documents will address site-specific sampling requirements including sample collection points and sampling equipment. The most frequently used samplers include the following:

- Peristaltic pump
- Bailer
- Dip sampler
- Weighted bottle
- Hand pump
- Kemmerer
- Depth-integrating sampler

The dip sampler and weighted bottle sampler are used most often, and detailed discussions for these devices and the Kemmerer sampler are addressed subsequently in this section.

The criteria for selecting a sampler include:

1. Disposability and/or easy decontamination.

2. Inexpensive cost (if the item is to be disposed).

3. Ease of operation.

4. Non-reactive/non-contaminating properties. Samples may be contaminated by contaminated sample containers, and analytes may be lost through precipitation, decomposition, adsorption or other mechanisms that result from interaction with the sample container. Decomposition also may occur when analytes volatilize out of a sample or react with light. Correct sample container selection and use of preservation such as chemical preservatives, cooling, and protection from light are necessary to retard the degradation of samples.

Measurements collected for each sample (grab or each aliquot collected for compositing) shall include but not be limited to:

- Specific conductance
- Temperature
- pH

- Dissolved oxygen

Sample measurements shall be conducted as soon as the sample is acquired. Measurement techniques described in SOP SA-1.1 shall be followed. All pertinent data and results shall be recorded in a field notebook or on sample log sheets (see Attachment A) or an equivalent electronic form(s). These analyses may be selected to provide information on water mixing/stratification and potential contamination. Various types of water bodies have differing potentials for mixing and stratification.

In general, the following equipment is necessary for obtaining surface water samples. Additional equipment may be necessary depending on circumstances and field conditions.

- Required sampling equipment and associated documentation, which may include:
  - Remote sampling pole.
  - Sample containers Sample containers shall conform to the guidelines in SOP SA-6.1.
  - Weighted bottle sampler.
  - Kemmerer sampler, or other device.
  - Decontamination equipment.
  - Required paperwork (see SOP SA-6.3 and Attachments A and B to this SOP).
  - Required decontamination equipment.
  - Sealable polyethylene bags (e.g., Ziploc® baggies).
  - Heavy-duty cooler.
  - Ice.
  - Paper towels and garbage bags.
  - Chain-of-custody records and custody seals.
- Real-time air monitoring instrument (e.g., PID, FID) as directed in the project-specific planning document.
- Required PPE as directed in the project-specific planning document, which may include:
  - Nitrile surgeon's or latex gloves (layered as necessary).
  - Safety glasses.
  - Other items identified on the Safe Work Permit that may be required based on location-specific requirements (e.g., hearing protection, steel-toed work boots, hard hat). These provisions will be listed in the HASP or addressed by the FOL and/or SSO.

Safety Reminder

The use of latex products may elicit an allergic reaction in some people. Should this occur, remove the latex gloves, treat for an allergic reaction, and seek medical attention as necessary.

Dip Sampling

Specific procedures for collecting a dip or grab sample of surface water can vary based on site-specific conditions (e.g., conditions near the shore and how closely a sampler can safely get to the shore). In some cases, e.g., when a sample container does not fit onto an available remote sampling pole, or pre-preserved sample containers are required, a transfer bottle must be used to collect sample material that is then transferred to the actual sample container. The general procedure for collecting a sample using a pole or directly from the water body is as follows:

1. Select the appropriate sample container based on the governing project-specific planning document.

NOTE: Samples designated for volatile chemical analyses should be collected first.

2. Remove the sample container cap. Do not place the cap where it might become contaminated (e.g., on the ground).

2. If sample material will be collected directly into an unpreserved container that can be dipped below the water surface, follow the steps immediately below; otherwise, proceed to Step 4.

    a. Securely attach the sample container to a remote sampling pole of sufficient length to reach below the surface of the water to be sampled.

    b. While facing upstream, invert the sample container connected to the pole so the opening faces downward, and carefully dip it to a stream depth of 0.5 foot below the water surface (or as directed by project-specific planning documents). If possible, avoid contacting the bottom of the water body because this could disturb sediment that may compromise the integrity of the surface water sample.

    c. Slowly turn the bottle right-side up allowing the bottle to fill.

    d. Replace the cap quickly and securely on the sample container. In the case of samples designated for VOC analysis, ensure that the cumulative size of air bubbles in the 40 mL vial is no greater than the size of a pea. It is best to exclude all air, if possible.

4. When using a transfer bottle (e.g., because the final sample container contains preservative or does not fit securely onto a dip pole), follow the steps below:

    a. Attach a transfer bottle to a remote sampling dip pole or plan to fill the transfer bottle directly. This bottle may be a large- or wide-mouth bottle, but small openings may be better for shallow surface water bodies to prevent inclusion of surface debris.

    b. While facing upstream, invert the transfer bottle so the opening faces downward and carefully dip it to a stream depth of 0.5 foot below the water surface (or as directed by project-specific planning documents). If possible, avoid contacting the bottom of the water body because this could disturb sediment that may compromise the integrity of the surface water sample.

    c. While avoiding contact between the transfer bottle and sample container, transfer the surface water sample from this intermediate container to the appropriate sample container with minimal agitation.

For samples to be analyzed for VOCs, minimal agitation is especially important to prevent loss of the volatiles.

d. Replace the cap quickly and securely on the sample container. In the case of samples designated for VOC analysis, ensure that the cumulative size of air bubbles in the 40 mL vial is no greater than the size of a pea. It is best to exclude all air, if possible.

5. Use a paper towel to clean and dry the outside of the sample container.

6. Affix a sample label to each sample container, ensuring that each label is completed legibly and completely, addressing all of the categories described in SOP SA-6.3.

7. Proceed with the handling and processing of each sample container as described in SOP SA-6.1.

Constituents measured in grab samples collected near the water surface may not be a true representation of the total concentration distributed throughout the water column and in the horizontal cross section. Therefore, as possible based on site conditions, the sampler may be required to augment dip samples with samples that represent both dissolved and suspended constituents and both vertical and horizontal distributions.

CAUTION

In areas prone to natural hazards such as alligators and snakes, etc., always use a buddy as a watch. Always have and use a lifeline or throwable device to extract persons who could potentially fall into the water. Be attentive to the signs, possible mounds indicating nests, and possible slides into the water. Remember that although snakes are typically encountered on the ground, they can appear on low-hanging branches. Be attentive to your surroundings because these may indicate that hazards are nearby.

Weighted Bottle Sampling

A grab sample can also be collected using a weighted holder that allows a bottle to be lowered to any desired depth, opened for filling, closed, and returned to the surface. This allows discrete sampling with depth. Several of these samples can be combined to provide a vertical composite. Alternatively, an open bottle can be lowered to the bottom and raised to the surface at a uniform rate so that the bottle collects a sample throughout the total water column depth and is just filled on reaching the surface. The resulting sample using either method will roughly approach what is known as a depth-integrated sample.

A closed weighted bottle sampler consists of glass or plastic bottle with a stopper, a weight and/or holding device, and lines to open the stopper and lower or raise the bottle. The general procedure for sampling with this device is as follows:

1. Gently lower the sampler to the desired depth so as not to remove the stopper prematurely (watch for bubbles).

2. When the desired depth is reached, pull out the stopper with a sharp jerk of the stopper line.

3. Allow the bottle to fill completely, as evidenced by the absence of air bubbles.

4. Raise the sampler and cap the bottle quickly and securely. In the case of samples designated for VOC analysis, ensure that the cumulative size of air bubbles in the 40 mL vial is no greater than the size of a pea. It is best to exclude all air, if possible.

5. Use a paper towel to clean and dry the outside of the container. This bottle may be used as the sample container as long as the bottle is an approved container type. If this bottle is not the sample bottle, transfer the sample from this intermediate container to the appropriate sample container with minimal agitation while avoiding contact between the two sample containers. For samples to be analyzed for VOCs, minimal agitation is especially important to prevent loss of the volatiles.

6. Affix a sample label to each sample container, ensuring that each label is completed legibly and completely, addressing all of the categories described in SOP SA-6.3.

7. Proceed with the handling and processing of each sample container as described in SOP SA-6.1.

Kemmerer Sampler

If samples are desired at a specific depth, and the parameters to be measured do not require a Teflon-coated sampler, a standard Kemmerer sampler may be used. The Kemmerer sampler is a brass, stainless steel or acrylic cylinder with rubber stoppers that leave the ends open while it is lowered in a vertical position (thus allowing free passage of water through the cylinder). A "messenger" is sent down the line when the sampler is at the designated depth to cause the stoppers to close the cylinder, which is then raised. Water is removed through a valve to fill sample bottles. The general procedure for sampling with this device is as follows:

1. Gently lower the sampler to the desired depth.

2. When the desired depth is reached, send down the messenger to close the cylinder and then raise the sampler.

3. Open the sampler valve to fill each sample bottle (filling bottles for volatile analysis first, with minimal agitation). For samples to be analyzed for VOCs, minimal agitation is required to prevent loss of the VOCs.

4. Cap the bottle quickly and securely. Ensure that the cumulative size of air bubbles in 40 mL VOC vials is no greater than the size of a pea. It is best to exclude all air, if possible.

5. Use a paper towel to clean and dry the outside of the sample container.

6. Affix a sample label to each sample container, ensuring that each label is completed legibly, and completely, addressing all of the categories described in SOP SA-6.3.

7. Proceed with the handling and processing of each sample container as described in SOP SA-6.1.

6.2 Onsite Water Quality Testing

Onsite water quality testing shall be conducted as described in SOP SA-1.1.

6.3 Sediment Sampling

6.3.1 General

If composite surface water samples are collected, sediment samples are usually collected at the same locations as the associated surface water samples. If only one sediment sample is to be collected, the sampling location shall be approximately at the center of the water body, in a depositional area if possible based on sample location restraints (see below), unless the SAP states otherwise.

Generally, coarser-grained sediments are deposited near the headwaters of reservoirs. Bed sediments near the center of a water body will be composed of fine-grained materials that may, because of their lower porosity and greater surface area available for adsorption, contain greater concentrations of contaminants. The shape, flow pattern, bathymetry (i.e., depth distribution), and water circulation patterns must all be considered when selecting sediment sampling sites. In streams, areas likely to have sediment accumulation (e.g., bends, behind islands or boulders, quiet shallow areas or very deep, low-velocity areas) shall be sampled, in general, and areas likely to show net erosion (i.e., high-velocity, turbulent areas) and suspension of fine solid materials shall be generally avoided. Follow instructions in the SAP, as applicable.

Chemical constituents associated with bottom material may reflect an integration of chemical and biological processes. Bottom samples reflect the historical input to streams, lakes, and estuaries with respect to time, application of chemicals, and land use. Bottom sediments (especially fine-grained material) may act as a sink or reservoir for adsorbed heavy metals and organic contaminants (even if water column concentrations are less than detection limits). Therefore, it is important to minimize the loss of low-density "fines" during any sampling process.

Samples collected for volatile organic compound (VOC) analysis must be collected prior to any sample homogenization. Regardless of the method used for collection, the aliquot for VOC analysis must be collected directly from the sampling device (hand auger bucket, scoop, trowel), to the extent practical. If a device such as a dredge is used, the aliquot should be collected after the sample is placed in the mixing container prior to mixing.

In some cases, the sediment may be soft and not lend itself to collection by plunging Encore™ or syringe samplers into the sample matrix. In these cases, it is appropriate to open the sampling device, (Encore™ barrel or syringe) prior to sample collection, and carefully place the sediment in the device, filling it fully with the required volume of sample.

On active or former military sites, ordnance items may be encountered in some work areas. Care should be exercised when handling site media (such as if unloading a dredge as these materials may be scooped up). If suspected ordnance items are encountered, stop work immediately, move to shore and notify the Project Manager and Health and Safety Manager.

All relevant information pertaining to sediment sampling shall be documented as applicably described in SOP SA-6.3 and Attachment B or an equivalent electronic form.

6.3.2 Sampling Equipment and Techniques for Sampling Bottom Materials

A bottom-material sample may consist of a single scoop or core, or may be a composite of several individual samples in the cross section. Sediment samples may be obtained using onshore or offshore techniques.

SAFETY REMINDER

The following health and safety provisions apply when working on/over/near water:

- At least two people are required to be present at the sampling location in situations where the water depth and/or movement deem it necessary, each wearing a USCG-approved Personal Flotation Device.
- A minimum of three people are required if *any* of the following conditions are anticipated or observed:

  - Work in a waterway that is turbulent *or* swift that could sweep a sampler downstream should he or she fall in accidentally.

- The underwater walking surface (e.g., stream/river bed) is suspected or observed to involve conditions that increase the potential for a worker to fall into the water. Examples include large/uneven rocks or boulders, dense mud or sediment that could entrap worker's feet, etc.

- Waterway is tidal, and conditions such as those listed above could rapidly change.

The third person in the above condition must be equipped and prepared to render emergency support [e.g., lifeline, tethered Personal Flotation Device (Throwable Type IV, life saver), skiff, means to contact external emergency response support, etc.]

The following sampling devices may be used to collect sediment samples:

- Scoop sampler
- Dredge sampler
- Coring sampler
- Stainless steel or disposable trowel

Each type of sampler is discussed below.

In general, the following equipment if necessary for obtaining sediment samples:

- Required sampling equipment, which may include a scoop sampler, dredge sampler, coring sampler, or stainless steel or pre-cleaned disposable trowel.

- Stainless steel bowl or pre-cleaned disposable bowl to homogenize sample.

- Real-time air monitoring instrument (e.g., PID, FID) as directed in the project-specific planning document.

- Required PPE as directed in the project-specific planning document, which may include:

  - Nitrile surgeon's or latex gloves (layered as necessary).

  - Safety glasses.

  - Other items identified on the Safe Work Permit that may be required based on location-specific requirements (e.g., hearing protection, steel-toed work boots, hard hat). These provisions will be listed in the HASP or addressed by the FOL and/or SSO.

  - Required paperwork (see SOP SA-6.3 and Attachments A and B to this SOP).

  - Required decontamination equipment.

  - Required sample containers.

  - Sealable polyethylene bags (e.g., Ziploc® baggies).

  - Heavy-duty cooler.

  - Ice.

- Paper towels and garbage bags.

- Chain-of-custody records and custody seals.

Scoop Sampler

A scoop sampler consists of a pole to which a jar or scoop is attached. The pole may be made of bamboo, wood, PVC, or aluminum and be either telescoping or of fixed length. The scoop or jar at the end of the pole is usually attached using a clamp.

If the water body can be sampled from the shore or if the sampler can safely wade to the required location, the easiest and best way to collect a sediment sample is to use a scoop sampler. Scoop sampling also reduces the potential for cross-contamination. The general scoop sampling procedure is as follows:

1. Reach over or wade into the water body.

2. While facing upstream (into the current), scoop the sampler along the bottom in an upstream direction. Although it is very difficult not to disturb fine-grained materials at the sediment-water interface when using this method, try to keep disturbances to a minimum.

3. If collecting sediment for VOC analysis, fill the sample container(s) for VOC analysis at this time and quickly and securely replace the cap(s) on the container(s).

4. Transfer the remaining sediment sample material to the bowl and homogenize the sediment.

5. Fill the containers for all remaining analyses and quickly and securely replace the caps on the containers as they are filled.

6. Use a paper towel to clean and dry the outside of each container.

7. Affix a sample label to each container, ensuring that each label is completed legibly and completely, addressing all of the categories described in SOP SA-6.3.

8. Proceed with the handling and processing of each sample container as described in SOP SA-6.1.

Dredge Samplers

Dredges are generally used to sample sediments that cannot easily be obtained using coring devices (e.g., coarse-grained or partially cemented materials) or when large quantities of sample are required. Dredges generally consist of a clam shell arrangement of two buckets. The buckets may either close upon impact or be activated by use of a "messenger." Some dredges are heavy and may require use of a winch and crane assembly for sample retrieval. The three major types of dredges are Peterson, Eckman, and Ponar.

The Peterson dredge is used when the bottom is rocky, in very deep water, or when the flow velocity is high. The Peterson dredge shall be lowered very slowly as it approaches bottom, because it can force out and miss lighter materials if allowed to drop freely.

The Eckman dredge has only limited usefulness. It performs well where bottom material is unusually soft, as when covered with organic sludge or light mud. It is unsuitable, however, for sandy, rocky, and hard bottoms and is too light for use in streams with high flow velocities.

The Ponar dredge is a Peterson dredge modified by the addition of side plates and a screen on the top of the sample compartment. The screen over the sample compartment permits water to pass through the sampler as it descends, thus reducing the "shock wave." The Ponar dredge is easily operated by one person in the same fashion as the Peterson dredge. The Ponar dredge is one of the most effective samplers for general use on all types of substrates.

The general procedure for using a dredge sampler is as follows:

1. Gently lower the dredge to the desired depth.

2. When the desired depth is reached, send the messenger down the cable to close the cylinder and then carefully raise the sampler.

3. Open the sampler to retrieve the sediment.

4. If collecting sediment for VOC analysis, fill the sample container(s) for VOC analysis at this time and quickly and securely replace the cap(s) on the container(s).

5. Transfer the remaining sediment sample material to the bowl and homogenize the sediment.

6. Fill the containers for all remaining analyses and quickly and securely replace the caps on the containers as they are filled.

7. Use a paper towel to clean and dry the outside of each container.

8. Affix a sample label to each container, ensuring that each label is completed legibly and completely, addressing all of the categories described in SOP SA-6.3.

9. Proceed with the handling and processing of each sample container as described in SOP SA-6.1.

SAFETY REMINDER

Safety concerns using these dredges include lifting hazards, pinches, and compressions (several pinch points exist within the jaws and levers). In all cases, handle the dredge by the rope to avoid capturing fingers/hands.

Coring Samplers

Coring samplers are used to sample vertical columns of sediment. Many types of coring devices have been developed depending on the depth of water from which the sample is to be obtained, the nature of the bottom material, and the length of core to be collected. They vary from hand-push tubes to electronic vibrational core tube drivers.

Coring devices are particularly useful in pollutant monitoring because turbulence created by descent through the water is minimal, thus the fines at the sediment-water interface are only minimally disturbed. The sample is withdrawn intact, permitting the removal of only those layers of interest.

In shallow, wadeable waters, the use of a core liner or tube manufactured of Teflon or plastic is recommended for the collection of sediment samples. Caution should be exercised not to disturb the bottom sediments when the sample is obtained by wading in shallow water. The general procedure to collecting a sediment sample with a core tube is as follows:

1. Push the coring tube into the substrate until 4 inches or less of the tube is above the sediment-water interface. When sampling hard or coarse substrates, a gentle rotation of the tube while it is being pushed will facilitate greater penetration and decrease core compaction.

2. Cap the top of the tube to provide suction and reduce the chance of losing the sample.

3. Slowly extract the tube so as not to lose sediment from the bottom of the tube during extraction, and cap the bottom of the tube before removing it from the water. This will also help to minimize loss of sample.

4. If collecting sediment for VOC analysis, fill the sample container(s) for VOC analysis at this time and quickly and securely replace the cap(s) on the container(s).

5. Transfer the remaining sediment sample material to the bowl in which it will be homogenized and homogenize the remainder of the sediment.

6. Fill the containers for all analyses other than VOCs, and quickly and securely replace their caps as they are filled.

7. Use a paper towel to clean and dry the outside of each container.

8. Affix a sample label to each container, ensuring that each label is completed legibly and completely, addressing all of the categories described in SOP SA-6.3.

9. Proceed with the handling and processing of each sample container as described in SOP SA-6.1.

In deeper, non-wadeable water bodies, sediment cores may be collected from a bridge or boat using different coring devices such as Ogeechee Sand Pounders, gravity cores, and vibrating coring devices. All three devices utilize a core barrel with a core liner tube system. The core liners can be removed from the core barrel and replaced with a clean core liner after each sample. Before extracting the sediment from the coring tubes, the clear supernatant above the sediment-water interface in the core should be decanted from the tube. This is accomplished by turning the core tube to its side and gently pouring the liquid out until fine sediment particles appear in the waste liquid. Post-retrieval processing of samples is the same as above.

7.0 REFERENCES

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ATTACHMENT A
SURFACE WATER SAMPLE LOG SHEET (EXAMPLE)

Tetra Tech

SURFACE WATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: _____
Project No.: _____

[] Stream
[] Spring
[] Pond
[] Lake
[] Other: _____
[] QA Sample Type: _____

Sample ID No.: _____
Sample Location: _____
Sampled By: _____
C.O.C. No.: _____

Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: / Time:	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Depth: / Method:								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

ATTACHMENT B
SOIL & SEDIMENT SAMPLE LOG SHEET (EXAMPLE)

Tetra Tech

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: _____
Project No.: _____

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other: _____
[] QA Sample Type: _____

Sample ID No.: _____
Sample Location: _____
Sampled By: _____
C.O.C. No.: _____

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: / Time: / Method: / Monitor Reading (ppm):	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)

COMPOSITE SAMPLE DATA:

Date: / Method: / Monitor Readings (Range in ppm):	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

APPENDIX C
GUIDANCE ON SAMPLING DESIGN AND SAMPLE COLLECTION

C.1 Defining the Sampling Program

Many factors are considered in developing a sampling program for surface water and/or sediment, including study objectives, accessibility, site topography, physical characteristics of the water body (e.g., flow and mixing), point and diffuse sources of contamination, and personnel and equipment available to conduct the study. For waterborne constituents, dispersion depends on vertical and lateral mixing within the body of water. For sediment, dispersion depends on bottom current or flow characteristics, sediment characteristics (e.g., density, size), and geochemical properties (that affect adsorption/desorption). The hydrogeologist developing the sampling plan must therefore know not only the mixing characteristics of streams and lakes but must also understand the role of fluvial-sediment transport, deposition, and chemical sorption.

C.1.1 Sampling Program Objectives

The scope of the sampling program must consider the contaminant sources and potential pathways for transport of contamination to or within a surface water body. Contaminant sources may include point sources (leaky tanks, outfalls, etc.) or nonpoint sources (e.g., contaminated runoff). The major pathways for surface water contamination (not including airborne deposition) are overland runoff, leachate influx to the water body, direct waste disposal (solid or liquid) into the water body, and groundwater flow influx from upgradient contaminant sources. The relative importance of these pathways, and therefore the design of the sampling program, is controlled by the physiographic and hydrologic features of the site, the drainage basin(s) that encompasses the site, and the history of site activities.

Physiographic and hydrologic features to be considered include slopes and runoff direction, areas of temporary flooding or pooling, tidal effects, artificial surface runoff controls such as berms or drainage ditches (and when they were constructed relative to site operation), and locations of springs, seeps, marshes, etc. In addition, the obvious considerations such as the locations of man-made discharge points to the nearest stream (intermittent or flowing), pond, lake, estuary, etc. shall be considered.

A more subtle consideration in designing the sampling program is the potential for dispersion of dissolved or sediment-associated contaminants away from the source. The dispersion could lead to a more homogeneous distribution of contamination at low or possibly non-detectable concentrations. Such dispersion does not, however, always readily occur. For example, obtaining a representative sample of contamination from a main stream immediately below an outfall or a tributary is difficult because the inflow frequently follows a stream bank with little lateral mixing for some distance. Sampling alternatives to overcome this situation include: (1) moving the sampling location far enough downstream to allow for adequate mixing, or (2) collecting integrated samples in a cross section. Also, non-homogeneous distribution is a particular problem with regard to sediment-associated contaminants, which may accumulate in low-energy environments (coves, river bends, deep spots, or even behind boulders) near or distant from the source while higher-energy areas (main stream channels) near the source may show no contaminant accumulation.

The distribution of particulates within a sample itself is an important consideration. Many organic compounds are only slightly water soluble and tend to adsorb onto particulate matter. Nitrogen, phosphorus, and heavy metals may also be transported by particulates. Samples must be collected with a representative amount of suspended material; transfer from the sampling device shall include transferring a proportionate amount of the suspended material.

C.1.2 Location of Sampling Stations

Accessibility is the primary factor affecting sampling costs. The desirability and utility of a sample for analysis and consideration of site conditions must be balanced against the costs of collection as controlled by accessibility. Bridges or piers are the first choice for locating a sampling station on a stream because bridges provide ready access and also permit the sampling technician to sample any point across the stream. A boat or pontoon (with an associated increase in cost) may be needed to sample locations on lakes, reservoirs, or larger rivers. Frequently, however, a boat will take longer to cross a water body and will hinder manipulation of the sampling equipment. Wading for samples is not recommended unless it is known that contaminant levels are low so that skin contact will not produce adverse health effects. This provides a built in margin of safety in the event that wading boots or other protective equipment should fail to function properly. If it is necessary to wade into the water body to obtain a sample, the sampler shall be careful to minimize disturbance of bottom sediments and must enter the water body downstream of the sampling location. If necessary, the sampling technician shall wait for the sediments to settle before taking a sample.

Under ideal and uniform contaminant dispersion conditions in a flowing stream, the same concentrations of each contaminant would occur at all points along the cross section. This situation is most likely downstream of areas of high turbulence. Careful site selection is needed to ensure, as nearly as possible, that samples are taken where uniform flow or deposition and good mixing conditions exist.

The availability of stream flow and sediment discharge records can be an important consideration in choosing sampling sites in streams. Stream flow data in association with contaminant concentration data are essential for estimating the total contaminant loads carried by the stream. If a gaging station is not conveniently located on a selected stream, the project hydrogeologist shall explore the possibility of obtaining stream flow data by direct or indirect methods. Remember these locations are also where you may encounter natural hazards as these are areas where they hunt. Always exercise extreme caution.

C.1.3 Frequency of Sampling

The sampling frequency and objectives of the sampling event will be defined by the project planning documents. For single-event site or area characterization sampling, both bottom material and overlying water samples shall be collected at the specified sampling stations. If valid data are available on the distribution of a contaminant between the solid and aqueous phases, it may be appropriate to sample only one phase, although this is not often recommended. If samples are collected primarily for monitoring purposes (i.e., consisting of repetitive, continuing measurements to define variations and trends at a given location), water samples should be collected at a pre-established and constant interval as specified in the project plans (often monthly or quarterly and during droughts and floods). Samples of bottom material should generally be collected from fresh deposits at least yearly, and preferably seasonally, during both spring and fall.

The variability in available water quality data shall be evaluated before determining the number and collection frequency of samples required to maintain an effective monitoring program.

C.2 Surface Water Sample Collection

C.2.1 Streams, Rivers, Outfalls, and Drainage Features

Methods for sampling streams, rivers, outfalls, and drainage features (ditches, culverts) at a single point vary from the simplest of hand-sampling procedures to the more sophisticated multi-point sampling techniques known as the equal-width-increment (EWI) method or the equal-discharge-increment (EDI) methods (see below).

Samples from different depths or cross-sectional locations in the watercourse taken during the same sampling episode shall be composited. However, samples collected along the length of the watercourse or at different times may reflect differing inputs or dilutions and therefore shall not be composited. Generally, the number and type of samples to be taken depend on the river's width, depth, and discharge and on the suspended sediment the stream or river transports. The greater the number of individual points that are sampled, the more likely that the composite sample will truly represent the overall characteristics of the water.

In small streams less than about 20 feet wide, a sampling site can generally be found where the water is well mixed. In such cases, a single grab sample taken at mid-depth in the center of the channel is adequate to represent the entire cross section.

For larger streams, at least one vertical composite shall be taken with one sample each from just below the surface, at mid-depth, and just above the bottom. The measurement of dissolved oxygen (DO), pH, temperature, conductivity, etc., shall be made on each aliquot of the vertical composite and on the composite itself. For rivers, several vertical composites shall be collected, as directed in the project planning documents.

C.2.2 Lakes, Ponds, and Reservoirs

Lakes, ponds, and reservoirs have a much greater tendency to stratify than rivers and streams. The relative lack of mixing requires that more samples be obtained. The number of water sampling sites on a lake, pond, or impoundment will vary with the size and shape of the basin. In ponds and small lakes, a single vertical composite at the deepest point may be sufficient. Similarly, measurement of DO, pH, temperature, etc. is to be conducted on each aliquot of the vertical composite and on the composite itself. In naturally formed ponds, the deepest point may have to be determined empirically; in impoundments, the deepest point is usually near the dam.

In lakes and larger reservoirs, several vertical composites shall be composited to form a single sample if a sample representative of the water column is required. These vertical composites are often collected along a transect or grid. In some cases, it may be of interest to form separate composites of epilimnetic and hypolimnetic zones. In a stratified lake, the epilimnion is the thermocline that is exposed to the atmosphere. The hypolimnion is the lower, "confined" layer that is only mixed with the epilimnion and vented to the atmosphere during seasonal "overturn" (when density stratification disappears). These two zones may thus have very different concentrations of contaminants if input is only to one zone, if the contaminants are volatile (and therefore vented from the epilimnion but not the hypolimnion), or if the epilimnion only is involved in short-term flushing (i.e., inflow from or outflow to shallow streams). Normally, however, a composite consists of several vertical composites with samples collected at various depths.

In lakes with irregular shape and with bays and coves that are protected from the wind, separate composite samples may be needed to adequately represent water quality because it is likely that only poor mixing will occur. Similarly, additional samples are recommended where discharges, tributaries, land use characteristics, and other such factors are suspected of influencing water quality.

Many lake measurements are now made in situ using sensors and automatic readout or recording devices. Single and multi-parameter instruments are available for measuring temperature, depth, pH, oxidation-reduction potential (ORP), specific conductance, DO, some cations and anions, and light penetration.

C.2.3 Estuaries

Estuarine areas are, by definition, zones where inland freshwaters (both surface and ground) mix with oceanic saline waters. Knowledge of the estuary type may be necessary to determine sampling locations.

Estuaries are generally categorized into one of the following three types dependent on freshwater inflow and mixing properties:

- Mixed Estuary - characterized by the absence of a vertical halocline (gradual or no marked increase in salinity in the water column) and a gradual increase in salinity seaward. Typically, this type of estuary is shallow and is found in major freshwater sheet flow areas. Because this type of estuary is well mixed, sampling locations are not critical.

- Salt Wedge Estuary - characterized by a sharp vertical increase in salinity and stratified freshwater flow along the surface. In these estuaries, the vertical mixing forces cannot override the density differential between fresh and saline waters. In effect, a salt wedge tapering inland moves horizontally back and forth with the tidal phase. If contamination is being introduced into the estuary from upstream, water sampling from the salt wedge may miss it entirely.

- Oceanic Estuary - characterized by salinities approaching full-strength oceanic waters. Seasonally, freshwater inflow is small, with the preponderance of the fresh-saline water mixing occurring near or at the shore line.

Sampling in estuarine areas is normally based on the tidal phase, with samples collected on successive slack tides (i.e., when the tide turns). Estuarine sampling programs shall include vertical salinity measurements at 1- to 5-foot increments, coupled with vertical DO and temperature profiles.

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		Effective Date 05/18/2018	Revision 4
		Applicability Tetra Tech, Inc., NUS Operating Unit	
		Prepared Earth Sciences Department	
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1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the methods and protocols to be used for collecting and handling samples to be analyzed for per- and polyfluoroalkyl substances (PFAS). PFAS are present in many consumer products including some typical sampling equipment and are widely present in the environment.

Low regulatory criteria and high cross-contamination potential require special precautions to be implemented to avoid compromising sample integrity. Instructions are provided herein for collection of environmental samples without contaminating them. This SOP is designed to supplement but not replace existing sampling SOPs SA-1.1, SA-1.2, SA-1.3, SA-1.7, and SA-5.1. In addition, some clients and/or projects may have specific PFAS-related sampling requirements that extend beyond the procedures described in this SOP. Such additional requirements typically are documented in work plans or similar documents.

2.0 SCOPE AND APPLICABILITY

This document provides information on selection of proper sampling equipment and techniques for groundwater, surface water, sediment, soil, and water supply sampling for PFAS analysis. Sampling of air or biota is not addressed in this SOP, but similar principles would apply for those media.

3.0 BACKGROUND

PFAS have been used since the 1940s as manufacturer-applied oil and water repellants on products such as clothing, upholstery, paper, and carpets and in making fluoropolymers for non-stick cookware. They are found in textiles and leather products, mist suppressants for metal plating, materials used in the photography industry, photolithography, semi-conductors, paper and packaging, coatings, cleaning products, pesticides, and cosmetics. They have been used in well-known consumer products including Teflon, StainMaster, Scotchgard, and GoreTex. In the 1960s, aqueous film-forming foam (AFFF) containing PFASs was developed for fighting flammable liquid fires, particularly petroleum-fueled (Class B) fires (ATSDR, 2009). The two most researched and most prevalent PFAS in the environment are perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) (ATSDR, 2009).

Military uses of PFAS have been primarily related to fire fighting and electroplating. AFFF meeting MIL-F-24385 specifications was developed by various manufacturers for use in extinguishing fires at military bases, airports, commercial facilities, and fire-fighting training facilities throughout the United States. Beginning in the late 1960s the United States Department of Defense (DoD) used large quantities of AFFF for shipboard and shore facility fire-suppression systems, on fire-fighting vehicles, and at fire-training facilities. AFFF concentrate that contains PFAS may still be in use at DoD facilities, and large quantities of AFFF may have been released to the environment at some facilities.

PFAS are persistent in the environment, tend to bioaccumulate, and demonstrate toxicity in laboratory animals, enough to raise concerns about their presence in the environment. Some areas where PFAS may have been released to the environment include the following:

- Fire-fighting training areas
- Areas where fire-fighting products/materials are stored (e.g., fire stations)
- Aircraft crash sites
- Refineries
- DoD sites/military bases
- Landfills (leaching from consumer products)
- Biosolids land applications

- Rail yards
- Textile/carper manufacturing sites
- Septic systems
- Metal coating and plating facilities
- Water treatment systems and receiving water bodies
- Airport hangars and other facilities storing fire-fighting foams
- Chemical facilities, especially fluorochemical manufacturing, use, and disposal facilities

PFAS are ubiquitous in consumer products and are present in or on some materials used in environmental sampling (e.g., Teflon tubing, waterproof logbooks, and GoreTex field clothing). Laboratory detection limits are low for PFAS, and contact of sample material or sampling equipment with any one of the multitude of PFAS sources could result in detectable contamination. In addition, PFAS tend to adsorb to glass and some plastics, so certain glass or plastic sample collection containers are inappropriate for use in PFAS sample collection. Adsorption to sample containers may result in a low bias for measured PFAS concentrations.

Collection and analysis of quality control blanks is an important aspect of verifying that samples have not been contaminated during sample collection and handling. Use of additional blanks or blanks of a different type than usual may be required in some circumstances, and the governing project planning documents should be consulted. Consult Section 7.7 of this SOP for instructions regarding collection of field reagent blanks (FRBs).

4.0 DEFINITIONS

AFFF – Aqueous film-forming foam.

Emerging Contaminant – An emerging contaminant is a chemical or material that is characterized by a perceived, potential, or real threat to human health or the environment or by a lack of published health standards (U.S. EPA, 2014). A contaminant may also be "emerging" because a new source or a new pathway for human exposure has been discovered or a new detection method or treatment technology has been developed (DoD, 2011).

FRB – Field Reagent Blank. A blank sample prepared in the field by transferring laboratory-supplied, chemically preserved, "PFAS-free" deionized water to an empty, laboratory-supplied, collection bottle. FRBs are typically analyzed only for PFAS and are treated as site samples in all respects, including shipment to the sampling site, exposure to sampling site conditions, storage, preservation, and all PFAS analytical procedures. The purpose of FRBs is to indicate whether PFAS measured in corresponding site samples may have been introduced during sample collection and handling.

PFAS – Per- and Polyfluoroalkyl Substances. A reference term currently in use, replacing "PFCs" in recent scientific and other technical literature. The term is inclusive of both perfluorinated chemicals like PFOA and PFOS and polyfluoroalkyl substances like fluorinated telomers.

PFCs – Perfluorinated Compounds or Chemicals. PFCs are a family of man-made chemicals that have been used for commercial, industrial, and military applications because they resist thermal degradation and repel oil, stains, grease, and water.

PFOA – Perfluorooctanoic Acid. PFOA is used as an aqueous dispersion agent (surfactant) and in the manufacture of fluoropolymers (including Teflon) used in industrial components such as electrical wire casings, fire- and chemical-resistant tubing, and plumbing seal tape. PFOA is used in surface treatment products (e.g., paints) to impart oil, stain, grease, and water resistance. PFOA can also be produced by the breakdown of some fluorinated telomers.

PFOS – Perfluorooctane Sulfonate. PFOS was a key ingredient in Scotchgard and used in the manufacture of Class B AFFF used per DoD military specifications. Phase out of AFFF by 3M occurred in 2002.

5.0 SAFETY PRECAUTIONS

Sample acquisition activities shall be conducted in accordance health and safety requirements identified in the project-specific Health and Safety Plan (HASP), Accident Prevention Plan (APP), and corporate health and safety policies. Alteration may be necessary to allow sample collection without cross contamination as dictated by site-specific conditions.

Caution

The use of personal protective equipment (PPE) containing PFAS (e.g., some insect repellants, sunscreens, traffic safety vests, etc.) should be avoided if possible or, if deemed necessary to control hazards, should be carefully considered as they can pose a potential cross-contamination risk for samples. Extra care (e.g., changing outer gloves) must be exercised to ensure that PFAS is not transferred directly or indirectly from PPE to samples or sample containers.

The Tetra Tech Project Manager (PM), in coordination with the Tetra Tech NUS Operating Unit Health and Safety Group, shall ensure that the development of project-specific plans balances the need to control exposure to safety hazards as well as address PFAS contamination risks.

6.0 PERSONNEL RESPONSIBILITIES, QUALIFICATIONS, AND TRAINING

Project Manager (PM) – The PM along with the management team are responsible for determining sampling objectives, initial sampling locations, and field procedures used in the collection of samples of environmental media. Additionally, in consultation with other project personnel (geologist, hydrogeologist, etc.), the PM is responsible for selecting and detailing the specific sampling techniques and equipment to be used and for providing detailed input in this regard to the project planning documents. The PM has the overall responsibility for ensuring that sampling activities are properly conducted by appropriately trained staff.

Site Safety and Health Officer (SSHO) – The SSHO (or a qualified designee) is responsible for providing the technical support necessary to implement the project HASP, APP, or equivalent. The SSHO or SSHO designee may also be required to advise the Field Operations Leader (FOL) on safety-related matters regarding sampling, such as measures to mitigate potential hazards, hazardous objects, or conditions.

Project Geologist/Sampler – The project geologist/sampler is responsible for proper acquisition of samples in accordance with this SOP and other project-specific governing documents. In addition, this individual is responsible for the completion of all required paperwork (e.g., sample log sheets, field notebook, boring logs, container labels, custody seals, and chain-of-custody forms) associated with the collection of those samples.

Field Operations Leader (FOL) – This individual is primarily responsible for the execution of the field sampling program in accordance with the project planning documents. This is accomplished through management of a field sampling team for the proper acquisition of samples.

Personnel implementing this SOP must read and understand this SOP prior to collection of samples designated for PFAS analysis.

7.0 PROCEDURES

The following sampling procedure establishes requirements for collection of samples designated for PFAS analysis while minimizing potential cross contamination of the samples and other materials.

7.1 Selection of Equipment

It is important to research available equipment and materials at the project planning stage to avoid last-minute problems in the field, for example, ensuring compatibility of high-density polyethylene (HDPE) tubing with fittings for use in a peristaltic or other pump, or ensuring that equipment (e.g., a bladder pump) does not contain Teflon.

Sampling Equipment:

Note: PFAS cross-contamination of samples can be minimized through decontamination or conditioning of equipment left in a well. Use of dedicated equipment also is helpful so that handling during decontamination is unnecessary.

- Decontamination – All reusable equipment used in sample acquisition should be adequately decontaminated prior to use. Consult Safety Data Sheets (SDSs) to verify that soaps or detergents used in decontamination do not contain fluorosurfactants.

- Unless project requirements indicate otherwise, use sampling equipment made of stainless steel, acetate, silicone, or HDPE. This applies to tubing, pumps and pump components, tape for plumbing fittings, trowels, mixing bowls, or other equipment that could contact the sample media. Gasket and O-ring components of sampling equipment may also contain fluoropolymers.

Note: PFAS on purchased or rented items is likely to occur predominantly in newly manufactured or rented items treated with chemicals containing PFAS. Therefore, all rental equipment that will make direct contact with the material being sampled must be thoroughly decontaminated prior to use, especially if the equipment items are new. Be cognizant of the potential for continued leaching of PFAS or other chemicals — even after decontamination.

- During sample handling, mobilization, and demobilization, avoid using sampling equipment that includes or contains polyvinylidene fluoride (PVDF) or contains “fluoro” in the name such as:
    - Polytetrafluoroethylene (PTFE)
    - Teflon (DuPont brand name)
    - Fluorinated ethylene propylene (FEP)
    - Ethylene tetrafluoroethylene (ETFE).

- Use products that are not made of low-density polyethylene products (LDPE) if contamination from those products can be transferred to environmental samples or QC samples.

- For collecting drinking water samples to be analyzed using United States Environmental Protection Agency (U.S. EPA) Method 537, use polypropylene sample bottles with a polypropylene screw cap; for all other samples, use HDPE containers with unlined plastic screw caps.

Non-Sampling Field Equipment:

- Non-waterproof loose-leaf paper or notebooks are acceptable. Avoid using waterproof field books or paper during sampling activities. Do not use plastic clipboards, binders, or spiral hard-cover notebooks that may be coated; use Masonite or aluminum clipboards instead.

- Avoid using Post-it notes or similar removable notes during sample handling or mobilization/demobilization activities.

- Use ballpoint pens or pencils for note taking and sample bottle labeling. Avoid using Sharpies or similar indelible markers.

- Avoid the use of aluminum foil.

Field Personnel Clothing and Protective Gear:

- Wear clothing that has been washed at least six times without fabric softener to remove possible stain-resistant coatings. Clothing made of natural fibers such as cotton is preferred to other fabrics. Protective clothing must be washed in accordance with manufacturer recommendations to ensure that the protective properties necessary to control safety hazards (e.g., fire-retardant clothing) are not compromised.

- Avoid unnecessary contact with upholstery in vehicles because many such fabrics may be treated with stain-resistant materials that could contain PFAS. Typically, rental vehicles are newer and more likely to pose a contamination risk to samples. Well-washed towels or rags may be placed on the seats to prevent contact with car seats and other materials that could transfer PFAS to clothing worn by samplers. If practical, cover clothing and skin that has been in contact with such upholstery with non-fluorinated clothing.

- During wet weather, use rain gear made from polyurethane or wax-coated materials.

- Avoid wearing water-resistant (e.g., Gore-Tex or similar material) clothing or footwear (e.g., boots) immediately prior to or during sample collection and management.

- Avoid wearing coated Tyvek or similar coated PPE suits.

- Wear un-powdered nitrile gloves at all times while collecting and handling samples, and change gloves often. Anecdotal evidence indicates that changing gloves is one of the most effective methods of reducing or eliminating sample contamination potential; therefore, change to a new pair of gloves prior to collecting each sample.

- Avoid wearing cosmetics, shampoos, hair conditioners, moisturizers, hand cream, or other similar personal care products on the day of sampling.

- As necessary, use sunscreens and insect repellants that are made with 100-percent natural ingredients and that the Air Force Civil Engineer Center has identified as acceptable for use. ***These products must be used in accordance with manufacturer recommendations and in combination with controls in the project-specific HASP, APP, and corporate health and safety policies***. ***Multiple applications of these products per work shift may be required to ensure their effectiveness.***

    - Sunscreens: Alba Organics Natural Sunscreen, Yes To Cucumbers, Aubrey Organics, Jason Natural Sun Block, Kiss My Face, baby sunscreens that are “free” or “natural.”

    - Sunscreen and insect repellant: Avon Skin So Soft Bug Guard Plus – SPF 30 Lotion

- Insect Repellent: Jason Natural Quit Bugging Me, Repel Lemon Eucalyptus Insect Repellant, Herbal Armor, California Baby Natural Bug Spray, BabyGanics.

Notes: The suitability of these items has not been independently verified. Products containing N-diethyl-meta-toluamide **(**DEET), picaridin, and IR3535 and some oil of lemon eucalyptus (OLE) and para-menthane-diol products are known to provide longer-lasting protection than others. One of the products recommended by the Air Force Civil Engineer Center and listed above, Repel Lemon Eucalyptus Insect Repellant, contains OLE and is most likely to be effective.

An independent study (Bartlett and Davis, 2018) of three insect repellents (Sawyer® do-it-yourself permethrin treatment for clothing, Off! Deep Woods® spray for clothing/skin, and Insect Shield® pretreated clothing) determined that these products were free of PFAS compounds (17 compounds were tested for), thus they may be suitable for use on a project-specific basis.

Sample Containers and Shipping Materials:

- Avoid the use of glass or LDPE sample containers, which are believed to result in loss of PFAS through adsorption to the container inner walls.

- Collect samples in clean, laboratory-supplied, plastic bottles only, typically polypropylene for drinking water or HDPE for other matrices.

- Confirm that Teflon-lined caps are not used in sample containers; unlined polypropylene screw caps must be used. It is best to segregate sample containers with Teflon components (e.g., Teflon-lined septa) from PFAS sample containers.

- Avoid using Blue Ice or similar items to cool samples and avoid placing such items in sample coolers for shipping. Use commercially available (e.g., from convenience stores or supermarkets) double-bagged ice instead.

Caution: Samples designated for PFAS analysis must be cooled to achieve a storage temperature of less than 6 °C. Cooling to this temperature may take several hours, and sample temperatures may not achieve 6 °C by the time they arrive at the laboratory. If sample temperatures upon arrival at the laboratory are not less than 10 °C, the laboratory may conclude that sample preservation was compromised and may reject the samples. Therefore, place samples on ice as soon after collection as possible. On warm days, or when a representative from a nearby laboratory picks up the samples, take extra care (e.g., use more ice or delay shipment, if necessary) to ensure that sample temperatures will not exceed 10 °C when the samples arrive at the laboratory.

- Use of commercially available plastic bags (e.g., 3-mil-thick trash can liners) for lining coolers to prevent leakage and to separate potential melt water from chain-of-custody forms is allowed.

7.2 Other Precautions for Sample Handling

- Wash hands thoroughly before sampling and after handling fast food, carryout food, snacks, or other items that may contain PFAS. Do not carry pre-packaged food items such as candy bars or microwave popcorn into sampling areas.

- Assume that shipping tape used for securing coolers could contain PFAS; therefore, take care not to transfer PFAS from tape to samples.

- Minimize exposure of samples to light. This can be done by placing the collected samples into a cooler (with ice) and closing the cooler lid.

- If in doubt about a particular product or item that comes into contact with environmental media to be sampled or is near to sampling operations, consider collecting and analyzing a rinsate blank using laboratory-supplied PFAS-free water to test the item for contamination potential. Consult the Tetra Tech PM in these cases to verify whether collection of additional blanks is warranted.

- Support personnel that are within 3 meters of the sample processing area are considered subject to the same restrictions related to precautionary measures for clothing and food as applied to sampling personnel.

These precautions must be observed during sampling activities, especially during water sample collection (groundwater, water supply, and surface water), given the high solubilities of PFAS in water. Examples of how these precautions may be applied to sampling of specific media are provided in the following sections.

7.3 Groundwater Sample Acquisition

The precautions and requirements identified in Sections 7.1 and 7.2 must be observed for groundwater sampling. Do not proceed any further without reviewing each of those precautions and requirements.

- Collect groundwater samples for PFAS analyses in accordance with this SOP, SOP SA-1.1, and/or project- or client-specific requirements.

- If non-dedicated non-disposable equipment is used between sampling locations, it should be decontaminated with Alconox or Liquinox, unless 1,4-dioxane (a potential component of Liquinox) is also a contaminant of concern. In that case, Liquinox should not be used. Products such as Decon 90, which contains fluorosurfactants, should not be used. Alconox or Liquinox rinses should be followed by a potable water rinse then deionized water rinse. The final decontamination rinse for DoD projects must be with water certified by the laboratory to be PFAS-free.

- If sampling for multiple analytes using PFAS-appropriate equipment, collect samples for PFAS analysis last to ensure adequate purging and conditioning of sampling equipment. If practical to do so, suitable PPE (especially gloves) may also be changed out for PFAS sampling. For example, purge and sample a monitoring well for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and metals using a peristaltic pump with HDPE and silicone tubing, then collect the material for PFAS analysis. If either the proper sampling sequence or proper equipment is unclear, consult the FOL or Tetra Tech PM and record the actual sequence in the field notes.

- If sampling wells that have or had dedicated Teflon or FEP tubing that potentially contained PFAS, remove the dedicated tubing and, using silicone or HDPE tubing, remove at least one well volume from the target sampling interval prior to sampling. Accomplish this removal in a manner that is rigorous enough to remove the entire water column from the well and not just a limited vertical interval of the water column. This will minimize the potential for collecting a sample that was in contact with the Teflon/FEP tubing.

- The use of detergents must be avoided during decontamination of drilling or other heavy equipment. All equipment must be scrubbed with a plastic brush or steam cleaned with potable water, and rinsed thoroughly in potable water to clean away any debris or material on exposed surfaces.

- Sample(s) representing any water collected at the point of use (e.g., water truck or tank on site) used by the driller for drilling purposes must be analyzed for PFAS. See Section 7.8 for guidance on waste management.

- Collect drinking water samples to be analyzed using U.S. EPA Method 537 in clean polypropylene sample bottles with a polypropylene screw cap; for all other samples, use clean, laboratory-supplied, HDPE bottles with unlined plastic screw caps.

7.4 Soil Sample Acquisition

The precautions and requirements identified in Sections 7.1 and 7.2 must be observed for soil sampling. Do not proceed any further without reviewing each of those precautions and requirements.

- Collect soil samples for PFAS analyses in accordance with this SOP, SOP SA-1.3, and/or project- or client-specific requirements. Review client–specific (e.g., DoD component) guidance or previously approved Sampling and Analysis Plans (SAPs).

- Soil sampling equipment should not be constructed of or contain Teflon or other materials likely to contain or be coated with PFAS. Acceptable materials for sampling include stainless steel, acetate, and HDPE.

- If non-dedicated non-disposable equipment is used between sampling locations, it should be decontaminated with Alconox or Liquinox, unless 1,4-dioxane (a potential component of Liquinox) is also a contaminant of concern. In that case, Liquinox should not be used. Products such as Decon 90, which contains fluorosurfactants, should not be used. Alconox or Liquinox rinses should be followed by a potable water rinse then deionized water rinse. The final decontamination rinse for DoD projects must be with water certified by the laboratory to be PFAS-free.

- Collect samples in laboratory-provided HDPE containers specifically designated for PFAS analysis. Do not use glass jars typically used for soil sample collection because some PFAS may irreversibly adsorb to the glass and could create a negative bias in the measured PFAS concentrations.

7.5 Surface Water and Sediment Sample Acquisition

The precautions and requirements identified in Sections 7.1 and 7.2 must be observed for surface water and sediment sampling. Do not proceed any further without reviewing each of those precautions and requirements.

- Collect surface water and sediment samples for PFAS analysis in accordance with this SOP, SOP SA-1.2, and/or project- or client-specific requirements.

- Surface water and sediment sampling equipment should not be constructed of or contain Teflon or LDPE materials. Acceptable materials for sampling include HDPE, silicone, stainless steel, and acetate. Do not use glass. The bottleware should be supplied clean by the laboratory and specifically designated for PFAS analysis. If transfer bottles are required for collection of surface water samples, the transfer bottles used should be of the same material as the containers designated for submission to the laboratory.

- For surface water sample collection, invert the capped sample bottle, with the opening pointing downward, at least 10 cm below the water surface, at least 10 cm above the bottom of the water body, and as close to the center of the channel or water body as practical. To collect the sample,

uncap the bottle underneath the water surface and point the bottle upward so that gloved hands, sample container, and sampler are downstream of where the sample is being collected.

- For aquatic samples collected from the shoreline or via wading, ensure that waders are constructed of fabric that has not been treated with waterproofing coatings, and stand downstream of the sample bottle during sample collection.

- If non-dedicated non-disposable sampling equipment is used between sampling locations, it should be decontaminated with Alconox or Liquinox, unless 1,4-dioxane (a potential component of Liquinox) is also a contaminant of concern. In that case, Liquinox should not be used. Products such as Decon 90, which contains fluorosurfactants, also should not be used. Alconox or Liquinox rinses should be followed by a potable water rinse then deionized water rinse. The final decontamination rinse for DoD projects must be with water certified by the laboratory to be PFAS-free.

- Avoid reusing non-stainless-steel equipment (e.g., porewater observation devices consisting of slotted PVC pipe and silicone tubing) when collecting porewater samples.

7.6 Water Supply Sampling

This section applies to sampling from taps, spigots, faucets, or similar devices for PFAS analysis. The precautions and requirements identified in Sections 7.1 and 7.2 must be observed for water supply sampling. Do not proceed any further without reviewing each of those precautions and requirements.

- Collect water supply samples for PFAS analysis in accordance with applicable portions of SOP SA-1.7 and/or project- or client-specific requirements.

- Water supply sampling equipment (if needed) should not be constructed of or contain Teflon or LDPE materials. Acceptable materials for sampling include HDPE, polypropylene (drinking water sampling only), small amounts of silicone (e.g., short runs of silicone tubing used in peristaltic pumps), stainless steel, and acetate. Non-drinking water supply samples should be collected in clean, laboratory-supplied, HDPE bottleware specifically designated for PFAS analysis (not glass). Collect drinking water samples in clean polypropylene bottles supplied by the laboratory.

- Ensure that sample bottles used to collect chlorinated water samples contain the proper Trizma preservative (5 g/L to remove chlorine). Non-chlorinated water does not require chemical preservatives designed to remove chlorine.

- If non-dedicated non-disposable equipment is used between sample locations, it should be decontaminated with Alconox or Liquinox unless 1,4-dioxane (a potential component of Liquinox) is also a contaminant of concern. In that case, Liquinox should not be used. Products such as Decon 90, which contains fluorosurfactants, also should not be used. Alconox or Liquinox rinses should be followed by a potable water rinse then deionized water rinse. The final decontamination rinse for DoD projects must be with water certified by the laboratory to be PFAS-free.

- Locate the sampling point. If a specific sampling point has already been designated (e.g., a kitchen tap), plan to collect the sample from that point. Otherwise, identify a location in the water supply line that is as close as possible to the water's point of origination (e.g., a well or other water source) and upstream of any local water treatment unit(s) that could affect PFAS levels (e.g., water softeners, activated carbon, or reverse osmosis treatment units). If a treatment unit is in use, a post-treatment sample may also be required in some cases, per project requirements.

Note: If treatment that could affect PFAS levels (e.g., carbon filtration or reverse osmosis) is part of the water distribution system, often a spigot will be present in the plumbing line between the water source and the treatment unit, and this spigot should be used for sample collection.

- Remove any aerator/diffuser from the faucet, if possible. If removal is not possible, record this observation in the field notes.
- Allow the water to run freely from the tap until water quality parameter stabilization per project-specific requirements is achieved, or as otherwise required by project-specific requirements. This will often require purging for 3 to 5 minutes.
- Reduce the water flow rate to minimize aeration of the sample. The water stream should be no wider than the diameter of a pencil.
- Fill the sample bottle (typically 250 mL) directly from the tap to the bottom of the neck of the bottle, and cap the bottle immediately.
- After collecting the sample, cap the bottle and, if preservative is included, agitate by hand until the preservative is dissolved.
- Do not use filters when collecting samples because the filters may introduce PFAS contamination or absorb PFAS and thus reduce PFAS concentrations in the samples.

7.7 Field Reagent Blank Collection

Note: If PFAS are detected in site samples, FRBs may be analyzed to assess whether PFAS in site samples could be non-site-related contamination and whether resampling is necessary. U.S. EPA Method 537 and modifications or derivatives thereof for PFAS analysis require an FRB to be handled along with each sample set. A sample set is described as samples collected from the same sample site and at the same time, but “sample site” and “same time” are not precisely defined. Therefore, it is important to verify that the correct number of FRBs will be collected. The intent is to be able to verify whether samples have been contaminated and to help identify the source of contamination. In general, collecting one FRB at each sampling point is recommended when sampling drinking water; fewer FRBs are recommended when sampling non-drinking water matrices. The actual number will depend on project needs. *Collection of an FRB at every sampling point may be required.*

- Verify the number of FRBs to be collected for the project and where those samples must be collected. This should be described in the project planning documents such as work plans or SAPs. If it is not, consult the PM.

Note: Chemical preservative may not be included in FRBs that are used when sampling non-drinking water matrices.

- At the sampling site, when ready to collect an FRB, open the bottle of chemically preserved FRB reagent water provided by the laboratory and a corresponding clean empty bottle, also provided by the laboratory.
- Pour the preserved FRB reagent water into the empty sample bottle, close the cap, and label this filled bottle as the FRB.

- Pack and ship the FRB along with site samples and required documentation (e.g., chain-of-custody form) to the laboratory.

Note: Although chain-of-custody forms will indicate that FRBs must be analyzed for PFAS, analysis of an FRB will be required only if site samples contain PFAS greater than a certain concentration. If an FRB is analyzed and any PFAS concentration in the FRB exceeds one-third of the laboratory minimum reporting limit (or equivalent), all samples collected with that FRB may be considered invalid and may require recollection and reanalysis. Consult the project planning documents governing sample collection for specifics as to whether resampling is necessary. Care in collection and handling of site samples and FRBs in a way that avoids contamination cannot be overemphasized.

Note: It will be necessary to associate individual FRBs with corresponding site samples; otherwise, decisions about which samples to recollect (if recollection is indicated) could be compromised. Associations between FRBs and corresponding site samples may be accomplished by marking chain-of-custody forms with the associations, but other methods also may be useful. Consult the governing planning document or the PM for guidance, if necessary.

7.8 Disposal of Investigation-Derived Waste Potentially Containing PFAS

PFAS are not hazardous wastes as defined in the Resource Conservation and Recovery Act and Comprehensive Environmental Response, Compensation, and Liability Act. It may be possible to dispose of PFAS-containing solid waste as non-hazardous, but sampling solid waste material for PFAS analysis is not advised. Consult the client PM or on-site point of contact to verify their current disposal acceptance criteria, and indicate on waste manifests that the waste potentially contains PFAS. Waste water potentially containing PFAS should be analyzed for PFAS to determine the appropriate disposal option. If the sum of PFOA and PFOS concentrations is less than 70 ng/L the water may be disposed of without special handling if no other enforceable regulations apply; otherwise, the water should be treated to reduce the PFOA + PFOS concentration to an acceptable level or should be directed to an appropriate treatment facility for disposal. On-site treatment (e.g., granular activated carbon filtration) may be appropriate. Consult the client PM or on-site point of contact for direction regarding disposal.

Note: If aqueous investigation-derived waste (IDW) is expected to contain greater than 70 ng/L combined PFOA and PFOS (e.g., captured residual AFFF or AFFF concentrate from an accidental release in a hangar), special actions may be necessary and the client PM should be consulted. For wastes that are dewatered and potentially contain PFAS, containerize the waste water and analyze it for PFAS prior to disposal.

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		Effective Date 07/15//2016	Revision 5
		Applicability Tetra Tech, Inc., NUS Operating Unit	
		Prepared Earth Sciences Department	
Subject NON-RADIOLOGICAL SAMPLE HANDLING		Approved T. Johnston	tom. johnston @tetratech.com Digitally signed by: tom. johnston@tetratech.com DN: CN = tom. johnston@tetratech.com Date: 2016.07.14 10:21:19 -05'00'

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1.0 PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to provide information on sample preservation, packaging, and shipping procedures to be used in handling environmental samples submitted for chemical constituent, biological, or geotechnical analysis. Sample chain-of-custody procedures and other aspects of field documentation are addressed in SOP SA-6.3. Sample identification is addressed in SOP CT-04.

2.0 SCOPE

This procedure describes the appropriate containers to be used for samples depending on the analyses to be performed, and the steps necessary to preserve the samples when shipped off site for chemical analysis.

3.0 GLOSSARY

Hazardous Material - A substance or material which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated. Under 49 CFR, the term includes hazardous substances, hazardous wastes, marine pollutants, and elevated temperature materials, as well as materials designated as hazardous under the provisions of §172.101 and §172.102 and materials that meet the defining criteria for hazard classes and divisions in Part 173. With slight modifications, IATA has adopted DOT "hazardous materials" as IATA "Dangerous Goods."

Hazardous Waste - Any substance listed in 40 CFR, Subpart D (§261.30 et seq.), or otherwise characterized as ignitable, corrosive, reactive, or toxic (as defined by Toxicity Characteristic Leaching Procedure, TCLP, analysis) as specified under 40 CFR, Subpart C (§261.20 et seq.), that would be subject to manifest requirements specified in 40 CFR 262. Such substances are defined and regulated by EPA.

Marking - A descriptive name, identification number, instructions, cautions, weight, specification or UN marks, or combination thereof required on outer packaging of hazardous materials.

n.o.i - Not otherwise indicated (may be used interchangeably with n.o.s.).

n.o.s. - Not otherwise specified.

Packaging - A receptacle and any other components or materials necessary for compliance with the minimum packaging requirements of 49 CFR 174, including containers (other than freight containers or overpacks), portable tanks, cargo tanks, tank cars, and multi-unit tank-car tanks to perform a containment function in conformance with the minimum packaging requirements of 49 CFR 173.24(a) & (b).

Placard - Color-coded, pictorial sign which depicts the hazard class symbol and name and which is placed on the side of a vehicle transporting certain hazardous materials.

Common Preservatives:
- Hydrochloric Acid - HCl
- Sulfuric Acid - H_2SO_4
- Nitric Acid - HNO_3
- Sodium Hydroxide - NaOH

Other Preservatives
- Zinc Acetate
- Sodium Thiosulfate - $Na_2S_2O_3$

Normality (N) - Concentration of a solution expressed as equivalent per liter, an equivalent being the amount of a substance containing 1 gram-atom of replaceable hydrogen or its equivalent.

Reportable Quantity (RQ) - For the purposes of this SOP, means the quantity specified in column 3 of the Appendix to DOT 49 CFR §172.101 for any material identified in column 1 of the appendix. A spill greater than the amount specified must be reported to the National Response Center.

Sample - A sample is physical evidence collected from a facility or the environment, which is representative of conditions at the location and time of collection.

4.0 RESPONSIBILITIES

Field Operations Leader - Directly responsible for the bottling, preservation, labeling, packaging, shipping, and custody of samples up to and including release to the shipper.

Field Samplers - Responsible for initiating the Chain-of-Custody Record (per SOP SA-6.3), implementing the packaging and shipping requirements, and maintaining custody of samples until they are relinquished to another custodian or to the shipper.

5.0 PROCEDURES

Sample identification, labeling, documentation, and chain-of-custody are addressed by SOP SA-6.3.

5.1 Sample Containers

Different types of chemicals react differently with sample containers made of various materials. For example, trace metals adsorb more strongly to glass than to plastic, whereas many organic chemicals may dissolve various types of plastic containers. Proper sample containers, sample volumes, preservation methods such as chemical preservatives/cooling requirements, and holding times should be provided in the project-specific work plan. Some of these requirements may be laboratory-specific and should be arranged during the laboratory procurement phase of a project. In general, the sample container shall allow approximately 5-10 percent air space ("ullage") to allow for expansion/vaporization if the sample warms during transport. However, for collection of volatile organic compounds, head space shall be omitted.

The analytical laboratory will generally provide certified-clean containers for samples to be analyzed for chemical constituents. These containers shall be pre-cleaned to meet or exceed requirements of the latest U.S. Environmental Protection Agency (EPA) "Specifications and Guidance for Contaminant-Free Sample Containers." I-Chem 200 and 300 Series containers meet these requirements; other certifications may be available that also meet these requirements. Each case of 300 Series containers comes with a "Certificate of Analysis," and every container bears a similar bar-coded label for traceability. I-Chem Series 200 containers do not come with a Certificate of Analysis but a certificate may be accessed upon request to the supplier. Shelby tubes or other sample containers are generally provided by the driller for samples requiring geotechnical analysis. Sufficient lead time shall be allowed for a delivery of sample container orders. Therefore, it is critical to use the correct container to maintain the integrity of the sample prior to analysis.

Upon being opened, the container must be used at once for collection/storage of a particular sample. Unused but opened containers are to be considered contaminated and must be discarded. Because of the potential for introduction of contamination, they cannot be reclosed and saved for later use. Likewise, any unused containers which appear contaminated upon receipt, or which are found to have loose caps or a missing Teflon liner (if required for the container), shall be discarded.

Sample containers can be contaminated during storage if nearby volatile substances infiltrate the surrounding air and migrate into the containers. This can occur even when containers are capped.

Therefore, containers should not be stored on site but if on site storage is necessary, sample containers that have been stored on site for longer than 6 months should not be used.

Note: Whereas most air-borne contamination is likely to be associated with organic substances, inorganic substances such as hydrochloric acid (muriatic acid) can emit inorganic vapors that infiltrate sample containers.

5.2 Sample Preservation

Many water and soil samples are unstable and therefore require preservation to prevent changes in either the concentration or the physical condition of the constituent(s) requiring analysis. Although complete and irreversible preservation of samples is not possible, preservation does retard the chemical and biological changes that inevitably take place after the sample is collected. Preservation techniques are usually limited to pH control, chemical addition(s), and refrigeration/ freezing (certain biological samples only).

5.2.1 Overview

Reagents required for sample preservation will either be added to the sample containers by the laboratory prior to their shipment to the field or be added in the field (in a clean environment). Only high purity reagents shall be used for preservation and field preservation of samples is discouraged for reasons of potential cross-contamination of samples and worker safety. Most samples require cooling to <6°C and the project-specific planning documents should be consulted for detailed preservation and storage requirements.

The following subsections describe the procedures for preparing and adding chemical preservatives.

The FOL is responsible for ensuring that an accurate Chemical Inventory is created and maintained for all hazardous chemicals brought to the work site. Furthermore, the FOL must ensure that a corresponding Safety Data Sheet (SDS) is collected for every substance entered on the site Chemical Inventory, and that all persons using/handling/ disposing of these substances review the appropriate SDS for substances they will work with. The Chemical Inventory and the SDSs must be maintained at each work site in a location and manner where they are readily-accessible to all personnel.

5.2.2 Preparation and Addition of Reagents

Addition of the following acids or bases may be specified for sample preservation; these reagents shall be analytical reagent (AR) grade or purer and shall be diluted to the required concentration with deionized water before field sampling commences. To avoid uncontrolled reactions, be sure to Add Acid to water (not vice versa). A dilutions guide is provided below.

Acid/Base	Dilution	Concentration	Estimated Amount Required for Preservation
Hydrochloric Acid (HCl)	1 part concentrated HCl: 1 part double-distilled, deionized water	6N	5 to 10 mL
Sulfuric Acid (H_2SO_4)	1 part concentrated H_2SO_4: 1 part double-distilled, deionized water	18N	2 to 5 mL
Nitric Acid (HNO_3)	Undiluted concentrated HNO_3	16N	2 to 5 mL
Sodium Hydroxide (NaOH)	400 grams solid NaOH dissolved in 870 mL double-distilled, deionized water; yields 1 liter of solution	10N	2 mL

The amounts required for preservation shown in the above table assumes proper preparation of the preservative and addition of the preservative to one liter of aqueous sample. This assumes that the sample is initially at pH 7, is poorly buffered, and does not contain particulate matter; as these conditions vary, more preservative may be required. Consequently, the final sample pH must be checked using narrow-range pH paper, as described in the generalized procedure detailed below:

- Pour off 5 to 10 mL of sample into a dedicated, clean container. Use some of this sample to check the initial sample pH using wide range (0-14) pH paper. Never dip the pH paper into the sample; always apply a drop of sample to the pH paper using a clean stirring rod or pipette.

- Add about one-half of the estimated preservative required to the original sample bottle. Cap and invert gently several times to mix. Check pH (as described above) using medium range pH paper (pH 0-6 or pH 7.5-14, as applicable).

- Cap sample bottle and seal securely.

Additional considerations are discussed below:

- To test if ascorbic acid must be used to remove oxidizing agents present in the sample before it can be properly preserved, place a drop of sample on KI-starch paper. A blue color indicates the need for ascorbic acid addition.

  If required, add a few crystals of ascorbic acid to the sample and retest with the KI-starch paper. Repeat until a drop of sample produces no color on the KI-starch paper. Then add an additional 0.6 grams of ascorbic acid per each liter of sample volume.

  Continue with proper base preservation of the sample as described above.

- Samples for sulfide analysis must be treated by the addition of 4 drops (0.2 mL) of 2N zinc acetate solution per 100 mL of sample.

  The 2N zinc acetate solution is made by dissolving 220 grams of zinc acetate in 870 mL of double-distilled, deionized water to make 1 liter of solution.

  The sample pH is then raised to 9 using the NaOH preservative.

- Sodium thiosulfate must be added to remove residual chlorine from a sample. To test the sample for residual chlorine use a field test kit specially made for this purpose.

  If residual chlorine is present, add 0.08 grams of sodium thiosulfate per liter of sample to remove the residual chlorine.

  Continue with proper acidification of the sample as described above.

For biological samples, 10% buffered formalin or isopropanol may also be required for preservation. Questions regarding preservation requirements should be resolved through communication with the laboratory before sampling begins.

5.3 Field Filtration

At times, field-filtration may be required to provide for the analysis of dissolved chemical constituents. Field-filtration must be performed prior to the preservation of samples as described above. General procedures for field filtration are described below:

- The sample shall be filtered through a non-metallic, 0.45-micron membrane filter, immediately after collection. The filtration system shall consist of dedicated filter canister, dedicated tubing, and a peristaltic pump with pressure or vacuum pumping squeeze action (since the sample is filtered by mechanical peristalsis, the sample travels only through the tubing) or hand pump.

- To perform filtration, thread the tubing through the peristaltic pump head. Attach the filter canister to the discharge end of the silicon tubing (note flow direction arrow); attach the aqueous sample container to the intake end of the silicon tubing. Turn the peristaltic pump on and perform filtration. Run approximately 100 mL of sample through the filter and discard prior to sample collection.

- Continue by preserving the filtrate (contained in the filter canister), as applicable and generally described above.

5.4 Sample Packaging and Shipping

Only employees who have successfully completed the corporate “Shipping Hazardous Materials” training course are authorized to package and ship hazardous substances. These trained individuals are responsible for performing shipping duties in accordance with this training.

Samples collected for shipment from a site shall be classified as either environmental or hazardous material samples. Samples from drums containing materials other than Investigative Derived Waste (IDW) and samples obtained from waste piles or bulk storage tanks are generally shipped as hazardous materials. A distinction must be made between the two types of samples in order to:

- Determine appropriate procedures for transportation of samples (if there is any doubt, a sample shall be considered hazardous and shipped accordingly.)

- Protect the health and safety of transport and laboratory personnel receiving the samples (special precautions are used by the shipper and at laboratories when hazardous materials are received.)

Detailed procedures for packaging environmental samples are outlined in the remainder of this section.

5.4.1 Environmental Samples

Environmental samples are packaged as follows:

- Place properly identified and labeled sample container, with lid securely fastened, in a plastic bag (e.g. Ziploc baggie), and seal the bag.

- Place sample in a cooler constructed of sturdy material which has been lined with a large, plastic bag (e.g. "garbage" bag). Drain plugs on coolers must be taped shut.

- Pack with enough cushioning materials such as bubble wrap (shoulders of bottles must be iced if required) to minimize the possibility of the container breaking. Glass bottles should be individually wrapped in bubblewrap.

- If cooling is required (see Attachments A and B), place ice around sample container shoulders, and on top of packing material (minimum of 8 pounds of ice for a medium-size cooler).

- Seal (i.e., tape or tie top in knot) large liner bag.

- The original (top, signed copy) of the COC form shall be placed inside a large Ziploc-type bag and taped inside the lid of the shipping cooler. If multiple coolers are sent but are included on one COC form, the COC form should be sent with the cooler containing the vials for VOC analysis. The COC form should then state how many coolers are included with that shipment.

- Close and seal outside of cooler as described in SOP SA-6.3. Signed custody seals must be used.

Coolers must be marked as containing "Environmental Samples." The appropriate side of the container must be marked "This End Up" and arrows placed appropriately. No DOT marking or labeling is required; there are no DOT restrictions on mode of transportation.

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		Prepared Earth Sciences Department	
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1.0 PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to identify and designate the field data record forms, logs, and reports generally initiated and maintained for documenting NUS Operating Unit field activities.

2.0 SCOPE AND APPLICABILITY

Documents presented within this SOP (and related sampling SOPs) shall be used for all NUS Operating Unit field activities, as applicable. All personnel are encouraged to review the information contained herein to facilitate planning of the field sampling and documentation effort. The techniques described shall be followed whenever applicable, noting that site-specific conditions or project-specific plans may require modifications to methodology. Other or additional documents may be required by specific client contracts or project planning documents.

3.0 GLOSSARY

None.

4.0 RESPONSIBILITIES AND PERSONNEL QUALIFICATIONS

Project Manager (PM) - The PM is responsible for obtaining hardbound controlled-distribution logbooks (from the appropriate source), as needed. In addition, the PM is responsible for placing all field documentation used in site activities (i.e., records, field reports, sample data sheets, field notebooks, and the site logbook) in the project's central file upon the completion of field work.

Field Operations Leader (FOL) - The FOL is responsible for ensuring that the site logbook, notebooks, and all appropriate and current forms and field reports included in this SOP (and any additional forms required by the contract) are correctly used, accurately filled out, and completed in the required time frame.

Site Safety Officer (SSO) - The SSO (or a qualified designee) is responsible for providing the technical support necessary to implement the project Health and Safety Plan (HASP) (or equivalent).

Project Geologist/Sampler - The Project Geologist/Sampler is responsible for the proper documentation of field activities in accordance with this SOP and/or other project-specific documents.

General personnel qualifications for field documentation activities include the following:

- Occupational Safety and Health Administration (OSHA) 40-hour and applicable refresher training.
- Capability of performing field work under the expected physical and environmental (i.e., weather) conditions.
- Familiarity with appropriate procedures for documentation, handling, packaging, and shipping.

5.0 PROCEDURES

5.1 SITE LOGBOOK

5.1.1 General

The site logbook is a hard-bound, paginated, controlled-distribution record book in which all major on-site activities are documented. At a minimum, record or reference the following activities/events (daily) in the site logbook:

- All field personnel present
- Arrival/departure times and names of site visitors
- Times and dates of health and safety training
- Arrival/departure times of equipment
- Times and dates of equipment calibration
- Start and/or completion of borehole, trench, monitoring well installation activities, etc.
- Daily on-site activities
- Sample pickup information
- Health and safety issues (level of protection, personal protective equipment [PPE], etc.)
- Weather conditions

Maintain a site logbook for each project and initiate it at the start of the first on-site activity (e.g., site visit or initial reconnaissance survey). Make entries every day that on-site activities take place involving NUS Operating Unit or subcontractor personnel. Upon completion of the fieldwork, provide the site logbook to the PM (or qualified designee) for inclusion in the project's central file.

Record the following information on the cover of each site logbook:

- Project name
- NUS Operating Unit project number
- Sequential book number
- Start date
- End date

Information recorded daily in the site logbook need not be duplicated in other field notebooks (see Section 5.2) but must summarize the contents of these other notebooks and refer to specific page locations in these notebooks for detailed information (where applicable). An example of a typical site logbook entry is shown in Attachment A.

If measurements are made at any location, either record the measurements and equipment used in the site logbook or reference the field notebook in which the measurements are recorded (see Attachment A).

Make all logbook, notebook, and log sheet entries in indelible ink (black pen is preferred). No erasures are permitted. If an incorrect entry is made, cross out the entry with a single strike mark, initial, and date it. At the completion of entries by any individual, the logbook pages used must be signed and dated by the person making the entries. The site logbook must also be signed by the FOL at the end of each day.

5.1.2 Photographs and Other Images

Permission to take photographs, make movies, or otherwise record visual representations of site features, activities, or facility personnel on certain properties such as military installations is a temporary privilege bestowed upon a person (i.e., the photographer) by the property owner and the particular facility at which the photographs are taken. In the case of U.S. military installations, the U.S. Government and Installation Command bestow this privilege. For the remainder of this section the term “image” is intended to represent

all visual forms of documentation of site features, activities, or personnel, such as film and digital still images and movies.

It may be illegal to record images without proper authorization and the photographer may be criminally liable for their actions. This is especially true on or near U.S. Government property. A particular image alone may not constitute an act of espionage or a national security threat; however, nefarious persons and organizations could conceivably combine information from multiple sources to create a national security threat. Therefore, the photographer must comply with any and all restrictions imposed on them by authorized facility personnel.
The instructions below apply to formal and casual photography sessions conducted, for example, during on-site meetings, walkovers, and other visits. Persons recording images should be aware that images recorded on or near military installations, and possibly at other installations, may be subject to censorship and clearance, e.g., through Public Affairs or Public Relations Offices.

CAUTION

Fieldwork-specific SOPs establish safety precautions for the fieldwork that they govern. When recording images, adhere to all safety precautions associated with fieldwork described in those SOPs. Pay attention to your surroundings. Avoid unsafe locations and positions. Avoid walking or turning your body while looking through the lens or viewfinder of a camera unless the path of movement has been cleared in advance and the movements will be made safely. Be especially alert to trip and fall hazards. Dress appropriately for the weather, topography, and the flora and fauna. Stay hydrated, and be aware of the effects of heat and cold stress on the body. Consult the SSO if in doubt about your safety or the safety of others while recording images.

5.1.2.1 Prior to and during photography sessions, follow these steps:

Note: In general, avoidance of specialty photographic equipment reduces the amount of work required of the photographer. The photographer is not required to record aperture, shutter speed, ISO rating, or other camera settings within automatic exposure ranges available on digital cameras; however use of special lenses (e.g., tilt-and-shift), filters (e.g., neutral density, warming, and polarizing filters), and other image enhancement equipment or techniques must be noted in the logbook/notebook. If possible, use of such equipment items or special techniques should be avoided because they can adversely affect the accuracy of recorded images.

- By communicating with the facility point of contact prior to recording images, obtain permission directly from, or on behalf of, the property owner and/or operator to record the images. In the case of U.S. Government military installations, the point of contact typically represents the Installation Command or a higher authority. The actual point of contact is frequently a Public Works or Environmental Department staff member.

- Request from the facility point of contact a written pass that allows permission to record images (hereafter referred to as a photography pass) but do not insist on obtaining one if the facility declines to issue such a pass.

- If the facility does not issue a written photography pass, either do not record images or verify via written communication with the facility point of contact that image making will be permitted while on the Installation property.

  Note: The intent of these permissions and communications is to ensure that the photographer clearly communicates his or her intentions to the facility and to avoid disputes regarding appropriateness of images, ownership of images or property depicted in the images, violation of privacy, etc. During

communication with the facility point of contact, ensure that they understand the types of scenes, activities, equipment, features, processes, etc., to be recorded visually and under what conditions the images will be made.

- If the facility issues a written photography pass:
  - Prior to recording images, verify that the photography pass is valid for the time period during which images will be made.
  - Carry the written photography pass in your possession when recording images.
  - Be prepared to produce the photography pass as proof of permission to record images.

- Prior to recording images, if using a digital recording medium, enable automatic collection of Exchangeable Image File (EXIF) data. Doing so will provide automatic documentation of the camera settings (ISO rating, shutter speed, aperture, focal length, etc.) used during image capture. Most digital cameras will record this information by default; but the use of special filters or other attachments to the image capture device is not recorded because such equipment is not an integral part of the device.

- While recording images, enter the name of the photographer, date, time, site location, and site description in the logbook/notebook and update this information as necessary to document important changes. Include other pertinent information such as weather conditions, if such information will support interpretation of the images.

- When orientation of the camera is important to interpreting the contents of the images, record the camera angles and positions for each image. This may be done by drawing an arrow on a site figure that points in the same direction the camera was pointed when the image was recorded. Alternatively, some digital cameras may automatically record the geographical coordinates and orientation angle during image capture.

- Sequentially number images of a site or monitoring location to correspond to logbook/notebook entries. Digital still image media typically provide automatic numbering of images. If desired, the image numbers may be altered later (e.g., during download to a computer) but it may be desirable to retain the original file name in the EXIF data for traceability.

5.1.2.2 <u>After recording images follow these steps:</u>

- Verify that the name of the photographer, date, time, site location, site description, and other pertinent notes were correctly entered in the logbook/notebook.

- Compile the images and associated information that will be necessary to interpret them in a manner suitable for the associated project. For example, consecutively number still images and label them according to the logbook/notebook descriptions. If camera angle, camera position, or camera settings are important, record this important information with the images. For moving images, edit and compile the images a manner consistent with the intended use.

- Docket the images and associated film negatives or digital files to the central project file and/or compact disk. If EXIF data were captured and are needed for the project, ensure the EXIF data are transferred along with the image to the final storage location. This final storage location may be a project file or a report compiled to document site conditions.

- If multiple versions of image files are generated (e.g., high resolution and low resolution), arrange for proper storage and management of all versions of files for ready retrieval and safe storage.

5.2 FIELD NOTEBOOKS

Key field team personnel may maintain a separate dedicated field notebook to document the pertinent field activities conducted directly under their supervision. For example, on large projects with multiple investigative sites and varying operating conditions, the SSO may elect to maintain a separate field notebook. Where several drill rigs are in operation simultaneously, each Project Geologist/Sampler assigned to oversee a rig must maintain a field notebook.

5.3 FIELD FORMS

Field forms (see list in Section 6.0 of this SOP) can be found on the NUS Operating Unit intranet site under "Field Log Sheets." Forms may be altered or revised for project-specific needs, subject to client approval. Care must be taken to ensure that all essential information can be documented. Guidelines for completing these forms can be found in the related sampling SOPs.

5.3.1 Sample Collection, Labeling, Shipment, Request for Analysis, and Field Test Results

5.3.1.1 Sample Log Sheet

Sample log sheets are used to record specified types of data while sampling. The data recorded on these sheets are useful in describing the sample as well as pointing out any problems, difficulties, or irregularities encountered during sampling. Complete a sample log sheet for each sample obtained, including field quality assurance (QA) samples.

5.3.1.2 Sample Label

A typical sample label is illustrated in Attachment B. Complete the required information on the adhesive labels and apply them to every sample container. Obtain sample labels from the appropriate program/project source, request that they be electronically generated in house, or request them from the laboratory subcontractor.

CAUTION

Some labels (e.g., paper labels) may become soaked with water from melted ice or condensation during shipping. This soaking could render the labels illegible or cause them to fall off of their containers. Therefore, all paper labels and other labels subject to such deterioration should be covered with clear protective tape (e.g., packing tape) to keep them dry during shipment. Avoid wrinkles in the tape that could directly interfere with legibility of the label or allow contact with water. **Covering all hand-written sample container labels (paper or otherwise) with protective tape in this manner is an absolute requirement when collecting samples in support of United States Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) projects.**

5.3.1.3 Chain-of-Custody Record

The chain-of-custody record is a multi-part form that is initiated as samples are acquired and accompanies a sample (or group of samples) as they are transferred from person to person. This form must be used as follows for any samples collected for chemical or geotechnical analysis whether the analyses are performed on-site or off-site:

- Retain one carbonless copy of the completed chain-of-custody form in the field.
- Send one copy to the PM (or qualified designee).
- Send the original (top, signed copy) to the laboratory with the associated samples. Place the original chain-of-custody copy inside a large Ziploc®-type bag taped inside the lid of the shipping cooler. If

multiple coolers are sent, but are included on one chain-of-custody form, send the form with the cooler containing vials for volatile organic compounds (VOCs) analysis or the cooler with the air bill attached. Indicate on the air bill how many coolers are included with that shipment.

An example of a chain-of-custody form is provided as Attachment C. After the samples are received at the laboratory, the sample cooler and contents are checked and any problems are noted on the enclosed chain-of-custody form (any discrepancies between the sample labels and chain-of-custody form and any other problems that are noted are resolved through communication between the laboratory point-of-contact and the PM or qualified designee). The chain-of-custody form is signed and copied. The laboratory will retain the copy, and the original becomes part of the samples' corresponding analytical data package.

5.3.1.4 Custody Seal

Attachment D is an example of a custody seal. The custody seal is an adhesive-backed label that is part of a chain-of-custody process and is used to prevent tampering with samples after they have been collected in the field and sealed in coolers for transport to the laboratory. Sign and date custody seals and affix them across the lid and body of each cooler (front and back of opposite sides) containing environmental samples (see SOP SA-6.1). Obtain custody seals from the laboratory (if available) or purchase them from a supplier.

5.3.1.5 Geochemical Parameters Log Sheets

Complete Field Analytical Log Sheets to record geochemical and/or natural attenuation field test results.

5.3.2 Hydrogeological and Geotechnical Forms

5.3.2.1 Groundwater Level Measurement Sheet

Complete a Groundwater Level Measurement Sheet for each round of water level measurements made at a site.

5.3.2.2 Data Sheet for Pumping Test

During the performance of a pumping test (or an in-situ hydraulic conductivity test), a large amount of data must be recorded, often within a short time period. Use a Pumping Test Data Sheet to facilitate this task by standardizing the data collection format for the pumping well and observation wells, and allowing the time interval for collection to be established in advance.

5.3.2.3 Packer Test Report Form

Complete a Packer Test Report Form for each well at which a packer test is conducted.

5.3.2.4 Boring Log

Complete a Summary Log of Boring, or Boring Log for each soil boring performed to document the materials encountered, operation and driving of casing, and locations/depths of samples collected. In addition, if volatile organic vapors are monitored on cores, samples, cuttings from the borehole, or breathing zone, (using a photoionization detector [PID] or flame ionization detector [FID]), enter these readings on the boring log at the appropriate depth. When they become available, enter the laboratory sample number, concentrations of key contaminants, or other pertinent information in the "Remarks" column. This feature allows direct comparison of contaminant concentrations with soil characteristics.

5.3.2.5 Monitoring Well Construction Details Form

Complete a Monitoring Well Construction Details Form for every monitoring well, piezometer, or temporary well point installed. This form contains specific information on length and type of well riser pipe and screen, backfill, filter pack, annular seal and grout characteristics, and surface seal characteristics. This information is important in evaluating the performance of the monitoring well, particularly in areas where water levels show temporal variation or where there are multiple (immiscible) phases of contaminants. Depending on the type of monitoring well (in overburden or bedrock, stick-up or flush mount), different forms are used.

5.3.2.6 Test Pit Log

When a test pit or trench is constructed for investigative or sampling purposes, a Test Pit Log must be filled out by the responsible Project Geologist/Sampler.

5.3.2.7 Miscellaneous Monitoring Well Forms

Miscellaneous monitoring well forms that may be required on a project-specific basis include the Monitoring Well Materials Certificate of Conformance and Monitoring Well Development Record. Use a Monitoring Well Materials Certificate of Conformance to document all materials utilized during each monitoring well installation. Use a Monitoring Well Development Record to document all well development activities.

5.3.2.8 Miscellaneous Field Forms – Quality Assurance and Checklists

Miscellaneous field forms/checklists that may be required on a project-specific basis include the following:

- Container Sample and Inspection Sheet – use this form when a container (drum, tank, etc.) is sampled and/or inspected.
- QA Sample Log Sheet – use this form when a QA sample such as an equipment rinsate blank, source blank, etc. is collected.
- Field Task Modification Request (FTMR) – use this form to document deviations from the project planning document(s). The FOL is responsible for initiating the FTMRs. Maintain copies of all FTMRs with the on-site planning documents, and place originals in the final evidence file.
- Field Project Daily Activities Checklist and Field Project Pre-Mobilization Checklist – use these during both the planning and field effort to ensure that all necessary tasks are planned for and completed. These two forms are not requirements, but are useful tools for most field work.

5.3.3 Equipment Calibration and Maintenance Form

The calibration or standardization of monitoring, measuring, or test equipment is necessary to ensure the proper operation and response of the equipment, to document the accuracy, precision, or sensitivity of the measurements, and to determine if correction should be applied to the readings. Some items of equipment require frequent calibration, others infrequent. Some are calibrated by the manufacturer, others by the user.

Each instrument requiring calibration has its own Equipment Calibration Log, which documents that the manufacturer's instructions were followed for calibration of the equipment, including frequency and type of standard or calibration device. Maintain an Equipment Calibration Log for each electronic measuring device used in the field; make entries for each day the equipment is used or in accordance with manufacturer recommendations.

5.4 FIELD REPORTS

The primary means of recording on-site activities is the site logbook. Other field notebooks may also be maintained. These logbooks and notebooks (and supporting forms) contain detailed information required for data interpretation or documentation but are not easily used for tracking and reporting of progress. Furthermore, the field logbook/notebooks remain on site for extended periods of time and are thus not accessible for timely review by project management. Other reports useful for tracking and reporting the progress of field activities are described below.

5.4.1 Daily Activities Report

To provide timely oversight of on-site contractors, complete and submit Daily Activities Reports (DARs) as described below.

5.4.1.1 Description

The DAR documents the activities and progress for each day's field work. Complete this report on a daily basis whenever there are drilling, test pitting, well construction, or other related activities occurring that involve subcontractor personnel. These sheets summarize the work performed and form the basis of payment to subcontractors. The DAR form can be found on the NUS Operating Unit intranet site.

5.4.1.2 Responsibilities

It is the responsibility of the rig geologist to complete the DAR and obtain the driller's signature acknowledging that the times and quantities of material entered are correct.

5.4.1.3 Submittal and Approval

At the end of the shift, the rig geologist must submit the DAR to the FOL for review and filing. The DAR is not a formal report and thus requires no further approval. The DARs are retained by the FOL for use in preparing the site logbook and in preparing weekly status reports for submission to the PM.

5.4.2 Weekly Status Reports

To facilitate timely review by project management, photocopies of logbook/notebook entries may be made for internal use.

In addition to those described herein, other summary reports may also be contractually required.
Field forms can be found on the NUS Operating Unit intranet site.

6.0 LISTING OF FIELD FORMS ON THE NUS OPERATING UNIT INTRANET SITE

- Boring Log
- Container Sample and Inspection Sheet
- Daily Activities Checklist
- Daily Activities Record
- Equipment Calibration Log
- Field Task Modification Request Form
- Field Analytical Log Sheet - Geochemical Parameters
- Groundwater Level Measurement Sheet
- Groundwater Sample Log Sheet
- Hydraulic Conductivity Testing Data Sheet
- Low Flow Purge Data Sheet

- Bedrock Monitoring Well Construction (Stick Up)
- Bedrock Monitoring Well Construction (Flush Mount)
- Bedrock Monitoring Well Construction (Open Hole)
- Confining Layer Monitoring Well Construction
- Monitoring Well Development Record
- Monitoring Well Materials Certificate of Conformance
- Overburden Monitoring Well Construction (Flush Mount)
- Overburden Monitoring Well Construction (Stick Up)
- Packer Test Report Form
- Pumping Test Data Sheet
- QA Sample Log Sheet
- Soil & Sediment Sample Log Sheet
- Surface Water Sample Log Sheet
- Test Pit Log
- Field Project Pre-Mobilization Checklist

7.0 REFERENCES

USEPA, 2016.Sampler's Guide, Contract Laboratory Program Guidance for Filed Samplers, Office of Superfund Remediation and Technology Transfer, OSWER 9200.2-147, EPA-540-R-014-013, October.

ATTACHMENT A

TYPICAL SITE LOGBOOK ENTRY

START TIME: _____ DATE: _____

SITE LEADER: _____

PERSONNEL:

NUS	DRILLER	SITE VISITORS
_____	_____	_____
_____	_____	_____
_____	_____	_____

WEATHER: Clear, 68°F, 2-5 mph wind from SE

ACTIVITIES:

1. Steam jenney and fire hoses were set up.
2. Drilling activities at well ____ resumes. Rig geologist was _____. See Geologist's Notebook, No. 1, page 29-30, for details of drilling activity. Sample No. 123-21-S4 collected; see sample logbook, page 42. Drilling activities completed at 11:50 and a 4-inch stainless steel well installed. See Geologist's Notebook, No. 1, page 31, and well construction details for well _____.
3. Drilling rig No. 2 steam-cleaned at decontamination pit. Then set up at location of well _____.
4. Well _____ drilled. Rig geologist was _____. See Geologist's Notebook, No. 2, page ____ for details of drilling activities. Sample numbers 123-22-S1, 123-22-S2, and 123-22-S3 collected; see sample logbook, pages 43, 44, and 45.
5. Well _____ was developed. Seven 55-gallon drums were filled in the flushing stage. The well was then pumped using the pitcher pump for 1 hour. At the end of the hour, water pumped from well was "sand free."
6. EPA remedial project manager arrives on site at 14:25 hours.
7. Large dump truck arrives at 14:45 and is steam-cleaned. Backhoe and dump truck set up over test pit _____.
8. Test pit _____ dug with cuttings placed in dump truck. Rig geologist was _____. See Geologist's Notebook, No. 1, page 32, for details of test pit activities. Test pit subsequently filled. No samples taken for chemical analysis. Due to shallow groundwater table, filling in of test pit ___ resulted in a very soft and wet area. A mound was developed and the area roped off.
9. Express carrier picked up samples (see Sample Logbook, pages 42 through 45) at 17:50 hours. Site activities terminated at 18:22 hours. All personnel off site, gate locked.

_____

Field Operations Leader

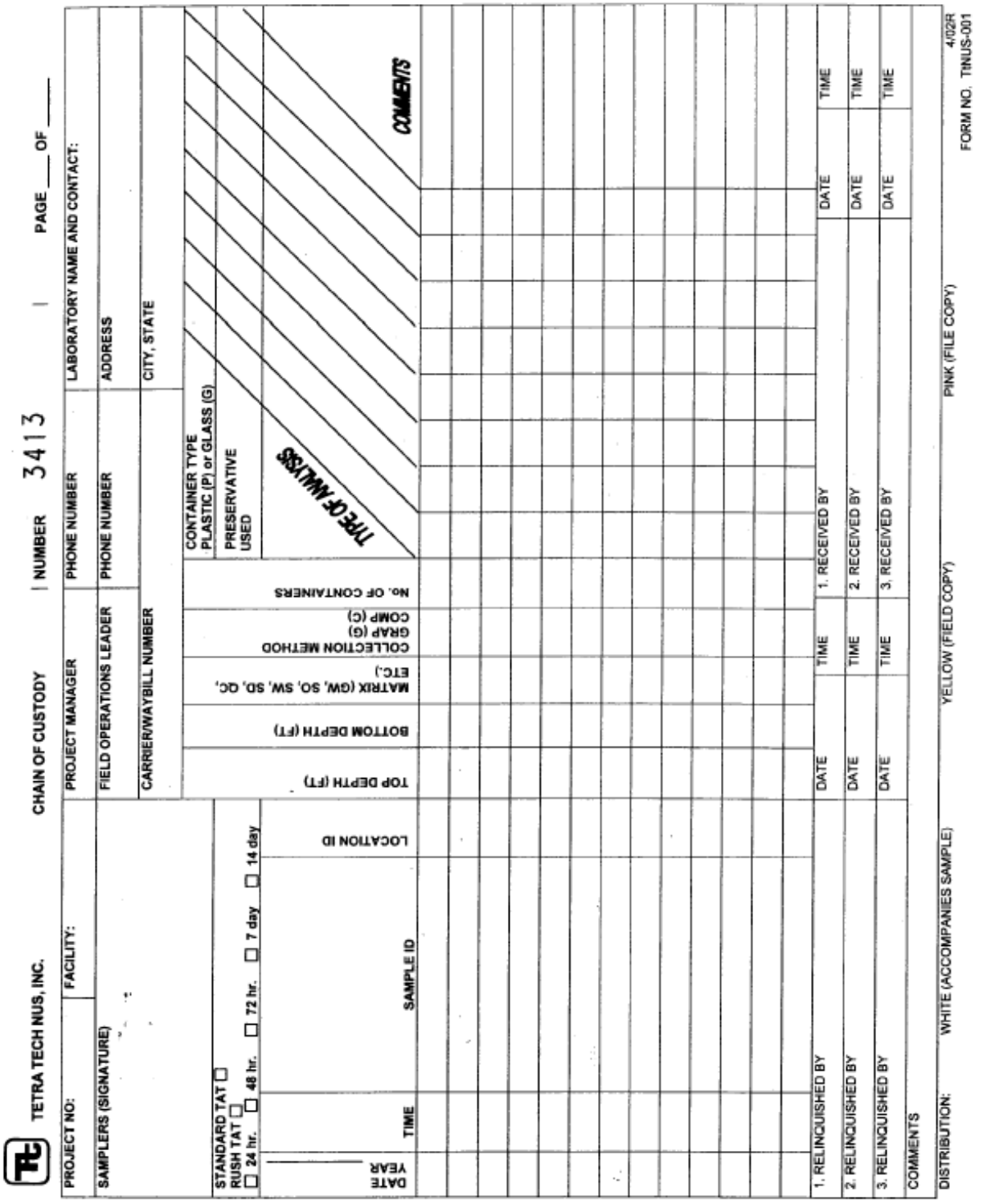
ATTACHMENT B

SAMPLE LABEL (EXAMPLE)

Tetra Tech NUS, Inc. 661 Andersen Drive Pittsburgh, 15220 (412)921-7090	**Project:** **Site:** **Location:**	
Sample No:		**Matrix:**
Date:	**Time:**	**Preserve:**
Analysis:		
Sampled by:	**Laboratory:**	

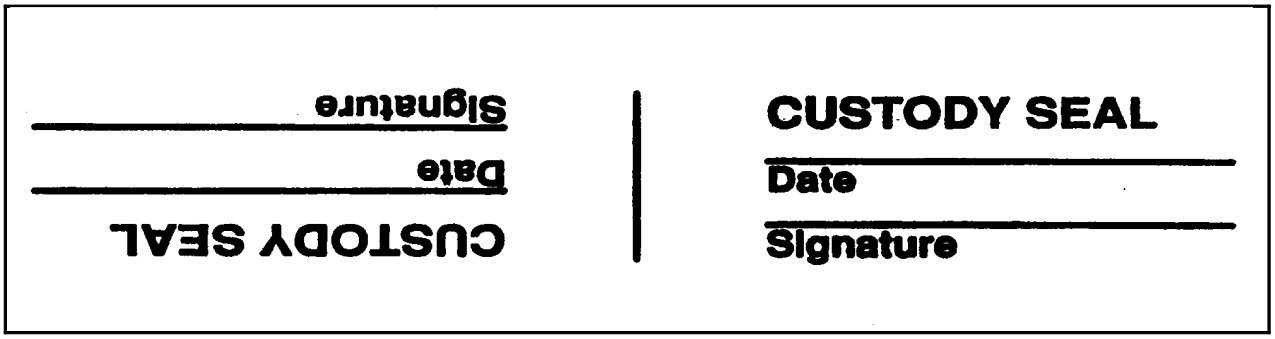
ATTACHMENT C

CHAIN-OF-CUSTODY FORM (EXAMPLE)



ATTACHMENT D

CHAIN-OF-CUSTODY SEAL (EXAMPLE)



TETRA TECH	STANDARD OPERATING PROCEDURE	Number SA-7.1	Page 1 of 17
		Effective Date 7/15/2016	Revision 8
		Applicability Tetra Tech, Inc., NUS Operating Unit	
		Prepared Earth Sciences Department	
Subject DECONTAMINATION OF FIELD EQUIPMENT AND MANAGEMENT OF INVESTIGATION DERIVED WASTE		Approved T. Johnston tom. johnston @tetratech.com Digitally signed by: tom. johnston@tetratech.com DN: CN = tom. johnston@tetratech.com Date: 2016.07.14 10:21:43 -05'00'	

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1.0 PURPOSE

Decontamination is the process of removing, or neutralizing contaminants that have contacted and/or accumulated on equipment and/or personnel. The purpose of this Standard Operating Procedure (SOP) is to protect site personnel, the general public, and the environment while preserving or maintaining sample integrity. It is further intended through this procedure to describe the steps necessary for proper decontamination to prevent either direct or indirect contamination of drilling equipment, earth-moving equipment, chemical sampling equipment, and analytical equipment. It is also intended through the application of these principles to prevent cross-contamination of the environment.

2.0 SCOPE AND APPLICABILITY

This procedure applies to all equipment used to provide access to/acquire environmental samples that may have become contaminated through direct contact with contaminated media including air, water, and soil. This equipment includes drilling and heavy equipment and chemical sampling and field analytical equipment. Where technologically and economically feasible, single-use sealed disposable equipment will be employed to minimize the potential for cross-contamination. This SOP also provides general reference information on the control of contaminated materials.

Decontamination methods and equipment requirements may differ from one project to another. General equipment items are specified in Section 6.0, but project-specific equipment must be obtained to address the project-specific decontamination procedures presented in Section 7.0 and applicable subsections.

3.0 GLOSSARY

Alconox/Liquinox - A brand of phosphate-free laboratory-grade detergent.

Chemical/Hygienic/Sanitizing wipes – These types of devices offer a portable solution when there are no sources of water and soap to allow hands, face, or equipment to be cleaned of gross contamination. Some of these wipes and solution based detergents are chemical specific such as D-Lead or D-Wipes are used to remove lead and other heavy metals from hands and face.

Decontamination Solution - A solution selected/identified in the Health and Safety Plan (HASP), Project-Specific Quality Assurance Project Plan (QAPP), or other governing document. The solution is selected and employed as directed by the project chemist/health and safety professional as it has been shown to be most effective in the removal, neutralization, and/or stabilization of the contaminants in question without creating unwanted byproducts.

Deionized Water (DI) – This is water that has been treated by passing it through a deionizing resin column. This water may also pass through additional filtering media to attain various levels of analyte-free status. The DI water should meet College of American Pathologists (CAP) and National Committee for Clinical Laboratory Standards (NCCLS) specifications for reagent-grade Type I water.

Dry decontamination – This method physically removes contaminates from the surface through the use of High Efficiency Particulate Filter vacuums employed for lead and asbestos operations.

Potable Water - Tap water from any municipal water treatment system. Use of an untreated potable water supply is not an acceptable substitute for tap water.

Pressure Washing - Process employing a high-pressure pump and nozzle configuration to create a high-pressure spray of potable water. High-pressure spray is employed to remove solids from the surface of equipment. This process can be coupled with wash solutions or used solely as a pressure washer to physically remove surface artifacts.

Solvent – A solvent is a liquid that is able to dissolve other substances, or solutes, (gases, liquids and/or solids) to form a solution. A solution is a homogeneous mixture of solvent and solute. Water is often referred to as a universal solvent because of its ability to dissolve many different types of substances. The category "solvent" includes but is not limited to pesticide-grade isopropanol; methanol; acetone; and hexane. These solvents may be required for particular projects or for a particular purpose (e.g., removal of concentrated waste) and must be justified in the project planning documents. For example, it may be necessary to use hexane when analyzing for trace levels of pesticides, polychlorinated biphenyls (PCBs), or fuels. In addition, because many of these solvents are not miscible in water, the equipment should be air dried prior to use. Solvents should not be used on polyvinyl chloride (PVC) equipment or well construction materials. Acidic and caustic materials may also serve as solutes and when mixed with water may be used for the purpose of decontamination.

Steam Pressure Washing - A cleaning method employing a high-pressure spray of heated potable water (steam) to remove various organic/inorganic chemicals from equipment. This method is useful for removing organic substances such as pesticides, PCBs, oils, and fuels.

4.0 RESPONSIBILITIES AND PERSONNEL QUALIFICATIONS

Project Manager (PM) - Responsible for ensuring that all field activities are conducted in accordance with approved project plan(s) requirements.

Decontamination Personnel - Individuals assigned the task of decontamination. It is the responsibility of these individuals to understand the use and application of the decontamination process, including:

- A working knowledge of the use of all equipment involved (pressure washers, steam cleaners, etc.).
- Hazards associated with the solutions used for this purpose.
- The monitoring of the decontamination process to ensure that it is working properly. This is accomplished through:
    - Visual evaluation (i.e., answering the question: "Does it appear to be clean?"),
    - Employing monitoring instruments and scanning of decontaminated items do determine if off-gassing indicates the presence of contaminants , and/or
    - Through the collection of equipment rinsate blanks to verify contaminant removal.
    - Focusing on tools that contact sampled media as well as areas on those tools that trap dirt and contaminated water.
    - Diligent use of PPE and self-decontamination to minimize the potential for cross contamination.
- Replace wash waters often to minimize the collection of contaminants.

Field Operations Leader (FOL) - Responsible for the implementation of project-specific planning documents. This includes on-site verification that all field activities are performed in compliance with approved SOPs or as otherwise dictated by the approved project plan(s). The FOL is also responsible for the completion and accuracy of all field documentation as well as assigning or evaluating the decontamination process. Additionally, through concurrence with the PM, the FOL may:

- Initiate site investigation/remediation efforts in the area where the least amount of contamination is reported thereby minimizing the potential for cross contamination.

- Use disposable devices to collect sample aliquots to minimize cross contamination that might otherwise occur through the use of reusable items.

Site Safety and Health Officer (SSHO) - Exercises shared responsibility with the FOL concerning decontamination effectiveness. All equipment arriving on site (as part of the equipment inspection), leaving the site, and moving between locations is required to go through a decontamination process and evaluation. This is accomplished through visual examination and/or instrument screening, where contaminants can be detected to determine the effectiveness of the decontamination process. Improper or incomplete decontamination is sufficient to restrict equipment from entering the site, exiting the site, or moving to a new location on the site until the objectives are successfully completed.

General personnel qualifications for decontamination activities include the following:

- Occupational Safety and Health Administration (OSHA) 40-hour General Site Worker and/or applicable 8-Hour General Site Worker Refresher training.

- Capability of performing field work under the expected physical (heavy lifting and moving auger flights and drill rods) and environmental (i.e., weather – heat and/or cold extremes) conditions.

- Familiarity with appropriate decontamination procedures. Throughout this SOP, the procedures remove gross contamination from top down, outside in, then moving to what may be described as “polishing stages” where solvents including laboratory grade isopropanol and deionized water are used to remove residual levels of contaminants.

5.0 HEALTH AND SAFETY

In addition to the health and safety issues and reminders specified in subsections of this SOP, the following considerations and requirements must be observed as SOPs for field equipment decontamination activities:

- If any solvents or hazardous chemicals (e.g., isopropyl alcohol) are to be used in equipment decontamination activities, the FOL must first obtain the manufacturer’s/supplier’s Safety Data Sheet (SDS) and assure that it is reviewed by all users (prior to its use), added to the site Hazardous Chemical Inventory, and maintained on site as part of the project Hazard Communication Program.

- Review and observe specific health and safety requirements (e.g., personal protective equipment [PPE]) specified in the project-specific HASP (or equivalent) for this activity.

6.0 EQUIPMENT LIST

- Wood for decontamination pad construction, when applicable (see Section 7.1).

- Tools for constructing decontamination pad frame, when applicable (see Section 7.1).

- Plastic sheeting or comparable material to cover decontamination pad frame, when applicable (see Section 7.1).

- Wash/drying racks for auger flights and drill/drive rods, when applicable (see Section 7.2).

- PPE as specified in the project HASP (or equivalent).

- Soap and water for physical washing and rinsing.

- Deionized water for final rinsing.
- Solvents (e.g., pesticide-grade isopropanol) for rinsing (see applicable portions of Section 7.2).
- Tubs, buckets, etc. for containerizing rinse water (see applicable portions of Section 7.2).
- Sample bottles for collecting equipment rinsate blanks (see Section 7.2).
- Calibrated photoionization detector (PID) or flame ionization detector (FID) to monitor decontaminated equipment for organic vapors generated through the existence of residual contamination or the presence of decontamination solvent remaining after the piece was rinsed.
- Aluminum foil or clear clean plastic bag for covering cleaned equipment (see applicable portions of Section 7.2).
- Paper towels or cloths for wiping.
- Brushes, scrapers, or other hand tools useful for removing solid materials from equipment.
- Clear plastic wrap for covering or wrapping large decontaminated equipment items (see Section 7.2.2).
- Drum-moving equipment for moving filled waste drums (optional) (see Section 7.3).
- Drum labels for waste drums (see Attachment A).

7.0 PROCEDURES

The process of decontamination is accomplished through the removal of contaminants or neutralization of contaminants. To accomplish this activity, preparation is required including site preparation, equipment selection, and evaluation of the decontamination requirements and processes. Site contaminant types, concentrations, and media types are primary drivers in the selection of the types of decontamination and where it will be conducted. For purposes of this SOP, discussion is limited to decontamination procedures for general environmental investigations.

Decontamination processes will be performed at the location(s) specified in project-specific planning documents. Typical decontamination locations include the following:

- Temporary decontamination pads/facilities
- Sample locations
- Centralized decontamination pad/facilities
- Combination of some or all of the above

The following discussion includes general considerations for the decontamination process. Specific construction and implementation procedures will be as specified in the project-specific planning documents and/or may be as dictated by site-specific conditions as long as the intent of the requirements in the planning documents is met. This intent is to contain any residual fluids and solids generated through the decontamination process.

7.1 Decontamination Pad Design/Construction Considerations

7.1.1 Temporary Decontamination Pads

Temporary decontamination pads may be constructed at satellite locations within the site area in support of temporary work areas. These structures are generally constructed to support the decontamination of heavy equipment such as drill rigs and earth-moving equipment but can be and are generally employed for smaller articles (auger flights, drill rods, split spoons, etc.).

The purpose of the decontamination pad is to contain wash waters and potentially contaminated soil generated during decontamination procedures. Therefore, construction of these pads should take into account the following considerations:

- Site location – Establish the decontamination site far enough from the work site to maximize decontamination effectiveness while minimizing travel distance. The location of the decontamination site shall be selected to provide, in the judgment of the FOL or his/her designee, compliance with as many of the following characteristics as practicable:

  - Away from pedestrian/vehicle thoroughfares.

  - Avoidance of areas where control/custody cannot be maintained.

  - Avoidance of areas where potential releases of contaminated media or decontamination fluids may be compounded through access to storm water transport systems, streams, or other potentially sensitive areas.

  - Avoidance of potentially contaminated areas.

  - Avoidance of areas too close to the ongoing operation, where cross-contamination may occur.

The selected decontamination site should include the following, where possible:

- Areas where potable water and electricity are provided.

> ***Safety Reminder***
>
> When utilizing electrical power sources, either hard-wired or portable-generated sources, ensure that:
>
> - All power is routed through a Ground Fault Circuit Interrupter (GFCI).
>
> - All power cords are in good condition (no physical damage), rated for the intended energy load, and designated for outdoor use.
>
> In situations where accomplishing these elements are not possible, it will be necessary to implement a site electrical grounding program.

- Areas where support activities such as removing decontamination waters, soil, and sediment are possible without entering an active exclusion zone.

- Areas that offer sufficient size to carry out the specific decontamination sequence.

- Decontamination pad (decon pad) – Construct the decontamination pad to meet the following characteristics:

  - Size – The size of the pad should be sufficient to accept the equipment to be decontaminated as well as permitting free movement around the equipment by the personnel conducting the decontamination. The size of the decontamination pad should permit these movements utilizing pressure/steam washer wands and hoses and minimizing splash due to work in close quarters.

  - Slope – An adequate slope should be constructed to permit the collection of water and potentially contaminated soil within a trough or sump constructed at one end. The collection point for wash waters should be of adequate distance that the decontamination workers do not have to walk through the wash waters while completing their tasks. Because the pad will be sloped, place a light coating of sand over the plastic to minimize potential slips and falls. See the text about liners below. When preparing the pad, remove sticks, roots, stones, and debris that could puncture the liner. The area should be lightly graded and possibly covered with sand to minimize the possibility of puncture.

  - Sidewalls – The sidewalls shall be at least 6 inches in height (or as high as possible if 6 inches is not achievable) to provide adequate containment for wash waters and soil. If splash represents a potential problem, splash guards should be constructed to control overspray. Sidewalls may be constructed of wood, inflatables, sand bags, etc. to permit containment. Splash guards are typically wood frames with plastic sheeting to control overspray.

  - Liner – Depending on the types of equipment and decontamination method to be used, the liner should be of sufficient thickness to provide a puncture-resistant barrier between the decontamination operation and the unprotected environment. Care should be taken to examine the surface area prior to placing the liner to remove sharp articles (sticks, stones, debris) that could puncture the liner. Liners are intended to form an impermeable barrier. The thickness may vary from a minimum recommended thickness of 10 mil to 30 mil. The desired thickness may be achieved through layering materials of lighter construction. It should be noted that various materials (rubber, polyethylene sheeting) become slippery when wet. To minimize this potential hazard associated with a sloped liner, a light coating of sand shall be applied to provide traction as necessary.

  - Wash/drying racks – Auger flights, drill/drive rods, and similar equipment require racks positioned off of the ground to permit these articles to be washed, drained, and dried while secured from falling during this process.

For decontamination of direct-push technology (DPT) equipment, the pad may be as simple as a mortar tub containing buckets of soapy water for washing and an empty bucket to capture rinse waters. Decontamination may be conducted at the rear of the rig to permit rapid tool exchange, because dual tube or Macro-Core Samplers and drive rods require little space for decontamination

- Maintenance – Maintain the decontamination area by:

  - Periodically clearing the work area of standing water, soil, and debris, and coiling hoses to aid in eliminating slip, trip, and fall hazards. In addition, these articles will reduce potential backsplash and cross-contamination.

  - Regularly changing the decontamination fluids to ensure proper cleaning and prevent cross-contamination.

  - PPE – Periodically evaluate the condition of, and maintain the decontamination equipment, including regular cleaning of face shields and safety glasses. This is critical to ensuring the safety

of decontamination personnel and the integrity of the decontamination process, and it will ensure that equipment is functioning properly.

7.1.2 Decontamination Activities at Drill Rigs/DPT Units

7.1.2.1 During subsurface sampling activities including drilling and DPT activities, conduct decontamination of drive rods, Macro Core Samplers, split spoons, etc. at an area adjacent to the operation. Decontamination is generally accomplished using a soap/water wash and rinse utilizing buckets and brushes. This area requires sufficient preparation to accomplish the decontamination objectives.

7.1.2.2 Place buckets within mortar tubs or similar secondary containment tubs to prevent splash and spills from reaching unprotected environmental media.

7.1.2.3 Use drying racks where possible to permit parts to dry and be evaluated prior to use/reuse. Methodology regarding this activity is provided in Section 7.2.

7.1.3 Decontamination Activities at Remote Sample Locations

7.1.3.1 When sampling at remote locations, evacuate sampling equipment such as trowels and pumps/tubing of potentially contaminated media to the extent possible.

7.1.3.2 Wrap this equipment in plastic for transport to the temporary/centralized decontamination location for final cleaning and disposition.

7.1.3.3 Flush and clean single-use equipment such as disposable trowels, tubing, and surgeon's gloves to allow disposal of this equipment after visible soil and water remnants have been removed.

7.2 Equipment Decontamination Procedures

The following represents procedures to be employed for the decontamination of equipment that may have contacted and/or accumulated contamination through site investigation activities.

7.2.1 Monitoring Well Sampling Equipment

7.2.1.1 Groundwater sampling equipment – This includes pumps inserted into monitoring wells such as bladder pumps, Whale pumps, and Redi-Flo pumps and reusable bailers, etc.

1. Evacuate to the extent possible, any purge water within the pump/bailer.

2. Scrub the external components using soap and water and/or steam clean* the outside of the pump/bailer and, if applicable, the pump tubing.

3. Insert the pump and tubing/bailer into a clean container of soapy water. Pump/run a sufficient amount of soapy water through the pump/bailer to flush out any residual well water. After the pump is flushed, circulate soapy water through the pump to ensure that the internal components are thoroughly flushed.

4. Remove the pump and tubing/bailer from the container.

5. Rinse external pump components using tap water.

6. Insert the pump and tubing/bailer into a clean container of tap water. Pump/run a sufficient amount of tap water through the pump/bailer to evacuate all of the soapy water (until clear).

CAUTION

Do not rinse polyethylene (PE), PVC, and associated tubing with solvents – These are considered single use items and can be removed and disposed of after use. Use the procedures defined in the project-specific planning documents. If they are not defined, contact the FOL for guidance. The solvent rinse described in Step 7 should be omitted and tubing or plastic components replaced.

7. If groundwater contains or is suspected to contain oil, grease, PAHs, PCBs, or other hard to remove organic materials, rinse the equipment to be cleaned with pesticide-grade isopropanol. If groundwater contains these contaminants employ single use sampling apparatus that can be wash, rinsed, and disposed of after use.

8. Pass deionized water through the hose to flush out the tap water and solvent residue as applicable.

9. Drain residual deionized water to the extent possible.

10. Allow components of the equipment to air dry.

11. For bladder pumps, disassemble the pump and wash the internal components with soap and water, then rinse with tap water, isopropanol, and deionized water and allow to dry. After the parts are dry, conduct a visual inspection and a monitoring instrument scan to ensure that potential contaminants and all decontamination solvent have been removed. Collect an equipment rinsate blank in accordance with the project-specific planning documents to ensure that the decontamination process is functioning as intended. The typical frequency of collection for equipment rinsate blanks is 1 per 20 field samples. In addition, wipe samples or field tests such as ultraviolet light may be used.

12. Wrap pump/bailer in aluminum foil or a clear clean plastic bag for storage.

SAFETY REMINDER

Remember when handling powered equipment to disconnect the power source and render the equipment to a zero energy state (both potential and kinetic) before opening valves, disconnecting lines, etc.

7.2.1.2 Electronic Water Level Indicators/Sounders/Tapes

During water level measurements, rinsing the extracted tape and probe with deionized water and wiping the surface of the extracted tape between locations is acceptable. However, periodic full decontamination should be conducted as follows:

1. Wash with soap and water
2. Rinse with tap water
3. Rinse with deionized water

NOTE

In situations where oil, grease, free product, other hard to remove materials are encountered, probes and exposed tapes should be washed in hot soapy water. If probes or tapes cannot be satisfactorily decontaminated (they are still stained, discolored, etc.), they should be removed from service.

7.2.1.3 Miscellaneous Equipment

Miscellaneous equipment including analytical equipment (water quality testing equipment) shall be cleaned per manufacturers' instructions. This generally includes wiping the sensor housing and rinsing with tap and deionized water.

Coolers/shipping containers employed to ship samples are received from the laboratory in a variety of conditions including marginal to extremely poor. Coolers shall be evaluated prior to use for the following:

- Structural integrity – Coolers missing handles or having breaks in the outer housing should be removed and not used. Notify the laboratory that the risk of shipping samples in the cooler(s) provided is too great and request a replacement unit.

- Cleanliness – As per protocol, only volatile organic samples are accompanied by a trip blank. If a cooler's cleanliness is in question (visibly dirty/stained) or if there are noticeable odors, the cooler should be decontaminated prior to use as follows:

    1. Wash with soap and water
    2. Rinse with tap water
    3. Dry

If these measures fail to clean the cooler to an acceptable level, remove the unit from use as a shipping container and ask the cooler provider (e.g., the analytical laboratory) to provide a replacement unit.

7.2.2 Downhole Drilling Equipment

This includes any portion of the drill rig that is over the borehole, including auger flights, drill stems, rods, and associated tooling that would extend over the borehole. The following procedure is to be employed prior to initiating the drilling/sampling activity, then between locations:

CAUTION

Exercise care when using scrapers to remove soil and debris from downhole drilling equipment. Inadvertent slips of scrapers have resulted in cuts, scrapes, and injured knuckles, so use scrapers carefully when removing soil from these items.

1. Remove loose soil using shovels, scrapers, etc.

2. Through a combination of scrubbing using soap and water and/or steam cleaning or pressure washing, remove visible dirt/soil from the equipment being decontaminated.

CAUTION

In Step 3, do not rinse PE, PVC, and associated tubing with solvents. The appropriate procedures should be defined within the project-specific planning documents. If they are not defined, contact the FOL for guidance. The solvent rinse described in Step 4 may be omitted if groundwater does not contain oil, grease, PAHs, PCBs, or other hard to remove organic materials.

3. Rinse the equipment with tap water, where applicable (steam cleaning and pressure washing incorporate rinsing as part of the process).

4. If the equipment has directly or indirectly contacted contaminated sample media and is known or suspected of being contaminated with oil, grease, PAHs, PCBs, or other hard to remove organic materials, rinse equipment with pesticide-grade isopropanol

   ☞***Note:*** *Steam cleaning does the best job removing contaminants especially the more volatile components. Not only is the water pressure sufficient to remove caked on soils, the heat associated with the steam is very effective in removing contaminants (even those more stubborn ones such as PAHs and PCBs). Steam cleaning units, however, are more dangerous to use due to pressurized steam and water. Care must be taken to avoid thermal burns by ensuring all guards are in place and gloves are employed. When using steam, the items that have been washed dry relatively quickly because heated water and steam are applied.*

5. To the extent possible, allow components to air dry.

6. If the decontaminated equipment is to be used immediately after decontamination, screen it with a calibrated photoionization detector (PID)/flame ionization detector (FID) to ensure that all contaminants and possible decontamination solvents (if they were used) have been adequately removed.

7. Wrap or cover equipment in clear plastic until it is time to be used.

SAFETY REMINDER

Even when equipment is disconnected from power sources, dangers such as the following may persist:

Falls - An auger flight standing on its end may fall and injure someone. Secure all loose articles to prevent heavy articles from falling onto people or equipment.

Burns - Steam cleaner water is heated to more than 212 ˚F and exhibits thermal energy that can cause burns. Prevent contact of skin with hot water or surfaces.

High water pressure - Pressure washer discharge can have 2,000 to 4,000 psi of water pressure. Water under this amount of pressure can rupture skin and other human tissues. Water at 4,000 psi exiting a 0˚ tip can be dangerous because of its relatively high cutting power. The exit velocity and cutting power of the water are reduced when exiting a 15-25˚ fan tip, but damage to soft tissues is still possible.

In general, follow the rules below to avoid injury, equipment damage, or incomplete decontamination:

1. Read the operating manual and follow the manufacturers' recommended safety practices before operating pressure washers and steam cleaners.

2. Never point the pressure washer or steam cleaner at another person or use to clean your boots or other parts of your body. Water lacerations and burns may appear to be minor at first but can be life threatening. Do not attempt to hold small parts in your hand while washing them with high- temperature or high-pressure water.

3. Always wear PPE as specified in the HASP (or equivalent) such as:

   - Hard hat, safety glasses, splash shield, impermeable apron or splash suit, and hearing protection. Remember that excessive noise is a hazard when operating gas-powered engines and electrically driven pressure washers. PPE will be identified in your project specific planning documents.

4. Inspect each device before use. An inspection checklist will be provided in the project-specific planning documents. If it is a rented device, safety measures are typically provided by the vendor. In all cases, if you are not familiar with the operation of a pressure washer/steam cleaner, do not operate it until you obtain and thoroughly review operating instructions and recommended safety practices.

5. Do not modify equipment unless the manufacturer has approved the modifications.

7.2.3 Soil/Sediment Sampling Equipment

This section applies to soil sampling equipment including but not limited to hand augers, stainless steel trowels/spoons, bowls, dredges, scoops, split spoons, Macro Core samplers, etc.

1. Remove all loose soil from the equipment through manual means.

2. Through a combination of scrubbing using soap and water and/or steam cleaning or pressure washing, remove visible dirt/soil from the equipment.

3. Rinse the equipment with tap water.

4. If the equipment is contaminated or suspected to be contaminated with oil, grease, PAHs, PCBs, or other hard to remove organic materials, rinse the equipment with pesticide-grade isopropanol followed by steam cleaning. Where cleanliness is considered suspect, dispose and replace the suspect item.

5. Rinse the equipment with deionized water.

6. To the extent possible, allow components to air dry.

7. If the equipment is to be used immediately after decontamination, screen it with a calibrated PID/FID to ensure that all solvents (if they were used) and trace contaminants have been adequately removed.

8. After the equipment has dried, wrap it in aluminum foil for storage until use.

Dredges employed in sediment sampling are typically decontaminated as follows:

- Remove the sediment sample from the sampling device. If sufficient surface water exists remove visible sediments by dunking within the water from where the sediment sample was obtained. Because of this always work from downstream to upstream

- Extract the dredge and wash it in soap and water per the project-specific planning documents.

CAUTION

When handling dredges, the primary safety concern is trapping fingers or extremities in the larger dredge samplers within the jaws or pinch points of the mechanical jaws. Keep hands, fingers, and extremities away from these pinch and compression points. Either handle the device by the rope or preferably lock the jaws in place to control the potential for closing during maintenance and/or cleaning.

☞***Note:*** *In all cases when cleaning stainless steel sampling equipment minimize if not eliminate the use of acids as this will leach certain metals (e.g., chromium, nickel, iron, and antimony) and may result in sample contamination. Use soap and water wash and rinse and, where necessary, steam clean to remove stubborn contaminants.*

7.3 Contact Waste/Materials

During the course of field investigations, disposable/single-use equipment becomes contaminated. These items include tubing, trowels, PPE (gloves, overboots, splash suits, etc.), and broken sample containers.

With the exception of the broken glass, single-use articles should be cleaned (washed and rinsed) of visible materials and disposed as normal refuse. The exception to this rule is that extremely soiled materials that cannot be cleaned shall be containerized for disposal in accordance with project planning documents.

NOTE

Requirements for waste storage may differ from one facility to the next. Facility-specific directions for waste storage areas will be provided in project-specific documents, or separate direction will be provided by the Project Manager.

1. Assume that all investigation-derived waste (IDW) generated from decontamination activities contains the hazardous chemicals associated with the site unless there are analytical or other data to the contrary. Waste solution volumes could vary from a few gallons to several hundred gallons in cases where large equipment required cleaning.

2. Where possible, use filtering systems to extend the use of water within a closed system wash unit to recycle water and to reduce possible waste amounts.

NOTE

Containerized waste rinse solutions are best stored in 55-gallon drums (or equivalent containers); frac tanks, or tankers that can be sealed until ultimate disposal at an approved facility.

3. Properly label waste storage containers (see Attachment A).

4. Ensure that the IDW storage area is configured to meet the following specifications to permit access to the containers and to conduct spill/leak monitoring, sampling, and extraction when the disposal route is determined:

- Enclose areas accessible by the general public using construction fencing and signs.
- Store materials in 55-gallon drums on pallets with four (or fewer) drums per pallet.
- Maintain the retaining bolt and label on the outside of storage containers where readily visible.

- Provide at least 4 feet of room between each row of pallets to allow access to containers for sampling, drum removal, and spill response.

- As directed in project-specific planning documents, maintain an IDW Inventory List and provide the list to the site Point of Contact at the termination of each shift.

- Maintain spill response equipment at the IDW storage area in case it is required for immediate access.

- Where possible, use equipment for moving containers. Where not possible, obtain help to manipulate containers.

-

CAUTION

Each container of water can weigh up to 490 pounds. Each 55-gallon drum of wet soil can weigh more than 750 pounds. These heavy objects may constitute a safety hazard. To minimize hazards such as this, limit the filling of drums and temporary containers to 80 percent capacity to minimize spill and handling difficulties, and to allow for expansion caused by freezing. Use powered equipment as the preferred method for moving staging and disposal of IDW. Where this is not possible, use drum carts to move partially filled drums.

Where drums have to be manually handled:
Get help
Secure the drum to the cart
Clear the pathway to the staging area.
Employ safe lifting techniques.
Consult the Project Planning Documents, most importantly, the Activity Hazard Analysis for additional direction.
.

When placing drums, keep your fingers out of pinch and smash points such as between the drums. In some cases such as well development and/or purge water, you can place the drums to be filled on the pallet and transport materials in smaller easier to handle containers.

Airborne Contaminant Exposure
To minimize potential airborne contaminant exposure close and seal all containers transported them inside the sampling support vehicle.
Periodically decontaminate temporary portable containers to minimize off-gassing inside the vehicle. When working at the well or storage container always work from an upwind position.

7.4 Decontamination Evaluation

Upon decontamination of equipment, determine the effectiveness of the decontamination process in the following manner:

- Visual evaluation – A visual evaluation will be conducted to ensure the removal of particulate matter. This shall be done to ensure that the washing/rinsing process is working as intended. Pay particular attention to points where soils and sediments may become trapped including threads cutting shoes to

body, etc. It is often necessary to combine these types of decontamination methods to ensure the adequacy is sufficient to pass chemical rinsate.

- Instrument Screening – A properly calibrated PID/FID should be used to evaluate the presence of site contaminants and solvents used in the cleaning process. The air intake of the instrument shall be passed over the article to be evaluated. Avoid placing the instrument probe into residual waters. A PID/FID reading greater than the daily established background level requires a repeat of the decontamination process, followed by rescreening with the PID/FID. This sequence must be repeated until no instrument readings greater than the daily established background level are observed. It should be noted that the instrument scan is only viable if the contaminants are detectable within the instrument's capabilities.

> ***NOTE***
> When required by project-specific planning documents, collection of equipment rinsate blanks (see next step) shall be completed without exception unless approval to not collect these samples is obtained from the Project Manager.

- Collection of Equipment Rinsate Blanks – It is recommended that equipment rinsate blank samples be collected to:

  - Evaluate the decontamination procedure representing different equipment applications (pumps versus drilling equipment) and different decontamination applications.

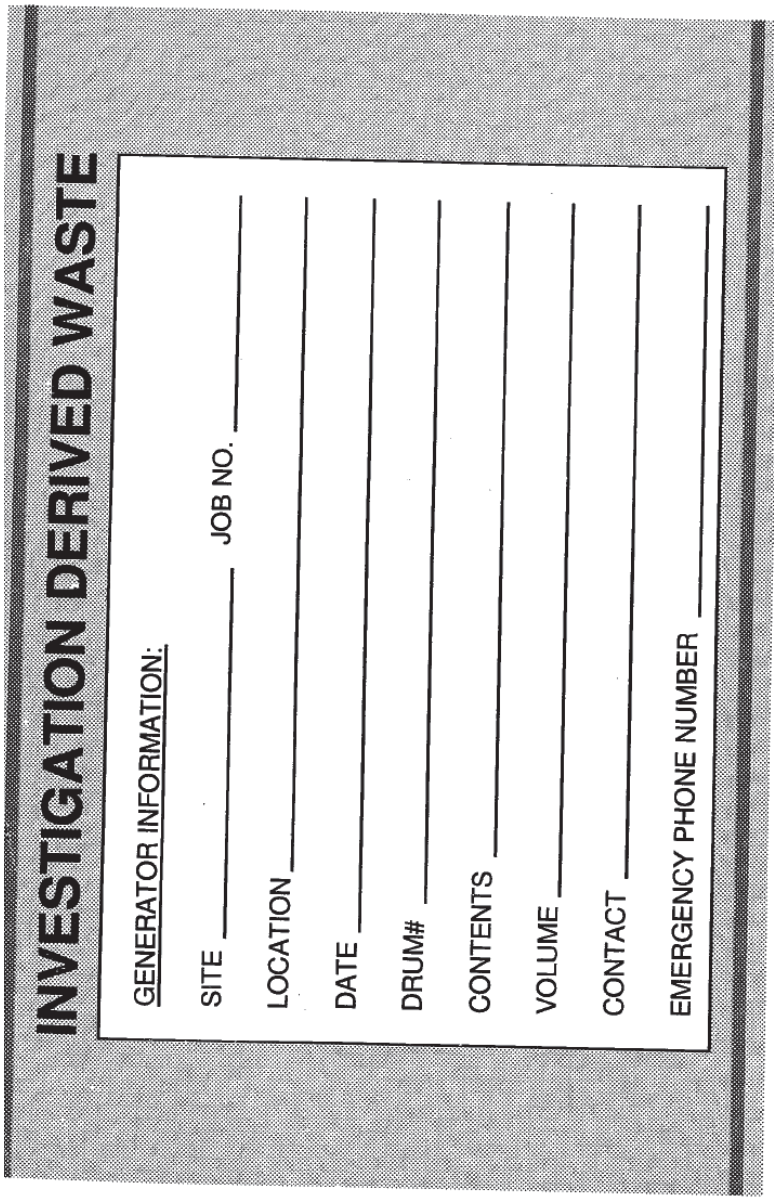
  - Single-use disposable equipment – The number of samples should represent different types of equipment as well as different lot numbers of single-use articles.

  - The collection and the frequency of equipment rinsate blank samples are as follows unless specified differently in the project-specific planning documents:
    - Per decontamination method.
    - Per disposable article/batch number of disposable articles

> ***NOTE***
> It is recommended that an initial equipment rinsate blank sample be collected early in the project to ensure that the decontamination process is functioning properly and to avoid using a contaminated batch of single-use articles. It is recommended that a follow-up sample be collected later during the execution of the project to ensure that those conditions do not change.
>
> Equipment rinsate blank sample collection may be driven by types of and/or levels of contaminant. Difficult to remove contaminants, oils/greases, some PAHs/PCBs, etc. may also support the collection of additional equipment rinsate blank samples due to the obvious challenges to the decontamination process. This is a field consideration to be determined by the FOL supporting and/or resigning not to collect.

ATTACHMENT A

IDW LABEL (EXAMPLE)



ATTACHMENT B, INVESTIGATIVE DERIVED WASTE DRUM/CONTAINER INVENTORY LOG (EXAMPLE)

This attachment should be completed as investigative derived waste is accumulated. An updated inventory should be provided to the site Point of Contact at the end of each 10-day shift. Add additional rows on extra pages, as needed.

Drum/ Container Number #	Drum/ Container Type	Media (Contents)	Location (SWMU and Well #, etc.)	Estimated Volume	Date Filed	Comments
1				( )-Gallons		
2				( )-Gallons		
3				( )-Gallons		
4				( )-Gallons		

Emergency Point of Contact: _____ Phone Number: _____

(Name of Facility) Point of Contact: _____ Phone Number: ( ) _____

Information Point of Contact (Name): _____ Phone Number: _____

Distribution of Inventory Log: Facility Point of Contact, Phone Number: ( ) _____

Fire Dept/Emergency Services Provider, Phone Number: ( ) _____

Comments: _____

APPENDIX D

LABORATORY ACCREDITATION DOCUMENTATION AND IN-HOUSE QC LIMITS

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Battelle PFAS Control Limits
Non-Potable Water

Analyte	CAS No.	Lower	Upper
PFBA	375-22-4	61	139
PFPeA	2706-90-3	64	134
PFHxA	307-24-4	51	137
PFHpA	375-85-9	48	136
PFOA	335-67-1	49	141
PFNA	375-95-1	58	122
PFDA	335-76-2	59	135
PFUnA	2058-94-8	64	134
PFDoA	307-55-1	75	131
PFTrDA	72629-94-8	42	148
PFTeDA	376-06-7	42	158
NMeFOSAA	2355-31-9	50	146
NEtFOSAA	2991-50-6	51	131
PFOSA	754-91-6	70	130
PFBS	375-73-5	56	134
PFPeS	2706-91-4	70	130
PFHxS	355-46-4	52	128
PFHpS	375-92-8	52	128
PFOS	1763-23-1	40	144
PFNS	98789-57-2	70	130
PFDS	2806-15-7	66	122
4:2FTS	414911-30-1	60	138
6:2FTS	27619-97-2	62	142
8:2FTS	39108-34-4	68	146
HFPO-DA	13252-13-6	70	130
Adona	919005-14-4	70	130
11Cl-PF3OUdS	763051-92-9	70	130
9Cl-PF3ONS	756426-58-1	70	130

Battelle PFAS Control Limits
Solid Matrix

Analyte	CAS No.	Lower	Upper
PFBA	375-22-4	53	125
PFPeA	2706-90-3	50	138
PFHxA	307-24-4	45	135
PFHpA	375-85-9	60	128
PFOA	335-67-1	56	136
PFNA	375-95-1	54	130
PFDA	335-76-2	55	141
PFUnA	2058-94-8	57	137
PFDoA	307-55-1	62	134
PFTrDA	72629-94-8	51	127
PFTeDA	376-06-7	34	162
NMeFOSAA	2355-31-9	52	146
NEtFOSAA	2991-50-6	54	124
PFOSA	754-91-6	70	130
PFBS	375-73-5	57	145
PFPeS	2706-91-4	70	130
PFHxS	355-46-4	52	132
PFHpS	375-92-8	46	142
PFOS	1763-23-1	50	130
PFNS	98789-57-2	70	130
PFDS	2806-15-7	51	139
4:2FTS	414911-30-1	49	157
6:2FTS	27619-97-2	64	150
8:2FTS	39108-34-4	49	149
3:3 FTCA	356-02-5	70	130
5:3 FTCA	914637-49-3	70	130
7:3 FTCA	812-70-4	70	130
HFPO-DA	13252-13-6	70	130
Adona	919005-14-4	70	130
11Cl-PF3OUdS	763051-92-9	70	130
9Cl-PF3ONS	756426-58-1	70	130

PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc. has assessed the Laboratory of:

Battelle

141 Longwater Drive, Suite 202, Norwell, MA 02061

(Hereinafter called the Organization) and hereby declares that Organization has met the requirements of ISO/IEC 17025:2005 "General Requirements for the competence of Testing and Calibration Laboratories" and the DoD Quality Systems Manual for Environmental Laboratories Version 5.1.1 February 2018 and is accredited is accordance with the:

United States Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP)

This accreditation demonstrates technical competence for the defined scope:

Environmental Testing

(As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

Tracy Szerszen
President/Operations Manager

Initial Accreditation Date:	*Issue Date:*	*Expiration Date:*
November 17, 2016	December 20, 2018	February 28, 2021
Revision Date:	*Accreditation No.:*	*Certificate No.:*
March 27, 2019	91667	L18-588-R2

Perry Johnson Laboratory Accreditation, Inc. (PJLA)
755 W. Big Beaver, Suite 1325
Troy, Michigan 48084

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: www.pjlabs.com

Certificate of Accreditation: Supplement

ISO/IEC 17025:2005 and DoD-ELAP

Battelle

141 Longwater Drive, Suite 202, Norwell, MA 02061

Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Drinking Water	EPA 537.1	LC/MS/MS	4,8-dioxa-3H-perfluorononanoic acid (ADONA)
Drinking Water	EPA 537.1	LC/MS/MS	9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)
Drinking Water	EPA 537.1	LC/MS/MS	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)
Drinking Water	EPA 537.1	LC/MS/MS	Hexafluoropropylene oxide dimer acid (HFPO-DA)
Drinking Water	EPA 537.1	LC/MS/MS	Perfluoro-n-hexanoic acid (PFHxA)
Drinking Water	EPA 537.1	LC/MS/MS	Perfluoro-n-heptanoic Acid (PFHpA)
Drinking Water	EPA 537.1	LC/MS/MS	Perfluoro-n-octanoic Acid (PFOA)
Drinking Water	EPA 537.1	LC/MS/MS	Perfluorononanoic acid (PFNA)
Drinking Water	EPA 537.1	LC/MS/MS	Perfluoro-n-decanoic Acid (PFDA)
Drinking Water	EPA 537.1	LC/MS/MS	Perfluoro-n-undecanoic acid (PFUnA)
Drinking Water	EPA 537.1	LC/MS/MS	Perfluoro-n-dodecanoic acid (PFDoA)
Drinking Water	EPA 537.1	LC/MS/MS	Perfluoro-n-tridecanoic acid (PFTrDA)
Drinking Water	EPA 537.1	LC/MS/MS	Perfluoro-n-tetradecanoic acid (PFTeDA)
Drinking Water	EPA 537.1	LC/MS/MS	N-methylperfluoro-1-octanesulfonamidoacetic acid (NMeFOSAA)
Drinking Water	EPA 537.1	LC/MS/MS	N-ethylperfluoro-octanesulfonamidoacetic acid (NEtFOSAA)
Drinking Water	EPA 537.1	LC/MS/MS	Perfluoro-1-butanesulfonic Acid (PFBS)
Drinking Water	EPA 537.1	LC/MS/MS	Perfluoro-1-hexanesulfonic Acid (PFHxS)
Drinking Water	EPA 537.1	LC/MS/MS	Perfluoro-1-octanesulphonic Acid (PFOS)
Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	3-Perfluoropropyl propanoic Acid (3:3 FTCA)
Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	3-Perfluoropropyl propanoic acid (5:3 FTCA)
Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	3-Perfluoropropyl propanoic acid (7:3 FTCA)
Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	Perfluoro-1-octanesulfonamide (PFOSA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	4,8-dioxa-3H-perfluorononanoic acid (Adona)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9CI-PF3ONS)

Certificate of Accreditation: Supplement

ISO/IEC 17025:2005 and DoD-ELAP

Battelle

141 Longwater Drive, Suite 202, Norwell, MA 02061

Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	Hexafluoropropylene oxide dimer acid (HFPO-DA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	Sodium perfluoro-1-pentanesulfonate (PFPeS)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	Perfluoro-1-nonanesulfonate (PFNS)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	Perfluoro-1-heptanesulfonate (PFHpS)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	N-ethylperfluoro-octanesulfonamidoacetic acid (NEtFOSAA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	1H,1H,2H,2H-Perfluorohexane sulfonate (4:2FTS)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	1H,1H,2H,2H-Perfluorooctane sulfonate (6:2FTS)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	1H,1H,2H,2H-Perfluorodecane sulfonate (8:2FTS)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	Perfluoro-n-butanoic Acid (PFBA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	Perfluoro-n-pentanoic acid (PFPeA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	Perfluoro-n-hexanoic acid (PFHxA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	Perfluoro-n-heptanoic Acid (PFHpA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	Perfluoro-n-octanoic Acid (PFOA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	Perfluorononanoic acid (PFNA)

Certificate of Accreditation: Supplement

ISO/IEC 17025:2005 and DoD-ELAP

Battelle

141 Longwater Drive, Suite 202, Norwell, MA 02061
Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	Perfluoro-n-decanoic Acid (PFDA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	Perfluoro-n-undecanoic acid (PFUnA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	Perfluoro-n-dodecanoic acid (PFDoA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	Perfluoro-n-tridecanoic acid (PFTrDA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	Perfluoro-n-tetradecanoic acid (PFTeDA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	N-methylperfluoro-1-octanesulfonamidoacetic acid (NMeFOSAA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	Perfluoro-1-butanesulfonic Acid (PFBS)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	Perfluoro-1-hexanesulfonic Acid (PFHxS)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	Perfluoro-1-octanesulphonic Acid (PFOS)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.1 Table B-15	LC/MS/MS	Perfluoro-1-decanesulfonate (PFDS)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',3,3',4,4'-Hexachlorobiphenyl (BZ 128)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',3,3',4,5-Hexachlorobiphenyl (BZ 129)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',3,4,4',5,5'-Heptachlorobiphenyl (BZ 180)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',3,4,4',5',6-Heptachlorobiphenyl (BZ 183)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',3,4,4',5'-Hexachlorobiphenyl (BZ 138)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',3,4,4',6,6'-Heptachlorobiphen yl (BZ 184)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ 187)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',3,4,5'-Pentachlorobiphenyl (BZ 87)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',3,5'-Tetrachlorobiphenyl (BZ 44)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',4,4',5,5'-Hexachlorobiphenyl (BZ 153)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',4,5,5'-Pentachlorobiphenyl (BZ 101)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',4,5'-Tetrachlorobiphenyl (BZ 49)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',5,5'-Tetrachlorobiphenyl (BZ 52)

Certificate of Accreditation: Supplement

ISO/IEC 17025:2005 and DoD-ELAP

Battelle

141 Longwater Drive, Suite 202, Norwell, MA 02061
Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',5-Trichlorobiphenyl (BZ 18)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,3,3',4,4'-Pentachlorobiphenyl (BZ 105)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,3,3',4',6-Pentachlorobiphenyl (BZ 110)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,3',4,4',5-Pentachlorobiphenyl (BZ 118)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,3',4,4'-Tetrachlorobiphenyl (BZ 66)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,4,4'-Trichlorobiphenyl (BZ 28)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,4'-DDD
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,4'-DDE
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,4'-DDT
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,4'-Dichlorobiphenyl (BZ 8)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	3,3',4,4',5,5'-Hexachlorobiphenyl (BZ 169)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	3,3',4,4',5-Pentachlorobiphenyl (BZ 126)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	3,3',4,4'-Tetrachlorobiphenyl (BZ 77)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	4,4'-DDD
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	4,4'-DDE
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	4,4'-DDT
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Aldrin
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	alpha-BHC (alpha-Hexachlorocyclohexane)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	alpha-Chlordane
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	beta-BHC (beta-Hexachlorocyclohexane)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Chlorpyrifos
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	cis-Nonachlor
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Decachlorobiphenyl (BZ 209)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	delta-BHC
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Dieldrin
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Endosulfan II
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Endosulfan I
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Endosulfan sulfate
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Endrin
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Endrin aldehyde
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Endrin ketone
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	gamma-Chlordane
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Heptachlor
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Heptachlor epoxide
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Hexachlorobenzene

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Matrix	Standard/Method	Technology	Analyte
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Methoxychlor
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Mirex
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Oxychlordane
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	trans-Nonachlor
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	1,4-Dichlorobenzene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	1-Methylnaphthalene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	1-Methylphenanthrene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ 206)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',4,4',5,5'-Octachlorobiphenyl (BZ 194)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (BZ 207)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',4,4',5,6-Octachlorobiphenyl (BZ 195)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ 170)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',4,4',6,6'-Octachlorobiphenyl (BZ 197)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',4,4',6-Heptachlorobiphenyl (BZ 171)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',4,4'-Hexachlorobiphenyl (BZ 128)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (BZ 208)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',4,5,5',6-Octachlorobiphenyl (BZ 198)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',4,5,5',6'-Octachlorobiphenyl (BZ 199)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',4,5,5'-Heptachlorobiphenyl (BZ 172)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',4,5,6,6'-Octachlorobiphenyl (BZ 200)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',4,5',6,6'-Octachlorobiphenyl (BZ 201)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',4,5,6-Heptachlorobiphenyl (BZ 173)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',4,5,6'-Heptachlorobiphenyl (BZ 174)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',4,5',6-Heptachlorobiphenyl (BZ 175)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',4,5',6'-Heptachlorobiphenyl (BZ 177)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',4,5'-Hexachlorobiphenyl (BZ 130)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',4,6,6'-Heptachlorobiphenyl (BZ 176)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',4,6-Hexachlorobiphenyl (BZ 131)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',4-Pentachlorobiphenyl (BZ 82)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',5,5',6,6'-Octachlorobiphenyl (BZ 202)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',5,5',6-Heptachlorobiphenyl (BZ 178)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',5,6,6'-Heptachlorobiphenyl (BZ 179)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',5,6-Hexachlorobiphenyl (BZ 134)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',5,6'-Hexachlorobiphenyl (BZ 135)

Certificate of Accreditation: Supplement

ISO/IEC 17025:2005 and DoD-ELAP

Battelle

141 Longwater Drive, Suite 202, Norwell, MA 02061
Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',5-Pentachlorobiphenyl (BZ 83)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',6,6'-Hexachlorobiphenyl (BZ 136)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3',6-Pentachlorobiphenyl (BZ 84)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,3'-Tetrachlorobiphenyl (BZ 40)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,4,4',5,5',6-Octachlorobiphenyl (BZ 203)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,4,4',5,5'-Heptachlorobiphenyl (BZ 180)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,4,4',5',6-Heptachlorobiphenyl (BZ 183)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,4,4',5-Hexachlorobiphenyl (BZ 137)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,4,4',5'-Hexachlorobiphenyl (BZ 138)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,4,4',6,6'-Heptachlorobiphenyl (BZ 184)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,4,4',6-Hexachlorobiphenyl (BZ 139)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,4,4',6'-Hexachlorobiphenyl (BZ 140)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,4,4'-Pentachlorobiphenyl (BZ 85)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,4,5,5',6-Heptachlorobiphenyl (BZ 185)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ 187)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,4,5,5'-Hexachlorobiphenyl (BZ 141)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,4',5,5'-Hexachlorobiphenyl (BZ 146)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,4',5,6,6'-Heptachlorobiphenyl (BZ 188)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,4',5',6-Hexachlorobiphenyl (BZ 149)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,4,5',6-Hexachlorobiphenyl (BZ 144)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,4,5'-Pentachlorobiphenyl (BZ 87)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,4',5'-Pentachlorobiphenyl (BZ 97)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,4',6-Pentachlorobiphenyl (BZ 91)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,4-Tetrachlorobiphenyl (BZ 41)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,4'-Tetrachlorobiphenyl (BZ 42)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,5,5',6-Hexachlorobiphenyl (BZ 151)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,5,5'-Pentachlorobiphenyl (BZ 92)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,5',6-Pentachlorobiphenyl (BZ 95)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,5-Tetrachlorobiphenyl (BZ 43)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,5'-Tetrachlorobiphenyl (BZ 44)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,6'-Tetrachlorobiphenyl (BZ 46)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3,6-Tetrachlorobiphenyl (BZ 45)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',3-Trichlorobiphenyl (BZ 16)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',4,4',5,5'-Hexachlorobiphenyl (BZ 153)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',4,4',5,6'-Hexachlorobiphenyl (BZ 154)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',4,4',5-Pentachlorobiphenyl (BZ 99)

Certificate of Accreditation: Supplement

ISO/IEC 17025:2005 and DoD-ELAP

Battelle

141 Longwater Drive, Suite 202, Norwell, MA 02061

Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',4,4',6,6'-Hexachlorobiphenyl (BZ 155)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',4,4',6-Pentachlorobiphenyl (BZ 100)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',4,4'-Tetrachlorobiphenyl (BZ 47)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',4,5,5'-Pentachlorobiphenyl (BZ 101)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',4,5-Tetrachlorobiphenyl (BZ 48)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',4,5'-Tetrachlorobiphenyl (BZ 49)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',4,6,6'-Pentachlorobiphenyl (BZ 104)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',4,6'-Tetrachlorobiphenyl (BZ 51)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',4,6-Tetrachlorobiphenyl (BZ 50)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',4-Trichlorobiphenyl (BZ 17)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',5,5'-Tetrachlorobiphenyl (BZ 52)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',5,6'-Tetrachlorobiphenyl (BZ 53)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',5-Trichlorobiphenyl (BZ 18)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',6,6'-Tetrachlorobiphenyl (BZ 54)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2',6-Trichlorobiphenyl (BZ 19)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,2'-Dichlorobiphenyl (BZ 4)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3,3',4,4',5,5',6-Octachlorobiphenyl (BZ 205)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3,3',4,4',5,5'-Heptachlorobiphenyl (BZ 189)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3,3',4,4',5,6-Heptachlorobiphenyl (BZ 190)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3,3',4,4',5',6-Heptachlorobiphenyl (BZ 191)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3,3',4,4',5-Hexachlorobiphenyl (BZ 156)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3,3',4,4',5'-Hexachlorobiphenyl (BZ 157)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3,3',4,4',6-Hexachlorobiphenyl (BZ 158)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3,3',4,4'-Pentachlorobiphenyl (BZ 105)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3,3',4',5,5',6-Heptachlorobiphenyl (BZ 193)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3,3',4',5,6-Hexachlorobiphenyl (BZ 163)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3,3',4',5',6-Hexachlorobiphenyl (BZ 164)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3,3',4',6-Pentachlorobiphenyl (BZ 110)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3,3',4'-Tetrachlorobiphenyl (BZ 56)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3',4,4',5,5'-Hexachlorobiphenyl (BZ 167)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3,4,4',5,6-Hexachlorobiphenyl (BZ 166)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3,4,4',5-Pentachlorobiphenyl (BZ 114)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3',4,4',5-Pentachlorobiphenyl (BZ 118)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3',4,4',5'-Pentachlorobiphenyl (BZ 123)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3,4,4',6-Pentachlorobiphenyl (BZ 115)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3,4,4'-Tetrachlorobiphenyl (BZ 60)

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Battelle

141 Longwater Drive, Suite 202, Norwell, MA 02061

Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3',4,4'-Tetrachlorobiphenyl (BZ 66)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3',4',5,5'-Pentachlorobiphenyl (BZ 124)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3',4',5',6-Pentachlorobiphenyl (BZ 125)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3,4',5-Tetrachlorobiphenyl (BZ 63)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3',4,5-Tetrachlorobiphenyl (BZ 67)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3',4',5-Tetrachlorobiphenyl (BZ 70)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3,4',6-Tetrachlorobiphenyl (BZ 64)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3',4',6-Tetrachlorobiphenyl (BZ 71)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3,4'-Trichlorobiphenyl (BZ 22)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3',4-Trichlorobiphenyl (BZ 25)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3',4'-Trichlorobiphenyl (BZ 33)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3',5-Trichlorobiphenyl (BZ 26)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3,5-Trimethylnaphthalene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3,6-Trichlorobiphenyl (BZ 24)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3',6-Trichlorobiphenyl (BZ 27)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3-Dichlorobiphenyl (BZ 5)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,3'-Dichlorobiphenyl (BZ 6)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,4,4',5-Tetrachlorobiphenyl (BZ 74)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,4,4',6-Tetrachlorobiphenyl (BZ 75)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,4,4'-Trichlorobiphenyl (BZ 28)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,4,5-Trichlorobiphenyl (BZ 29)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,4',5-Trichlorobiphenyl (BZ 31)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,4,6-Trichlorobiphenyl (BZ 30)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,4',6-Trichlorobiphenyl (BZ 32)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,4'-DDD
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,4'-DDE
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,4'-DDT
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,4-Dichlorobiphenyl (BZ 7)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,4'-Dichlorobiphenyl (BZ 8)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,5-Dichlorobiphenyl (BZ 9)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2,6-Dimethylnaphthalene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2-Chlorobiphenyl (BZ 1)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2-Chloronaphthalene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2-Methylnaphthalene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	2-Methylphenanthrene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	3,3',4,4',5,5'-Hexachlorobiphenyl (BZ 169)

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Battelle

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Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	3,3',4,4',5-Pentachlorobiphenyl (BZ 126)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	3,3',4,4'-Tetrachlorobiphenyl (BZ 77)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	3,3',4,5,5'-Pentachlorobiphenyl (BZ 127)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	3,3',5,5'-Tetrachlorobiphenyl (BZ 80)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	3,3'-Dichlorobiphenyl (BZ 11)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	3,4,4',5-Tetrachlorobiphenyl (BZ 81)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	3,4,4'-Trichlorobiphenyl (BZ 37)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	3,4-Dichlorobiphenyl (BZ 12)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	3,4'-Dichlorobiphenyl (BZ 13)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	3,6-Dimethylphenanthrene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	4,4'-Dichlorobiphenyl (BZ 15)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	4-Chlorobiphenyl (BZ 3)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	Acenaphthene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	Acenaphthylene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	Anthracene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	Benzo(a)anthracene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	Benzo(a)pyrene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	Benzo(b)fluoranthene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	Benzo(b)thiophene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	Benzo(e)pyrene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	Benzo(g,h,i)perylene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	Benzo(k)fluoranthene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	Biphenyl
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	Chrysene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	cis-Decalin
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	Decachlorobiphenyl (BZ 209)
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	Dibenz(a,h)anthracene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	Dibenzofuran
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	Dibenzothiophene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	Fluoranthene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	Fluorene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	Indeno(l,2,3-cd)pyrene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	Naphthalene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	Perylene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	Phenanthrene
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	Pyrene

Certificate of Accreditation: Supplement

ISO/IEC 17025:2005 and DoD-ELAP

Battelle

141 Longwater Drive, Suite 202, Norwell, MA 02061
Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Aqueous/Solid/Tissue	EPA 8270D MOD	GC-MS	trans-Decalin

Certificate of Accreditation: Supplement

ISO/IEC 17025:2005 and DoD-ELAP

Battelle

141 Longwater Drive, Suite 202, Norwell, MA 02061
Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Aqueous	EPA 3510 C	Separatory Funnel	Prep
Aqueous	EPA 3640A MOD	Gel-permeation chromatography (GPC)	Cleanup
Aqueous	EPA 3660B MOD	Sulfur Cleanup	Cleanup
Solid	EPA 3640A MOD	Gel-permeation chromatography (GPC)	Cleanup
Solid	EPA 3660B MOD	Sulfur Cleanup	Cleanup
Solid	NOAA NOS ORCA 71	Orbital Shaker	Prep
Tissue	EPA 3640A MOD	Gel-permeation chromatography (GPC)	Cleanup
Tissue	EPA 3660B MOD	Sulfur Cleanup	Cleanup
Tissue	NOAA NOS ORCA 71	Tissuemizer	Prep

CERTIFICATE OF ACCREDITATION

ANSI National Accreditation Board

11617 Coldwater Road, Fort Wayne, IN 46845 USA

This is to certify that

Katahdin Analytical Services, LLC
600 Technology Way
Scarborough, ME 04074

has been assessed by ANAB and meets the requirements of international standard

ISO/IEC 17025:2005

and the

US Department of Defense (DoD) Quality Systems Manual for Environmental Laboratories (DoD QSM V 5.1)

while demonstrating technical competence in the field of

TESTING

Refer to the accompanying Scope of Accreditation for information regarding the types of activities to which this accreditation applies

L2223
Certificate Number

ANAB Approval

Certificate Valid Through: 02/01/2022
Version No. 004 Issued: 01/16/2019

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).

ANSI National Accreditation Board

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005 AND DOD QUALITY SYSTEMS MAUAL FOR ENVIRONMENTAL LABORATORIES (DOD QSM V 5.1)

Katahdin Analytical Services, LLC
600 Technology Way
Scarborough, ME 04074
Leslie Dimond
207-874-2400

TESTING

Valid to: **February 1, 2022** Certificate Number: **L2223**

Environmental

Non-Potable Water		
Technology	**Method**	**Analyte**
GC/ECD	EPA 8081B	2, 4`-DDD
GC/ECD	EPA 8081B	2, 4`-DDE
GC/ECD	EPA 8081B	2, 4`-DDT
GC/ECD	EPA 608; EPA 8081B	4, 4`-DDD
GC/ECD	EPA 608; EPA 8081B	4, 4`-DDE
GC/ECD	EPA 608; EPA 8081B	4, 4`-DDT
GC/ECD	EPA 608; EPA 8081B	Aldrin
GC/ECD	EPA 608; EPA 8081B	alpha-BHC (alpha-Hexachlorocyclohexane)
GC/ECD	EPA 8081B	Alpha-Chlordane/cis-chlordane
GC/ECD	EPA 608; EPA 8081B	beta-BHC (beta-Hexachlorocyclohexane)
GC/ECD	EPA 8081B	Cis-Nonaclor
GC/ECD	EPA 608; EPA 8081B	Chlordane (tech.)
GC/ECD	EPA 608; EPA 8081B	delta-BHC
GC/ECD	EPA 608; EPA 8081B	Dieldrin
GC/ECD	EPA 608; EPA 8081B	Endosulfan I
GC/ECD	EPA 608; EPA 8081B	Endosulfan II
GC/ECD	EPA 608; EPA 8081B	Endosulfan sulfate

Non-Potable Water		
Technology	**Method**	**Analyte**
GC/ECD	EPA 608; EPA 8081B	Endrin
GC/ECD	EPA 608; EPA 8081B	Endrin aldehyde
GC/ECD	EPA 8081B	Endrin Ketone
GC/ECD	EPA 8081B	gamma-BHC (Lindane gamma-Hexachlorocyclohexane)
GC/ECD	EPA 8081B	gamma-Chlordane/trans-Chlordane
GC/ECD	EPA 608; EPA 8081B	Heptachlor
GC/ECD	EPA 608; EPA 8081B	Heptachlor epoxide
GC/ECD	EPA 8081B	Hexachlorobenzene
GC/ECD	EPA 8081B	Methoxychlor
GC/ECD	EPA 8081B	Mirex
GC/ECD	EPA 8081B	Oxychlordane
GC/ECD	EPA 608; EPA 8081B	Toxaphene (Chlorinated camphene)
GC/ECD	EPA 8081B	trans-Nonachlor
GC/ECD	EPA 608; EPA 8082A	Aroclor-1016 (PCB-1016)
GC/ECD	EPA 608; EPA 8082A	Aroclor-1221 (PCB-1221)
GC/ECD	EPA 608; EPA 8082A	Aroclor-1232 (PCB-1232)
GC/ECD	EPA 608; EPA 8082A	Aroclor-1242 (PCB-1242)
GC/ECD	EPA 608; EPA 8082A	Aroclor-1248 (PCB-1248)
GC/ECD	EPA 608; EPA 8082A	Aroclor-1254 (PCB-1254)
GC/ECD	EPA 608; EPA 8082A	Aroclor-1260 (PCB-1260)
GC/ECD	EPA 8082A MOD	Aroclor-1262 (PCB-1262)
GC/ECD	EPA 8082A MOD	Aroclor-1268 (PCB-1268)
GC/ECD	EPA 8082A	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ 206)
GC/ECD	EPA 8082A	2,2',3,3',4,4',5,6-Octachlorobiphenyl (BZ 195)
GC/ECD	EPA 8082A	2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ 170)
GC/ECD	EPA 8082A	2,2',3,3',4,4'-Hexachlorobiphenyl (BZ 128)
GC/ECD	EPA 8082A	2, 2', 3, 4, 4', 5, 5'-Heptachlorobiphenyl (BZ 180)
GC/ECD	EPA 8082A	2, 2', 3, 4, 4', 5', 6-Heptachlorobiphenyl (BZ 183)
GC/ECD	EPA 8082A	2, 2', 3, 4, 4', 5-Hexachlorobiphenyl (BZ 138)

Non-Potable Water		
Technology	**Method**	**Analyte**
GC/ECD	EPA 8082A	2, 2', 3, 4, 4', 6, 6'-Heptachlorobiphenyl (BZ 184)
GC/ECD	EPA 8082A	2, 2', 3, 4', 5, 5', 6-Heptachlorobiphenyl (BZ 187)
GC/ECD	EPA 8082A	2, 2', 3, 4, 5'-Pentachlorobiphenyl (BZ 87)
GC/ECD	EPA 8082A	2, 2', 3, 5'-Tetrachlorobiphenyl (BZ 44)
GC/ECD	EPA 8082A	2, 2', 4, 4', 5, 5'-Hexachlorobiphenyl (BZ 153)
GC/ECD	EPA 8082A	2, 2', 4, 5, 5'-Pentachlorobiphenyl (BZ 101)
GC/ECD	EPA 8082A	2, 2', 4, 5-Tetrachlorobiphenyl (BZ 48)
GC/ECD	EPA 8082A	2, 2', 4, 5'-Tetrachlorobiphenyl (BZ 49)
GC/ECD	EPA 8082A	2, 2', 5, 5'-Tetrachlorobiphenyl (BZ 52)
GC/ECD	EPA 8082A	2, 2', 5-Trichlorobiphenyl (BZ 18)
GC/ECD	EPA 8082A	2, 3, 3', 4, 4', 5-Hexachlorobiphenyl (BZ 156)
GC/ECD	EPA 8082A	2, 3, 3', 4, 4', 5'-Hexachlorobiphenyl (BZ 157)
GC/ECD	EPA 8082A	2, 3, 3', 4, 4'-Pentachlorobiphenyl (BZ 105)
GC/ECD	EPA 8082A	2, 3, 3', 4, 4', 5, 5'-Heptachlorobiphenyl (BZ 189)
GC/ECD	EPA 8082A	2, 3', 4, 4', 5, 5'-Hexachlorobiphenyl (BZ 167)
GC/ECD	EPA 8082A	2, 3', 4, 4', 5-Pentachlorobiphenyl (BZ 118)
GC/ECD	EPA 8082A	2, 3', 4, 4',5'-Pentachlorobiphenyl (BZ 123)
GC/ECD	EPA 8082A	2, 3', 4, 4'-Tetrachlorobiphenyl (BZ 66)
GC/ECD	EPA 8082A	2, 3, 4, 4', 5-Pentachlorobiphenyl (BZ 114)
GC/ECD	EPA 8082A	2, 4, 4'-Trichlorobiphenyl (BZ 28)
GC/ECD	EPA 8082A	2, 4'-Dichlorobiphenyl (BZ 8)
GC/ECD	EPA 8082A	3, 3', 4, 4', 5, 5'-Hexachlorobiphenyl (BZ 169)
GC/ECD	EPA 8082A	3, 3', 4, 4', 5-Pentachlorobiphenyl (BZ 126)
GC/ECD	EPA 8082A	3, 3', 4, 4'-Tetrachlorobiphenyl (BZ 77)
GC/ECD	EPA 8082A	3, 4, 4', 5-Tetrachlorobiphenyl (BZ 81)
GC/ECD	EPA 8082A	Decachlorobiphenyl (BZ 209)
GC/ECD	EPA 8151A	2, 4, 5-T
GC/ECD	EPA 8151A	2, 4-D
GC/ECD	EPA 8151A	2, 4-DB

Non-Potable Water		
Technology	**Method**	**Analyte**
GC/ECD	EPA 8151A	Dalapon
GC/ECD	EPA 8151A	Dicamba
GC/ECD	EPA 8151A	Dichloroprop
GC/ECD	EPA 8151A	Dinoseb
GC/ECD	EPA 8151A	MCPA
GC/ECD	EPA 8151A	MCPP
GC/ECD	EPA 8151A	Pentachlorophenol
GC/ECD	EPA 8151A	Silvex (2, 4, 5-TP)
GC/FID	EPA 8015C/D MOD	Diesel range organics (DRO)
GC/FID	EPA 8015C/D MOD	Total Petroleum Hydrocarbon (TPH)
GC/FID	EPA 8015C/D MOD	Gasoline range organics (GRO)
GC/FID/PID	MA DEP VPH	Volatile Organic Hydrocarbons
GC/FID	MA DEP EPH	Extractable Petroleum Hydrocarbons
GC/FID	CT ETPH	Total Petroleum Hydrocarbons
GC/FID	TNRCC Method 1005	Total Petroleum Hydrocarbons
GC/FID	FL-PRO	Petroleum Range Organics
GC/ECD	EPA 8011; EPA 504	1, 2-Dibromoethane (EDB)
GC/ECD	EPA 8011; EPA 504	1, 2-Dibromo-3-chloropropane
GC/FID	RSK-175	Methane Ethane Ethene
GC/MS	EPA 8260B/C; EPA 524.2	1, 1, 1, 2-Tetrachloroethane
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	1, 1, 1-Trichloroethane
GC/MS	EPA 624; 8260B/C; EPA 524.2	1, 1, 2, 2-Tetrachloroethane
GC/MS	EPA 8260B/C	1,1,2-Trichloro-1,2,2-trifluoroethane
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	1, 1, 2-Trichloroethane
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	1, 1-Dichloroethane
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	1, 1-Dichloroethene
GC/MS	EPA 8260B/C; EPA 524.2	1, 1-Dichloropropene

Non-Potable Water		
Technology	**Method**	**Analyte**
GC/MS	EPA 8260B/C; EPA 524.2	1, 2, 3-Trichlorobenzene
GC/MS	EPA 8260B/C; EPA 524.2	1, 2, 3-Trichloropropane
GC/MS	EPA 8260B/C	1,2,3-Trimethylbenzene
GC/MS	EPA 8260B/C; EPA 524.2	1, 2, 4-Trichlorobenzene
GC/MS	EPA 8260B/C; EPA 524.2	1, 2, 4-Trimethylbenzene
GC/MS	EPA 8260B/C; EPA 524.2	1, 2-Dibromo-3-chloropropane
GC/MS	EPA 8260B/C; EPA 524.2	1, 2-Dibromoethane (EDB)
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	1, 2-Dichlorobenzene
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	1, 2-Dichloroethane
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	1, 2-Dichloropropane
GC/MS	EPA 8260B/C	1,3,5-Trichlorobenzene
GC/MS	EPA 8260B/C; EPA 524.2	1, 3, 5-Trimethylbenzene
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	1, 3-Dichlorobenzene
GC/MS	EPA 8260B/C; EPA 524.2	1, 3-Dichloropropane
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	1, 4-Dichlorobenzene
GC/MS	EPA 8260B/C	1, 4-Dioxane
GC/MS	EPA 8260B/C; EPA 524.2	2, 2-Dichloropropane
GC/MS	EPA 8260B/C; EPA 524.2	2-Butanone
GC/MS	EPA 624; EPA 8260B/C	2-Chloroethyl vinyl ether
GC/MS	EPA 8260B/C; EPA 524.2	2-Chlorotoluene
GC/MS	EPA 8260B/C; EPA 524.2	2-Hexanone
GC/MS	EPA 8260B/C; EPA 524.2	4-Chlorotoluene
GC/MS	EPA 8260B/C; EPA 524.2	4-Methyl-2-pentanone
GC/MS	EPA 8260B/C; EPA 524.2	Acetone
GC/MS	EPA 8260B/C	Acetonitrile
GC/MS	EPA 624; EPA 8260B/C	Acrolein
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	Acrylonitrile

Non-Potable Water		
Technology	**Method**	**Analyte**
GC/MS	EPA 8260B/C; EPA 524.2	Allyl chloride
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	Benzene
GC/MS	EPA 8260B/C	Benzyl chloride
GC/MS	EPA 8260B/C; EPA 524.2	Bromobenzene
GC/MS	EPA 8260B/C; EPA 524.2	Bromochloromethane
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	Bromodichloromethane
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	Bromoform
GC/MS	EPA 8260B/C; EPA 524.2	Carbon disulfide
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	Carbon tetrachloride
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	Chlorobenzene
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	Chloroethane
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	Chloroform
GC/MS	EPA 8260B/C	Chloroprene
GC/MS	EPA 8260B/C; EPA 524.2	cis-1, 2-Dichloroethene
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	cis-1, 3-Dichloropropene
GC/MS	EPA 8260B/C	Cis-1,4-Dichloro-2-butene
GC/MS	EPA 8260B/C	Cyclohexane
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	Dibromochloromethane
GC/MS	EPA 8260B/C; EPA 524.2	Dibromomethane
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	Dichlorodifluoromethane
GC/MS	EPA 8260B/C; EPA 524.2	Diethyl ether
GC/MS	EPA 8260B/C	Di-isopropylether
GC/MS	EPA 8260B/C; EPA 524.2	Ethyl methacrylate
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	Ethylbenzene
GC/MS	EPA 8260B/C	Ethyl-t-butylether

Non-Potable Water		
Technology	**Method**	**Analyte**
GC/MS	EPA 8260B/C; EPA 524.2	Hexachlorobutadiene
GC/MS	EPA 8260B/C	Iodomethane
GC/MS	EPA 8260B/C	Isobutyl alcohol
GC/MS	EPA 8260B/C	Isopropyl alcohol
GC/MS	EPA 8260B/C; EPA 524.2	Isopropyl benzene
GC/MS	EPA 8260B/C; EPA 524.2	m p-xylenes
GC/MS	EPA 8260B/C	Methyl acetate
GC/MS	EPA 8260B/C	Methacrylonitrile
GC/MS	EPA 624; EPA 8260B/C	Methyl bromide (Bromomethane)
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	Methyl chloride (Chloromethane)
GC/MS	EPA 8260B/C	Methyl methacrylate
GC/MS	EPA 8260B/C; EPA 524.2	Methyl tert-butyl ether
GC/MS	EPA 8260B/C	Methylcyclohexane
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	Methylene chloride
GC/MS	EPA 8260B/C; EPA 524.2	Naphthalene
GC/MS	EPA 8260B/C; EPA 524.2	n-Butylbenzene
GC/MS	EPA 8260B/C; EPA 524.2	n-Propylbenzene
GC/MS	EPA 8260B/C; EPA 524.2	o-Xylene
GC/MS	EPA 8260B/C	Pentachloroethane
GC/MS	EPA 8260B/C; EPA 524.2	p-Isopropyltoluene
GC/MS	EPA 8260B/C; EPA 524.2	Propionitrile
GC/MS	EPA 8260B/C; EPA 524.2	sec-butylbenzene
GC/MS	EPA 8260B/C; EPA 524.2	Styrene
GC/MS	EPA 8260B/C	t-Amylmethylether
GC/MS	EPA 8260B/C; EPA 524.2	tert-Butyl alcohol
GC/MS	EPA 8260B/C	tert-Butylbenzene
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	Tetrachloroethene (Perchloroethylene)
GC/MS	EPA 8260B/C; EPA 524.2	Tetrahydrofuran

Non-Potable Water		
Technology	**Method**	**Analyte**
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	Toluene
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	trans-1, 2-Dichloroethylene
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	trans-1, 3-Dichloropropylene
GC/MS	EPA 8260B/C; EPA 524.2	trans-1, 4-Dichloro-2-butuene
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	Trichloroethene (Trichloroethylene)
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	Trichlorofluoromethane
GC/MS	EPA 8260B/C	Vinyl acetate
GC/MS	EPA 624; EPA 8260B/C; EPA 524.2	Vinyl chloride
GC/MS	EPA 624; EPA 8260B/C	Xylene
GC/MS	EPA 8260B/C SIM	1,1,1,2-Tetrachloroethane
GC/MS	EPA 8260B/C SIM	1,1,1-Trichloroethane
GC/MS	EPA 8260B/C SIM	1,1,2,2-Tetrachloroethane
GC/MS	EPA 8260B/C SIM	1, 1, 2-Trichloroethane
GC/MS	EPA 8260B/C SIM	1,2,3-Trichloropropane
GC/MS	EPA 8260B/C SIM	1,1-Dichloroethane
GC/MS	EPA 8260B/C SIM	1,1-Dichloroethene
GC/MS	EPA 8260B/C SIM	1,2,4-Trichlorobenzene
GC/MS	EPA 8260B/C SIM	1,2,4-Trimethylbenzene
GC/MS	EPA 8260B/C SIM	1,2-Dibromo-3-chloropropane
GC/MS	EPA 8260B/C SIM	1,2-Dibromoethane
GC/MS	EPA 8260B/C SIM	1,2-Dichlorobenzene
GC/MS	EPA 8260B/C SIM	1,2-Dichloroethane
GC/MS	EPA 8260B/C SIM	1,2-Dichloropropane
GC/MS	EPA 8260B/C SIM	1,3-Dichlorobenzene
GC/MS	EPA 8260B/C SIM	1,3-Dichloropropane
GC/MS	EPA 8260B/C SIM	1,4-Dichlorobenzene
GC/MS	EPA 8260B/C SIM	2-Hexanone

Non-Potable Water		
Technology	**Method**	**Analyte**
GC/MS	EPA 8260B/C SIM	4-Methyl-2-pentanone
GC/MS	EPA 8260B/C SIM	Benzene
GC/MS	EPA 8260B/C SIM	Bromodichloromethane
GC/MS	EPA 8260B/C SIM	Carbon Disulfide
GC/MS	EPA 8260B/C SIM	Carbon Tetrachloride
GC/MS	EPA 8260B/C SIM	Chloroform
GC/MS	EPA 8260B/C SIM	Chloromethane
GC/MS	EPA 8260B/C SIM	cis-1,2-Dichloroethene
GC/MS	EPA 8260B/C SIM	cis-1,3-Dichloropropene
GC/MS	EPA 8260B/C SIM	Dibromochloromethane
GC/MS	EPA 8260B/C SIM	Ethylbenzene
GC/MS	EPA 8260B/C SIM	Isopropylbenzene
GC/MS	EPA 8260B/C SIM	Hexachlorobutadiene
GC/MS	EPA 8260B/C SIM	Methylene chloride
GC/MS	EPA 8260B/C SIM	m,p-Xylene
GC/MS	EPA 8260B/C SIM	o-Xylene
GC/MS	EPA 8260B/C SIM	Tetrachloroethene
GC/MS	EPA 8260B/C SIM	Toluene
GC/MS	EPA 8260B/C SIM	trans-1,2-Dichloroethene
GC/MS	EPA 8260B/C SIM	Trans-1,3-Dichloropropene
GC/MS	EPA 8260B/C SIM	Trichloroethene
GC/MS	EPA 8260B/C SIM	Trichlorofluoromethane
GC/MS	EPA 8260B/C SIM	Vinyl Chloride
GC/MS	EPA 8260B/C SIM	Xylenes (total)
GC/MS	EPA 8270C/D	1, 2, 4, 5-Tetrachlorobenzene
GC/MS	EPA 625; EPA 8270C/D	1, 2, 4-Trichlorobenzene
GC/MS	EPA 625; EPA 8270C/D	1, 2-Dichlorobenzene
GC/MS	EPA 8270C/D	1, 2-Diphenylhydrazine
GC/MS	EPA 8270C/D	1, 3, 5-Trinitrobenzene

Non-Potable Water		
Technology	**Method**	**Analyte**
GC/MS	EPA 625; EPA 8270C/D	1, 3-Dichlorobenzene
GC/MS	EPA 8270C/D	1, 3-Dinitrobenzene
GC/MS	EPA 625; EPA 8270C/D	1, 4-Dichlorobenzene
GC/MS	EPA 8270C/D	1, 4-Dioxane
GC/MS	EPA 8270C/D	1, 4-Naphthoquinone
GC/MS	EPA 8270C/D	1, 4-Phenylenediamine
GC/MS	EPA 8270C/D	1-Chloronaphthalene
GC/MS	EPA 8270C/D	1-Methylnaphthalene
GC/MS	EPA 8270C/D	1-Naphthylamine
GC/MS	EPA 8270C/D	2, 3, 4, 6-Tetrachlorophenol
GC/MS	EPA 8270C/D	2, 4, 5-Trochlorophenol
GC/MS	EPA 625; EPA 8270C/D	2, 4, 6-Trichlorophenol
GC/MS	EPA 625; EPA 8270C/D	2, 4-Dichlorophenol
GC/MS	EPA 625; EPA 8270C/D	2, 4-Dimethylphenol
GC/MS	EPA 625; EPA 8270C/D	2, 4-Dinitrophenol
GC/MS	EPA 625; EPA 8270C/D	2, 4-Dinitrotoluene (2, 4-DNT)
GC/MS	EPA 8270C/D	2, 6-Dichlorophenol
GC/MS	EPA 625; EPA 8270C/D	2, 6-Dinitrotoluene (2, 6-DNT)
GC/MS	EPA 8270C/D	2-Acetylaminofluorene
GC/MS	EPA 625; EPA 8270C/D	2-Chloronaphthalene
GC/MS	EPA 625; EPA 8270C/D	2-Chlorophenol
GC/MS	EPA 625; EPA 8270C/D	2-Methyl-4 6-dinitrophenol
GC/MS	EPA 8270C/D	2-Methylnaphthalene
GC/MS	EPA 8270C/D	2-Methylphenol
GC/MS	EPA 8270C/D	2-Naphthylamine
GC/MS	EPA 8270C/D	2-Nitroaniline
GC/MS	EPA 625; EPA 8270C/D	2-Nitrophenol
GC/MS	EPA 8270C/D	2-Picoline
GC/MS	EPA 8270C/D	3-Methylcholanthrene

Non-Potable Water		
Technology	**Method**	**Analyte**
GC/MS	EPA 8270C/D	3-Nitroaniline
GC/MS	EPA 8270C/D	4-Aminobiphenyl
GC/MS	EPA 625; EPA 8270C/D	4-Bromophenyl phenyl ether
GC/MS	EPA 625; EPA 8270C/D	4-Chloro-3-methylphenol
GC/MS	EPA 8270C/D	4-Chloroaniline
GC/MS	EPA 625; EPA 8270C/D	4-Chlorophenyl phenylether
GC/MS	EPA 8270C/D	4-Dimethyl aminoazobenzene
GC/MS	EPA 8270C/D	3, 4-Methylphenol
GC/MS	EPA 8270C/D	4-Nitroaniline
GC/MS	EPA 625; EPA 8270C/D	4-Nitrophenol
GC/MS	EPA 8270C/D	4-Nitroquinoline-1-oxide
GC/MS	EPA 8270C/D	5-Nitro-o-toluidine
GC/MS	EPA 8270C/D	7, 12-Dimethylbenz(a)anthracene
GC/MS	EPA 8270C/D	a a-Dimethylphenethylamine
GC/MS	EPA 625; EPA 8270C/D	Acenaphthene
GC/MS	EPA 625; EPA 8270C/D	Acenaphthylene
GC/MS	EPA 8270C/D	Acetophenone
GC/MS	EPA 8270C/D	Aniline
GC/MS	EPA 625; EPA 8270C/D	Anthracene
GC/MS	EPA 8270C/D	Aramite
GC/MS	EPA 8270C/D	Atrazine
GC/MS	EPA 8270C/D	Azobenzene
GC/MS	EPA 8270C/D	Benzaldehyde
GC/MS	EPA 625; EPA 8270C/D	Benzidine
GC/MS	EPA 625; EPA 8270C/D	Benzo(a)anthracene
GC/MS	EPA 625; EPA 8270C/D	Benzo(a)pyrene
GC/MS	EPA 625; EPA 8270C/D	Benzo(b)fluoranthene
GC/MS	EPA 625; EPA 8270C/D	Benzo(g h i)perylene
GC/MS	EPA 625; EPA 8270C/D	Benzo(k)fluoranthene

Non-Potable Water		
Technology	**Method**	**Analyte**
GC/MS	EPA 8270C/D	Benzoic Acid
GC/MS	EPA 8270C/D	Benzyl alcohol
GC/MS	EPA 8270C/D	1,1-Biphenyl
GC/MS	EPA 625; EPA 8270C/D	bis(2-Chloroethoxy)methane
GC/MS	EPA 625; EPA 8270C/D	bis(2-Chloroethyl) ether
GC/MS	EPA 625; EPA 8270C/D	bis(2-Chloroisopropyl) ether (2, 2`-Oxybis(1-chloropropane)
GC/MS	EPA 625; EPA 8270C/D	bis(2-Ethylhexyl)adipate
GC/MS	EPA 625; EPA 8270C/D	bis(2-Ethylhexyl) phthalate (DEHP)
GC/MS	EPA 625; EPA 8270C/D	Butyl benzyl phthalate
GC/MS	EPA 8270C/D	Caprolactam
GC/MS	EPA 8270C/D	Carbazole
GC/MS	EPA 8270C/D	Chlorobenzilate
GC/MS	EPA 625; EPA 8270C/D	Chrysene
GC/MS	EPA 8270C/D	Diallate
GC/MS	EPA 8270C/D	Dibenzo(a,j)acridine
GC/MS	EPA 625	Dibenzo(a,c)anthracene
GC/MS	EPA 625; EPA 8270C/D	Dibenzo(a,h)anthracene
GC/MS	EPA 8270C/D	Dibenzofuran
GC/MS	EPA 8270C/D	Diethyladipate
GC/MS	EPA 625; EPA 8270C/D	Diethyl phthalate
GC/MS	EPA 8270C/D	Dimethoate
GC/MS	EPA 625; EPA 8270C/D	Dimethyl phthalate
GC/MS	EPA 625; EPA 8270C/D	Di-n-butyl phthalate
GC/MS	EPA 625; EPA 8270C/D	Di-n-octyl phthalate
GC/MS	EPA 8270C/D	Dinoseb
GC/MS	EPA 8270C/D	Disulfoton
GC/MS	EPA 8270C/D	Ethyl methanesulfonate
GC/MS	EPA 8270C/D	Ethyl parathion
GC/MS	EPA 8270C/D	Ethyl methacrylate

Non-Potable Water		
Technology	**Method**	**Analyte**
GC/MS	EPA 8270C/D	Famfur
GC/MS	EPA 625; EPA 8270C/D	Fluoranthene
GC/MS	EPA 625; EPA 8270C/D	Fluorene
GC/MS	EPA 625; EPA 8270C/D	Hexachlorobenzene
GC/MS	EPA 625; EPA 8270C/D	Hexachlorobutadiene
GC/MS	EPA 625; EPA 8270C/D	Hexachlorocyclopentadiene
GC/MS	EPA 625; EPA 8270C/D	Hexachloroethane
GC/MS	EPA 8270C/D	Hexachlorophene
GC/MS	EPA 8270C/D	Hexachloropropene
GC/MS	EPA 625; EPA 8270C/D	Indeno(1, 2, 3-cd)pyrene
GC/MS	EPA 8270C/D	Isodrin
GC/MS	EPA 625; EPA 8270C/D	Isophorone
GC/MS	EPA 8270C/D	Isosafrole
GC/MS	EPA 8270C/D	Kepone
GC/MS	EPA 8270C/D	Methapyriline
GC/MS	EPA 8270C/D	Methy methanesulfonate
GC/MS	EPA 8270C/D	Methyl parathion
GC/MS	EPA 625; EPA 8270C/D	Naphthalene
GC/MS	EPA 625; EPA 8270C/D	Nitrobenzene
GC/MS	EPA 8270C/D	Nitroquinoline-1-oxide
GC/MS	EPA 8270C/D	n-Nitrosodiethylamine
GC/MS	EPA 625; EPA 8270C/D	n-Nitrosodimethylamine
GC/MS	EPA 8270C/D	n-Nitroso-di-n-butylamine
GC/MS	EPA 625; EPA 8270C/D	n-Nitrosodi-n-propylamine
GC/MS	EPA 625; EPA 8270C/D	n-Nitrosodiphenylamine
GC/MS	EPA 8270C/D	n-Nitrosomethylethylamine
GC/MS	EPA 8270C/D	n-Nitrosomorpholine
GC/MS	EPA 8270C/D	n-Nitrosopiperidine
GC/MS	EPA 8270C/D	n-Nitrosopyrrolidine

Non-Potable Water		
Technology	**Method**	**Analyte**
GC/MS	EPA 8270C/D	O,O,O-Triethyl phosphorothioate
GC/MS	EPA 8270C/D	o,o-Diethyl o-2pyrazinyl phosphorothioate
GC/MS	EPA 8270C/D	o-Toluidine
GC/MS	EPA 8270C/D	Pentachlorobenzene
GC/MS	EPA 8270C/D	Pentachloronitrobenzene
GC/MS	EPA 625; EPA 8270C/D	Pentachlorophenol
GC/MS	EPA 625	Perylene
GC/MS	EPA 8270C/D	Phenacetin
GC/MS	EPA 625; EPA 8270C/D	Phenanthrene
GC/MS	EPA 625; EPA 8270C/D	Phenol
GC/MS	EPA 8270C/D	Phorate
GC/MS	EPA 8270C/D	Pronamide
GC/MS	EPA 625; EPA 8270C/D	Pyrene
GC/MS	EPA 8270C/D	Pyridine
GC/MS	EPA 8270C/D	Safrole
GC/MS	EPA 8270C/D	Sulfotepp
GC/MS	EPA 8270C/D	Thionazin
GC/MS	EPA 625; EPA 8270C/D	3, 3’-Dichlorobenzidine
GC/MS	EPA 8270C/D	3, 3’-Dimethylbenzidine
GC/MS	EPA 8270C/D SIM	1,1'-Biphenyl
GC/MS	EPA 8270C/D SIM	1,2,4,5-Tetrachlorobenzene
GC/MS	EPA 8270C/D SIM	1,4-Dioxane
GC/MS	EPA 8270C/D SIM	1-Methylnaphthalene
GC/MS	EPA 8270C/D SIM	2,2'-Oxybis(1-chloropropane
GC/MS	EPA 8270C/D SIM	2,3,4,6-Tetrachlorophenol
GC/MS	EPA 8270C/D SIM	2,4,5-Trichlorophenol
GC/MS	EPA 8270C/D SIM	2,4,6-Trichlorophenol
GC/MS	EPA 8270C/D SIM	2,4-Dichlorophenol
GC/MS	EPA 8270C/D SIM	2,4-Dimethylphenol

Non-Potable Water		
Technology	**Method**	**Analyte**
GC/MS	EPA 8270C/D SIM	2,4-Dinitrophenol
GC/MS	EPA 8270C/D SIM	2,4-Dinitrotoluene
GC/MS	EPA 8270C/D SIM	2,6-Dinitrotoluene
GC/MS	EPA 8270C/D SIM	2-Chloronaphthalene
GC/MS	EPA 8270C/D SIM	2-Chlorophenol
GC/MS	EPA 8270C/D SIM	2-Methylnaphthalene
GC/MS	EPA 8270C/D SIM	2-Methylphenol
GC/MS	EPA 8270C/D SIM	2-Nitroaniline
GC/MS	EPA 8270C/D SIM	2-Nitrophenol
GC/MS	EPA 8270C/D SIM	3&4-Methylphenol
GC/MS	EPA 8270C/D SIM	3,3'-Dichlorobenzidine
GC/MS	EPA 8270C/D SIM	3-Nitroaniline
GC/MS	EPA 8270C/D SIM	4,6-Dinitro-2-methylphenol
GC/MS	EPA 8270C/D SIM	4-Bromophenyl-phenylether
GC/MS	EPA 8270C/D SIM	4-Chloro-3-methylphenol
GC/MS	EPA 8270C/D SIM	4-Chloroaniline
GC/MS	EPA 8270C/D SIM	4-Chlorophenyl-phenylether
GC/MS	EPA 8270C/D SIM	4-Nitroaniline
GC/MS	EPA 8270C/D SIM	4-Nitrophenol
GC/MS	EPA 8270C/D SIM	Acenaphthene
GC/MS	EPA 8270C/D SIM	Acenaphthylene
GC/MS	EPA 8270C/D SIM	Acetophenone
GC/MS	EPA 8270C/D SIM	Anthracene
GC/MS	EPA 8270C/D SIM	Atrazine
GC/MS	EPA 8270C/D SIM	Benzaldehyde
GC/MS	EPA 8270C/D SIM	Benzo(a)anthracene
GC/MS	EPA 8270C/D SIM	Benzo(a)pyrene
GC/MS	EPA 8270C/D SIM	Benzo(b)fluoranthene
GC/MS	EPA 8270C/D SIM	Benzo(g,h,i)perylene

Non-Potable Water		
Technology	**Method**	**Analyte**
GC/MS	EPA 8270C/D SIM	Benzo(k)fluoranthene
GC/MS	EPA 8270C/D SIM	Bis(2-chloroethoxy)methane
GC/MS	EPA 8270C/D SIM	Bis(2-chloroethyl)ether
GC/MS	EPA 8270C/D SIM	Bis(2-ethylhexyl)phthalate
GC/MS	EPA 8270C/D SIM	Butylbenzylphthalate
GC/MS	EPA 8270C/D SIM	Caprolactam
GC/MS	EPA 8270C/D SIM	Carbazole
GC/MS	EPA 8270C/D SIM	Chrysene
GC/MS	EPA 8270C/D SIM	Dibenzo(a,h)anthracene
GC/MS	EPA 8270C/D SIM	Dibenzofuran
GC/MS	EPA 8270C/D SIM	Diethylphthalate
GC/MS	EPA 8270C/D SIM	Dimethyl phthalate
GC/MS	EPA 8270C/D SIM	Di-n-butylphthalate
GC/MS	EPA 8270C/D SIM	Di-n-octylphthalate
GC/MS	EPA 8270C/D SIM	Fluoranthene
GC/MS	EPA 8270C/D SIM	Fluorene
GC/MS	EPA 8270C/D SIM	Hexachlorobenzene
GC/MS	EPA 8270C/D SIM	Hexachlorobutadiene
GC/MS	EPA 8270C/D SIM	Hexachlorocyclopentadiene
GC/MS	EPA 8270C/D SIM	Hexachloroethane
GC/MS	EPA 8270C/D SIM	Indeno(1,2,3-cd)pyrene
GC/MS	EPA 8270C/D SIM	Isophorone
GC/MS	EPA 8270C/D SIM	Naphthalene
GC/MS	EPA 8270C/D SIM	Nitrobenzene
GC/MS	EPA 8270C/D SIM	n-Nitroso-di-n-propylamine
GC/MS	EPA 8270C/D SIM	n-Nitrosodiphenylamine
GC/MS	EPA 8270C/D SIM	Pentachlorophenol
GC/MS	EPA 8270C/D SIM	Phenanthrene
GC/MS	EPA 8270C/D SIM	Phenol

Non-Potable Water		
Technology	**Method**	**Analyte**
GC/MS	EPA 8270C/D SIM	Pyrene
HPLC/UV	EPA 8330A/B	1, 3, 5-Trinitrobenzene
HPLC/UV	EPA 8330A/B	1, 3-Dinitrobenzene
HPLC/UV	EPA 8330A/B	2, 4, 6-Trinitrotoluene
HPLC/UV	EPA 8330A/B	2, 4-Dinitrotoluene
HPLC/UV	EPA 8330A/B	2, 6-Dinitrotoluene
HPLC/UV	EPA 8330A/B	2-Amino-4, 6 -Dinitrotoluene
HPLC/UV	EPA 8330A/B	2-Nitrotoluene
HPLC/UV	EPA 8330A/B	3-Nitrotoluene
HPLC/UV	EPA 8330A/B	3,5-Dinitroaniline
HPLC/UV	EPA 8330A/B	4-Amino-2, 6-Dinitrotoluene
HPLC/UV	EPA 8330A/B	4-Nitrotoluene
HPLC/UV	EPA 8330A/B	Ethylene glycol dinitrate (EGDN)
HPLC/UV	EPA 8330A/B	Hexahydro-1, 3, 5-trinitro-1, 3, 5-triazine (RDX)
HPLC/UV	EPA 8330A/B	Nitroguanidine
HPLC/UV	EPA 8330A/B	Nitrobenzene
HPLC/UV	EPA 8330A MOD	Nitroglycerin
HPLC/UV	EPA 8330B	Nitroglycerin
HPLC/UV	EPA 8330A/B	Octahydro-1, 3, 5, 7-tetrazocine (HMX)
HPLC/UV	EPA 8330A/B	Pentaerythritol Tetranitrate (PETN)
HPLC/UV	EPA 8330A/B	Tetryl
CVAA	EPA 245.1; EPA 7470A	Mercury
CVAF	EPA 1631E	Low Level Mercury
ICP/AES	EPA 200.7; EPA 6010C/D	Aluminum
ICP/AES	EPA 200.7; EPA 6010C/D	Antimony
ICP/AES	EPA 200.7; EPA 6010C/D	Arsenic
ICP/AES	EPA 200.7; EPA 6010C/D	Barium
ICP/AES	EPA 200.7; EPA 6010C/D	Beryllium
ICP/AES	EPA 200.7; EPA 6010C/D	Boron

Non-Potable Water		
Technology	**Method**	**Analyte**
ICP/AES	EPA 200.7; EPA 6010C/D	Cadmium
ICP/AES	EPA 200.7; EPA 6010C/D	Calcium
ICP/AES	EPA 200.7; EPA 6010C/D	Chromium
ICP/AES	EPA 200.7; EPA 6010C/D	Cobalt
ICP/AES	EPA 200.7; EPA 6010C/D	Copper
ICP/AES	EPA 200.7; EPA 6010C/D	Iron
ICP/AES	EPA 200.7; EPA 6010C/D	Lead
ICP/AES	EPA 200.7; EPA 6010C/D	Magnesium
ICP/AES	EPA 200.7; EPA 6010C/D	Manganese
ICP/AES	EPA 200.7; EPA 6010C/D	Molybdenum
ICP/AES	EPA 200.7; EPA 6010C/D	Nickel
ICP/AES	EPA 200.7; EPA 6010C/D	Potassium
ICP/AES	EPA 200.7; EPA 6010C/D	Selenium
ICP/AES	EPA 200.7; EPA 6010C/D	Silicon
ICP/AES	EPA 200.7; EPA 6010C/D	Silver
ICP/AES	EPA 200.7; EPA 6010C/D	Sodium
ICP/AES	EPA 6010C/D	Strontium
ICP/AES	EPA 200.7; EPA 6010C/D	Thallium
ICP/AES	EPA 200.7; EPA 6010C/D	Tin
ICP/AES	EPA 200.7; EPA 6010C/D	Titanium
ICP/AES	EPA 200.7; EPA 6010C/D	Vanadium
ICP/AES	EPA 200.7; EPA 6010C/D	Zinc
ICP/MS	EPA 200.8; EPA 6020A/B	Aluminum
ICP/MS	EPA 200.8; EPA 6020A/B	Antimony
ICP/MS	EPA 200.8; EPA 6020A/B	Arsenic
ICP/MS	EPA 200.8; EPA 6020A/B	Barium
ICP/MS	EPA 200.8; EPA 6020A/B	Beryllium
ICP/MS	EPA 200.8; EPA 6020A/B	Boron
ICP/MS	EPA 200.8; EPA 6020A/B	Cadmium

Non-Potable Water		
Technology	**Method**	**Analyte**
ICP/MS	EPA 200.8; EPA 6020A/B	Calcium
ICP/MS	EPA 200.8; EPA 6020A/B	Chromium
ICP/MS	EPA 200.8; EPA 6020A/B	Cobalt
ICP/MS	EPA 200.8; EPA 6020A/B	Copper
ICP/MS	EPA 200.8; EPA 6020A/B	Iron
ICP/MS	EPA 200.8; EPA 6020A/B	Lead
ICP/MS	EPA 200.8; EPA 6020A/B	Magnesium
ICP/MS	EPA 200.8; EPA 6020A/B	Manganese
ICP/MS	EPA 200.8; EPA 6020A/B	Molybdenum
ICP/MS	EPA 200.8; EPA 6020A/B	Nickel
ICP/MS	EPA 200.8; EPA 6020A/B	Potassium
ICP/MS	EPA 200.8; EPA 6020A/B	Selenium
ICP/MS	EPA 200.8; EPA 6020A/B	Silver
ICP/MS	EPA 200.8; EPA 6020A/B	Sodium
ICP/MS	EPA 6020A/B	Strontium
ICP/MS	EPA 200.8; EPA 6020A/B	Thallium
ICP/MS	EPA 200.8; EPA 6020A/B	Tin
ICP/MS	EPA 200.8; EPA 6020A/B	Titanium
ICP/MS	EPA 200.8; EPA 6020A/B	Tungsten
ICP/MS	EPA 200.8	Uranium
ICP/MS	EPA 200.8; EPA 6020A/B	Vanadium
ICP/MS	EPA 200.8; EPA 6020A/B	Zinc
IC	EPA 300.0; EPA 9056A	Chloride
IC	EPA 300.0; EPA 9056A	Fluoride
IC	EPA 300.0; EPA 9056A	Nitrate as N
IC	EPA 300.0; EPA 9056A	Nitrite as N
IC	EPA 300.0; EPA 9056A	Nitrate + Nitrite
IC	EPA 300.0; EPA 9056A	Orthophosphate as P
IC	EPA 300.0; EPA 9056A	Sulfate

Non-Potable Water		
Technology	**Method**	**Analyte**
IC	SOP CA-776	Lactic Acid
IC	SOP CA-776	Acetic Acid
IC	SOP CA-776	Propionic Acid
IC	SOP CA-776	Formic Acid
IC	SOP CA-776	Butyric Acid
IC	SOP CA-776	Pyruvic Acid
IC	SOP CA-776	i-Pentanoic Acid
IC	SOP CA-776	Pentanoic Acid
IC	SOP CA-776	i-Hexanoic Acid
IC	SOP CA-776	Hexanoic Acid
Titration	EPA 310.1; SM 2320B	Alkalinity
Caculation	SM 2340B	Hardness
Gravimetric	EPA 1664A; EPA 9070A	Oil and Grease, Oil and Grease with SGT
Gravimetric	SM 2540B/C/D	Solids
ISE	EPA 120.1; SM 2510B	Conductivity
ISE	SM 2520B	Practical Salinity
ISE	SM 4500F- C	Fluoride
ISE	SM 4500H+ B	pH
ISE	SM 5210B	TBOD / CBOD
Physical	EPA 1010A	Ignitability
Physical	EPA 9040C	pH
Titration	SM 2340C	Hardness
Titration	SM 4500SO_3 B	Sulfite
Titration	EPA 9034; SM 4500-S^{2-} F	Sulfide
Titration	EPA SW-846 Chapter 7.3.4	Reactive Sulfide
IR	EPA 9060A; SM 5310B	Total organic carbon
Turbidimetric	EPA 180.1; SM 2130B	Turbidity
Turbidimetric	EPA 9038; ASTM 516-02	Sulfate
UV/VIS	EPA 335.4; EPA 9012B; SM 4500-CN G	Amenable cyanide

Non-Potable Water		
Technology	**Method**	**Analyte**
UV/VIS	EPA 350.1; SM 4500-NH3 H	Ammonia as N
UV/VIS	SM 3500Fe D	Ferrous Iron
UV/VIS	EPA 351.2	Kjeldahl nitrogen - total
UV/VIS	EPA 353.2; SM 4500-NO3 F	Nitrate + Nitrite
UV/VIS	EPA 353.2; SM 4500-NO3 F	Nitrate as N
UV/VIS	EPA 353.2; SM 4500-NO3 F	Nitrite as N
UV/VIS	EPA 365.2; SM 4500-P E	Orthophosphate as P
UV/VIS	EPA 365.4	Phosphorus total
UV/VIS	EPA 821/R-91-100	AVS-SEM
UV/VIS	EPA 410.4	COD
UV/VIS	EPA 420.1; EPA 9065	Total Phenolics
UV/VIS	SM 4500-Cl G	Total Residual Chlorine
UV/VIS	SM 5540C	MBAS
UV/VIS	EPA 7196A; SM 3500-Cr D	Chromium VI
UV/VIS	EPA 9012B; EPA 335.4	Total Cyanide
UV/VIS	EPA 9251; SM 4500-Cl E	Chloride
UV/VIS	EPA SW-846 Chapter 7.3.4	Reactive Cyanide
Preparation	**Method**	**Type**
Cleanup Methods	EPA 3640A	Gel Permeation Clean-up
Cleanup Methods	EPA 3630C	Silica Gel
Cleanup Methods	EPA 3660B	Sulfur Clean-Up
Cleanup Methods	EPA 3665A	Sulfuric Acid Clean-Up
Organic Preparation	EPA 3510C	Separatory Funnel Extraction
Organic Preparation	EPA 3520C	Continuous Liquid-Liquid Extraction
Inorganic Preparation	EPA 3010A	Hotblock
Volatile Organic Preparation	EPA 5030C	Purge and Trap

Solid and Chemical Waste		
Technology	**Method**	**Analyte**
GC/ECD	EPA 8081B	2,4`-DDD
GC/ECD	EPA 8081B	2,4`-DDE
GC/ECD	EPA 8081B	2,4`-DDT
GC/ECD	EPA 8081B	4, 4`-DDD
GC/ECD	EPA 8081B	4, 4`-DDE
GC/ECD	EPA 8081B	4, 4`-DDT
GC/ECD	EPA 8081B	Aldrin
GC/ECD	EPA 8081B	alpha-BHC (alpha-Hexachlorocyclohexane)
GC/ECD	EPA 8081B	Alpha-Chlordane/cis-chlordane
GC/ECD	EPA 8081B	beta-BHC (beta-Hexachlorocyclohexane)
GC/ECD	EPA 608; EPA 8081B	Chlordane (tech.)
GC/ECD	EPA 8081B	Cis-Nonachlor
GC/ECD	EPA 8081B	delta-BHC
GC/ECD	EPA 8081B	Dieldrin
GC/ECD	EPA 8081B	Endosulfan I
GC/ECD	EPA 8081B	Endosulfan II
GC/ECD	EPA 8081B	Endosulfan sulfate
GC/ECD	EPA 8081B	Endrin
GC/ECD	EPA 8081B	Endrin aldehyde
GC/ECD	EPA 8081B	Endrin Ketone
GC/ECD	EPA 8081B	gamma-BHC (Lindane gamma-Hexachlorocyclohexane)
GC/ECD	EPA 8081B	gamma-Chlordane/trans-Chlordane
GC/ECD	EPA 8081B	Heptachlor
GC/ECD	EPA 8081B	Heptachlor epoxide
GC/ECD	EPA 8081B	Hexachlorobenzene
GC/ECD	EPA 8081B	Methoxychlor
GC/ECD	EPA 8081B	Mirex
GC/ECD	EPA 8081B	Oxychlordane
GC/ECD	EPA 8081B	Toxaphene (Chlorinated camphene)

Solid and Chemical Waste		
Technology	**Method**	**Analyte**
GC/ECD	EPA 8081B	Trans-Nonachlor
GC/ECD	EPA 8082A	Aroclor-1016 (PCB-1016)
GC/ECD	EPA 8082A	Aroclor-1221 (PCB-1221)
GC/ECD	EPA 8082A	Aroclor-1232 (PCB-1232)
GC/ECD	EPA 8082A	Aroclor-1242 (PCB-1242)
GC/ECD	EPA 8082A	Aroclor-1248 (PCB-1248)
GC/ECD	EPA 8082A	Aroclor-1254 (PCB-1254)
GC/ECD	EPA 8082A	Aroclor-1260 (PCB-1260)
GC/ECD	EPA 8082A MOD	Aroclor-1262 (PCB-1262)
GC/ECD	EPA 8082A MOD	Aroclor-1268 (PCB-1268)
GC/ECD	EPA 8082A	2, 2', 3, 3', 4, 4', 5, 5', 6-Nonachlorobiphenyl (BZ 206)
GC/ECD	EPA 8082A	2, 2', 3, 3', 4, 4', 5, 6-Octachlorobiphenyl (BZ 195)
GC/ECD	EPA 8082A	2, 2', 3, 3', 4, 4', 5-Heptachlorobiphenyl (BZ 170)
GC/ECD	EPA 8082A	2, 2', 3, 3', 4, 4'-Hexachlorobiphenyl (BZ 128)
GC/ECD	EPA 8082A	2, 2', 3, 4, 4', 5, 5'-Heptachlorobiphenyl (BZ 180)
GC/ECD	EPA 8082A	2, 2', 3, 4, 4', 5', 6-Heptachlorobiphenyl (BZ 183)
GC/ECD	EPA 8082A	2, 2', 3, 4, 4', 5-Hexachlorobiphenyl (BZ 138)
GC/ECD	EPA 8082A	2, 2', 3, 4, 4', 6, 6'-Heptachlorobiphenyl (BZ 184)
GC/ECD	EPA 8082A	2, 2', 3, 4', 5, 5', 6-Heptachlorobiphenyl (BZ 187)
GC/ECD	EPA 8082A	2, 2', 3, 4, 5'-Pentachlorobiphenyl (BZ 87)
GC/ECD	EPA 8082A	2, 2', 3, 5'-Tetrachlorobiphenyl (BZ 44)
GC/ECD	EPA 8082A	2, 2', 4, 4', 5, 5'-Hexachlorobiphenyl (BZ 153)
GC/ECD	EPA 8082A	2, 2', 4, 5, 5'-Pentachlorobiphenyl (BZ 101)
GC/ECD	EPA 8082A	2, 2', 4, 5-Tetrachlorobiphenyl (BZ 48)
GC/ECD	EPA 8082A	2, 2', 4, 5'-Tetrachlorobiphenyl (BZ 49)
GC/ECD	EPA 8082A	2, 2', 5, 5'-Tetrachlorobiphenyl (BZ 52)
GC/ECD	EPA 8082A	2, 2', 5-Trichlorobiphenyl (BZ 18)
GC/ECD	EPA 8082A	2, 3, 3', 4, 4', 5-Hexachlorobiphenyl (BZ 156)
GC/ECD	EPA 8082A	2, 3, 3', 4, 4', 5'-Hexachlorobiphenyl (BZ 157)

Solid and Chemical Waste		
Technology	**Method**	**Analyte**
GC/ECD	EPA 8082A	2, 3, 3', 4, 4'-Pentachlorobiphenyl (BZ 105)
GC/ECD	EPA 8082A	2, 3, 3', 4, 4', 5, 5'-Heptachlorobiphenyl (BZ 189)
GC/ECD	EPA 8082A	2, 3', 4, 4', 5, 5'-Hexachlorobiphenyl (BZ 167)
GC/ECD	EPA 8082A	2, 3', 4, 4', 5-Pentachlorobiphenyl (BZ 118)
GC/ECD	EPA 8082A	2, 3', 4, 4',5'-Pentachlorobiphenyl (BZ 123)
GC/ECD	EPA 8082A	2, 3', 4, 4'-Tetrachlorobiphenyl (BZ 66)
GC/ECD	EPA 8082A	2, 3, 4, 4', 5-Pentachlorobiphenyl (BZ 114)
GC/ECD	EPA 8082A	2, 4, 4'-Trichlorobiphenyl (BZ 28)
GC/ECD	EPA 8082A	2, 4'-Dichlorobiphenyl (BZ 8)
GC/ECD	EPA 8082A	3, 3', 4, 4', 5, 5'-Hexachlorobiphenyl (BZ 169)
GC/ECD	EPA 8082A	3, 3', 4, 4', 5-Pentachlorobiphenyl (BZ 126)
GC/ECD	EPA 8082A	3, 3', 4, 4'-Tetrachlorobiphenyl (BZ 77)
GC/ECD	EPA 8082A	3, 4, 4', 5-Tetrachlorobiphenyl (BZ 81)
GC/ECD	EPA 8082A	Decachlorobiphenyl (BZ 209)
GC/ECD	EPA 8151A	2, 4, 5-T
GC/ECD	EPA 8151A	2, 4-D
GC/ECD	EPA 8151A	2, 4-DB
GC/ECD	EPA 8151A	Dalapon
GC/ECD	EPA 8151A	Dicamba
GC/ECD	EPA 8151A	Dichloroprop
GC/ECD	EPA 8151A	Dinoseb
GC/ECD	EPA 8151A	MCPA
GC/ECD	EPA 8151A	MCPP
GC/ECD	EPA 8151A	Pentachlorophenol
GC/ECD	EPA 8151A	Silvex (2, 4, 5-TP)
GC/FID	EPA 8015C/D MOD	Diesel range organics (DRO)
GC/FID	EPA 8015C/D MOD	Total Petroleum Hydrocarbons (TPH)
GC/FID	EPA 8015C/D MOD	Gasoline range organics (GRO)
GC/FID/PID	MA DEP VPH	Volatile Organic Hydrocarbons

Solid and Chemical Waste		
Technology	**Method**	**Analyte**
GC/FID	MA DEP EPH	Extractable Petroleum Hydrocarbons
GC/FID	MA DEP EPH EPA 3546	Extractable Petroleum Hydrocarbons Microwave Extraction Preparation
GC/FID	CT-ETPH	Total Petroleum Hydrocarbons
GC/FID	TNRCC Method 1005	Total Petroleum Hydrocarbons
GC/FID	FL-PRO	Petroleum Range Organics
GC/ECD	EPA 8011	1, 2-Dibromoethane (EDB)
GC/ECD	EPA 8011	1, 2-Dibromo-3-chloropropane
GC/MS	EPA 8260B/C	1, 1, 1, 2-Tetrachloroethane
GC/MS	EPA 8260B/C	1,1,2-Trichloro-1,2,2-trifluoroethane
GC/MS	EPA 8260B/C	1, 1, 1-Trichloroethane
GC/MS	EPA 8260B/C	1, 1, 2, 2-Tetrachloroethane
GC/MS	EPA 8260B/C	1, 1, 2-Trichloroethane
GC/MS	EPA 8260B/C	1, 1-Dichloroethane
GC/MS	EPA 8260B/C	1, 1-Dichloroethylene
GC/MS	EPA 8260B/C	1, 1-Dichloropropene
GC/MS	EPA 8260B/C	1, 2, 3-Trichlorobenzene
GC/MS	EPA 8260B/C	1, 2, 3-Trichloropropane
GC/MS	EPA 8260B/C	1,2,3-Trimethylbenzene
GC/MS	EPA 8260B/C	1, 2, 4-Trichlorobenzene
GC/MS	EPA 8260B/C	1, 2, 4-Trimethylbenzene
GC/MS	EPA 8260B/C	1, 2-Dibromo-3-chloropropane
GC/MS	EPA 8260B/C	1, 2-Dibromoethane
GC/MS	EPA 8260B/C	1, 2-Dichlorobenzene
GC/MS	EPA 8260B/C	1, 2-Dichloroethane
GC/MS	EPA 8260B/C	1, 2-Dichloropropane
GC/MS	EPA 8260B/C	1,3,5-Trichlorobenzene
GC/MS	EPA 8260B/C	1, 3, 5-Trimethylbenzene
GC/MS	EPA 8260B/C	1, 3-Dichlorobenzene
GC/MS	EPA 8260B/C	1, 3-Dichloropropane

Solid and Chemical Waste		
Technology	**Method**	**Analyte**
GC/MS	EPA 8260B/C	1, 4-Dichlorobenzene
GC/MS	EPA 8260B/C	1, 4-Dioxane
GC/MS	EPA 8260B/C	2, 2-Dichloropropane
GC/MS	EPA 8260B/C	2-Butanone
GC/MS	EPA 8260B/C	2-Chloroethyl vinyl ether
GC/MS	EPA 8260B/C	2-Chlorotoluene
GC/MS	EPA 8260B/C	2-Hexanone
GC/MS	EPA 8260B/C	4-Chlorotoluene
GC/MS	EPA 8260B/C	4-Methyl-2-pentanone
GC/MS	EPA 8260B/C	Acetone
GC/MS	EPA 8260B/C	Acetonitrile
GC/MS	EPA 8260B/C	Acrolein
GC/MS	EPA 8260B/C	Acrylonitrile
GC/MS	EPA 8260B/C	Allyl chloride
GC/MS	EPA 8260B/C	Benzene
GC/MS	EPA 8260B/C	Benzyl chloride
GC/MS	EPA 8260B/C	Bromobenzene
GC/MS	EPA 8260B/C	Bromochloromethane
GC/MS	EPA 8260B/C	Bromodichloromethane
GC/MS	EPA 8260B/C	Bromoform
GC/MS	EPA 8260B/C	Carbon disulfide
GC/MS	EPA 8260B/C	Carbon tetrachloride
GC/MS	EPA 8260B/C	Chlorobenzene
GC/MS	EPA 8260B/C	Chloroethane
GC/MS	EPA 8260B/C	Chloroform
GC/MS	EPA 8260B/C	Chloroprene
GC/MS	EPA 8260B/C	cis-1, 2-Dichloroethene
GC/MS	EPA 8260B/C	cis-1, 3-Dichloropropene
GC/MS	EPA 8260B/C	cis-1,3-Dichloro-2-butene

Solid and Chemical Waste		
Technology	**Method**	**Analyte**
GC/MS	EPA 8260B/C	Cyclohexane
GC/MS	EPA 8260B/C	Dibromochloromethane
GC/MS	EPA 8260B/C	Dibromomethane
GC/MS	EPA 8260B/C	Dichlorodifluoromethane
GC/MS	EPA 8260B/C	Diethyl ether
GC/MS	EPA 8260B/C	Di-isopropylether
GC/MS	EPA 8260B/C	1,2-Dibromoethane (EDB)
GC/MS	EPA 8260B/C	Ethyl methacrylate
GC/MS	EPA 8260B/C	Ethylbenzene
GC/MS	EPA 8260B/C	Ethyl-t-butylether
GC/MS	EPA 8260B/C	Hexachlorobutadiene
GC/MS	EPA 8260B/C	Iodomethane
GC/MS	EPA 8260B/C	Isobutyl alcohol
GC/MS	EPA 8260B/C	Isopropyl alcohol
GC/MS	EPA 8260B/C	Isopropyl benzene
GC/MS	EPA 8260B/C	m p-xylenes
GC/MS	EPA 8260B/C	Methyl acetate
GC/MS	EPA 8260B/C	Methacrylonitrile
GC/MS	EPA 8260B/C	Methyl bromide (Bromomethane)
GC/MS	EPA 8260B/C	Methyl chloride (Chloromethane)
GC/MS	EPA 8260B/C	Methyl methacrylate
GC/MS	EPA 8260B/C	Methyl tert-butyl ether
GC/MS	EPA 8260B/C	Methylcyclohexane
GC/MS	EPA 8260B/C	Methylene chloride
GC/MS	EPA 8260B/C	Naphthalene
GC/MS	EPA 8260B/C	n-Butylbenzene
GC/MS	EPA 8260B/C	n-proplybenzene
GC/MS	EPA 8260B/C	o-Xylene
GC/MS	EPA 8260B/C	pentachloroethane

Solid and Chemical Waste		
Technology	**Method**	**Analyte**
GC/MS	EPA 8260B/C	p-Isopropyltoluene
GC/MS	EPA 8260B/C	Propionitrile
GC/MS	EPA 8260B/C	sec-butylbenzene
GC/MS	EPA 8260B/C	Styrene
GC/MS	EPA 8260B/C	t-Amylmethylether
GC/MS	EPA 8260B/C	tert-Butyl alcohol
GC/MS	EPA 8260B/C	tert-Butylbenzene
GC/MS	EPA 8260B/C	Tetrachloroethylene (Perchloroethylene)
GC/MS	EPA 8260B/C	Tetrahydrofuran
GC/MS	EPA 8260B/C	Toluene
GC/MS	EPA 8260B/C	trans-1, 2-Dichloroethylene
GC/MS	EPA 8260B/C	trans-1, 3-Dichloropropylene
GC/MS	EPA 8260B/C	Trans-1, 4-Dichloro-2-butuene
GC/MS	EPA 8260B/C	Trichloroethene (Trichloroethylene)
GC/MS	EPA 8260B/C	Trichlorofluoromethane
GC/MS	EPA 8260B/C	Vinyl acetate
GC/MS	EPA 8260B/C	Vinyl chloride
GC/MS	EPA 8260B/C	Xylene
GC/MS	EPA 8270C/D	1, 2, 4, 5-Tetrachlorobenzene
GC/MS	EPA 8270C/D	1, 2, 4-Trichlorobenzene
GC/MS	EPA 8270C/D	1, 2-Dichlorobenzene
GC/MS	EPA 8270C/D	1, 2-Diphenylhydrazine
GC/MS	EPA 8270C/D	1, 3, 5-Trinitrobenzene
GC/MS	EPA 8270C/D	1, 3-Dichlorobenzene
GC/MS	EPA 8270C/D	1, 3-Dinitrobenzene
GC/MS	EPA 8270C/D	1, 4-Dichlorobenzene
GC/MS	EPA 8270C/D	1, 4-Dioxane
GC/MS	EPA 8270C/D	1, 4-Naphthoquinone
GC/MS	EPA 8270C/D	1, 4-Phenylenediamine

Solid and Chemical Waste		
Technology	**Method**	**Analyte**
GC/MS	EPA 8270C/D	1,1-Biphenyl
GC/MS	EPA 8270C/D	1-Chloronaphthalene
GC/MS	EPA 8270C/D	1-Methylnaphthalene
GC/MS	EPA 8270C/D	1-Naphthylamine
GC/MS	EPA 8270C/D	2, 3, 4, 6-Tetrachlorophenol
GC/MS	EPA 8270C/D	2, 4, 5-Trochlorophenol
GC/MS	EPA 8270C/D	2, 4, 6-Trichlorophenol
GC/MS	EPA 8270C/D	2, 4-Dichlorophenol
GC/MS	EPA 8270C/D	2, 4-Dimethylphenol
GC/MS	EPA 8270C/D	2, 4-Dinitrophenol
GC/MS	EPA 8270C/D	2, 4-Dinitrotoluene (2 4-DNT)
GC/MS	EPA 8270C/D	2, 6-Dichlorophenol
GC/MS	EPA 8270C/D	2, 6-Dinitrotoluene (2 6-DNT)
GC/MS	EPA 8270C/D	2-Acetylaminofluorene
GC/MS	EPA 8270C/D	2-Chloronaphthalene
GC/MS	EPA 8270C/D	2-Chlorophenol
GC/MS	EPA 8270C/D	2-Methyl-4, 6-dinitrophenol
GC/MS	EPA 8270C/D	2-Methylnaphthalene
GC/MS	EPA 8270C/D	2-Methylphenol
GC/MS	EPA 8270C/D	2-Naphthylamine
GC/MS	EPA 8270C/D	2-Nitroaniline
GC/MS	EPA 8270C/D	2-Nitrophenol
GC/MS	EPA 8270C/D	2-Picoline
GC/MS	EPA 8270C/D	3, 3`-Dichlorobenzidine
GC/MS	EPA 8270C/D	3, 3'-Dimethylbenzidine
GC/MS	EPA 8270C/D	3,4-Methylphenol
GC/MS	EPA 8270C/D	3-Methylcholanthrene
GC/MS	EPA 8270C/D	3-Nitroaniline
GC/MS	EPA 8270C/D	4-Aminobiphenyl

Solid and Chemical Waste		
Technology	**Method**	**Analyte**
GC/MS	EPA 8270C/D	4-Bromophenyl phenyl ether
GC/MS	EPA 8270C/D	4-Chloro-3-methylphenol
GC/MS	EPA 8270C/D	4-Chloroaniline
GC/MS	EPA 8270C/D	4-Chlorophenyl phenylether
GC/MS	EPA 8270C/D	4-Dimethyl aminoazobenzene
GC/MS	EPA 8270C/D	4-Nitroaniline
GC/MS	EPA 8270C/D	4-Nitrophenol
GC/MS	EPA 8270C/D	4-Nitroquinoline-1-oxide
GC/MS	EPA 8270C/D	5-Nitro-o-toluidine
GC/MS	EPA 8270C/D	7,12-Dimethylbenz(a)anthracene
GC/MS	EPA 8270C/D	a a-Dimethylphenethylamine
GC/MS	EPA 8270C/D	Acenaphthene
GC/MS	EPA 8270C/D	Acenaphthylene
GC/MS	EPA 8270C/D	Acetophenone
GC/MS	EPA 8270C/D	Aniline
GC/MS	EPA 8270C/D	Anthracene
GC/MS	EPA 8270C/D	Aramite
GC/MS	EPA 8270C/D	Atrazine
GC/MS	EPA 8270C/D	Azobenzene
GC/MS	EPA 8270C/D	Benzaldehyde
GC/MS	EPA 8270C/D	Benzidine
GC/MS	EPA 8270C/D	Benzo(a)anthracene
GC/MS	EPA 8270C/D	Benzo(a)pyrene
GC/MS	EPA 8270C/D	Benzo(b)fluoranthene
GC/MS	EPA 8270C/D	Benzo(g h i)perylene
GC/MS	EPA 8270C/D	Benzo(k)fluoranthene
GC/MS	EPA 8270C/D	Benzoic Acid
GC/MS	EPA 8270C/D	Benzyl alcohol
GC/MS	EPA 8270C/D	bis(2-Chloroethoxy)methane

Solid and Chemical Waste		
Technology	**Method**	**Analyte**
GC/MS	EPA 8270C/D	bis(2-Chloroethyl) ether
GC/MS	EPA 8270C/D	bis(2-Chloroisopropyl) ether (2, 2`-Oxybis(1-chloropropane))
GC/MS	EPA 8270C/D	bis(2-Ethylhexyl) phthalate (DEHP)
GC/MS	EPA 8270C/D	Bis(2-Ethylhexyl)adipate
GC/MS	EPA 8270C/D	Butyl benzyl phthalate
GC/MS	EPA 8270C/D	Caprolactam
GC/MS	EPA 8270C/D	Carbazole
GC/MS	EPA 8270C/D	Chlorobenzilate
GC/MS	EPA 8270C/D	Chrysene
GC/MS	EPA 8270C/D	Diallate
GC/MS	EPA 8270C/D	Dibenzo(a,h)anthracene
GC/MS	EPA 8270C/D	Dibenzo(a,j)acridine
GC/MS	EPA 8270C/D	Dibenzofuran
GC/MS	EPA 8270C/D	Diethyl phthalate
GC/MS	EPA 8270C/D	Diethyladipate
GC/MS	EPA 8270C/D	Dimethoate
GC/MS	EPA 8270C/D	Dimethyl phthalate
GC/MS	EPA 8270C/D	Di-n-butyl phthalate
GC/MS	EPA 8270C/D	Di-n-octyl phthalate
GC/MS	EPA 8270C/D	Dinoseb
GC/MS	EPA 8270C/D	Disulfoton
GC/MS	EPA 8270C/D	Ethyl methacrylate
GC/MS	EPA 8270C/D	Ethyl methanesulfonate
GC/MS	EPA 8270C/D	Ethyl parathion
GC/MS	EPA 8270C/D	Famfur
GC/MS	EPA 8270C/D	Fluoranthene
GC/MS	EPA 8270C/D	Fluorene
GC/MS	EPA 8270C/D	Hexachlorobenzene
GC/MS	EPA 8270C/D	Hexachlorobutadiene

Solid and Chemical Waste		
Technology	**Method**	**Analyte**
GC/MS	EPA 8270C/D	Hexachlorocyclopentadiene
GC/MS	EPA 8270C/D	Hexachloroethane
GC/MS	EPA 8270C/D	Hexachlorophene
GC/MS	EPA 8270C/D	Hexachloropropene
GC/MS	EPA 8270C/D	Indeno(1, 2, 3-cd)pyrene
GC/MS	EPA 8270C/D	Isodrin
GC/MS	EPA 8270C/D	Isophorone
GC/MS	EPA 8270C/D	Isosafrole
GC/MS	EPA 8270C/D	Kepone
GC/MS	EPA 8270C/D	Methapyriline
GC/MS	EPA 8270C/D	Methyl methanesulfonate
GC/MS	EPA 8270C/D	Methyl parathion
GC/MS	EPA 8270C/D	Naphthalene
GC/MS	EPA 8270C/D	Nitrobenzene
GC/MS	EPA 8270C/D	n-Nitrosodiethylamine
GC/MS	EPA 8270C/D	n-Nitrosodimethylamine
GC/MS	EPA 8270C/D	n-Nitroso-di-n-butylamine
GC/MS	EPA 8270C/D	n-Nitrosodi-n-propylamine
GC/MS	EPA 8270C/D	n-Nitrosodiphenylamine
GC/MS	EPA 8270C/D	n-Nitrosomethylethylamine
GC/MS	EPA 8270C/D	n-Nitrosomorpholine
GC/MS	EPA 8270C/D	n-Nitrosopiperidine
GC/MS	EPA 8270C/D	n-Nitrosopyrrolidine
GC/MS	EPA 8270C/D	O, O, O-Triethyl phosphorothioate
GC/MS	EPA 8270C/D	o,o-Diethyl o-2-pyrazinyl phosphorothioate
GC/MS	EPA 8270C/D	o-Toluidine
GC/MS	EPA 8270C/D	Pentachlorobenzene
GC/MS	EPA 8270C/D	Pentachloronitrobenzene
GC/MS	EPA 8270C/D	Pentachlorophenol

Solid and Chemical Waste		
Technology	**Method**	**Analyte**
GC/MS	EPA 8270C/D	Phenacetin
GC/MS	EPA 8270C/D	Phenanthrene
GC/MS	EPA 8270C/D	Phenol
GC/MS	EPA 8270C/D	Phorate
GC/MS	EPA 8270C/D	Pronamide
GC/MS	EPA 8270C/D	Pyrene
GC/MS	EPA 8270C/D	Pyridine
GC/MS	EPA 8270C/D	Safrole
GC/MS	EPA 8270C/D	Sulfotepp
GC/MS	EPA 8270C/D	Thionazin
GC/MS	EPA 8270C/D SIM	1,1'-Biphenyl
GC/MS	EPA 8270C/D SIM	1,2,4,5-Tetrachlorobenzene
GC/MS	EPA 8270C/D SIM	1,4-Dioxane
GC/MS	EPA 8270C/D SIM	1-Methylnaphthalene
GC/MS	EPA 8270C/D SIM	2,2'-Oxybis(1-chloropropane
GC/MS	EPA 8270C/D SIM	2,3,4,6-Tetrachlorophenol
GC/MS	EPA 8270C/D SIM	2,4,5-Trichlorophenol
GC/MS	EPA 8270C/D SIM	2,4,6-Trichlorophenol
GC/MS	EPA 8270C/D SIM	2,4-Dichlorophenol
GC/MS	EPA 8270C/D SIM	2,4-Dimethylphenol
GC/MS	EPA 8270C/D SIM	2,4-Dinitrophenol
GC/MS	EPA 8270C/D SIM	2,4-Dinitrotoluene
GC/MS	EPA 8270C/D SIM	2,6-Dinitrotoluene
GC/MS	EPA 8270C/D SIM	2-Chloronaphthalene
GC/MS	EPA 8270C/D SIM	2-Chlorophenol
GC/MS	EPA 8270C/D SIM	2-Methylnaphthalene
GC/MS	EPA 8270C/D SIM	2-Methylphenol
GC/MS	EPA 8270C/D SIM	2-Nitroaniline
GC/MS	EPA 8270C/D SIM	2-Nitrophenol

Solid and Chemical Waste		
Technology	**Method**	**Analyte**
GC/MS	EPA 8270C/D SIM	3&4-Methylphenol
GC/MS	EPA 8270C/D SIM	3,3'-Dichlorobenzidine
GC/MS	EPA 8270C/D SIM	3-Nitroaniline
GC/MS	EPA 8270C/D SIM	4,6-Dinitro-2-methylphenol
GC/MS	EPA 8270C/D SIM	4-Bromophenyl-phenylether
GC/MS	EPA 8270C/D SIM	4-Chloro-3-methylphenol
GC/MS	EPA 8270C/D SIM	4-Chloroaniline
GC/MS	EPA 8270C/D SIM	4-Chlorophenyl-phenylether
GC/MS	EPA 8270C/D SIM	4-Nitroaniline
GC/MS	EPA 8270C/D SIM	4-Nitrophenol
GC/MS	EPA 8270C/D SIM	Acenaphthene
GC/MS	EPA 8270C/D SIM	Acenaphthylene
GC/MS	EPA 8270C/D SIM	Acetophenone
GC/MS	EPA 8270C/D SIM	Anthracene
GC/MS	EPA 8270C/D SIM	Atrazine
GC/MS	EPA 8270C/D SIM	Benzaldehyde
GC/MS	EPA 8270C/D SIM	Benzo(a)anthracene
GC/MS	EPA 8270C/D SIM	Benzo(a)pyrene
GC/MS	EPA 8270C/D SIM	Benzo(b)fluoranthene
GC/MS	EPA 8270C/D SIM	Benzo(g,h,i)perylene
GC/MS	EPA 8270C/D SIM	Benzo(k)fluoranthene
GC/MS	EPA 8270C/D SIM	Bis(2-chloroethoxy)methane
GC/MS	EPA 8270C/D SIM	Bis(2-chloroethyl)ether
GC/MS	EPA 8270C/D SIM	Bis(2-ethylhexyl)phthalate
GC/MS	EPA 8270C/D SIM	Butylbenzylphthalate
GC/MS	EPA 8270C/D SIM	Caprolactam
GC/MS	EPA 8270C/D SIM	Carbazole
GC/MS	EPA 8270C/D SIM	Chrysene
GC/MS	EPA 8270C/D SIM	Dibenzo(a,h)anthracene

Solid and Chemical Waste		
Technology	**Method**	**Analyte**
GC/MS	EPA 8270C/D SIM	Dibenzofuran
GC/MS	EPA 8270C/D SIM	Diethylphthalate
GC/MS	EPA 8270C/D SIM	Dimethyl phthalate
GC/MS	EPA 8270C/D SIM	Di-n-butylphthalate
GC/MS	EPA 8270C/D SIM	Di-n-octylphthalate
GC/MS	EPA 8270C/D SIM	Fluoranthene
GC/MS	EPA 8270C/D SIM	Fluorene
GC/MS	EPA 8270C/D SIM	Hexachlorobenzene
GC/MS	EPA 8270C/D SIM	Hexachlorobutadiene
GC/MS	EPA 8270C/D SIM	Hexachlorocyclopentadiene
GC/MS	EPA 8270C/D SIM	Hexachloroethane
GC/MS	EPA 8270C/D SIM	Indeno(1,2,3-cd)pyrene
GC/MS	EPA 8270C/D SIM	Isophorone
GC/MS	EPA 8270C/D SIM	Naphthalene
GC/MS	EPA 8270C/D SIM	Nitrobenzene
GC/MS	EPA 8270C/D SIM	n-Nitroso-di-n-propylamine
GC/MS	EPA 8270C/D SIM	n-Nitrosodiphenylamine
GC/MS	EPA 8270C/D SIM	Pentachlorophenol
GC/MS	EPA 8270C/D SIM	Phenanthrene
GC/MS	EPA 8270C/D SIM	Phenol
GC/MS	EPA 8270C/D SIM	Pyrene
HPLC/UV	EPA 8330A	1 ,3, 5-Trinitrobenzene
HPLC/UV	EPA 8330A	1, 3-Dinitrobenzene
HPLC/UV	EPA 8330A	2, 4, 6-Trinitrotoluene
HPLC/UV	EPA 8330A	2, 4-Dinitrotoluene
HPLC/UV	EPA 8330A	2, 6-Dinitrotoluene
HPLC/UV	EPA 8330A	2-Amino-4, 6-dinitrotoluene
HPLC/UV	EPA 8330A	2-Nitrotoluene
HPLC/UV	EPA 8330A	3-Nitrotoluene

Solid and Chemical Waste		
Technology	**Method**	**Analyte**
HPLC/UV	EPA 8330A	3,5-Dinitroaniline
HPLC/UV	EPA 8330A	4-Amino-2,6-dinitrotoluene
HPLC/UV	EPA 8330A	4-Nitrotoluene
HPLC/UV	EPA 8330A	Ethylene glycol dinitrate (EGDN)
HPLC/UV	EPA 8330A	Hexahydro-1, 3, 5-trinitro-1, 3, 5-triazine (RDX)
HPLC/UV	EPA 8330A	Nitrobenzene
HPLC/UV	EPA 8330A MOD	Nitroglycerin
HPLC/UV	EPA 8330A	Octahydro-1, 3, 5, 7-tetrazocine (HMX)
HPLC/UV	EPA 8330A	Pentaerythritol Tetranitrate (PETN)
HPLC/UV	EPA 8330A	Tetryl
HPLC/UV	EPA 8330A	Nitroguanidine
HPLC/UV	EPA 8330B	1, 3, 5-Trinitrobenzene
HPLC/UV	EPA 8330B	1, 3-Dinitrobenzene
HPLC/UV	EPA 8330B	2, 4, 6-Trinitrotoluene
HPLC/UV	EPA 8330B	2, 4-Dinitrotoluene
HPLC/UV	EPA 8330B	2, 6-Dinitrotoluene
HPLC/UV	EPA 8330B	2-Amino-4, 6 –Dinitrotoluene
HPLC/UV	EPA 8330B	2-Nitrotoluene
HPLC/UV	EPA 8330B	3-Nitrotoluene
HPLC/UV	EPA 8330B	3,5-Dinitroaniline
HPLC/UV	EPA 8330B	4-Amino-2,6,Dinitrotoluene
HPLC/UV	EPA 8330B	4-Nitrotoluene
HPLC/UV	EPA 8330B	Ethylene glycol dinitrate (EGDN)
HPLC/UV	EPA 8330B	Hexahydro-1, 3, 5-trinitro-1, 3, 5-triazine (RDX)
HPLC/UV	EPA 8330B	Nitrobenzene
HPLC/UV	EPA 8330B	Nitroglycerin
HPLC/UV	EPA 8330B	Octahydro-1, 3, 5, 7-tetrazocine (HMX)
HPLC/UV	EPA 8330B	Pentaerythritol Tetranitrate (PETN)
HPLC/UV	EPA 8330B	Tetryl

Solid and Chemical Waste		
Technology	**Method**	**Analyte**
HPLC/UV	EPA 8330B	Nitroguanidine
CVAA	EPA 7471B	Mercury
CVAF	EPA 1631E	Low Level Mercury
ICP/AES	EPA 6010C/D	Aluminum
ICP/AES	EPA 6010C/D	Antimony
ICP/AES	EPA 6010C/D	Arsenic
ICP/AES	EPA 6010C/D	Barium
ICP/AES	EPA 6010C/D	Beryllium
ICP/AES	EPA 6010C/D	Boron
ICP/AES	EPA 6010C/D	Cadmium
ICP/AES	EPA 6010C/D	Calcium
ICP/AES	EPA 6010C/D	Chromium
ICP/AES	EPA 6010C/D	Cobalt
ICP/AES	EPA 6010C/D	Copper
ICP/AES	EPA 6010C/D	Iron
ICP/AES	EPA 6010C/D	Lead
ICP/AES	EPA 6010C/D	Magnesium
ICP/AES	EPA 6010C/D	Manganese
ICP/AES	EPA 6010C/D	Molybdenum
ICP/AES	EPA 6010C/D	Nickel
ICP/AES	EPA 6010C/D	Potassium
ICP/AES	EPA 6010C/D	Selenium
ICP/AES	EPA 6010C/D	Silicon
ICP/AES	EPA 6010C/D	Silver
ICP/AES	EPA 6010C/D	Sodium
ICP/AES	EPA 6010C/D	Strontium
ICP/AES	EPA 6010C/D	Thallium
ICP/AES	EPA 6010C/D	Tin
ICP/AES	EPA 6010C/D	Titanium

Solid and Chemical Waste		
Technology	**Method**	**Analyte**
ICP/AES	EPA 6010C/D	Vanadium
ICP/AES	EPA 6010C/D	Zinc
ICP/MS	EPA 6020A/B	Aluminum
ICP/MS	EPA 6020A/B	Antimony
ICP/MS	EPA 6020A/B	Arsenic
ICP/MS	EPA 6020A/B	Barium
ICP/MS	EPA 6020A/B	Beryllium
ICP/MS	EPA 6020A/B	Boron
ICP/MS	EPA 6020A/B	Cadmium
ICP/MS	EPA 6020A/B	Calcium
ICP/MS	EPA 6020A/B	Chromium
ICP/MS	EPA 6020A/B	Cobalt
ICP/MS	EPA 6020A/B	Copper
ICP/MS	EPA 6020A/B	Iron
ICP/MS	EPA 6020A/B	Lead
ICP/MS	EPA 6020A/B	Magnesium
ICP/MS	EPA 6020A/B	Manganese
ICP/MS	EPA 6020A/B	Molybdenum
ICP/MS	EPA 6020A/B	Nickel
ICP/MS	EPA 6020A/B	Potassium
ICP/MS	EPA 6020A/B	Selenium
ICP/MS	EPA 6020A/B	Silver
ICP/MS	EPA 6020A/B	Sodium
ICP/MS	EPA 6020A/B	Strontium
ICP/MS	EPA 6020A/B	Thallium
ICP/MS	EPA 6020A/B	Tin
ICP/MS	EPA 6020A/B	Titanium
ICP/MS	EPA 6020A/B	Tungsten
ICP/MS	EPA 6020A/B	Vanadium

Solid and Chemical Waste		
Technology	**Method**	**Analyte**
ICP/MS	EPA 6020A/B	Zinc
IC	EPA 9056A	Chloride
IC	EPA 9056A	Fluoride
IC	EPA 9056A	Nitrate as N
IC	EPA 9056A	Nitrite as N
IC	EPA 9056A	Orthophosphate
IC	EPA 9056A	Sulfate
Gravimetric	EPA 9071A/B	Oil and Grease, Oil and Grease with SGT
Physical	EPA 1010A	Ignitability
Physical	EPA 9045D	pH
Titration	EPA SW-846 Chapter 7.3.4	Reactive Sulfide
Titration	Walkley-Black	Total Organic Carbon
IR	Lloyd Kahn	Total organic carbon
Turbidimetric	EPA 9038; ASTM 516-02	Sulfate
UV/VIS	EPA 350.1; SM 4500-NH3 H	Ammonia as N
UV/VIS	EPA 9251; SM 4500-Cl E	Chloride
UV/VIS	EPA SW-846 Chapter 7.3.4	Reactive Cyanide
UV/VIS	EPA 821/R-91-100	AVS-SEM
UV/VIS	SM 3500-Fe D	Ferrous Iron
Cleanup Methods	EPA 3630C	Silica Gel
UV/VIS	EPA 7196	Chromium VI
UV/VIS	EPA 7196A	Chromium VI
UV/VIS	EPA 9012B	Total cyanide
Grain Size	ASTM D422	
Preparation	**Method**	**Type**
Preparation	EPA 1311	Toxicity Characteristic Leaching Procedure
Preparation	EPA 1312	Synthetic Precipitation Leaching Procedure
Cleanup Methods	EPA 3660B	Sulfur Clean-up

Solid and Chemical Waste		
Technology	**Method**	**Analyte**
Cleanup Methods	EPA 3620C	Florsil Clean-up
Cleanup Methods	EPA 3630C	Silica Gel Clean-up
Cleanup Methods	EPA 3640A	GPC Clean-up
Organic Preparation	EPA 3540C	Soxhlet Extraction
Organic Preparation	EPA 3545A	Pressurized Fluid Extraction
Organic Preparation	EPA 3546	Microwave Extraction Preparation for EPA 8082A, 8081B and 8270C, D, 8015C/D
Organic Preparation	EPA 3550C	Sonication
Inorganics Preparation	EPA 3050B	Hotblock
Inorganics Preparation	EPA 3060A	Alkaline Digestion
Volatile Organics Preparation	EPA 5035/5035A	Closed System Purge and Trap

Air		
Technology	**Method**	**Analyte**
GC/MS	EPA TO-15	1, 1, 1-Trichloroethane
GC/MS	EPA TO-15	1, 1, 2, 2-Tetrachloroethane
GC/MS	EPA TO-15	1, 1, 2-Trichloroethane
GC/MS	EPA TO-15	1, 1-Dichloroethane
GC/MS	EPA TO-15	1, 1-Dichloroethylene
GC/MS	EPA TO-15	1, 2, 4-Trichlorobenzene
GC/MS	EPA TO-15	1, 2, 4-Trimethylbenzene
GC/MS	EPA TO-15	1, 2-Dibromoethane (EDB)
GC/MS	EPA TO-15	1, 2-Dichlorobenzene
GC/MS	EPA TO-15	1, 2-Dichloroethane
GC/MS	EPA TO-15	1, 2-Dichloroethenes (Total)
GC/MS	EPA TO-15	1, 2-Dichloropropane
GC/MS	EPA TO-15	1, 3, 5-Trimethylbenzene
GC/MS	EPA TO-15	1, 3-Butadiene

Air		
Technology	**Method**	**Analyte**
GC/MS	EPA TO-15	1, 3-Dichlorobenzene
GC/MS	EPA TO-15	1, 4-Dichlorobenzene
GC/MS	EPA TO-15	1, 4-Dioxane
GC/MS	EPA TO-15	1,1,2-Trichloro1,2,2-trifluoroethane (Freon 113)
GC/MS	EPA TO-15	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)
GC/MS	EPA TO-15	1,4-Difluorobenzene
GC/MS	EPA TO-15	2,2,4-Trimethylpentane
GC/MS	EPA TO-15	2-Butanone
GC/MS	EPA TO-15	2-Chlorotoluene
GC/MS	EPA TO-15	2-Hexanone
GC/MS	EPA TO-15	2-Propanol
GC/MS	EPA TO-15	3-Chloropropene (Allyl chloride)
GC/MS	EPA TO-15	4-Ethyltoluene
GC/MS	EPA TO-15	4-Methyl-2-pentanone
GC/MS	EPA TO-15	Acetone
GC/MS	EPA TO-15	Acrolein
GC/MS	EPA TO-15	Benzene
GC/MS	EPA TO-15	Benzyl chloride
GC/MS	EPA TO-15	Bromochloromethane
GC/MS	EPA TO-15	Bromodichloromethane
GC/MS	EPA TO-15	Bromoform
GC/MS	EPA TO-15	Carbon disulfide
GC/MS	EPA TO-15	Carbon tetrachloride
GC/MS	EPA TO-15	Chlorobenzene
GC/MS	EPA TO-15	Chloroethane
GC/MS	EPA TO-15	Chloroform
GC/MS	EPA TO-15	Cis-1, 2-Dichloroethene
GC/MS	EPA TO-15	Cis-1, 3-Dichloropropene
GC/MS	EPA TO-15	Cyclohexane

Air		
Technology	**Method**	**Analyte**
GC/MS	EPA TO-15	Dibromochloromethane
GC/MS	EPA TO-15	Dichlorodifluoromethane (Freon 12)
GC/MS	EPA TO-15	Ethanol
GC/MS	EPA TO-15	Ethyl acetate
GC/MS	EPA TO-15	Ethylbenzene
GC/MS	EPA TO-15	Hexachlorobutadiene
GC/MS	EPA TO-15	Isopropyl alcohol
GC/MS	EPA TO-15	Isopropylbenzene
GC/MS	EPA TO-15	m, p-Xylene
GC/MS	EPA TO-15	Methyl bromide (Bromomethane)
GC/MS	EPA TO-15	Methyl chloride (Chloromethane)
GC/MS	EPA TO-15	Methyl methacrylate
GC/MS	EPA TO-15	Methyl tert-butyl ether
GC/MS	EPA TO-15	Methylene chloride
GC/MS	EPA TO-15	Naphthalene
GC/MS	EPA TO-15	n-Heptane
GC/MS	EPA TO-15	n-Hexane
GC/MS	EPA TO-15	o-Xylene
GC/MS	EPA TO-15	Propene
GC/MS	EPA TO-15	Styrene
GC/MS	EPA TO-15	tert-Butyl alcohol
GC/MS	EPA TO-15	Tetrachloroethylene (Perchloroethylene)
GC/MS	EPA TO-15	Tetrahydrofuran
GC/MS	EPA TO-15	Toluene
GC/MS	EPA TO-15	trans-1, 2-Dichloroethylene
GC/MS	EPA TO-15	trans-1, 3-Dichloropropylene
GC/MS	EPA TO-15	Trichloroethene (Trichloroethylene)
GC/MS	EPA TO-15	Trichlorofluoromethane (Freon 11)
GC/MS	EPA TO-15	Vinyl acetate
GC/MS	EPA TO-15	Vinyl bromide

Air		
Technology	**Method**	**Analyte**
GC/MS	EPA TO-15	Vinyl chloride
GC/MS	EPA TO-15	Xylenes (Total)
GC/MS	MA DEP APH	Aliphatic C5-C8 range
GC/MS	MA DEP APH	Aliphatic C9-C12 range
GC/MS	MA DEP APH	Aromatic C9-C10 range
GC/MS	MA DEP APH	1,3-Butadiene
GC/MS	MA DEP APH	Benzene
GC/MS	MA DEP APH	Ethylbenzene
GC/MS	MA DEP APH	m+p-Xylene
GC/MS	MA DEP APH	Methyl tert-butyl ether
GC/MS	MA DEP APH	Naphthalene
GC/MS	MA DEP APH	o-Xylene
GC/MS	MA DEP APH	Toluene

Biological Tissue		
Technology	**Method**	**Analyte**
GC/ECD	EPA 8081B	4, 4`-DDD
GC/ECD	EPA 8081B	4, 4`-DDE
GC/ECD	EPA 8081B	4, 4`-DDT
GC/ECD	EPA 8081B	Aldrin
GC/ECD	EPA 8081B	alpha-BHC (alpha-Hexachlorocyclohexane)
GC/ECD	EPA 8081B	Alpha-Chlordane/cis-Chlordane
GC/ECD	EPA 8081B	beta-BHC (beta-Hexachlorocyclohexane)
GC/ECD	EPA 8081B	Cis-Nonaclor
GC/ECD	EPA 8081B	delta-BHC
GC/ECD	EPA 8081B	Dieldrin
GC/ECD	EPA 8081B	Endosulfan I
GC/ECD	EPA 8081B	Endosulfan II
GC/ECD	EPA 8081B	Endosulfan sulfate
GC/ECD	EPA 8081B	Endrin

Biological Tissue		
Technology	**Method**	**Analyte**
GC/ECD	EPA 8081B	Endrin aldehyde
GC/ECD	EPA 8081B	Endrin Ketone
GC/ECD	EPA 8081B	gamma-BHC (Lindane gamma-Hexachlorocyclohexane)
GC/ECD	EPA 8081B	gamma-Chlordane/trans-Chlordane
GC/ECD	EPA 8081B	Heptachlor
GC/ECD	EPA 8081B	Heptachlor epoxide
GC/ECD	EPA 8081B	Hexachlorobenzene
GC/ECD	EPA 8081B	Methoxychlor
GC/ECD	EPA 8081B	Oxychlordane
GC/ECD	EPA 8081B	Toxaphene (Chlorinated camphene)
GC/ECD	EPA 8081B	trans-Nonachlor
GC/ECD	EPA 8082A	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ 206)
GC/ECD	EPA 8082A	2,2',3,3',4,4',5,6-Octachlorobiphenyl (BZ 195)
GC/ECD	EPA 8082A	2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ 170)
GC/ECD	EPA 8082A	2,2',3,3',4,4'-Hexachlorobiphenyl (BZ 128)
GC/ECD	EPA 8082A	2, 2', 3, 4, 4', 5, 5'-Heptachlorobiphenyl (BZ 180)
GC/ECD	EPA 8082A	2, 2', 3, 4, 4', 5', 6-Heptachlorobiphenyl (BZ 183)
GC/ECD	EPA 8082A	2, 2', 3, 4, 4', 5-Hexachlorobiphenyl (BZ 138)
GC/ECD	EPA 8082A	2, 2', 3, 4, 4', 6, 6'-Heptachlorobiphenyl (BZ 184)
GC/ECD	EPA 8082A	2, 2', 3, 4', 5, 5', 6-Heptachlorobiphenyl (BZ 187)
GC/ECD	EPA 8082A	2, 2', 3, 4, 5'-Pentachlorobiphenyl (BZ 87)
GC/ECD	EPA 8082A	2, 2', 3, 5'-Tetrachlorobiphenyl (BZ 44)
GC/ECD	EPA 8082A	2, 2', 4, 4', 5, 5'-Hexachlorobiphenyl (BZ 153)
GC/ECD	EPA 8082A	2, 2', 4, 5, 5'-Pentachlorobiphenyl (BZ 101)
GC/ECD	EPA 8082A	2, 2', 4, 5'-Tetrachlorobiphenyl (BZ 49)
GC/ECD	EPA 8082A	2, 2', 5, 5'-Tetrachlorobiphenyl (BZ 52)
GC/ECD	EPA 8082A	2, 2', 5-Trichlorobiphenyl (BZ 18)
GC/ECD	EPA 8082A	2, 3, 3', 4, 4'-Pentachlorobiphenyl (BZ 105)
GC/ECD	EPA 8082A	2, 3', 4, 4', 5-Pentachlorobiphenyl (BZ 118)

Biological Tissue		
Technology	**Method**	**Analyte**
GC/ECD	EPA 8082A	2, 3', 4, 4'-Tetrachlorobiphenyl (BZ 66)
GC/ECD	EPA 8082A	2, 4, 4'-Trichlorobiphenyl (BZ 28)
GC/ECD	EPA 8082A	2, 4'-Dichlorobiphenyl (BZ 8)
GC/ECD	EPA 8082A	Decachlorobiphenyl (BZ 209)
GC/MS	EPA 8270C/D SIM	2,4-Dichlorophenol
GC/MS	EPA 8270C/D SIM	2,4-Dimethylphenol
GC/MS	EPA 8270C/D SIM	2,4-Dinitrophenol
GC/MS	EPA 8270C/D SIM	2,4-Dinitrotoluene
GC/MS	EPA 8270C/D SIM	2,6-Dinitrotoluene
GC/MS	EPA 8270C/D SIM	2-Chloronaphthalene
GC/MS	EPA 8270C/D SIM	2-Chlorophenol
GC/MS	EPA 8270C/D SIM	2-Methylnaphthalene
GC/MS	EPA 8270C/D SIM	2-Methylphenol
GC/MS	EPA 8270C/D SIM	2-Nitroaniline
GC/MS	EPA 8270C/D SIM	2-Nitrophenol
GC/MS	EPA 8270C/D SIM	3&4-Methylphenol
GC/MS	EPA 8270C/D SIM	4,6-Dinitro-2-methylphenol
GC/MS	EPA 8270C/D SIM	4-Bromophenyl-phenylether
GC/MS	EPA 8270C/D SIM	4-Chloro-3-methylphenol
GC/MS	EPA 8270C/D SIM	4-Chloroaniline
GC/MS	EPA 8270C/D SIM	4-Chlorophenyl-phenylether
GC/MS	EPA 8270C/D SIM	4-Nitrophenol
GC/MS	EPA 8270C/D SIM	Acenaphthene
GC/MS	EPA 8270C/D SIM	Acenaphthylene
GC/MS	EPA 8270C/D SIM	Acetophenone
GC/MS	EPA 8270C/D SIM	Anthracene
GC/MS	EPA 8270C/D SIM	Atrazine
GC/MS	EPA 8270C/D SIM	Benzo(a)anthracene
GC/MS	EPA 8270C/D SIM	Benzo(a)pyrene
GC/MS	EPA 8270C/D SIM	Benzo(b)fluoranthene

Biological Tissue		
Technology	**Method**	**Analyte**
GC/MS	EPA 8270C/D SIM	Benzo(g,h,i)perylene
GC/MS	EPA 8270C/D SIM	Benzo(k)fluoranthene
GC/MS	EPA 8270C/D SIM	Bis(2-chloroethoxy)methane
GC/MS	EPA 8270C/D SIM	Bis(2-chloroethyl)ether
GC/MS	EPA 8270C/D SIM	Butylbenzylphthalate
GC/MS	EPA 8270C/D SIM	Caprolactam
GC/MS	EPA 8270C/D SIM	Carbazole
GC/MS	EPA 8270C/D SIM	Chrysene
GC/MS	EPA 8270C/D SIM	Dibenzo(a,h)anthracene
GC/MS	EPA 8270C/D SIM	Dibenzofuran
GC/MS	EPA 8270C/D SIM	Diethylphthalate
GC/MS	EPA 8270C/D SIM	Dimethyl phthalate
GC/MS	EPA 8270C/D SIM	Di-n-butylphthalate
GC/MS	EPA 8270C/D SIM	Di-n-octylphthalate
GC/MS	EPA 8270C/D SIM	Fluoranthene
GC/MS	EPA 8270C/D SIM	Fluorene
GC/MS	EPA 8270C/D SIM	Hexachlorobenzene
GC/MS	EPA 8270C/D SIM	Hexachlorobutadiene
GC/MS	EPA 8270C/D SIM	Hexachloroethane
GC/MS	EPA 8270C/D SIM	Indeno(1,2,3-cd)pyrene
GC/MS	EPA 8270C/D SIM	Isophorone
GC/MS	EPA 8270C/D SIM	Naphthalene
GC/MS	EPA 8270C/D SIM	n-Nitroso-di-n-propylamine
GC/MS	EPA 8270C/D SIM	n-Nitrosodiphenylamine
GC/MS	EPA 8270C/D SIM	Pentachlorophenol
GC/MS	EPA 8270C/D SIM	Phenanthrene
GC/MS	EPA 8270C/D SIM	Phenol
GC/MS	EPA 8270C/D SIM	Pyrene
ICP/AES	EPA 6010C/D	Aluminum
ICP/AES	EPA 6010C/D	Antimony

Biological Tissue		
Technology	**Method**	**Analyte**
ICP/AES	EPA 6010C/D	Arsenic
ICP/AES	EPA 6010C/D	Barium
ICP/AES	EPA 6010C/D	Beryllium
ICP/AES	EPA 6010C/D	Boron
ICP/AES	EPA 6010C/D	Cadmium
ICP/AES	EPA 6010C/D	Calcium
ICP/AES	EPA 6010C/D	Chromium
ICP/AES	EPA 6010C/D	Cobalt
ICP/AES	EPA 6010C/D	Copper
ICP/AES	EPA 6010C/D	Iron
ICP/AES	EPA 6010C/D	Lead
ICP/AES	EPA 6010C/D	Magnesium
ICP/AES	EPA 6010C/D	Manganese
ICP/AES	EPA 6010C/D	Molybdenum
ICP/AES	EPA 6010C/D	Nickel
ICP/AES	EPA 6010C/D	Potassium
ICP/AES	EPA 6010C/D	Selenium
ICP/AES	EPA 6010C/D	Silver
ICP/AES	EPA 6010C/D	Sodium
ICP/AES	EPA 6010C/D	Thallium
ICP/AES	EPA 6010C/D	Tin
ICP/AES	EPA 6010C/D	Vanadium
ICP/AES	EPA 6010C/D	Zinc
ICP/MS	EPA 6020A/B	Aluminum
ICP/MS	EPA 6020A/B	Antimony
ICP/MS	EPA 6020A/B	Arsenic
ICP/MS	EPA 6020A/B	Barium
ICP/MS	EPA 6020A/B	Beryllium
ICP/MS	EPA 6020A/B	Boron
ICP/MS	EPA 6020A/B	Cadmium

Biological Tissue		
Technology	**Method**	**Analyte**
ICP/MS	EPA 6020A/B	Calcium
ICP/MS	EPA 6020A/B	Chromium
ICP/MS	EPA 6020A/B	Cobalt
ICP/MS	EPA 6020A/B	Copper
ICP/MS	EPA 6020A/B	Iron
ICP/MS	EPA 6020A/B	Lead
ICP/MS	EPA 6020A/B	Magnesium
ICP/MS	EPA 6020A/B	Manganese
ICP/MS	EPA 6020A/B	Molybdenum
ICP/MS	EPA 6020A/B	Nickel
ICP/MS	EPA 6020A/B	Potassium
ICP/MS	EPA 6020A/B	Selenium
ICP/MS	EPA 6020A/B	Silver
ICP/MS	EPA 6020A/B	Sodium
ICP/MS	EPA 6020A/B	Thallium
ICP/MS	EPA 6020A/B	Tin
ICP/MS	EPA 6020A/B	Vanadium
ICP/MS	EPA 6020A/B	Zinc
CVAA	EPA 7471B	Mercury

Note:

1. This scope is formatted as part of a single document including Certificate of Accreditation No. L2223.

Vice President

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

BUREAU OF LABORATORIES

LABORATORY ACCREDITATION PROGRAM

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certifies That

68-00571

Katahdin Analytical Services LLC

600 Technology Way, Scarborough, ME 04074

Having duly met the requirement of
The act of June 29, 2002 (P.L. 596, No. 90)
dealing with Environmental Laboratories Accreditation
(27 Pa. C.S. §§4104-4113) and the
National Environmental Laboratory Accreditation Program Standard

is hereby approved as an

Accredited Laboratory

to conduct analysis within the fields of accreditations more fully described in the attached Scope of Accreditation

Expiration Date: **11/30/2019**

Certificate Number: **009**

Aaren S. Alger, Chief
Laboratory Accreditation Program
Bureau of Laboratories

Continued accreditation status depends on successful ongoing participation in the program
Certificate not transferable Surrender upon revocation
To be conspicuously displayed at the Laboratory
Not valid unless accompanied by a valid Scope of Accreditation
Shall not be used to imply endorsement by the Commonwealth of Pennsylvania
Customers are urged to verify the laboratory's current accreditation status
PA DEP is a NELAP recognized accreditation body

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 009-001 expiration date November 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

DEP Laboratory ID: 68-00571 **EPA Lab Code: ME00019** **TNI Code: TNI00476** **(207) 874-2400**

Katahdin Analytical Services LLC
600 Technology Way
Scarborough, ME 04074

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary	Effective Date
ASTM D516-02		Sulfate	NELAP	NH	11/14/2014
EPA 1010	A	Ignitability	NELAP	NH	11/14/2014
EPA 1631	E	Mercury	NELAP	NH	11/14/2014
EPA 1664	A	Oil and grease	NELAP	NH	11/14/2014
EPA 180.1		Turbidity	NELAP	NH	11/14/2014
EPA 200.7	4.4	Aluminum	NELAP	NH	11/14/2014
EPA 200.7	4.4	Antimony	NELAP	NH	11/14/2014
EPA 200.7	4.4	Arsenic	NELAP	NH	11/14/2014
EPA 200.7	4.4	Barium	NELAP	NH	11/14/2014
EPA 200.7	4.4	Beryllium	NELAP	NH	11/14/2014
EPA 200.7	4.4	Boron	NELAP	NH	11/14/2014
EPA 200.7	4.4	Cadmium	NELAP	NH	11/14/2014
EPA 200.7	4.4	Calcium	NELAP	NH	11/14/2014
EPA 200.7	4.4	Chromium	NELAP	NH	11/14/2014
EPA 200.7	4.4	Cobalt	NELAP	NH	11/14/2014
EPA 200.7	4.4	Copper	NELAP	NH	11/14/2014
EPA 200.7	4.4	Iron	NELAP	NH	11/14/2014
EPA 200.7	4.4	Lead	NELAP	NH	11/14/2014
EPA 200.7	4.4	Magnesium	NELAP	NH	11/14/2014
EPA 200.7	4.4	Manganese	NELAP	NH	11/14/2014
EPA 200.7	4.4	Molybdenum	NELAP	NH	11/14/2014
EPA 200.7	4.4	Nickel	NELAP	NH	11/14/2014
EPA 200.7	4.4	Potassium	NELAP	NH	11/14/2014
EPA 200.7	4.4	Selenium	NELAP	NH	11/14/2014
EPA 200.7	4.4	Silicon	NELAP	NH	11/14/2014
EPA 200.7	4.4	Silver	NELAP	NH	11/14/2014
EPA 200.7	4.4	Sodium	NELAP	NH	11/14/2014
EPA 200.7	4.4	Thallium	NELAP	NH	11/14/2014
EPA 200.7	4.4	Tin	NELAP	NH	11/14/2014
EPA 200.7	4.4	Titanium	NELAP	NH	11/14/2014
EPA 200.7	4.4	Vanadium	NELAP	NH	11/14/2014
EPA 200.7	4.4	Zinc	NELAP	NH	11/14/2014
EPA 200.8	5.4	Aluminum	NELAP	NH	11/14/2014
EPA 200.8	5.4	Antimony	NELAP	NH	11/14/2014
EPA 200.8	5.4	Arsenic	NELAP	NH	11/14/2014
EPA 200.8	5.4	Barium	NELAP	NH	11/14/2014
EPA 200.8	5.4	Beryllium	NELAP	NH	11/14/2014
EPA 200.8	5.4	Cadmium	NELAP	NH	11/14/2014
EPA 200.8	5.4	Chromium	NELAP	NH	11/14/2014
EPA 200.8	5.4	Cobalt	NELAP	NH	11/14/2014

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 009-001 expiration date November 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

DEP Laboratory ID: 68-00571 **EPA Lab Code: ME00019** **TNI Code: TNI00476** **(207) 874-2400**

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary	Effective Date
EPA 200.8	5.4	Copper	NELAP	NH	11/14/2014
EPA 200.8	5.4	Lead	NELAP	NH	11/14/2014
EPA 200.8	5.4	Manganese	NELAP	NH	11/14/2014
EPA 200.8	5.4	Molybdenum	NELAP	NH	11/14/2014
EPA 200.8	5.4	Nickel	NELAP	NH	11/14/2014
EPA 200.8	5.4	Selenium	NELAP	NH	11/14/2014
EPA 200.8	5.4	Silver	NELAP	NH	11/14/2014
EPA 200.8	5.4	Thallium	NELAP	NH	11/14/2014
EPA 200.8	5.4	Vanadium	NELAP	NH	11/14/2014
EPA 200.8	5.4	Zinc	NELAP	NH	11/14/2014
EPA 245.1	3.0	Mercury	NELAP	NH	11/14/2014
EPA 300.0	2.1	Bromide	NELAP	NH	11/14/2014
EPA 300.0	2.1	Chloride	NELAP	NH	11/14/2014
EPA 300.0	2.1	Fluoride	NELAP	NH	11/14/2014
EPA 300.0	2.1	Nitrate as N	NELAP	NH	11/14/2014
EPA 300.0	2.1	Nitrite as N	NELAP	NH	11/14/2014
EPA 300.0	2.1	Orthophosphate as P	NELAP	NH	11/14/2014
EPA 300.0	2.1	Sulfate	NELAP	NH	11/14/2014
EPA 300.0	2.1	Total nitrate-nitrite	NELAP	NH	11/14/2014
EPA 3010	A	Hot plate acid digestion (HNO3 + HCl)	NELAP	NH	11/14/2014
EPA 3060	A	Alkaline digestion of Cr(VI)	NELAP	NH	11/14/2014
EPA 350.1		Ammonia as N	NELAP	NH	11/14/2014
EPA 3510	C	Separatory funnel liquid-liquid extraction	NELAP	NH	11/14/2014
EPA 3520	C	Continuous liquid-liquid extraction	NELAP	NH	11/14/2014
EPA 353.2		Nitrite as N	NELAP	NH	11/14/2014
EPA 353.2		Total nitrate-nitrite	NELAP	NH	11/14/2014
EPA 3535		Solid-phase extraction (SPE)	NELAP	NH	11/14/2014
EPA 3620	B	Florisil cleanup	NELAP	NH	11/14/2014
EPA 3630	C	Silica gel cleanup	NELAP	NH	11/14/2014
EPA 3640	A	Gel permeation cleanup (GPC)	NELAP	NH	11/14/2014
EPA 365.4		Phosphorus, total	NELAP	NH	11/14/2014
EPA 3660	B	Sulfur cleanup	NELAP	NH	11/14/2014
EPA 410.4		Chemical oxygen demand (COD)	NELAP	NH	11/14/2014
EPA 420.1		Total phenolics	NELAP	NH	11/14/2014
EPA 5030	C	Aqueous-phase purge-and-trap	NELAP	NH	11/14/2014
EPA 6010		Aluminum	NELAP	NH	11/14/2014
EPA 6010		Antimony	NELAP	NH	11/14/2014
EPA 6010		Arsenic	NELAP	NH	11/14/2014
EPA 6010		Barium	NELAP	NH	11/14/2014
EPA 6010		Beryllium	NELAP	NH	11/14/2014
EPA 6010		Boron	NELAP	NH	11/14/2014
EPA 6010		Cadmium	NELAP	NH	11/14/2014
EPA 6010		Calcium	NELAP	NH	11/14/2014
EPA 6010		Chromium	NELAP	NH	11/14/2014
EPA 6010		Cobalt	NELAP	NH	11/14/2014
EPA 6010		Copper	NELAP	NH	11/14/2014
EPA 6010		Iron	NELAP	NH	11/14/2014

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Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 009-001 expiration date November 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

DEP Laboratory ID: 68-00571 **EPA Lab Code: ME00019** **TNI Code: TNI00476** **(207) 874-2400**

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary	Effective Date
EPA 6010		Lead	NELAP	NH	11/14/2014
EPA 6010		Magnesium	NELAP	NH	11/14/2014
EPA 6010		Manganese	NELAP	NH	11/14/2014
EPA 6010	C	Metals by ICP/AES	NELAP	NH	11/14/2014
EPA 6010		Molybdenum	NELAP	NH	11/14/2014
EPA 6010		Nickel	NELAP	NH	11/14/2014
EPA 6010		Potassium	NELAP	NH	11/14/2014
EPA 6010		Selenium	NELAP	NH	11/14/2014
EPA 6010		Silver	NELAP	NH	11/14/2014
EPA 6010		Sodium	NELAP	NH	11/14/2014
EPA 6010		Strontium	NELAP	NH	11/14/2014
EPA 6010		Thallium	NELAP	NH	11/14/2014
EPA 6010		Tin	NELAP	NH	11/14/2014
EPA 6010		Titanium	NELAP	NH	11/14/2014
EPA 6010		Vanadium	NELAP	NH	11/14/2014
EPA 6010		Zinc	NELAP	NH	11/14/2014
EPA 6020		Aluminum	NELAP	NH	11/14/2014
EPA 6020		Antimony	NELAP	NH	11/14/2014
EPA 6020		Arsenic	NELAP	NH	11/14/2014
EPA 6020		Barium	NELAP	NH	11/14/2014
EPA 6020		Beryllium	NELAP	NH	11/14/2014
EPA 6020		Cadmium	NELAP	NH	11/14/2014
EPA 6020		Chromium	NELAP	NH	11/14/2014
EPA 6020		Cobalt	NELAP	NH	11/14/2014
EPA 6020		Copper	NELAP	NH	11/14/2014
EPA 6020		Lead	NELAP	NH	11/14/2014
EPA 6020		Manganese	NELAP	NH	11/14/2014
EPA 6020	A	Metals by ICP/MS	NELAP	NH	11/14/2014
EPA 6020		Nickel	NELAP	NH	11/14/2014
EPA 6020		Silver	NELAP	NH	11/14/2014
EPA 6020		Thallium	NELAP	NH	11/14/2014
EPA 6020		Zinc	NELAP	NH	11/14/2014
EPA 608		4,4'-DDD	NELAP	NH	11/14/2014
EPA 608		4,4'-DDE	NELAP	NH	11/14/2014
EPA 608		4,4'-DDT	NELAP	NH	11/14/2014
EPA 608		Aldrin (HHDN)	NELAP	NH	11/14/2014
EPA 608		Aroclor-1016 (PCB-1016)	NELAP	NH	11/14/2014
EPA 608		Aroclor-1221 (PCB-1221)	NELAP	NH	11/14/2014
EPA 608		Aroclor-1232 (PCB-1232)	NELAP	NH	11/14/2014
EPA 608		Aroclor-1242 (PCB-1242)	NELAP	NH	11/14/2014
EPA 608		Aroclor-1248 (PCB-1248)	NELAP	NH	11/14/2014
EPA 608		Aroclor-1254 (PCB-1254)	NELAP	NH	11/14/2014
EPA 608		Aroclor-1260 (PCB-1260)	NELAP	NH	11/14/2014
EPA 608		Chlordane (tech.)	NELAP	NH	11/14/2014
EPA 608		Dieldrin	NELAP	NH	11/14/2014
EPA 608		Endosulfan I	NELAP	NH	11/14/2014
EPA 608		Endosulfan II	NELAP	NH	11/14/2014

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Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 009-001 expiration date November 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

DEP Laboratory ID: 68-00571 **EPA Lab Code: ME00019** **TNI Code: TNI00476** **(207) 874-2400**

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary	Effective Date
EPA 608		Endosulfan sulfate	NELAP	NH	11/14/2014
EPA 608		Endrin	NELAP	NH	11/14/2014
EPA 608		Endrin aldehyde	NELAP	NH	11/14/2014
EPA 608		Heptachlor	NELAP	NH	11/14/2014
EPA 608		Heptachlor epoxide	NELAP	NH	11/14/2014
EPA 608		Toxaphene (Chlorinated camphene)	NELAP	NH	11/14/2014
EPA 608		alpha-BHC (alpha-Hexachlorocyclohexane)	NELAP	NH	11/14/2014
EPA 608		beta-BHC (beta-Hexachlorocyclohexane)	NELAP	NH	11/14/2014
EPA 608		delta-BHC (delta-Hexachlorocyclohexane)	NELAP	NH	11/14/2014
EPA 608		gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	NELAP	NH	11/14/2014
EPA 624		1,1,1-Trichloroethane	NELAP	NH	11/14/2014
EPA 624		1,1,2,2-Tetrachloroethane	NELAP	NH	11/14/2014
EPA 624		1,1,2-Trichloroethane	NELAP	NH	11/14/2014
EPA 624		1,1-Dichloroethane	NELAP	NH	11/14/2014
EPA 624		1,1-Dichloroethene (1,1-Dichloroethylene)	NELAP	NH	11/14/2014
EPA 624		1,2-Dichlorobenzene (o-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 624		1,2-Dichloroethane	NELAP	NH	11/14/2014
EPA 624		1,2-Dichloropropane	NELAP	NH	11/14/2014
EPA 624		1,3-Dichlorobenzene (m-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 624		1,4-Dichlorobenzene (p-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 624		2-Chloroethyl vinyl ether	NELAP	NH	11/14/2014
EPA 624		Benzene	NELAP	NH	11/14/2014
EPA 624		Bromodichloromethane	NELAP	NH	11/14/2014
EPA 624		Bromoform	NELAP	NH	11/14/2014
EPA 624		Bromomethane (Methyl bromide)	NELAP	NH	11/14/2014
EPA 624		Carbon tetrachloride	NELAP	NH	11/14/2014
EPA 624		Chlorobenzene	NELAP	NH	11/14/2014
EPA 624		Chloroethane	NELAP	NH	11/14/2014
EPA 624		Chloroform	NELAP	NH	11/14/2014
EPA 624		Chloromethane (Methyl chloride)	NELAP	NH	11/14/2014
EPA 624		Dibromochloromethane	NELAP	NH	11/14/2014
EPA 624		Ethylbenzene	NELAP	NH	11/14/2014
EPA 624		Methylene chloride (Dichloromethane)	NELAP	NH	11/14/2014
EPA 624		Tetrachloroethene (PCE, Perchloroethylene)	NELAP	NH	11/14/2014
EPA 624		Toluene	NELAP	NH	11/14/2014
EPA 624		Trichloroethene (TCE, Trichloroethylene)	NELAP	NH	11/14/2014
EPA 624		Trichlorofluoromethane (Freon 11)	NELAP	NH	11/14/2014
EPA 624		Vinyl chloride (Chloroethene)	NELAP	NH	11/14/2014
EPA 624		cis-1,3-Dichloropropene	NELAP	NH	11/14/2014
EPA 624		trans-1,2-Dichloroethene	NELAP	NH	11/14/2014
EPA 624		trans-1,3-Dichloropropene	NELAP	NH	11/14/2014
EPA 625		1,2,4-Trichlorobenzene	NELAP	NH	11/14/2014
EPA 625		1,2-Dichlorobenzene (o-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 625		1,3-Dichlorobenzene (m-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 625		1,4-Dichlorobenzene (p-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 625		2,2'-oxybis(1-Chloropropane)	NELAP	NH	11/14/2014

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Attached to Certificate of Accreditation 009-001 expiration date November 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

DEP Laboratory ID: 68-00571 **EPA Lab Code: ME00019** **TNI Code: TNI00476** **(207) 874-2400**

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary	Effective Date
EPA 625		2,4,5-Trichlorophenol	NELAP	NH	11/14/2014
EPA 625		2,4,6-Trichlorophenol	NELAP	NH	11/14/2014
EPA 625		2,4-Dichlorophenol	NELAP	NH	11/14/2014
EPA 625		2,4-Dimethylphenol	NELAP	NH	11/14/2014
EPA 625		2,4-Dinitrophenol	NELAP	NH	11/14/2014
EPA 625		2,4-Dinitrotoluene (2,4-DNT)	NELAP	NH	11/14/2014
EPA 625		2,6-Dichlorophenol	NELAP	NH	11/14/2014
EPA 625		2,6-Dinitrotoluene (2,6-DNT)	NELAP	NH	11/14/2014
EPA 625		2-Chloronaphthalene	NELAP	NH	11/14/2014
EPA 625		2-Chlorophenol	NELAP	NH	11/14/2014
EPA 625		2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	NELAP	NH	11/14/2014
EPA 625		2-Nitrophenol	NELAP	NH	11/14/2014
EPA 625		3,3'-Dichlorobenzidine	NELAP	NH	11/14/2014
EPA 625		4-Bromophenyl phenyl ether	NELAP	NH	11/14/2014
EPA 625		4-Chloro-3-methylphenol	NELAP	NH	11/14/2014
EPA 625		4-Chlorophenyl phenyl ether	NELAP	NH	11/14/2014
EPA 625		4-Nitrophenol	NELAP	NH	11/14/2014
EPA 625		Acenaphthene	NELAP	NH	11/14/2014
EPA 625		Acenaphthylene	NELAP	NH	11/14/2014
EPA 625		Anthracene	NELAP	NH	11/14/2014
EPA 625		Benzidine	NELAP	NH	11/14/2014
EPA 625		Benzo[a]anthracene	NELAP	NH	11/14/2014
EPA 625		Benzo[a]pyrene	NELAP	NH	11/14/2014
EPA 625		Benzo[b]fluoranthene	NELAP	NH	11/14/2014
EPA 625		Benzo[ghi]perylene	NELAP	NH	11/14/2014
EPA 625		Benzo[k]fluoranthene	NELAP	NH	11/14/2014
EPA 625		Benzyl butyl phthalate (Butyl benzyl phthalate)	NELAP	NH	11/14/2014
EPA 625		Chrysene (Benzo[a]phenanthrene)	NELAP	NH	11/14/2014
EPA 625		Di-n-butyl phthalate	NELAP	NH	11/14/2014
EPA 625		Di-n-octyl phthalate	NELAP	NH	11/14/2014
EPA 625		Dibenzo[a,h]anthracene	NELAP	NH	11/14/2014
EPA 625		Diethyl phthalate	NELAP	NH	11/14/2014
EPA 625		Dimethyl phthalate	NELAP	NH	11/14/2014
EPA 625		Fluoranthene	NELAP	NH	11/14/2014
EPA 625		Fluorene	NELAP	NH	11/14/2014
EPA 625		Hexachlorobenzene	NELAP	NH	11/14/2014
EPA 625		Hexachlorobutadiene (1,3-Hexachlorobutadiene)	NELAP	NH	11/14/2014
EPA 625		Hexachloroethane	NELAP	NH	11/14/2014
EPA 625		Indeno(1,2,3-cd)pyrene	NELAP	NH	11/14/2014
EPA 625		Isophorone	NELAP	NH	11/14/2014
EPA 625		N-Nitrosodi-n-propylamine	NELAP	NH	11/14/2014
EPA 625		N-Nitrosodimethylamine	NELAP	NH	11/14/2014
EPA 625		N-Nitrosodiphenylamine	NELAP	NH	11/14/2014
EPA 625		Naphthalene	NELAP	NH	11/14/2014
EPA 625		Nitrobenzene	NELAP	NH	11/14/2014



pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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DEP Laboratory ID: 68-00571 **EPA Lab Code: ME00019** **TNI Code: TNI00476** **(207) 874-2400**

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary	Effective Date
EPA 625		Pentachlorophenol (PCP)	NELAP	NH	11/14/2014
EPA 625		Phenanthrene	NELAP	NH	11/14/2014
EPA 625		Phenol	NELAP	NH	11/14/2014
EPA 625		Pyrene	NELAP	NH	11/14/2014
EPA 625		bis(2-Chloroethoxy)methane	NELAP	NH	11/14/2014
EPA 625		bis(2-Chloroethyl) ether	NELAP	NH	11/14/2014
EPA 625		bis(2-Ethylhexyl) phthalate (DEHP)	NELAP	NH	11/14/2014
EPA 7470	A	Mercury	NELAP	NH	11/14/2014
EPA 8011		1,2-Dibromo-3-chloropropane (DBCP, Dibromochloropropane)	NELAP	NH	11/14/2014
EPA 8011		1,2-Dibromoethane (EDB, Ethylene dibromide)	NELAP	NH	11/14/2014
EPA 8015		Diesel-range organics (DRO)	NELAP	NH	11/14/2014
EPA 8015		Ethanol	NELAP	NH	11/14/2014
EPA 8015		Ethylene glycol	NELAP	NH	11/14/2014
EPA 8015		Gasoline-range organics (GRO)	NELAP	NH	11/14/2014
EPA 8015		Isobutyl alcohol (2-Methyl-1-propanol)	NELAP	NH	11/14/2014
EPA 8015		Methanol	NELAP	NH	11/14/2014
EPA 8015	C	Nonhalogenated organics by GC/FID	NELAP	NH	11/14/2014
EPA 8015	D	Nonhalogenated organics by GC/FID	NELAP	NH	11/14/2014
EPA 8015		Total petroleum hydrocarbons (TPH)	NELAP	NH	11/14/2014
EPA 8015		n-Propanol (1-Propanol)	NELAP	NH	11/14/2014
EPA 8081		4,4'-DDD	NELAP	NH	11/14/2014
EPA 8081		4,4'-DDE	NELAP	NH	11/14/2014
EPA 8081		4,4'-DDT	NELAP	NH	11/14/2014
EPA 8081		Aldrin (HHDN)	NELAP	NH	11/14/2014
EPA 8081		Chlordane (tech.)	NELAP	NH	11/14/2014
EPA 8081		Dieldrin	NELAP	NH	11/14/2014
EPA 8081		Endosulfan I	NELAP	NH	11/14/2014
EPA 8081		Endosulfan II	NELAP	NH	11/14/2014
EPA 8081		Endosulfan sulfate	NELAP	NH	11/14/2014
EPA 8081		Endrin	NELAP	NH	11/14/2014
EPA 8081		Endrin aldehyde	NELAP	NH	11/14/2014
EPA 8081		Endrin ketone	NELAP	NH	11/14/2014
EPA 8081		Heptachlor	NELAP	NH	11/14/2014
EPA 8081		Heptachlor epoxide	NELAP	NH	11/14/2014
EPA 8081		Methoxychlor	NELAP	NH	11/14/2014
EPA 8081	B	Organochlorine pesticides by GC/ECD	NELAP	NH	11/14/2014
EPA 8081		Toxaphene (Chlorinated camphene)	NELAP	NH	11/14/2014
EPA 8081		alpha-BHC (alpha-Hexachlorocyclohexane)	NELAP	NH	11/14/2014
EPA 8081		alpha-Chlordane	NELAP	NH	11/14/2014
EPA 8081		beta-BHC (beta-Hexachlorocyclohexane)	NELAP	NH	11/14/2014
EPA 8081		delta-BHC (delta-Hexachlorocyclohexane)	NELAP	NH	11/14/2014
EPA 8081		gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	NELAP	NH	11/14/2014
EPA 8081		gamma-Chlordane	NELAP	NH	11/14/2014
EPA 8082		2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ 206)	NELAP	NH	11/14/2014

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Attached to Certificate of Accreditation 009-001 expiration date November 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

DEP Laboratory ID: 68-00571 **EPA Lab Code: ME00019** **TNI Code: TNI00476** **(207) 874-2400**

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary	Effective Date
EPA 8082		2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ 170)	NELAP	NH	11/14/2014
EPA 8082		2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ 187)	NELAP	NH	11/14/2014
EPA 8082		2,2',3,4,4',5',6-Heptachlorobiphenyl (BZ 183)	NELAP	NH	11/14/2014
EPA 8082		2,2',3,4,4',5'-Hexachlorobiphenyl (BZ 138)	NELAP	NH	11/14/2014
EPA 8082		2,2',3,4,5'-Pentachlorobiphenyl (BZ 87)	NELAP	NH	11/14/2014
EPA 8082		2,2',3,5'-Tetrachlorobiphenyl (BZ 44)	NELAP	NH	11/14/2014
EPA 8082		2,2',4,4',5,5'-Hexachlorobiphenyl (BZ 153)	NELAP	NH	11/14/2014
EPA 8082		2,2',4,5'-Tetrachlorobiphenyl (BZ 49)	NELAP	NH	11/14/2014
EPA 8082		2,2',4,5,5'-Pentachlorobiphenyl (BZ 101)	NELAP	NH	11/14/2014
EPA 8082		2,2',5,5'-Tetrachlorobiphenyl (BZ 52)	NELAP	NH	11/14/2014
EPA 8082		2,2',5-Trichlorobiphenyl (BZ 18)	NELAP	NH	11/14/2014
EPA 8082		2,3',4,4',5,5'-Hexachlorobiphenyl (BZ 167)	NELAP	NH	11/14/2014
EPA 8082		2,3',4,4',5-Pentachlorobiphenyl (BZ 118)	NELAP	NH	11/14/2014
EPA 8082		2,3,3',4,4',5'-Hexachlorobiphenyl (BZ 157)	NELAP	NH	11/14/2014
EPA 8082		2,3,3',4,4',5,5'-Heptachlorobiphenyl (BZ 189)	NELAP	NH	11/14/2014
EPA 8082		2,3,3',4,4',5-Hexachlorobiphenyl (BZ 156)	NELAP	NH	11/14/2014
EPA 8082		2,3,3',4,4'-Pentachlorobiphenyl (BZ 105)	NELAP	NH	11/14/2014
EPA 8082		2,3,4,4',5-Pentachlorobiphenyl (BZ 114)	NELAP	NH	11/14/2014
EPA 8082		3,3',4,4',5,5'-Hexachlorobiphenyl (BZ 169)	NELAP	NH	11/14/2014
EPA 8082		3,3',4,4',5-Pentachlorobiphenyl (BZ 126)	NELAP	NH	11/14/2014
EPA 8082		3,3',4,4'-Tetrachlorobiphenyl (BZ 77)	NELAP	NH	11/14/2014
EPA 8082		Aroclor-1016 (PCB-1016)	NELAP	NH	11/14/2014
EPA 8082		Aroclor-1221 (PCB-1221)	NELAP	NH	11/14/2014
EPA 8082		Aroclor-1232 (PCB-1232)	NELAP	NH	11/14/2014
EPA 8082		Aroclor-1242 (PCB-1242)	NELAP	NH	11/14/2014
EPA 8082		Aroclor-1248 (PCB-1248)	NELAP	NH	11/14/2014
EPA 8082		Aroclor-1254 (PCB-1254)	NELAP	NH	11/14/2014
EPA 8082		Aroclor-1260 (PCB-1260)	NELAP	NH	11/14/2014
EPA 8082	A	PCBs by GC/ECD	NELAP	NH	11/14/2014
EPA 8151		2,4,5-T	NELAP	NH	11/14/2014
EPA 8151		2,4,5-TP (Silvex)	NELAP	NH	11/14/2014
EPA 8151		2,4-D	NELAP	NH	11/14/2014
EPA 8151		2,4-DB (Butoxon)	NELAP	NH	11/14/2014
EPA 8151	A	Chlorinated herbicides by GC/ECD	NELAP	NH	10/28/2015
EPA 8151		Dalapon (2,2-Dichloropropionic acid)	NELAP	NH	11/14/2014
EPA 8151		Dicamba	NELAP	NH	11/14/2014
EPA 8151		Dichloroprop (Dichlorprop)	NELAP	NH	11/14/2014
EPA 8151		Dinoseb (2-sec-Butyl-4,6-dinitrophenol, DNBP)	NELAP	NH	11/14/2014
EPA 8151		MCPA	NELAP	NH	11/14/2014
EPA 8151		MCPP (Mecoprop)	NELAP	NH	11/14/2014
EPA 8151		Pentachlorophenol (PCP)	NELAP	NH	11/14/2014
EPA 8260		1,1,1,2-Tetrachloroethane	NELAP	NH	11/14/2014
EPA 8260		1,1,1-Trichloroethane	NELAP	NH	11/14/2014



Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 009-001 expiration date November 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

DEP Laboratory ID: 68-00571 **EPA Lab Code: ME00019** **TNI Code: TNI00476** **(207) 874-2400**

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary	Effective Date
EPA 8260		1,1,2,2-Tetrachloroethane	NELAP	NH	11/14/2014
EPA 8260		1,1,2-Trichloroethane	NELAP	NH	11/14/2014
EPA 8260		1,1-Dichloroethane	NELAP	NH	11/14/2014
EPA 8260		1,1-Dichloroethene (1,1-Dichloroethylene)	NELAP	NH	11/14/2014
EPA 8260		1,1-Dichloropropene	NELAP	NH	11/14/2014
EPA 8260		1,2,3-Trichlorobenzene	NELAP	NH	11/14/2014
EPA 8260		1,2,3-Trichloropropane (1,2,3-TCP)	NELAP	NH	11/14/2014
EPA 8260		1,2,4-Trichlorobenzene	NELAP	NH	11/14/2014
EPA 8260		1,2,4-Trimethylbenzene	NELAP	NH	11/14/2014
EPA 8260		1,2-Dibromo-3-chloropropane (DBCP, Dibromochloropropane)	NELAP	NH	11/14/2014
EPA 8260		1,2-Dibromoethane (EDB, Ethylene dibromide)	NELAP	NH	11/14/2014
EPA 8260		1,2-Dichlorobenzene (o-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 8260		1,2-Dichloroethane	NELAP	NH	11/14/2014
EPA 8260		1,2-Dichloropropane	NELAP	NH	11/14/2014
EPA 8260		1,3,5-Trimethylbenzene	NELAP	NH	11/14/2014
EPA 8260		1,3-Dichlorobenzene (m-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 8260		1,3-Dichloropropane	NELAP	NH	11/14/2014
EPA 8260		1,4-Dichlorobenzene (p-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 8260		1,4-Dioxane (1,4-Diethyleneoxide)	NELAP	NH	11/14/2014
EPA 8260		1-Chlorohexane	NELAP	NH	11/14/2014
EPA 8260		2,2-Dichloropropane	NELAP	NH	11/14/2014
EPA 8260		2-Butanone (Methyl ethyl ketone, MEK)	NELAP	NH	11/14/2014
EPA 8260		2-Chloroethyl vinyl ether	NELAP	NH	11/14/2014
EPA 8260		2-Chlorotoluene	NELAP	NH	11/14/2014
EPA 8260		2-Hexanone	NELAP	NH	11/14/2014
EPA 8260		4-Chlorotoluene	NELAP	NH	11/14/2014
EPA 8260		4-Methyl-2-pentanone (MIBK)	NELAP	NH	11/14/2014
EPA 8260		Acetone	NELAP	NH	11/14/2014
EPA 8260		Acetonitrile	NELAP	NH	11/14/2014
EPA 8260		Acrolein (Propenal)	NELAP	NH	11/14/2014
EPA 8260		Acrylonitrile	NELAP	NH	11/14/2014
EPA 8260		Allyl chloride (3-Chloropropene)	NELAP	NH	11/14/2014
EPA 8260		Benzene	NELAP	NH	11/14/2014
EPA 8260		Benzyl chloride	NELAP	NH	11/14/2014
EPA 8260		Bromobenzene	NELAP	NH	11/14/2014
EPA 8260		Bromochloromethane	NELAP	NH	11/14/2014
EPA 8260		Bromodichloromethane	NELAP	NH	11/14/2014
EPA 8260		Bromoform	NELAP	NH	11/14/2014
EPA 8260		Bromomethane (Methyl bromide)	NELAP	NH	11/14/2014
EPA 8260		Carbon disulfide	NELAP	NH	11/14/2014
EPA 8260		Carbon tetrachloride	NELAP	NH	11/14/2014
EPA 8260		Chlorobenzene	NELAP	NH	11/14/2014
EPA 8260		Chloroethane	NELAP	NH	11/14/2014
EPA 8260		Chloroform	NELAP	NH	11/14/2014
EPA 8260		Chloromethane (Methyl chloride)	NELAP	NH	11/14/2014

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DEP Laboratory ID: 68-00571 **EPA Lab Code: ME00019** **TNI Code: TNI00476** **(207) 874-2400**

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary	Effective Date
EPA 8260		Chloroprene (2-Chloro-1,3-butadiene)	NELAP	NH	11/14/2014
EPA 8260		Cyclohexane	NELAP	NH	11/14/2014
EPA 8260		Dibromochloromethane	NELAP	NH	11/14/2014
EPA 8260		Dibromomethane	NELAP	NH	11/14/2014
EPA 8260		Dichlorodifluoromethane (Freon 12)	NELAP	NH	11/14/2014
EPA 8260		Diethyl ether (Ethyl ether)	NELAP	NH	11/14/2014
EPA 8260		Ethylbenzene	NELAP	NH	11/14/2014
EPA 8260		Iodomethane (Methyl iodide)	NELAP	NH	11/14/2014
EPA 8260		Isobutyl alcohol (2-Methyl-1-propanol)	NELAP	NH	11/14/2014
EPA 8260		Isopropyl alcohol (2-Propanol)	NELAP	NH	11/14/2014
EPA 8260		Isopropylbenzene (Cumene)	NELAP	NH	11/14/2014
EPA 8260		Methacrylonitrile	NELAP	NH	11/14/2014
EPA 8260		Methyl acetate	NELAP	NH	11/14/2014
EPA 8260		Methyl tert-butyl ether (MTBE)	NELAP	NH	11/14/2014
EPA 8260		Methylcyclohexane	NELAP	NH	11/14/2014
EPA 8260		Methylene chloride (Dichloromethane)	NELAP	NH	11/14/2014
EPA 8260		Methylmethacrylate	NELAP	NH	11/14/2014
EPA 8260		Naphthalene	NELAP	NH	11/14/2014
EPA 8260		Pentachloroethane	NELAP	NH	11/14/2014
EPA 8260		Propionitrile (Ethyl cyanide)	NELAP	NH	11/14/2014
EPA 8260		Styrene	NELAP	NH	11/14/2014
EPA 8260		Tetrachloroethene (PCE, Perchloroethylene)	NELAP	NH	11/14/2014
EPA 8260		Toluene	NELAP	NH	11/14/2014
EPA 8260		Trichloroethene (TCE, Trichloroethylene)	NELAP	NH	11/14/2014
EPA 8260		Trichlorofluoromethane (Freon 11)	NELAP	NH	11/14/2014
EPA 8260	C	VOCs by GC/MS	NELAP	NH	11/14/2014
EPA 8260	B	VOCs by GC/MS	NELAP	NH	11/14/2014
EPA 8260		Vinyl acetate	NELAP	NH	11/14/2014
EPA 8260		Vinyl chloride (Chloroethene)	NELAP	NH	11/14/2014
EPA 8260		Xylenes, total	NELAP	NH	11/14/2014
EPA 8260		cis-1,2-Dichloroethene	NELAP	NH	11/14/2014
EPA 8260		cis-1,3-Dichloropropene	NELAP	NH	11/14/2014
EPA 8260		cis-1,4-Dichloro-2-butene	NELAP	NH	11/14/2014
EPA 8260		n-Butylbenzene	NELAP	NH	11/14/2014
EPA 8260		n-Propylbenzene	NELAP	NH	11/14/2014
EPA 8260		p-Isopropyltoluene (4-Isopropyltoluene)	NELAP	NH	11/14/2014
EPA 8260		sec-Butylbenzene	NELAP	NH	11/14/2014
EPA 8260		tert-Amyl methyl ether (TAME)	NELAP	NH	11/14/2014
EPA 8260		tert-Butyl alcohol (2-Methyl-2-propanol)	NELAP	NH	11/14/2014
EPA 8260		tert-Butylbenzene	NELAP	NH	11/14/2014
EPA 8260		trans-1,2-Dichloroethene	NELAP	NH	11/14/2014
EPA 8260		trans-1,3-Dichloropropene	NELAP	NH	11/14/2014
EPA 8260		trans-1,4-Dichloro-2-butene	NELAP	NH	11/14/2014
EPA 8270		1,2,4,5-Tetrachlorobenzene	NELAP	NH	11/14/2014
EPA 8270		1,2,4-Trichlorobenzene	NELAP	NH	11/14/2014
EPA 8270		1,2-Dichlorobenzene (o-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 8270		1,2-Diphenylhydrazine	NELAP	NH	11/14/2014



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DEP Laboratory ID: 68-00571 **EPA Lab Code: ME00019** **TNI Code: TNI00476** **(207) 874-2400**

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary	Effective Date
EPA 8270		1,3,5-Trinitrobenzene (1,3,5-TNB)	NELAP	NH	11/14/2014
EPA 8270		1,3-Dichlorobenzene (m-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 8270		1,3-Dinitrobenzene (1,3-DNB)	NELAP	NH	11/14/2014
EPA 8270		1,4-Dichlorobenzene (p-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 8270		1,4-Naphthoquinone	NELAP	NH	11/14/2014
EPA 8270		1-Chloronaphthalene	NELAP	NH	11/14/2014
EPA 8270		1-Naphthylamine (alpha-Naphthylamine)	NELAP	NH	11/14/2014
EPA 8270		2,2'-oxybis(1-Chloropropane)	NELAP	NH	11/14/2014
EPA 8270		2,3,4,6-Tetrachlorophenol	NELAP	NH	11/14/2014
EPA 8270		2,4,5-Trichlorophenol	NELAP	NH	11/14/2014
EPA 8270		2,4,6-Trichlorophenol	NELAP	NH	11/14/2014
EPA 8270		2,4-Dichlorophenol	NELAP	NH	11/14/2014
EPA 8270		2,4-Dimethylphenol	NELAP	NH	11/14/2014
EPA 8270		2,4-Dinitrophenol	NELAP	NH	11/14/2014
EPA 8270		2,4-Dinitrotoluene (2,4-DNT)	NELAP	NH	11/14/2014
EPA 8270		2,6-Dichlorophenol	NELAP	NH	11/14/2014
EPA 8270		2,6-Dinitrotoluene (2,6-DNT)	NELAP	NH	11/14/2014
EPA 8270		2-Acetylaminofluorene	NELAP	NH	11/14/2014
EPA 8270		2-Chloronaphthalene	NELAP	NH	11/14/2014
EPA 8270		2-Chlorophenol	NELAP	NH	11/14/2014
EPA 8270		2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	NELAP	NH	11/14/2014
EPA 8270		2-Methylnaphthalene	NELAP	NH	11/14/2014
EPA 8270		2-Methylphenol (o-Cresol)	NELAP	NH	11/14/2014
EPA 8270		2-Naphthylamine (beta-Naphthylamine)	NELAP	NH	11/14/2014
EPA 8270		2-Nitroaniline	NELAP	NH	11/14/2014
EPA 8270		2-Nitrophenol	NELAP	NH	11/14/2014
EPA 8270		2-Picoline (2-Methylpyridine)	NELAP	NH	11/14/2014
EPA 8270		3+4-Methylphenol (m+p-Cresol)	NELAP	NH	11/14/2014
EPA 8270		3,3'-Dichlorobenzidine	NELAP	NH	11/14/2014
EPA 8270		3,3'-Dimethylbenzidine	NELAP	NH	11/14/2014
EPA 8270		3-Methylcholanthrene	NELAP	NH	11/14/2014
EPA 8270		3-Nitroaniline	NELAP	NH	11/14/2014
EPA 8270		4-Aminobiphenyl	NELAP	NH	11/14/2014
EPA 8270		4-Bromophenyl phenyl ether	NELAP	NH	11/14/2014
EPA 8270		4-Chloro-3-methylphenol	NELAP	NH	11/14/2014
EPA 8270		4-Chloroaniline	NELAP	NH	11/14/2014
EPA 8270		4-Chlorophenyl phenyl ether	NELAP	NH	11/14/2014
EPA 8270		4-Nitroaniline	NELAP	NH	11/14/2014
EPA 8270		4-Nitrophenol	NELAP	NH	11/14/2014
EPA 8270		5-Nitro-o-toluidine	NELAP	NH	11/14/2014
EPA 8270		7,12-Dimethylbenz(a)anthracene	NELAP	NH	11/14/2014
EPA 8270		Acenaphthene	NELAP	NH	11/14/2014
EPA 8270		Acenaphthylene	NELAP	NH	11/14/2014
EPA 8270		Acetophenone	NELAP	NH	11/14/2014
EPA 8270		Aniline	NELAP	NH	11/14/2014
EPA 8270		Anthracene	NELAP	NH	11/14/2014

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DEP Laboratory ID: 68-00571 **EPA Lab Code: ME00019** **TNI Code: TNI00476** **(207) 874-2400**

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary	Effective Date
EPA 8270		Aramite	NELAP	NH	11/14/2014
EPA 8270		Benzaldehyde	NELAP	NH	11/14/2014
EPA 8270		Benzidine	NELAP	NH	11/14/2014
EPA 8270		Benzo[a]anthracene	NELAP	NH	11/14/2014
EPA 8270		Benzo[a]pyrene	NELAP	NH	11/14/2014
EPA 8270		Benzo[b]fluoranthene	NELAP	NH	11/14/2014
EPA 8270		Benzo[ghi]perylene	NELAP	NH	11/14/2014
EPA 8270		Benzo[k]fluoranthene	NELAP	NH	11/14/2014
EPA 8270		Benzoic acid	NELAP	NH	11/14/2014
EPA 8270		Benzyl alcohol	NELAP	NH	11/14/2014
EPA 8270		Benzyl butyl phthalate (Butyl benzyl phthalate)	NELAP	NH	11/14/2014
EPA 8270		Carbazole	NELAP	NH	11/14/2014
EPA 8270		Chlorobenzilate	NELAP	NH	11/14/2014
EPA 8270		Chrysene (Benzo[a]phenanthrene)	NELAP	NH	11/14/2014
EPA 8270		Di-n-butyl phthalate	NELAP	NH	11/14/2014
EPA 8270		Di-n-octyl phthalate	NELAP	NH	11/14/2014
EPA 8270		Diallate (cis or trans)	NELAP	NH	11/14/2014
EPA 8270		Dibenz[a,j]acridine	NELAP	NH	11/14/2014
EPA 8270		Dibenzo[a,h]anthracene	NELAP	NH	11/14/2014
EPA 8270		Dibenzofuran	NELAP	NH	11/14/2014
EPA 8270		Diethyl phthalate	NELAP	NH	11/14/2014
EPA 8270		Dimethoate	NELAP	NH	11/14/2014
EPA 8270		Dimethyl phthalate	NELAP	NH	11/14/2014
EPA 8270		Disulfoton	NELAP	NH	11/14/2014
EPA 8270		Ethyl methanesulfonate	NELAP	NH	11/14/2014
EPA 8270		Famphur	NELAP	NH	11/14/2014
EPA 8270		Fluoranthene	NELAP	NH	11/14/2014
EPA 8270		Fluorene	NELAP	NH	11/14/2014
EPA 8270		Hexachlorobenzene	NELAP	NH	11/14/2014
EPA 8270		Hexachlorobutadiene (1,3-Hexachlorobutadiene)	NELAP	NH	11/14/2014
EPA 8270		Hexachlorocyclopentadiene	NELAP	NH	11/14/2014
EPA 8270		Hexachloroethane	NELAP	NH	11/14/2014
EPA 8270		Hexachlorophene	NELAP	NH	11/14/2014
EPA 8270		Hexachloropropene	NELAP	NH	11/14/2014
EPA 8270		Indeno(1,2,3-cd)pyrene	NELAP	NH	11/14/2014
EPA 8270		Isodrin	NELAP	NH	11/14/2014
EPA 8270		Isophorone	NELAP	NH	11/14/2014
EPA 8270		Isosafrole	NELAP	NH	11/14/2014
EPA 8270		Kepone	NELAP	NH	11/14/2014
EPA 8270		Methapyrilene	NELAP	NH	11/14/2014
EPA 8270		Methyl methanesulfonate	NELAP	NH	11/14/2014
EPA 8270		Methyl parathion (Parathion, methyl)	NELAP	NH	11/14/2014
EPA 8270		N-Nitrosodi-n-butylamine	NELAP	NH	11/14/2014
EPA 8270		N-Nitrosodi-n-propylamine	NELAP	NH	11/14/2014
EPA 8270		N-Nitrosodiethylamine	NELAP	NH	11/14/2014

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DEP Laboratory ID: 68-00571 **EPA Lab Code: ME00019** **TNI Code: TNI00476** **(207) 874-2400**

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary	Effective Date
EPA 8270		N-Nitrosodimethylamine	NELAP	NH	11/14/2014
EPA 8270		N-Nitrosodiphenylamine	NELAP	NH	11/14/2014
EPA 8270		N-Nitrosomethylethylamine	NELAP	NH	11/14/2014
EPA 8270		N-Nitrosomorpholine	NELAP	NH	11/14/2014
EPA 8270		N-Nitrosopiperidine	NELAP	NH	11/14/2014
EPA 8270		N-Nitrosopyrrolidine	NELAP	NH	11/14/2014
EPA 8270		Naphthalene	NELAP	NH	11/14/2014
EPA 8270		Nitrobenzene	NELAP	NH	11/14/2014
EPA 8270		O,O,O-Triethyl phosphorothioate	NELAP	NH	11/14/2014
EPA 8270		Parathion, ethyl (Ethyl parathion, Parathion)	NELAP	NH	11/14/2014
EPA 8270		Pentachlorobenzene	NELAP	NH	11/14/2014
EPA 8270		Pentachlorophenol (PCP)	NELAP	NH	11/14/2014
EPA 8270		Phenacetin	NELAP	NH	11/14/2014
EPA 8270		Phenanthrene	NELAP	NH	11/14/2014
EPA 8270		Phenol	NELAP	NH	11/14/2014
EPA 8270		Phorate (Thimet)	NELAP	NH	11/14/2014
EPA 8270		Pronamide (Kerb)	NELAP	NH	11/14/2014
EPA 8270		Pyrene	NELAP	NH	11/14/2014
EPA 8270		Pyridine	NELAP	NH	11/14/2014
EPA 8270	C	SOCs by GC/MS	NELAP	NH	11/14/2014
EPA 8270	D	SOCs by GC/MS	NELAP	NH	11/14/2014
EPA 8270		Safrole	NELAP	NH	11/14/2014
EPA 8270		Sulfotepp (Tetraethyl dithiopyrophosphate)	NELAP	NH	11/14/2014
EPA 8270		Thionazine (Thionazin, Zinophos)	NELAP	NH	11/14/2014
EPA 8270		bis(2-Chloroethoxy)methane	NELAP	NH	11/14/2014
EPA 8270		bis(2-Chloroethyl) ether	NELAP	NH	11/14/2014
EPA 8270		bis(2-Ethylhexyl) phthalate (DEHP)	NELAP	NH	11/14/2014
EPA 8330		1,3,5-Trinitrobenzene (1,3,5-TNB)	NELAP	NH	11/14/2014
EPA 8330		1,3-Dinitrobenzene (1,3-DNB)	NELAP	NH	11/14/2014
EPA 8330		2,4,6-Trinitrotoluene (2,4,6-TNT)	NELAP	NH	11/14/2014
EPA 8330		2,4-Dinitrotoluene (2,4-DNT)	NELAP	NH	11/14/2014
EPA 8330		2,6-Dinitrotoluene (2,6-DNT)	NELAP	NH	11/14/2014
EPA 8330		2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NELAP	NH	11/14/2014
EPA 8330		2-Nitrotoluene	NELAP	NH	11/14/2014
EPA 8330		3-Nitrotoluene	NELAP	NH	11/14/2014
EPA 8330		4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NELAP	NH	11/14/2014
EPA 8330		4-Nitrotoluene	NELAP	NH	11/14/2014
EPA 8330		Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	NELAP	NH	11/14/2014
EPA 8330	A	Nitroaromatics and nitramines by HPLC/UV	NELAP	NH	11/14/2014
EPA 8330	B	Nitroaromatics and nitramines by HPLC/UV	NELAP	NH	11/14/2014
EPA 8330		Nitrobenzene	NELAP	NH	11/14/2014
EPA 8330		Nitroglycerin	NELAP	NH	11/14/2014
EPA 8330		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	NELAP	NH	11/14/2014
EPA 8330		RDX (Hexahydro-1,3,5-trinitro-1,3,5-triazine)	NELAP	NH	11/14/2014
EPA 9012	A	Total cyanide	NELAP	NH	10/28/2015

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Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 009-001 expiration date November 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

DEP Laboratory ID: 68-00571 **EPA Lab Code: ME00019** **TNI Code: TNI00476** **(207) 874-2400**

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary	Effective Date
EPA 9012	B	Total cyanide	NELAP	NH	10/28/2015
EPA 9038		Sulfate	NELAP	NH	11/14/2014
EPA 9040	B	pH	NELAP	NH	10/28/2015
EPA 9040	C	pH	NELAP	NH	10/28/2015
EPA 9056	A	Anions by IC	NELAP	NH	11/14/2014
EPA 9056		Bromide	NELAP	NH	11/14/2014
EPA 9056		Chloride	NELAP	NH	11/14/2014
EPA 9056		Fluoride	NELAP	NH	11/14/2014
EPA 9056		Nitrate as N	NELAP	NH	11/14/2014
EPA 9056		Nitrite as N	NELAP	NH	11/14/2014
EPA 9056		Orthophosphate as P	NELAP	NH	11/14/2014
EPA 9056		Sulfate	NELAP	NH	11/14/2014
EPA 9060	A	Total organic carbon (TOC)	NELAP	NH	4/3/2017
EPA 9065		Total phenolics	NELAP	NH	11/14/2014
EPA 9070	A	Oil and grease	NELAP	NH	4/3/2017
EPA 9251		Chloride	NELAP	NH	11/14/2014
SM 2120 B		Color	NELAP	NH	11/14/2014
SM 2130 B		Turbidity	NELAP	NH	11/14/2014
SM 2320 B		Alkalinity as CaCO3	NELAP	NH	11/14/2014
SM 2510 B		Conductivity	NELAP	NH	11/14/2014
SM 2540 B		Residue, total	NELAP	NH	11/14/2014
SM 2540 C		Residue, filterable (TDS)	NELAP	NH	11/14/2014
SM 2540 D		Residue, nonfilterable (TSS)	NELAP	NH	11/14/2014
SM 2540 F		Residue, settleable	NELAP	NH	11/14/2014
SM 3500-Cr D	18/19	Chromium VI	NELAP	NH	11/14/2014
SM 3500-Fe D	18/19	Iron	NELAP	NH	11/14/2014
SM 4500-Cl G		Total residual chlorine	NELAP	NH	11/14/2014
SM 4500-Cl- E		Chloride	NELAP	NH	11/14/2014
SM 4500-F- C		Fluoride	NELAP	NH	11/14/2014
SM 4500-H+ B		pH	NELAP	NH	11/14/2014
SM 4500-NH3 H	19-22	Ammonia as N	NELAP	NH	11/14/2014
SM 4500-P E		Orthophosphate as P	NELAP	NH	11/14/2014
SM 4500-SO3 B		Sulfite, SO3	NELAP	NH	11/14/2014
SM 5210 B		Biochemical oxygen demand (BOD)	NELAP	NH	11/14/2014
SM 5210 B		Carbonaceous BOD (CBOD)	NELAP	NH	11/14/2014
SM 5310 B		Total organic carbon (TOC)	NELAP	NH	11/14/2014
SM 5540 C		Surfactants as MBAS	NELAP	NH	11/14/2014

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary	Effective Date
EPA 1010	A	Ignitability	NELAP	NH	11/14/2014
EPA 1311		Toxicity characteristic leaching procedure (TCLP)	NELAP	NH	11/14/2014
EPA 1312		Synthetic precipitation leaching procedure (SPLP)	NELAP	NH	11/14/2014
EPA 3050	B	Acid digestion of solids	NELAP	NH	10/28/2015

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DEP Laboratory ID: 68-00571 **EPA Lab Code: ME00019** **TNI Code: TNI00476** **(207) 874-2400**

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary	Effective Date
EPA 3060	A	Alkaline digestion of Cr(VI)	NELAP	NH	10/28/2015
EPA 3540	C	Soxhlet extraction	NELAP	NH	11/14/2014
EPA 3545		Pressurized fluid extraction (PFE)	NELAP	NH	11/14/2014
EPA 3550	C	Ultrasonic extraction	NELAP	NH	11/14/2014
EPA 3550	B	Ultrasonic extraction	NELAP	NH	11/14/2014
EPA 3580	A	Waste dilution	NELAP	NH	11/14/2014
EPA 3585		Waste dilution for VOCs	NELAP	NH	11/14/2014
EPA 3620	B	Florisil cleanup	NELAP	NH	11/14/2014
EPA 3630	C	Silica gel cleanup	NELAP	NH	11/14/2014
EPA 3640	A	Gel permeation cleanup (GPC)	NELAP	NH	11/14/2014
EPA 3660	B	Sulfur cleanup	NELAP	NH	11/14/2014
EPA 5035	A	Closed-system purge-and-trap (bisulfate option)	NELAP	NH	11/14/2014
EPA 5035	A	Closed-system purge-and-trap (methanol option)	NELAP	NH	11/14/2014
EPA 5035	A	Closed-system purge-and-trap (unpreserved)	NELAP	NH	11/14/2014
EPA 6010		Aluminum	NELAP	NH	11/14/2014
EPA 6010		Antimony	NELAP	NH	11/14/2014
EPA 6010		Arsenic	NELAP	NH	11/14/2014
EPA 6010		Barium	NELAP	NH	11/14/2014
EPA 6010		Beryllium	NELAP	NH	11/14/2014
EPA 6010		Boron	NELAP	NH	11/14/2014
EPA 6010		Cadmium	NELAP	NH	11/14/2014
EPA 6010		Calcium	NELAP	NH	11/14/2014
EPA 6010		Chromium	NELAP	NH	11/14/2014
EPA 6010		Cobalt	NELAP	NH	11/14/2014
EPA 6010		Copper	NELAP	NH	11/14/2014
EPA 6010		Iron	NELAP	NH	11/14/2014
EPA 6010		Lead	NELAP	NH	11/14/2014
EPA 6010		Lithium	NELAP	NH	11/14/2014
EPA 6010		Magnesium	NELAP	NH	11/14/2014
EPA 6010		Manganese	NELAP	NH	11/14/2014
EPA 6010	C	Metals by ICP/AES	NELAP	NH	11/14/2014
EPA 6010		Molybdenum	NELAP	NH	11/14/2014
EPA 6010		Nickel	NELAP	NH	11/14/2014
EPA 6010		Potassium	NELAP	NH	11/14/2014
EPA 6010		Selenium	NELAP	NH	11/14/2014
EPA 6010		Silver	NELAP	NH	11/14/2014
EPA 6010		Sodium	NELAP	NH	11/14/2014
EPA 6010		Strontium	NELAP	NH	11/14/2014
EPA 6010		Thallium	NELAP	NH	11/14/2014
EPA 6010		Tin	NELAP	NH	11/14/2014
EPA 6010		Titanium	NELAP	NH	11/14/2014
EPA 6010		Vanadium	NELAP	NH	11/14/2014
EPA 6010		Zinc	NELAP	NH	11/14/2014
EPA 6020		Aluminum	NELAP	NH	11/14/2014
EPA 6020		Antimony	NELAP	NH	11/14/2014

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DEP Laboratory ID: 68-00571 **EPA Lab Code: ME00019** **TNI Code: TNI00476** **(207) 874-2400**

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary	Effective Date
EPA 6020		Arsenic	NELAP	NH	11/14/2014
EPA 6020		Barium	NELAP	NH	11/14/2014
EPA 6020		Beryllium	NELAP	NH	11/14/2014
EPA 6020		Boron	NELAP	NH	11/14/2014
EPA 6020		Cadmium	NELAP	NH	11/14/2014
EPA 6020		Calcium	NELAP	NH	11/14/2014
EPA 6020		Chromium	NELAP	NH	11/14/2014
EPA 6020		Cobalt	NELAP	NH	11/14/2014
EPA 6020		Copper	NELAP	NH	11/14/2014
EPA 6020		Iron	NELAP	NH	11/14/2014
EPA 6020		Lead	NELAP	NH	11/14/2014
EPA 6020		Magnesium	NELAP	NH	11/14/2014
EPA 6020		Manganese	NELAP	NH	11/14/2014
EPA 6020	A	Metals by ICP/MS	NELAP	NH	11/14/2014
EPA 6020		Molybdenum	NELAP	NH	11/14/2014
EPA 6020		Nickel	NELAP	NH	11/14/2014
EPA 6020		Potassium	NELAP	NH	11/14/2014
EPA 6020		Selenium	NELAP	NH	11/14/2014
EPA 6020		Silver	NELAP	NH	11/14/2014
EPA 6020		Sodium	NELAP	NH	11/14/2014
EPA 6020		Thallium	NELAP	NH	11/14/2014
EPA 6020		Tin	NELAP	NH	11/14/2014
EPA 6020		Vanadium	NELAP	NH	11/14/2014
EPA 6020		Zinc	NELAP	NH	11/14/2014
EPA 7196	A	Chromium VI	NELAP	NH	11/14/2014
EPA 7471	A	Mercury	NELAP	NH	11/14/2014
EPA 7471	B	Mercury	NELAP	NH	11/14/2014
EPA 8015		Ethanol	NELAP	NH	11/14/2014
EPA 8015		Methanol	NELAP	NH	11/14/2014
EPA 8015	C	Nonhalogenated organics by GC/FID	NELAP	NH	11/14/2014
EPA 8015		n-Propanol (1-Propanol)	NELAP	NH	11/14/2014
EPA 8081		4,4'-DDD	NELAP	NH	11/14/2014
EPA 8081		4,4'-DDE	NELAP	NH	11/14/2014
EPA 8081		4,4'-DDT	NELAP	NH	11/14/2014
EPA 8081		Aldrin (HHDN)	NELAP	NH	11/14/2014
EPA 8081		Chlordane (tech.)	NELAP	NH	11/14/2014
EPA 8081		Dieldrin	NELAP	NH	11/14/2014
EPA 8081		Endosulfan I	NELAP	NH	11/14/2014
EPA 8081		Endosulfan II	NELAP	NH	11/14/2014
EPA 8081		Endosulfan sulfate	NELAP	NH	11/14/2014
EPA 8081		Endrin	NELAP	NH	11/14/2014
EPA 8081		Endrin aldehyde	NELAP	NH	11/14/2014
EPA 8081		Endrin ketone	NELAP	NH	11/14/2014
EPA 8081		Heptachlor	NELAP	NH	11/14/2014
EPA 8081		Heptachlor epoxide	NELAP	NH	11/14/2014
EPA 8081		Methoxychlor	NELAP	NH	11/14/2014
EPA 8081	B	Organochlorine pesticides by GC/ECD	NELAP	NH	11/14/2014

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DEP Laboratory ID: 68-00571 **EPA Lab Code: ME00019** **TNI Code: TNI00476** **(207) 874-2400**

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary	Effective Date
EPA 8081		Toxaphene (Chlorinated camphene)	NELAP	NH	11/14/2014
EPA 8081		alpha-BHC (alpha-Hexachlorocyclohexane)	NELAP	NH	11/14/2014
EPA 8081		alpha-Chlordane	NELAP	NH	11/14/2014
EPA 8081		beta-BHC (beta-Hexachlorocyclohexane)	NELAP	NH	11/14/2014
EPA 8081		delta-BHC (delta-Hexachlorocyclohexane)	NELAP	NH	11/14/2014
EPA 8081		gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	NELAP	NH	11/14/2014
EPA 8081		gamma-Chlordane	NELAP	NH	11/14/2014
EPA 8082		2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ 206)	NELAP	NH	11/14/2014
EPA 8082		2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ 170)	NELAP	NH	11/14/2014
EPA 8082		2,2',3,3',4,4'-Hexachlorobiphenyl (BZ 128)	NELAP	NH	11/14/2014
EPA 8082		2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ 187)	NELAP	NH	11/14/2014
EPA 8082		2,2',3,4,4',5',6-Heptachlorobiphenyl (BZ 183)	NELAP	NH	11/14/2014
EPA 8082		2,2',3,4,4',5'-Hexachlorobiphenyl (BZ 138)	NELAP	NH	11/14/2014
EPA 8082		2,2',3,4,4',5,5'-Heptachlorobiphenyl (BZ 180)	NELAP	NH	11/14/2014
EPA 8082		2,2',3,4,5'-Pentachlorobiphenyl (BZ 87)	NELAP	NH	11/14/2014
EPA 8082		2,2',3,5'-Tetrachlorobiphenyl (BZ 44)	NELAP	NH	11/14/2014
EPA 8082		2,2',4,4',5,5'-Hexachlorobiphenyl (BZ 153)	NELAP	NH	11/14/2014
EPA 8082		2,2',4,5'-Tetrachlorobiphenyl (BZ 49)	NELAP	NH	11/14/2014
EPA 8082		2,2',4,5,5'-Pentachlorobiphenyl (BZ 101)	NELAP	NH	11/14/2014
EPA 8082		2,2',5,5'-Tetrachlorobiphenyl (BZ 52)	NELAP	NH	11/14/2014
EPA 8082		2,2',5-Trichlorobiphenyl (BZ 18)	NELAP	NH	11/14/2014
EPA 8082		2,3',4,4'-Tetrachlorobiphenyl (BZ 66)	NELAP	NH	11/14/2014
EPA 8082		2,3,4,4',5-Pentachlorobiphenyl (BZ 114)	NELAP	NH	11/14/2014
EPA 8082		Aroclor-1016 (PCB-1016)	NELAP	NH	11/14/2014
EPA 8082		Aroclor-1221 (PCB-1221)	NELAP	NH	11/14/2014
EPA 8082		Aroclor-1232 (PCB-1232)	NELAP	NH	11/14/2014
EPA 8082		Aroclor-1242 (PCB-1242)	NELAP	NH	11/14/2014
EPA 8082		Aroclor-1248 (PCB-1248)	NELAP	NH	11/14/2014
EPA 8082		Aroclor-1254 (PCB-1254)	NELAP	NH	11/14/2014
EPA 8082		Aroclor-1260 (PCB-1260)	NELAP	NH	11/14/2014
EPA 8082	A	PCBs by GC/ECD	NELAP	NH	11/14/2014
EPA 8151		2,4,5-T	NELAP	NH	11/14/2014
EPA 8151		2,4,5-TP (Silvex)	NELAP	NH	11/14/2014
EPA 8151		2,4-D	NELAP	NH	11/14/2014
EPA 8151		2,4-DB (Butoxon)	NELAP	NH	11/14/2014
EPA 8151	A	Chlorinated herbicides by GC/ECD	NELAP	NH	10/28/2015
EPA 8151		Dalapon (2,2-Dichloropropionic acid)	NELAP	NH	11/14/2014
EPA 8151		Dicamba	NELAP	NH	11/14/2014
EPA 8151		Dichloroprop (Dichlorprop)	NELAP	NH	11/14/2014
EPA 8151		Dinoseb (2-sec-Butyl-4,6-dinitrophenol, DNBP)	NELAP	NH	11/14/2014
EPA 8151		MCPA	NELAP	NH	11/14/2014

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DEP Laboratory ID: 68-00571 **EPA Lab Code: ME00019** **TNI Code: TNI00476** **(207) 874-2400**

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary	Effective Date
EPA 8151		MCPP (Mecoprop)	NELAP	NH	11/14/2014
EPA 8151		Pentachlorophenol (PCP)	NELAP	NH	11/14/2014
EPA 8260		1,1,1,2-Tetrachloroethane	NELAP	NH	11/14/2014
EPA 8260		1,1,1-Trichloroethane	NELAP	NH	11/14/2014
EPA 8260		1,1,2,2-Tetrachloroethane	NELAP	NH	11/14/2014
EPA 8260		1,1,2-Trichloroethane	NELAP	NH	11/14/2014
EPA 8260		1,1-Dichloroethane	NELAP	NH	11/14/2014
EPA 8260		1,1-Dichloroethene (1,1-Dichloroethylene)	NELAP	NH	11/14/2014
EPA 8260		1,1-Dichloropropene	NELAP	NH	11/14/2014
EPA 8260		1,2,3-Trichlorobenzene	NELAP	NH	11/14/2014
EPA 8260		1,2,3-Trichloropropane (1,2,3-TCP)	NELAP	NH	11/14/2014
EPA 8260		1,2,4-Trichlorobenzene	NELAP	NH	11/14/2014
EPA 8260		1,2,4-Trimethylbenzene	NELAP	NH	11/14/2014
EPA 8260		1,2-Dibromoethane (EDB, Ethylene dibromide)	NELAP	NH	11/14/2014
EPA 8260		1,2-Dichlorobenzene (o-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 8260		1,2-Dichloroethane	NELAP	NH	11/14/2014
EPA 8260		1,2-Dichloropropane	NELAP	NH	11/14/2014
EPA 8260		1,3,5-Trimethylbenzene	NELAP	NH	11/14/2014
EPA 8260		1,3-Dichlorobenzene (m-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 8260		1,3-Dichloropropane	NELAP	NH	11/14/2014
EPA 8260		1,4-Dichlorobenzene (p-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 8260		1,4-Dioxane (1,4-Diethyleneoxide)	NELAP	NH	11/14/2014
EPA 8260		1-Chlorohexane	NELAP	NH	11/14/2014
EPA 8260		2,2-Dichloropropane	NELAP	NH	11/14/2014
EPA 8260		2-Butanone (Methyl ethyl ketone, MEK)	NELAP	NH	11/14/2014
EPA 8260		2-Chloroethyl vinyl ether	NELAP	NH	11/14/2014
EPA 8260		2-Chlorotoluene	NELAP	NH	11/14/2014
EPA 8260		2-Hexanone	NELAP	NH	11/14/2014
EPA 8260		4-Chlorotoluene	NELAP	NH	11/14/2014
EPA 8260		4-Methyl-2-pentanone (MIBK)	NELAP	NH	11/14/2014
EPA 8260		Acetone	NELAP	NH	11/14/2014
EPA 8260		Acetonitrile	NELAP	NH	11/14/2014
EPA 8260		Acrolein (Propenal)	NELAP	NH	11/14/2014
EPA 8260		Acrylonitrile	NELAP	NH	11/14/2014
EPA 8260		Benzene	NELAP	NH	11/14/2014
EPA 8260		Bromobenzene	NELAP	NH	11/14/2014
EPA 8260		Bromochloromethane	NELAP	NH	11/14/2014
EPA 8260		Bromodichloromethane	NELAP	NH	11/14/2014
EPA 8260		Bromoform	NELAP	NH	11/14/2014
EPA 8260		Bromomethane (Methyl bromide)	NELAP	NH	11/14/2014
EPA 8260		Carbon disulfide	NELAP	NH	11/14/2014
EPA 8260		Carbon tetrachloride	NELAP	NH	11/14/2014
EPA 8260		Chlorobenzene	NELAP	NH	11/14/2014
EPA 8260		Chloroethane	NELAP	NH	11/14/2014
EPA 8260		Chloroform	NELAP	NH	11/14/2014
EPA 8260		Chloromethane (Methyl chloride)	NELAP	NH	11/14/2014

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Attached to Certificate of Accreditation 009-001 expiration date November 30, 2019. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

DEP Laboratory ID: 68-00571 **EPA Lab Code: ME00019** **TNI Code: TNI00476** **(207) 874-2400**

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary	Effective Date
EPA 8260		Chloroprene (2-Chloro-1,3-butadiene)	NELAP	NH	11/14/2014
EPA 8260		Dibromochloromethane	NELAP	NH	11/14/2014
EPA 8260		Dibromomethane	NELAP	NH	11/14/2014
EPA 8260		Dichlorodifluoromethane (Freon 12)	NELAP	NH	11/14/2014
EPA 8260		Diethyl ether (Ethyl ether)	NELAP	NH	11/14/2014
EPA 8260		Ethylbenzene	NELAP	NH	11/14/2014
EPA 8260		Iodomethane (Methyl iodide)	NELAP	NH	11/14/2014
EPA 8260		Isobutyl alcohol (2-Methyl-1-propanol)	NELAP	NH	11/14/2014
EPA 8260		Isopropyl alcohol (2-Propanol)	NELAP	NH	11/14/2014
EPA 8260		Isopropylbenzene (Cumene)	NELAP	NH	11/14/2014
EPA 8260		Methacrylonitrile	NELAP	NH	11/14/2014
EPA 8260		Methyl tert-butyl ether (MTBE)	NELAP	NH	11/14/2014
EPA 8260		Methylene chloride (Dichloromethane)	NELAP	NH	11/14/2014
EPA 8260		Methylmethacrylate	NELAP	NH	11/14/2014
EPA 8260		Naphthalene	NELAP	NH	11/14/2014
EPA 8260		Pyridine	NELAP	NH	11/14/2014
EPA 8260		Tetrachloroethene (PCE, Perchloroethylene)	NELAP	NH	11/14/2014
EPA 8260		Toluene	NELAP	NH	11/14/2014
EPA 8260		Trichloroethene (TCE, Trichloroethylene)	NELAP	NH	11/14/2014
EPA 8260		Trichlorofluoromethane (Freon 11)	NELAP	NH	11/14/2014
EPA 8260	B	VOCs by GC/MS	NELAP	NH	11/14/2014
EPA 8260	C	VOCs by GC/MS	NELAP	NH	11/14/2014
EPA 8260		Vinyl acetate	NELAP	NH	11/14/2014
EPA 8260		Vinyl chloride (Chloroethene)	NELAP	NH	11/14/2014
EPA 8260		Xylenes, total	NELAP	NH	11/14/2014
EPA 8260		cis-1,2-Dichloroethene	NELAP	NH	11/14/2014
EPA 8260		cis-1,3-Dichloropropene	NELAP	NH	11/14/2014
EPA 8260		cis-1,4-Dichloro-2-butene	NELAP	NH	11/14/2014
EPA 8260		n-Butyl alcohol (n-Butanol, 1-Butanol)	NELAP	NH	11/14/2014
EPA 8260		n-Butylbenzene	NELAP	NH	11/14/2014
EPA 8260		n-Propylbenzene	NELAP	NH	11/14/2014
EPA 8260		p-Isopropyltoluene (4-Isopropyltoluene)	NELAP	NH	11/14/2014
EPA 8260		sec-Butylbenzene	NELAP	NH	11/14/2014
EPA 8260		tert-Butyl alcohol (2-Methyl-2-propanol)	NELAP	NH	11/14/2014
EPA 8260		tert-Butylbenzene	NELAP	NH	11/14/2014
EPA 8260		trans-1,2-Dichloroethene	NELAP	NH	11/14/2014
EPA 8260		trans-1,3-Dichloropropene	NELAP	NH	11/14/2014
EPA 8260		trans-1,4-Dichloro-2-butene	NELAP	NH	11/14/2014
EPA 8270		1,2,4,5-Tetrachlorobenzene	NELAP	NH	11/14/2014
EPA 8270		1,2,4-Trichlorobenzene	NELAP	NH	11/14/2014
EPA 8270		1,2-Dichlorobenzene (o-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 8270		1,2-Dinitrobenzene (1,2-DNB)	NELAP	NH	11/14/2014
EPA 8270		1,2-Diphenylhydrazine	NELAP	NH	11/14/2014
EPA 8270		1,3,5-Trinitrobenzene (1,3,5-TNB)	NELAP	NH	11/14/2014
EPA 8270		1,3-Dichlorobenzene (m-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 8270		1,3-Dinitrobenzene (1,3-DNB)	NELAP	NH	11/14/2014
EPA 8270		1,4-Dichlorobenzene (p-Dichlorobenzene)	NELAP	NH	11/14/2014



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DEP Laboratory ID: 68-00571 **EPA Lab Code: ME00019** **TNI Code: TNI00476** **(207) 874-2400**

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary	Effective Date
EPA 8270		1,4-Dinitrobenzene (1,4-DNB)	NELAP	NH	11/14/2014
EPA 8270		1,4-Naphthoquinone	NELAP	NH	11/14/2014
EPA 8270		1-Chloronaphthalene	NELAP	NH	11/14/2014
EPA 8270		1-Naphthylamine (alpha-Naphthylamine)	NELAP	NH	11/14/2014
EPA 8270		2,2'-oxybis(1-Chloropropane)	NELAP	NH	11/14/2014
EPA 8270		2,3,4,6-Tetrachlorophenol	NELAP	NH	11/14/2014
EPA 8270		2,4,5-Trichlorophenol	NELAP	NH	11/14/2014
EPA 8270		2,4,6-Trichlorophenol	NELAP	NH	11/14/2014
EPA 8270		2,4-Dichlorophenol	NELAP	NH	11/14/2014
EPA 8270		2,4-Dimethylphenol	NELAP	NH	11/14/2014
EPA 8270		2,4-Dinitrophenol	NELAP	NH	11/14/2014
EPA 8270		2,4-Dinitrotoluene (2,4-DNT)	NELAP	NH	11/14/2014
EPA 8270		2,6-Dichlorophenol	NELAP	NH	11/14/2014
EPA 8270		2,6-Dinitrotoluene (2,6-DNT)	NELAP	NH	11/14/2014
EPA 8270		2-Acetylaminofluorene	NELAP	NH	11/14/2014
EPA 8270		2-Chloronaphthalene	NELAP	NH	11/14/2014
EPA 8270		2-Chlorophenol	NELAP	NH	11/14/2014
EPA 8270		2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	NELAP	NH	11/14/2014
EPA 8270		2-Methylnaphthalene	NELAP	NH	11/14/2014
EPA 8270		2-Methylphenol (o-Cresol)	NELAP	NH	11/14/2014
EPA 8270		2-Naphthylamine (beta-Naphthylamine)	NELAP	NH	11/14/2014
EPA 8270		2-Nitroaniline	NELAP	NH	11/14/2014
EPA 8270		2-Nitrophenol	NELAP	NH	11/14/2014
EPA 8270		3+4-Methylphenol (m+p-Cresol)	NELAP	NH	11/14/2014
EPA 8270		3,3'-Dichlorobenzidine	NELAP	NH	11/14/2014
EPA 8270		3,3'-Dimethylbenzidine	NELAP	NH	11/14/2014
EPA 8270		3-Methylcholanthrene	NELAP	NH	11/14/2014
EPA 8270		3-Nitroaniline	NELAP	NH	11/14/2014
EPA 8270		4-Aminobiphenyl	NELAP	NH	11/14/2014
EPA 8270		4-Bromophenyl phenyl ether	NELAP	NH	11/14/2014
EPA 8270		4-Chloro-3-methylphenol	NELAP	NH	11/14/2014
EPA 8270		4-Chloroaniline	NELAP	NH	11/14/2014
EPA 8270		4-Chlorophenyl phenyl ether	NELAP	NH	11/14/2014
EPA 8270		4-Nitroaniline	NELAP	NH	11/14/2014
EPA 8270		4-Nitrophenol	NELAP	NH	11/14/2014
EPA 8270		5-Nitro-o-toluidine	NELAP	NH	11/14/2014
EPA 8270		7,12-Dimethylbenz(a)anthracene	NELAP	NH	11/14/2014
EPA 8270		Acenaphthene	NELAP	NH	11/14/2014
EPA 8270		Acenaphthylene	NELAP	NH	11/14/2014
EPA 8270		Acetophenone	NELAP	NH	11/14/2014
EPA 8270		Aniline	NELAP	NH	11/14/2014
EPA 8270		Anthracene	NELAP	NH	11/14/2014
EPA 8270		Aramite	NELAP	NH	11/14/2014
EPA 8270		Benzaldehyde	NELAP	NH	11/14/2014
EPA 8270		Benzidine	NELAP	NH	11/14/2014
EPA 8270		Benzo[a]anthracene	NELAP	NH	11/14/2014

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DEP Laboratory ID: 68-00571 **EPA Lab Code: ME00019** **TNI Code: TNI00476** **(207) 874-2400**

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary	Effective Date
EPA 8270		Benzo[a]pyrene	NELAP	NH	11/14/2014
EPA 8270		Benzo[b]fluoranthene	NELAP	NH	11/14/2014
EPA 8270		Benzo[ghi]perylene	NELAP	NH	11/14/2014
EPA 8270		Benzo[k]fluoranthene	NELAP	NH	11/14/2014
EPA 8270		Benzoic acid	NELAP	NH	11/14/2014
EPA 8270		Benzyl alcohol	NELAP	NH	11/14/2014
EPA 8270		Benzyl butyl phthalate (Butyl benzyl phthalate)	NELAP	NH	11/14/2014
EPA 8270		Carbazole	NELAP	NH	11/14/2014
EPA 8270		Chlorobenzilate	NELAP	NH	11/14/2014
EPA 8270		Chrysene (Benzo[a]phenanthrene)	NELAP	NH	11/14/2014
EPA 8270		Di-n-butyl phthalate	NELAP	NH	11/14/2014
EPA 8270		Di-n-octyl phthalate	NELAP	NH	11/14/2014
EPA 8270		Diallate (cis or trans)	NELAP	NH	11/14/2014
EPA 8270		Dibenz[a,j]acridine	NELAP	NH	11/14/2014
EPA 8270		Dibenzo[a,h]anthracene	NELAP	NH	11/14/2014
EPA 8270		Dibenzofuran	NELAP	NH	11/14/2014
EPA 8270		Diethyl phthalate	NELAP	NH	11/14/2014
EPA 8270		Dimethoate	NELAP	NH	11/14/2014
EPA 8270		Dimethyl phthalate	NELAP	NH	11/14/2014
EPA 8270		Disulfoton	NELAP	NH	11/14/2014
EPA 8270		Ethyl methanesulfonate	NELAP	NH	11/14/2014
EPA 8270		Famphur	NELAP	NH	11/14/2014
EPA 8270		Fluoranthene	NELAP	NH	11/14/2014
EPA 8270		Fluorene	NELAP	NH	11/14/2014
EPA 8270		Hexachlorobenzene	NELAP	NH	11/14/2014
EPA 8270		Hexachlorobutadiene (1,3-Hexachlorobutadiene)	NELAP	NH	11/14/2014
EPA 8270		Hexachlorocyclopentadiene	NELAP	NH	11/14/2014
EPA 8270		Hexachloroethane	NELAP	NH	11/14/2014
EPA 8270		Hexachlorophene	NELAP	NH	11/14/2014
EPA 8270		Hexachloropropene	NELAP	NH	11/14/2014
EPA 8270		Indeno(1,2,3-cd)pyrene	NELAP	NH	11/14/2014
EPA 8270		Isodrin	NELAP	NH	11/14/2014
EPA 8270		Isophorone	NELAP	NH	11/14/2014
EPA 8270		Isosafrole	NELAP	NH	11/14/2014
EPA 8270		Kepone	NELAP	NH	11/14/2014
EPA 8270		Methapyrilene	NELAP	NH	11/14/2014
EPA 8270		Methyl methanesulfonate	NELAP	NH	11/14/2014
EPA 8270		Methyl parathion (Parathion, methyl)	NELAP	NH	11/14/2014
EPA 8270		N-Nitrosodi-n-butylamine	NELAP	NH	11/14/2014
EPA 8270		N-Nitrosodi-n-propylamine	NELAP	NH	11/14/2014
EPA 8270		N-Nitrosodiethylamine	NELAP	NH	11/14/2014
EPA 8270		N-Nitrosodimethylamine	NELAP	NH	11/14/2014
EPA 8270		N-Nitrosodiphenylamine	NELAP	NH	11/14/2014
EPA 8270		N-Nitrosomethylethylamine	NELAP	NH	11/14/2014
EPA 8270		N-Nitrosomorpholine	NELAP	NH	11/14/2014



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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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DEP Laboratory ID: 68-00571 **EPA Lab Code: ME00019** **TNI Code: TNI00476** **(207) 874-2400**

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary	Effective Date
EPA 8270		N-Nitrosopiperidine	NELAP	NH	11/14/2014
EPA 8270		Naphthalene	NELAP	NH	11/14/2014
EPA 8270		Nitrobenzene	NELAP	NH	11/14/2014
EPA 8270		O,O,O-Triethyl phosphorothioate	NELAP	NH	11/14/2014
EPA 8270		Parathion, ethyl (Ethyl parathion, Parathion)	NELAP	NH	11/14/2014
EPA 8270		Pentachlorobenzene	NELAP	NH	11/14/2014
EPA 8270		Pentachloronitrobenzene (PCNB)	NELAP	NH	11/14/2014
EPA 8270		Pentachlorophenol (PCP)	NELAP	NH	11/14/2014
EPA 8270		Phenacetin	NELAP	NH	11/14/2014
EPA 8270		Phenanthrene	NELAP	NH	11/14/2014
EPA 8270		Phenol	NELAP	NH	11/14/2014
EPA 8270		Phorate (Thimet)	NELAP	NH	11/14/2014
EPA 8270		Pronamide (Kerb)	NELAP	NH	11/14/2014
EPA 8270		Pyrene	NELAP	NH	11/14/2014
EPA 8270		Pyridine	NELAP	NH	11/14/2014
EPA 8270	D	SOCs by GC/MS	NELAP	NH	11/14/2014
EPA 8270	C	SOCs by GC/MS	NELAP	NH	11/14/2014
EPA 8270		Safrole	NELAP	NH	11/14/2014
EPA 8270		Sulfotepp (Tetraethyl dithiopyrophosphate)	NELAP	NH	11/14/2014
EPA 8270		Thionazine (Thionazin, Zinophos)	NELAP	NH	11/14/2014
EPA 8270		a,a-Dimethylphenethylamine (Phentermine)	NELAP	NH	11/14/2014
EPA 8270		bis(2-Chloroethoxy)methane	NELAP	NH	11/14/2014
EPA 8270		bis(2-Chloroethyl) ether	NELAP	NH	11/14/2014
EPA 8270		bis(2-Ethylhexyl) phthalate (DEHP)	NELAP	NH	11/14/2014
EPA 8270		o-Toluidine (2-Toluidine, 2-Methylaniline)	NELAP	NH	11/14/2014
EPA 8330		1,3,5-Trinitrobenzene (1,3,5-TNB)	NELAP	NH	11/14/2014
EPA 8330		1,3-Dinitrobenzene (1,3-DNB)	NELAP	NH	11/14/2014
EPA 8330		2,4,6-Trinitrotoluene (2,4,6-TNT)	NELAP	NH	11/14/2014
EPA 8330		2,4-Dinitrotoluene (2,4-DNT)	NELAP	NH	11/14/2014
EPA 8330		2,6-Dinitrotoluene (2,6-DNT)	NELAP	NH	11/14/2014
EPA 8330		2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NELAP	NH	11/14/2014
EPA 8330		2-Nitrotoluene	NELAP	NH	11/14/2014
EPA 8330		3-Nitrotoluene	NELAP	NH	11/14/2014
EPA 8330		4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NELAP	NH	11/14/2014
EPA 8330		4-Nitrotoluene	NELAP	NH	11/14/2014
EPA 8330		Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	NELAP	NH	11/14/2014
EPA 8330	B	Nitroaromatics and nitramines by HPLC/UV	NELAP	NH	11/14/2014
EPA 8330	A	Nitroaromatics and nitramines by HPLC/UV	NELAP	NH	11/14/2014
EPA 8330		Nitrobenzene	NELAP	NH	11/14/2014
EPA 8330		Nitroglycerin	NELAP	NH	11/14/2014
EPA 8330		Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	NELAP	NH	11/14/2014
EPA 9012	A	Total cyanide	NELAP	NH	10/28/2015
EPA 9038		Sulfate	NELAP	NH	11/14/2014
EPA 9045	D	pH	NELAP	NH	11/14/2014
EPA 9056	A	Anions by IC	NELAP	NH	11/14/2014

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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DEP Laboratory ID: 68-00571 **EPA Lab Code: ME00019** **TNI Code: TNI00476** **(207) 874-2400**

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary	Effective Date
EPA 9056		Chloride	NELAP	NH	11/14/2014
EPA 9056		Fluoride	NELAP	NH	11/14/2014
EPA 9056		Nitrate as N	NELAP	NH	11/14/2014
EPA 9056		Nitrite as N	NELAP	NH	11/14/2014
EPA 9056		Orthophosphate as P	NELAP	NH	11/14/2014
EPA 9056		Sulfate	NELAP	NH	11/14/2014
EPA 9060	A	Total organic carbon (TOC)	NELAP	NH	4/3/2017
EPA 9071	A	Oil and grease	NELAP	NH	11/14/2014
EPA 9071	B	Oil and grease	NELAP	NH	11/14/2014
EPA 9095	B	Paint filter liquids test	NELAP	NH	4/3/2017
EPA 9251		Chloride	NELAP	NH	11/14/2014

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Laboratory Status Summary

DEP Laboratory ID: 68-00571 **EPA Lab Code: ME00019** **(207) 874-2400**

Katahdin Analytical Services LLC
600 Technology Way
Scarborough, ME 04074

Matrix: Non-Potable Water

Method	Revision	Analyte	Status	Effective Date
EPA 8260		1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	Not Accredited	4/3/2018
EPA 8270		Pentachloronitrobenzene (PCNB)	Not Accredited	4/3/2018
EPA 8270		a,a-Dimethylphenethylamine (Phentermine)	Not Accredited	4/3/2018
EPA 8270		o-Toluidine (2-Toluidine, 2-Methylaniline)	Not Accredited	4/3/2018

Print Date: 11/29/2018

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TETRA TECH
FIELD TASK MODIFICATION REQUEST FORM

NAS JRB Willow Grove	WE04	1
Project/Installation Name	CTO & Project Number	Task Mod. Number
SAP	SW/SED	8/19/2020
Modification To (e.g. Work Plan)	Site/Sample Location	Date

Activity Description:

The SAP Worksheet #19 says to collect sediment in 8 oz. glass jars for PFAS analysis.

Reason for Change:

Direction from Tetra Tech SOP SA-1.8 and the laboratory is to use HDPE jars for PFAS in solid matrix rather than glass. Per the SOP: Do not use glass jars typically used for soil sample collection because some PFAS may irreversibly adsorb to the glass and could create a negative bias (i.e., artificially low concentrations) in the measured PFAS concentrations.

Recommended Disposition:

Use HDPE jars provided by the laboratory for sediment collection.

Sue Herbert — 8/19/2020

Field Operations Leader or Project Chemist (Signature) — Date

Approved Disposition:

Use HDPE jars provided by the laboratory for sediment collection.

Tricia E Moore — 08/19/2020

Project/Task Order Manager (Signature) — Date

Distribution:

Program/Project File -
Project/Task Order Manager - Tricia Moore
Field Operations Leader - Seth Oshier

Other: Chemist, Sue Herbert

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TETRA TECH

FIELD TASK MODIFICATION REQUEST FORM

NAS JRB Willow Grove	**WE04**	**2 (NIRIS # 4823)**
Project/Installation Name	**CTO & Project Number**	**Task Mod. Number**
SAP for PFAS Surface Water and Sediment Sampling (NIRIS #3957)	**On-base and Off-base**	**4/21/2021**
Modification To (e.g. Work Plan)	**Site/Sample Location**	**Date**

Activity Description: This Field Task Modification Request Form (FTMR) documents surface water and sediment sampling conducted thus far as well as changes to the on-going sampling program. Ecological and human health project screening levels (PSLs) have also been updated. Laboratory certifications have been updated as well as applicable Worksheets to document the change in certification of the Per- and polyfluoroalkyl substances (PFAS) laboratory from Quality Systems Manual (QSM) 5.1 to QSM 5.3. The positions of Health and Safety Manager and Project Chemist have been updated and additional field operations leaders have been added.

Reason for Change: The original sampling sequencing documented in the final Sampling and Analysis Plan (SAP) was changed due to the incorporation of U.S. Geological Survey input and the involvement of the Air National Guard to take over sampling at some surface water locations. The PFAS laboratory, Battelle, updated its Department of Defense (DOD) certification from QSM 5.1 to QSM 5.3 and updated the achievable lab limits. New literature has been published regarding toxicity of PFAS to ecological receptors and therefore the PSLs were re-evaluated and updated.

Recommended Disposition: Use the updated SAP Worksheets in conjugation with the original approved SAP for additional project details such as the conceptual site model and data validation requirements. Updated Field Standard Operating Procedures (SOPs) are included in Appendix C and the new QSM 5.3 DOD certification for the PFAS laboratory (Battelle) and updated Pennsylvania Department of Environmental Protection (PADEP) Environmental Laboratory Accreditation Program (ELAP) certification for the Total Organic Carbon laboratory (Katahdin) are included in Appendix D.

Sue Herbst — Requester, e.g., Project Chemist (Signature) — 4/21/2021 — Date

Approved Disposition:

Lucia E Moore — Project/Task Order Manager (Signature) — 4/28/21 — Date

T.E. Johnston — Quality Assurance Manager (Signature) — 4/29/2021 — Date

Signed during internal draft — Navy QAO (Signature) — Date

Distribution:
Program/Project File – NAS JRB Willow Grove
Project/Task Order Manager – Tricia Moore

Field Operations Leader – Seth Oshier _____

Field Operations Leader – Chris Sinisi _____

Field Operations Leader – Don Whalen _____

Distribution:
Program/Project File – NAS JRB Willow Grove
Project/Task Order Manager – Tricia Moore

Field Operations Leader – Seth Oshier _____

Field Operations Leader – Chris Sinisi 4/23/21

Field Operations Leader – Don Whalen _____

Distribution:
Program/Project File – NAS JRB Willow Grove
Project/Task Order Manager – Tricia Moore

Field Operations Leader – Seth Oshier _____

Field Operations Leader – Chris Sinisi _____

Field Operations Leader – Don Whalen Donald Whalen _____

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SAP Worksheet #30 -- Analytical Services Table 43
SAP Worksheet #34-36 -- Data Verification and Validation (Steps I and IIa/IIb) Process Table 44
References 45

APPENDICES

A – see Final SAP
B – Site-Specific Human Health Project Screening Levels (updates only)
C – Field Standard Operating Procedures
D – Laboratory Accreditation Documentation, In-house Quality Control Limits, and Backup Laboratory Worksheets
E – Ecological Project Screening Level Documentation

FIGURES

1 – Site Surface Water/Sediment Sample Locations
2 – Reference Surface Water/Sediment Sample Locations
3 – Site Surface Water/Sediment Sample Location (Updated from March 2020 Final SAP)

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SAP Worksheet #3 -- Distribution List

(UFP-QAPP Manual Section 2.3.1)

Note: Only the SAP recipients that have changed since publication of the Final SAP (Tetra Tech, 2020) are included in this Worksheet.

Name of Sampling Analysis Plan (SAP) Recipients	Title/Role	Organization	Telephone Number	E-mail Address or Mailing Address
Dawn DeFreitas (electronic copy)	Naval Facilities Engineering Systems Command (NAVFAC) Base Realignment and Closure (BRAC) Environmental Coordinator (BEC)/Provides technical support	NAVFAC	215-897-4903	dawn.defreitas@navy.mil
Matt Soltis, Certified Industrial Hygienist/ Certified Safety Professional (Health and Safety Plan (HASP) only]) (electronic copy)	Health and Safety Manager/Manages Comprehensive Long-Term Environmental Action Navy (CLEAN) Health and Safety Program	Tetra Tech	412-921-8912	matt.soltis@tetratech.com
Sue Herbert (electronic copy)	Project Chemist/Interface with laboratory	Tetra Tech	610-382-1537	sue.herbert@tetratech.com
Katherine Super (electronic copy)	Per- and polyfluoroalkyl substances (PFAS) point of contact (POC)/Serves as technical resource, does not implement SAP	Tetra Tech	412-921-8887	katherine.super@tetratech.com
Seth Oshier Chris Sinisi Don Whalen (electronic copy)	Field Operations Leader (FOL) / Site Safety and Health Officer (SSHO)	Tetra Tech	610-382-1526 610-382-1524 610-382-1536	seth.oshier@tetratech.com chris.sinisi@tetratech.com don.whalen@tetratech.com

SAP Worksheet #4 -- Project Personnel Sign-Off Sheet

(UFP-QAPP Manual Section 2.3.2)

Certification that project personnel have read the text will be obtained by one of the following methods as applicable:

1. In the case of regulatory agency personnel with oversight authority, approval letters or emails will constitute verification that applicable sections of the SAP have been reviewed. Copies of regulatory agency approval letters/emails will be retained in the project files as project records (see Worksheet #29).

2. Emails will be sent to the listed Navy, Tetra Tech, and subcontractor project personnel whom will be requested to verify by email that they have read the applicable SAP/sections and the date on which they were reviewed. Copies of the verification email will be included in the project files (see Worksheet #29).

A copy of the signed Worksheet #4 will be retained in the project files and is identified as a project record in Worksheet #29.

Key personnel (NAVFAC Remedial Project Manager [RPM], Tetra Tech Project Manager [PM], Tetra Tech Project Chemist, Tetra Tech FOL, and Tetra Tech SSHO) will be instructed to read the SAP portions indicated in this worksheet prior to attending an internal site-specific kick-off meeting for field activities. The Tetra Tech PM will track when the reviews have been completed, obtain signatures, and ensure that the completed sign-off sheet is included in the central project file.

Name(1)	Organization/Title/Role	Telephone Number	Signature/Email Receipt	SAP Section Reviewed	Date SAP Read
Navy and Regulator Project Team Personnel					
Brian Helland	NAVFAC/RPM/Manages project for NAVFAC	215-897-4912	See Worksheet #1 for signature	All	
Willington Lin	NAVFAC/Deputy Base Closure Manager/Provides technical support	215-897-4904	Email receipt	All	
Dawn DeFreitas	NAVFAC/BEC/Provides technical support	215-897-4903	Email receipt	All	
Jason Speicher	NAVFAC/Technical support/Provides technical support	215-897-4914	Email receipt	All	
Judy Solomon (draft only)	NAVFAC/ Quality Assurance Officer (QAO)/Chemist/ Quality Assurance (QA) oversight	757-322-4699	See Worksheet #1 for signature	All	

Name[(1)]	Organization/Title/Role	Telephone Number	Signature/Email Receipt	SAP Section Reviewed	Date SAP Read
Sarah Kloss	Environmental Protection Agency (EPA)/RPM/Provides regulatory input and oversight	215-814-3379	Email receipt	All	
Colin Wade	Pennsylvania Department of Environmental Protection (PADEP)/Project Officer/Provides regulatory input	484-250-5722	Email receipt	All	
Tetra Tech Project Team Personnel					
Tricia Moore	Tetra Tech/PM/Provides oversight and daily management	609-277-5051	See Worksheet #1 for signature	All	
Matt Soltis	Tetra Tech/CLEAN HSM/Manages CLEAN health and safety program	412-921-8912	See project-specific HASP for signature	HASP	
Tom Johnston	Tetra Tech/ Quality Assurance Manager (QAM)/Manages QA program and its Implementation	412-921-8615	See Worksheet #1 for signature	All	
Joseph Samchuck	Tetra Tech/Data Validation Manager (DVM)/Manages Data Validation (DV)	412-921-8510	Email receipt	All (emphasis on Worksheets #s 12, 14, 15, 19, 20, 23-28, 30, and 34-37)	
Katherine Super (does not implement SAP)	Tetra Tech/PFAS POC/Serves as technical resource	412-921-8887	Email receipt	All	

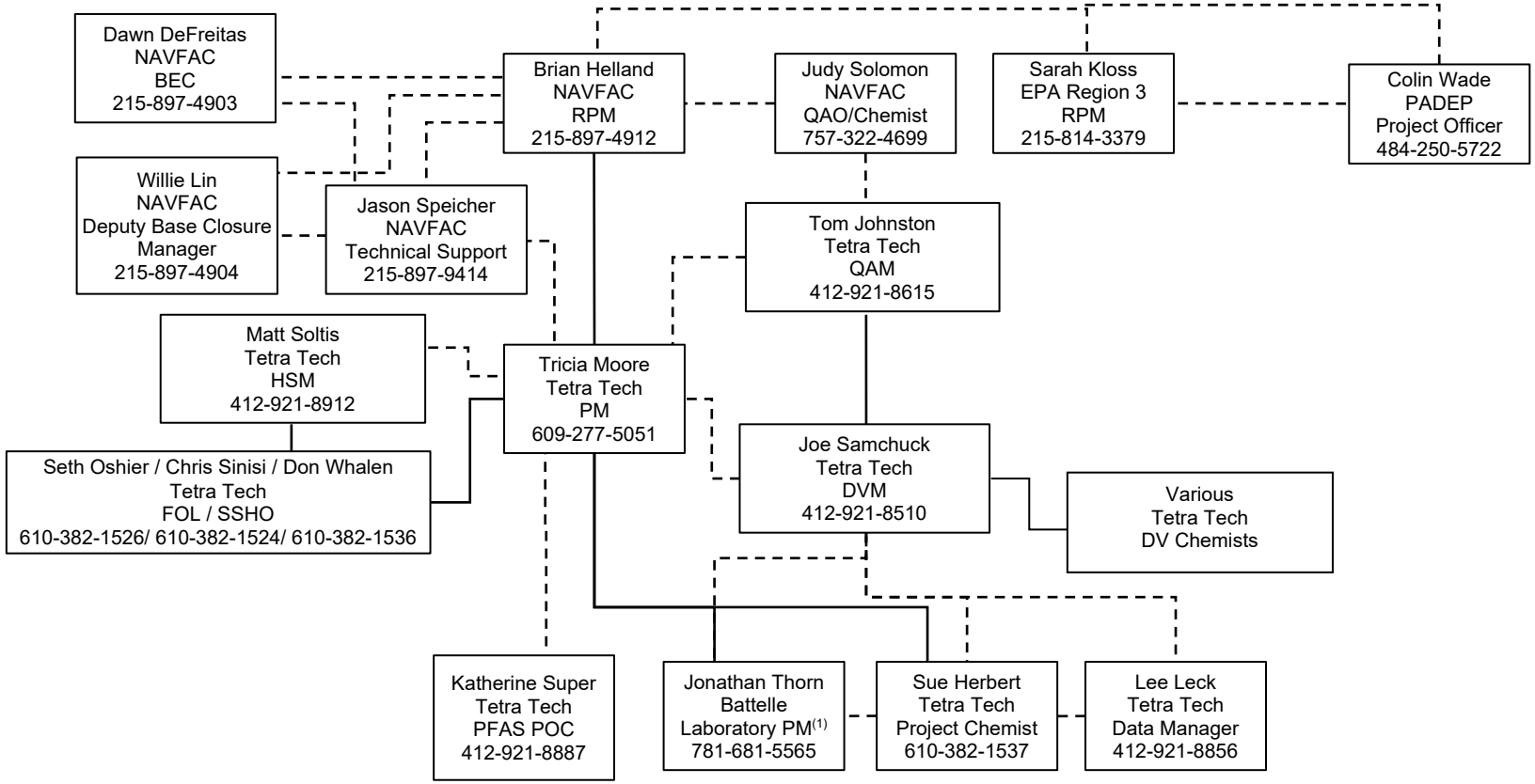
Name[1]	Organization/Title/Role	Telephone Number	Signature/Email Receipt	SAP Section Reviewed	Date SAP Read
Sue Herbert	Tetra Tech/Project Chemist/Provides coordination with laboratory and DV group Sampling Coordinator/Coordinates beginning of sampling effort, Tracks samples	610-382-1537	Email receipt	All	
Seth Oshier Chris Sinisi Don Whalen	Tetra Tech/FOL/ Oversees operational activities in the field Tetra Tech/SSHO/ Oversees health and safety activities in the field	610-382-1526 610-382-1524 610-382-1536	Email receipt	All (emphasis on Worksheet #s 5, 6, 10, 11.1-11.4, 12, 14, 15, 17 to 22, and 27)	
Lee Leck	Tetra Tech/Data Manager/Coordinates data management activities	412-921-8856	Email receipt	All (emphasis on Worksheet #s 6, 12, 14, 15, 19, 23-28, 30, and 34-37)	
Subcontractor Personnel (Laboratory)					
Jonathan Thorn	Battelle/Laboratory PM[2]/ Oversees project-specific laboratory operations	781-681-5565	Email receipt	Worksheet #s 6, 12, 14, 15, 19, 23-28, 30, and 34-36	
Heather Manz	Katahdin/Laboratory PM/ Oversees project-specific laboratory operations	207-874-2400	Email receipt	Worksheet #s 6, 12, 14, 15, 19, 23-28, 30, and 34-36	

Note:
[1] Persons listed on this worksheet will be responsible for distributing the SAP to the appropriate people within their organization.
[2] Backup laboratory information is provided in Appendix D.

SAP Worksheet #5 -- Project Organizational Chart

(UFP-QAPP Manual Section 2.4.1

Lines of Authority ——————— Lines of Communication - - - - - - - - - -



Note: All Tetra Tech staff have communication access to the HSM and QAM at all times, especially if health and safety or quality incidents adverse to personnel safety or work performance are identified.

(1) Backup laboratory information provided in Appendix D.

SAP Worksheet #11 -- Project Quality Objectives/Systematic Planning Process Statements
(UFP-QAPP Manual Section 2.6.1)

Note: Section 11.2.3 is the only section in Worksheet #11 that has been updated since publication of the Final SAP (Tetra Tech, 2020).

Human Health

Human health surface water and sediment PSLs were derived for perfluorooctanesulfonic acid (PFOS), perfluorooctanoic acid (PFOA), and perfluorobutanesulfonic acid (PFBS) using the EPA Regional Screening Level (RSL) Calculator based on a target cancer risk level of 1E-6 (applicable to PFOA only); and a target hazard quotient (HQ) of 0.1 (for all three PFAS). Human health screening levels were not developed for other PFAS because of the lack of available toxicity values for these analytes. Default exposure assumptions for a recreational soil exposure scenario recommended in the RSL calculator were used (where available) to represent potential exposure to sediment for preliminary screening purposes. The use of soil exposure inputs to represent sediment exposure is likely to overestimate adverse health effects. Exposure assumptions outlined in the Phase I RI for a recreational surface water exposure scenario were used in the RSL Calculator for PFOS, PFOA and PFBS to represent potential exposure to surface water for preliminary screening purposes. Where default values are not available or appropriate, conservative inputs protective of a potential site-specific sediment exposure scenario were selected by the RI Phase I risk assessor. These values were for exposure frequency (contact with sediment two times per week, for 26 weeks with a contact time of 3 hours per exposure). The inputs used to derive the surface water and sediment PSLs originally published in the RI report (Resolution, 2019) are provided in Appendix B. The EPA RSL calculator inputs that were published in the May 2021 RSL update contained no updates to the exposure parameters or toxicity values used in the Final Phase I RI for those PFAS compounds listed in Worksheet #15 (Resolution, 2019, EPA, 2021a) except for the following. The EPA published an update to the PFBS toxicity criteria in an April 2021 publication by the EPA Office of Water (EPA, 2021b). The PFBS surface water and sediment PSLs were calculated with the EPA RSL Calculator for a recreational swimmer using an updated chronic oral RfD of 0.0003 mg/kg-day (EPA, 2021a). The RSL Calculator output for PFBS is provided in Appendix B (EPA, 2021a, 2021b).

The following are the selected human health PSLs for surface water (also see Worksheet #15):

- PFOA: 1,400 ppt (corresponds to an HQ of 0.1)
- PFOS: 1,400 ppt (corresponds to an HQ of 0.1)
- PFBS: 21,000 ppt (corresponds to an HQ of 0.1)

The following are the selected human health PSLs for sediment (also see Worksheet #15):

- PFOA: 851 ppb (corresponds to an HQ of 0.1)
- PFOS: 851 ppb (corresponds to an HQ of 0.1)
- PFBS: 13,000 ppb (corresponds to an HQ of 0.1)

11.2.3 Project Screening Levels

Ecological

The EPA has not yet established consensus-based ecological screening values (ESVs) for PFAS for surface water or sediment. The Department of Defense's (DoD's) Strategic Environmental Research and Development Program (SERDP) has published additional ecological studies since the Final SAP was written. SERDP ER18-1614, *Guidance for Assessing the Ecological Risks of PFASs to Threatened and Endangered Species at*

Aqueous Film Forming Foam-Impacted Sites (Revision 2), published in September 2020, provides aquatic life protection values for perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) (Conder et al., 2020). The PFOS and PFOA ecological direct contact surface water screening values were considered from Table 6 (freshwater 5 percent hazardous concentration [protective of 95 percent of all species]) of SERDP ER18-1614. Screening levels were also considered from SERDP ER18-1653, *Approach for Assessing PFAS Risk to Threatened and Endangered Species*, published in March 2020, and provides chronic recommended water quality (RWQ) risk-based screening level (RBSL) values for several PFAS (Divine et al., 2020). The surface water wildlife values were also considered from Divine et al. (2020) and are no observable adverse effects level (NOAEL)-based toxicity reference values (TRVs) and therefore are conservative based screening values. Values considered from both references are provided in Appendix E.

For purposes of determining if the laboratory LOQs can meet the ecological project screening levels (PSLs), the lowest value of the PSLs was selected for Worksheet #15. The following are the selected ecological PSLs from SERDP ER18-1653 (Divine et al., 2020) for surface water (also see Worksheet #15):

- PFOA: 4,400 parts per trillion (ppt) (mammal)
- PFOS: 75 ppt (bird)
- PFBS: 640,000 ppt (bird)
- Perfluorodecanoic acid (PFDA): 140,000 ppt (aquatic organism)
- Perfluorododecanoic acid (PFDoA): 72,000 ppt (aquatic organism)
- Perfluoroheptanoic acid (PFHpA): 870,000 ppt (aquatic organism)
- Perfluorohexanoic acid (PFHxA): 210,000 ppt (mammal)
- Perfluorononanoic acid (PFNA): 2,200 ppt (mammal)
- Perfluoroundecanoic acid (PFUnA): 49,000 ppt (aquatic organism)

The selected ecological PSL for freshwater sediment invertebrates for PFOS is based on the predicted no observable effect concentration of 67 parts per billion (ppb) wet weight from the *Environmental Risk Evaluation Report: Perfluorooctanesulphonate (PFOS)* from the Environment Agency (EA, 2004). This wet weight-based screening level was derived using equilibrium partitioning and a surface water screening level. For screening purposes, the wet weight-based screening level of 67 ppb was converted to a sample-specific dry weight-based screening level. If no sample-specific percent solids data were available, this was adjusted to 84 ppb dry weight assuming a conservative percent solids content of 80 percent. This risk screening value was also used in the previous Remedial Investigation (RI) (Resolution, 2019), as detailed in the Final SAP (Tetra Tech, 2020). Ecological screening values for sediment bird and mammal exposed to sediments were extracted from SERDP ER18-1653 (Divine et al., 2020). The freshwater sediment wildlife PSLs from Divine et al. (2020) are NOAEL-based TRVs. Values considered from both references are provided in Appendix E.

The evaluation of the ecological effects of PFAS is an expanding field of study and additional information relevant to PFAS at this Site may be identified in the future. Prior to preparation of the RI screening-level ecological risk assessment (SLERA), the ESVs that will be used for comparison to site media will be reviewed based on current science and relevancy to site-specific receptors (e.g., relevant ecological receptors). ESVs selected for the screening will be presented in an ESV screening memorandum for regulatory review.

For purposes of determining if the laboratory LOQs can meet the ecological PSLs, the lowest value of the PSLs was selected for Worksheet #15. The following are the selected ecological PSLs from SERDP ER18-1653 (Divine et al., 2020) for sediment (also see Worksheet #15):

- PFOA: 6.0 ppb (mammal)
- PFOS: 1.4 ppb (bird)
- PFBS: 730 ppb (bird)
- PFNA: 10 ppb (mammal)
- PFHxA: 1,800 ppb (mammal)

SAP Worksheet #14 -- Summary of Project Tasks
(UFP-QAPP Manual Section 2.8.1)

Note: Sections 14.3, 14.4, and 14.10.5 are the only sections in Worksheet #14 that have been updated since publication of the Final SAP (Tetra Tech, 2020).

14.3 COLLECTING FIELD MEASUREMENTS AND SURFACE WATER SAMPLES

Quarterly surface water sampling is planned for most sampling locations. Sampling of identified reference locations will occur semiannually during expected seasonal high (late spring) and low (late summer) flow conditions. Additionally, surface water samples will be collected from select locations on the facility (not previously sampled during the Phase I RI or only sampled once) during a single event to determine if these locations should be included in more frequent sampling. See Worksheet #18 and Figures 1 and 2 for a list of the specific locations and frequencies of sampling. Surface water samples will be obtained following Tetra Tech Standard Operating Procedures (SOPs) SA-1.2 and SA-1.8. In addition to the procedures outlined in SOP SA-1.2, samples will be collected with bottles that are both opened and closed while underwater for this SAP. The sampling SOPs are listed in Worksheets #18 and #21, and are in Appendix C. A new pair of nitrile gloves will be worn for each sample collected. Surface water samples will be placed in laboratory-provided containers, preserved as required per analytical methods, stored on ice, and transported under chain-of-custody to Battelle. Refer to Worksheets #15, #18, #20 and #30 for analytical parameters, methods, and procedures.

Stream flow at select sampling locations will be measured with support from United States Geological Survey (USGS) following manual measurement methods at existing or newly installed permanent USGS staff plate gauges. Field measurements of surface water pH, specific conductance, turbidity, temperature, oxidation-reduction potential (ORP), and dissolved oxygen (DO) will be recorded per Section 11.2.4. The following instruments will be used for field data collection:

- Horiba U-50 (or equivalent) water quality meter
- Hanna 2100Q or Hanna HI98703 models (or equivalent) turbidity meter

Field instruments will be calibrated according to the manufacturers' procedures as specified in Worksheet #22. All instrument calibration will be recorded on an equipment calibration log sheet, which will be included in the sampling report. During calibration, a maintenance check will be performed on each piece of equipment. If damaged or defective parts are identified during the maintenance check and it is determined that the damage could have an impact on the instrument's performance, the instrument will be removed from service until the defective parts can be repaired or the instrument replaced.

14.4 COLLECTING SEDIMENT SAMPLES

Annual sediment sampling is planned. Sediment samples will be collected at the same locations as surface water samples except as noted in Worksheet #17 and Table 17-1. Aqueous samples will be collected first immediately followed by collection of sediment samples. Sediment samples will be obtained following Tetra Tech SOP SA-1.2 with a variance: SOP SA-1.2 states that the "sampling location shall be approximately at the center of the water body, in a depositional area if possible based on sample location restraints (see below), unless the SAP states otherwise." For this SAP, depositional areas with fine-grained sediments should be prioritized over the center of the water body. Depositional areas with fine-grained sediments will be targeted at each location. SOP SA-1.8 will be followed for PFAS considerations. Additional detail regarding depth of sediment sample collection is provided in Worksheet #17. The sampling SOPs are listed in Worksheets #18 and #21 and are in Appendix C. A new pair of nitrile gloves will be worn for each sample collected. Sediment samples will be placed in laboratory-provided containers, preserved as required per analytical methods, stored on ice, and transported under chain-of-custody to Battelle for PFAS analysis and to Katahdin for total organic carbon (TOC) analysis. TOC content will be compared to PFAS concentrations to see if there is a correlation (i.e., with

increasing concentrations of TOC more sorption/adherence of PFAS is observed in sediment). Refer to Worksheets #15, #18, #20 and #30 for analytical parameters, methods, and procedures.

14.10 ADDITIONAL ANALYTICAL AND REPORTING TASKS

14.10.5 Project Reports

The results of each round of sampling for either surface water or sediment will be documented in a quarterly technical memorandum to include locations of samples and a table of validated results. Data evaluation will not be included in the quarterly technical memorandum.

An annual summary report evaluating and discussing all quarterly rounds of surface water sampling, annual sediment sampling, and reference station sampling will be prepared and submitted for review. The annual summary report will be submitted to the regulatory team following the completion of four rounds of sampling. This report is expected to be in technical memorandum format and provide a brief summary of sampling activities with the validated results provided in table format. The statement of work (SOW) provided by the Navy did not include an example of the report format required for this project but will include the following elements:

- Introduction and Background - a brief description of the history of the site and the rationale for performing the surface water and sediment sampling.
- Description of Field Investigation - a summary of the work performed in accordance with the approved SAP, any approved SAP addenda, and any field modifications as documented by the Tetra Tech FOL.
- Data Usability Assessment - a summary of quantitative analytical performance indicators such as completeness, precision, bias, and sensitivity; and qualitative indicators such as representativeness and comparability. This section will also include a reconciliation of project data with the data quality objectives (DQOs) and identification of deviations from this SAP. This data usability assessment will be used to identify significant deviations in analytical performance that could affect the ability to meet project objectives. The elements of this review are presented in Worksheet #37.
- Discussion of Results - a discussion of the analytical results and a comparison to PSLs. Detected concentrations will be tabulated and depicted on a tag map showing the sampling locations and results.
- Summary and Conclusions - a summary of the findings, conclusions as to whether project objectives were met or if significant data gaps remain, and recommendations for further investigations (if needed).
- Attachments - copies of field log books, sample logs, data validation reports and all other appropriate documentation will be included in separate attachments.

SAP Worksheet #15 -- Reference Limits and Evaluation Table
(UFP-QAPP Manual Section 2.8.1)

Matrix: Surface Water
Analytical Group: PFAS by Liquid Chromatograph/Tandem Mass Spectroscopy (LC/MS/MS) Compliant with Quality Systems Manual (QSM) 5.3 Table B-15 [1]

Analyte	CAS Number	Human Health PSL[2] (ppt)	PSL Reference[2]	Ecological PSL[3] (ppt)	PSL Reference[3]	Practical Quantitation Limit Goals (PQLG) [4] (ppt)	Battelle		
							LOQ (ppt)	LOD (ppt)	DL (ppt)
Perfluorooctanoic acid (PFOA)	335-67-1	1,400	RSL Calc	4,400	Divine et al. (2020)	467	5.00	1.50	0.511
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	1,400	RSL Calc	75	Divine et al. (2020)	25	5.00	1.00	0.437
Perfluorobutanesulfonic acid (PFBS)	375-73-5	21,000	RSL Calc	640,000	Divine et al. (2020)	7,000	5.00	0.500	0.144
Perfluorodecanoic acid (PFDA)	335-76-2	NA	NA	140,000	Divine et al. (2020)	46,667	5.00	0.500	0.142
Perfluorododecanoic acid (PFDoA)	307-55-1	NA	NA	72,000	Divine et al. (2020)	24,000	5.00	0.500	0.192
Perfluoroheptanoic acid (PFHpA)	375-85-9	NA	NA	870,000	Divine et al. (2020)	290,000	5.00	1.00	0.263
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	NA	NA	NA	NA	NA	5.00	0.40	0.112
Perfluorohexanoic acid (PFHxA)	307-24-4	NA	NA	210,000	Divine et al. (2020)	70,000	5.00	1.500	0.527
Perfluorononanoic acid (PFNA)	375-95-1	NA	NA	2,200	Divine et al. (2020)	733	5.00	1.00	0.309
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	NA	NA	NA	NA	NA	5.00	2.00	0.733
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	NA	NA	NA	NA	NA	5.00	0.500	0.154
Perfluoroundecanoic acid (PFUnA)	2058-94-8	NA	NA	49,000	Divine et al. (2020)	16,333	5.00	0.500	0.219
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	NA	NA	NA	NA	NA	5.00	1.00	0.350
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	NA	NA	NA	NA	NA	5.00	1.00	0.500
Hexafluoropropylene oxide dimer acid, (HFPO-DA)	13252-13-6	NA	NA	NA	NA	NA	5.00	0.500	0.248

Analyte	CAS Number	Human Health PSL[2] (ppt)	PSL Reference[2]	Ecological PSL[3] (ppt)	PSL Reference[3]	Practical Quantitation Limit Goals (PQLG) [4] (ppt)	Battelle		
							LOQ (ppt)	LOD (ppt)	DL (ppt)
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	NA	NA	NA	NA	NA	5.00	0.500	0.231
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	NA	NA	NA	NA	NA	5.00	1.00	0.268
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	NA	NA	NA	NA	NA	5.00	1.00	0.265

(1) The DoD QSM version 5.3 is being used to govern this effort (DoD, 2019a). Analysis will be completed in accordance with Battelle SOPs. Battelle's accreditation meets the requirements of QSM 5.3 Table B-15.

(2) DoD (2019b) directs the use of the EPA RSLs for screening criteria of environmental investigation data and provides screening values based on the recreator receptor scenario for surface water. The screening levels for human health were derived using the EPA RSL Calculator based on a target cancer risk of 1E-6 (applicable to PFOA only) and a target HQ of 0.1 with exposure assumptions for a recreational receptor. EPA's Office of Water RfD of 0.00002 mg/kg-day was used for PFOA and PFOS as outlined in the Phase I RI and Appendix B of the Final SAP (Resolution, 2019, Tetra Tech 2020). The EPA RSL calculator inputs that were published in the May 2021 RSL update did not have any updates to the exposure parameters or toxicity values used in the Final Phase I RI (Resolution, 2019, EPA 2021); however, EPA published an update to the PFBS toxicity criteria in April 2021. The PFBS PSL was calculated with the EPA RSL Calculator using the updated chronic oral RfD of 0.0003 mg/kg-day (EPA, 2021b). The RSL Calculator output for PFBS is provided in Appendix B (EPA, 2021a, 2021b).

(3) Refer to Worksheet #11 Section 11.2.3 and Appendix E for discussion and documentation of ecological PSL selection.

(4) If the PSL is at least three times the DL, the PQLG is approximately one-third of the PSL; otherwise the PQLG is set equal to the PSL.

Results less than the DL will be reported as the LOD value followed by a "U" qualifier to indicate that the analyte was not detected at the indicated concentration level.

CAS = Chemical abstract service

DL = Detection limit

LOD = Limit of detection

LOQ = Limit of quantitation

NA = Not applicable

RSL Calc = EPA RSL Calculator

Matrix: Sediment
Analytical Group: PFAS by LC/MS/MS Compliant with QSM 5.3 Table B-15 [1]

Analyte	CAS Number	Human Health PSL[2] (ppb)	PSL Reference[2]	Ecological PSL[3] (ppb)	PSL Reference[3]	PQLG [4] (ppb)	Battelle		
							LOQ (ppb)	LOD (ppb)	DL (ppb)
PFAS by LC/MS/MS Compliant with QSM 5.3 Table B-15									
Perfluorooctanoic acid (PFOA)	335-67-1	851	RSL Calc	6	Divine et al. (2020)	2	5.00	2.00	0.607
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	851	RSL Calc	1.4	Divine et al. (2020)	0.47	5.00	2.00	0.692
Perfluorobutanesulfonic acid (PFBS)	375-73-5	13,000	RSL Calc	730	Divine et al. (2020)	243	5.00	1.00	0.350
Perfluorodecanoic acid (PFDA)	335-76-2	NA	NA	NA	NA	NA	5.00	1.00	0.463
Perfluorododecanoic acid (PFDoA)	307-55-1	NA	NA	NA	NA	NA	5.00	2.00	0.612
Perfluoroheptanoic acid (PFHpA)	375-85-9	NA	NA	NA	NA	NA	5.00	1.50	0.506
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	NA	NA	NA	NA	NA	5.00	2.00	0.808
Perfluorohexanoic acid (PFHxA)	307-24-4	NA	NA	1,800	Divine et al. (2020)	600	5.00	2.00	0.707
Perfluorononanoic acid (PFNA)	375-95-1	NA	NA	10	Divine et al. (2020)	3.33	5.00	1.00	0.491
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	NA	NA	NA	NA	NA	5.00	2.00	0.733
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	NA	NA	NA	NA	NA	5.00	1.00	0.280
Perfluoroundecanoic acid (PFUnA)	2058-94-8	NA	NA	NA	NA	NA	5.00	1.00	0.457
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	NA	NA	NA	NA	NA	5.00	2.50	1.02
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	NA	NA	NA	NA	NA	5.00	2.00	0.748
Hexafluoropropylene oxide dimer acid, (HFPO-DA)	13252-13-6	NA	NA	NA	NA	NA	5.00	2.00	0.641
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	NA	NA	NA	NA	NA	5.00	1.50	0.524
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	NA	NA	NA	NA	NA	5.00	1.00	0.482
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	NA	NA	NA	NA	NA	5.00	2.00	0.830

(1) The DoD QSM version 5.3 is being used to govern this effort (DoD, 2019a). Analysis will be completed in accordance with Battelle SOPs. Battelle's accreditation meets the requirements of QSM 5.3 Table B-15.

(2) DoD (2019b) directs the use of the EPA RSLs for screening criteria of environmental investigation data and provides screening values based on the recreator receptor scenario for sediment. The screening levels for human health were derived using the EPA RSL Calculator based on a target cancer risk of 1E-6 (applicable to PFOA only) and a target HQ of 0.1 with exposure assumptions for a recreational receptor. EPA's Office of Water RfD of 0.00002 mg/kg-day was used for PFOA and PFOS as outlined in the Phase I RI and Appendix B

of the Final SAP (Resolution, 2019, Tetra Tech 2020). The EPA RSL calculator inputs that were published in the November 2020 RSL update did not have any updates to the exposure parameters or toxicity values used in the Final Phase I RI (Resolution, 2019, EPA 2021a), however EPA published an update to the PFBS toxicity criteria in April 2021. The PFBS PSL was calculated with the EPA RSL Calculator using the updated chronic oral RfD of 0.0003 mg/kg-day (EPA, 2021a, 2021b) and the same residential soil defaults for incidental ingestion rate, soil adherence factor, and exposed surface soil area as were used in the Final SAP. The RSL Calculator output for PFBS is provided in Appendix B (EPA, 2021a).

(3) Refer to Worksheet #11 Section 11.2.3 and Appendix E for discussion and documentation of ecological PSL selection. The PFOS sediment screening level for ecological receptors reported in wet weight, i.e., 67 ppb wet weight. If level is applied to samples without percent moisture data, then a percent moisture of 80% will be assumed, which yields a sample-specific PFOS screening level of 84 ppb.

(4) If the PSL is at least three times the DL, the PQLG is approximately one-third of the PSL; otherwise the PQLG is set equal to the PSL.

Results less than the DL will be reported as the LOD value followed by a "U" qualifier to indicate that the analyte was not detected at the indicated concentration level.

Matrix: Sediment
Analytical Group: Total Organic Carbon

Analyte	CAS Number	Human Health PSL (ppm)	PSL Reference	Ecological PSL (ppm)	PSL Reference	PQLG (ppm)	Katahdin		
							LOQ (ppm)	LOD (ppm)	DL (ppm)
Total Organic Carbon (TOC) by SW-846 9060A									
Total Organic Carbon	NA	NA	NA	NA	NA	NA	400	300	84.8

Results less than the DL will be reported as the LOD value followed by a "U" flag to indicate that the analyte was not detected at the indicated concentration level.
ppm = parts per million

SAP Worksheet #16 -- Project Schedule / Timeline Table
(UFP-QAPP Manual Section 2.8.2)

Activities	Organization	Dates (Month-Year)		Deliverable	Deliverable Due Date (Month-Year)
		Anticipated Date(s) of Initiation	Anticipated Date of Completion		
Analytical Analysis	Battelle Lab & Katahdin Analytical Services, Inc.	Sep-20	Oct-20	Laboratory Report	Oct-20
Data Validation	Tetra Tech	Oct-20	Nov-20	Data Validation Report	Nov-20
Surface Water Sampling Event 6 (4Q2020)	Tetra Tech	Jan-21	Jan-21	NA	NA
Analytical Analysis	Battelle Lab	Jan-21	Jan-21	Laboratory Report	Jan-21
Data Validation	Tetra Tech	Feb-21	Feb-21	Data Validation Report	Feb-21
Surface Water Sampling Event 7	Tetra Tech	Mar-21	Mar-21	NA	NA
Analytical Analysis	Battelle Lab	Mar-21	Apr-21	Laboratory Report	Apr-21
Data Validation	Tetra Tech	Apr-21	May-21	Data Validation Report	May-21
Surface Water Sampling Event 8	Tetra Tech	Jun-21	Jun-21	NA	NA
Analytical Analysis	Battelle Lab	Jun-21	Jul-21	Laboratory Report	Jul-21
Data Validation	Tetra Tech	Jul-21	Aug-21	Data Validation Report	Aug-21
2020-2021 Annual Report	Tetra Tech	Aug-21	Oct-21	Final Report	Oct-21
Surface Water Event 9 and Sediment Sampling Event 3	Tetra Tech	Sep-21	Sep-21	NA	NA
Analytical Analysis	Battelle Lab & Katahdin Analytical Services, Inc.	Sep-21	Oct-21	Laboratory Report	Oct-21
Data Validation	Tetra Tech	Oct-21	Nov-21	Data Validation Report	Nov-21
Surface Water Event 10	Tetra Tech	Dec-21	Dec-21	NA	NA
Analytical Analysis	Battelle Lab	Dec-21	Jan-22	Laboratory Report	Jan-22
Data Validation	Tetra Tech	Jan-22	Feb-22	Data Validation Report	Feb-22

Activities	Organization	Dates (Month-Year)		Deliverable	Deliverable Due Date (Month-Year)
		Anticipated Date(s) of Initiation	Anticipated Date of Completion		
Surface Water Event 11	Tetra Tech	Mar-22	Mar-22	NA	NA
Analytical Analysis	Battelle Lab	Mar-22	Apr-22	Laboratory Report	Apr-22
Data Validation	Tetra Tech	Apr-22	May-22	Data Validation Report	May-22
Surface Water Event 12	Tetra Tech	Jun-22	Jun-22	NA	NA
Analytical Analysis	Battelle Lab	Jun-22	Jul-22	Laboratory Report	Jul-22
Data Validation	Tetra Tech	Jul-22	Aug-22	Data Validation Report	Aug-22
Surface Water Event 13 and Sediment Sampling Event 4	Tetra Tech	Sep-22	Sep-22	NA	NA
Analytical Analysis	Battelle Lab & Katahdin Analytical Services, Inc.	Sep-22	Oct-22	Laboratory Report	Oct-22
Data Validation	Tetra Tech	Oct-22	Nov-22	Data Validation Report	Nov-22
2021-2022 Annual Report	Tetra Tech	Nov-22	Dec-22	Final Report	Dec-22

Note: The second (2020-2021) and third (2021-2022) annual reports will include results from four rounds of surface water sampling and one round of sediment sampling.

SAP Worksheet #17 -- Sampling Design and Rationale
(UFP-QAPP Manual Section 3.1.1)

The majority of surface water and sediment samples are co-located and are collected from a maximum of 56 locations and analyzed for the PFAS compounds listed in Worksheet #15. Surface water samples are generally collected on a quarterly basis and sediment samples are collected annually. The locations were chosen to provide representative coverage of the area that could possibly be impacted by PFAS. Rationale for inclusion of each location is located in Worksheet #18. Some variations in the sample sequencing due to either wet/dry conditions or based on discussions with the USGS prior to each sampling event and these changes are document in Worksheet #18. After a review of the July 2019 to May 2020 sampling results, changes to the sampling program were recommended in the *Draft Annual Technical Memorandum for Per- and Polyfluoroalkyl Substances, July 2019, October 2019, January 2020, and May 2020 Surface Water Sampling and July 2019 Sediment Sampling* (Tetra Tech, 2021) and are reflected in Worksheet #18. In the January 2021 sampling event and in subsequent sampling events, some surface water samples were collected by the Biddle Air National Guard Base (ANG) which provided results to the Navy. These locations are documented in Worksheet #18.

Co-located surface water and sediment samples will be collected from reference locations for the PFAS compounds listed in Worksheet #15. The reference locations listed in Worksheet #18 were chosen to provide coverage of areas outside the impact of PFAS from the Site. Rationale for inclusion of each reference location is discussed in Worksheet #18.

Surface water will be collected from within the water column, not from the surface of the water. When collecting more than one sample in moving water, collect the farthest downstream sample first, and continue sample collection in an upstream direction. In general, work from zones suspected of low impacts to zones of high impacts. Sediment samples will be collected from the top six inches of the stream bed from areas with fine-grained sediment deposits (not the center of the stream bed as stated in SOP SA-1.2). See Worksheets #14 and #21 for more details about the sampling procedures.

NAVFAC and Tetra Tech will be the primary users of the data generated. EPA and PADEP will be provided the data as part of the report submittal.

Field Quality Control Samples

Worksheets #12 and #20 present the field quality control (QC) sample summary. Additional sample volume will be collected as necessary for the laboratory QC analysis of matrix spike/matrix spike duplicates (MS/MSDs).

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SAP Worksheet #18 -- Location-Specific Sampling Methods/SOP Requirements Table (UFP-QAPP Manual Section 3.1.1)
Surface Water and Sediment Samples Collected from February 2015 to June 2021

Sampling Location	Sampling ID Number[1,2]	Navy Sampling Frequency and Matrix[3]		ANG Sample?[6]	1Q2015 Surface Water	2Q2016 Surface Water	3Q2017 Surface Water	3Q2019 SW Event 1 & SED Event 1	4Q2019 SW Event 2	1Q2020 SW Event 3	2Q2020 SW Event 4	3Q2020 SW Event 5 & SED Event 2	4Q2020 SW Event 6	1Q2021 SW Event 7	2Q2021 SW Event 8	Comments	Description	Reference
		Surface Water[4,5]	Sediment[4,5]															
Little Neshaminy REF1	WGNA-SW-LNCREF1-YYYYMMDD and WGNA-SD-LNCREF1-YYYYMMDD	Spring/summer only	Annual					7/26/2019			5/5/2020	9/16/2020			6/29/2021		Upstream Little Neshaminy reference location; West of site. Location of former SW/SED-29	Reference
NESHAMINY REF1	WGNA-SW-NCREF1-YYYYMMDD and WGNA-SD-NCREF1-YYYYMMDD	Spring/summer only	Annual					7/29/2019			5/6/2020	9/17/2020			6/30/2021		First Neshaminy Creek reference location; Upstream of confluence with Little Neshaminy Creek; USGS Station 01464750 Neshaminy Creek near Rushland, PA	Reference
NESHAMINY REF2	WGNA-SW-NCREF2-YYYYMMDD and WGNA-SD-NCREF2-YYYYMMDD	Spring/summer only	Annual					7/29/2019			5/6/2020	9/17/2020			6/30/2021		Mill Creek tributary to Neshaminy Creek. Downstream confluence with Little Neshaminy Creek to monitor Mill Creek discharges to Neshaminy Creek.	Reference
NESHAMINY REF3	WGNA-SW-NCREF3-YYYYMMDD and WGNA-SD-NCREF3-YYYYMMDD	Spring/summer only	Annual					7/29/2019			5/6/2020	9/17/2020			6/30/2021		Newtown Creek tributary to Neshaminy Creek; Farthest downstream reference location	Reference
NESHAMINY REF4	**WGNA-SW-NCREF4-YYYYMMDD and WGNA-SD-NCREF4-YYYYMMDD**	**Annual**	**Annual**	Yes						1/30/2020	5/6/2020	9/17/2020	1/11/2021***	3/15/2021***	6/30/2021	Location added to program after October 2019 per USGS request. **Given the historical low levels of PFAS, it is recommended to change this sampling frequency from quarterly to annual**	UNT to Neshaminy	Reference
PARK CREEK REF1	WGNA-SW-PCREF1-YYYYMMDD and WGNA-SD-PCREF1-YYYYMMDD	Spring/summer only	Annual					7/25/2019			5/4/2020	9/15/2020			6/29/2021		Upstream Park Creek reference location; West of site	Reference
PENNYPACK REF1	WGNA-SW-PPREF1-YYYYMMDD and WGNA-SD-PPREF1-YYYYMMDD	Spring/summer only	Annual					7/25/2019			5/4/2020	9/15/2020			6/28/2021		Unnamed tributary of Pennypack (Source: PADEP eMaps) located south of PA Turnpike upstream of Pennypack Creek	Reference
PENNYPACK REF2	WGNA-SW-PPREF1-YYYYMMDD and WGNA-SD-PPREF1-YYYYMMDD	Spring/summer only	Annual					7/25/2019			5/4/2020	9/15/2020			6/28/2021		Unnamed tributary upstream of Pennypack Creek.	Reference
SW/SED-01	WGNA-SW-01-YYYYMMDD and WGNA-SD-01-YYYYMMDD	Quarterly	Annual		2/25/2015	4/25/2016		7/25/2019	DRY	1/29/2020	5/4/2020	9/15/2020**	1/12/2021	3/16/2021	6/29/2021		Outfall #6A - Flows to UNT of Park Creek	NA
SW/SED-02	WGNA-SW-02-YYYYMMDD and WGNA-SD-02-YYYYMMDD	One-time only	One-time only		2/25/2015	4/25/2016		7/25/2019									Ponding upstream of Outfall #5 - Flows to UNT of Park Creek	NA
SW/SED-03	WGNA-SW-03-YYYYMMDD and WGNA-SD-03-YYYYMMDD	Quarterly	Annual		2/25/2015	4/25/2016	8/10/2017	7/25/2019	10/22/2019	1/29/2020	5/4/2020	9/15/2020	1/12/2021	3/16/2021	6/29/2021		Outfall #5 - Flows to UNT of Park Creek	NA
SW/SED-04	NA	Not in program	Not in program		2/25/2015	4/29/2016											Downstream from base boundary on UNT to Park Creek	NA
SW/SED-05	WGNA-SW-05-YYYYMMDD and WGNA-SD-05-YYYYMMDD	Quarterly	Annual			4/28/2016	8/10/2017	7/25/2019	10/22/2019 & 10/25/2019	1/29/2020	5/4/2020	9/15/2020	1/12/2021	3/16/2021	6/29/2021		Downstream from base boundary on UNT to Park Creek	NA
SW/SED-06	NA	Not in program	Not in program		2/25/2015	4/29/2016												NA
SW/SED-07	NA	Not in program	Not in program		2/23/2015	4/28/2016												NA
SW/SED-08	NA	Not in program	Not in program		2/23/2015	4/28/2016												NA
SW/SED-09	NA	Not in program	Not in program		2/23/2015	4/28/2016												NA
SW/SED-10	WGNA-SW-10-YYYYMMDD and WGNA-SD-10-YYYYMMDD	Spring/summer only	Annual			4/28/2016	8/10/2017	7/25/2019	10/25/2019	1/29/2020	5/4/2020	9/15/2020	1/12/2021	3/16/2021	6/29/2021	**Revise the sampling frequency from quarterly to spring/summer only due to no change in PFAS concentrations in the last six sampling events.**	Upstream reference for Park Creek; upstream of confluence with UNT	NA
SW/SED-11	NA	Not in program	Not in program			4/28/2016												NA
SW/SED-12	NA	Not in program	Not in program			4/27/2016	8/10/2017											NA
SW/SED-13	NA	Not in program	Not in program		2/23/2015	4/27/2016												NA
SW/SED-14	WGNA-SW-14-YYYYMMDD and WGNA-SD-14-YYYYMMDD	Quarterly	Annual	Yes	2/23/2015	4/27/2016	8/10/2017	7/26/2019	10/25/2019	1/30/2020	5/4/2020	9/15/2020 & 9/16/2020	1/12/2021***	3/16/2021***	6/29/2021	Third quarter 2020 sample was collected twice on subsequent days to assist USGS with mass and flow continuity	Park Creek upstream from Log College wastewater treatment plant and directly downstream of northern ponding area along Park Creek.	NA
SW/SED-15	NA	Not in program	Not in program		2/23/2015	4/27/2016	8/10/2017											NA
SW/SED-16	WGNA-SW-16-YYYYMMDD and WGNA-SD-16-YYYYMMDD	Quarterly	Annual	Yes	2/23/2015	4/28/2016		7/26/2019	10/25/2019	1/30/2020	5/5/2020	9/16/2020	1/12/2021***	3/16/2021***	6/29/2021		Park Creek downstream from Log College wastewater treatment plant	NA
SW/SED-17	WGNA-SW-17-YYYYMMDD and WGNA-SD-17-YYYYMMDD	Not in program - Added per USGS	Not in program - Added per USGS		2/24/2015	4/28/2016					5/5/2020	9/16/2020	1/12/2021***	3/16/2021***	***	USGS recommended adding to the quarterly sampling program (6/16/20 tech coordination call)		NA
SW/SED-18	WGNA-SW-18-YYYYMMDD and WGNA-SD-18-YYYYMMDD	Quarterly	Annual	Yes	2/24/2015	4/28/2016	8/10/2017	7/26/2019		1/30/2020	5/5/2020	9/16/2020				The location was not on the USGS's sample sequence in October 2019. USGS recommended removing from quarterly sampling program. USGS recommended sampling again in September 2020 (8/17/20 tech coordination call).	Park Creek Downstream from UNT 2 to Park Creek and SW-28	NA
SW/SED-19	WGNA-SW-19-YYYYMMDD and WGNA-SD-19-YYYYMMDD	Not in program - Added per USGS	Not in program - Added per USGS	Yes	2/24/2015	4/28/2016		7/26/2019	10/25/2019	1/30/2020	5/5/2020	9/16/2020	1/12/2021***	3/16/2021***	***	USGS recommended adding to the quarterly sampling program (6/16/20 tech coordination call)	Park Creek downstream from Log College wastewater treatment plant; USGS Station 01464899	NA
SW/SED-20	WGNA-SW-20-YYYYMMDD and WGNA-SD-20-YYYYMMDD	Quarterly	Annual	Yes	2/24/2015	4/26/2016	8/10/2017	7/26/2019	10/25/2019	1/30/2020	5/5/2020	9/16/2020	1/11/2021***	3/15/2020*** & 3/16/2020***	***		Park Creek; most downstream location on Park Creek prior to confluence with Little Neshaminy Creek	NA
SW/SED-21A	WGNA-SW-21A-YYYYMMDD and WGNA-SD-21A-YYYYMMDD	As directed by USGS	As directed by USGS			4/27/2016		7/26/2019	10/25/2019		5/5/2020					The location was in USGS's sample sequence in October 2019 and May 2020.	Outfall from Northwestern base boundary to monitor groundwater resurfacing at Park Creek	NA

SAP Worksheet #18 -- Location-Specific Sampling Methods/SOP Requirements Table (UFP-QAPP Manual Section 3.1.1)
Surface Water and Sediment Samples Collected from February 2015 to June 2021

Sampling Location	Sampling ID Number[1,2]	Navy Sampling Frequency and Matrix[3]		ANG Sample?[6]	1Q2015	2Q2016	3Q2017	3Q2019	4Q2019	1Q2020	2Q2020	3Q2020	4Q2020	1Q2021	2Q2021	Comments	Description	Reference
		Surface Water[4,5]	Sediment[4,5]		Surface Water	Surface Water	Surface Water	SW Event 1 & SED Event 1	SW Event 2	SW Event 3	SW Event 4	SW Event 5 & SED Event 2	SW Event 6	SW Event 7	SW Event 8			
SW/SED-21B	NA	Not in program	Not in program			4/27/2016												NA
SW/SED-22	NA	Not in program	Not in program		2/25/2015													NA
SW/SED-22A	NA	Not in program	Not in program		2/25/2015													NA
SW/SED-22B	NA	Not in program	Not in program		2/25/2015	4/27/2016												NA
SW/SED-23A	NA	Not in program	Not in program			4/27/2016												NA
SW/SED-23B	NA	Not in program	Not in program			4/27/2016												NA
SW/SED-24A	NA	Not in program	Not in program			4/27/2016												NA
SW/SED-24B	NA	Not in program	Not in program			4/27/2016												NA
SW/SED-25	NA	Not in program	Not in program		2/23/2015	4/27/2016	8/10/2017											NA
SW/SED-26	WGNA-SW-26-YYYYMMDD and WGNA-SD-26-YYYYMMDD	Quarterly	Annual	Yes	2/27/2015	4/28/2016		7/26/2019	10/25/2019	1/30/2020	5/5/2020	9/16/2020	1/12/2021***	3/16/2021***	***		Outfall #9; UNT 2 to Park Creek: PFOS exceedance; Northwest ANG boundary	NA
SW/SED-27	WGNA-SW-27-YYYYMMDD and WGNA-SD-27-YYYYMMDD	Quarterly	Annual	Yes	2/23/2015	4/28/2016		7/26/2019	10/25/2019	1/30/2020	5/5/2020	9/16/2020	1/12/2021***	3/16/2021***	***		UNT 2 to Park Creek: PFOS exceedance. Downstream ANG.	NA
SW/SED-28	WGNA-SW-28-YYYYMMDD and WGNA-SD-28-YYYYMMDD	Not in program - Added per USGS	Not in program - Added per USGS	Yes	2/24/2015	4/28/2016	8/10/2017	7/26/2019	10/25/2019	1/30/2020	5/5/2020	9/16/2020	1/12/2021***	3/16/2021***	***	USGS recommended adding to the quarterly sampling program (6/16/20 tech coordination call)	Park Creek upstream of UNT 2 confluence; PFOS exceedance	NA
SW/SED-29	NA	Not in program	Not in program		2/24/2015	4/28/2016										Replaced with L Neshaminy Ref1		NA
SW/SED-30	WGNA-SW-30-YYYYMMDD and WGNA-SD-30-YYYYMMDD	Quarterly	Annual	Yes	4/26/2016	4/26/2016	8/10/2017	7/26/2019	10/25/2019	1/30/2020	5/5/2020	9/16/2020	1/11/2021*** & 1/12/2021***	3/15/2021***	***		UNT upstream of confluence with Little Neshaminy Creek	NA
SW/SED-31	WGNA-SW-31-YYYYMMDD and WGNA-SD-31-YYYYMMDD	Quarterly	Annual	Yes	4/26/2016	4/26/2016	8/10/2017	7/26/2019	10/25/2019	1/30/2020	5/5/2020	9/16/2020	1/11/2021***	3/15/2021***	*** & ***		Little Neshaminy Creek downstream of confluence with Park Creek and UNT	NA
SW/SED-32	**WGNA-SW-32-YYYYMMDD and WGNA-SD-32-YYYYMMDD**	**Not in program**	**Not in program**		4/26/2016						5/5/2020	9/16/2020	1/11/2021***		***	Location added to program after January 2020 per USGS request. **It is recommended to remove this location given that there are no known potential PFAS sources in the vicinity between the upstream sample location (SW-31) and the downstream sample (SW-33).**	Location is west side of 611 (Easton Rd.) bridge. Upstream of SW-72 and SW-71.	NA
SW/SED-33	**WGNA-SW-33-YYYYMMDD and WGNA-SD-33-YYYYMMDD**	**Quarterly**	**Quarterly**		2/24/2015	4/26/2016					5/5/2020		See Comment in ANG-SW-33		***	Location added to program after January 2020 per USGS request. **As this location is upstream of the confluence of the unnamed tributary coming from the base and Little Neshaminy Creek; it is recommended that SW-33 be sampled quarterly.**	Upstream from SW-34 and SW-34A.	NA
ANG-SW-33	WGNA-ANG-SW-33-20210111												1/11/2021***			Air National Guard (ANG) Station SW-33 (40.255208, -75.034800) was sampled inadvertently instead of sampling SW-33 in January 2021.	ANG-SW-33 is adjacent to Reference Location SW-71 on Little Neshaminy Creek Northeast of site.	Reference
SW/SED-34	WGNA-SW-34-YYYYMMDD and WGNA-SD-34-YYYYMMDD	Quarterly	Annual	Yes		4/26/2016	8/10/2017	7/26/2019	10/25/2019	1/30/2020	5/5/2020	9/16/2020				USGS recommended considering dropping sample location from program after September 2020 sampling event. (8/17/20 tech coordination call)	Little Neshaminy Creek downstream of confluence with UNT from eastern side of site	NA
SW/SED-34A	WGNA-SW-34A-YYYYMMDD and WGNA-SD-34A-YYYYMMDD	Quarterly	Annual	Yes				7/26/2019	10/25/2019	1/30/2020	5/5/2020	9/16/2020	1/11/2021***	3/15/2021***	***	USGS recommended considering dropping sample location from program after September 2020 sampling event. (8/17/20 tech coordination call)	Little Neshaminy Creek downstream of confluence with UNT from eastern side of site	NA
SW/SED-35	NA	Not in program	Not in program		2/24/2015	4/26/2016												NA
SW/SED-36	WGNA-SW-36-YYYYMMDD and WGNA-SD-36-YYYYMMDD	Spring/summer only	Annual			4/26/2016	8/10/2017	7/26/2019			5/6/2020	9/16/2020 & 9/17/2020			*** & 6/30/2021	3Q2020 sample was collected twice on subsequent days to assist USGS with mass and flow continuity.	First downstream Little Neshaminy Creek reference location; Northeast of site; USGS Station 01464907 Little Neshaminy C at Valley Road near Neshaminy PA	Reference
SW/SED-37	NA	Not in program	Not in program		4/26/2016													NA
SW/SED-39	NA	Not in program	Not in program		2/27/2015	4/29/2016												NA
SW/SED-40	NA	Not in program	Not in program		2/27/2015	4/29/2016												NA
SW/SED-41	WGNA-SW-41-YYYYMMDD and WGNA-SD-41-YYYYMMDD	Quarterly	Annual	Yes		4/29/2016		7/26/2019	10/25/2019		5/5/2020	9/16/2020	1/11/2021***	3/15/2021***	***	The location was not in the USGS's sampling sequence in January 2020.	UNT to Little Neshaminy on eastern side of site	NA
SW/SED-42	WGNA-SW-42-YYYYMMDD and WGNA-SD-42-YYYYMMDD	Quarterly	Annual	Yes	2/24/2015	4/26/2016	8/10/2017	7/26/2019	10/25/2019	1/30/2020	5/5/2020	9/16/2020	1/11/2021***	3/15/2021***	***		UNT to Little Neshaminy on eastern side of site; downstream from SW-41	NA
SW/SED-43	NA	Not in program	Not in program		2/25/2015	4/25/2016	8/11/2017											NA
SW/SED-43A	NA	Not in program	Not in program			4/25/2016	8/11/2017											NA
SW/SED-44	NA	Not in program	Not in program		2/25/2015	4/25/2016	8/11/2017											NA
SW/SED-45	WGNA-SW-45-YYYYMMDD and WGNA-SD-45-YYYYMMDD	Quarterly	Annual			4/29/2016	8/11/2017	7/25/2019	10/22/2019	1/29/2020	5/4/2020	9/15/2020	1/11/2021	3/15/2021	6/28/2021		Onsite Outfall #2	NA
SW/SED-46	WGNA-SW-46-YYYYMMDD and WGNA-SD-46-YYYYMMDD	Quarterly	Annual			4/29/2016	8/11/2017	7/25/2019	10/22/2019	1/29/2020	5/4/2020	9/15/2020**	1/11/2021	3/15/2021	6/28/2021		UNT to Pennypack Creek downstream of Outfall #2.	NA
SW/SED-47	WGNA-SW-47-YYYYMMDD and WGNA-SD-47-YYYYMMDD	Quarterly	Annual			4/29/2016	8/11/2017						1/11/2021	3/15/2021	6/28/2021	Sample location added to quarterly sampling program per EPA's 6/11/20 Email		NA
SW/SED-48	WGNA-SW-48-YYYYMMDD and WGNA-SD-48-YYYYMMDD	Quarterly	Annual			4/29/2016	8/11/2017	7/25/2019	10/22/2019	1/29/2020	5/4/2020	9/15/2020	1/11/2021	3/15/2021	6/28/2021		Pennypack Creek upstream of confluence with tributaries from site	NA

SAP Worksheet #18 -- Location-Specific Sampling Methods/SOP Requirements Table (UFP-QAPP Manual Section 3.1.1)
Surface Water and Sediment Samples Collected from February 2015 to June 2021

Sampling Location	Sampling ID Number[1,2]	Navy Sampling Frequency and Matrix[3]		ANG Sample?[6]	1Q2015 Surface Water	2Q2016 Surface Water	3Q2017 Surface Water	3Q2019 SW Event 1 & SED Event 1	4Q2019 SW Event 2	1Q2020 SW Event 3	2Q2020 SW Event 4	3Q2020 SW Event 5 & SED Event 2	4Q2020 SW Event 6	1Q2021 SW Event 7	2Q2021 SW Event 8	Comments	Description	Reference
		Surface Water[4,5]	Sediment[4,5]															
SW/SED-49	WGNA-SW-49-YYYYMMDD and WGNA-SD-49-YYYYMMDD	Quarterly	Annual			4/29/2016				1/29/2020	5/4/2020	9/15/2020*	1/11/2021	3/15/2021	DRY	Location added to program after October 2019 per USGS request	PFOS exceedance; UNT to Pennypack Creek upstream of confluence with Captain's Pond tributary	NA
SW/SED-50	NA	Not in program	Not in program			4/25/2016												NA
SW/SED-51	WGNA-SW-51-YYYYMMDD and WGNA-SD-51-YYYYMMDD	Quarterly	Annual			4/29/2016		7/25/2019	DRY	DRY	DRY	9/15/2020**	DRY	DRY	DRY		Onsite North Ponding Area Southeast Basin at Outfall #8; PFOS exceedance	NA
SW/SED-52	WGNA-SW-52-YYYYMMDD and WGNA-SD-52-YYYYMMDD	Quarterly	Annual			4/29/2016		7/25/2019	DRY	1/29/2020	5/4/2020	9/15/2020**	1/12/2021	3/16/2021	DRY		Onsite Outfall #7	NA
SW/SED-53	WGNA-SW-53-YYYYMMDD and WGNA-SD-53-YYYYMMDD	Quarterly	Annual					DRY	DRY	1/29/2020	5/4/2020	9/15/2020**	1/11/2021	3/15/2021	DRY		Immediately downstream of base boundary along Horsham Road; intermittent tributary to Pennypack Creek	NA
SW/SED-54	WGNA-SW-54-YYYYMMDD and WGNA-SD-54-YYYYMMDD	Quarterly	Annual				8/11/2017			1/29/2020	5/4/2020	9/15/2020**	1/11/2021	3/15/2021	DRY		Elevated PFOS; intermittent tributary to Pennypack Creek; to monitor impact to shallow groundwater downstream at Horsham Water and Sewer Authority (HWSA) well (not shown on Figure 3).	NA
SW/SED-55	NA	Not in program	Not in program				8/11/2017											NA
SW/SED-56	WGNA-SW-56-YYYYMMDD and WGNA-SD-56-YYYYMMDD	As directed by USGS	Annual				8/11/2017	7/25/2019		1/29/2020	5/4/2020	9/15/2020	1/11/2021	3/15/2021	6/28/2021	The location was on the USGS's sampling sequence in January 2020.	First downstream Pennypack Creek reference location; Southeast of site	Reference
SW/SED-57	WGNA-SW-57-YYYYMMDD and WGNA-SD-57-YYYYMMDD	Quarterly	Annual	Yes				7/26/2019	DRY	1/30/2020	5/5/2020	9/16/2020**	1/11/2021***	3/15/2021***	***		Onsite Outfall #14; Sometimes dry at southernmost location; Sample will be taken from first location where there is standing water along this UNT to Little Neshaminy Creek.	NA
SW/SED-58	NA	Not in program	Not in program															NA
SW/SED-59	NA	Not in program	Not in program															NA
SW/SED-60	NA	Not in program	Not in program															NA
SW/SED-61	NA	Not in program	Not in program				8/11/2017											NA
SW/SED-62	NA	Not in program	Not in program				8/11/2017											NA
SW/SED-63	WGNA-SW-63-YYYYMMDD and WGNA-SD-63-YYYYMMDD	Quarterly	Annual					7/25/2019	10/25/2019	1/29/2020	5/4/2020	9/15/2020	1/12/2021	3/16/2021	6/29/2021		Park Creek upstream of northern base boundary	NA
SW/SED-64	WGNA-SW-64-YYYYMMDD and WGNA-SD-64-YYYYMMDD	Quarterly	Annual					7/25/2019	10/22/2019	1/29/2020	5/4/2020	9/15/2020	1/12/2021	3/16/2021	6/29/2021		Second UNT to Park Creek upstream of confluence with site UNT	NA
SW/SED-65	**WGNA-SW-65-YYYYMMDD and WGNA-SD-65-YYYYMMDD**	**Not in program**	**Not in program**					7/29/2019			5/6/2020	9/17/2020			6/30/2021	**It is recommended to remove this location given that there are no known potential PFAS sources in the vicinity and its relatively low historical PFAS levels**	**Third downstream Little Neshaminy Creek reference location; Northeast of site**	**Reference**
SW/SED-66	WGNA-SW-66-YYYYMMDD and WGNA-SD-66-YYYYMMDD	One-time only	One-time only					7/25/2019									Onsite Captain's Pond near southeastern boundary fed by groundwater seep; Upstream of Outfall #2	NA
SW/SED-67	WGNA-SW-67-YYYYMMDD and WGNA-SD-67-YYYYMMDD	Spring/summer only	Annual					7/29/2019			5/6/2020	9/17/2020			6/30/2021		Second downstream Little Neshaminy Creek reference location; northeast of site	Reference
SW/SED-68	WGNA-SW-68-YYYYMMDD and WGNA-SD-68-YYYYMMDD	One-time only	One-time only					7/25/2019									Onsite northern ponding basin between Graeme Park Road and Keith Valley Road; Separate from Outfall #8	NA
SW/SED-69	WGNA-SW-69-YYYYMMDD and WGNA-SD-69-YYYYMMDD	Spring/summer only	Annual					7/25/2019			5/4/2020	9/15/2020			6/28/2021		Second downstream Pennypack Creek reference location; Southeast of site	Reference
SW/SED-70	WGNA-SW-70-YYYYMMDD and WGNA-SD-70-YYYYMMDD	Spring/summer only	Annual					7/25/2019			5/4/2020	9/15/2020			6/28/2021		Third downstream Pennypack Creek reference location; Southeast of site	Reference
SW/SED-71	WGNA-SW-71-YYYYMMDD and WGNA-SD-71-YYYYMMDD	Spring/summer only	Annual					7/29/2019			5/6/2020	9/17/2020			6/30/2021		Fourth downstream Little Neshaminy Creek reference location; Northeast of site. Adjacent to former SW/SED-33 ANG Station.	Reference
SW/SED-72	WGNA-SW-72-YYYYMMDD and WGNA-SD-72-YYYYMMDD	As directed by USGS	As directed by USGS							1/30/2020		9/16/2020				The location was in the USGS's sampling sequence in January 2020. USGS recommended this sample location is dropped since it is located at a dam. Third quarter 2020 collected sediment sample only - SW single event sample collected in prior event.	Neshaminy Creek upstream of waterfall	Reference
SW/SED-73	WGNA-SW-73-YYYYMMDD and WGNA-SD-73-YYYYMMDD	As directed by USGS	As directed by USGS							1/30/2020	5/5/2020	9/16/2020				Third quarter 2020 collected sediment sample only - SW single event sample collected in prior event.	Neshaminy Creek downstream of waterfall	Reference
40°12'0.22"N, 75°11'19.67"W (A)	**WGNA-SW-PCREF2 and WGNA-SD-PCREF2**	**Spring/summer only**	**Annual**													**This proposed location (location "A" on Figure 1) would be added given the position of the Horsham Water and Sewer Authority Monitoring Well HWSA-OW19 at 1028 Limekiln Pike near SW-Park Creek Reference 1.**	**Most upstream Park Creek reference location; northwest of site**	**Reference**
40°12'26.35"N, 75°10'26.47"W (B)	**WGNA-SW-08A and WGNA-SD-08A**	**Quarterly**	**Annual**													**This proposed location (location "B" on Figure 1) would be added given the proximity of the Horsham Fire Company to Park Creek; located between historical locations SW-08 and SW-09.**	**Park Creek upstream of northern base boundary; between locations SW-10 and Park Creek Ref1**	**NA**
40°13'58.37"N, 75° 6'8.02"W (D)	**WGNA-SW-36A and WGNA-SD-36A**	**Quarterly**	**Annual**													**This proposed location (location "D" on Figure 1) would be added given its proximity to the nearby Warminster sewage treatment system; downstream of SW-36.**	**Little Neshaminy Creek downstream of Warminster Sewage Treatment**	**Reference**

SAP Worksheet #18 -- Location-Specific Sampling Methods/SOP Requirements Table (UFP-QAPP Manual Section 3.1.1)
Surface Water and Sediment Samples Collected from February 2015 to June 2021

Sampling Location	Sampling ID Number[1,2]	Navy Sampling Frequency and Matrix[3]		ANG Sample?[6]	1Q2015 Surface Water	2Q2016 Surface Water	3Q2017 Surface Water	3Q2019 SW Event 1 & SED Event 1	4Q2019 SW Event 2	1Q2020 SW Event 3	2Q2020 SW Event 4	3Q2020 SW Event 5 & SED Event 2	4Q2020 SW Event 6	1Q2021 SW Event 7	2Q2021 SW Event 8	Comments	Description	Reference
		Surface Water[4,5]	Sediment[4,5]															
40°12'33.49"N, 75° 8'7.44"W (C)	WGNA-SW-39A and WGNA-SD-39A	Spring Only	Annual													This proposed location (location "C" on Figure 1) is near historical location SW-39. It is upstream of historical location SW-40. As SW-57 lacks flow during a majority of sampling events, adding this location would increase our knowledge of the PFAS in the base surrounding area along the northeastern side of the base.	Downstream of Onsite Outfall #14	NA

Notes:
**Sediment sample was collected but not surface water (dry).
***Air National Guard sampled this location
ANG: Biddle Air National Guard Base
HWSA: Horsham Water and Sewer Authority
SED: sediment sample collected for PFAS and TOC
SW: surface water sample collected for PFAS
UNT: Unnamed tributary.
USGS: U.S. Geological Survey
Proposed Changes to Sampling Plan are highlighted.
1: Example Sample Designations: WGNA-SW-02-20210501 represents a surface water sample collected at the NAS JRB Willow Grove site from surface water sampling location 02 on May 1, 2021.
2: Example FB Designation: WGNA-FB-02-20210501 represents a field blank collected at NAS JRB Willow Grove from surface water sampling location 02 on May 1, 2021. Only one FB needed for surface water per day of sampling; FBs are not collected for sediment. This nomenclature style can be applied to equipment rinsate blanks by replacing "FB" with "RB".
3: Sampling location frequency will be finalized during discussions held with USGS prior to each sampling event.
4: Concentration Level is expected to be low for samples except for elevated concentrations expected at: SW/SD-01, SW/SD-21A, SW/SD-26, SW/SD-27, SW/SD-28, SW/SD-49, SW/SD-51, SW/SD-53, and SW/SD-54.
5: Sampling SOP reference: SA-1.2 and SA-1.8.
6: Yes = ANG collected sample at this location beginning in January 2021.

SAP Worksheet #19 -- Field Sampling Requirements Table
(UFP-QAPP Manual Section 3.1.1)

Matrix	Analytical Group	Analytical and Preparation Method / SOP Reference	Containers (number, size, and type)	Sample Volume (units)	Preservation Requirements (chemical, temperature, light protected)[1]	Maximum Holding Time[2] (preparation / analysis)
Surface water and aqueous QC	PFAS	PFAS by liquid chromatography tandem mass spectrometry (LCMSMS) Compliant with QSM 5.3 Table B-15 / 5-370-10, 5-369-08	2-250-milliliter (mL), high-density polyethylene (HDPE)	250 mL	Temperature must be above freezing and less than or equal to 10 degrees Celsius (°C) when received at the laboratory. Samples stored in the lab must be held at or below 6 °C until extraction but should not be frozen.	14 days from sampling to extraction/ 28 days from extraction to analysis
Sediment	PFAS	PFAS by LCMSMS Compliant with Table B-15 of QSM 5.3 / 5-370-10, 5-369-08	1-8-ounce, wide-mouth, HDPE bottle	10 grams	Temperature must be above freezing and less than or equal to 10°C when received at the laboratory. Samples stored in the lab must be held at or below 6 °C until extraction but should not be frozen.	28 days from sampling to extraction, 28 days from extraction to analysis
Sediment	TOC	SW-846 9060A / CA-741	2-ounce wide-mouth jar	0.5 gram	Cool to ≤ 6 °C	14 days to analysis

Notes:
(1) For PFAS sampling, samples with temperatures significantly greater than 10° C at the time of collection may need to be iced or refrigerated for a period of time in order to chill them prior to shipping. This will allow them to be shipped with enough ice to meet the above requirements.
(2) Maximum holding time is calculated from the time the sample is collected to the time the sample is prepared/extracted.

SAP Worksheet #21 -- Project Sampling SOP References Table
(UFP-QAPP Manual Section 3.1.2)

Methods for sample collection that are described in SOPs listed in the table below have been developed to ensure sample quality (integrity and representativeness).

Reference Number	Title, Revision Date and / or Number	Originating Organization	Equipment Type	Modified for Project Work? (Y/N)	Comments
SA-1.1	Groundwater Sample Acquisition and Onsite Water Quality Testing (Revision 11, 7/17/2020)	Tetra Tech	Water quality meter, turbidity meter	Y	Contained in Appendix C. Use only the portion of the SOP for field measurement of water quality parameters.
SA-1.2	Surface Water and Sediment Sampling (Revision 9, 7/15/2020)	Tetra Tech	Disposable sample trowels, bottleware	Y (See Worksheet #14)	Contained in Appendix C. Sediment samples will be collected from areas of depositional fine-grained sediment, not from the center of the stream bed.
SA-1.8	Sample Acquisition for Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) Analysis (Revision 6, 10/12/2020)	Tetra Tech	NA	N	This SOP is a supplement to SOP SA-1.1 and SA-1.2 which is the sampling procedure. Contained in Appendix C.
SA-6.1	Non-Radiological Sample Handling (Revision 6, 4/30/2020)	Tetra Tech	Sample Bottleware, Packaging Material, Shipping Materials	N	Contained in Appendix C.
SA-6.3	Field Documentation (Revision 7, 4/30/2020)	Tetra Tech	Field Logbook, Field Sample Forms, Boring Logs	N	Contained in Appendix C.
SA-7.1	Decontamination of Field Equipment and Management of Investigation Derived Waste (Revision 9, 4/30/2020)	Tetra Tech	Decontamination equipment, scrub brushes, 5-gallon buckets, spray bottles, phosphate-free detergent, deionized water, PFAS-free deionized water.	N	Contained in Appendix C.

SAP Worksheet #22 -- Field Equipment Calibration, Maintenance, Testing, and Inspection Table
(UFP-QAPP Manual Section 3.1.2.4)

Note: The turbidity meter is the only equipment that has been updated since publication of the Final SAP (Tetra Tech, 2020).

Field Equipment	Activity	Frequency	Acceptance Criteria	Corrective Action	Responsible Person	SOP Reference	Comments
Turbidity Meter	Same as multi-parameter meter calibrations and calibration checks. Acceptance limits do not apply to turbidity–free water sold as a standard by a vendor (i.e., a blank), but water must meet the vendor's stated value (typically < 0.1 NTU). This water may be used to set the zero point according to the instrument manufacturer's manual.	Same as multi-parameter meter calibrations and calibration checks.	Calibration in accordance with manufacturer's instructions. Calibration Check value should fall within these tolerances of the true value: 0.1-10 NTUs: ±10% 11-40 NTUs: ±8% 41-100 NTUs: ±6.5% >100 NTUs: ±5%	Reattempt calibration. If it does not calibrate, replace meter.	FOL or Designee	Manufacturer's Guidance	Hanna 2100Q or Hanna HI98703 (or equivalent); keep spare batteries in carrying case

SAP Worksheet #23 -- Analytical SOP References Table
(UFP-QAPP Manual Section 3.2.1)

Lab SOP Number[1]	Title, Revision Date, and/or Number	Definitive or Screening Data	Matrix and Analytical Group	Instrument	Organization Performing Analysis	Variance to QSM? (Y/N)	Modified for Project Work? (Y/N)
5-369-08	Analysis of Poly and Perfluoroalkyl Substances in Environmental Samples by Liquid Chromatography and Tandem Mass Spectrometry (LC/MS/MS) Revision 8, 7/2020	Definitive	Surface Water Sediment PFAS	LC/MS/MS	Battelle	N	N
5-370-10	Extraction of Poly and Perfluoroalkyl Substances from Environmental Matrices, Revision 11, 7/2020	Definitive	Extraction, Surface Water Sediment PFAS	NA	Battelle	N	N
6-010-19	Sample Receipt, Custody, and Handling Revision 19, 12/2020	NA	Sample Receipt	NA	Battelle	N	N
5-114-10	The Storage and Disposal of Regulated and Non-Regulated Waste, Revision 10, 9/2020	NA	Sample Disposal	NA	Battelle	N	N
CA-741	Determination of Total Organic Carbon in Solids Using the EPA Region II Method Lloyd Kahn and SW-846 9060 Mod., 9/2020, Revision 9	Definitive	Sediment TOC	TOC Analyzer	Katahdin	N	N

Note: Laboratory SOPs provided upon request.

SAP Worksheet #24 -- Analytical Instrument Calibration Table

(UFP-QAPP Manual Section 3.2.2)

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
LC/MS/MS – PFAS by LC/MS/MS Compliant with QSM 5.3 Table B-15	Initial Demonstration of PFOA Branched vs Linear Profile	Prior to analyzing any field samples	Prepare and analyze a qualitative standard used for identifying retention times of branched isomers of PFOA. Identify the retention times of branched isomers of PFOA in the purchased technical grade PFOA standard. This qualitative PFOA standard is not used for quantitation. This branched isomer identification check must be repeated any time changes occur that affect the analyte retention times.	NA.	Analyst	5-369-08
LC/MS/MS – PFAS by LC/MS/MS Compliant with QSM 5.3 Table B-15	Aqueous Sample Preparation	Each sample and associated batch QC sample. Samples with >1% solids may require centrifugation prior to Solid Phase Extraction (SPE) extraction. Pre-screening of separate aliquots of aqueous samples is recommended.	SPE must be used unless samples are known to contain high PFAS concentrations (e.g., aqueous film-forming foam [AFFF] formulations). Inline SPE is acceptable. Entire sample plus bottle rinsate must be extracted using SPE. Samples of known high PFAS concentrations can be prepared by serial dilution instead of SPE, with documented project approval. Documented project approval is needed for samples prepared by serial dilution as opposed to SPE.	NA	Analyst	5-370-10
LCMSMS – PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	Soil Sample Preparation	Each sample and associated batch QC samples.	Entire sample received by the laboratory must be homogenized prior to sampling.	NA	NA	5-370-10

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
LC/MS/MS – PFAS by LC/MS/MS Compliant with QSM 5.3 Table B-15	Sample Cleanup Procedure	Each sample and associated batch QC samples. Not applicable to AFFF and AFFF mixture samples. Cleanup should reduce bias from matrix interferences.	ENVI-Carb or equivalent must be used on each sample and batch QC sample.	NA Flagging is not appropriate.	NA	5-370-10
LC/MS/MS – PFAS by LC/MS/MS Compliant with QSM 5.3 Table B-15	Mass calibration	Instrument must have a valid mass calibration prior to any sample analysis. Mass calibration is verified after each mass calibration, prior to initial calibration (ICAL). The mass calibration is updated on an as-needed basis (e.g., QC failures, ion masses fall outside of the ±0.5 atomic mass unit (amu) of the true value, major instrument maintenance is performed, or the instrument is moved).	Calibrate the mass scale of the mass spectrometer with calibration compounds and procedures described by the manufacturer. Mass calibration range must bracket the ion masses of interest. The most recent mass calibration must be used for every acquisition in an analytical run. Mass accuracy shall be verified to be ±0.5 amu of the true value by acquiring a full scan continuum mass spectrum of a PFAS stock standard, or by following instrument manufacturer's instructions for performing a mass calibration verification and using the instrument manufacturer's recommended standards as long as these standards verify the mass range of the PFAS ions of interest. Problem must be corrected. No samples may be analyzed under a failing mass calibration.	If the mass calibration fails, then recalibrate. If it fails again, consult manufacturer instructions on corrective maintenance. Flagging is not appropriate.	Analyst	5-369-08
LC/MS/MS – PFAS by LC/MS/MS Compliant with QSM 5.3 Table B-15	Mass spectral acquisition rate	Each analyte extracted internal standard analyte.	A minimum of 10 spectra scans are acquired across each chromatographic peak.	NA Flagging is not appropriate.	Analyst	5-369-08

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
LC/MS/MS – PFAS by LC/MS/MS Compliant with QSM 5.3 Table B-15	Calibration, calibration verification, and spiking standards	All analytes. Standards containing both branched and linear isomers are to be used during method validation to ensure the total response is quantitated for that analyte. Technical grade standards cannot be used for quantitative analysis.	Standards containing both branched and linear isomers must be used when commercially available. PFAS method analytes may consist of both branched and linear isomers, but quantitative standards that contain the linear and branched isomers do not exist for all method analytes. For PFAS that do not have a quantitative branched and linear standard, identify the branched isomers by analyzing a qualitative standard that includes both linear and branched isomers and determine retention times, transitions and transition ion ratios. Quantitate samples by integrating the total response (i.e., accounting for peaks that are identified as linear and branched isomers) and relying on the initial calibration that uses the linear isomer quantitative standard.	NA Flagging is not appropriate.	Analyst	5-369-08

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
LC/MS/MS – PFAS by LC/MS/MS Compliant with QSM 5.3 Table B-15	Ion Transitions (Parent-> Product)	Every field sample, standard, blank, and QC sample.	To avoid biasing results high due to known interferences for some transitions, the following transitions must be used for quantification of the following analytes: PFOA: 413 —› 369 PFOS: 499 —› 80 PFHxS: 399 —› 80 PFBS: 299 —› 80 4:2 Fluorinated Telomer Sulfonates (FTS): 327 —› 307 6:2 FTS: 427 —› 407 8:2 FTS: 527 —› 507 NEtFOSAA: 584 —› 419 NMeFOSAA: 570 —›419 If these transitions are not used, the reason must be technically justified and documented (e.g., alternate transition was used due to observed interferences).	NA. Flagging is not appropriate.	Analyst	5-369-08

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
LC/MS/MS – PFAS by LC/MS/MS Compliant with QSM 5.3 Table B-15	ICAL	At instrument set-up and after initial calibration verification (ICV) or continuing calibration verification (CCV) failure, prior to sample analysis. No samples shall be analyzed until ICAL has passed. External Calibration is not allowed for any analyte. Calibration can be linear (minimum of 5 standards) or quadratic (minimum of 6 standards); weighting is allowed.	The isotopically labeled analog of an analyte (extracted internal standard analyte) must be used for quantitation if commercially available (isotope dilution quantitation). Commercial PFAS standards available as salts are acceptable providing the measured mass is corrected to the neutral acid concentration. Results shall be reported as the neutral acid with appropriate CAS number. If a labeled analog is not commercially available, the extracted internal standard analyte with the closest retention time to the analyte must be used for quantitation (internal standard quantitation). Analytes must be within 70% to 130% of their true value for each calibration standard. ICAL must meet one of the two options below: Option 1: The relative standard deviation of the retention factors for all analytes must be ≤20%. Option 2: Linear or non- linear calibrations must have $r^2 \geq 0.99$ for each analyte.	Correct problem, then repeat ICAL. Flagging is not appropriate.	Analyst	5-369-08
LC/MS/MS – PFAS by LC/MS/MS Compliant with QSM 5.3 Table B-15	Retention Time (RT) window position establishment	Once per ICAL and at the beginning of the analytical sequence. Calculated for each analyte and Extracted Internal Standard.	Position shall be set using the midpoint standard of the ICAL curve when ICAL is performed. On days when ICAL is not performed, the initial CCV is used.	NA.	Analyst	5-369-08

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
LC/MS/MS – PFAS by LC/MS/MS Compliant with QSM 5.3 Table B-15	RT window width	Every field sample, standard, blank, and QC sample. Calculated for each analyte and Extracted Internal Standard.	RT of each analyte and Extracted Internal Standard analyte must fall within 0.4 minutes of the predicted retention times from the daily calibration verification or, on days when ICAL is performed, from the midpoint standard of the ICAL. Analytes must elute within 0.1 minutes of the associated Extracted Internal Standard. This criterion applies only to analyte and labeled analog pairs.	Correct the problem and reanalyze the samples.	Analyst	5-369-08
LC/MS/MS – PFAS by LC/MS/MS Compliant with QSM 5.3 Table B-15	Instrument sensitivity check (ISC)	Prior to analysis and at least once every 12 hours. No samples shall be analyzed until ISC has met acceptance criteria. ISC can serve as the initial daily CCV.	Analyte concentrations must be at LOQ; concentrations must be within 70% to 130% of their true values.	Correct problem and rerun ISC. If problem persists, repeat ICAL. Flagging is not appropriate.	Analyst	5-369-08
LC/MS/MS – PFAS by LC/MS/MS Compliant with QSM 5.3 Table B-15	ICV	Once after each ICAL, analysis of a second source standard prior to sample analysis. No samples shall be analyzed until calibration has been verified.	Analyte concentrations must be within 70% to 130% of their true value.	Correct problem and rerun ICV. If that fails, repeat ICAL. Flagging is not appropriate.	Analyst	5-369-08

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
LC/MS/MS – PFAS by LC/MS/MS Compliant with QSM 5.3 Table B-15	CCV	Prior to sample analysis, after every 10 field samples, and at the end of the analytical sequence. Results may not be reported without valid CCVs. ISC can serve as a bracketing CCV.	Concentration of analytes must range from the LOQ to the mid-level calibration concentration. Analyte concentrations must be within 70% to 130% of their true value.	Immediately analyze 2 additional consecutive CCVs. If both pass, samples may be reported without reanalysis. If either fails, or if 2 consecutive CCVs cannot be run, perform corrective action(s) and repeat CCV and all associated samples since last successful CCV. Alternately, recalibrate if necessary; then reanalyze all associated samples since the last acceptable CCV. If reanalysis cannot be performed, data must be qualified and explained in the Case Narrative. Apply Q-flag to all results for the specific analyte(s) in all samples since the last acceptable calibration verification.	Analyst	5-369-08

SAP Worksheet #25 -- Analytical Instrument and Equipment Maintenance, Testing, and Inspection Table

(UFP-QAPP Manual Section 3.2.3)

Instrument/ Equipment	Maintenance Activity	Testing Activity	Inspection Activity	Frequency	Acceptance Criteria	Corrective Action	Responsible Person	SOP Reference
LC/MS/MS	Preventative maintenance	PFAS	NA	6 months	NA	NA	Battelle Analyst / Supervisor	5-369-08
LC/MS/MS	Clean Curtain Plate	PFAS	Visual inspection of curtain plate for residue.	As needed when curtain plate has visible residue present	No visible residue on curtain plate	Remove and clean the instrument curtain plate	Battelle Analyst / Supervisor	5-369-08
LC/MS/MS	Replace analytical column	PFAS	Degradation of instrument performance	Every six months or when instrument performance deteriorates	ICAL within acceptance criteria on Worksheet #24 and internal standards recovery within acceptance criteria on Worksheet #28	Service provider performs Preventative Maintenance and mass calibration. Run tune check. Reanalyze samples with new ICAL, intra-class correlation coefficient (ICC), ISC, and instrument blank.	Battelle Analyst / Supervisor	5-369-08
LC/MS/MS	Replace analytical column	PFAS	Review peak shape, retention times, and peak separation on ICAL, ICC, and CCV samples.	Performed when chromatography deteriorates	ICAL within acceptance criteria on Worksheet #24 and internal standards recovery within acceptance criteria on Worksheet #28	Replace analytical column. Reanalyze samples with new ICAL, ICC, ISC, and instrument blank.	Battelle Analyst / Supervisor	5-369-08

SAP Worksheet #28 -- Laboratory QC Samples Table

(UFP-QAPP Manual Section 3.4)

Matrix	Surface Water and Sediment
Analytical Group	LC/MS/MS
Analytical Method/ SOP Reference	PFAS by LC/MS/MS Compliant with QSM 5.3 Table B-15 / 5-369-08

QC Sample	Frequency/Number	Method/SOPQC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	Data Quality Indicators (DQIs)	Measurement Performance Criteria (MPCs)
Instrument Blanks	Immediately following the highest standard analyzed and daily prior to sample analysis. Note: Successful analysis following the highest standard analyzed determines the highest concentration that carryover does not occur. When the highest standard analyzed is not part of the calibration curve, it cannot be used to extend out the calibration range, it is used only to document a higher concentration at which carry over still does not occur.	Concentration of each analyte must be ≤ ½ the LOQ. Instrument Blank must contain extracted internal standard to enable quantitation of contamination. No samples shall be analyzed until instrument blank has met acceptance criteria.	If acceptance criteria are not met after the highest calibration standard, calibration must be performed using a lower concentration for the highest standard until acceptance criteria are met. If sample concentrations exceed the highest allowed standard and the sample(s) following exceed this acceptance criteria (>1/2 LOQ), they must be reanalyzed. Flagging is only appropriate in cases when the sample cannot be reanalyzed and when there is no more sample left.	Analyst, Supervisor	Accuracy/Bias/ Contamination	Same as Method/SOP QC Acceptance Limits.

Matrix	Surface Water and Sediment
Analytical Group	LC/MS/MS
Analytical Method/ SOP Reference	PFAS by LC/MS/MS Compliant with QSM 5.3 Table B-15 / 5-369-08

QC Sample	Frequency/Number	Method/SOPQC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	Data Quality Indicators (DQIs)	Measurement Performance Criteria (MPCs)
Extracted Internal Standard (EIS) Analytes	Every field sample, standard, blank, and QC sample. Extracted internal standard should be 96% (or greater) purity. When the impurity consists of the unlabeled analyte, the extracted internal standard can result in a background artifact in every sample, standard and blank, if the extracted internal standard is fortified at excessive concentrations.	Added to solid sample prior to extraction. Added to aqueous samples, into the original container, prior to extraction For aqueous samples prepared by serial dilution instead of SPE, added to final dilution of samples prior to analysis. Extracted internal standard Analyte recoveries must be within 50% to 150% of ICAL midpoint standard area or area measured in the initial CCV on days when an ICAL is not performed.	Correct problem. If required, re-extract and reanalyze associated field and QC samples. If recoveries are acceptable for QC samples, but not field samples, the field samples must be re-extracted and reanalyzed (greater dilution may be needed). Samples may be re-extracted and analyzed outside of hold times, as necessary for corrective action associated with QC failure. Apply Q-flag and discuss in the Case Narrative only if reanalysis confirms failures in exactly the same manner. Failing analytes shall be thoroughly documented in the Case Narrative.	Analyst, Supervisor	Accuracy/Bias	Same as Method/SOP QC Acceptance Limits.

Matrix	Surface Water and Sediment
Analytical Group	LC/MS/MS
Analytical Method/ SOP Reference	PFAS by LC/MS/MS Compliant with QSM 5.3 Table B-15 / 5-369-08

QC Sample	Frequency/Number	Method/SOPQC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	Data Quality Indicators (DQIs)	Measurement Performance Criteria (MPCs)
Method Blank (MB)	One per preparatory batch.	No analytes detected >1/2 LOQ or > 1/10 the amount measured in any sample or 1/10 the regulatory limit, whichever is greater. Results may not be reported without a valid MB.	Correct problem. If required, re-prepare and reanalyze MB and all QC samples and field samples processed with the contaminated blank. Samples may be re-extracted and analyzed outside of hold times, as necessary for corrective action associated with QC failure. Examine the project-specific requirements. Contact the client as to additional measures to be taken. If reanalysis cannot be performed, data must be qualified and explained in the case narrative. Apply B-flag to all results for the specific analyte(s) in all samples in the associated preparatory batch. Flagging is only appropriate in cases where the samples cannot be reanalyzed.	Analyst, Supervisor	Accuracy/Bias/ Contamination	Same as Method/SOP QC Acceptance Limits.

Matrix	Surface Water and Sediment
Analytical Group	LC/MS/MS
Analytical Method/ SOP Reference	PFAS by LC/MS/MS Compliant with QSM 5.3 Table B-15 / 5-369-08

QC Sample	Frequency/Number	Method/SOPQC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	Data Quality Indicators (DQIs)	Measurement Performance Criteria (MPCs)
Laboratory Control Sample (LCS)	One per preparatory batch.	Blank spiked with all analytes at a concentration ≥ LOQ and ≤ the mid-level calibration concentration. Use QSM 5.3 Appendix C LCS Limits for batch control. If analyte(s) are not listed in QSM 5.3 Appendix C, use in-house LCS limits provided in this Appendix. Results may not be reported without a valid LCS.	Correct problem, then re-prepare and reanalyze the LCS and all samples in the associated preparatory batch for failed analytes, if sufficient sample material is available. Samples may be re-extracted and analyzed outside of hold times, as necessary for corrective action associated with QC failure. Examine the project-specific requirements. Contact the client as to additional measures to be taken. If reanalysis cannot be performed, data must be qualified and explained in the case narrative. Apply Q-flag to specific analyte(s) in all samples in the associated preparatory batch. Flagging is only appropriate in cases where the samples cannot be reanalyzed.	Analyst, Supervisor	Accuracy/Bias	Same as Method/SOP QC Acceptance Limits.

Matrix	Surface Water and Sediment
Analytical Group	LC/MS/MS
Analytical Method/ SOP Reference	PFAS by LC/MS/MS Compliant with QSM 5.3 Table B-15 / 5-369-08

QC Sample	Frequency/Number	Method/SOPQC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	Data Quality Indicators (DQIs)	Measurement Performance Criteria (MPCs)
MS	One per preparatory batch. Not required for aqueous samples prepared by serial dilution instead of SPE.	Sample spiked with all analytes at a concentration ≥ LOQ and ≤ the mid-level calibration concentration. Use QSM 5.3 Appendix C LCS Limits for batch control. If analyte(s) are not listed in QSM 5.3 Appendix C, use in-house LCS limits provided in Appendix D.	Examine the project- specific requirements. Contact the client as to additional measures to be taken. For the specific analyte(s) in the parent sample, apply J-flag if acceptance criteria are not met and explain in the case narrative. For matrix evaluation only. If MS results are outside the limits, the data shall be evaluated to determine the source(s) of difference, i.e., matrix effect or analytical error.	Analyst, Supervisor	Accuracy/Bias	Same as Method/SOP QC Acceptance Limits.
MSD or Matrix Duplicate (MD)	For MSD: One per preparatory batch. The MD is a second aliquot of the field sample that has been prepared by serial dilution. For MD: Each aqueous sample prepared by serial dilution instead of SPE.	For MSD: Sample spiked with all analytes at a concentration ≥ LOQ and ≤ the mid-level calibration concentration. For MSD: Use QSM 5.3 Appendix C LCS Limits for batch control. If analyte(s) are not listed in QSM 5.3 Appendix C, use in-house LCS limits provided in Appendix D. RPD ≤ 30% (between MS and MSD or sample and MD). For Sample/MD: RPD criteria only apply to analytes whose concentration in the sample is ≥ LOQ.	Examine the project- specific requirements. Contact the client as to additional measures to be taken. For the specific analyte(s) in the parent sample, apply J-flag if acceptance criteria are not met and explain in the case narrative. The data shall be evaluated to determine the source of difference.	Analyst, Supervisor	Precision/ Accuracy/Bias	Same as Method/SOP QC Acceptance Limits.

Matrix	Surface Water and Sediment
Analytical Group	LC/MS/MS
Analytical Method/ SOP Reference	PFAS by LC/MS/MS Compliant with QSM 5.3 Table B-15 / 5-369-08

QC Sample	Frequency/Number	Method/SOPQC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	Data Quality Indicators (DQIs)	Measurement Performance Criteria (MPCs)
Post Spike Sample	Only applies to aqueous samples prepared by serial dilution instead of SPE that have reported value of <LOQ" for analyte(s).	Spike all analytes that have reported as <LOQ into the dilution that the result for that analyte is reported from. The spike must be at the LOQ concentration to be reported with this sample as <LOQ. When analyte concentrations are calculated as <LOQ, the spike must recover within 70% to 130% of its true value. When analyte concentrations are calculated as <LOQ, results may not be reported without acceptable post spike recoveries.	When analyte concentrations are calculated as <LOQ, and the spike recovery does not meet the 70 to 130% acceptance criteria, the sample, sample duplicate, and post spike sample must be reanalyzed at consecutively higher dilutions until the criteria are met. Flagging is not appropriate.	Analyst, Supervisor	Accuracy/Bias	Same as Method/SOP QC Acceptance Limits.

Matrix	Surface Water and Sediment
Analytical Group	LC/MS/MS
Analytical Method/ SOP Reference	PFAS by LC/MS/MS Compliant with QSM 5.3 Table B-15 / 5-369-08

QC Sample	Frequency/Number	Method/SOPQC Acceptance Limits	Corrective Action	Person(s) Responsible for Corrective Action	Data Quality Indicators (DQIs)	Measurement Performance Criteria (MPCs)
Sample PFAS Identification	All analytes detected in a sample.	The chemical derivation of the ion transitions must be documented. A minimum of two ion transitions (Precursor -->quant ion and precursor --> confirmation ion) and the ion transitions ratio per analyte are required for confirmation. Exception is made for analytes where two transitions do not exist (Perfluorobutanoic acid [PFBA] and Perfluoropentanoic acid [PFPeA]). Documentation of the primary and confirmation transitions and the ion ratio is required. In-house acceptance criteria for evaluation of ion ratios must be used and must not exceed 50% to 150%. Signal-to-noise ratio must be $\geq$ 10 for all ions used for quantification and must be $\geq$ 3 for all ions used for confirmation. Quantitation ion and confirmation ion must be present and must maximize simultaneously (±2 seconds).	NA PFAS identified with Ion ratios that fail acceptance criteria must be flagged. Any quantitation ion peak that does not meet the maximization criteria shall be included in the summed integration and the resulting data flagged as “estimated, biased high”. For example: Ion Ratio = (quantitation ion abundance/ confirmation ion abundance). Calculate the average ratio and standard deviation using the ICAL standards. An acceptance range of ratio could be within average ratio ± 3 standard deviation for confirmation of detection.	Analyst, Supervisor	Accuracy/Bias	Same as Method/SOP QC Acceptance Limits.

SAP Worksheet #30 -- Analytical Services Table

(UFP-QAPP Manual Section 3.5.2.3)

Matrix	Analytical Group	Sample Locations/ID Numbers	Analytical SOP	Data Package Turnaround Time	Laboratory/Organization[1] (name and address, contact person and telephone number)	Backup Laboratory/Organization [2] (name and address, contact person and telephone number)
Surface Water and Sediment	PFAS	See Worksheet #18	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15, 5-369-08, 5-370-10	21 business days to Tetra Tech	Jonathan Thorn Project Manager Battelle Memorial Institute 141 Longwater Drive, Suite 202 Norwell, Massachusetts 02061 781-681-5565 Thorn@battelle.org	Stephen Gordon Laboratory PM Eurofins Lancaster Laboratories Environmental, LLC 2425 New Holland Pike Lancaster, PA 17601 412-525-0071 StephenGordon@eurofinsus.com
Sediment	TOC	See Worksheet #18	TOC by SW-846 9060A / CA-741	21 business days to Tetra Tech	Heather Manz Project Manager Katahdin Analytical 600 Technology Way P.O. Box 540 Scarborough, ME 04070 207-874-2400	NA

Notes:

(1) Primary Laboratory meets accreditation requirements to support project needs. See footnotes, Worksheet #31.

(2) The DoD Environmental Laboratory Accreditation Program (ELAP) accreditation documentation, PADEP accreditation documentation, as well as all applicable laboratory worksheet information for the backup analytical laboratory for PFAS analysis, Eurofins Lancaster Laboratories Environmental (ELLE), is included in Appendix D.

SAP Worksheet #34-36 -- Data Verification and Validation (Steps I and IIa/IIb) Process Table

(UFP-QAPP Manual Section 5.2.1), (UFP-QAPP Manual Section 5.2.2), (Figure 37 UFP-QAPP Manual), (Table 9 UFP-QAPP Manual))

Note that the SAP/Laboratory Data Packages/ EDDs is the only data review input that changed.

Data Review Input	Description	Responsible for Verification (name, organization)	Step I / IIa / IIb [1]	Internal/ External
SAP/Laboratory Data Packages/ EDDs	Conduct USEPA Stage 2B data validation on 90% of the definitive laboratory data and USEPA Stage 4 data validation on 10% of the definitive laboratory data generated by the selected methods using QC criteria listed in Worksheets #s 12, 15, 24, and 28. Apply validation qualifiers in accordance with logic provided in DoD's *General Data Validation Guidelines* and *Data Validation Guidelines, Module 3: Data Validation Procedure for Per- and Polyfluoroalkyl Substances Analysis by QSM Table B-15* (DoD, 2019c, 2020). Document findings in the data validation report.	Data Validator, Tetra Tech	IIa/IIb	External

Notes:

(1) IIa=compliance with methods, procedures, and contracts [see Table 10, page 117, UFP-QAPP manual, V.1] (EPA, 2005).
IIb=comparison with measurement performance criteria in the SAP [see Table 11, page 118, UFP-QAPP manual, V.1] (EPA, 2005).

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FIGURES

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INSET A
SCALE 1" = 200'

INSET B
SCALE 1" = 100'

INSET C
SCALE 1" = 300'

SW/SD-30
SW/SD-20
SW/SD-31
SW/SD-18
SW/SD-17
SW/SD-28
SW/SD-21A
OUTFALL #8C
SW/SD-68
OUTFALL #8D
SW/SD-63
OUTFALL #8E
SW/SD-33
SW/SD-42
SW/SD-34A
SW/SD-34
SW/SD-41
SEE INSET A
SW/SD-19
SEE INSET B
SW/SD-16
SW/SD-27
SW/SD-14
OUTFALL #8A
OUTFALL #8B
SEE INSET C
OUTFALL #8
SW/SD-51
SW/SD-26
OUTFALL #9
SW/SD-10
SW/SD-05
PROPOSED SW/SD-08A
OUTFALL #7A
OUTFALL #7
SW/SD-52
OUTFALL #10
OUTFALL #11
OUTFALL #12
PROPOSED SW/SD-39A
OUTFALL #13
OUTFALL #14
SW/SD-57
OUTFALL #15
OUTFALL #6
SW/SD-01
OUTFALL #6A
SW/SD-64
SW/SD-02
SW/SD-03
OUTFALL #5
OUTFALL #16
SW/SD-53
OUTFALL #3
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OUTFALL #2
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SW/SD-46
SW/SD-48
SW/SD-47

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LEGEND
- SITE SURFACE WATER/SEDIMENT SAMPLE LOCATION
- OUTFALL
- INTERPRETED GROUNDWATER FLOW DIRECTION
- STREAM
- POTENTIAL PFAS SOURCE
- BIDDLE AIR NATIONAL GUARD BASE
- FORMER NAS JRB WILLOW GROVE

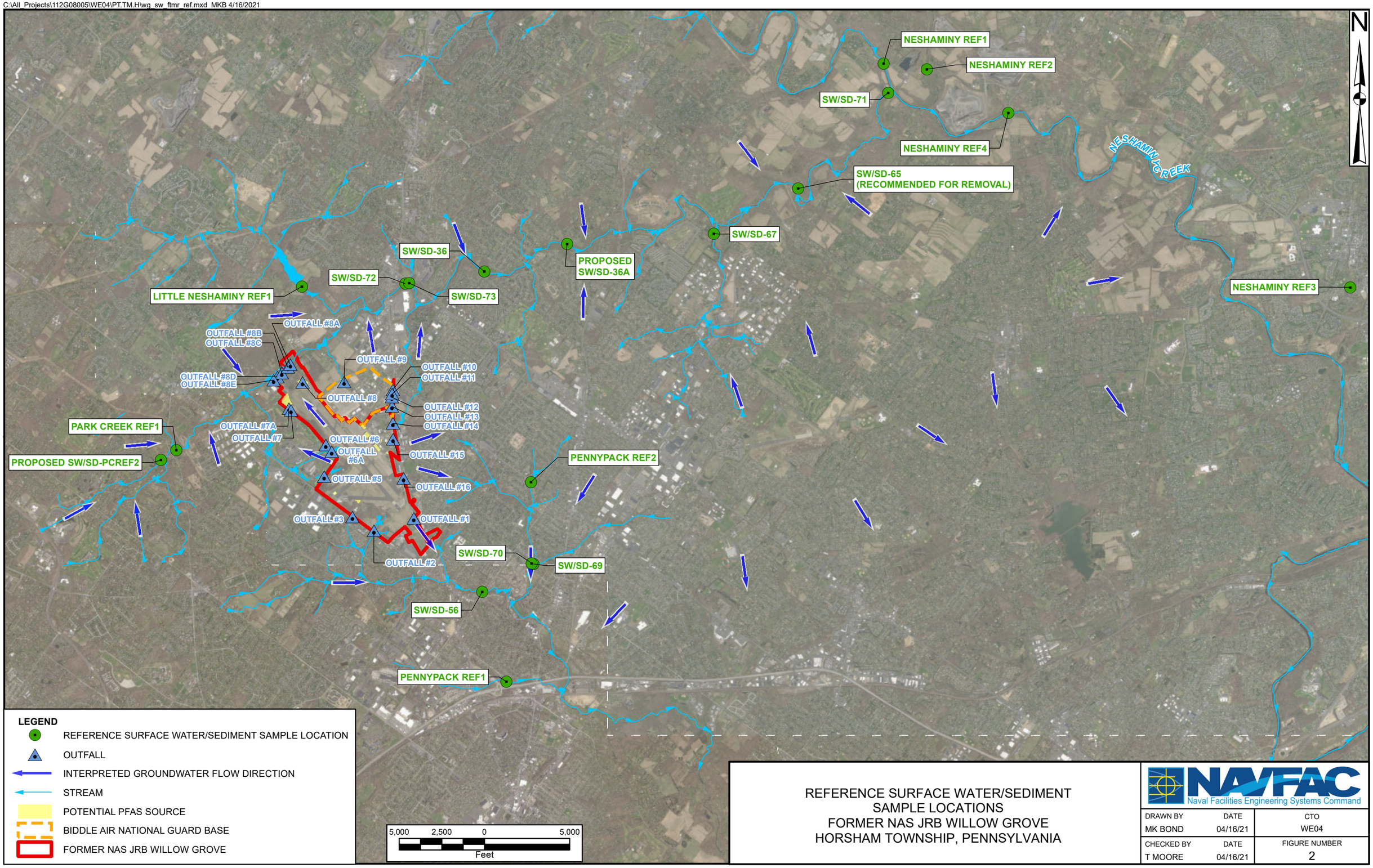
SITE SURFACE WATER/SEDIMENT
SAMPLE LOCATIONS
FORMER NAS JRB WILLOW GROVE
HORSHAM TOWNSHIP, PENNSYLVANIA

NAVFAC
Naval Facilities Engineering Systems Command

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REFERENCE SURFACE WATER/SEDIMENT
SAMPLE LOCATIONS
FORMER NAS JRB WILLOW GROVE
HORSHAM TOWNSHIP, PENNSYLVANIA

NAVFAC
Naval Facilities Engineering Systems Command

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Updated Figure 3 from Final Surface Water and Sediment SAP (March 2020)

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INSET A
SCALE 1" = 200'

INSET B
SCALE 1" = 100'

INSET C
SCALE 1" = 300'

SW/SD-30
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SW/SD-33
SW/SD-42
SW/SD-34A
SW/SD-34
SW/SD-41
SEE INSET A
SW/SD-19
SEE INSET B
SW/SD-16
SW/SD-27
SW/SD-14
OUTFALL #8A
OUTFALL #8B
SEE INSET C
SW/SD-26
OUTFALL #8
SW/SD-51
OUTFALL #9
SW/SD-10
SW/SD-05
OUTFALL #10
OUTFALL #11
OUTFALL #12
OUTFALL #13
OUTFALL #7A
OUTFALL #7
SW/SD-52
OUTFALL #14
SW/SD-57
OUTFALL #15
OUTFALL #6
SW/SD-01
OUTFALL #6A
SW/SD-64
SW/SD-02
SW/SD-03
OUTFALL #5
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SW/SD-21A
OUTFALL #8C
SW/SD-68
OUTFALL #8D
SW/SD-63
OUTFALL #8E

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LEGEND

- SITE SURFACE WATER/SEDIMENT SAMPLE LOCATION
- SURFACE WATER LOCATION EXCEEDED PFOS HUMAN HEALTH PSL IN PHASE 1 RI
- OUTFALL
- INTERPRETED GROUNDWATER FLOW DIRECTION
- STREAM
- POTENTIAL PFAS SOURCE
- BIDDLE AIR NATIONAL GUARD BASE
- FORMER NAS JRB WILLOW GROVE

SITE SURFACE WATER/SEDIMENT SAMPLE LOCATIONS
FORMER NAS JRB WILLOW GROVE
HORSHAM TOWNSHIP, PENNSYLVANIA

NAVFAC Naval Facilities Engineering Systems Command

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APPENDIX B
SITE-SPECIFIC HUMAN HEALTH PROJECT SCREENING LEVELS (UPDATES ONLY)

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Site-specific Recreator Sediment Inputs

Variable	Recreator Soil Default Value	Form-input Value
A (PEF Dispersion Constant)	16.2302	16.2302
A (VF Dispersion Constant)	11.911	11.911
A (VF Dispersion Constant - mass limit)	11.911	11.911
B (PEF Dispersion Constant)	18.7762	18.7762
B (VF Dispersion Constant)	18.4385	18.4385
B (VF Dispersion Constant - mass limit)	18.4385	18.4385
City (PEF Climate Zone) Selection	Default	Default
City (VF Climate Zone) Selection	Default	Default
C (PEF Dispersion Constant)	216.108	216.108
C (VF Dispersion Constant)	209.7845	209.7845
C (VF Dispersion Constant - mass limit)	209.7845	209.7845
foc (fraction organic carbon in soil) g/g	0.006	0.006
F(x) (function dependent on U_m/U_t) unitless	0.194	0.194
n (total soil porosity) L_{pore}/L_{soil}	0.43396	0.43396
p_h (dry soil bulk density) g/cm ^{3}	1.5	1.5
p_h (dry soil bulk density - mass limit) g/cm ^{3}	1.5	1.5
PEF (particulate emission factor) m ^{3}/kg	1359344438	1359344438
p_s (soil particle density) g/cm ^{3}	2.65	2.65
Q/C_{wind} (g/m^2-s per kg/m^3)	93.77	93.77
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
Q/C_{vol} (g/m^2-s per kg/m^3 - mass limit)	68.18	68.18
A_s (PEF acres)	0.5	0.5
A_s (VF acres)	0.5	0.5
A_s (VF mass-limit acres)	0.5	0.5
AF_{0-2} (skin adherence factor) mg/cm ^{2}	0.2	0.2
AF_{2-6} (skin adherence factor) mg/cm ^{2}	0.2	0.2
AF_{6-16} (skin adherence factor) mg/cm ^{2}	0.07	0.07
AF_{16-30} (skin adherence factor) mg/cm ^{2}	0.07	0.07
AF_{rec-a} (skin adherence factor - adult) mg/cm ^{2}	0.07	0.07
AF_{rec-c} (skin adherence factor - child) mg/cm ^{2}	0.2	0.2
AT_{rec} (averaging time)	365	365

Output generated 15APR2021:14:15:11

Site-specific Recreator Sediment Input

Variable	Recreator Soil Default Value	Form-input Value
BW_{0-2} (body weight) kg	15	15
BW_{2-6} (body weight) kg	15	15
BW_{6-16} (body weight) kg	80	80
BW_{16-30} (body weight) kg	80	80
BW_{rec-a} (body weight - adult) kg	80	80
BW_{rec-c} (body weight - child) kg	15	15
$DFS_{rec-adj}$ (age-adjusted soil dermal factor) mg/kg	.	15360.8
$DFSM_{rec-adj}$ (mutagenic age-adjusted soil dermal factor) mg/kg	.	63627.2
ED_{rec} (exposure duration - recreator) years	26	26
ED_{0-2} (exposure duration) year	2	2
ED_{2-6} (exposure duration) year	4	4
ED_{6-16} (exposure duration) year	10	10
ED_{16-30} (exposure duration) year	10	10
ED_{rec-c} (exposure duration - child) years	6	6
EF_{rec} (exposure frequency) days/year	.	52
EF_{0-2} (exposure frequency) days/year	.	52
EF_{2-6} (exposure frequency) days/year	.	52
EF_{6-16} (exposure frequency) days/year	.	52
EF_{16-30} (exposure frequency) days/year	.	52
EF_{rec-a} (exposure frequency - adult) days/year	.	52
EF_{rec-c} (exposure frequency - child) days/year	.	52
ET_{rec} (exposure time - recreator) hours/day	.	3
ET_{0-2} (exposure time) hours/day	.	3
ET_{2-6} (exposure time) hours/day	.	3
ET_{6-16} (exposure time) hours/day	.	3
ET_{16-30} (exposure time) hours/day	.	3
ET_{rec-a} (adult exposure time) hours/day	.	3
ET_{rec-c} (child exposure time) hours/day	.	3
THQ (target hazard quotient) unitless	0.1	0.1
$IFS_{rec-adj}$ (age-adjusted soil ingestion factor) mg/kg	.	5460
$IFSM_{rec-adj}$ (mutagenic age-adjusted soil ingestion factor) mg/kg	.	24786.667

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Site-specific Recreator Sediment Inputs

Variable	Recreator Soil Default Value	Form-input Value
IRS_{0-2} (soil intake rate) mg/day	200	200
IRS_{2-6} (soil intake rate) mg/day	200	200
IRS_{6-16} (soil intake rate) mg/day	100	100
IRS_{16-30} (soil intake rate) mg/day	100	100
IRS_{rec-a} (soil intake rate - adult) mg/day	100	100
IRS_{rec-c} (soil intake rate - child) mg/day	200	200
LT (lifetime - recreator) years	70	70
SA_{0-2} (skin surface area) cm^2/day	2373	2373
SA_{2-6} (skin surface area) cm^2/day	2373	2373
SA_{6-16} (skin surface area) cm^2/day	6032	6032
SA_{16-30} (skin surface area) cm^2/day	6032	6032
SA_{rec-a} (skin surface area - adult) cm^2/day	6032	6032
SA_{rec-c} (skin surface area - child) cm^2/day	2373	2373
TR (target risk) unitless	1.0E-06	1.0E-06
T_w (groundwater temperature) Celsius	25	25
$Theta_a$ (air-filled soil porosity) L_{air}/L_{soil}	0.28396	0.28396
$Theta_w$ (water-filled soil porosity) L_{water}/L_{soil}	0.15	0.15
T (exposure interval) s	819936000	819936000
T (exposure interval) yr	26	26
U_m (mean annual wind speed) m/s	4.69	4.69
U_t (equivalent threshold value)	11.32	11.32
V (fraction of vegetative cover) unitless	0.5	0.5

Site-specific

Recreator Regional Screening Levels (RSL) for Sediment

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = DWSHA; W = TEF applied; E = RPF applied; G = see user's guide; U = user provided; ca = cancer; nc = noncancer; * = where: nc SL < 100X ca SL; ** = where nc SL < 10X ca SL; SSL values are based on DAF=1; max = ceiling limit exceeded; sat = Csat exceeded.

Chemical	CAS Number	Mutagen?	Volatile?	Chemical Type	SF_o (mg/kg-day)$^{-1}$	SF_o Ref	IUR (ug/m^3)$^{-1}$	IUR Ref	RfD (mg/kg-day)	RfD Ref	RfC (mg/m^3)	RfC Ref	GIABS	ABS	RBA	Soil Saturation Concentration (mg/kg)	S (mg/L)
Perfluorobutane sulfonic acid (PFBS)	375-73-5	No	No	Organics	-		-		3.00E-04	U	-		1	0.1	1	-	5.66E+0

K_{oc} \ (cm^3/g)	K_d \ (cm^3/g)	HLC (atm-m^3/mole)	Henry's Law Constant Used in Calcs (unitless)	H` and HLC Ref	Normal Boiling Point BP (K)	BP Ref	Critical Temperature TC (K)	TC Ref	Chemical Type	D_{ia} \ (cm^2/s)	D_{iw} \ (cm^2/s)	D_A \ (cm^2/s)	Particulate Emission Factor (m^3/kg)	Volatilization Factor (m^3/kg)	Ingestion SL TR=1E-06 (mg/kg)
6.17E+01	-	-	-		484.15	U	-		BTEX	2.70E-02	7.16E-06	-	1.36E+09	-	-

Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)	Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=0.1 (mg/kg)	Dermal SL Child THQ=0.1 (mg/kg)	Inhalation SL Child THQ=0.1 (mg/kg)	Noncarcinogenic SL Child THI=0.1 (mg/kg)	Ingestion SL Adult THQ=0.1 (mg/kg)	Dermal SL Adult THQ=0.1 (mg/kg)	Inhalation SL Adult THQ=0.1 (mg/kg)	Noncarcinogenic SL Adult THI=0.1 (mg/kg)	Screening Level (mg/kg)
-	-	-	1.58E+01	6.66E+01	-	1.28E+01	1.68E+02	3.99E+02	-	1.18E+02	1.28E+01 nc

Site-specific
Recreator Surface Water Inputs

Variable	Recreator Surface Water Default Value	Form-input Value
BW_{0-2} (body weight) kg	15	15
BW_{2-6} (body weight) kg	15	15
BW_{6-16} (body weight) kg	80	80
BW_{16-30} (body weight) kg	80	80
BW_{a} (body weight - adult) kg	80	80
BW_{rec-a} (body weight - adult) kg	80	80
$DFW_{rec-adj}$ (age-adjusted dermal factor) cm^2-event/kg	.	387868
$DFWM_{rec-adj}$ (mutagenic age-adjusted dermal factor) cm^2-event/kg	.	1217042.66
ED_{rec} (exposure duration - recreator) years	26	26
ED_{0-2} (exposure duration) years	2	2
ED_{2-6} (exposure duration) years	4	4
ED_{6-16} (exposure duration) years	10	10
ED_{16-30} (exposure duration) years	10	10
ED_{rec-a} (exposure duration - adult) years	20	20
EF_{rec-w} (exposure frequency) days/year	.	52
EF_{2-6} (exposure frequency) days/year	.	52.
EF_{6-16} (exposure frequency) days/year	.	52.
EF_{16-30} (exposure frequency) days/year	.	52.
EF_{rec-a} (adult exposure frequency) days/year	.	52
ET_{0-2} (exposure time) hours/event	.	3.
ET_{2-6} (exposure time) hours/event	.	3.
ET_{6-16} (exposure time) hours/event	.	3.
ET_{16-30} (exposure time) hours/event	.	3.
ET_{rec-a} (adult exposure time) hours/event	.	3
EV_{0-2} (events) events/day	.	1.
EV_{2-6} (events) events/day	.	1.
EV_{6-16} (events) events/day	.	1.
EV_{16-30} (events) events/day	.	1.
EV_{rec-a} (adult) events/day	.	1
THQ (target hazard quotient) unitless	0.1	0.1

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Site-specific
Recreator Surface Water Inputs

Variable	Recreator Surface Water Default Value	Form-input Value
$IFW_{rec\text{-}adj}$ (age-adjusted water intake rate) L/kg	.	5.07
$IFWM_{rec\text{-}adj}$ (mutagenic age-adjusted water intake rate) L/kg	.	20.54
$IRW_{0\text{-}2}$ (water intake rate) L/hour	0.12	0.05
$IRW_{2\text{-}6}$ (water intake rate) L/hour	0.12	0.05
$IRW_{6\text{-}16}$ (water intake rate) L/hour	0.124	0.05
$IRW_{16\text{-}30}$ (water intake rate) L/hour	0.0985	0.05
IRW_{rec} (water intake rate - adult) L/day	0.11	0.05
$IRW_{rec\text{-}a}$ (water intake rate - adult) L/hr	0.11	0.05
LT (lifetime - recreator) years	70	70
$SA_{0\text{-}2}$ (skin surface area) cm^2	6365	6365
$SA_{2\text{-}6}$ (skin surface area) cm^2	6365	6365
$SA_{6\text{-}16}$ (skin surface area) cm^2	19652	19652
$SA_{16\text{-}30}$ (skin surface area) cm^2	19652	19652
SA_{rec} (skin surface area - adult) cm^2	19652	19652
$SA_{rec\text{-}a}$ (skin surface area - adult) cm^2	19652	19652
Apparent thickness of stratum corneum (cm)	0.001	0.001
TR (target risk) unitless	1.0E-06	1.0E-06

Site-specific

Recreator Regional Screening Levels (RSL) for Surface Water

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = DWSHA; W = TEF applied; E = RPF applied; G = see user's guide; U = user provided; ca = cancer; nc = noncancer; * = where: nc SL < 100X ca SL; ** = where nc SL < 10X ca SL; SSL values are based on DAF=1; max = ceiling limit exceeded; sat = Csat exceeded.

Chemical	CAS Number	Mutagen?	Volatile?	Chemical Type	Chemical Type	SF_o (mg/kg-day)$^{-1}$	SF_o Ref	RfD (mg/kg-day)	RfD Ref	RfC (mg/m^3)	RfC Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	FA (unitless)	In EPD?
Perfluorobutane sulfonic acid (PFBS)	375-73-5	No	No	Organics	Organics	-		3.00E-04	P	-		1	0.0000193	300.1	1	Yes

$DA_{event\ (ca)}$	$DA_{event\ (nc\ child)}$	$DA_{event\ (nc\ adult)}$	Ingestion SL TR=1E-06 (ug/L)	Dermal SL TR=1E-06 (ug/L)	Carcinogenic SL TR=1E-06 (ug/L)	Ingestion SL (Child) THQ=0.1 (ug/L)	Dermal SL (Child) THQ=0.1 (ug/L)	Noncarcinogenic SL (Child) THQ=0.1 (ug/L)	Ingestion SL (Adult) THQ=0.1 (ug/L)	Dermal SL (Adult) THQ=0.1 (ug/L)	Noncarcinogenic SL (Adult) THQ=0.1 (ug/L)	Screening Level (ug/L)
-	0.0004963	0.0008572	-	-	-	2.11E+01	2.40E+03	2.09E+01	1.12E+02	4.14E+03	1.09E+02	2.09E+01 nc

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APPENDIX C
FIELD STANDARD OPERATING PROCEDURES

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TETRA TECH	STANDARD OPERATING PROCEDURE	Number SA-1.1	Page 1 of 27
		Effective Date 07/17/2020	Revision 11
		Applicability EGS Operating Unit	
		Prepared Earth Sciences Department	
Subject GROUNDWATER SAMPLE ACQUISITION AND ONSITE WATER QUALITY TESTING FROM MONITORING WELLS		Approved T. Johnston T.E. Johnston 07/17/2020	

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1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the processes to be used for purging groundwater monitoring wells prior to sampling, for collecting groundwater samples, and for measuring groundwater quality parameters. Governing project specific work plans, quality assurance project plans (QAPPs), sampling and analysis plans (SAPs), and comparable documents take precedence if this SOP conflicts with them.

2.0 SCOPE AND APPLICABILITY

This document provides information on proper sampling equipment, onsite water quality testing, safety measures to ensure the safety of the field technician(s), and techniques for groundwater sampling. All personnel are encouraged to review the information contained herein to facilitate planning of the field sampling effort. The techniques described shall be followed whenever applicable, noting that site-specific conditions or project-specific plans may require modifications to methodology.

WARNING

Sample containers can be contaminated during storage, especially by volatile substances that infiltrate the surrounding air and migrate into the containers. This can occur even when containers are capped. Therefore, containers that have been stored onsite for longer than 6 months should not be used. For DoD per- and polyfluoroalkyl substances (PFAS) projects, PFAS containers may not be stored longer than 3 weeks before use.

3.0 GLOSSARY

Dissolved Oxygen (DO) – Oxygen, e.g., from the atmosphere, dissolves in water without reacting chemically with the water. The resulting DO concentrations reflect the degree of physical, chemical, and biochemical activities in the water. Analysis of DO is a key test in water pollution and wastewater treatment process control that can provide an indication of the level of biological activity. Accurate measurement requires exclusion of air from samples during DO measurements. Results are typically reported in milligrams/Liter (mg/L).

Groundwater Sample – A quantity of water removed from the ground, usually via a monitoring well (temporary or permanent) that may or may not be lined with a well casing, and typically in a manner that is designed to represent the in-situ characteristics of the groundwater.

Oxidation-Reduction Potential (ORP) – A measure of the chemical activity ratio of oxidizing and reducing species in water. This ratio is proportional to the electromotive force developed in water by a noble metal electrode, as compared to a reference electrode. Positive values represent a net oxidizing tendency and negative values represent a net reducing tendency of the water. ORP can provide evidence of the likelihood of anaerobic degradation of biodegradable organic compounds. A reference electrode commonly used in the field is the silver/silver chloride electrode, which has a voltage offset of approximately 210 millivolts (mV) from the standard hydrogen electrode (SHE). To convert field ORP measurements to equivalent SHE values, approximately 210 mV must be added to the ORP values obtained using the silver/silver chloride electrode. The actual offset voltage depends on the temperature and the reference electrode and can be found in documents other than this SOP.

pH – A unitless number equal to the negative logarithm (base 10) of the hydrogen ion activity expressed in moles per liter. The hydrogen ion activity is related to the hydrogen ion concentration, and for all practical purposes, pH reflects the hydrogen ion concentration. The pH decreases with increasing hydrogen ion concentration. The standard pH scale ranges from 0 to 14. Aqueous solutions at 25°C with a pH less than 7 are acidic, whereas those with a pH greater than 7 are basic or alkaline (sometimes referred to as caustic). Measurement of pH is one of the most important and frequently used tests in water chemistry, therefore

accurate pH measurement is typically required. The most accurate measurements are obtained using an electronic pH meter with two separate electrodes or one combined electrode connected to the meter.

NOTE: Although pH measurements are unitless, some references and data management systems may indicate that pH is measured in "standard units" (S.U.s).

pH Paper – Indicator paper that turns different colors depending on the pH of the solution to which it is exposed. Comparison with color standards supplied by the manufacturer provides an indication of the solution's pH. Indicator paper is used when only an approximation of the pH is required, e.g., to verify pH meter readings.

Representativeness – A qualitative description of the degree to which a sample accurately mimics characteristics of a larger population (i.e., a larger area, volume, or mass of material). Selection of sampling locations and proper sample collection and handling are important to ensure that representative samples are collected.

Salinity – A measure of the mass of dissolved salts in a given mass of solution. Many field meters determine salinity automatically and indirectly from specific conductivity and temperature. The value will be displayed in either parts per thousand (ppt, or $^0/_{00}$) or percent (e.g., 35 ppt equals 3.5 percent). The parts per thousand symbol ($^0/_{00}$) is different than the percent symbol (%) and the two symbols must not be confused.

Specific Conductivity – Specific conductivity is the electrical conductivity of a solution across an electrical cell of specified geometry. It can be used to identify the direction and extent of migration of contaminants in groundwater or surface water, as well as subsurface biodegradation or to indicate the presence of contamination sources. The electrical current is carried by charged atoms or molecules in solution (i.e., ions) and can be affected by exposure to the atmosphere. Measurements are commonly made at, or normalized to, a standard temperature of 25 degrees Celsius (°C). Temperature normalizations commonly are automated by the instruments used to make these measurements. This type of compensation, however, adjusts only for temperature-induced changes in electronic instrument response; it does not compensate for temperature-induced changes in ion mobility that also affect the measurement. For comparability to literature references, measurements are commonly made at the standard temperature of 25°C. To minimize atmospheric alteration of the sample's conductivity, these measurements are made within a closed flow-through cell. Most conductivity meters in use today display specific conductivity in units of mS/cm normalized to a temperature of 25°C, but other units (e.g., µS/cm) also are used.

Temperature – Temperature is a measure of the average kinetic energy of the atoms or molecules in a material expressed in units of degrees on a standard scale. The scale most commonly used for scientific work is the Celsius scale. A constant temperature during well purging is an indicator which, with other parameters, helps to establish when sampling conditions are stable enough for collecting a representative sample. Temperature measurements may be taken with alcohol-toluene, mercury-filled, dial-type thermometers, or combination meters equipped with an in-line sample chamber and electronic temperature probe (e.g., YSI 600 series and Horiba U-52). Temperature can be a useful indicator of the likelihood of biological action in a water sample. It can also be used to trace the flow direction of contaminated groundwater

Turbidity – Turbidity is an expression of the optical property that causes light to be scattered and absorbed rather than transmitted in a straight line through the sample. Turbidity in water, measured in nephelometric turbidity units (NTUs) is caused by suspended matter such as clay, silt, and other fine organic and inorganic matter. It is important to obtain a turbidity reading immediately after collecting a sample because irreversible changes in turbidity may occur if the sample is stored too long.

4.0 PERSONEL RESPONSIBILITIES, QUALIFICATIONS, AND TRAINING

NOTE: The composition of a project team may not include all of the positions listed below and may include others that are not listed. Training is provided to these individual according to applicable corporate protocols.

Project Manager – Responsible for overall project direction and execution in coordination with the client and project team. Responsible for identifying key staff needs and resulting makeup of the project support staff. The project manager along with the management team are responsible for determining sampling objectives, initial sampling locations, and field procedures used in the collection of samples of environmental media. Additionally, in consultation with other project personnel (geologist, hydrogeologist, etc.), the project manager is responsible for selecting and detailing the specific sampling techniques and equipment to be used and for providing detailed input in this regard to the project-specific work plan.

Site Safety & Health Officer (SSHO) – The SSHO (or a qualified designee) is responsible for providing the technical support necessary to implement the project Health and Safety Plan (HASP) or equivalent. This includes but is not limited to performing air quality monitoring during sampling, boring and excavation activities, and ensuring that workers and offsite (downwind) individuals are not exposed to hazardous levels of airborne contaminants. The SSHO or SSHO designee may also be required to advise the Field Operations Leader (FOL) on other safety-related matters regarding sampling, such as mitigative measures to address potential hazards from hazardous objects or conditions.

Project Hydrogeologist – This individual is responsible for selecting and detailing the specific groundwater sampling techniques, onsite water quality testing (type, frequency, and location), equipment to be used, and providing detailed input in this regard to the project-specific work plan. The project hydrogeologist is also responsible for properly briefing and overseeing the performance of site sampling personnel.

Field Operations Leader (FOL) – The FOL is responsible for overall coordination and execution of the field program in accordance with project-specific work plan and for communication from the field to the project manager and other key staff. This is accomplished through management of a field sampling team for the proper acquisition of samples. He or she is responsible for the supervision of onsite analyses; ensuring proper instrument calibration, care, and maintenance; sample collection and handling; the completion and accuracy of all field documentation; and making sure that custody of all samples obtained is maintained according to sample collection protocols. When appropriate and as directed by the FOL, such responsibilities may be performed by other qualified personnel (e.g., field technicians) where credentials and time permit. The FOL is ultimately responsible for ensuring compliance with Occupational Safety and Health Administration (OSHA) regulations during these operations in accordance with the project Health and Safety Plan. This person shall have significant hands-on experience with sample collection, handling, and documentation under the circumstances required for the current project.

Field Support Personnel – Responsible for the proper acquisition of samples in accordance with this SOP and governing work plans or similar project-specific documents. In addition, this individual is responsible for completion of all required paperwork (e.g., sample log sheets, field notebook, boring logs, container labels, custody seals, and chain-of-custody forms) associated with the collection of the samples.

Minimum field personnel qualifications for groundwater sample collection and onsite water quality testing include the following:

- OSHA 40-hour; applicable refresher training; and, if applicable, supervisory training (Hazardous Waste Operations and Emergency Response [HAZWOPER] operations only).
- Capability of performing field work under the expected physical and environmental (i.e., weather) conditions.

- Familiarity with sampling procedures, sample handling, sample documentation, and sample packaging and shipping as documented in the project-specific work plan and this SOP.

5.0 SAFETY PRECAUTIONS

Specific safety and health hazards are identified throughout the project-specific HASP or Accident Prevention Plan/Site Safety and Health Plan (APP/SSHP), specifically the Activity Hazard Analysis (AHA). Common health and safety concerns that may arise during implementation of this SOP are identified below:

- Knee injuries from kneeling on hard surfaces.
- Slips, trips, and falls.
- Cuts and lacerations.
- Traffic hazards associated with sampling in parking areas and roadways and along highways and railways.
- Biological hazards including insects; spiders; snakes and other reptiles, as well as, poisonous fauna.
- Physical hazards directly associated with the groundwater sampling equipment.

General methods of avoiding these hazards include:

- Maintaining situational awareness, e.g., surveilling the area to identify hazards, such as:
  - Vehicular traffic within industrial areas.
  - Remote locations requiring traverse through heavy vegetation or over steep terrain.
  - Time of the year potentially resulting in heat and/or cold stress.
  - Potential for insect or snake bites or contact with poisonous plants such as poison ivy
  - Rushing/fatigue/frustration/complacency (reference: Safe Start Program based on four states that can lead critical errors).
- Hierarchy of Control
  1st: Engineering controls – If a hazard can be eliminated or avoided by using shielding against it, then avoidance or use of shielding is the preferred action.
  2nd: Administrative Work Practices – Altering work practices to avoid the hazard is another option to limit exposure potential and minimize potential hazards.
  3rd: Personal Protective Equipment (PPE) – This is the least preferred option though it may not be required if other options cannot be readily implemented.

6.0 PROCEDURES

6.1 GENERAL

For information derived from a groundwater sample to be useful and accurate, the sample must be representative of the particular water zone being sampled. The physical, chemical, and microbiological integrity of the sample must be maintained from the time of sampling to the time of analysis to keep any changes in water quality parameters after collection to a minimum. Fresh, certified-clean sample containers should be used. Use of previously stored containers should be avoided, if possible (see Section 2.0 warning). If containers that had been previously stored on site must be used, this should be noted in the field log to support identification of cross-contamination sources, if necessary. Obtaining a representative

sample of groundwater requires avoiding collection of stagnant (standing) water in a well and avoiding physical or chemical alteration of the water sample.

In a non-pumping well, there will be little or no vertical mixing of water in the well pipe or casing, and stratification will occur. The well water in the screened section will mix with groundwater due to normal flow patterns, but the well water above the screened section will remain isolated and become stagnant. This stagnant water is not representative of the surrounding geologic formation. Concentration gradients, layers of different geologic permeability, and the presence of separate-phase product (e.g., floating hydrocarbons) may cause stratification. Excessive pumping or improper sampling methods can dilute or increase contaminant concentrations in the collected sample compared to what is representative of the natural water column, resulting in collection of a non-representative sample.

6.2 PURGING, SAMPLING, AND MONITORING EQUIPMENT

The following equipment, supplies, and/or documents may be required (depending on the chosen sampling technique) when sampling groundwater wells:

- Pumps
  - Shallow-well pumps: Centrifugal, bladder, suction, or peristaltic pumps with drop lines and air-lift apparatus (compressor and tubing) where applicable.
  - Deep-well pumps: Submersible pumps and electrical power-generating units, or bladder pumps where applicable.
- Power source (electrical generator, nitrogen tank, 12 volt battery, etc.). If a gasoline powered generator is used, it must be located downwind and at a safe distance from the well to avoid unnecessary exposures to exhaust and so that the exhaust fumes do not contaminate samples.
- Tubing – Teflon, Teflon-lined polyethylene, polyethylene, PVC, Tygon, or stainless steel tubing may be used to collect samples for analysis, depending on the analyses to be performed and regulatory requirements. When collecting samples for per- and polyfluoroalky substances (PFAS) analysis, avoid using materials containing Teflon and other fluoropolymers.
- Water level measuring device with 0.01-foot accuracy (electronic devices are preferred for tracking water level drawdown during all pumping operations).
- Photoionization detector (PID) or flame ionization detector (FID) for measuring volatile organic vapors per the HASP (or equivalent).
- Interface probe if separate-phase product is suspected.
- Water quality meters – pH, turbidity, specific conductivity, and temperature. Optional indicators - ORP, salinity, and DO. A flow-through cell (also referred to as an in-line sample chamber) is required for low-flow sampling.
- Chemical Standards to perform field calibrations.
- Other sampling equipment – Disposable clear bottom-filling bailers to be used to check for and obtain samples of light non-aqueous phase liquid (LNAPL) or dense non-aqueous phase liquid (DNAPL), graduated cylinder, stopwatch, and inert line (cord).

- Clean paper or cotton towels for cleaning equipment.
- Buckets with lids for collecting purge water.
- Decontamination solutions – Deionized water, potable water, phosphate-free laboratory-grade detergent, and analytical-grade solvent (e.g., pesticide-grade isopropanol), as required.
- Well construction data, location map, field data from the previous sampling event (if available).
- Field Sampling Plan, field logbooks, field forms, camera (if appropriate), and well keys.
- Sample packaging and shipping equipment – Coolers for sample shipping and cooling, chemical preservatives, appropriate sampling containers and filler materials, ice, labels, and chain-of-custody documents.

Ideally, water sample withdrawal equipment shall be completely inert, economical, easily cleaned, cleaned prior to use (in the case of reusable items), able to operate at remote sites in the absence of power sources, and capable of delivering variable rates for well purging and sample collection. Additional information regarding the selection of purging equipment can be found in Attachment A.

6.3 CALCULATION OF WELL VOLUME

To ensure that a proper volume of water is removed from a well prior to sampling, it is first necessary to know the volume of standing water in the well pipe (including well screen where applicable). This volume can be easily calculated by the following method.

1. Obtain all available information on well construction (location, casing material and thickness, screen configuration, etc.).
2. Determine well or inner casing diameter.
3. Measure and record static water level (depth below ground level or top of casing reference point).
4. Sound the well depth using a clean, decontaminated, weighted tape measure or water level indicator.
5. Calculate and record the number of linear feet of static water (total depth or length of well pipe minus the depth to static water level).
6. Calculate one static well volume in gallons $V = (0.163)(T)(r^2)$

where: V = Static volume of well in gallons.
T = Linear feet of water in the well.
r = Inside radius of well casing in inches.
0.163 = Conversion factor (compensates for conversion of casing radius from inches to feet; cubic feet to gallons; and Pi (π)).

NOTE: Calculations shall be entered in the site logbook or field notebook or on a sample log sheet form or equivalent electronic form(s) (see Attachment C).

6.4 EVACUATION OF STATIC WATER – PURGING

6.4.1 General

The volume of water to be purged from each well will be determined prior to sample collection. This volume will depend on the intent of the monitoring program and the hydrogeologic conditions. Programs to determine overall quality of water resources may require long purge periods to obtain a sample that is representative of a large volume of the aquifer. The purged volume may be specified prior to sampling so that the sample can be a composite of a known volume of the aquifer. Alternately, the well can be purged until parameters such as temperature, specific conductivity, pH, and turbidity (as applicable) have stabilized. Onsite measurements of these parameters shall be recorded in the site logbook or field notebook or on standardized data sheets or an equivalent electronic form(s).

6.4.2 Evacuation Devices

The following list of evacuation devices is limited to those devices commonly used at hazardous waste sites. Attachment A provides guidance on the proper evacuation device to use for particular sampling situations. All of these techniques involve equipment that is portable and readily available.

Bailers

Bailers are the simplest evacuation devices used and have many advantages. They generally consist of a length of tubing equipped with a base plate and ball check-valve at the bottom and are lowered and raised using a length of inert, non-absorbent rope (polyethylene) or cable. Bailers are typically comprised of stainless steel, high density polyethylene (HDPE) or polyvinyl chloride (PVC) plastic or Teflon. They come in a variety of sizes, but the two most often used are 2 inches and 4 inches in diameter. These devices come in weighted and non-weighted configurations. As the bailer is lowered into the water column, the ball is pushed up allowing the tube to be filled. When the bailer is pulled upward, the ball seats in the base plate preventing water from escaping.

Bladder Pumps

Bladder pumps are low-flow pneumatic devices used mainly for fluid sampling applications. These pumps typically have low flow rates making them ideal for collecting very low turbidity samples (<5 NTUs). They are also designed to minimize the potential for sample contamination. These characteristics are especially important for groundwater analysis, which requires representative, reproducible sampling data to obtain accurate results. Bladder pumps are EPA-accepted for low-flow sampling.

Bladder pumps are available in a range of sizes, materials, and models. These include models for deep wells, narrow or obstructed casings, and small-volume pumps for low-yield wells. When low-flow pumping rates are used, these pumps consistently collect high quality, uniform samples.

Suction Pumps

There are many different types of inexpensive suction pumps including centrifugal, diaphragm, and peristaltic pumps. Centrifugal and diaphragm pumps can be used for well evacuation at a fast pumping rate and for sampling at a low pumping rate. The peristaltic pump (“peri” pump) is a low-volume pump that uses rollers to squeeze flexible tubing to create suction. This tubing can be dedicated to a well to prevent cross-contamination from well to well. Suction pumps are all portable, inexpensive, and readily available. However, because they are based on suction, their use is restricted to areas with water levels within 20 to 25 feet of the ground surface. A significant limitation is that the vacuum created by these pumps can cause loss of dissolved gases and volatile organics. Another limitation is that they require a secondary energy source to drive them. Electrically driven pumps may require portable generators as energy sources. Air

diaphragm pumps require air compressors and/or compressed gas cylinders to drive them. The advantage of the peristaltic pump is that it can operate from either a built in power source or a portable battery source. Safety measures associated with these pumps are provided below.

Air-Lift and Gas-Lift Samplers

This group of pump samplers uses gas pressure (ether air or nitrogen) either in the annulus of the well or in a Venturi to force groundwater up a sampling tube. These pumps are also relatively inexpensive.

CAUTION

Air- or gas-lift samplers are more suitable for well development than for sampling because the samples may be aerated as a result of pump action. Aeration can cause loss of volatile organics and pH changes with subsequent loss of trace metals via precipitation.

Submersible Pumps

Submersible pumps take in water and push the sample up a sample tube to the surface. The power sources for these samplers may be compressed gas or electricity. Operation principles vary, and displacement of the sample can be by an inflatable bladder, sliding piston, gas bubble, or impeller. Pumps are available for 2-inch-diameter wells and larger. These pumps can lift water from considerable depths (several hundred feet) when connected in stages. Limitations of this class of pumps include the following:

- They may have low delivery rates.
- Many models are expensive.
- Compressed gas or electric power is needed.
- Sediment in water may cause clogging of the valves or eroding of the impellers with some of these
- pumps.
- Decontamination of internal components can be difficult and time consuming.

6.4.3 Safety Precautions Associated with Evacuation Devices

Compressed Gases

Compressed gases are provided in metal cylinders at pressures of approximately 2,000 pounds per square inch (psi) for some gases. If damaged, these cylinders can become dangerous projectiles. Sudden release of a cylinder's contents can involve considerable force that could cause significant damage to eyes and/or skin. Protective measures include the following:

- Always wear safety impact glasses when handling compressed gases.
- Always administer compressed gases through appropriate dual stage pressure-reducing regulators.
- Keep valve protection caps on gas cylinders when not in use.
- When using a gas cylinder, restrain it or lay it on its side to avoid the risk of knocking the valve off, which could cause the cylinder to become a missile.
- DO NOT use compressed gas to clean clothing or to spray off skin. Pressurized gas can enter cuts in the protective layer of the skin, presenting the potential danger of an embolism.

See the project-specific HASP (or equivalent) for additional direction concerning cylinder safe handling

procedures pertaining to the safe handling, transportation, and storage of compressed gas cylinders.

Electrical Shock

Even when using portable batteries and vehicle batteries, the potential for damaging electrical shock exists. This risk increases whenever water is present near the batteries. The risk also increases in (prohibited) situations involving jury-rigging of electrical connections To control these hazards:

- If unfamiliar with electrical devices, do not experiment. Get help, and get the proper equipment.
- Use proper portable power inverters for vehicle cigarette lighter connections to minimize the need to access the battery under the hood of a vehicle.

To minimize or eliminate electrical generator hazards:

- Wear hearing protection when working near generators and stay alert .
- Inspect the generator before use. Ensure that the generator and any extension cords are rated for the intended operation and have a Ground Fault Circuit Interrupter (GFCI) in line to control potential electrical shock.
- Fuel the generator before purging and sampling to avoid loss of power during sampling.
- Fuel engines only when they are turned OFF and have cooled sufficiently to prevent a fire hazard.

Lifting Hazards

These hazard may be experienced when moving containers of purge water, equipment, cylinders, as well as generators and compressors. To control these potential hazards:

- Do not fill purge buckets to more than 80 percent of their capacity.
- Obtain a gas cylinder of sufficient size to complete the designated task but not too large to handle. K-size cylinders weigh approximately 135 pounds and are difficult to handle. M-size cylinders weigh approximately 50 pounds and are easier to handle and move.
- When necessary, get help lifting and moving gas cylinders and other heavy objects. Minimize twisting and turning while lifting. If it is necessary to move these cylinders or generators over significant distance, use mechanical means (carts, etc.).
- Use proper lifting techniques as described in project-specific work plan, specifically the AHAs for additional hazards concerning heavy lifting and recommended control measures to minimize such hazards.

6.5 ONSITE WATER QUALITY TESTING

The following field parameters are often measured during groundwater well purging prior to sample collection:

- pH
- Specific Conductivity
- Temperature

- DO
- ORP
- Turbidity
- Salinity

Refer to the Glossary for descriptions of these parameters and descriptions of their importance.

The measurement of water quality is typically performed using multi-parameter water quality instruments from manufacturers such as a Horiba or YSI. Turbidity is often measured independently using a LaMotte 2020. The procedures and equipment described below are applicable to groundwater samples and are not, in general, subject to interferences from color, turbidity, colloidal material or other suspended matter in samples.

Because instruments from different manufacturers may vary, review of the manufacturer's literature pertaining to the use of a specific instrument is required before use. Most meters used to measure field parameters require daily calibration and should be done so according to the manufacturer's calibration requirements. Refer to Attachment C for an example equipment calibration log.

Safety Data Sheets (SDSs) for all chemicals such as buffer solutions and calibration solutions per 29 CFR 1910.1200 (Hazard Communication, 2012) must be obtained from the chemical supplier and maintained onsite (see Section DCN 02-01 of the Tetra Tech Health and Safety Manual regarding the Hazard Communication Program).

NOTE: If conditions that may interfere with water quality measurements are observed, such as high turbidity or oily material that could foul electrodes, note them and avoid them as much as possible.

6.5.1 Use of Electronic Instruments to Measure pH, Specific Conductivity, Temperature, DO, ORP, Salinity, and Turbidity

1. Before going to the field
   a) Check batteries of field instruments to ensure sufficient charge is available to make all required measurements.
   b) Condition DO probes in water for as long a period as practical before use in the field. Intermittent periods of dry storage may result in inaccurate readings.
   c) Check the expiration dates of solutions used for calibration and replace them if they are expired.

2. Standardize (pH) or calibrate (non-pH) the instruments in accordance with manufacturer's instructions and steps presented below.

3. Ensure that solutions used for field standardization/calibration will not be used after their expiration dates.

NOTE: pH buffer solutions need to be changed often as a result of degradation from exposure to the atmosphere.

4. If applicable, make sure all electrolyte solutions within electrode(s) are at their proper levels and that no air bubbles are present within the electrode(s).

5. For temperature, follow these calibration instructions:

   a) Prior to use, verify whether calibration of the thermometer or temperature probe is required (as indicated in the governing work plan or directed by the FOL).

b) If calibration is not required, use the device as received, record in the field notes that it was not calibrated prior to use, and skip the remaining calibration steps.

c) If the thermometer comes with a calibration sticker or certificate and the date of use is within the valid calibration date range, it may be used as received. In this case skip the remaining calibration steps.

d) If calibration is required but invalid or undocumented, take one of the following actions, otherwise proceed to Step e):
- Calibrate the thermometer or temperature probe in accordance with the manufacturer's instructions.
- Return the thermometer or temperature probe to the supplier for calibration.

e) Record calibration data on a calibration log (see Attachment C).

6. Except for temperature, calibrate the meter and electrode(s)/probe(s) on a daily use basis in accordance with manufacturer's instructions and requirements of the governing work plan. Record calibration data on a water quality meter calibration log sheet (see Attachment C).

NOTE: Ensure DO probes have sufficient flow of water around them during measurement, especially if readings appear to be unstable.

7. For all water quality parameters except turbidity, direct groundwater to be measured through the flow-through cell or immerse the electrode(s) in the sample(e.g., for surface water). Stabilization may take several seconds to minutes.
    a. If the measurement continues to drift, the sample temperature may not be stable, a physical or chemical reaction (e.g., degassing or absorption of CO_2) may be taking place, or the meter or electrode(s) may be malfunctioning. Additional time should be allowed for stabilization but if it does not appear that the measurements will stabilize within a reasonable timeframe, and the instrument is functioning properly, proceed with recording the measurements and clearly note in the logbook or equivalent electronic form the failure of measurements to stabilize.

    b. If the instrument appears to be malfunctioning, follow troubleshooting corrective measures or contact the instrument supplier for assistance, then repeat the calibration and measurement steps above, as applicable, to make the required measurements. Verification of proper pH measurement may be possible using pH paper (see Section 6.5.2).

8. For turbidity, direct water flow (e.g., through a "T" fitting upstream of the flow through cell) into the appropriate clean sample cup, then:
    a. When using the YSI 600 and/or Horiba U-52, rinse the electrode with one or more portions of the sample to be tested or with deionized water.

    b. When using the Lamotte 2020, fill the light meter's glass test cell with approximately 5 mL of sample, screw on the cap, wipe off the glass to remove all residue that could intercept the instrument's light beam, place the test cell in the light meter, aligning the arrow on the cap of the test cell to the arrow on the meter, and close the lid.

    c. Immerse the probe in the sample and measure the turbidity immediately to prevent changes in turbidity from settling particulates.

9. Read and record all water quality measurements using the following guide (or as directed in the governing work plan):

a. pH: Nearest 0.01.
b. Specific Conductivity: Nearest 0.001 to 0.1 mS/cm (range dependent)
c. Temperature: Nearest 0.02 degree Fahrenheit or 0.01 degree Celsius, or less
d. Dissolved Oxygen: Nearest 0.01 mg/L
e. Oxidation-Reduction Potential (ORP): Nearest 0.1 mV
f. Turbidity: Nearest 0.1 NTU
g. Salinity: Nearest 0.01 parts per thousand ($^0/_{00}$)

NOTE: For greatest accuracy on instruments that allow selection of different scales, choose scales that result in measured values at least 10 percent of full scale.

10. Record the sample temperature along with other water quality measurements.

11. When finished using water quality meters, rinse their electrode(s)/probe(s) with deionized water and store them in accordance with the manufacturer's instructions. Some probes require that they be stored in a protective cup or other device that ensures they remain in contact with an aqueous liquid.

6.5.2 Use of pH Paper to Measure pH

Use of pH paper is very simple and requires no sample preparation, standardization, etc. pH paper is available in several ranges, including wide-range (indicating approximately pH = 0 to 14), mid-range (approximately pH = 0 to 6, 6 to 9, or 8 to 14) and narrow-range (many available, with ranges as narrow as 1.5 pH units and a pH resolution of 0.5 or less). The appropriate range of pH paper must be selected. If the pH is unknown, then measurements should start with wide-range paper followed by narrower range paper until the sample pH is determined to the desired degree of precision. To measure the pH:

1. Collect a small portion of sample in a clean container separate from the main sample container.

2. Dip the pH paper into this small portion of sample.

3. Compare the color of the paper to the color chart that is provided with the pH paper and read the corresponding pH from the chart.

4. If desired, continue to narrow the pH range for a more specific reading.

5. Record the final pH value from the chart on the sample log sheet.

6. Discard the used pH paper as trash.

7. Discard the small volume of sample that was used for the pH measurement with the other investigative-derived waste.

6.6 GROUNDWATER SAMPLING PROCEDURES

Groundwater sampling typically is performed using conventional methods or via low-flow (minimal drawdown) methods. The following sections provide guidance on the procedures to be followed when performing groundwater sampling using each of these methods. It should be noted that EPA regional protocols may supersede the procedures outlined below (consult the governing work plan).

NOTE: If using a generator that requires liquid fuels, place the generator and any fuel source at least 50 feet downwind from the sampling point to prevent human exposure to fuel vapors and prevent the vapors from contaminating samples.

6.6.1 Conventional Sampling Methods (Not Low-Flow Sampling)

The collection of a groundwater sample consists of the following steps:

1. Open the well cover at arm's length, then step away and allow the well to vent. In situations where volatile organic compounds (VOCs) are the primary contaminants of concern, air monitoring of the sampler's breathing zone may be required by the HASP or equivalent (typically with a PID or FID).

2. Measure the water level prior to placing the pump or tubing in the well and record the water level on the Groundwater Sample Log Sheet (see Attachment B) or equivalent electronic form immediately prior to placing the pump or tubing into the well.

3. Calculate volume of well water to be removed as described in Section 6.3.

4. Select the appropriate purging equipment (see Attachment A) or as designated within the governing work plan. If an electric submersible pump with packer is chosen, go to Step 10.

5. Lower the purging equipment or intake into the well to a short distance below the water level or mid-screen as indicated in project-specific documentation and begin water removal. Remember that some contaminants are denser than water and in these cases, project-specific direction may specify placing the intake just above (1 to 2 feet) the well bottom. Secure the pump intake at the well and secure the effluent at the collection container and begin pumping. The pumping rate will be determined based on the decrease in the water level (see Section 6.6.2) or as directed in the governing project-specific documents. Purge water is generally collected in a 5-gallon bucket or similar open- or closed-top container. To minimize the potential for spills and back injuries, do not fill 5-gallon buckets beyond approximately 80 percent of their capacity. Dispose of purge water as indicated in the governing work plan. Where necessary, slow the pumping rate or lower the pump intake as required to maintain submergence.

6. Estimate the approximate rate of discharge frequently and record it on the Groundwater Sample Log Sheet (see Attachment B). Estimate flow rate by noting the amount of discharge in a bucket or graduated cylinder per unit time using a watch with a second hand or a stopwatch.

7. If using a peristaltic pump, observe the pump tubing intake for degassing "bubbles." If bubbles are abundant and the intake is fully submerged, this pump is not suitable for collecting samples for volatile organics. I must be replaced.

8. Purge a minimum of three to five well casing volumes before sampling (or as directed by the project-specific work plan). In low-permeability strata (i.e., if the well is pumped to dryness), one volume will suffice. Allow the well to recover to 75 percent of initial water level before sampling. Do not overfill purge containers because this increases the potential for spills and lifting injuries.

9. Measure and record water quality parameters every 5 to 15 minutes or as otherwise specified in the governing work plan throughout the purging process. At a minimum, pH, specific conductivity and turbidity should be measured during purging. If parameters have stabilized after evacuating three casing volumes, then sampling may commence.

10. If sampling using a submersible pump, lower the pump intake to mid-screen (or the middle of the open section in uncased wells) and collect the sample. If sampling with a bailer, lower the bailer to just below the water surface.

11. For pump and packer assemblies only: Lower the assembly into the well so that the packer is positioned just above the screen or open section. Inflate the packer. Purge a volume equal to at least twice the

screened interval (or unscreened open section volume below the packer) before sampling. Packers shall always be tested in a casing section above ground to determine proper inflation pressures for good sealing.

12. If the recovery time of the well is very slow (e.g., 24 hours or greater), sample collection can be delayed until the following day. If the well has been purged early in the morning, sufficient water may be standing in the well by the day's end to permit sample collection. If the well is incapable of producing a sufficient volume of sample at any time, collect the largest quantity available and record this occurrence in the site logbook or equivalent electronic form. When this occurs, contact the analytical laboratory to alert them that a reduced sample volume(s) will be submitted for analysis.

13. Fill sample containers, and preserve and label them as described in SOP SA-6.1. Many sample bottles will contain preservative when they are shipped to the field. In those cases, do not add preservative.

14. Replace the well cap and lock it as appropriate. Make sure the well is readily identifiable as the source of the sample.

15. Prepare samples for shipping as described in SOP SA-6.1.

16. Decontaminate equipment as described in SOP SA-7.1.

6.6.2 Low-Flow Purging and Sampling

Low-flow purging and sampling techniques are often implemented for groundwater sampling activities. The purpose of low-flow purging and sampling is to collect groundwater samples that contain "representative" amounts of mobile organic and inorganic constituents in the vicinity of the selected open well interval, at or near natural flow conditions. This minimum-stress procedure emphasizes negligible water level drawdown and low pumping rates to collect samples with minimal alterations in water chemistry. This procedure is designed primarily to be used in wells with a casing diameter of 1 inch or more and a saturated screen length, or open interval, of 10 feet or less. Samples obtained are suitable for analyses of common types of groundwater contaminants (VOCs and semivolatile organic compounds [SVOCs], pesticides, polychlorinated biphenyls [PCBs], metals, and other inorganic ions [cyanide, chloride, sulfate, etc.]). This low-flow procedure is not designed for collection of non-aqueous phase liquid samples from wells containing LNAPL or DNAPL.

This procedure is flexible for various well construction types and groundwater yields. The goal of the procedure is to obtain a turbidity level of less than 10 NTUs and to achieve a water level drawdown of less than 0.3 foot during purging and sampling. If these goals cannot be achieved, sample collection can take place provided that the remaining criteria in this procedure are met.

1. Open the monitoring well and prepare purging equipment. In situations where VOCs are the primary contaminants of concern, air monitoring of the samplers' breathing zone areas may be required by the HASP or equivalent (typically with a PID or FID).

2 Measure the water level prior to placing the pump or tubing in the well and record the water level on the Groundwater Sample Log Sheet (see Attachment B) or equivalent electronic form immediately prior to placing the pump or tubing into the well.

3. Lower the measuring device further into the well to collect the total depth measurement, if necessary. Again wait 3 to 5 minutes to allow the well to equilibrate to the initial water level prior to placing the pump or pump intake in the well.

4. Record the total well depth on the Groundwater Sample Log Sheet (see Attachment B) or equivalent electronic form immediately prior to placing the pump or tubing into the well.

5. Lower the pump or tubing slowly into the well so that the pump intake is located at the center of the saturated screen length of the well. If possible, keep the pump intake at least 2 feet above the bottom of the well to minimize mobilization of sediment that may be present in the bottom of the well. Collection of turbidity-free water samples may be difficult if there is 3 feet or less of standing water in the well.

6. Start with the initial pump rate set at approximately 0.1 liter per minute. Use a graduated cylinder and stopwatch to measure the pumping rate. Adjust the pumping rate as necessary to prevent drawdown from exceeding 0.3 foot during purging. If no drawdown is noted, the pump rate may be increased (to a maximum of 0.4 liter per minute) to expedite the purging and sampling event. The pump rate should be reduced if turbidity is greater than 10 NTUs after all other field parameters have stabilized. If groundwater is drawn down below the top of the well screen, purging shall cease, and allowed to recover to 75 percent of the initial water level above the screen. Otherwise, the well shall be pumped to dryness and then allowed to recover before sampling. Well recovery to 75 percent is necessary prior to sampling. Slow-recovering wells should be identified and purged at the beginning of the workday to maximize field work efficiency. If possible, samples should be collected from these wells within the same workday and no later than 24 hours after the end of purging.

7. Measure the water level in the well every 5 to 10 minutes using the water level meter. Record the well water level on the Groundwater Sample Log Sheet (see Attachment B) or equivalent electronic form.

8. Record on the Groundwater Sample Log Sheet every 5 to 10 minutes the water quality parameters (pH, specific conductivity, temperature, turbidity, ORP, DO, and salinity or as specified by the approved project specific work plan) measured by the water quality meter with flow-through cell and turbidity meter. If the cell needs to be cleaned during purging operations, continue pumping (allow the pump to discharge into a container) and disconnect the cell. Rinse the cell with distilled/deionized water. After cleaning is completed, reconnect the flow-through cell and continue purging. Document the cell cleaning on the Groundwater Sample Log Sheet or equivalent electronic form.

9. Estimate the flow rate by noting the amount of discharge in a graduated cylinder per unit time using a watch with a second hand. Remeasure the flow rate any time the pump rate is adjusted and periodically during purging. This will determine if a reduction in rate has occurred due to possible battery depletion.

10. During purging, check for the presence of bubbles in the flow-through cell. The presence of bubbles is an indication that connections are not tight. If bubbles are observed, check for loosen connections and tighten, repair, or replace them as necessary to achieve a tight connection.

11. Purge the well at a constant nominal rate of 100 mL/min (minimum rate) to 300 mL/min (maximum rate if there is no drawdown) until stabilization is achieved. Stabilization is achieved when the last three consecutive readings taken at 5- to 10-minute intervals are within the following limits, or a minimum of three saturated screen volumes have been removed:

    - **pH:** ±0.1 unit
    - **Specific conductivity:** 3%
    - **DO:** 10% for values greater than 0.5 mg/L, if three DO values are less than 0.5 mg/L, consider the values as stabilized.
    - **Turbidity:** 10% for values greater than 5 NTUs; if three Turbidity values are less than 5 NTUs, consider the values as stabilized**.**
    - **Temperature:** 3**%**
    - **ORP:** ±10 mV

12. If the above conditions have not been met after the well has been purged for 2 hours, consider purging to be complete and begin sampling (unless otherwise directed by the project manager). Record the final well stabilization parameters on the Groundwater Sample Log Sheet or equivalent electronic form.

13. Once well purging is complete, redirect water flow through the upstream "T" fitting (if installed) or disconnect the pump tubing from the flow-through cell, and collect samples directly from the tubing.

    NOTE: VOC samples are preferably collected first, directly into pre-preserved sample containers. Fill all sample containers by allowing the pump discharge to flow gently down the inside of the container with minimal turbulence.

14. If the water column in the pump tubing collapses (water does not completely fill the tubing) before exiting the tubing, collect samples for non-VOC analyses first, then use one of the following procedures to collect VOC samples:

    - Increase the flow rate incrementally until the water column completely fills the tubing, collect the sample for VOCs, and record the new flow rate.

    - Reduce the diameter of the tubing until the water column fills the tubing either by adding a connector (Teflon or stainless steel) or clamp, which should reduce the flow rate by constricting the end of the tubing. Proceed with sample collection.

    - Insert a narrow-diameter Teflon tube into the pump's tubing so that the end of the tubing is in the water column and the other end of the tubing protrudes beyond the pump's tubing, then collect the sample from the narrow diameter tubing.

15. Prepare samples for shipping as described in SOP SA-6.1.

16. Decontaminate equipment as described in SOP SA-7.1.

6.6.3 Groundwater Sampling Using Drive Points

Conduct drive point sampling of groundwater as follows:

1. Stand by as a third party:
    a. Advances the direct push technology (DPT) dual tube and discrete point sampler to the desired depth in accordance with standard DPT protocols.
    b. Removes the drive rods and discrete point sampler and inserts internal rods and well screen.
    c. Retracts the outer casing approximately 18-24 inches to expose the well screen.
2. After being granted access to the well by the third party, insert a polyethylene purging/sampling tube into the well to mid-screen.
3. Connect the other end of this tubing to the peristaltic pump using a short length of silicone tubing for the drive section of the pump and polyethylene tubing on the discharge.
4. Pump groundwater from the drive point tube using a rate of 100mL/minute for 20 minutes, collecting groundwater quality measurements as described in Section 6.6.2, Steps 5 through 12.

NOTE: If turbidity is not reduced to less than 10 NTUs after 20 minutes or pumping, introduce the tubing at the top of the water column and slowly lower it while pumping. This will clear some turbidity within the water column above the screen interval.

5. Collect the sample(s), document operations, and decontaminant equipment in accordance with Section 6.6.2, Steps 13 through 16.

6.6.4 Groundwater Sampling Using Temporary Wells

Temporary pre-packed monitoring wells can be installed into a DPT dual tube system from 1- to 2-inch pre-packed wells as follows:

1. A third party will:
    a. Advance tooling to pre-determined levels based on data collected during soil boring or previously acquired information.
    b. Introduce a pre-packed well screen into the outside casing, held in place as the outer casing is extracted.
2. After being granted access to the well by the third party, insert purging/sampling tubing into the well to mid-screen.
3. Connect the other end of this tubing to the peristaltic pump using a short length of silicone tubing for the drive section of the pump and polyethylene tubing on the discharge end.
4. Pump groundwater from the temporary well at a rate of 100mL/min, while monitoring drawdown. If there is no drawdown, the pumping rate maybe incrementally increased up to 300mL/minute.
5. Pump groundwater from the drive point tube using a rate of 100mL/minute for 20 minutes, collecting groundwater quality measurements as described in Section 6.6.2, Steps 5 through 12.

NOTE: If turbidity is not reduced to less than 10 NTUs after 20 minutes or pumping, introduce the tubing at the top of the water column and slowly lower it while pumping. This will clear some turbidity within the water column above the screen interval.

6. Collect the sample(s), document operations, and decontaminant equipment in accordance with 6.6.2, Steps 13 through 16.

6.6.5 Passive Diffusion Bag Sampling

Passive diffusion bags (PDBs) are closed-ended, cylindrical, semipermeable membranes filled with laboratory pure water. They are deployed in a well by hanging them within the well's screened interval for several days to weeks. Groundwater contaminants diffuse across the semipermeable membrane from outside the PDB to its interior. Only contaminants in the column of water contacting the PDB can diffuse across the membrane, and this diffusion occurs over a longer time period than a low-flow sampling period. Given enough time (e.g., more than a week), the contaminant concentrations inside and outside the PDB equilibrate. Diffusion and equilibration reduce short-term data variations.

1. Prior to the deployment of the PDB samplers, contact the laboratory subcontractor (i.e., the PDB provider) and provide details regarding total depth and screen intervals for each monitoring well to be sampled

NOTE: The PDB provider will construct a PDB sampler for each monitoring well according to the specifications provided in Step 1 and will include various lengths of line to allow each PDB sampler to hang at the prescribed depth within the monitoring well. Additionally, the PDB provider will furnish hangers and stainless steel weights to secure each PDB sampler in place. PDB samplers will be prefilled by the PDB provider with laboratory-grade deionized water. After construction at the laboratory, the PDB samplers will be packaged and shipped to the site for deployment.

NOTE: Each PDB sampler will be properly identified and individually packaged by the PDB provider so the field crew will be able to match each PDB sampler with the corresponding monitoring well.

2. Upon arrival at a monitoring well designated for PDB sampler deployment, remove the PDB sampler from its packaging.

3. Carefully lower the PDB sampler into the monitoring well, and secure it using the hanger provided.

4. Record the date and time of deployment on a sample log sheet, field notebook, or equivalent.

5. Secure the monitoring well with a lock or other means until such time that the PDB sampler is recovered.

6. After the prescribed soak time detailed in the work plan has elapsed, recover the PDB sampler from the well by carefully lifting the hanger and line from the well to remove the PDB sampler. Care must be taken to minimize agitation of the sampler during retrieval.

7. Document on a sample log sheet, field notebook, or equivalent any evidence of growths such as algae or iron bacteria, or other substances on the sampler.

8. If there is evidence of any tears in the PDB sampler discard that sampler's contents in accordance with IDW management practices prescribed in the project-specific work plan, as the PDB sample is considered to be non-representative of conditions in the well. The empty PDB bag may be discarded as municipal trash.

9. Detach the PDB sampler from the line and wipe away any excess water from the outside of the sampler in a manner that prevents cross-contamination of the sample when later transferring the water sample to sample vials.

10. Cut open the top end of the PDB sampler using decontaminated scissors.

11. In a manner that minimizes water agitation transfer the water inside the PDB sampler to pre-preserved 40-mL VOC vials to obtain a convex meniscus at the vial opening.

12. Screw the cap with septum onto the vial in a manner that prevents bubbles from forming inside the vial.

13. Following placement of the cap, invert the vial and gently tap the side of the vial to ensure no bubbles are visible. If bubbles are visible, remove the cap, add additional sample water from the PDB sampler to re-establish the convex meniscus at the vial opening, and replace the cap. Re-check the vial for bubbles.

14. After each vial has been filled and capped, label it and immediately place it on ice in a laboratory-provided cooler. The samples must be maintained between 0 and 6 °C until delivery to laboratory.

15. Package the sample vials and ship them via courier (e.g., Federal Express) to the analytical laboratory in accordance with Tetra Tech SOP No. SA-6.1.

16. Containerize any remaining water from the PDB sampling and manage it in accordance with IDW according to the project-specific work plan.

17. Dispose of the PDB bag as municipal trash with the disposable personal protective equipment (nitrile gloves, etc.) and decontamination supplies (paper towels, etc.).

18. After a sample has been collected, place the hanger and weighted line assembly in a Ziploc bag and labeled with the associated monitoring well number so that it can be reused at a later date.

7.0 REFERENCES

USGS National Field Manual for the Collection of Water Quality Data (NFM), Feb 2019.

U.S. EPA, Region 1, 2017. Low Stress (Low Flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells, Revision 4, Dated 30 July 1996, Revised 20 Sept 2017.

U.S. EPA, Region 4, 2017. Groundwater Sampling. U.S. Environmental Protection Agency, Region 4 Number SESDPROC-301-R4, April.

Department of Defense Environmental Field Sampling Handbook, Revision 1, Chapter 8, Groundwater Sampling, April 2013

ATTACHMENT A

PURGING EQUIPMENT SELECTION (EXAMPLE)

Diameter Casing		Bailer	Peristaltic Pump	Vacuum Pump	Air-lift	Diaphragm "Trash" Pump	Submersible Diaphragm Pump	Submersible Electric Pump	Submersible Electric Pump w/Packer
1.25-Inch	Water level <25 feet	X	X	X	X	X			
	Water Level >25 feet	X			X				
2-Inch	Water level <25 feet	X	X	X	X	X	X		
	Water Level >25 feet	X			X		X		
4-Inch	Water level <25 feet	X	X	X	X	X	X	X	X
	Water Level >25 feet	X			X		X	X	X
6-Inch	Water level <25 feet				X	X		X	X
	Water Level >25 feet				X			X	X
8-Inch	Water level <25 feet				X	X		X	X
	Water Level >25 feet				X			X	X

ATTACHMENT A
Purging and Sampling Equipment Selection (Updated July 2016)

Manufacturer	Model Name/ Number	Principle of Operation	I/E[1]	Maximum Outer Diameter (OD)/ Length (L)[2]	Construction Materials[3] (with Lines and Tubing)	Lift Range (Feet)	Delivery Rates or Volumes[4]	Main Source(s) of Information[5]	Comments
Commonly Used Purging/Sampling Equipment									
GeoTech Environmental Equipment, Inc.	Geopump (Series I or II)	Portable, peristaltic vacuum (suction) or pressure - reversible pump	E	3.5" x 8" x 8"	Not applicable (NA)	0 - 27	0 - 1,000 mL/min	Mfg./Pine	Variable speed; operate with 12 volt (V) direct current (DC) or 120V alternating current (AC) power source.
Grundfos Pumps Corporation	Redi-Flo2	Portable, submersible pump	I	1.8" OD x 11" L	SS, PTFE (i.e., Teflon®)	0 - 250	100 mL/min to 9 gpm	Pine/PNNL	Variable speed (adjustable flow rate); ideal for purging or sampling.
QED Environmental Systems	Sample Pro	Portable, bladder pump (positive displacement)	I	1.75" OD x 12" L	SS, PTFE or PE disposable bladder	0 - 250	0 - 800 mL/min	Mfg.	First pump developed specifically to bring the advantages of low-flow sampling to sites with non-dedicated pumps.
QED Environmental Systems	Well Wizard	Dedicated, bladder pump (positive displacement)	I	1.66" OD x 41" L	SS, PTFE bladder, HDPE, PP	0 - 1,000	0 - 2,000 mL/min	Pine/PNNL	Ideal for deep well applications and long-term monitoring. Available in a variety of sizes and materials.
Less Commonly Used Purging/Sampling Equipment									
Bennett Sample Pumps, Inc.	Bennett 1800-8	Portable, piston pump (positive displacement)	I	1.8" OD x 23.625" L	SS, PTFE, PP, Nylon	0 - 1,000	100 mL/min to 2.6 gpm	Mfg./PNNL	Variable speed (adjustable flow rate); ideal for purging or sampling. Discharge rates are difficult to control
Cole-Parmer Instl. Co.	Masterflex 7571-00	Portable, peristaltic vacuum (suction) or pressure - reversible pump	E	16" x 10.25" x 11"	NA	0 - 27	0.06 - 680 mL/min	Mfg./Pine	Peristaltic pumps are not recommended for sampling volatile organic compounds (VOCs).
Fultz Pumps, Inc.	Fultz SP300	Portable, gear driven pump (positive displacement)	I	1.75" OD x 9.16" L	SS, PTFE gears, Viton®	0 - 200	100 mL/min to 2.4 gpm	Mfg./PNNL	Variable speed (adjustable flow rate); ideal for purging or sampling. Low extraction rates are difficult to control
GeoTech Environmental Equipment, Inc.	Keck SP12	Portable, progressive cavity pump (positive displacement)	I	1.75" OD x 25" L	SS, EPDM stator, PE	0 - 150	100 mL/min to 1.2 gpm	Mfg./PNNL	Variable speed (adjustable flow rate); ideal for purging or sampling. Low extraction rates are difficult to control
GeoTech Environmental Equipment, Inc.	SS Geosub	Portable, single speed submersible purge pump	I	1.75" OD x 13.2" L	SS, PTFE, Viton®	0 - 200	low flow to 10 mL/min	Mfg./Pine	Only 12V SS pump with Teflon® cable according to GeoTech brochure.
GeoTech Environmental Equipment, Inc.	NA	Portable, centrifugal purge pump		NA	NA	0 - 55	2.5 gpm max.	Mfg.	Not recommended for sampling.
GeoTech Environmental Equipment, Inc.	Various	Portable, bladder pump (positive displacement)	I	0.675-1.66" OD	SS or PVC; PTFE or PE bladder; FEP or PE tubing	0 - 200 SS; 0 - 250 PVC	NA	Mfg.	Various sizes are available. Pump is also available in PVC instead of SS.
GeoTech Environmental Equipment, Inc.	Bailer	Portable, grab (positive displacement)	I	Various sizes	Various materials - HDPE, PVC, SS, or fluoropolymer	No limit	NA	Mfg.	Low cost, easy operation; potential churning could increase turbidity. Typically a last-resort option.
Grundfos Pumps Corporation	Redi-Flo3	Portable, submersible pump	I	2.9" OD	SS, PVDF, Viton®, Tefzel®	0 - 360	8 gpm max.	Pine/PNNL	Not designed for low flow use.
Grundfos Pumps Corporation	Redi-Flo4	Portable, submersible pump	I	3.8" OD	SS, PTFE	0 - 600	100 mL/min to 10 gpm	Pine/PNNL	Variable speed (adjustable flow rate); ideal for purging or sampling.
KYB	HydroStar™	Portable, single-action piston pump (positive displacement)	I	1.66" OD	SS, PTFE	0 - 400	100 mL/min to 5 gpm	Mfg./PNNL	Variable speed (adjustable flow rate); ideal for purging or sampling. Discharge rates are difficult to control.

ATTACHMENT A
Purging and Sampling Equipment Selection (Updated July 2016)

Manufacturer	Model Name/ Number	Principle of Operation	I/E[1]	Maximum Outer Diameter (OD)/ Length (L)[2]	Construction Materials[3] (with Lines and Tubing)	Lift Range (Feet)	Delivery Rates or Volumes[4]	Main Source(s) of Information[5]	Comments
Landtec North America	Nu-Matic 4	Dedicated; pneumatic displacement pump	I	3.5" OD x 43.25" L	SS	0 - 275	10 gpm max.	Pine	Float activated, fully automatic; ideal for the harsh environment of landfill conditions.
ProActive Environmental Products	SS Monsoon (and others)	Portable; Low Flow pumps available in a variety of sizes	I	1.82" OD x 7.5" L	SS, PE	0 - 120	10 mL/min to 3.5 gpm	Pine/GeoTech	12V DC - designed for continuous purging and low flow sampling.
QED Environmental Systems	Eliminator	Portable; bladder pump (positive displacement)	I	3" OD x 40" L	SS; PTFE or elastomer bladder, Q-Tal®, Viton®	0 - 230	6 gpm max.	Pine	High capacity; designed for light non-aqueous phase liquid (LNAPL) and dense non-aqueous phase liquid (DNAPL) removal in 4" wells.
QED Environmental Systems	Pulse Pump	Portable; pneumatic displacement pump	I	1.66" OD x 20" L	SS; PTFE	0 - 230	2 gpm max.	Pine	Especially suited for DNAPL recovery. Requires compressed air, external timer.
Solinst Canada Ltd.	404 WaTerra	Portable; inertial reciprocating pump (positive displacement)	I	Various sizes	SS or Delrin® footvalve; HDPE tubing	0 - 200	2 gpm max.	Pine	Low cost, easy operation; potential churning could increase turbidity. Simple alternative to a bailer.
Solinst Canada Ltd.	407 Integra	Portable; bladder pump	I	1" or 1.66" OD	SS or PVC; FEP bladder (disposable PE available)	SS - 0 - 500 PVC - 0-100	3.3 L/min at 150'	Pine	Regular or low flow applications.
Solinst Canada Ltd.	408 DVP	Portable; pneumatic drive pump	I	1.66" OD x 24" L	SS or PVC; FEP bladder	SS - 0 - 500 PVC - 0-100	3.3 L/min at 150'	Pine	Regular or low flow applications - can deliver high flow rates.
Solinst Canada Ltd.	408M DVP	Portable; micro pneumatic drive pump	I	0.375" OD	FEP tubing	0 - 240	20 - 150 mL/min	Pine	Uses coaxial FEP tubing, easy to transport and install; ideal for low flow and narrow down-hole applications.
Solinst Canada Ltd.	410	Portable; peristaltic (negative pressure) pump	E	13" x 5" x 6"	NA	0 - 27	120 - 3,500 mL/min	Pine	Ideal for vapor sampling, water from shallow wells, or surface water.
TIMCO Mfg. Co., Inc.	Bailer	Portable; grab (positive displacement)	I	Various sizes	PVC, PP, others	No limit	250 mL/foot of bailer	Old SOP	Other sizes, materials, models available; optional bottom-emptying device available, no solvents used.
No-Purge Sampling Equipment (Available Options on Some Projects)									
Amplified Geochemical Imaging (AGI), LLC	AGI Universal Sampler (formerly Gore-Sorber™ Module)	Passive container, diffusion-type sampler	I	0.25" OD x 8" L	Waterproof, vapor-permeable GORE-TEX™ polymer membrane of expanded PTFE	0 - 32	NA	ITRC PSC-5	Demonstrated to be applicable to a variety of (but not all) VOCs, semivolatile organic compounds (SVOCs), and polycyclic aromatic hydrocarbons (PAHs); not designed for inorganics.
GeoInsight, Inc.	HydraSleeve™	Passive container, grab-type sampler	I	1.5-2.6" OD x 30" L	PE tubing with PE reed-valve	No limit	650 - 1,250 mL	ITRC PSC-5	Demonstrated to be applicable to a variety of VOCs and inorganics.
Mutiple Manufacturers	RPPS	Rigid Porous Polyethylene Sampler (RPPS); diffusion-type sampler	I	1.5" OD x 5" L	Rigid PE tube - thin sheets of foamlike porous PE with a Delrin® plug	No limit	80 - 100 mL	ITRC PSC-5	Developed by Don Vroblesky (USGS). Demonstrated to be applicable to a variety of water-soluble organics and inorganics.
Mutiple Manufacturers	PDB	Passive Diffusion Bag (PDB) Sampler; diffusion-type sampler	I	1.2-2" OD, 18-24" L	LDPE with HDPE cap; some vendors use other materials and sizes	No limit	75 - 350 mL	ITRC PSC-3	Developed by Don Vroblesky (USGS) and Thomas Hyde (GE). Demonstrated to be applicable to a variety of (but not all) VOCs; not for inorganics.

ATTACHMENT A
Purging and Sampling Equipment Selection (Updated July 2016)

Manufacturer	Model Name/ Number	Principle of Operation	I/E[1]	Maximum Outer Diameter (OD)/ Length (L)[2]	Construction Materials[3] (with Lines and Tubing)	Lift Range (Feet)	Delivery Rates or Volumes[4]	Main Source(s) of Information[5]	Comments
ProHydro, Inc.	Snap Sampler™	Pneumatic actuator; grab-type sampler	I	1.7-3.4" OD x 19-22+" L	Acetal with PFA-coated SS spring; optional SS weight, 40 mL glass vials or 125-350 mL PP bottles	0 - 2,500	40 - 1,400 mL	ITRC PSC-5	Demonstrated to be applicable to a variety of VOCs and inorganics. Up to 4 bottles may be employed together.
Multi-Level Groundwater Monitoring System (MLS) (Used on Some Projects based on Stakeholder Agreement)									
FLUT, Ltd. Co.	Water FLUTe™	Dedicated; gas drive sampling, liner seals entire borehole wall.	I	Various sizes	NA	NA	NA	Mfg.	Practical to collect large volumes; can use low flow method; minimizes investigation-derived waste (IDW); proven technology.
Solinst Canada Ltd.	Continuous Multichannel Tubing (CMT)	Dedicated; 3 or 7-channel tubing designed to isolate and monitor depth discrete zones.	I	Up to 7 ports	NA	NA	NA	Mfg.	Low cost and easy to install; ideal for shallow applications; single tube for effective sealing.
Solinst Canada Ltd.	Waterloo	Dedicated; double valve or bladder pump sampling, packers separate ports at multiple depths.	I	Various sizes	NA	NA	NA	Mfg.	Practical to collect large volumes; can use low flow method; minimizes IDW; proven technology.
Schlumberger	Westbay	Dedicated; packers separate ports at multiple depths.	I	Various sizes	NA	NA	NA	Mfg.	Transducer and sampler are on a wire line; minimizes IDW; proven technology. Low long-time maintenance costs.

Footnotes:
1 - I/E - Internal (I) or external (E) to the well.
2 - For external pumps, the size is given in three dimensions (i.e. length, width, height); for internal pumps, the size is given in outside diameter (OD) and length (L) (in inches).
3 - Construction materials for pumps and associated equipment include: SS = stainless steel; PTFE = polytetrafluoroethylene; HDPE = high density polyethylene; PP = polypropylene; PE = polyethylene; PVC = polyvinyl chloride; FEP = fluorinated ethylene propylene; PVDF = polyvinylidene difluoride; EPDM = ethylene-propylene-diene elastomr; LDPE = low density polyethylene; PFA = perfluoroalkoxy.
4 - Rate or volume abbreviations: mL/min = milliliters per minute; gpm = gallons per minute; L/min = liters per minute; max. = maximum; mL = milliliters.
5 - Sources of information include specification sheets from the manufacturer (i.e., "Mfg."); equipment rental company websites - Pine Environmental (www.pine-environmental.com); GeoTech (www.geoenvtech.com); and guidance documents from Pacific Northwest National Laboratory (PNNL) (i.e., PNNL-13560) and Interstate Technology & Regulatory Council (ITRC) (i.e., PSC-3 and PSC-5 available at www.itrcweb.org).

ATTACHMENT B
GROUNDWATER SAMPLE LOG SHEET (EXAMPLE)

Tetra Tech

GROUNDWATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: _____
Project No.: _____

[ ] Domestic Well Data
[x] Monitoring Well Data
[ ] Other Well Type: _____
[ ] QA Sample Type: _____

Sample ID No.: _____
Sample Location: _____
Sampled By: _____
C.O.C. No.: _____
Type of Sample:
[X] Low Concentration
[ ] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Other
Date: / Time:	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	mV	NA
Method:								

PURGE DATA:

Date:	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	ORP	Other
Method:								
Monitor Reading (ppm):			SEE LOW FLOW PURGE DATA SHEET					
Well Casing Diameter & Material								
Type:								
Total Well Depth (TD):								
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs):								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected

OBSERVATIONS / NOTES:

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

ATTACHMENT C
FIELD CALIBRATION LOG SHEET (EXAMPLE)

Tetra Tech NUS, Inc.

EQUIPMENT CALIBRATION LOG

PROJECT NAME : _____ INSTRUMENT NAME/MODEL: _____

SITE NAME: _____ MANUFACTURER: _____

PROJECT No.: _____ SERIAL NUMBER: _____

Date of Calibration	Instrument I.D. Number	Person Performing Calibration	Instrument Settings		Instrument Readings		Calibration Standard (Lot No.)	Remarks and Comments
			Pre-calibration	Post-calibration	Pre-calibration	Post-calibration		

ATTACHMENT D
LOW FLOW PURGE DATA SHEET (EXAMPLE)

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: ____________ WELL ID.: ____________

PROJECT NUMBER: ____________ DATE: ____________

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments

SIGNATURE(S): ____________ PAGE___OF___

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TETRA TECH	STANDARD OPERATING PROCEDURE	Number SA-1.2	Page 1 of 20
		Effective Date 7/15/2020	Revision 9
		Applicability EGS Operating Unit	
		Prepared Earth Sciences Department	
Subject SURFACE WATER AND SEDIMENT SAMPLING		Approved T. Johnston T.E. Johnston 7/15/2020	

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1.0 PURPOSE

This Standard Operating Procedure (SOP) describes procedures and equipment commonly used for collecting environmental samples of surface water and aquatic sediment either for onsite examination and chemical testing or for offsite laboratory analysis.

2.0 SCOPE AND APLICABILITY

The information presented in this document is applicable to all environmental sampling of surface waters (Section 5.3) and aquatic sediments (Section 5.5), except where the analyte(s) may interact with the sampling equipment or may leach from the sampling equipment into the collected samples. The collection of concentrated sludges or hazardous waste samples from disposal or process lagoons often requires methods, precautions, and equipment different from those described herein and should be described in site-specific planning documents.

WARNING:

Sample containers can be contaminated during storage if nearby volatile substances infiltrate the surrounding air and migrate into the containers. This can occur even when containers are capped. Therefore, containers that have been stored on site for longer than 6 months should not be used.

Note: Whereas most air-borne contaminants are likely to be associated with organic substances, inorganic substances such as hydrochloric acid (muriatic acid) can emit inorganic vapors that infiltrate sample containers.

3.0 GLOSSARY

Analyte – Chemical or radiochemical material whose concentration, activity, or mass is measured.

Composite Sample – A sample representing a physical average of grab samples.

Environmental Sample – A quantity of material collected in support of an environmental investigation that does not require special handling or transport considerations as detailed in SOP SA-6.1.

Grab Sample – A portion of material collected to represent material or conditions present at a single unit of space and time.

Hazardous Waste Sample – A sample containing (or suspected to contain) concentrations of contaminants that are high enough to require special handling and/or transport considerations per SOP SA-6.1.

Representativeness – A qualitative description of the degree to which an individual sample accurately reflects population characteristics or parameter variations at a sampling point. It is therefore an important characteristic not only of assessment and quantification of environmental threats posed by the site, but also for providing information for engineering design and construction. Proper sample location selection and proper sample collection methods are important to ensure that a truly representative sample has been collected.

4.0 RESPONSIBILITIES AND PERSONNEL QUALIFICATIONS

Project Manager - The Project Manager is responsible for determining the sampling objectives, initial sampling locations, and field procedures used in the collection of soil samples. The Project Manager also

has the overall responsibility for seeing that all surface water and sediment sampling activities are properly conducted by appropriately trained personnel in accordance with applicable planning documents.

Field Operations Leader (FOL) - This individual is primarily responsible for the execution of the planning document containing the Sampling and Analysis Plan (SAP). This is accomplished through management of a field sampling team for the proper acquisition of samples. He or she is responsible for the supervision of onsite analyses; ensuring proper instrument calibration, care, and maintenance; sample collection and handling; the completion and accuracy of all field documentation; and making sure that custody of all samples obtained is maintained according to proper procedures. When appropriate and as directed by the FOL, such responsibilities may be performed by other qualified personnel (e.g., field technicians) where credentials and time permit. The FOL is responsible for finalizing the locations for collection of surface water and sediment samples. The FOL is ultimately responsible for adherence to Occupational Safety and Health Administration (OSHA) regulations during these operations through self-acquisition or through the management of a field team of samplers.

Site Safety Officer (SSO) - The SSO (or a qualified designee) is responsible for providing the technical support necessary to implement the project Health and Safety Plan (HASP). This includes ensuring that workers and offsite (downwind) individuals are not exposed to hazardous levels of airborne contaminants. The SSO or SSO designee may also be required to advise the FOL on other safety-related matters such as mitigative measures to address potential hazards from hazardous objects or conditions.

Project Geologist/Sampler - The project geologist/sampler is responsible for the proper acquisition of samples in accordance with this SOP and other project-specific documents. In addition, this individual is responsible for the completion of all required paperwork (e.g., sample log sheets, field notebook, container labels, custody seals, and chain-of-custody forms) associated with the collection of those samples.

General personnel qualifications for groundwater sample collection and onsite water quality testing include the following:

- OSHA 40-hour and applicable refresher training.
- Capability of performing field work under the expected physical and environmental (i.e., weather) conditions.
- Familiarity with appropriate procedures for sample documentation, handling, packaging, and shipping.

5.0 HEALTH AND SAFETY

Some important precautions to preserve the health and safety of field personnel implementing this SOP are distributed throughout. However, the site specific HASP and daily tailgate meeting should be used to provide clear guidance to safely perform the project specific surface water and sediment sampling.

Bridge/Boat Sampling – Potential hazards associated with this activity include:

- Traffic – one of the primary concerns as samplers move across a bridge because free space of travel is not often provided. Control measures should include:
    - When sampling from a bridge, if the samplers do not have at least 6 feet of free travel space or physical barriers separating them and the traffic patterns, the HASP will include a Traffic Control Plan, which may include obtaining permits from local authorities.
    - The use of warning signs and high-visibility vests are required to warn oncoming traffic and to increase the visibility of sample personnel.

- If it is necessary to work from elevated surfaces above the water body to collected water or sediment samples, and the HASP does not have fall protection and other precautions then the SSO should contact Tetra Tech H&S Management. In addition, personnel entering the water from an elevated surface (such as a bridge or dock) and when sampling from a boat, shall wear a Coast Guard (USCG)-approved floatation device and a Type IV Throwable Personal Floatation Device with at least 90 feet of 3/8-inch rope shall be accessible. See Section 5.5.2 of this SOP.

- If a boat is needed, the site specific HASP should describe the requirements of a Safe Vessel Certification, boat inspection, requirements for boat operator and other pertinent information for safe sampling from and use of a boat. If the HASP does not contain use of a boat, then the Tetra Tech H&S Management should be consulted before sampling from a boat.

Entering Water to Collect Samples – Several hazards are associated with this activity and can be mitigated as follows:

- Personnel must wear a USCG-approved Floatation Device (selected and identified in the HASP). The SSO shall ensure that the device selected is in acceptable condition and suitable for the individual using it. This includes consideration of the weight of the individual.

- Lifelines shall be employed from a point on the shore. This activity will always be conducted with a Buddy. See Section 6.5.2.

- Personnel shall carry a probe to monitor the bottom ahead of them for drop offs or other associated hazards.

- The person in the water shall exercise caution concerning the path traveled so that the lifeline does not become entangled in underwater obstructions such as logs, branches, stumps, etc., thereby restricting its effectiveness in extracting the person from the water.

- Consult the site specific HASP for precautions regarding potential biological hazards, high water flows, or submerged debris, or other hazards potentially associated with surface water body and bottom conditions.

Sampling in marshes or tidal areas in some instances can be accomplished using an all-terrain vehicle (ATV). This is not the primary recommended approach because the vehicle may become disabled, or weather conditions or tidal changes could result in environmental damage as well as loss of the vehicle. The primary approach is recommended to be on foot where minimal disturbance would occur.

6.0 PROCEDURES

NOTE: If documentation such as a Certificate of Analysis is provided with sample containers to demonstrate their cleanliness, submit the documentation to the project manager for inclusion in the project file.

NOTE: If sample containers that have been stored on site for more than 6 months are used for sampling, a note should be entered into the field log to explain why the containers were used. In such cases, collection of additional field blanks may be useful. These blanks may be used to identify the contamination source.

6.1 INTRODUCTION

Collecting a representative sample of surface water or sediment may be difficult because of water movement, stratification, or heterogeneous distribution of the targeted analytes. To collect representative samples, one must standardize sampling methods related to site selection, sampling frequency, sample collection, sampling devices, and sample handling, preservation, and identification. Regardless of quality control applied during laboratory analyses and subsequent scrutiny of analytical data packages, reported data are no better than the confidence that can be placed in the representativeness of the samples. Consult Appendix C for guidance on sampling that should be considered during project planning and that may be helpful to field personnel.

6.1.1 Surface Water Sampling Technique

Surface water samples collected during site investigations may be grab samples or composite samples. The following general procedures apply to various types of surface water collection techniques:

- If a pre-preserved sample container is not used and the container is not pre-cleaned (See Section 6.1.2), rinse the sample container at least once with the surface water to be sampled before the sample is collected. This is not applicable when sample containers are provided pre-preserved with chemicals because doing so will wash some or all of the preservative out of the bottle. For sample containers that are certified to be clean, pre-rinsing is not recommended.

- When sampling moving water, collect the farthest downstream sample first, and continue sample collection in an upstream direction. In general, work from zones suspected of low contamination to zones of high contamination.

- Take care to avoid excessive agitation of water samples because loss of volatile constituents could result.

- When obtaining water samples in 40 mL vials with septum-lined lids for volatile organics analysis, fill the container completely (with a meniscus) to exclude any air space in the top of the vial and to be sure that the Teflon liner of the septum faces in after the vial is filled and capped. Turn the vial upside down and tap gently on your wrist to check for air bubbles. If air bubbles rise in the bottle, add additional sample volume to the container or recollect the sample in a new vial (if pre-preserved) to obtain a representative sample that has not lost VOCs through volatilization and is properly preserved.

- Do not sample at a water surface, unless sampling specifically for a known constituent that is immiscible with, and on top of, the water.

- Do not sample at the bottom of the water column unless sampling specifically for a known constituent that is immiscible with, and is expected to be found at the bottom of, the water column.

6.1.2 Surface Water Sampling Equipment

The selection of sampling equipment depends on the site conditions and sample type to be acquired. In general, the most representative surface water samples are obtained from mid-channel at a stream depth

of 0.5 foot below water surface in a well-mixed stream; however, project-specific planning documents will address site-specific sampling requirements including sample collection points and sampling equipment. The most frequently used samplers include the following:

- Peristaltic pump
- Bailer
- Dip sampler
- Weighted bottle
- Hand pump
- Kemmerer
- Depth-integrating sampler

The criteria for selecting a sampler include:

1. Disposability and/or easy decontamination.

2. Inexpensive cost (if the item is to be disposed).

3. Ease of operation.

4. Non-reactive/non-contaminating properties. Samples may be contaminated by contaminated sample containers, and analytes may be lost through precipitation, decomposition, adsorption or other mechanisms that result from interaction with the sample container. Decomposition also may occur when analytes volatilize out of a sample or react with light. Correct sample container selection and use of preservation such as chemical preservatives, cooling, and protection from light are necessary to retard the degradation of samples.

Measurements collected for each sample (grab or each aliquot collected for compositing) shall include but not be limited to:

- Specific conductance
- Temperature
- pH
- Dissolved oxygen

Sample measurements shall be conducted as soon as the sample is acquired. Measurement techniques described in SOP SA-1.1 shall be followed. All pertinent data and results shall be recorded in a field notebook or on sample log sheets (see Attachment A) or an equivalent electronic form(s). These analyses may be selected to provide information on water mixing/stratification and potential contamination. Various types of water bodies have differing potentials for mixing and stratification.

In general, the following equipment is necessary for obtaining surface water samples. Additional equipment may be necessary depending on circumstances and field conditions.

- Required sampling equipment and associated documentation, which may include:

    - Remote sampling pole.

    - Sample containers Sample containers shall conform to the guidelines in SOP SA-6.1.

    - Weighted bottle sampler.

    - Kemmerer sampler, or other device.

- Decontamination equipment.
- Required paperwork (see SOP SA-6.3 and Attachments A and B to this SOP).
- Required decontamination equipment.
- Sealable polyethylene bags (e.g., Ziploc® baggies).
- Heavy-duty cooler.
- Ice.
- Paper towels and garbage bags.
- Chain-of-custody records and custody seals.

- Real-time air monitoring instrument (e.g., PID, FID), if required, as directed in the governing SAP.
- Required PPE as directed in the project-specific planning document, which may include:
  - Nitrile surgeon's or latex gloves (layered as necessary).
  - Safety glasses.
  - Other items identified in the site specific HASP that may be required based on location-specific requirements (e.g., hearing protection, steel-toed work boots, hard hat). These provisions will be listed in the site specific HASP or addressed by the FOL and/or SSO.

Dip Sampling

Specific procedures for collecting a dip or grab sample of surface water can vary based on site-specific conditions (e.g., conditions near the shore and how closely a sampler can safely get to the shore). In some cases, e.g., when a sample container does not fit onto an available remote sampling pole, or pre-preserved sample containers are required, a transfer bottle must be used to collect sample material that is then transferred to the actual sample container. The general procedure for collecting a sample using a pole or directly from the water body is as follows:

1. Select the appropriate sample container based on the governing SAP.

NOTE: Samples designated for volatile chemical analyses should be collected first.

2. Remove the sample container cap. Do not place the cap where it might become contaminated (e.g., on the ground).

3. If sample material will be collected directly into an unpreserved container that can be dipped below the water surface, follow the steps immediately below; otherwise, proceed to Step 4.

   a. Securely attach the sample container to a remote sampling pole of sufficient length to reach below the surface of the water to be sampled.

   b. While facing upstream, invert the sample container connected to the pole so the opening faces downward, and carefully dip it to a stream depth of 0.5 foot below the water surface (or as directed

by project-specific planning documents). If possible, avoid contacting the bottom of the water body because this could disturb sediment that may compromise the integrity of the surface water sample.

c. Slowly turn the bottle right-side up allowing the bottle to fill.

d. Replace the cap quickly and securely on the sample container. In the case of samples designated for VOC analysis, ensure that the cumulative size of air bubbles in the 40 mL vial is no greater than the size of a pea. It is best to exclude all air, if possible.

4. When using a transfer bottle (e.g., because the final sample container contains preservative or does not fit securely onto a dip pole), follow the steps below:

   a. Attach a transfer bottle to a remote sampling dip pole or plan to fill the transfer bottle directly. This bottle may be a large- or wide-mouth bottle, but small openings may be better for shallow surface water bodies to prevent inclusion of surface debris.

   b. While facing upstream, invert the transfer bottle so the opening faces downward and carefully dip it to a stream depth of 0.5 foot below the water surface (or as directed by project-specific planning documents). If possible, avoid contacting the bottom of the water body because this could disturb sediment that may compromise the integrity of the surface water sample.

   c. While avoiding contact between the transfer bottle and sample container, transfer the surface water sample from this intermediate container to the appropriate sample container with minimal agitation. For samples to be analyzed for VOCs, minimal agitation is especially important to prevent loss of the volatiles.

   d. Replace the cap quickly and securely on the sample container. In the case of samples designated for VOC analysis, ensure that the cumulative size of air bubbles in the 40 mL vial is no greater than the size of a pea. It is best to exclude all air, if possible.

5. Use a paper towel to clean and dry the outside of the sample container.

6. Affix a sample label to each sample container, ensuring that each label is completed legibly in accordance with SOP SA-6.3.

7. Proceed with the handling and processing of each sample container as described in SOP SA-6.1.

Constituents measured in grab samples collected near the water surface may not be a true representation of the total concentration distributed throughout the water column and in the horizontal cross section. Therefore, as possible based on site conditions, the sampler may be required to augment dip samples with samples that represent both dissolved and suspended constituents and both vertical and horizontal distributions.

Weighted Bottle Sampling

A grab sample can also be collected using a weighted holder that allows a bottle to be lowered to any desired depth, opened for filling, closed, and returned to the surface. This allows discrete sampling with depth. Several of these samples can be combined to provide a vertical composite. Alternatively, an open bottle can be lowered to the bottom and raised to the surface at a uniform rate so that the bottle collects a sample throughout the total water column depth and is just filled on reaching the surface. The resulting sample using either method will roughly approach what is known as a depth-integrated sample.

A closed weighted bottle sampler consists of glass or plastic bottle with a stopper, a weight and/or holding device, and lines to open the stopper and lower or raise the bottle. The general procedure for sampling with this device is as follows:

1. Gently lower the sampler to the desired depth so as not to remove the stopper prematurely (watch for bubbles).

2. When the desired depth is reached, pull out the stopper with a sharp jerk of the stopper line.

3. Allow the bottle to fill completely, as evidenced by the absence of air bubbles.

4. Raise the sampler and cap the bottle quickly and securely. In the case of samples designated for VOC analysis, ensure that the cumulative size of air bubbles in the 40 mL vial is no greater than the size of a pea. It is best to exclude all air, if possible.
5. Use a paper towel to clean and dry the outside of the container. This bottle may be used as the sample container as long as the bottle is an approved container type. If this bottle is not the sample bottle, transfer the sample from this intermediate container to the appropriate sample container with minimal agitation while avoiding contact between the two sample containers. For samples to be analyzed for VOCs, minimal agitation is especially important to prevent loss of the volatiles.

6. Affix a sample label to each sample container, ensuring that each label is completed legibly in accordance with in SOP SA-6.3.

7. Proceed with the handling and processing of each sample container as described in SOP SA-6.1.

Kemmerer Sampler

If samples are desired at a specific depth, and the parameters to be measured do not require a Teflon-coated sampler, a standard Kemmerer sampler may be used. The Kemmerer sampler is a brass, stainless steel or acrylic cylinder with rubber stoppers that leave the ends open while it is lowered in a vertical position (thus allowing free passage of water through the cylinder). A "messenger" is sent down the line when the sampler is at the designated depth to cause the stoppers to close the cylinder, which is then raised. Water is removed through a valve to fill sample bottles. The general procedure for sampling with this device is as follows:

1. Gently lower the sampler to the desired depth.

2. When the desired depth is reached, send down the stopper release messenger to close the cylinder and then raise the sampler.

3. Open the sampler valve to fill each sample bottle (filling bottles for volatile analysis first, with minimal agitation). For samples to be analyzed for VOCs, minimal agitation is required to prevent loss of the VOCs.

4. Cap the bottle quickly and securely. Ensure that the cumulative size of air bubbles in 40 mL VOC vials is no greater than the size of a pea. It is best to exclude all air, if possible.

5. Use a paper towel to clean and dry the outside of the sample container.

6. Affix a sample label to each sample container, ensuring that each label is completed legibly in accordance with SOP SA-6.3.

7. Proceed with the handling and processing of each sample container as described in SOP SA-6.1.

6.2 ONSITE WATER QUALITY TESTING

Onsite water quality testing shall be conducted as described in SOP SA-1.1.

6.3 SEDIMENT SAMPLING

6.3.1 General

If composite surface water samples are collected, sediment samples are usually collected at the same locations as the associated surface water samples. If only one sediment sample is to be collected, the sampling location shall be approximately at the center of the water body, in a depositional area if possible based on sample location restraints (see below), unless the SAP states otherwise.

Generally, coarser-grained sediments are deposited near the headwaters of reservoirs. Bed sediments near the center of a water body will be composed of fine-grained materials that may, because of their lower porosity and greater surface area available for adsorption, contain greater concentrations of contaminants. The shape, flow pattern, bathymetry (i.e., depth distribution), and water circulation patterns must all be considered when selecting sediment sampling sites. In streams, areas likely to have sediment accumulation (e.g., bends, behind islands or boulders, quiet shallow areas or very deep, low-velocity areas) shall be sampled, in general, and areas likely to show net erosion (i.e., high-velocity, turbulent areas) and suspension of fine solid materials shall be generally avoided. Follow instructions in the SAP, as applicable.

Chemical constituents associated with bottom material may reflect an integration of chemical and biological processes. Bottom samples reflect the historical input to streams, lakes, and estuaries with respect to time, application of chemicals, and land use. Bottom sediments (especially fine-grained material) may act as a sink or reservoir for adsorbed heavy metals and organic contaminants (even if water column concentrations are less than detection limits). Therefore, it is important to minimize the loss of low-density "fines" during any sampling process.

Samples collected for volatile organic compound (VOC) analysis must be collected prior to any sample homogenization. Regardless of the method used for collection, the aliquot for VOC analysis must be collected directly from the sampling device (hand auger bucket, scoop, trowel), to the extent practical. If a device such as a dredge is used, the aliquot should be collected after the sample is placed in the mixing container prior to mixing.

In some cases, the sediment may be soft and not lend itself to collection by plunging Encore or syringe samplers into the sample matrix. In these cases, it is appropriate to open the sampling device, (Encore barrel or syringe) prior to sample collection, and carefully place the sediment in the device, filling it fully with the required volume of sample.

On active or former military sites, ordnance items may be encountered in some work areas. Care should be exercised when handling site media (such as if unloading a dredge as these materials may be scooped up). If suspected ordnance items are encountered, stop work immediately, move to shore and notify the Project Manager and Health and Safety Manager.

All relevant information pertaining to sediment sampling shall be documented in accordance with SOP SA-6.3 and Attachment B or an equivalent electronic form.

6.3.2 Sampling Equipment and Techniques for Sampling Bottom Materials

A bottom-material sample may consist of a single scoop or core, or may be a composite of several individual samples in the cross section. Sediment samples may be obtained using onshore or offshore techniques.

SAFETY REMINDER

Refer to discussion in Section 5.0 Health and Safety.

The following sampling devices may be used to collect sediment samples:

- Scoop sampler
- Dredge sampler
- Coring sampler
- Stainless steel or disposable trowel

Each type of sampler is discussed below.

In general, the following equipment if necessary for obtaining sediment samples:

- Required sampling equipment, which may include a scoop sampler, dredge sampler, coring sampler, or stainless steel or pre-cleaned disposable trowel.
- Stainless steel bowl or pre-cleaned disposable bowl to homogenize sample.
- Real-time air monitoring instrument (e.g., PID, FID) as directed in the project-specific planning document.
- Required PPE as directed in the project-specific planning document, which may include:
  - Nitrile surgeon's or latex gloves (layered as necessary).
  - Safety glasses.
  - Other items identified on the Safe Work Permit that may be required based on location-specific requirements (e.g., hearing protection, steel-toed work boots, hard hat). These provisions will be listed in the HASP or addressed by the FOL and/or SSO.
  - Required paperwork (see SOP SA-6.3 and Attachments A and B to this SOP).
  - Required decontamination equipment.
  - Required sample containers.
  - Sealable polyethylene bags (e.g., Ziploc® baggies).
  - Heavy-duty cooler.
  - Ice.
  - Paper towels and garbage bags.
  - Chain-of-custody records and custody seals.

Scoop Sampler

A scoop sampler consists of a pole to which a jar or scoop is attached. The pole may be made of bamboo, wood, PVC, or aluminum and be either telescoping or of fixed length. The scoop or jar at the end of the pole is usually attached using a clamp.

If the water body can be sampled from the shore or if the sampler can safely wade to the required location, the easiest and best way to collect a sediment sample is to use a scoop sampler. Scoop sampling also reduces the potential for cross-contamination. The general scoop sampling procedure is as follows:

1. Starting at the furthest downstream location, reach over or wade into the water body.

2. While facing upstream (into the current), scoop the sampler along the bottom in an upstream direction. Although it is very difficult not to disturb fine-grained materials at the sediment-water interface when using this method, try to keep disturbances to a minimum.

3. If collecting sediment for VOC analysis, fill the sample container(s) for VOC analysis at this time and quickly and securely replace the cap(s) on the container(s).

4. Transfer the remaining sediment sample material to the bowl and homogenize the sediment.

5. Fill the containers for all remaining analyses and quickly and securely replace the caps on the containers as they are filled.

6. Use a paper towel to clean and dry the outside of each container.

7. Affix a sample label to each container, ensuring that each label is completed legibly in accordance with SOP SA-6.3.

8. Proceed with the handling and processing of each sample container as described in SOP SA-6.1.

Dredge Samplers

Dredges are generally used to sample sediments that cannot easily be obtained using coring devices (e.g., coarse-grained or partially cemented materials) or when large quantities of sample are required. Dredges generally consist of a clam shell arrangement of two buckets. The buckets may either close upon impact or be activated by use of a "messenger." Some dredges are heavy and may require use of a winch and crane assembly for sample retrieval. The three common types of dredges are Peterson, Eckman, and Ponar.

The Peterson dredge is used when the bottom is rocky, in very deep water, or when the flow velocity is high. The Peterson dredge shall be lowered very slowly as it approaches bottom, because it can force out and miss lighter materials if allowed to drop freely.

The Eckman dredge has only limited usefulness. It performs well where bottom material is unusually soft, as when covered with organic sludge or light mud. It is unsuitable, however, for sandy, rocky, and hard bottoms and is too light for use in streams with high flow velocities.

The Ponar dredge is a Peterson dredge modified by the addition of side plates and a screen on the top of the sample compartment. The screen over the sample compartment permits water to pass through the sampler as it descends, thus reducing the "shock wave." The Ponar dredge is easily operated by one person in the same fashion as the Peterson dredge. The Ponar dredge is one of the most effective samplers for general use on all types of substrates.

The general procedure for using a dredge sampler is as follows:

1. Gently lower the dredge to the desired depth.

2. When the desired depth is reached, send the messenger down the cable to close the cylinder and then carefully raise the sampler.

3. Open the sampler to retrieve the sediment.

4. If collecting sediment for VOC analysis, fill the sample container(s) for VOC analysis at this time and quickly and securely replace the cap(s) on the container(s).

5. Transfer the remaining sediment sample material to the bowl and homogenize the sediment.

6. Fill the containers for all remaining analyses and quickly and securely replace the caps on the containers as they are filled.

7. Use a paper towel to clean and dry the outside of each container.

8. Affix a sample label to each container, ensuring that each label is completed legibly in accordance with SOP SA-6.3.

9. Proceed with the handling and processing of each sample container as described in SOP SA-6.1.

Coring Samplers

Coring samplers are used to sample vertical columns of sediment. Many types of coring devices have been developed depending on the depth of water from which the sample is to be obtained, the nature of the bottom material, and the length of core to be collected. They vary from hand-push tubes to electronic vibrational core tube drivers.

Coring devices are particularly useful in pollutant monitoring because turbulence created by descent through the water is minimal, thus the fines at the sediment-water interface are only minimally disturbed. The sample is withdrawn intact, permitting the removal of only those layers of interest.

In shallow, wadeable waters, the use of a core liner or tube manufactured of Teflon or plastic is recommended for the collection of sediment samples. Caution should be exercised not to disturb the bottom sediments when the sample is obtained by wading in shallow water. The general procedure to collecting a sediment sample with a core tube is as follows:

1. Push the coring tube into the substrate until 4 inches or less of the tube is above the sediment-water interface. When sampling hard or coarse substrates, a gentle rotation of the tube while it is being pushed will facilitate greater penetration and decrease core compaction.

2. Cap the top of the tube to provide suction and reduce the chance of losing the sample.

3. Slowly extract the tube so as not to lose sediment from the bottom of the tube during extraction, and cap the bottom of the tube before removing it from the water. This will also help to minimize loss of sample.

4. If collecting sediment for VOC analysis, fill the sample container(s) for VOC analysis at this time and quickly and securely replace the cap(s) on the container(s).

5. Transfer the remaining sediment sample material to the bowl in which it will be homogenized and homogenize the remainder of the sediment.

6. Fill the containers for all analyses other than VOCs, and quickly and securely replace their caps as they are filled.

7. Use a paper towel to clean and dry the outside of each container.

8. Affix a sample label to each container, ensuring that each label is completed legibly in accordance with SOP SA-6.3.

9. Proceed with the handling and processing of each sample container as described in SOP SA-6.1.

In deeper, non-wadeable water bodies, sediment cores may be collected from a bridge or boat using different coring devices such as Ogeechee Sand Pounders, gravity cores, and vibrating coring devices. All three devices utilize a core barrel with a core liner tube system. The core liners can be removed from the core barrel and replaced with a clean core liner after each sample. Before extracting the sediment from the coring tubes, the clear supernatant above the sediment-water interface in the core should be decanted from the tube. This is accomplished by turning the core tube to its side and gently pouring the liquid out until fine sediment particles appear in the waste liquid. Post-retrieval processing of samples is the same as above.

7.0 REFERENCES

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U.S. EPA, 1992. Specifications and Guidance for Contaminant-Free Sample Containers. EPA-540/R-93/051.

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ATTACHMENT A
SURFACE WATER SAMPLE LOG SHEET (EXAMPLE)

Tetra Tech NUS, Inc.

SURFACE WATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: _____ Sample ID No.: _____
Project No.: _____ Sample Location: _____
Sampled By: _____
C.O.C. No.: _____

[] Stream
[] Spring
[] Pond
[] Lake
[] Other: _____
[] QA Sample Type: _____

Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: / Time:	Visual	Standard	mS/cm	Degrees C	NTU	mg/l	%	NA
Depth: / Method:								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

ATTACHMENT B
SOIL & SEDIMENT SAMPLE LOG SHEET (EXAMPLE)

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: _____
Project No.: _____

[] Surface Soil
[] Subsurface Soil
[] Sediment
[] Other: _____
[] QA Sample Type: _____

Sample ID No.: _____
Sample Location: _____
Sampled By: _____
C.O.C. No.: _____

Type of Sample:
[] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: / Time: / Method: / Monitor Reading (ppm):	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)

COMPOSITE SAMPLE DATA:

Date: / Method: / Monitor Readings (Range in ppm):	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

APPENDIX C
GUIDANCE ON SAMPLING DESIGN AND SAMPLE COLLECTION

C.1 Defining the Sampling Program

Many factors are considered in developing a sampling program for surface water and/or sediment, including study objectives, accessibility, site topography, physical characteristics of the water body (e.g., flow and mixing), point and diffuse sources of contamination, and personnel and equipment available to conduct the study. For waterborne constituents, dispersion depends on vertical and lateral mixing within the body of water. For sediment, dispersion depends on bottom current or flow characteristics, sediment characteristics (e.g., density, size), and geochemical properties (that affect adsorption/desorption). The hydrogeologist developing the sampling plan must therefore know not only the mixing characteristics of streams and lakes but must also understand the role of fluvial-sediment transport, deposition, and chemical sorption.

C.1.1 Sampling Program Objectives

The scope of the sampling program must consider the contaminant sources and potential pathways for transport of contamination to or within a surface water body. Contaminant sources may include point sources (leaky tanks, outfalls, etc.) or nonpoint sources (e.g., contaminated runoff). The major pathways for surface water contamination (not including airborne deposition) are overland runoff, leachate influx to the water body, direct waste disposal (solid or liquid) into the water body, and groundwater flow influx from upgradient contaminant sources. The relative importance of these pathways, and therefore the design of the sampling program, is controlled by the physiographic and hydrologic features of the site, the drainage basin(s) that encompasses the site, and the history of site activities.

Physiographic and hydrologic features to be considered include slopes and runoff direction, areas of temporary flooding or pooling, tidal effects, artificial surface runoff controls such as berms or drainage ditches (and when they were constructed relative to site operation), and locations of springs, seeps, marshes, etc. In addition, the obvious considerations such as the locations of man-made discharge points to the nearest stream (intermittent or flowing), pond, lake, estuary, etc. shall be considered.

A more subtle consideration in designing the sampling program is the potential for dispersion of dissolved or sediment-associated contaminants away from the source. The dispersion could lead to a more homogeneous distribution of contamination at low or possibly non-detectable concentrations. Such dispersion does not, however, always readily occur. For example, obtaining a representative sample of contamination from a main stream immediately below an outfall or a tributary is difficult because the inflow frequently follows a stream bank with little lateral mixing for some distance. Sampling alternatives to overcome this situation include: (1) moving the sampling location far enough downstream to allow for adequate mixing, or (2) collecting integrated samples in a cross section. Also, non-homogeneous distribution is a particular problem with regard to sediment-associated contaminants, which may accumulate in low-energy environments (coves, river bends, deep spots, or even behind boulders) near or distant from the source while higher-energy areas (main stream channels) near the source may show no contaminant accumulation.

The distribution of particulates within a sample itself is an important consideration. Many organic compounds are only slightly water soluble and tend to adsorb onto particulate matter. Nitrogen, phosphorus, and heavy metals may also be transported by particulates. Samples must be collected with a representative amount of suspended material; transfer from the sampling device shall include transferring a proportionate amount of the suspended material.

C.1.2 Location of Sampling Stations

Accessibility is the primary factor affecting sampling costs. The desirability and utility of a sample for analysis and consideration of site conditions must be balanced against the costs of collection as controlled by accessibility. Bridges or piers are the first choice for locating a sampling station on a stream because bridges provide ready access and also permit the sampling technician to sample any point across the stream. A boat or pontoon (with an associated increase in cost) may be needed to sample locations on lakes, reservoirs, or larger rivers. Frequently, however, a boat will take longer to cross a water body and will hinder manipulation of the sampling equipment. Wading for samples is not recommended unless it is known that contaminant levels are low so that skin contact will not produce adverse health effects. This provides a built in margin of safety in the event that wading boots or other protective equipment should fail to function properly. If it is necessary to wade into the water body to obtain a sample, the sampler shall be careful to minimize disturbance of bottom sediments and must enter the water body downstream of the sampling location. If necessary, the sampling technician shall wait for the sediments to settle before taking a sample.

Under ideal and uniform contaminant dispersion conditions in a flowing stream, the same concentrations of each contaminant would occur at all points along the cross section. This situation is most likely downstream of areas of high turbulence. Careful site selection is needed to ensure, as nearly as possible, that samples are taken where uniform flow or deposition and good mixing conditions exist.

The availability of stream flow and sediment discharge records can be an important consideration in choosing sampling locations in streams. Stream flow data in association with contaminant concentration data are essential for estimating the total contaminant loads carried by the stream. If a gaging station is not conveniently located on a selected stream, the project hydrogeologist shall explore the possibility of obtaining stream flow data by direct or indirect methods. Remember these locations are also where you may encounter natural hazards as these are areas where they hunt. Always exercise extreme caution.

C.1.3 Frequency of Sampling

The sampling frequency and objectives of the sampling event will be defined by the project planning documents. For single-event site or area characterization sampling, both bottom material and overlying water samples shall be collected at the specified sampling stations. If valid data are available on the distribution of a contaminant between the solid and aqueous phases, it may be appropriate to sample only one phase, although this is not often recommended. If samples are collected primarily for monitoring purposes (i.e., consisting of repetitive, continuing measurements to define variations and trends at a given location), water samples should be collected at a pre-established and constant interval as specified in the project plans (often monthly or quarterly and during droughts and floods). Samples of bottom material should generally be collected from fresh deposits at least yearly, and preferably seasonally, during both spring and fall.

The variability in available water quality data shall be evaluated before determining the number and collection frequency of samples required to maintain an effective monitoring program.

C.2 Surface Water Sample Collection

C.2.1 Streams, Rivers, Outfalls, and Drainage Features

Methods for sampling streams, rivers, outfalls, and drainage features (ditches, culverts) at a single point vary from the simplest of hand-sampling procedures to the more sophisticated multi-point sampling techniques known as the equal-width-increment (EWI) method or the equal-discharge-increment (EDI) methods (see below).

Samples from different depths or cross-sectional locations in the watercourse taken during the same sampling episode shall be composited. However, samples collected along the length of the watercourse or at different times may reflect differing inputs or dilutions and therefore shall not be composited. Generally, the number and type of samples to be taken depend on the river's width, depth, and discharge and on the suspended sediment the stream or river transports. The greater the number of individual points that are sampled, the more likely that the composite sample will truly represent the overall characteristics of the water.

In small streams less than about 20 feet wide, a sampling site can generally be found where the water is well mixed. In such cases, a single grab sample taken at mid-depth in the center of the channel is adequate to represent the entire cross section.

For larger streams, at least one vertical composite shall be taken with one sample each from just below the surface, at mid-depth, and just above the bottom. The measurement of dissolved oxygen (DO), pH, temperature, conductivity, etc., shall be made on each aliquot of the vertical composite and on the composite itself. For rivers, several vertical composites shall be collected, as directed in the project planning documents.

C.2.2 Lakes, Ponds, and Reservoirs

Lakes, ponds, and reservoirs have a much greater tendency to stratify than rivers and streams. The relative lack of mixing requires that more samples be obtained. The number of water sampling sites on a lake, pond, or impoundment will vary with the size and shape of the basin. In ponds and small lakes, a single vertical composite at the deepest point may be sufficient. Similarly, measurement of DO, pH, temperature, etc. is to be conducted on each aliquot of the vertical composite and on the composite itself. In naturally formed ponds, the deepest point may have to be determined empirically; in impoundments, the deepest point is usually near the dam.

In lakes and larger reservoirs, several vertical composites shall be composited to form a single sample if a sample representative of the water column is required. These vertical composites are often collected along a transect or grid. In some cases, it may be of interest to form separate composites of epilimnetic and hypolimnetic zones. In a stratified lake, the epilimnion is the thermocline that is exposed to the atmosphere. The hypolimnion is the lower, "confined" layer that is only mixed with the epilimnion and vented to the atmosphere during seasonal "overturn" (when density stratification disappears). These two zones may thus have very different concentrations of contaminants if input is only to one zone, if the contaminants are volatile (and therefore vented from the epilimnion but not the hypolimnion), or if the epilimnion only is involved in short-term flushing (i.e., inflow from or outflow to shallow streams). Normally, however, a composite consists of several vertical composites with samples collected at various depths.

In lakes with irregular shape and with bays and coves that are protected from the wind, separate composite samples may be needed to adequately represent water quality because it is likely that only poor mixing will occur. Similarly, additional samples are recommended where discharges, tributaries, land use characteristics, and other such factors are suspected of influencing water quality.

Many lake measurements are now made in situ using sensors and automatic readout or recording devices. Single and multi-parameter instruments are available for measuring temperature, depth, pH, oxidation-reduction potential (ORP), specific conductance, DO, some cations and anions, and light penetration.

C.2.3 Estuaries

Estuarine areas are, by definition, zones where inland freshwaters (both surface and ground) mix with oceanic saline waters. Knowledge of the estuary type may be necessary to determine sampling locations.

Estuaries are generally categorized into one of the following three types dependent on freshwater inflow and mixing properties:

- Mixed Estuary - characterized by the absence of a vertical halocline (gradual or no marked increase in salinity in the water column) and a gradual increase in salinity seaward. Typically, this type of estuary is shallow and is found in major freshwater sheet flow areas. Because this type of estuary is well mixed, sampling locations are not critical.

- Salt Wedge Estuary - characterized by a sharp vertical increase in salinity and stratified freshwater flow along the surface. In these estuaries, the vertical mixing forces cannot override the density differential between fresh and saline waters. In effect, a salt wedge tapering inland moves horizontally back and forth with the tidal phase. If contamination is being introduced into the estuary from upstream, water sampling from the salt wedge may miss it entirely.

- Oceanic Estuary - characterized by salinities approaching full-strength oceanic waters. Seasonally, freshwater inflow is small, with the preponderance of the fresh-saline water mixing occurring near or at the shore line.

Sampling in estuarine areas is normally based on the tidal phase, with samples collected on successive slack tides (i.e., when the tide turns). Estuarine sampling programs shall include vertical salinity measurements at 1- to 5-foot increments, coupled with vertical DO and temperature profiles.

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		Effective Date 10/12/2020	Revision 6
		Applicability EGS Operating Unit	
		Prepared Earth Sciences Department	
Subject SAMPLE ACQUISITION FOR PERFLUOROALKYL AND POLYFLUOROALKYL SUBSTANCES (PFAS) ANALYSIS		Approved T. Johnston T.E. Johnston 10/12/2020	

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1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the methods and protocols to be used for collecting and handling samples to be analyzed for per- and polyfluoroalkyl substances (PFAS). PFAS are present in many consumer products including some typical sampling equipment and are widely present in the environment.

Low screening criteria and high cross-contamination potential require special precautions to be implemented to avoid compromising sample integrity. Instructions are provided herein for collection of environmental samples without contaminating them. This SOP is designed to supplement but not replace existing sampling SOPs SA-1.1, SA-1.2, SA-1.3, SA-1.7, and SA-5.1. In addition, some clients and/or projects may have specific PFAS-related sampling requirements that extend beyond the procedures described in this SOP. Such additional requirements typically are documented in work plans or similar documents.

2.0 SCOPE AND APPLICABILITY

This document provides information on selection of proper sampling equipment and techniques for groundwater, surface water, sediment, soil, and water supply sampling for PFAS analysis. Sampling of air or biota is not addressed in this SOP, but similar principles would apply for those media.

3.0 BACKGROUND

PFAS have been used since the 1940s as manufacturer-applied oil and water repellants on products such as clothing, upholstery, paper, and carpets and in making fluoropolymers for non-stick cookware. They are found in textiles and leather products, mist suppressants for metal plating, materials used in the photography industry, photolithography, semi-conductors, paper and packaging, coatings, cleaning products, pesticides, and cosmetics. They have been used in well-known consumer products including Teflon, StainMaster, Scotchgard, and GoreTex. In the 1960s, aqueous film-forming foam (AFFF) containing PFASs was developed for fighting flammable liquid fires, particularly petroleum-fueled (Class B) fires (ATSDR, 2009). The two most researched and most prevalent PFAS in the environment are perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) (ATSDR, 2009).

Military uses of PFAS have been primarily related to fire fighting and electroplating. AFFF meeting MIL-F-24385 specifications was developed by various manufacturers for use in extinguishing fires at military bases, airports, commercial facilities, and fire-fighting training facilities throughout the United States. Beginning in the late 1960s the United States Department of Defense (DoD) used large quantities of AFFF for shipboard and shore facility fire-suppression systems, on fire-fighting vehicles, and at fire-training facilities. AFFF concentrate that contains PFAS may still be in use at DoD facilities, and large quantities of AFFF may have been released to the environment at some facilities.

PFAS are persistent in the environment, tend to bioaccumulate, and demonstrate toxicity in laboratory animals, enough to raise concerns about their presence in the environment. Some areas where PFAS may have been released to the environment include the following:

- Fire-fighting training areas
- Areas where fire-fighting products/materials are stored (e.g., fire stations)
- Aircraft crash sites
- Refineries
- DoD sites/military bases

- Landfills (leaching from consumer products)
- Biosolids land applications
- Rail yards
- Textile/carpet manufacturing sites
- Septic systems
- Metal coating and plating facilities
- Water treatment systems and receiving water bodies
- Airport hangars and other facilities storing fire-fighting foams
- Chemical facilities, especially fluorochemical manufacturing, use, and disposal facilities

PFAS are ubiquitous in consumer products and are present in or on some materials used in environmental sampling (e.g., Teflon tubing, waterproof logbooks, and GoreTex field clothing). Laboratory detection limits are low for PFAS, and contact of sample material or sampling equipment with any one of the multitude of PFAS sources could result in detectable contamination. In addition, PFAS tend to adsorb to glass and some plastics, so certain glass or plastic sample collection containers are inappropriate for use in PFAS sample collection. Adsorption to sample containers or other materials (e.g., tubes or hoses) may result in a low bias for measured PFAS concentrations.

Collection and analysis of quality control blanks is an important aspect of verifying that samples have not been contaminated during sample collection and handling. Use of additional blanks or blanks of a different type than usual may be required, and the governing project planning documents should be consulted. Consult Section 7.7 of this SOP for instructions regarding collection of field reagent blanks (FRBs).

4.0 DEFINITIONS

AFFF – Aqueous film-forming foam.

Chemical of Emerging Concern – A chemical of emerging concern (previously called “emerging contaminant” and also called “contaminant of emerging concern” or “CEC”) is a chemical or material that is characterized by a perceived, potential, or real threat to human health or the environment or by a lack of published health standards (U.S. EPA, 2014; U.S. Geological Service [USGS], 2019). A contaminant may also be of “emerging concern” because a new source or a new pathway for human exposure has been discovered or a new detection method or treatment technology has been developed (DoD, 2011).

FRB – Field Reagent Blank. A blank sample prepared in the field by transferring laboratory-supplied, chemically preserved, “PFAS-free” deionized water to an empty, laboratory-supplied, collection bottle. FRBs are typically analyzed only for PFAS and are treated as site samples in all respects, including shipment to the sampling site, exposure to sampling site conditions, storage, preservation, and all PFAS analytical procedures. The purpose of FRBs is to indicate whether PFAS measured in corresponding site samples may have been introduced during sample preservation, collection, and handling. Note that the term “FRB” may be inappropriate when sampling groundwater sources not used for drinking water. In those cases Field Blank (FB) may be more appropriate. Consult project-specific planning documents for direction.

PFAS – Per- and Polyfluoroalkyl Substances. A reference term currently in use, replacing “PFCs” in recent scientific and other technical literature. The term is inclusive of both perfluorinated chemicals like PFOA and PFOS and polyfluoroalkyl substances like fluorinated telomers. In all environmental matrices, these chemicals are CECs.

PFCs – Perfluorinated Compounds or Chemicals. PFCs are a family of man-made chemicals that have been used for commercial, industrial, and military applications because they resist thermal degradation and repel oil, stains, grease, and water.

PFOA – Perfluorooctanoic Acid. PFOA is used as an aqueous dispersion agent (surfactant) and in the manufacture of fluoropolymers (including Teflon) used in industrial components such as electrical wire casings, fire- and chemical-resistant tubing, and plumbing seal tape. PFOA is used in surface treatment products (e.g., paints) to impart oil, stain, grease, and water resistance. PFOA can also be produced by the breakdown of some fluorinated telomers.

PFOS – Perfluorooctane Sulfonic Acid. PFOS was a key ingredient in Scotchgard and used in the manufacture of Class B AFFF used per DoD military specifications. Phase out of AFFF by 3M occurred in 2002.

5.0 SAFETY PRECAUTIONS

Sample acquisition activities shall be conducted in accordance health and safety requirements identified in the project-specific Health and Safety Plan (HASP), Accident Prevention Plan (APP), and corporate health and safety policies. Alteration may be necessary to allow sample collection without cross contamination as dictated by site-specific conditions.

Caution

The use of personal protective equipment (PPE) containing PFAS (e.g., some insect repellants, sunscreens, traffic safety vests, etc.) should be avoided if possible or, if deemed necessary to control hazards, should be carefully considered as they can pose a potential cross-contamination risk for samples. Extra care (e.g., changing outer gloves) must be exercised to ensure that PFAS is not transferred directly or indirectly from PPE to samples or sample containers.

The Tetra Tech Project Manager (PM), in coordination with the Tetra Tech EGS Operating Unit Health and Safety Group, shall ensure that the development of project-specific plans balances the need to control exposure to safety hazards as well as address PFAS contamination risks.

6.0 PERSONNEL RESPONSIBILITIES, QUALIFICATIONS, AND TRAINING

Personnel implementing this SOP must read and understand this entire SOP prior to collection of samples designated for PFAS analysis.

Project Manager (PM) – The PM along with the management team are responsible for determining sampling objectives, initial sampling locations, and field procedures used in the collection of samples of environmental media. Additionally, in consultation with other project personnel (geologist, hydrogeologist, etc.), the PM is responsible for selecting and detailing the specific sampling techniques and equipment to be used and for providing detailed input in this regard to the project planning documents. The PM has the overall responsibility for ensuring that sampling activities are properly conducted by appropriately trained staff.

Site Safety and Health Officer (SSHO) – The SSHO (or a qualified designee) is responsible for providing the technical support necessary to implement the project HASP, APP, or equivalent. The SSHO or SSHO designee may also be required to advise the Field Operations Leader (FOL) on safety-related matters regarding sampling, such as measures to mitigate potential hazards, hazardous objects, or conditions.

Field Operations Leader (FOL) – This individual is primarily responsible for faithful execution of the planning document that governs sampling. This is accomplished through management of a field sampling team for the proper acquisition of samples. The FOL is responsible for the supervision of onsite activities; ensuring proper instrument calibration, care, and maintenance; sample collection and handling; the completion and

accuracy of all field documentation; and making sure that custody of all samples obtained is maintained according to sample collection protocols. When appropriate and as directed by the FOL, such responsibilities may be performed by other qualified personnel (e.g., field support personnel) where credentials and time permit. The FOL is ultimately responsible for ensuring compliance with Occupational Safety and Health Administration (OSHA) regulations during these operations in accordance with the project Health and Safety Plan. The FOL person shall have significant hands-on experience with sample collection, handling, and documentation under the circumstances required for the current project.

Field Support Personnel – These individuals are responsible for the proper acquisition of samples in accordance with this SOP or other project-specific documents. In addition, these personnel are responsible for completion of all required paperwork (e.g., sample log sheets, field notebook, boring logs, container labels, custody seals, and chain-of-custody forms) associated with the collection of the samples.

General field personnel qualifications for groundwater sample collection and onsite water quality testing include the following:

- OSHA 40-hour; applicable refresher training; and, if applicable, supervisory training (HAZWOPER operations only).
- Capability of performing field work under the expected physical and environmental (i.e., weather) conditions.
- Familiarity with sampling procedures, sample handling, sample documentation, and sample packaging and shipping as documented in project specific planning documents and this SOP.

7.0 PROCEDURE

The following sampling procedure establishes requirements for collection of samples designated for PFAS analysis while minimizing potential cross contamination of the samples and other materials or loss of PFAS.

7.1 Selection of Equipment

It is important to research available equipment and materials at the project planning stage to avoid last-minute problems in the field, for example, ensuring compatibility of high-density polyethylene (HDPE) tubing with fittings for use in a pump, or ensuring that equipment (e.g., a bladder pump) does not contain Teflon.

7.1.1 Sampling Equipment:

NOTE: PFAS cross-contamination of groundwater samples can be minimized through decontamination or conditioning of equipment left in a well. Use of dedicated equipment also is helpful so that handling during decontamination is unnecessary. Pre-labeling sample bottles before sample collection minimizes the number of glove changes required to prevent contamination of samples by PFAS that may be on the labels.

- Decontamination – All reusable equipment used in sample acquisition should be adequately decontaminated prior to use. Consult Safety Data Sheets (SDSs) to verify that soaps or detergents used in decontamination do not contain fluorosurfactants. Be aware that low levels of contaminants such as PFAS may be present in a product but not listed on the SDS.
- Unless project requirements indicate otherwise, use sampling equipment made of stainless steel, acetate, silicone, or HDPE. This applies to tubing, pumps and pump components, tape for plumbing

fittings, trowels, mixing bowls, or other equipment that could contact the sample media. Gasket and O-ring components of sampling equipment may also contain fluoropolymers.

NOTE: PFAS on purchased or rented items is likely to occur predominantly in newly manufactured or rented items treated with chemicals containing PFAS. Therefore, all rental equipment that will make direct contact with the material being sampled must be thoroughly decontaminated prior to use, especially if the equipment items are new. Be cognizant of the potential for continued leaching of PFAS or other chemicals — even after decontamination.

- During sample handling, mobilization, and demobilization, avoid using sampling equipment that includes or contains polyvinylidene fluoride (PVDF) or contains "fluor" in the name such as:
    - Polytetrafluoroethylene (PTFE)
    - Teflon (DuPont brand name for PTFE)
    - Fluorinated ethylene propylene (FEP)
    - Ethylene tetrafluoroethylene (ETFE).

- Use products that are not made of low-density polyethylene products (LDPE) if contamination from those products can be transferred to environmental samples or QC samples.

- For collecting drinking water samples to be analyzed for PFAS, use polypropylene sample bottles with a polypropylene screw cap; for all other samples, use HDPE containers with unlined plastic screw caps.

7.1.2 Non-Sampling Field Equipment:

- Non-waterproof loose-leaf paper or notebooks are acceptable. Avoid using waterproof field books or paper during sampling activities. Do not use plastic clipboards, binders, or spiral hard-cover notebooks that may be coated; use Masonite or aluminum clipboards instead.

- Use ballpoint pens or pencils for note taking and sample bottle labeling.

- Avoid using:
    - Post-it notes or similar removable notes.
    - Sharpies or similar indelible markers.
    - Aluminum foil.

7.1.3 Field Personnel Clothing and Protective Gear:

- Wear clothing that has been washed at least six times without fabric softener to remove possible stain-resistant coatings. Clothing made of natural fibers such as cotton is preferred to other fabrics. Protective clothing must be washed in accordance with manufacturer recommendations to ensure that the protective properties necessary to control safety hazards (e.g., fire-retardant clothing) are not compromised.

- Wear non-powdered nitrile gloves at all times while collecting and handling samples, and change gloves often. Anecdotal evidence indicates that changing gloves is one of the most effective methods of reducing or eliminating sample contamination potential; therefore, change to a new pair of gloves prior to collecting each sample.

- As necessary, use sunscreens and insect repellants that are made with 100-percent natural ingredients and that the Air Force Civil Engineer Center has identified as acceptable for use. ***These products must be used in accordance with manufacturer recommendations and in combination with***

controls in the project-specific HASP, APP, and corporate health and safety policies. Multiple re-applications of these products per work shift may be required to ensure their effectiveness.

- Sunscreens: Alba Organics Natural Sunscreen, Yes To Cucumbers, Aubrey Organics, Jason Natural Sun Block, Kiss My Face, baby sunscreens that are “free” or “natural.”

- Sunscreen and insect repellant: Avon Skin So Soft Bug Guard Plus – SPF 30 Lotion

- Insect Repellent: Jason Natural Quit Bugging Me, Repel Lemon Eucalyptus Insect Repellant, Herbal Armor, California Baby Natural Bug Spray, BabyGanics.

NOTE: The suitability of these items has not been independently verified. Products containing N-diethyl-meta-toluamide **(**DEET), picaridin, and IR3535 and some oil of lemon eucalyptus (OLE) and para-menthane-diol products are known to provide longer-lasting protection than others. One of the products recommended by the Air Force Civil Engineer Center and listed above, Repel Lemon Eucalyptus Insect Repellant, contains OLE and is most likely to be effective.

An independent study (Bartlett and Davis, 2018) of three insect repellents (Sawyer do-it-yourself permethrin treatment for clothing, Off! Deep Woods spray for clothing/skin, and Insect Shield pretreated clothing) determined that these products were free of PFAS compounds (17 PFAS compounds were tested), thus they may be suitable for use on a project-specific basis.

- During wet weather, use rain gear made from polyurethane or wax-coated materials.

- Avoid unnecessary contact with upholstery in vehicles because many such fabrics may be treated with stain-resistant materials that could contain PFAS. Typically, rental vehicles are newer and more likely to pose a contamination risk to samples. Well-washed towels or rags may be placed on the seats to prevent contact with car seats and other materials that could transfer PFAS to clothing worn by samplers. If practical, cover clothing and skin that has been in contact with such upholstery with non-fluorinated clothing.

- Avoid wearing:

    - Water-resistant (e.g., Gore-Tex or similar material) clothing or footwear (e.g., boots) immediately prior to or during sample collection and management.

    - Coated Tyvek or similar coated PPE suits.

    - Cosmetics, shampoos, hair conditioners, moisturizers, hand cream, or other similar personal care products on the day of sampling.

7.1.4 Sample Containers and Shipping Materials:

- Collect samples in clean, laboratory-supplied, plastic bottles only, typically polypropylene for drinking water or HDPE for other matrices.

- Confirm that Teflon-lined caps are not used in sample containers; unlined polypropylene screw caps must be used. It is best to segregate sample containers with Teflon components (e.g., Teflon-lined septa) from PFAS sample containers.

- Use of commercially available plastic bags (e.g., 3-mil-thick trash can liners) for lining coolers to prevent leakage and to separate potential melt water from chain-of-custody forms is allowed.

- Avoid the use of glass or LDPE sample containers, which are believed to result in loss of PFAS through adsorption to the container inner walls.

- Avoid using Blue Ice or similar items to cool samples and avoid placing such items in sample coolers for shipping. Use commercially available (e.g., from convenience stores or supermarkets) double-bagged ice instead.

Caution

Samples designated for PFAS analysis must be cooled to achieve a storage temperature of less than 6 °C. Cooling to this temperature may take several hours, and sample temperatures may not achieve 6 °C by the time they arrive at the laboratory. If sample temperatures upon arrival at the laboratory are not less than 10 °C, the laboratory may conclude that the sample integrity is compromised and may reject the samples. Therefore, place samples on ice as soon after collection as possible. On warm days, or when a representative from a nearby laboratory picks up the samples, take extra care (e.g., use more ice or delay shipment, if necessary) to ensure that sample temperatures will not exceed 10 °C when the samples arrive at the laboratory.

7.2 Other Precautions for Sample Handling

- Wash hands thoroughly before sampling and after handling fast food, carryout food, snacks, food wrappers, or other items that may contain PFAS. Do not carry pre-packaged food items such as candy bars or microwave popcorn into sampling areas.

- Assume that shipping tape used for securing coolers could contain PFAS; therefore, take care not to transfer PFAS from tape to samples.

- Minimize exposure of samples to light. This can be done by placing the collected samples into a cooler (with ice) and closing the cooler lid.

- If in doubt about a particular product or item that comes into contact with environmental media to be sampled or is near to sampling operations, consider collecting and analyzing a rinsate blank using laboratory-supplied PFAS-free water to test the item for contamination potential. Consult the Tetra Tech PM in these cases to verify whether collection of additional blanks is warranted.

- Support personnel that are within 3 meters of the sample processing area are considered subject to the same restrictions related to precautionary measures for clothing and food as applied to sampling personnel.

These precautions must be observed during sampling activities, especially during water sample collection (groundwater, water supply, and surface water), given the high solubilities of PFAS in water. Examples of how these precautions may be applied to sampling of specific media are provided in the following sections.

7.3 Groundwater Sample Acquisition

The precautions and requirements identified in Sections 7.1 and 7.2 must be observed for groundwater sampling. Do not proceed any further without reviewing each of those precautions and requirements.

- Collect groundwater samples for PFAS analyses in accordance with this SOP, SOP SA-1.1, and/or project- or client-specific requirements.

- If non-dedicated non-disposable equipment is used between sampling locations, it should be decontaminated with Alconox or Liquinox, unless 1,4-dioxane (a potential component of Liquinox) is also a contaminant of concern. In that case, Liquinox should not be used. Products such as Decon 90, which contains fluorosurfactants, shall not be used. Alconox or Liquinox rinses should be followed by a potable water rinse then deionized water rinse. The final decontamination rinse for DoD projects must be with water certified by the laboratory to be PFAS-free.

- If sampling for multiple analytes using PFAS-appropriate equipment, collect samples for PFAS analysis last to ensure adequate purging and conditioning of sampling equipment. If practical to do so, suitable PPE (especially gloves) may also be changed out for PFAS sampling. For example, purge and sample a monitoring well for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and metals using a peristaltic pump with HDPE and silicone tubing, then collect the sample for PFAS analysis. If either the proper sampling sequence or proper equipment is unclear, consult the FOL or Tetra Tech PM and record the actual sequence in the field notes.

- If sampling wells that have or had dedicated Teflon or FEP tubing that potentially contained PFAS, remove the dedicated tubing and, using silicone or HDPE tubing, remove at least one well volume from the target sampling interval prior to sampling. Accomplish this removal in a manner that is rigorous enough to remove the entire water column from the well and not just a limited vertical interval of the water column. This will minimize the potential for collecting a sample that was in contact with the Teflon/FEP tubing.

- The use of detergents must be avoided during decontamination of drilling or other heavy equipment. All equipment must be scrubbed with a plastic brush or steam cleaned with potable water, and rinsed thoroughly in potable water to clean away any debris or material on exposed surfaces.

- Sample(s) representing any water collected at the point of use (e.g., a water truck or tank on site) used by the driller for drilling purposes may require analysis for PFAS. Check the governing planning document for guidance and see Section 7.8 of this SOP for guidance on waste management.

- Collect drinking water samples to be analyzed for PFAS in clean polypropylene sample bottles with a polypropylene screw cap; for all other samples, use clean, laboratory-supplied, HDPE bottles with unlined plastic screw caps.

- Pre-label all sample bottles with the correct sample identifier prior to sampling and, for each bottle at the time of sampling:

    - Verify that the correct bottle is being used.
    - Fill the bottle to slightly below the shoulder of the bottle.
    - Tightly close the bottle with the appropriate cap.
    - Repeat this process for subsequent sample bottles.

7.4 Soil Sample Acquisition

The precautions and requirements identified in Sections 7.1 and 7.2 must be observed for soil sampling. Do not proceed any further without reviewing each of those precautions and requirements.

- Collect soil samples for PFAS analyses in accordance with this SOP, SOP SA-1.3, and/or project- or client-specific requirements. Review client–specific (e.g., DoD component) guidance or previously approved Sampling and Analysis Plans (SAPs).

- Soil sampling equipment should not be constructed of or contain Teflon or other materials likely to contain or be coated with PFAS. Acceptable materials for sampling include stainless steel, acetate plastic, and HDPE.

- If non-dedicated non-disposable equipment is used between sampling locations, it should be decontaminated with Alconox or Liquinox, unless 1,4-dioxane (a potential component of Liquinox) is also a contaminant of concern. In that case, Liquinox should not be used. Products such as Decon 90, which contains fluorosurfactants, shall not be used. Alconox or Liquinox rinses should be followed by a potable water rinse then deionized water rinse. The final decontamination rinse for DoD projects must be with water certified by the laboratory to be PFAS-free.

- Collect samples in laboratory-provided HDPE containers specifically designated for PFAS analysis. Do not use glass jars typically used for soil sample collection because some PFAS may irreversibly adsorb to the glass and could create a negative bias (i.e., artificially low concentrations) in the measured PFAS concentrations.

- Pre-label all sample containers with the correct sample identifier prior to sampling and, for each container at the time of sampling:

    - Verify that the correct container is being used.
    - Fill the container to the appropriate level.
    - Tightly close the container with the proper cap.
    - Repeat this process for subsequent sample containers.

7.5 Surface Water and Sediment Sample Acquisition

The precautions and requirements identified in Sections 7.1 and 7.2 must be observed for surface water and sediment sampling. Do not proceed any further without reviewing each of those precautions and requirements.

- Collect surface water and sediment samples for PFAS analysis in accordance with this SOP, SOP SA-1.2, and/or project- or client-specific requirements.

- Surface water and sediment sampling equipment should not be constructed of or contain Teflon or LDPE materials. Acceptable materials for sampling include HDPE, silicone, stainless steel, and acetate plastic. Do not use glass. The bottleware should be supplied clean by the laboratory and specifically designated for PFAS analysis. If transfer bottles are required for collection of surface water samples, the transfer bottles used should be of the same material as the containers designated for submission to the laboratory.

- For surface water sample collection, invert the capped sample bottle, with the opening pointing downward, at least 10 cm below the water surface, at least 10 cm above the bottom of the water body, and as close to the center of the channel or water body as practical. To collect the sample, uncap the bottle underneath the water surface and point the bottle upward so that gloved hands, sample container, and sampler are downstream of where the sample is being collected.

- For aquatic samples collected from the shoreline or via wading, ensure that waders are constructed of fabric that has not been treated with waterproofing coatings, and stand downstream of the sample bottle during sample collection.

- Pre-label all sample bottles with the correct sample identifier prior to sampling and, for each bottle at the time of sampling:

    - Verify that the correct container is being used.
    - Fill the container to the appropriate level.
    - Tightly close the container with the proper cap.
    - Repeat this process for subsequent sample containers.

- If non-dedicated non-disposable sampling equipment is used between sampling locations, it should be decontaminated with Alconox or Liquinox, unless 1,4-dioxane (a potential component of Liquinox) is also a contaminant of concern. In that case, Liquinox should not be used. Products such as Decon 90, which contains fluorosurfactants, shall not be used. Alconox or Liquinox rinses should be followed by a potable water rinse then deionized water rinse. The final decontamination rinse for DoD projects must be with water certified by the laboratory to be PFAS-free.

- Avoid reusing non-stainless-steel equipment (e.g., porewater observation devices consisting of slotted PVC pipe and silicone tubing) when collecting porewater samples.

7.6 Water Supply Sampling

This section applies to sampling from taps, spigots, faucets, or similar devices for PFAS analysis. The precautions and requirements identified in Sections 7.1 and 7.2 must be observed for water supply sampling. Do not proceed any further without reviewing each of those precautions and requirements.

Caution

Do not use filters when collecting samples because the filters may introduce PFAS contamination or absorb/adsorb PFAS and thus reduce PFAS concentrations in the samples.

- Collect water supply samples for PFAS analysis in accordance with applicable portions of SOP SA-1.7 and/or project- or client-specific requirements.

- Water supply sampling equipment (if needed) should not be constructed of or contain Teflon or LDPE materials. Acceptable materials for sampling include HDPE, polypropylene (drinking water sampling only), small amounts of silicone (e.g., short runs of silicone tubing used in peristaltic pumps), stainless steel, and acetate plastic. Non-drinking water supply samples should be collected in clean, laboratory-supplied, HDPE bottleware specifically designated for PFAS analysis (not glass). Collect drinking water samples in clean polypropylene bottles supplied by the laboratory.

- Ensure that sample bottles used to collect chlorinated water samples contain the proper Trizma preservative (5 g/L to remove chlorine). Non-chlorinated water does not require chemical preservatives

designed to remove chlorine; however, some projects may require the use of Trizma regardless of whether the water is chlorinated.

- Locate the sampling point. If a specific sampling point has already been designated (e.g., a kitchen tap or well head), plan to collect the sample from that point. Otherwise, identify a location in the water supply line that is as close as possible to the water's point of origination (e.g., a well or other water source) and upstream of any local water treatment unit(s) that could affect PFAS levels (e.g., water softeners, activated carbon, or reverse osmosis treatment units). If a treatment unit is in use, a post-treatment sample may also be required in some cases, per project requirements.

  NOTE: If treatment that could affect PFAS levels (e.g., carbon filtration or reverse osmosis) is part of the water distribution system, often a spigot will be present in the plumbing line between the water source and the treatment unit, and this spigot should be used for sample collection. If no local treatment is applied to the water, a convenient sampling point for private water supplies is often the cold water tap located at the point of use. If a sample cannot be collected from the planned location, collect the sample from an alternate, but equally representative sampling point, document the deviation in the field notes, and alert the project manager.

- Remove any aerator/diffuser from the faucet, if possible. If removal is not possible, record this observation in the field notes.

- Allow the water to run freely from the tap until project-specific requirements are achieved. This will often require purging for 3 to 5 minutes or may require monitoring of water quality parameters (e.g., temperature) until they stabilize.

- Reduce the water flow rate to minimize aeration of the sample. The water stream should be no wider than the diameter of a pencil.

- Pre-label all sample bottles with the correct sample identifier prior to sampling and, for each bottle at the time of sampling:

  - Verify that the correct bottle is being used
  - Fill the sample bottle directly from the tap to a point slightly below the shoulder of the bottle.
  - Cap the bottle tightly with the proper cap.
  - Repeat this process for subsequent sample bottles.

- After collecting the sample, ensure the bottle is capped tightly and, if solid chemical preservative is included, agitate by hand until the preservative is dissolved.

7.7 Field Reagent Blank Collection

NOTE: If PFAS are detected in site samples, FRBs may be analyzed to assess whether PFAS in site samples could be non-site-related contamination and whether resampling is necessary. U.S. EPA Method 537.1, and modifications or derivatives thereof for PFAS analysis in drinking water typically require an FRB to be handled along with each sample set. A sample set is described as samples collected from the same sample site and at the same time, but "sample site" and "same time" may not be precisely defined. Therefore, it is important to verify that the correct number of FRBs will be collected. The intent is to be able to verify whether samples have been contaminated and to help identify the source of contamination. In general, collecting one FRB at each sampling point is recommended when sampling drinking water; fewer

FRBs are recommended when sampling non-drinking water matrices. The actual number will depend on project needs. *Collection of an FRB at every non-drinking water sampling point **may** be required.*

- Verify the number of FRBs to be collected for the project and where those samples must be collected. This should be described in the governing project planning documents such as work plans or SAPs. If it is not, consult the PM. FRBs are commonly collected in pairs of sample bottles, similar to corresponding site samples.

NOTE: Chemical preservative may not be included in FRBs that are used when sampling non-drinking water matrices. In these cases the FRBs are more appropriately called Field Blanks (FBs) but the water transfers described below will be similar.

NOTE: It is important that FRB collection emulate as closely as possible the conditions surrounding collection of site samples. For example, when collecting FRBs from taps or spigots, collect each FRB either immediately before or after the corresponding site sample collection **without interrupting the water flow** until both the site sample and FRB have been collected.

- At the sampling site, when ready to collect an FRB, open the bottle of chemically preserved FRB reagent water provided by the laboratory and a corresponding clean empty bottle, also provided by the laboratory.

- Pour the preserved FRB reagent water into the empty sample bottle, close the cap, and label this filled bottle as the FRB.

- Pack and ship the FRB along with site samples and required documentation (e.g., chain-of-custody form) to the laboratory.

NOTE: Although chain-of-custody forms will indicate that FRBs must be analyzed for PFAS, analysis of an FRB will be required only if site samples contain PFAS greater than a certain concentration. If an FRB is analyzed and any PFAS concentration in the FRB exceeds one-third of the laboratory minimum reporting limit (or equivalent), all samples collected with that FRB may be considered invalid and may require recollection and reanalysis. Consult the project planning documents governing sample collection for specifics as to whether resampling is necessary. Care in collection and handling of site samples and FRBs in a way that avoids contamination cannot be overemphasized.

NOTE: It will be necessary to associate individual FRBs with corresponding site samples; otherwise, decisions about which samples to recollect (if recollection is indicated) could be compromised. Associations between FRBs and corresponding site samples may be accomplished by marking chain-of-custody forms with the associations, but other methods also may be useful. Consult the governing planning document or the PM for guidance, if necessary.

7.8 Disposal of Investigation-Derived Waste Potentially Containing PFAS

PFAS are not hazardous wastes as defined in the Resource Conservation and Recovery Act and Comprehensive Environmental Response, Compensation, and Liability Act. It may be possible to dispose of PFAS-containing solid waste as non-hazardous, but sampling solid waste material for PFAS analysis is not advised. Consult the client PM or on-site point of contact to verify their current disposal acceptance criteria and indicate on waste manifests that the waste potentially contains PFAS. Solid waste potentially containing PFAS should be identified as such on waste manifests. Wastewater potentially containing PFAS should be analyzed for PFAS to determine the appropriate disposal option. If the sum of PFOA and PFOS

concentrations is less than the applicable criterion (e.g., 70 ng/L) the water may be disposed of without special handling if no other enforceable regulations apply; otherwise, the water should be treated to reduce the PFOA + PFOS concentration to an acceptable level or should be directed to an appropriate treatment facility for disposal. On-site treatment (e.g., granular activated carbon filtration) may be appropriate. Consult the client PM or on-site point of contact for direction regarding disposal.

NOTE: If aqueous investigation-derived waste (IDW) is expected to contain PFAS greater than the applicable criterion (e.g., captured residual AFFF or AFFF concentrate from an accidental release in a hangar), special actions may be necessary and the client PM should be consulted. For wastes that are dewatered and potentially contain PFAS, containerize the wastewater and analyze it for PFAS prior to disposal.

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		Applicability EGS Operating Unit	
		Prepared Earth Sciences Department	
Subject NON-RADIOLOGICAL SAMPLE HANDLING		Approved T. Johnston T.E. Johnston	

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1.0 PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to provide information on sample preservation, packaging, and shipping procedures to be used in handling environmental samples submitted for chemical constituent, biological, or geotechnical analysis. Sample chain-of-custody procedures and other aspects of field documentation are addressed in SOP SA-6.3. Sample identification is addressed in SOP CT-04.

2.0 SCOPE

This procedure describes the appropriate containers to be used for samples depending on the analyses to be performed, and the steps necessary to preserve the samples when shipped off site for chemical analysis.

3.0 GLOSSARY

Hazardous Material – A substance or material which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated. Under 49 CFR, the term includes hazardous substances, hazardous wastes, marine pollutants, and elevated temperature materials, as well as materials designated as hazardous under the provisions of §172.101 and §172.102 and materials that meet the defining criteria for hazard classes and divisions in Part 173. With slight modifications, International Air Transport Association (IATA) has adopted Department of Transportation (DOT) "hazardous materials" as IATA "Dangerous Goods."

Hazardous Waste – Any substance listed in 40 CFR, Subpart D (§261.30 et seq.), or otherwise characterized as ignitable, corrosive, reactive, or toxic (as defined by Toxicity Characteristic Leaching Procedure, TCLP, analysis) as specified under 40 CFR, Subpart C (§261.20 et seq.), that would be subject to manifest requirements specified in 40 CFR 262. Such substances are defined and regulated by EPA.

Marking – A descriptive name, identification number, instructions, cautions, weight, specification or UN marks, or combination thereof required on outer packaging of hazardous materials.

n.o.i – Not otherwise indicated (may be used interchangeably with n.o.s.).

n.o.s – Not otherwise specified.

Packaging – A receptacle and any other components or materials necessary for compliance with the minimum packaging requirements of 49 CFR 174, including containers (other than freight containers or overpacks), portable tanks, cargo tanks, tank cars, and multi-unit tank-car tanks to perform a containment function in conformance with the minimum packaging requirements of 49 CFR 173.24(a) & (b).

Placard – Color-coded, pictorial sign which depicts the hazard class symbol and name and which is placed on the side of a vehicle transporting certain hazardous materials.

Common Preservatives:
- Hydrochloric Acid - HCl
- Sulfuric Acid - H_2SO_4
- Nitric Acid - HNO_3
- Sodium Hydroxide - NaOH

Other Preservatives
- Zinc Acetate
- Sodium Thiosulfate - $Na_2S_2O_3$

Normality (N) – Concentration of a solution expressed as equivalent per liter, an equivalent being the amount of a substance containing 1 gram-atom of replaceable hydrogen or its equivalent.

Reportable Quantity (RQ) – For the purposes of this SOP, means the quantity specified in column 3 of the Appendix to DOT 49 CFR §172.101 for any material identified in column 1 of the appendix. A spill greater than the amount specified must be reported to the National Response Center.

Sample – A sample is physical evidence collected from a facility or the environment, which is representative of conditions at the location and time of collection.

4.0 RESPONSIBILITIES

Project Manager (PM) – Responsible for all aspects of project implementation and direction. Responsible for ensuring that all field activities are conducted in accordance with approved project plan(s) and requirements and for providing the necessary resources in support of sample handling.

Field Operations Leader – Responsible for implementing field activities as detailed in approved project plans for the specific site. Directly responsible for the bottling, preservation, labeling, packaging, shipping, and custody of samples up to and including release to the shipper.

Field Support Personnel – Responsible for initiating the Chain-of-Custody Record (per SOP SA-6.3), implementing the packaging and shipping requirements, and maintaining custody of samples until they are relinquished to another custodian or to the shipper.

5.0 PROCEDURES

Sample identification, labeling, documentation, and chain-of-custody are addressed by SOP SA-6.3.

5.1 SAMPLE CONTAINERS

Different types of chemicals react differently with sample containers made of various materials. For example, trace metals adsorb more strongly to glass than to plastic, whereas many organic chemicals may dissolve various types of plastic containers. Proper sample containers, sample volumes, preservation methods such as chemical preservatives/cooling requirements, and holding times should be provided in the project-specific work plan. Some of these requirements may be laboratory-specific and should be arranged during the laboratory procurement phase of a project. In general, the sample container shall allow approximately 5-10 percent air space ("ullage") to allow for expansion/vaporization if the sample warms during transport. However, for collection of volatile organic compounds, head space shall be omitted.

The analytical laboratory will generally provide certified-clean containers for samples to be analyzed for chemical constituents. These containers shall be pre-cleaned to meet or exceed requirements of the latest U.S. Environmental Protection Agency (EPA) "Specifications and Guidance for Contaminant-Free Sample Containers." I-Chem 200 and 300 Series containers meet these requirements; other certifications may be available that also meet these requirements. Each case of 300 Series containers comes with a "Certificate of Analysis," and every container bears a similar bar-coded label for traceability. I-Chem Series 200 containers do not come with a Certificate of Analysis, but a certificate may be accessed upon request to the supplier. Shelby tubes or other sample containers are generally provided by the driller for samples requiring geotechnical analysis. Sufficient lead time shall be allowed for a delivery of sample container orders. Therefore, it is critical to use the correct container to maintain the integrity of the sample prior to analysis.

Upon being opened, the container must be used at once for collection/storage of a particular sample. Unused but opened containers are to be considered contaminated and must be discarded. Because of the

potential for introduction of contamination, they cannot be reclosed and saved for later use. Likewise, any unused containers which appear contaminated upon receipt, or which are found to have loose caps or a missing Teflon liner (if required for the container), shall be discarded.

Sample containers can be contaminated during storage if nearby volatile substances infiltrate the surrounding air and migrate into the containers. This can occur even when containers are capped. Therefore, containers should not be stored on site but if on site storage is necessary, sample containers that have been stored on site for longer than 6 months should not be used.

NOTE: Whereas most air-borne contamination is likely to be associated with organic substances, inorganic substances such as hydrochloric acid (muriatic acid) can emit inorganic vapors that infiltrate sample containers.

5.2 SAMPLE PRESERVATION

Many water and soil samples are unstable and therefore require preservation to prevent changes in either the concentration or the physical condition of the constituent(s) requiring analysis. Although complete and irreversible preservation of samples is not possible, preservation does retard the chemical and biological changes that inevitably take place after the sample is collected. Preservation techniques are usually limited to pH control, chemical addition(s), and refrigeration/ freezing (certain biological samples only).

5.2.1 Overview

Reagents required for sample preservation will either be added to the sample containers by the laboratory prior to their shipment to the field or be added in the field (in a clean environment). Only high purity reagents shall be used for preservation and field preservation of samples is discouraged for reasons of potential cross-contamination of samples and worker safety. Most samples require cooling to <6°C and the project-specific planning documents should be consulted for detailed preservation and storage requirements.

The following subsections describe the procedures for preparing and adding chemical preservatives.

The FOL is responsible for ensuring that an accurate Chemical Inventory is created and maintained for all hazardous chemicals brought to the work site. Furthermore, the FOL must ensure that a corresponding Safety Data Sheet (SDS) is collected for every substance entered on the site Chemical Inventory, and that all persons using/handling/ disposing of these substances review the appropriate SDS for substances they will work with. The Chemical Inventory and the SDSs must be maintained at each work site in a location and manner where they are readily accessible to all personnel.

5.2.2 Preparation and Addition of Reagents

Addition of the following acids or bases may be specified for sample preservation; these reagents shall be analytical reagent (AR) grade or purer and shall be diluted to the required concentration with deionized water before field sampling commences. To avoid uncontrolled reactions, be sure to Add Acid to water (not vice versa). A dilutions guide is provided below.

Acid/Base	Dilution	Concentration	Estimated Amount Required for Preservation
Hydrochloric Acid (HCl)	1 part concentrated HCl: 1 part double-distilled, deionized water	6N	5 to 10 mL

Acid/Base	Dilution	Concentration	Estimated Amount Required for Preservation
Sulfuric Acid (H_2SO_4)	1 part concentrated H_2SO_4: 1 part double-distilled, deionized water	18N	2 to 5 mL
Nitric Acid (HNO_3)	Undiluted concentrated HNO_3	16N	2 to 5 mL
Sodium Hydroxide (NaOH)	400 grams solid NaOH dissolved in 870 mL double-distilled, deionized water; yields 1 liter of solution	10N	2 mL

NOTE: Pre diluted preservatives are available as ampules or in dropper bottles and are preferred as opposed to handling concentrated acids and bases.

The amounts required for preservation shown in the above table assumes proper preparation of the preservative and addition of the preservative to one liter of aqueous sample. This assumes that the sample is initially at pH 7, is poorly buffered, and does not contain particulate matter; as these conditions vary, more preservative may be required. Consequently, the final sample pH must be checked using narrow-range pH paper, as described in the generalized procedure detailed below:

- Pour off 5 to 10 mL of sample into a dedicated, clean container. Use some of this sample to check the initial sample pH using wide range (0-14) pH paper. Never dip the pH paper into the sample; always apply a drop of sample to the pH paper using a clean stirring rod or pipette.

- Add about one-half of the estimated preservative required to the original sample bottle. Cap and invert gently several times to mix. Check pH (as described above) using medium range pH paper (pH 0-6 or pH 7.5-14, as applicable).

- Cap sample bottle and seal securely.

Additional considerations are discussed below:

- To test if ascorbic acid must be used to remove oxidizing agents (e.g., chlorine, permanganate or persulfate) present in the sample before it can be properly preserved, place a drop of sample on KI-starch paper. A blue color indicates the need for ascorbic acid addition.

  If required, add a few crystals of ascorbic acid to the sample and retest with the KI-starch paper. Repeat until a drop of sample produces no color on the KI-starch paper. Then add an additional 0.6 grams of ascorbic acid per each liter of sample volume.

  Continue with proper base preservation of the sample as described above.

- Samples for sulfide analysis must be treated by the addition of 4 drops (0.2 mL) of 2N zinc acetate solution per 100 mL of sample.

  The 2N zinc acetate solution is made by dissolving 220 grams of zinc acetate in 870 mL of double-distilled, deionized water to make 1 liter of solution.

  The sample pH is then raised to 9 using the NaOH preservative.

- Sodium thiosulfate must be added to remove residual chlorine from a sample. To test the sample for residual chlorine, use a field test kit specially made for this purpose.

If residual chlorine is present (e.g., in municipal water systems), add 0.08 grams of sodium thiosulfate per liter of sample to remove the residual chlorine.
Continue with proper acidification of the sample as described above.

For biological samples, 10% buffered formalin or isopropanol may also be required for preservation. Questions regarding preservation requirements should be resolved through communication with the laboratory before sampling begins.

5.3 FIELD FILTRATION

At times, field-filtration may be required to provide for the analysis of dissolved chemical constituents. Field-filtration must be performed prior to the preservation of samples as described above. General procedures for field filtration are described below:

- The sample shall be filtered through a non-metallic, 0.45-micron membrane filter, immediately after collection. The filtration system shall consist of dedicated filter canister, dedicated tubing, and a peristaltic pump with pressure or vacuum pumping squeeze action (since the sample is filtered by mechanical peristalsis, the sample travels only through the tubing) or hand pump.

- To perform filtration, thread the tubing through the peristaltic pump head. Attach the filter canister to the discharge end of the silicone tubing (note flow direction arrow); attach the unfiltered aqueous sample source to the intake end of the silicone tubing. Turn the peristaltic pump on and perform filtration. Run approximately 100 mL of sample through the filter and discard prior to sample collection of the filtered sample.

- Continue by preserving the filtrate, as applicable and generally described above.

5.4 SAMPLE PACKAGING AND SHIPPING

The Department of Transportation requires that persons who are required to transport or ship hazardous substances be specially trained. Only employees who have successfully completed the corporate “Shipping Hazardous Materials” training course are authorized to package and ship hazardous substances. These trained individuals are responsible for performing shipping duties in accordance with this training.

Samples collected for shipment from a site shall be classified as either environmental or hazardous material samples. Samples from drums containing materials other than Investigative Derived Waste (IDW) and samples obtained from waste piles or bulk storage tanks are generally shipped as hazardous materials. A distinction must be made between the two types of samples in order to:

- Determine appropriate procedures for transportation of samples (if there is any doubt, a sample shall be considered hazardous and shipped accordingly.)

- Protect the health and safety of transport and laboratory personnel receiving the samples (special precautions are used by the shipper and at laboratories when hazardous materials are received.)

Detailed procedures for packaging environmental samples are outlined in the remainder of this section.

5.4.1 Environmental Samples

Environmental samples are packaged as follows:

- Place properly identified and labeled sample container, with lid securely fastened, in a plastic bag (e.g. Ziploc baggie), and seal the bag.

- Place sample in a cooler constructed of sturdy material which has been lined with a large, plastic bag (e.g. "garbage" bag). Drain plugs on coolers must be taped shut.

- Pack with enough cushioning materials such as bubble wrap (shoulders of bottles must be iced if required) to minimize the possibility of the container breaking. Glass bottles should be individually wrapped in bubble wrap.

- If cooling is required (see Attachments A and B), place ice around sample container shoulders, and on top of packing material (minimum of 8 pounds of ice for a medium-size cooler).

- Seal (i.e., tape or tie top in knot) large liner bag.

- The original (top, signed copy) of the COC form shall be placed inside a large Ziploc-type bag and taped inside the lid of the shipping cooler. If multiple coolers are sent but are included on one COC form, the COC form should be sent with the cooler containing the vials for VOC analysis. The COC form should then state how many coolers are included with that shipment.

- Close and seal outside of cooler as described in SOP SA-6.3. Signed and dated custody seals must be used.

Coolers must be marked as containing "Environmental Samples." The appropriate side of the container must be marked "This End Up" and arrows placed appropriately. No DOT marking or labeling is required; there are no DOT restrictions on mode of transportation.

6.0 REFERENCES

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1.0 PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to identify and designate the field data record forms, logs, and reports generally initiated and maintained for documenting EGS Operating Unit field activities.

2.0 SCOPE AND APPLICABILITY

Documents presented within this SOP (and related sampling SOPs) shall be used for all NUS Operating Unit field activities, as applicable. All personnel are encouraged to review the information contained herein to facilitate planning of the field sampling and documentation effort. The techniques described shall be followed whenever applicable, noting that site-specific conditions or project-specific plans may require modifications to methodology. Other or additional documents may be required by specific client contracts or project planning documents. Use of SOPs from certain federal or state environmental agencies may take precedence over these SOPs, depending on the client requirements or jurisdiction of the project

3.0 GLOSSARY

None.

4.0 RESPONSIBILITIES AND PERSONNEL QUALIFICATIONS

Project Manager (PM) – Responsible for all aspects of project implementation and direction. Responsible for ensuring that all field activities are conducted in accordance with approved project plan(s) and requirements and for providing the necessary resources in support of all air monitoring and sampling applications. The PM is responsible for obtaining hardbound controlled-distribution logbooks (from the appropriate source), as needed. In addition, the PM is responsible for placing all field documentation used in site activities (i.e., records, field reports, sample data sheets, field notebooks, and the site logbook) in the project's central file upon the completion of field work.

Field Operations Leader (FOL) – Responsible for implementing field activities as detailed in approved project plans. The FOL is responsible for ensuring that the site logbook, notebooks, and all appropriate and current forms and field reports included in this SOP (and any additional forms required by the contract) are correctly used, accurately filled out, and completed in the required time frame.

Site Safety Officer (SSO) – The SSO (or a qualified designee) is responsible for providing the technical support necessary to implement the project Health and Safety Plan (HASP) (or equivalent).

Project Geologist/Sampler – The Project Geologist/Sampler is responsible for the proper documentation of field activities in accordance with this SOP and/or other project-specific documents.

General personnel qualifications for field documentation activities include the following:

- Occupational Safety and Health Administration (OSHA) 40-hour and applicable refresher training.
- Capability of performing field work under the expected physical and environmental (i.e., weather) conditions.
- Familiarity with appropriate procedures for documentation, handling, packaging, and shipping.

5.0 PROCEDURES

5.1 SITE LOGBOOK

5.1.1 General

The site logbook is a hard-bound, paginated, controlled-distribution record book in which all major on-site activities are documented. At a minimum, record or reference the following activities/events (daily) in the site logbook:

- All field personnel present
- Arrival/departure times and names of site visitors
- Times and dates of health and safety training
- Arrival/departure times of equipment
- Times and dates of equipment calibration
- Start and/or completion of borehole, trench, monitoring well installation activities, etc.
- Daily on-site activities
- Sample pickup information
- Health and safety issues (level of protection, personal protective equipment [PPE], etc.)
- Weather conditions

Maintain a site logbook for each project and initiate it at the start of the first on-site activity (e.g., site visit or initial reconnaissance survey). Make entries every day that on-site activities take place involving NUS Operating Unit or subcontractor personnel. Upon completion of the fieldwork, provide the site logbook to the PM (or qualified designee) for inclusion in the project's central file.

Record the following information on the cover of each site logbook:

- Project name
- NUS Operating Unit project number
- Sequential book number
- Start date
- End date

Information recorded daily in the site logbook need not be duplicated in other field notebooks (see Section 5.2) but must summarize the contents of these other notebooks and refer to specific page locations in these notebooks for detailed information (where applicable). An example of a typical site logbook entry is shown in Attachment A. Adding a note to the inside front cover similar to the following is recommended: “If this book is found, please return to:” followed by the office address and project manager’s name and phone number.

If measurements are made at any location, either record the measurements and equipment used in the site logbook or reference the field notebook or specific log sheet in which the measurements are recorded (see Attachment A).

Make all logbook, notebook, and log sheet entries in indelible ink (black pen is preferred). No erasures are permitted. If an incorrect entry is made, cross out the entry with a single strike mark, initial, and date it. At the completion of entries by any individual, the logbook pages used must be signed and dated by the person making the entries. Empty spaces generally should not be left on log sheets, forms, or notebooks. Instead, a line should be struck through them accompanied by the date and initials of the person adding the line. This signifies that the empty spaces are not inadvertent and marked them so no entries can be added at a later date. The site logbook must also be signed by the FOL at the end of each day.

5.1.2 Photographs and Other Images

Permission to take photographs, make movies, or otherwise record visual representations of site features, sampling activities, or facility personnel on certain properties such as military installations is a temporary privilege bestowed upon a person (i.e., the photographer) by the property owner and the particular facility at which the photographs are taken. In the case of U.S. military installations, the U.S. Government and Installation Command bestow this privilege. For the remainder of this section the term "image" is intended to represent all visual forms of documentation of site features, activities, or personnel, such as film and digital still images and movies.

It may be illegal to record images without proper authorization and the photographer may be criminally liable for their actions. This is especially true on or near U.S. Government property. A particular image alone may not constitute an act of espionage or a national security threat; however, nefarious persons and organizations could conceivably combine information from multiple sources to create a national security threat. Therefore, the photographer must comply with any and all restrictions imposed on them by authorized facility personnel.

The instructions below apply to formal and casual photography sessions conducted, for example, during on-site meetings, walkovers, and other visits. Persons recording images should be aware that images recorded on or near military installations, and possibly at other installations, may be subject to censorship and clearance, e.g., through Public Affairs or Public Relations Offices.

Caution

Fieldwork-specific SOPs establish safety precautions for the fieldwork that they govern. When recording images, adhere to all safety precautions associated with fieldwork described in those SOPs. Pay attention to your surroundings. Avoid unsafe locations and positions. Avoid walking or turning your body while looking through the lens or viewfinder of a camera unless the path of movement has been cleared in advance and the movements will be made safely. Be especially alert to trip and fall hazards. Dress appropriately for the weather, topography, and the flora and fauna. Stay hydrated, and be aware of the effects of heat and cold stress on the body. Consult the SSO if in doubt about your safety or the safety of others while recording images.

5.1.2.1 Prior to and during photography sessions, follow these steps:

NOTE: In general, avoidance of specialty photographic equipment reduces the amount of work required of the photographer. The photographer is not required to record aperture, shutter speed, ISO rating, or other camera settings within automatic exposure ranges available on digital cameras; however use of special lenses (e.g., tilt-and-shift), filters (e.g., neutral density, warming, and polarizing filters), and other image enhancement equipment or techniques must be noted in the logbook/notebook. If possible, use of such equipment items or special techniques should be avoided because they can adversely affect the accuracy of recorded images.

- By communicating with the facility point of contact prior to recording images, obtain permission directly from, or on behalf of, the property owner and/or operator to record the images. In the case of U.S. Government military installations, the point of contact typically represents the Installation Command or a higher authority. The actual point of contact is frequently a Public Works or Environmental Department staff member.

- Request from the facility point of contact a written pass that allows permission to record images (hereafter referred to as a photography pass) but do not insist on obtaining one if the facility declines to issue such a pass.

- If the facility does not issue a written photography pass, either do not record images or verify via written communication with the facility point of contact that image making will be permitted while on the Installation property.

  NOTE: The intent of these permissions and communications is to ensure that the photographer clearly communicates his or her intentions to the facility and to avoid disputes regarding appropriateness of images, ownership of images or property depicted in the images, violation of privacy, etc. During communication with the facility point of contact, ensure that they understand the types of scenes, activities, equipment, features, processes, etc., to be recorded visually and under what conditions the images will be made.

- If the facility issues a written photography pass:
  - Prior to recording images, verify that the photography pass is valid for the time period during which images will be made.
  - Carry the written photography pass in your possession when recording images.
  - Be prepared to produce the photography pass as proof of permission to record images.

- Prior to recording images, if using a digital recording medium, enable automatic collection of Exchangeable Image File (EXIF) data. Doing so will provide automatic documentation of the camera settings (ISO rating, shutter speed, aperture, focal length, etc.) used during image capture. Most digital cameras will record this information by default; but the use of special filters or other attachments to the image capture device is not recorded because such equipment is not an integral part of the device.

- While recording images, enter the name of the photographer, date, time, site location, and site description in the logbook/notebook and update this information as necessary to document important changes. Include other pertinent information such as weather conditions, if such information will support interpretation of the images.

- When orientation of the camera is important to interpreting the contents of the images, record the camera angles and positions for each image. This may be done by drawing an arrow on a site figure that points in the same direction the camera was pointed when the image was recorded. Alternatively, some digital cameras may automatically record the geographical coordinates and orientation angle during image capture.

- Sequentially number images of a site or monitoring location to correspond to logbook/notebook entries. Digital still image media typically provide automatic numbering of images. If desired, the image numbers may be altered later (e.g., during download to a computer) but it may be desirable to retain the original file name in the EXIF data for traceability.

5.1.2.2 After recording images follow these steps:

- Verify that the name of the photographer, date, time, site location, site description, and other pertinent notes were correctly entered in the logbook/notebook.

- Compile the images and associated information that will be necessary to interpret them in a manner suitable for the associated project. For example, consecutively number still images and label them according to the logbook/notebook descriptions. If camera angle, camera position, or camera settings are important, record this important information with the images. For moving images, edit and compile the images a manner consistent with the intended use.

- Docket the images and associated film negatives or digital files to the central project file and/or compact disk. If EXIF data were captured and are needed for the project, ensure the EXIF data are transferred

along with the image to the final storage location. This final storage location may be a project file or a report compiled to document site conditions.

- If multiple versions of image files are generated (e.g., high resolution and low resolution), arrange for proper storage and management of all versions of files for ready retrieval and safe storage.

5.2 FIELD NOTEBOOKS

Key field team personnel may maintain a separate dedicated field notebook to document the pertinent field activities conducted directly under their supervision. For example, on large projects with multiple investigative sites and varying operating conditions, the SSO may elect to maintain a separate field notebook. Where several drill rigs are in operation simultaneously, each Project Geologist/Sampler assigned to oversee a rig must maintain a field notebook.

5.3 FIELD FORMS

Field forms (see list in Section 6.0 of this SOP) can be found on the NUS Operating Unit intranet site under "Field Log Sheets." Forms may be altered or revised for project-specific needs, subject to client approval. Care must be taken to ensure that all essential information can be documented. Guidelines for completing these forms can be found in the related sampling SOPs.

5.3.1 Sample Collection, Labeling, Shipment, Request for Analysis, and Field Test Results

5.3.1.1 Sample Log Sheet

Sample log sheets are used to record specified types of data while sampling. The data recorded on these sheets are useful in describing the sample as well as pointing out any problems, difficulties, or irregularities encountered during sampling. Complete a sample log sheet for each sample obtained, including field quality assurance (QA) samples.

5.3.1.2 Sample Label

A typical sample label is illustrated in Attachment B. Complete the required information on the adhesive labels and apply them to every sample container. Obtain sample labels from the appropriate program/project source, request that they be electronically generated in house, or request them from the laboratory subcontractor. As much as practical, computer generated pre-printed sample labels containing as much specific sample information are preferred for efficiency and legibility.

5.3.1.3 Chain-of-Custody Record

Traditional, hardcopy chain-of-custody records are a multi-part forms that are initiated as samples are acquired and accompany a sample (or group of samples) as they are transferred from person to person. More recently computer generated forms are gaining popularity. Either format may be used. Hardcopy multi-part forms must be used as follows for any samples collected for chemical or geotechnical analysis whether the analyses are performed on-site or off-site:

- Retain one carbonless copy of the completed chain-of-custody form in the field.
- Send one copy to the PM (or qualified designee).
- Send the original (top, signed copy) to the laboratory with the associated samples. Place the original chain-of-custody copy inside a large Ziploc®-type bag taped inside the lid of the shipping cooler. If multiple coolers are sent, but are included on one chain-of-custody form, send the form with the cooler containing vials for volatile organic compounds (VOCs) analysis or the cooler with the air bill attached. Indicate on the air bill how many coolers are included with that shipment.

If electronic forms are used, they must be used and managed in accordance with the associated instructions. An example of a chain-of-custody form is provided as Attachment C. After the samples are received at the laboratory, the sample cooler and contents are checked, and any problems are noted on the enclosed chain-of-custody form. Any discrepancies between the sample labels and chain-of-custody form and any other problems that are noted are resolved as soon as practical through communication between the laboratory point-of-contact and the PM or qualified designee. The chain-of-custody form is signed by the laboratory sample custodian, and copied. The laboratory will retain the copy, and the original becomes part of the samples' corresponding analytical data package.

5.3.1.4 Custody Seal

Attachment D is an example of a custody seal. The custody seal is an adhesive-backed label that is part of a chain-of-custody process and is used to prevent tampering with samples after they have been collected in the field and sealed in coolers for transport to the laboratory. Sign and date custody seals and affix them across the lid and body of each cooler (front and back of opposite sides) containing environmental samples (see SOP SA-6.1). Obtain custody seals from the laboratory (if available) or purchase them from a supplier.

NOTE: Some projects or contracts may require used of custody seals or wired tags on individual sample bottles.

5.3.1.5 Geochemical Parameters Log Sheets

Complete Field Analytical Log Sheets to record geochemical and/or natural attenuation field test results.

5.3.2 Hydrogeological and Geotechnical Forms

5.3.2.1 Groundwater Level Measurement Sheet

Complete a Groundwater Level Measurement Sheet for each round of water level measurements made at a site.

5.3.2.2 Data Sheet for Pumping Test

During the performance of a pumping test (or an in-situ hydraulic conductivity test), a large amount of data must be recorded, often within a short time period. Use a Pumping Test Data Sheet to facilitate this task by standardizing the data collection format for the pumping well and observation wells, and allowing the time interval for collection to be established in advance.

5.3.2.3 Packer Test Report Form

Complete a Packer Test Report Form for each well at which a packer test is conducted.

5.3.2.4 Boring Log

Complete a Summary Log of Boring, or Boring Log for each soil boring performed to document the materials encountered, operation and driving of casing, and locations/depths of samples collected. In addition, if volatile organic vapors are monitored on cores, samples, cuttings from the borehole, or breathing zone, (using a photoionization detector [PID] or flame ionization detector [FID]), enter these readings on the boring log at the appropriate depth. When they become available, enter the laboratory sample number, concentrations of key contaminants, or other pertinent information in the "Remarks" column. This feature allows direct comparison of contaminant concentrations with soil characteristics. Consult the site-specific sampling plan for level of detail to include, such as soil classification, color, or blow counts for Standard Penetration Test.

5.3.2.5 Monitoring Well Construction Details Form

Complete a Monitoring Well Construction Details Form for every monitoring well, piezometer, or temporary well point installed. This form contains specific information on length and type of well riser pipe and screen, backfill, filter pack, annular seal and grout characteristics, and surface seal characteristics. This information is important in evaluating the performance of the monitoring well, particularly in areas where water levels show temporal variation or where there are multiple (immiscible) phases of contaminants. Depending on the type of monitoring well (in overburden or bedrock, stick-up or flush mount), different forms are used.

5.3.2.6 Test Pit Log

When a test pit or trench is constructed for investigative or sampling purposes, a Test Pit Log must be filled out by the responsible Project Geologist/Sampler.

5.3.2.7 Miscellaneous Monitoring Well Forms

Miscellaneous monitoring well forms that may be required on a project-specific basis include the Monitoring Well Materials Certificate of Conformance and Monitoring Well Development Record. Use a Monitoring Well Materials Certificate of Conformance to document all materials utilized during each monitoring well installation. Use a Monitoring Well Development Record to document all well development activities.

5.3.2.8 Miscellaneous Field Forms – Quality Assurance and Checklists

Miscellaneous field forms/checklists that may be required on a project-specific basis include the following:

- Container Sample and Inspection Sheet – use this form when a container (drum, tank, etc.) is sampled and/or inspected.
- QA Sample Log Sheet – use this form when a QA sample such as an equipment rinsate blank, source blank, etc. is collected.
- Field Task Modification Request (FTMR) – use this form to document deviations from the project planning document(s). The FOL is responsible for initiating the FTMRs. Maintain copies of all FTMRs with the on-site planning documents, and place originals in the final evidence file.
- Field Project Daily Activities Checklist and Field Project Pre-Mobilization Checklist – use these during both the planning and field effort to ensure that all necessary tasks are planned for and completed. These two forms are not requirements, but are useful tools for most field work.

5.3.3 Equipment Calibration and Maintenance Form

The calibration or standardization of monitoring, measuring, or test equipment is necessary to ensure the proper operation and response of the equipment, to document the accuracy, precision, or sensitivity of the measurements, and to determine if correction should be applied to the readings. Some items of equipment require frequent calibration, others infrequent. Some are calibrated by the manufacturer or the equipment rental vendor, others by the user.

Each instrument requiring calibration has its own Equipment Calibration Log, which documents that the manufacturer's instructions were followed for calibration of the equipment, including frequency and type of standard or calibration device. Maintain an Equipment Calibration Log for each electronic measuring device used in the field; make entries for each day the equipment is used or in accordance with manufacturer recommendations.

5.4 FIELD REPORTS

The primary means of recording on-site activities is the site logbook. Other field notebooks may also be maintained. These logbooks and notebooks (and supporting forms) contain detailed information required for data interpretation or documentation but are not easily used for tracking and reporting of progress. Furthermore, the field logbook/notebooks remain on site for extended periods of time and are thus not accessible for timely review by project management. Other reports useful for tracking and reporting the progress of field activities are described below.

5.4.1 Daily Activities Report

To provide timely oversight of on-site contractors, complete and submit Daily Activities Reports (DARs) as described below.

5.4.1.1 Description

The DAR documents the activities and progress for each day's field work. Complete this report on a daily basis whenever there are drilling, test pitting, well construction, or other related activities occurring that involve subcontractor personnel. These sheets summarize the work performed and form the basis of payment to subcontractors. The DAR form can be found on the NUS Operating Unit intranet site.

5.4.1.2 Responsibilities

It is the responsibility of the rig geologist to complete the DAR and obtain the driller's signature acknowledging that the times and quantities of material entered are correct.

5.4.1.3 Submittal and Approval

At the end of the shift, the rig geologist must submit the DAR to the FOL for review and filing. The DAR is not a formal report and thus requires no further approval. The DARs are retained by the FOL for use in preparing the site logbook and in preparing weekly status reports for submission to the PM.

5.4.2 Weekly Status Reports

To facilitate timely review by project management, photocopies of logbook/notebook entries may be made for internal use.

In addition to those described herein, other summary reports may also be contractually required.
Field forms can be found on the NUS Operating Unit intranet site.

6.0 LISTING OF FIELD FORMS ON THE NUS OPERATING UNIT INTRANET SITE

- Boring Log
- Container Sample and Inspection Sheet
- Chain of Custody
- Container Sample and Inspection
- Daily Activities Checklist
- Daily Activities Record
- Daily Activity Report
- Equipment Calibration Log
- Field Task Modification Request Form
- Field Analytical Log Sheet - Geochemical Parameters
- Groundwater Level Measurement Sheet

- Groundwater Sample Log Sheet
- Hydraulic Conductivity Testing Data Sheet
- Infiltration Test Data Sheet
- Instream Velocity Measurements
- Instrument Cal. Log Sheet (Water Qual. Meter)
- Job Safety Analysis
- Monitoring Well Bedrock Construction (Open Hole)
- Monitoring Well Confining Layer Construction
- Monitoring Well Development Record
- Monitoring Well Inspection Sheet
- Overburden and Bedrock Monitoring Well Construction (Flush Mount)
- Overburden and Bedrock Monitoring Well Construction (Stick Up)
- Packer Test Report Form
- Photo Log
- Pre-Mob ChecklistPrivate Water Supply Sample Log
- Private Well Sampling Log
- Pumping Test Data Sheet
- QA Sample Log Sheet
- Soil & Sediment Sample Log Sheet
- Surface Water Sample Log Sheet
- Tailgate Safety Meeting Attendance Form
- Test Pit Log
- Tetra Tech Certificate of Conformance (Monitoring Well Materials)

ATTACHMENT A

TYPICAL SITE LOGBOOK ENTRY (EXAMPLE)

START TIME: _____ DATE: _____

SITE LEADER: _____

PERSONNEL:

NUS	DRILLER	SITE VISITORS
_____	_____	_____
_____	_____	_____
_____	_____	_____

WEATHER: Clear, 68°F, 2-5 mph wind from SE

ACTIVITIES:

1. Steam Jenney and fire hoses were set up.
2. Drilling activities at well ____ resumes. Rig geologist was _____. See Geologist's Notebook, No. 1, page 29-30, for details of drilling activity. Sample No. 123-21-S4 collected; see sample logbook, page 42. Drilling activities completed at 11:50 and a 4-inch stainless steel well installed. See Geologist's Notebook, No. 1, page 31, and well construction details for well _____.
3. Drilling rig No. 2 steam-cleaned at decontamination pit. Then set up at location of well _____.
4. Well _____ drilled. Rig geologist was _____. See Geologist's Notebook, No. 2, page ____ for details of drilling activities. Sample numbers 123-22-S1, 123-22-S2, and 123-22-S3 collected; see sample logbook, pages 43, 44, and 45.
5. Well _____ was developed. Seven 55-gallon drums were filled in the flushing stage. The well was then pumped using the pitcher pump for 1 hour. At the end of the hour, water pumped from well was "sand free."
6. EPA remedial project manager arrives on site at 14:25 hours.
7. Large dump truck arrives at 14:45 and is steam-cleaned. Backhoe and dump truck set up over test pit _____.
8. Test pit _____ dug with cuttings placed in dump truck. Rig geologist was _____. See Geologist's Notebook, No. 1, page 32, for details of test pit activities. Test pit subsequently filled. No samples taken for chemical analysis. Due to shallow groundwater table, filling in of test pit ___ resulted in a very soft and wet area. A mound was developed and the area roped off.
9. Express carrier picked up samples (see Sample Logbook, pages 42 through 45) at 17:50 hours. Site activities terminated at 18:22 hours. All personnel off site, gate locked.

_____

Field Operations Leader

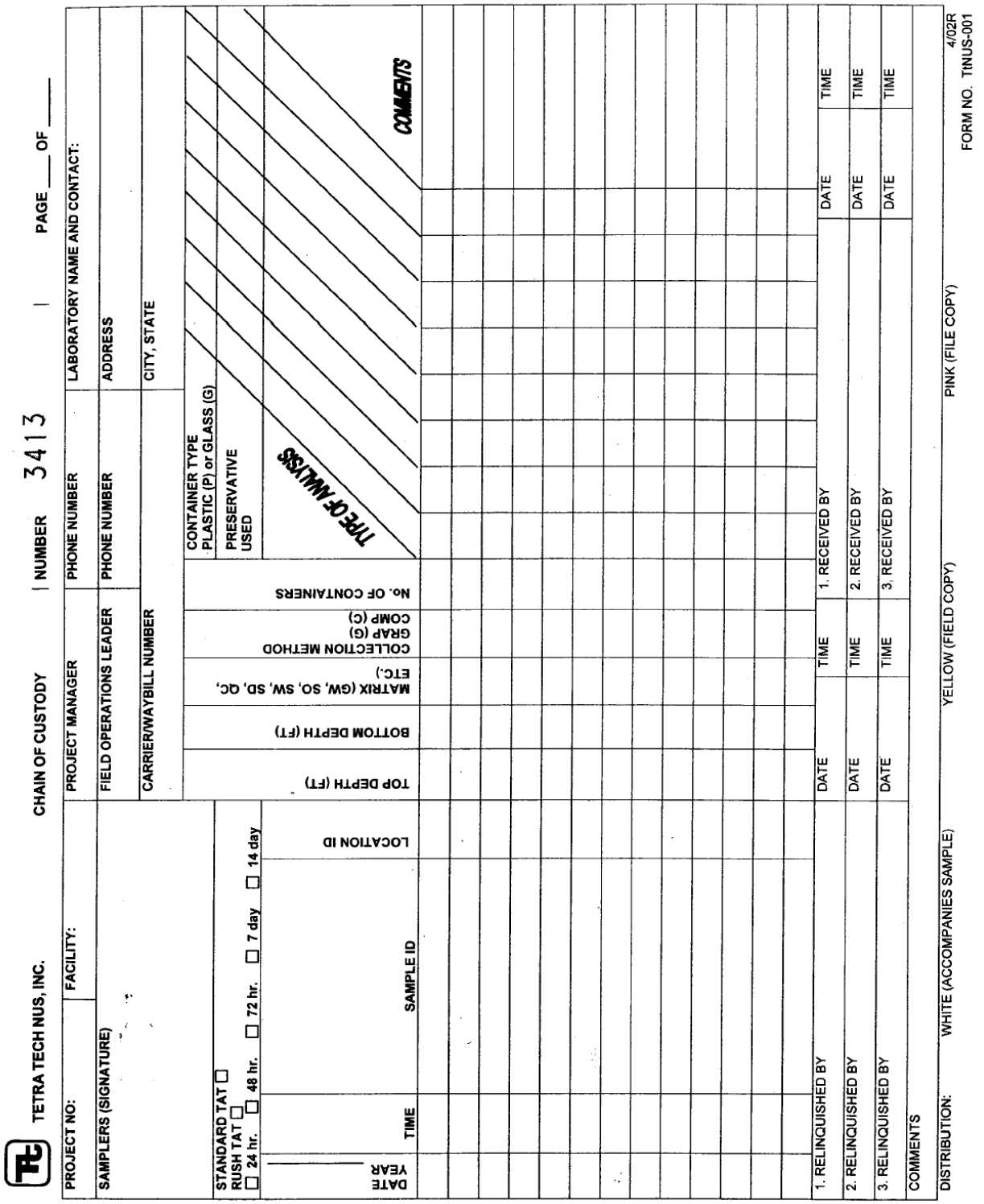
ATTACHMENT B

SAMPLE LABEL (EXAMPLE)

Tetra Tech NUS, Inc. 661 Andersen Drive Pittsburgh, 15220 (412)921-7090	**Project:** **Site:** **Location:**	
Sample No:		**Matrix:**
Date:	**Time:**	**Preserve:**
Analysis:		
Sampled by:	**Laboratory:**	

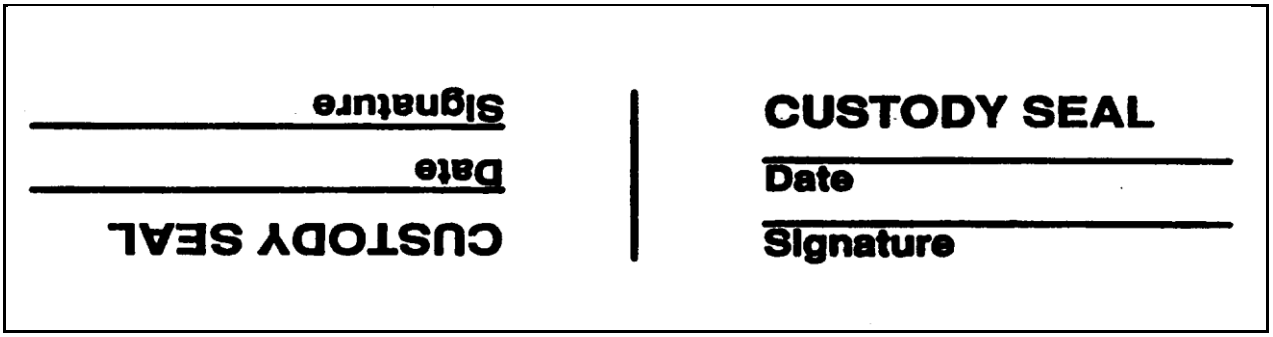
ATTACHMENT C

CHAIN-OF-CUSTODY FORM (EXAMPLE)



ATTACHMENT D

CHAIN-OF-CUSTODY SEAL (EXAMPLE)



TETRA TECH	STANDARD OPERATING PROCEDURE	Number SA-7.1	Page 1 of 17
		Effective Date 04/30/2020	Revision 9
		Applicability Tetra Tech, Inc., EGS Operating Unit	
		Prepared Earth Sciences Department	
Subject DECONTAMINATION OF FIELD EQUIPMENT AND MANAGEMENT OF INVESTIGATION DERIVED WASTE		Approved T. Johnston T. E. Johnston 04/30/2020	

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1.0 PURPOSE

Decontamination is the process of removing, or neutralizing contaminants that have contacted and/or accumulated on equipment and/or personnel. The purpose of this Standard Operating Procedure (SOP) is to protect site personnel, the general public, and the environment while preserving or maintaining sample integrity. It is further intended through this procedure to describe the steps necessary for proper decontamination to prevent either direct or indirect contamination of drilling equipment, earth-moving equipment, chemical sampling equipment, and analytical equipment. It is also intended through the application of these principles to prevent cross-contamination of the environment.

2.0 SCOPE AND APPLICABILITY

This procedure applies to all equipment used to provide access to/acquire environmental samples that may have become contaminated through direct contact with contaminated media including air, water, and soil. This equipment includes drilling and heavy equipment and chemical sampling and field analytical equipment. Where technologically and economically feasible, single-use sealed disposable equipment will be employed to minimize the potential for cross-contamination. This SOP also provides general reference information on the control of contaminated materials.

Decontamination methods and equipment requirements may differ from one project to another. General equipment items are specified in Section 6.0, but project-specific equipment must be obtained to address the project-specific decontamination procedures presented in Section 7.0 and applicable subsections.

3.0 GLOSSARY

Alconox/Liquinox/Luminox – Phosphate-free laboratory-grade detergent products by Alconox, Inc.

Chemical/Hygienic/Sanitizing wipes – These types of devices offer a portable solution when there are no sources of water and soap to allow hands, face, or equipment to be cleaned of gross contamination. Some of these wipes and solution based detergents are chemical specific such as D-Lead or D-Wipes are used to remove lead and other heavy metals from hands and face.

Decontamination Solution – A solution selected/identified in the Health and Safety Plan (HASP), Project-Specific Quality Assurance Project Plan (QAPP), or other governing document. The solution is selected and employed as directed by the project chemist/health and safety professional as it has been shown to be most effective in the removal, neutralization, and/or stabilization of the contaminants in question without creating unwanted byproducts.

Deionized Water (DI) – This is water that has been treated by passing it through a deionizing resin column. This water may also pass through additional filtering media to attain various levels of analyte-free status. The DI water should meet College of American Pathologists (CAP) and National Committee for Clinical Laboratory Standards (NCCLS) specifications for reagent-grade Type I water.

Dry decontamination – This method physically removes contaminates from the surface through the use of High Efficiency Particulate Filter vacuums employed for lead and asbestos operations.

Potable Water – Tap water from any municipal water treatment system. Use of an untreated potable water supply is not an acceptable substitute for tap water.

Pressure Washing – Process employing a high-pressure pump and nozzle configuration to create a high-pressure spray of potable water. High-pressure spray is employed to remove solids from the surface of equipment. This process can be coupled with wash solutions or used solely as a pressure washer to physically remove surface artifacts.

Solvent – A solvent is a liquid that is able to dissolve other substances, or solutes, (gases, liquids and/or solids) to form a solution. A solution is a homogeneous mixture of solvent and solute. Water is often referred to as a universal solvent because of its ability to dissolve many different types of substances. The category "solvent" includes but is not limited to pesticide-grade isopropanol; methanol; acetone; and hexane. These solvents may be required for particular projects or for a particular purpose (e.g., removal of concentrated waste) and **must be justified** in the project planning documents. **Methanol, acetone, hexane and isopropanol are highly flammable**. For example, it may be necessary to use hexane when analyzing for trace levels of pesticides, polychlorinated biphenyls (PCBs), or fuels. In addition, because many of these solvents are not miscible in water, the equipment should be air dried prior to use. Solvents should not be used on polyvinyl chloride (PVC) equipment or well construction materials. Acidic and caustic materials may also serve as solutes and when mixed with water may be used for the purpose of decontamination. A non-flammable option is available – see "Selection of Detergent" at the end of Section 6.0.

Steam Pressure Washing – A cleaning method employing a high-pressure spray of heated potable water (steam) to remove various organic/inorganic chemicals from equipment. This method is useful for removing organic substances such as pesticides, PCBs, oils, and fuels.

4.0 RESPONSIBILITIES AND PERSONNEL QUALIFICATIONS

Project Manager (PM) – Responsible for all aspects of project implementation and direction. Responsible for ensuring that all field activities are conducted in accordance with approved project plan(s) and requirements.

Decontamination Personnel – Individuals assigned the task of decontamination. It is the responsibility of these individuals to understand the use and application of the decontamination process, including:

- A working knowledge of the use of all equipment involved (pressure washers, steam cleaners, etc.).
- Hazards associated with the solutions used for this purpose.
- The monitoring of the decontamination process to ensure that it is working properly. This is accomplished through:
    - Visual evaluation (i.e., answering the question: "Does it appear to be clean?"),
    - Employing monitoring instruments and scanning of decontaminated items to determine if off-gassing indicates the presence of contaminants , and/or
    - Through the collection of equipment rinsate blanks to verify contaminant removal.
    - Focusing on tools that contact sampled media as well as areas on those tools that trap dirt and contaminated water.
    - Diligent use of PPE and self-decontamination to minimize the potential for cross contamination.
- Replace wash waters often to minimize the collection of contaminants.

Field Operations Leader (FOL) – Responsible for the implementation of project-specific planning documents. This includes on-site verification that all field activities are performed in compliance with approved SOPs or as otherwise dictated by the approved project plan(s). The FOL is also responsible for the completion and accuracy of all field documentation as well as assigning or evaluating the decontamination process. Additionally, through concurrence with the PM, the FOL may:

- Initiate site investigation/remediation efforts in the area where the least amount of contamination is reported thereby minimizing the potential for cross contamination.
- Use disposable devices to collect sample aliquots to minimize cross contamination that might otherwise occur through the use of reusable items.

Site Safety and Health Officer (SSHO) – Exercises shared responsibility with the FOL concerning decontamination effectiveness. All equipment arriving on site (as part of the equipment inspection), leaving the site, and moving between locations is required to go through a decontamination process and evaluation. This is accomplished through visual examination and/or instrument screening, where contaminants can be detected to determine the effectiveness of the decontamination process. Improper or incomplete decontamination is sufficient to restrict equipment from entering the site, exiting the site, or moving to a new location on the site until the objectives are successfully completed.

General personnel qualifications for decontamination activities include the following:

- Occupational Safety and Health Administration (OSHA) 40-hour General Site Worker and/or applicable 8-Hour General Site Worker Refresher training.

- Capability of performing field work under the expected physical (heavy lifting and moving auger flights and drill rods) and environmental (i.e., weather – heat and/or cold extremes) conditions.

- Familiarity with appropriate decontamination procedures. Throughout this SOP, the procedures remove gross contamination from top down, outside in, then moving to what may be described as “polishing stages” where solvents including laboratory grade isopropanol and deionized water are used to remove residual levels of contaminants.

5.0 HEALTH AND SAFETY

In addition to the health and safety issues and reminders specified in subsections of this SOP, the following considerations and requirements must be observed as SOPs for field equipment decontamination activities:

- If any solvents or hazardous chemicals (e.g., isopropyl alcohol) are to be used in equipment decontamination activities, the FOL must first obtain the manufacturer’s/supplier’s Safety Data Sheet (SDS) and assure that it is reviewed by all users (prior to its use), added to the site Hazardous Chemical Inventory, and maintained on site as part of the project Hazard Communication Program.

- Review and observe specific health and safety requirements (e.g., personal protective equipment [PPE]) specified in the project-specific HASP (or equivalent) for this activity.

6.0 EQUIPMENT LIST

- Wood for decontamination pad construction, when applicable (see Section 7.1).

- Tools for constructing decontamination pad frame, when applicable (see Section 7.1).

- Plastic sheeting or comparable material to cover decontamination pad frame, when applicable (see Section 7.1).

- Wash/drying racks for auger flights and drill/drive rods, when applicable (see Section 7.2).

- PPE as specified in the project HASP (or equivalent).

- Soap and water for physical washing and rinsing.
- Deionized water for final rinsing.
- Solvents (e.g., pesticide-grade isopropanol) for rinsing (see applicable portions of Section 7.2).
- Tubs, buckets, etc. for containerizing rinse water (see applicable portions of Section 7.2).
- Sample bottles for collecting equipment rinsate blanks (see Section 7.2).
- Calibrated photoionization detector (PID) or flame ionization detector (FID) to monitor decontaminated equipment for organic vapors generated through the existence of residual contamination or the presence of decontamination solvent remaining after the piece was rinsed.
- Aluminum foil or clear clean plastic bag for covering cleaned equipment (see applicable portions of Section 7.2).
- Paper towels or cloths for wiping.
- Brushes, scrapers, or other hand tools useful for removing solid materials from equipment.
- Clear plastic wrap for covering or wrapping large decontaminated equipment items (see Section 7.2.2).
- Drum-moving equipment for moving filled waste drums (optional) (see Section 7.3).
- Drum labels for waste drums (see Attachment A).

Selection of Detergent

A non-phosphate detergent shall be used when a detergent rinse is required. For environmental sampling field decontamination, three options are available and selection depends on the anticipated contaminants. *Alconox* powder is suitable for general purposes. *Liquinox is a traditional anionic laboratory detergent, also useful for general cleaning and where there is a concern for the stability of the cleaned items in harsher cleaners. Luminox is a specialized detergent designed to remove oils and organic contamination, and is best used after an Alconox rinse in lieu of a solvent rinse when cleaning equipment for trace contaminant sampling.*

If the equipment being cleaned is not highly soiled, and residual trace organics are the primary concern, Luminox may be used alone. Liquinox detergent is the better choice as a sole cleaning agent for field sampling equipment because it is a powerful emulsifier.

CAUTION

Do not use Liquinox when collecting samples for 1,4-dioxane analysis as it may contain trace levels of 1,4-dioxane.
Do not use Luminox when collecting samples for PFAS or 1,4-dioxane analysis as it has not been demonstrated to be PFAS- or 1,4-dioxane-free.

7.0 PROCEDURES

The process of decontamination is accomplished through the removal of contaminants or neutralization of contaminants. To accomplish this activity, preparation is required including site preparation, equipment selection, and evaluation of the decontamination requirements and processes. Site contaminant types, concentrations, and media types are primary drivers in the selection of the types of decontamination and where it will be conducted. For purposes of this SOP, discussion is limited to decontamination procedures for general environmental investigations.

Decontamination processes will be performed at the location(s) specified in project-specific planning documents. Typical decontamination locations include the following:

- Temporary decontamination pads/facilities
- Sample locations
- Centralized decontamination pad/facilities
- Combination of some or all of the above

The following discussion includes general considerations for the decontamination process. Specific construction and implementation procedures will be as specified in the project-specific planning documents and/or may be as dictated by site-specific conditions as long as the intent of the requirements in the planning documents is met. This intent is to contain any residual fluids and solids generated through the decontamination process.

7.1 DECONTAMINATION PAD DESIGN/CONSTRUCTION CONSIDERATIONS

7.1.1 Temporary Decontamination Pads

Temporary decontamination pads may be constructed at satellite locations within the site area in support of temporary work areas. These structures are generally constructed to support the decontamination of heavy equipment such as drill rigs and earth-moving equipment but can be and are generally employed for smaller articles (auger flights, drill rods, split spoons, etc.).

The purpose of the decontamination pad is to contain wash waters and potentially contaminated soil generated during decontamination procedures. Therefore, construction of these pads should take into account the following considerations:

- Site location – Establish the decontamination site far enough from the work site to maximize decontamination effectiveness while minimizing travel distance. The location of the decontamination site shall be selected to provide, in the judgment of the FOL or his/her designee, compliance with as many of the following characteristics as practicable:

  - Away from pedestrian/vehicle thoroughfares.

  - Avoidance of areas where control/custody cannot be maintained.

  - Avoidance of areas where potential releases of contaminated media or decontamination fluids may be compounded through access to storm water transport systems, streams, or other potentially sensitive areas.

  - Avoidance of potentially contaminated areas.

  - Avoidance of areas too close to the ongoing operation, where cross-contamination may occur.

The selected decontamination site should include the following, where possible:

- Areas where potable water and electricity are provided.

> ***SAFETY REMINDER***
> Use only electrical power sources and conduits/wires, either hard-wired or portable, that are:
>
> - Routed through a Ground Fault Circuit Interrupter (GFCI).
> - In good condition (no physical damage), rated for the intended energy load, and designated for outdoor use.

- Areas where support activities such as removing decontamination waters, soil, and sediment are possible without entering an active exclusion zone.

- Areas that offer sufficient size to carry out the specific decontamination sequence.

- Decontamination pad (decontamination pad) – Construct the decontamination pad to meet the following characteristics:

  - Size – The size of the pad should be sufficient to accept the equipment to be decontaminated as well as permitting free movement around the equipment by the personnel conducting the decontamination. The size of the decontamination pad should permit these movements utilizing pressure/steam washer wands and hoses and minimizing splash due to work in close quarters.

  - Slope – An adequate slope should be constructed to permit the collection of water and potentially contaminated soil within a trough or sump constructed at one end. The collection point for wash waters should be of adequate distance that the decontamination workers do not have to walk through the wash waters while completing their tasks. Because the pad will be sloped, place a light coating of sand over the plastic to minimize potential slips and falls. See the text about liners below. When preparing the pad, remove sticks, roots, stones, and debris that could puncture the liner. The area should be lightly graded and possibly covered with sand to minimize the possibility of puncture.

  - Sidewalls – The sidewalls shall be at least 6 inches in height (or as high as possible if 6 inches is not achievable) to provide adequate containment for wash waters and soil. If splash represents a potential problem, splash guards should be constructed to control overspray. Sidewalls may be constructed of wood, inflatables, sand bags, etc. to permit containment. Splash guards are typically wood frames with plastic sheeting to control overspray.

  - Liner – Depending on the types of equipment and decontamination method to be used, the liner should be of sufficient thickness to provide a puncture-resistant barrier between the decontamination operation and the unprotected environment. Care should be taken to examine the surface area prior to placing the liner to remove sharp articles (sticks, stones, debris) that could puncture the liner. Liners are intended to form an impermeable barrier. The thickness may vary from a minimum recommended thickness of 10 mil to 30 mil. The desired thickness may be achieved through layering materials of lighter construction. It should be noted that various materials (rubber, polyethylene sheeting) become slippery when wet. To minimize this potential hazard associated with a sloped liner, a light coating of sand shall be applied to provide traction as necessary.
  - Wash/drying racks – Auger flights, drill/drive rods, and similar equipment require racks positioned off of the ground to permit these articles to be washed, drained, and dried while secured from falling during this process.

For decontamination of direct-push technology (DPT) equipment, the pad may be as simple as a mortar tub containing buckets of soapy water for washing and an empty bucket to capture rinse waters. Decontamination may be conducted at the rear of the rig to permit rapid tool exchange, because dual tube or Macro-Core Samplers and drive rods require little space for decontamination

- Maintenance – Maintain the decontamination area by:

  - Periodically clearing the work area of standing water, soil, and debris, and coiling hoses to aid in eliminating slip, trip, and fall hazards. In addition, these articles will reduce potential backsplash and cross-contamination.

  - Regularly changing the decontamination fluids to ensure proper cleaning and prevent cross-contamination.

  - PPE – Periodically evaluate the condition of, and maintain the decontamination equipment, including regular cleaning of face shields and safety glasses. This is critical to ensuring the safety of decontamination personnel and the integrity of the decontamination process, and it will ensure that equipment is functioning properly.

7.1.2 Decontamination Activities at Drill Rigs/DPT Units

7.1.2.1 During subsurface sampling activities including drilling and DPT activities, conduct decontamination of drive rods, Macro Core Samplers, split spoons, etc. at an area adjacent to the operation. Decontamination is generally accomplished using a soap/water wash and rinse utilizing buckets and brushes. This area requires sufficient preparation to accomplish the decontamination objectives.

7.1.2.2 Place buckets within mortar tubs or similar secondary containment tubs to prevent splash and spills from reaching unprotected environmental media.

7.1.2.3 Use drying racks where possible to permit parts to dry and be evaluated prior to use/reuse. Methodology regarding this activity is provided in Section 7.2.

7.1.3 Decontamination Activities at Remote Sample Locations

7.1.3.1 When sampling at remote locations, evacuate sampling equipment such as trowels and pumps/tubing of potentially contaminated media to the extent possible.

7.1.3.2 Wrap this equipment in plastic for transport to the temporary/centralized decontamination location for final cleaning and disposition.

7.1.3.3 Flush and clean single-use equipment such as disposable trowels, tubing, and surgeon's gloves to allow disposal of this equipment after visible soil and water remnants have been removed.

7.2 EQUIPMENT DECONTAMINATION PROCEDURES

The following represents procedures to be employed for the decontamination of equipment that may have contacted and/or accumulated contamination through site investigation activities.

SAFETY REMINDER

Remember when handling powered equipment to disconnect the power source and render the equipment to a zero energy state (both potential and kinetic) before opening valves, disconnecting lines, etc.

7.2.1 Monitoring Well Sampling Equipment

7.2.1.1 Groundwater sampling equipment – This includes pumps inserted into monitoring wells such as bladder pumps, Whale pumps, and Redi-Flo pumps and reusable bailers, etc.

1. Evacuate to the extent possible, any purge water within the pump/bailer.

2. Scrub the external components using soap and water and/or steam clean* the outside of the pump/bailer and, if applicable, the pump tubing.

3. Insert the pump and tubing/bailer into a clean container of soapy water. Pump/run a sufficient amount of soapy water through the pump/bailer to flush out any residual well water. After the pump is flushed, circulate soapy water through the pump to ensure that the internal components are thoroughly flushed.

4. Remove the pump and tubing/bailer from the container.

5. Rinse external pump components using tap water.

6. Insert the pump and tubing/bailer into a clean container of tap water. Pump/run a sufficient amount of tap water through the pump/bailer to evacuate all of the soapy water (until clear).

> ***CAUTION***
> Do not rinse polyethylene (PE), PVC, and associated tubing with solvents – These are considered single use items and can be removed and disposed of after use. Use the procedures defined in the project-specific planning documents. If they are not defined, contact the FOL for guidance. The solvent rinse described in Step 7 should be omitted and tubing or plastic components replaced.

7. If groundwater contains or is suspected to contain oil, grease, PAHs, PCBs, or other hard to remove organic materials, rinse the equipment to be cleaned with pesticide-grade isopropanol. If groundwater contains these contaminants employ single use sampling apparatus that can be wash, rinsed, and disposed of after use.

8. Pass deionized water through the hose to flush out the tap water and solvent residue as applicable.

9. Drain residual deionized water to the extent possible.

10. Allow components of the equipment to air dry.

11. For bladder pumps, disassemble the pump and wash the internal components with soap and water, then rinse with tap water, isopropanol, and deionized water and allow to dry. After the parts are dry, conduct a visual inspection and a monitoring instrument scan to ensure that potential contaminants and all decontamination solvent have been removed. Collect an equipment rinsate blank in accordance with the project-specific planning documents to ensure that the decontamination process is functioning as intended. The typical frequency of collection for equipment rinsate blanks is 1 per 20 field samples. In addition, wipe samples or field tests such as ultraviolet light may be used.

12. Wrap pump/bailer in aluminum foil or a clear clean plastic bag for storage.

7.2.1.2 Electronic Water Level Indicators/Sounders/Tapes

During water level measurements, rinsing the extracted tape and probe with deionized water and wiping the surface of the extracted tape between locations is acceptable. However, periodic full decontamination should be conducted as follows:

1. Wash with soap and water
2. Rinse with tap water
3. Rinse with deionized water

In situations where oil, grease, free product, other hard to remove materials are encountered, probes and exposed tapes should be washed in hot soapy water and wiped with a rag or towel. If probes or tapes cannot be satisfactorily decontaminated (they are still stained, discolored, etc.), they should be removed from service.

7.2.1.3 Miscellaneous Equipment

Miscellaneous equipment including analytical equipment (water quality testing equipment) shall be cleaned per manufacturers' instructions. This generally includes wiping the sensor housing and rinsing with tap and deionized water.

Coolers/shipping containers employed to ship samples are received from the laboratory in a variety of conditions including marginal to extremely poor. Coolers shall be evaluated prior to use for the following:

- Structural integrity – Coolers missing handles or having breaks in the outer housing should be removed and not used. Notify the laboratory that the risk of shipping samples in the cooler(s) provided is too great and request a replacement unit.

- Cleanliness – As per protocol, only volatile organic samples are accompanied by a trip blank. If a cooler's cleanliness is in question (visibly dirty/stained) or if there are noticeable odors, the cooler should be decontaminated prior to use as follows:

    1. Wash with soap and water
    2. Rinse with tap water
    3. Dry

If these measures fail to clean the cooler to an acceptable level, remove the unit from use as a shipping container and ask the cooler provider (e.g., the analytical laboratory) to provide a replacement unit.

7.2.2 Downhole Drilling Equipment

This includes any portion of the drill rig that is over the borehole, including auger flights, drill stems, rods, and associated tooling that would extend over the borehole. The following procedure is to be employed prior to initiating the drilling/sampling activity, then between locations:

1. Remove loose soil using shovels, scrapers, etc.

2. Through a combination of scrubbing using soap and water and/or steam cleaning or pressure washing, remove visible dirt/soil from the equipment being decontaminated.

CAUTION

In Step 3, do not rinse PE, PVC, and associated tubing with solvents. The appropriate procedures should be defined within the project-specific planning documents. If they are not defined, contact the FOL for guidance. The solvent rinse described in Step 4 may be omitted if groundwater does not contain oil, grease, PAHs, PCBs, or other hard to remove organic materials.

3. Rinse the equipment with tap water, where applicable (steam cleaning and pressure washing incorporate rinsing as part of the process).

4. If the equipment has directly or indirectly contacted contaminated sample media and is known or suspected of being contaminated with oil, grease, PAHs, PCBs, or other hard to remove organic materials, rinse equipment with pesticide-grade isopropanol

   ☞**NOTE***: Steam cleaning does the best job removing contaminants especially the more volatile components. Not only is the water pressure sufficient to remove caked on soils, the heat associated with the steam is very effective in removing contaminants (even those more stubborn ones such as PAHs and PCBs). Steam cleaning units, however, are more dangerous to use due to pressurized steam and water. Care must be taken to avoid thermal burns by ensuring all guards are in place and gloves are employed. When using steam, the items that have been washed dry relatively quickly because heated water and steam are applied.*

5. To the extent possible, allow components to air dry.

6. If the decontaminated equipment is to be used immediately after decontamination, screen it with a calibrated photoionization detector (PID)/flame ionization detector (FID) to ensure that all contaminants and possible decontamination solvents (if they were used) have been adequately removed.

7. Wrap or cover equipment in clear plastic until it is time to be used.

SAFETY REMINDER

Even when equipment is disconnected from power sources, dangers such as the following may persist:

Falls - An auger flight standing on its end may fall and injure someone. Secure all loose articles to prevent heavy articles from falling onto people or equipment.

Burns - Steam cleaner water is heated to more than 212 ˚F and exhibits thermal energy that can cause burns. Prevent contact of skin with hot water or surfaces.

High water pressure - Pressure washer discharge can have 2,000 to 4,000 psi of water pressure. Water under this amount of pressure can rupture skin and other human tissues. Water at 4,000 psi exiting a 0˚ tip can be dangerous because of its relatively high cutting power. The exit velocity and cutting power of the water are reduced when exiting a 15-25˚ fan tip, but damage to soft tissues is still possible.

In general, follow the rules below to avoid injury, equipment damage, or incomplete decontamination:

1. Read the operating manual and follow the manufacturers' recommended safety practices before operating pressure washers and steam cleaners.

2. Never point the pressure washer or steam cleaner at another person or use to clean your boots or other parts of your body. Water lacerations and burns may appear to be minor at first but can be life threatening. Do not attempt to hold small parts in your hand while washing them with high- temperature or high-pressure water.

3. Always wear PPE as specified in the HASP (or equivalent) such as:

   - Hard hat, safety glasses, splash shield, impermeable apron or splash suit, and hearing protection. Remember that excessive noise is a hazard when operating gas-powered engines and electrically driven pressure washers. PPE will be identified in your project specific planning documents.

4. Inspect each device before use. An inspection checklist will be provided in the project-specific planning documents. If it is a rented device, safety measures are typically provided by the vendor. In all cases, if you are not familiar with the operation of a pressure washer/steam cleaner, do not operate it until you obtain and thoroughly review operating instructions and recommended safety practices.

5. Do not modify equipment unless the manufacturer has approved the modifications.

7.2.3 Soil/Sediment Sampling Equipment

This section applies to soil sampling equipment including but not limited to hand augers, stainless steel trowels/spoons, bowls, dredges, scoops, split spoons, Macro Core samplers, etc.

1. Remove all loose soil from the equipment through manual means.

2. Through a combination of scrubbing using soap and water and/or steam cleaning or pressure washing, remove visible dirt/soil from the equipment.

3. Rinse the equipment with tap water.

4. If the equipment is contaminated or suspected to be contaminated with oil, grease, PAHs, PCBs, or other hard to remove organic materials, rinse the equipment with pesticide-grade isopropanol followed by steam cleaning. Where cleanliness is considered suspect, dispose and replace the suspect item.

5. Rinse the equipment with deionized water.

6. To the extent possible, allow components to air dry.

7. If the equipment is to be used immediately after decontamination, screen it with a calibrated PID/FID to ensure that all solvents (if they were used) and trace contaminants have been adequately removed.

8. After the equipment has dried, wrap it in aluminum foil for storage until use.

Dredges employed in sediment sampling are typically decontaminated as follows:

- Remove the sediment sample from the sampling device. If sufficient surface water exists remove visible sediments by dunking within the water from where the sediment sample was obtained. Because of this always work from downstream to upstream

- Extract the dredge and wash it in soap and water per the project-specific planning documents.

CAUTION

When handling dredges, the primary safety concern is trapping fingers or extremities in the larger dredge samplers within the jaws or pinch points of the mechanical jaws. Keep hands, fingers, and extremities away from these pinch and compression points. Either handle the device by the rope or preferably lock the jaws in place to control the potential for closing during maintenance and/or cleaning.

☞**NOTE***: In all cases when cleaning stainless steel sampling equipment minimize if not eliminate the use of acids as this will leach certain metals (e.g., chromium, nickel, iron, and antimony) and may result in sample contamination. Use soap and water wash and rinse and, where necessary, steam clean to remove stubborn contaminants.*

7.3 CONTACT WASTE/MATERIALS

During the course of field investigations, disposable/single-use equipment becomes contaminated. These items include tubing, trowels, PPE (gloves, overboots, splash suits, etc.), and broken sample containers.

With the exception of the broken glass, single-use articles should be cleaned (washed and rinsed) of visible materials and disposed as normal refuse. The exception to this rule is that extremely soiled materials that cannot be cleaned shall be containerized for disposal in accordance with project planning documents.

NOTE

Requirements for waste storage may differ from one facility to the next. Facility-specific directions for waste storage areas will be provided in project-specific documents, or separate direction will be provided by the Project Manager.

1. Assume that all investigation-derived waste (IDW) generated from decontamination activities contains the hazardous chemicals associated with the site unless there are analytical or other data to the contrary. Waste solution volumes could vary from a few gallons to several hundred gallons in cases where large equipment required cleaning.

2. Where possible, use filtering systems to extend the use of water within a closed system wash unit to recycle water and to reduce possible waste amounts.

NOTE

Containerized waste rinse solutions are best stored in 55-gallon drums (or equivalent containers); frac tanks, or tankers that can be sealed until ultimate disposal at an approved facility.

3. Properly label waste storage containers (see Attachment A).

4. Ensure that the IDW storage area is configured to meet the following specifications to permit access to the containers and to conduct spill/leak monitoring, sampling, and extraction when the disposal route is determined:

- Enclose areas accessible by the general public using construction fencing and signs.
- Store materials in 55-gallon drums on pallets with four (or fewer) drums per pallet.
- Maintain the retaining bolt and label on the outside of storage containers where readily visible.

- Provide at least 4 feet of room between each row of pallets to allow access to containers for sampling, drum removal, and spill response.

- As directed in project-specific planning documents, maintain an IDW Inventory List and provide the list to the site Point of Contact at the termination of each shift.

- Maintain spill response equipment at the IDW storage area in case it is required for immediate access.

- Where possible, use equipment for moving containers. Where not possible, obtain help to manipulate containers.

CAUTION

Each container of water or soil can weigh up to 750 pounds, constituting a safety hazard. To minimize hazards such as this as well as spillage and potential expansion due to freezing, limit the filling of drums and temporary containers to 80 percent of capacity. These containers should be managed with appropriate manual equipment like drum dollies or, preferably, powered equipment like drum grappler on forklift truck. See the governing health and safety documents for safe management of IDW.

Airborne Contaminant Exposure

To minimize potential airborne contaminant exposure, close and seal all containers transported inside the sampling support vehicle.
Periodically, decontaminate temporary portable containers to minimize off-gassing inside the vehicle. When working at a well or storage container always work from an upwind position.

7.4 DECONTAMINATION EVALUATION

Upon decontamination of equipment, determine the effectiveness of the decontamination process in the following manner:

- Visual evaluation – Visually inspect equipment to verify the removal of particulate matter to ensure that the washing/rinsing process is working as intended. Pay particular attention to points where soils and sediments may become trapped, such as pipe threads, and other small/narrow openings. It is often necessary to combine multiple types of decontamination methods to ensure the decontamination is adequate and will ultimately yield a clean equipment rinsate blank.

- Instrument Screening – Use a properly calibrated PID/FID to evaluate the presence of site contaminants and solvents used in the cleaning process. The air intake of the instrument shall be passed over the article to be evaluated. Avoid placing the instrument probe into residual waters. A PID/FID reading greater than the daily established background level requires a repeat of the decontamination process, followed by rescreening with the PID/FID. This sequence must be repeated until no instrument readings greater than the daily established background level are observed. It should be noted that the instrument scan is only viable if the contaminants are detectable within the instrument's capabilities.

NOTE

When required by project-specific planning documents, collection of equipment rinsate blanks (see next step) shall be completed without exception unless approval to not collect these samples is obtained from the Project Manager.

- Collection of Equipment Rinsate Blanks – Collect equipment rinsate blanks to evaluate the decontamination procedure representing different equipment types (e.g., pumps versus drilling equipment) and different decontamination processes as follows:

  - Single-use disposable equipment – The number of samples should represent different types of equipment as well as different lot numbers of single-use articles.

  - The collection and the frequency of equipment rinsate blank samples are as follows unless specified differently in the project-specific planning documents:
    - Per decontamination method.
    - Per disposable article/batch number of disposable articles.

NOTE

It is recommended that an initial equipment rinsate blank sample be collected early in the project to ensure that the decontamination process is functioning properly and to avoid using a contaminated batch of single-use articles. It is recommended that a follow-up sample be collected later during the execution of the project to ensure that those conditions do not change.

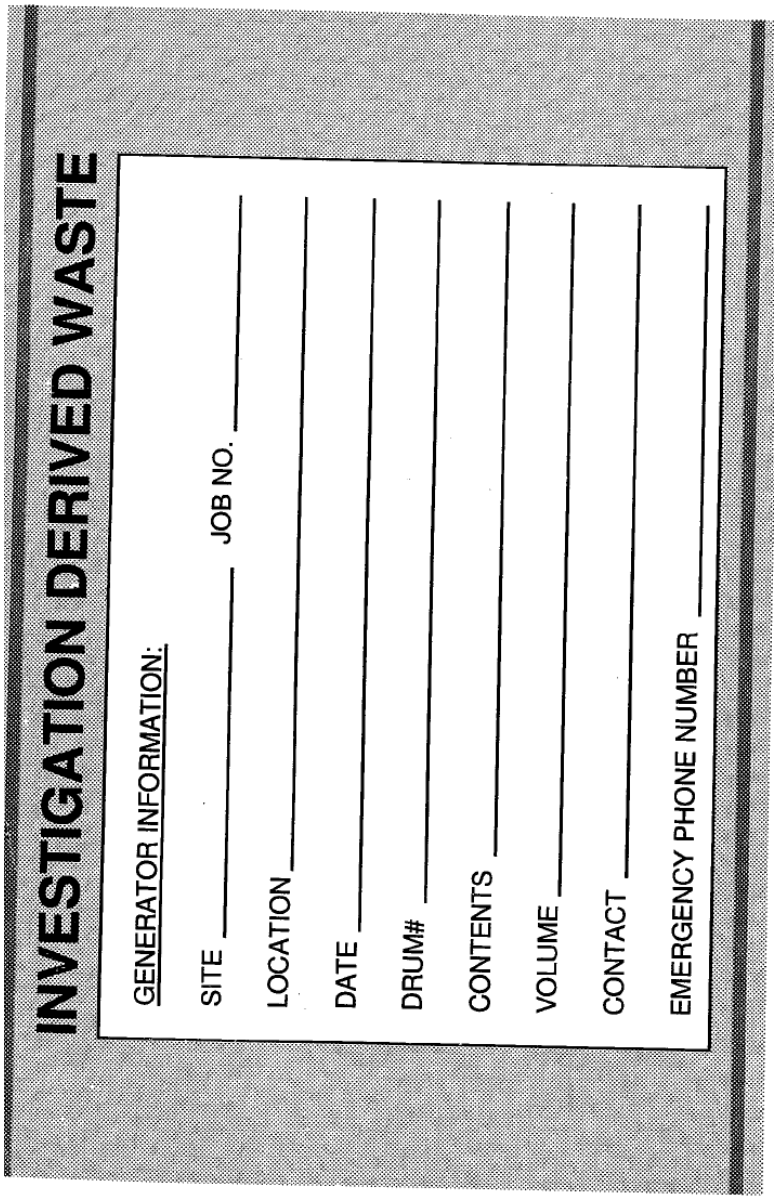
Equipment rinsate blank sample collection may be driven by types of and/or levels of contaminant. Difficult to remove contaminants, oils/greases, some PAHs/PCBs, etc. may also support the collection of additional equipment rinsate blank samples due to the obvious challenges to the decontamination process. This is a field consideration to be determined by the FOL supporting and/or resigning not to collect.

CAUTION

For equipment rinsate blanks, project-specific applications may require use of water certified to be contaminant free. Consult project planning documents or SOPs devoted to sampling for the particular contaminants (e.g., per- and polyfluoroalkyl substances).

ATTACHMENT A

IDW LABEL (EXAMPLE)



ATTACHMENT B, INVESTIGATIVE DERIVED WASTE DRUM/CONTAINER INVENTORY LOG (EXAMPLE)

This attachment should be completed as investigative derived waste is accumulated. An updated inventory should be provided to the site Point of Contact at the end of each 10-day shift. Add additional rows on extra pages, as needed.

Drum/ Container Number #	Drum/ Container Type	Media (Contents)	Location (SWMU and Well #, etc.)	Estimated Volume	Date Filled	Comments
1				( )-Gallons		
2				( )-Gallons		
3				( )-Gallons		
4				( )-Gallons		

Emergency Point of Contact: _____ Phone Number: _____

(Name of Facility) Point of Contact: _____ Phone Number: ( ) _____

Information Point of Contact (Name): _____ Phone Number: _____

Distribution of Inventory Log: Facility Point of Contact, Phone Number: ( ) _____

Fire Dept/Emergency Services Provider, Phone Number: ( ) _____

Comments: _____

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APPENDIX D

LABORATORY ACCREDITATION DOCUMENTATION, IN-HOUSE QUALITY CONTROL LIMITS, AND BACKUP LABORATORY WORKSHEETS

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PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc. has assessed the Laboratory of:

Battelle

141 Longwater Drive, Suite 202, Norwell, MA 02061

(Hereinafter called the Organization) and hereby declares that Organization has met the requirements of ISO/IEC 17025:2017) General Requirements for the competence of Testing and Calibration Laboratories and the United States Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP) requirements identified within the DoD/DOE Quality Systems Manual (DoD/DOE QSM) Version 5.3 May 2019 and is accredited is accordance with the:

United States Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP)

This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system
(as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

Environmental Testing

(As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

Tracy Szerszen
President

Perry Johnson Laboratory Accreditation, Inc. (PJLA)
755 W. Big Beaver, Suite 1325
Troy, Michigan 48084

Initial Accreditation Date:	*Issue Date:*	*Expiration Date:*
November 17, 2016	February 22, 2021	March 31, 2023

Accreditation No:	*Certificate No.:*
91667	L21-123

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: www.pjlabs.com

Certificate of Accreditation: Supplement

ISO/IEC 17025:2017 and DoD-ELAP

Battelle

141 Longwater Drive, Suite 202, Norwell, MA 02061

Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Drinking Water	EPA 533	LC/MS/MS	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)
Drinking Water	EPA 533	LC/MS/MS	9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)
Drinking Water	EPA 533	LC/MS/MS	4,8-dioxa-3H-perfluorononanoic acid (Adona)
Drinking Water	EPA 533	LC/MS/MS	Hexafluoropropylene oxide dimer acid (HFPO-DA)
Drinking Water	EPA 533	LC/MS/MS	Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)
Drinking Water	EPA 533	LC/MS/MS	Perfluoro-n-butanoic Acid (PFBA)
Drinking Water	EPA 533	LC/MS/MS	Perfluoro-1-butanesulfonic Acid (PFBS)
Drinking Water	EPA 533	LC/MS/MS	1H,1H,2H,2H-Perfluorodecane sulfonate (8:2FTS)
Drinking Water	EPA 533	LC/MS/MS	Perfluoro-n-decanoic Acid (PFDA)
Drinking Water	EPA 533	LC/MS/MS	Perfluoro-n-dodecanoic acid (PFDoA)
Drinking Water	EPA 533	LC/MS/MS	Perfluoro(2-ethoxyethane)sulfonic Acid (PFEESA)
Drinking Water	EPA 533	LC/MS/MS	Perfluoro-1-heptanesulfonate (PFHpS)
Drinking Water	EPA 533	LC/MS/MS	Perfluoro-n-heptanoic Acid (PFHpA)
Drinking Water	EPA 533	LC/MS/MS	1H,1H,2H,2H-Perfluorohexane sulfonate (4:2FTS)
Drinking Water	EPA 533	LC/MS/MS	Perfluoro-1-hexanesulfonic Acid (PFHxS)
Drinking Water	EPA 533	LC/MS/MS	Perfluoro-n-hexanoic acid (PFHxA)
Drinking Water	EPA 533	LC/MS/MS	Perfluoro-3-Methoxypropanoic Acid (PFMPA)
Drinking Water	EPA 533	LC/MS/MS	Perfluoro-4-Methoxybutanoic Acid (PFMBA)
Drinking Water	EPA 533	LC/MS/MS	Perfluorononanoic acid (PFNA)
Drinking Water	EPA 533	LC/MS/MS	1H,1H,2H,2H-Perfluorooctane sulfonate (6:2FTS)
Drinking Water	EPA 533	LC/MS/MS	Perfluoro-1-octanesulphonic Acid (PFOS)
Drinking Water	EPA 533	LC/MS/MS	Perfluoro-n-octanoic Acid (PFOA)
Drinking Water	EPA 533	LC/MS/MS	Perfluoro-n-pentanoic acid (PFPeA)
Drinking Water	EPA 533	LC/MS/MS	Sodium perfluoro-1-pentanesulfonate (PFPeS)
Drinking Water	EPA 533	LC/MS/MS	Perfluoro-n-undecanoic acid (PFUnA)
Drinking Water	EPA 537.1.1	LC/MS/MS	4,8-dioxa-3H-perfluorononanoic acid (ADONA)
Drinking Water	EPA 537.1.1	LC/MS/MS	9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)
Drinking Water	EPA 537.1.1	LC/MS/MS	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)
Drinking Water	EPA 537.1.1	LC/MS/MS	Hexafluoropropylene oxide dimer acid (HFPO-DA)

Certificate of Accreditation: Supplement

ISO/IEC 17025:2017 and DoD-ELAP

Battelle

141 Longwater Drive, Suite 202, Norwell, MA 02061

Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Drinking Water	EPA 537.1.1	LC/MS/MS	Perfluoro-n-hexanoic acid (PFHxA)
Drinking Water	EPA 537.1.1	LC/MS/MS	Perfluoro-n-heptanoic Acid (PFHpA)
Drinking Water	EPA 537.1.1	LC/MS/MS	Perfluoro-n-octanoic Acid (PFOA)
Drinking Water	EPA 537.1.1	LC/MS/MS	Perfluorononanoic acid (PFNA)
Drinking Water	EPA 537.1.1	LC/MS/MS	Perfluoro-n-decanoic Acid (PFDA)
Drinking Water	EPA 537.1.1	LC/MS/MS	Perfluoro-n-undecanoic acid (PFUnA)
Drinking Water	EPA 537.1.1	LC/MS/MS	Perfluoro-n-dodecanoic acid (PFDoA)
Drinking Water	EPA 537.1.1	LC/MS/MS	Perfluoro-n-tridecanoic acid (PFTrDA)
Drinking Water	EPA 537.1.1	LC/MS/MS	Perfluoro-n-tetradecanoic acid (PFTeDA)
Drinking Water	EPA 537.1.1	LC/MS/MS	N-methylperfluoro-1-octanesulfonamidoacetic acid (NMeFOSAA)
Drinking Water	EPA 537.1.1	LC/MS/MS	N-ethylperfluoro-octanesulfonamidoacetic acid (NEtFOSAA)
Drinking Water	EPA 537.1.1	LC/MS/MS	Perfluoro-1-butanesulfonic Acid (PFBS)
Drinking Water	EPA 537.1.1	LC/MS/MS	Perfluoro-1-hexanesulfonic Acid (PFHxS)
Drinking Water	EPA 537.1.1	LC/MS/MS	Perfluoro-1-octanesulphonic Acid (PFOS)
Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	3-Perfluoropropyl propanoic Acid (3:3 FTCA)
Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	3-Perfluoropropyl propanoic acid (5:3 FTCA)
Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	3-Perfluoropropyl propanoic acid (7:3 FTCA)
Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	Perfluoro-1-octanesulfonamide (PFOSA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	4,8-dioxa-3H-perfluorononanoic acid (Adona)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9CI-PF3ONS)

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Battelle

141 Longwater Drive, Suite 202, Norwell, MA 02061

Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	Hexafluoropropylene oxide dimer acid (HFPO-DA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	Sodium perfluoro-1-pentanesulfonate (PFPeS)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	Perfluoro-1-nonanesulfonate (PFNS)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	Perfluoro-1-heptanesulfonate (PFHpS)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	N-ethylperfluoro-octanesulfonamidoacetic acid (NEtFOSAA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	1H,1H,2H,2H-Perfluorohexane sulfonate (4:2FTS)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	1H,1H,2H,2H-Perfluorooctane sulfonate (6:2FTS)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	1H,1H,2H,2H-Perfluorodecane sulfonate (8:2FTS)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	Perfluoro-n-butanoic Acid (PFBA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	Perfluoro-n-pentanoic acid (PFPeA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	Perfluoro-n-hexanoic acid (PFHxA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	Perfluoro-n-heptanoic Acid (PFHpA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	Perfluoro-n-octanoic Acid (PFOA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	Perfluorononanoic acid (PFNA)

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Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	Perfluoro-n-decanoic Acid (PFDA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	Perfluoro-n-undecanoic acid (PFUnA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	Perfluoro-n-dodecanoic acid (PFDoA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	Perfluoro-n-tridecanoic acid (PFTrDA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	Perfluoro-n-tetradecanoic acid (PFTeDA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	N-methylperfluoro-1-octanesulfonamidoacetic acid (NMeFOSAA)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	Perfluoro-1-butanesulfonic Acid (PFBS)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	Perfluoro-1-hexanesulfonic Acid (PFHxS)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	Perfluoro-1-octanesulphonic Acid (PFOS)
Aqueous/Solids/Tissues	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	LC/MS/MS	Perfluoro-1-decanesulfonate (PFDS)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',3,3',4,4'-Hexachlorobiphenyl (BZ 128)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',3,3',4,5-Hexachlorobiphenyl (BZ 129)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',3,4,4',5,5'-Heptachlorobiphenyl (BZ 180)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',3,4,4',5',6-Heptachlorobiphenyl (BZ 183)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',3,4,4',5'-Hexachlorobiphenyl (BZ 138)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',3,4,4',6,6'-Heptachlorobiphen yl (BZ 184)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ 187)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',3,4,5'-Pentachlorobiphenyl (BZ 87)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',3,5'-Tetrachlorobiphenyl (BZ 44)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',4,4',5,5'-Hexachlorobiphenyl (BZ 153)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',4,5,5'-Pentachlorobiphenyl (BZ 101)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',4,5'-Tetrachlorobiphenyl (BZ 49)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',5,5'-Tetrachlorobiphenyl (BZ 52)

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Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,2',5-Trichlorobiphenyl (BZ 18)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,3,3',4,4'-Pentachlorobiphenyl (BZ 105)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,3,3',4',6-Pentachlorobiphenyl (BZ 110)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,3',4,4',5-Pentachlorobiphenyl (BZ 118)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,3',4,4'-Tetrachlorobiphenyl (BZ 66)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,4,4'-Trichlorobiphenyl (BZ 28)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,4'-DDD
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,4'-DDE
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,4'-DDT
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	2,4'-Dichlorobiphenyl (BZ 8)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	3,3',4,4',5,5'-Hexachlorobiphenyl (BZ 169)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	3,3',4,4',5-Pentachlorobiphenyl (BZ 126)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	3,3',4,4'-Tetrachlorobiphenyl (BZ 77)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	4,4'-DDD
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	4,4'-DDE
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	4,4'-DDT
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Aldrin
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	alpha-BHC (alpha-Hexachlorocyclohexane)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	alpha-Chlordane
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	beta-BHC (beta-Hexachlorocyclohexane)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Chlorpyrifos
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	cis-Nonachlor
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Decachlorobiphenyl (BZ 209)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	delta-BHC
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Dieldrin
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Endosulfan II
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Endosulfan I
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Endosulfan sulfate
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Endrin
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Endrin aldehyde
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Endrin ketone
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	gamma-Chlordane
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Heptachlor
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Heptachlor epoxide
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Hexachlorobenzene

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Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Methoxychlor
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Mirex
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	Oxychlordane
Aqueous/Solid/Tissue	EPA 8081 MOD	GC-ECD	trans-Nonachlor
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	1,4-Dichlorobenzene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	1-Methylnaphthalene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	1-Methylphenanthrene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ 206)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',4,4',5,5'-Octachlorobiphenyl (BZ 194)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (BZ 207)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',4,4',5,6-Octachlorobiphenyl (BZ 195)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ 170)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',4,4',6,6'-Octachlorobiphenyl (BZ 197)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',4,4',6-Heptachlorobiphenyl (BZ 171)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',4,4'-Hexachlorobiphenyl (BZ 128)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (BZ 208)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',4,5,5',6-Octachlorobiphenyl (BZ 198)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',4,5,5',6'-Octachlorobiphenyl (BZ 199)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',4,5,5'-Heptachlorobiphenyl (BZ 172)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',4,5,6,6'-Octachlorobiphenyl (BZ 200)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',4,5',6,6'-Octachlorobiphenyl (BZ 201)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',4,5,6-Heptachlorobiphenyl (BZ 173)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',4,5,6'-Heptachlorobiphenyl (BZ 174)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',4,5',6-Heptachlorobiphenyl (BZ 175)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',4,5',6'-Heptachlorobiphenyl (BZ 177)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',4,5'-Hexachlorobiphenyl (BZ 130)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',4,6,6'-Heptachlorobiphenyl (BZ 176)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',4,6-Hexachlorobiphenyl (BZ 131)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',4-Pentachlorobiphenyl (BZ 82)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',5,5',6,6'-Octachlorobiphenyl (BZ 202)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',5,5',6-Heptachlorobiphenyl (BZ 178)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',5,6,6'-Heptachlorobiphenyl (BZ 179)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',5,6-Hexachlorobiphenyl (BZ 134)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',5,6'-Hexachlorobiphenyl (BZ 135)

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Battelle

141 Longwater Drive, Suite 202, Norwell, MA 02061

Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',5-Pentachlorobiphenyl (BZ 83)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',6,6'-Hexachlorobiphenyl (BZ 136)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3',6-Pentachlorobiphenyl (BZ 84)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,3'-Tetrachlorobiphenyl (BZ 40)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,4,4',5,5',6-Octachlorobiphenyl (BZ 203)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,4,4',5,5'-Heptachlorobiphenyl (BZ 180)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,4,4',5',6-Heptachlorobiphenyl (BZ 183)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,4,4',5-Hexachlorobiphenyl (BZ 137)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,4,4',5'-Hexachlorobiphenyl (BZ 138)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,4,4',6,6'-Heptachlorobiphenyl (BZ 184)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,4,4',6-Hexachlorobiphenyl (BZ 139)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,4,4',6'-Hexachlorobiphenyl (BZ 140)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,4,4'-Pentachlorobiphenyl (BZ 85)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,4,5,5',6-Heptachlorobiphenyl (BZ 185)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ 187)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,4,5,5'-Hexachlorobiphenyl (BZ 141)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,4',5,5'-Hexachlorobiphenyl (BZ 146)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,4',5,6,6'-Heptachlorobiphenyl (BZ 188)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,4',5',6-Hexachlorobiphenyl (BZ 149)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,4,5',6-Hexachlorobiphenyl (BZ 144)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,4,5'-Pentachlorobiphenyl (BZ 87)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,4',5'-Pentachlorobiphenyl (BZ 97)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,4',6-Pentachlorobiphenyl (BZ 91)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,4-Tetrachlorobiphenyl (BZ 41)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,4'-Tetrachlorobiphenyl (BZ 42)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,5,5',6-Hexachlorobiphenyl (BZ 151)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,5,5'-Pentachlorobiphenyl (BZ 92)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,5',6-Pentachlorobiphenyl (BZ 95)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,5-Tetrachlorobiphenyl (BZ 43)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,5'-Tetrachlorobiphenyl (BZ 44)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,6'-Tetrachlorobiphenyl (BZ 46)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3,6-Tetrachlorobiphenyl (BZ 45)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',3-Trichlorobiphenyl (BZ 16)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',4,4',5,5'-Hexachlorobiphenyl (BZ 153)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',4,4',5,6'-Hexachlorobiphenyl (BZ 154)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',4,4',5-Pentachlorobiphenyl (BZ 99)

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Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',4,4',6,6'-Hexachlorobiphenyl (BZ 155)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',4,4',6-Pentachlorobiphenyl (BZ 100)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',4,4'-Tetrachlorobiphenyl (BZ 47)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',4,5,5'-Pentachlorobiphenyl (BZ 101)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',4,5-Tetrachlorobiphenyl (BZ 48)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',4,5'-Tetrachlorobiphenyl (BZ 49)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',4,6,6'-Pentachlorobiphenyl (BZ 104)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',4,6'-Tetrachlorobiphenyl (BZ 51)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',4,6-Tetrachlorobiphenyl (BZ 50)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',4-Trichlorobiphenyl (BZ 17)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',5,5'-Tetrachlorobiphenyl (BZ 52)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',5,6'-Tetrachlorobiphenyl (BZ 53)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',5-Trichlorobiphenyl (BZ 18)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',6,6'-Tetrachlorobiphenyl (BZ 54)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2',6-Trichlorobiphenyl (BZ 19)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,2'-Dichlorobiphenyl (BZ 4)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3,3',4,4',5,5',6-Octachlorobiphenyl (BZ 205)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3,3',4,4',5,5'-Heptachlorobiphenyl (BZ 189)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3,3',4,4',5,6-Heptachlorobiphenyl (BZ 190)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3,3',4,4',5',6-Heptachlorobiphenyl (BZ 191)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3,3',4,4',5-Hexachlorobiphenyl (BZ 156)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3,3',4,4',5'-Hexachlorobiphenyl (BZ 157)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3,3',4,4',6-Hexachlorobiphenyl (BZ 158)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3,3',4,4'-Pentachlorobiphenyl (BZ 105)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3,3',4',5,5',6-Heptachlorobiphenyl (BZ 193)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3,3',4',5,6-Hexachlorobiphenyl (BZ 163)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3,3',4',5',6-Hexachlorobiphenyl (BZ 164)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3,3',4',6-Pentachlorobiphenyl (BZ 110)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3,3',4'-Tetrachlorobiphenyl (BZ 56)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3',4,4',5,5'-Hexachlorobiphenyl (BZ 167)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3,4,4',5,6-Hexachlorobiphenyl (BZ 166)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3,4,4',5-Pentachlorobiphenyl (BZ 114)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3',4,4',5-Pentachlorobiphenyl (BZ 118)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3',4,4',5'-Pentachlorobiphenyl (BZ 123)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3,4,4',6-Pentachlorobiphenyl (BZ 115)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3,4,4'-Tetrachlorobiphenyl (BZ 60)

Certificate of Accreditation: Supplement

ISO/IEC 17025:2017 and DoD-ELAP

Battelle

141 Longwater Drive, Suite 202, Norwell, MA 02061

Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3',4,4'-Tetrachlorobiphenyl (BZ 66)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3',4',5,5'-Pentachlorobiphenyl (BZ 124)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3',4',5',6-Pentachlorobiphenyl (BZ 125)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3,4',5-Tetrachlorobiphenyl (BZ 63)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3',4,5-Tetrachlorobiphenyl (BZ 67)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3',4',5-Tetrachlorobiphenyl (BZ 70)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3,4',6-Tetrachlorobiphenyl (BZ 64)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3',4',6-Tetrachlorobiphenyl (BZ 71)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3,4'-Trichlorobiphenyl (BZ 22)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3',4-Trichlorobiphenyl (BZ 25)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3',4'-Trichlorobiphenyl (BZ 33)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3',5-Trichlorobiphenyl (BZ 26)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3,5-Trimethylnaphthalene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3,6-Trichlorobiphenyl (BZ 24)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3',6-Trichlorobiphenyl (BZ 27)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3-Dichlorobiphenyl (BZ 5)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,3'-Dichlorobiphenyl (BZ 6)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,4,4',5-Tetrachlorobiphenyl (BZ 74)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,4,4',6-Tetrachlorobiphenyl (BZ 75)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,4,4'-Trichlorobiphenyl (BZ 28)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,4,5-Trichlorobiphenyl (BZ 29)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,4',5-Trichlorobiphenyl (BZ 31)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,4,6-Trichlorobiphenyl (BZ 30)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,4',6-Trichlorobiphenyl (BZ 32)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,4'-DDD
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,4'-DDE
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,4'-DDT
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,4-Dichlorobiphenyl (BZ 7)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,4'-Dichlorobiphenyl (BZ 8)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,5-Dichlorobiphenyl (BZ 9)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2,6-Dimethylnaphthalene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2-Chlorobiphenyl (BZ 1)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2-Chloronaphthalene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2-Methylnaphthalene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	2-Methylphenanthrene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	3,3',4,4',5,5'-Hexachlorobiphenyl (BZ 169)

Certificate of Accreditation: Supplement

ISO/IEC 17025:2017 and DoD-ELAP

Battelle

141 Longwater Drive, Suite 202, Norwell, MA 02061

Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	3,3',4,4',5-Pentachlorobiphenyl (BZ 126)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	3,3',4,4'-Tetrachlorobiphenyl (BZ 77)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	3,3',4,5,5'-Pentachlorobiphenyl (BZ 127)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	3,3',5,5'-Tetrachlorobiphenyl (BZ 80)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	3,3'-Dichlorobiphenyl (BZ 11)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	3,4,4',5-Tetrachlorobiphenyl (BZ 81)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	3,4,4'-Trichlorobiphenyl (BZ 37)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	3,4-Dichlorobiphenyl (BZ 12)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	3,4'-Dichlorobiphenyl (BZ 13)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	3,6-Dimethylphenanthrene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	4,4'-Dichlorobiphenyl (BZ 15)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	4-Chlorobiphenyl (BZ 3)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	Acenaphthene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	Acenaphthylene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	Anthracene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	Benzo(a)anthracene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	Benzo(a)pyrene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	Benzo(b)fluoranthene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	Benzo(b)thiophene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	Benzo(e)pyrene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	Benzo(g,h,i)perylene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	Benzo(k)fluoranthene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	Biphenyl
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	Chrysene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	cis-Decalin
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	Decachlorobiphenyl (BZ 209)
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	Dibenz(a,h)anthracene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	Dibenzofuran
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	Dibenzothiophene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	Fluoranthene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	Fluorene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	lndeno(l,2,3-cd)pyrene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	Naphthalene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	Perylene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	Phenanthrene
Aqueous/Solid/Tissue	EPA 8270E MOD	GC-MS	Pyrene

Certificate of Accreditation: Supplement

ISO/IEC 17025:2017 and DoD-ELAP

Battelle

141 Longwater Drive, Suite 202, Norwell, MA 02061

Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Aqueous/Solid/Tissue	EPA 8270DE MOD	GC-MS	trans-Decalin
Aqueous	EPA 3510 C	Separatory Funnel	Prep
Aqueous/Solid/Tissue	EPA 3640A MOD	Gel-permeation chromatography (GPC)	Cleanup
Aqueous/Solid/Tissue	EPA 3660B MOD	Sulfur Cleanup	Cleanup
Solids/Tissues	NOAA NOS ORCA 71	Orbital Shaker	Prep
Tissue	NOAA NOS ORCA 71	Tissuemizer	Prep

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 003-002 expiration date 03/31/2022. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Battelle Analytical Chemistry Services Laboratory
101 Long Water Drive Suite 202
Norwell, MA 02061
(781) 681-5565

DEP Laboratory ID: 68-05687
EPA Lab Code: MA00056
TNI Code: TNI00280
PADWIS ID: 05687

Matrix: Drinking Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 537.1		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	NELAP	FL	12/24/2019
EPA 537.1		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NELAP	FL	12/24/2019
EPA 537.1		9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	NELAP	FL	12/24/2019
EPA 537.1		Hexafluoropropylene oxide dimer acid (HFPO-DA)	NELAP	FL	12/24/2019
EPA 537.1		Perfluorobutanesulfonic acid (PFBS)	NELAP	FL	10/23/2019
EPA 537.1		Perfluorodecanoic acid (PFDA)	NELAP	FL	10/23/2019
EPA 537.1		Perfluorododecanoic acid (PFDoA)	NELAP	FL	10/23/2019
EPA 537.1		Perfluoroheptanoic acid (PFHpA)	NELAP	FL	10/23/2019
EPA 537.1		Perfluorohexanesulfonic acid (PFHxS)	NELAP	FL	10/23/2019
EPA 537.1		Perfluorohexanoic acid (PFHxA)	NELAP	FL	10/23/2019
EPA 537.1		Perfluorononanoic acid (PFNA)	NELAP	FL	10/23/2019
EPA 537.1		Perfluorooctanesulfonic acid (PFOS)	NELAP	FL	10/23/2019
EPA 537.1		Perfluorooctanoic acid (PFOA)	NELAP	FL	10/23/2019
EPA 537.1		Perfluorotetradecanoic acid (PFTA)	NELAP	FL	10/23/2019
EPA 537.1		Perfluorotridecanoic acid (PFTrDA)	NELAP	FL	10/23/2019
EPA 537.1		Perfluoroundecanoic acid (PFUnA)	NELAP	FL	10/23/2019
EPA 537.1		n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NELAP	FL	10/23/2019
EPA 537.1		n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NELAP	FL	10/23/2019

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 537.1 Isotope Dilution		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	NELAP	FL	04/08/2021
EPA 537.1 Isotope Dilution		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NELAP	FL	04/08/2021
EPA 537.1 Isotope Dilution		9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	NELAP	FL	04/08/2021
EPA 537.1 Isotope Dilution		Hexafluoropropylene oxide dimer acid (HFPO-DA)	NELAP	FL	04/08/2021
EPA 537.1 Isotope Dilution		Perfluorobutanesulfonic acid (PFBS)	NELAP	FL	04/08/2021
EPA 537.1 Isotope Dilution		Perfluorodecanoic acid (PFDA)	NELAP	FL	04/08/2021
EPA 537.1 Isotope Dilution		Perfluorododecanoic acid (PFDoA)	NELAP	FL	04/08/2021
EPA 537.1 Isotope Dilution		Perfluoroheptanoic acid (PFHpA)	NELAP	FL	04/08/2021
EPA 537.1 Isotope Dilution		Perfluorohexanesulfonic acid (PFHxS)	NELAP	FL	04/08/2021
EPA 537.1 Isotope Dilution		Perfluorohexanoic acid (PFHxA)	NELAP	FL	04/08/2021

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The Pennsylvania Department of Environmental Protection Laboratory Accreditation Program is a NELAP recognized Accreditation Body. Customers are urged to verify the laboratory's current accreditation standing.

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 003-002 expiration date 03/31/2022. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Battelle Analytical Chemistry Services Laboratory
101 Long Water Drive Suite 202
Norwell, MA 02061
(781) 681-5565

DEP Laboratory ID: 68-05687
EPA Lab Code: MA00056
TNI Code: TNI00280
PADWIS ID: 05687

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 537.1 Isotope Dilution		Perfluorononanoic acid (PFNA)	NELAP	FL	04/08/2021
EPA 537.1 Isotope Dilution		Perfluorooctanesulfonic acid (PFOS)	NELAP	FL	04/08/2021
EPA 537.1 Isotope Dilution		Perfluorooctanoic acid (PFOA)	NELAP	FL	04/08/2021
EPA 537.1 Isotope Dilution		Perfluorotetradecanoic acid (PFTA)	NELAP	FL	04/08/2021
EPA 537.1 Isotope Dilution		Perfluorotridecanoic acid (PFTrDA)	NELAP	FL	04/08/2021
EPA 537.1 Isotope Dilution		Perfluoroundecanoic acid (PFUnA)	NELAP	FL	04/08/2021
EPA 537.1 Isotope Dilution		n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NELAP	FL	04/08/2021
EPA 537.1 Isotope Dilution		n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NELAP	FL	04/08/2021

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
SOP (05687) 5-369	8	Ammonium 4,8-Dioxa-3H-Perfluorononanoate (ADONA)	NELAP	FL	03/25/2021
SOP (05687) 5-369	8	Perfluorooctane sulfonate (PFOS)	NELAP	FL	03/25/2021
SOP (05687) 5-369	8	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	NELAP	FL	03/25/2021
SOP (05687) 5-369	8	9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	NELAP	FL	03/25/2021
SOP (05687) 5-369	8	Hexafluoropropylene oxide dimer acid (HFPO-DA)	NELAP	FL	03/25/2021
SOP (05687) 5-369	8	Perfluorobutanesulfonic acid (PFBS)	NELAP	FL	03/25/2021
SOP (05687) 5-369	8	Perfluorodecanoic acid (PFDA)	NELAP	FL	03/25/2021
SOP (05687) 5-369	8	Perfluorododecanoic acid (PFDoA)	NELAP	FL	03/25/2021
SOP (05687) 5-369	8	Perfluoroheptanoic acid (PFHpA)	NELAP	FL	03/25/2021
SOP (05687) 5-369	8	Perfluorohexanesulfonic acid (PFHxS)	NELAP	FL	03/25/2021
SOP (05687) 5-369	8	Perfluorohexanoic acid (PFHxA)	NELAP	FL	03/25/2021
SOP (05687) 5-369	8	Perfluorononanoic acid (PFNA)	NELAP	FL	03/25/2021
SOP (05687) 5-369	8	Perfluorooctanoic acid (PFOA)	NELAP	FL	03/25/2021
SOP (05687) 5-369	8	Perfluorotetradecanoic acid (PFTA)	NELAP	FL	03/25/2021
SOP (05687) 5-369	8	Perfluorotridecanoic acid (PFTrDA)	NELAP	FL	03/25/2021
SOP (05687) 5-369	8	Perfluoroundecanoic acid (PFUnA)	NELAP	FL	03/25/2021
SOP (05687) 5-369	8	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NELAP	FL	03/25/2021
SOP (05687) 5-369	8	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NELAP	FL	03/25/2021
SOP (05687) 5-370	11	Extraction of Poly-and Perfluoroalkyl Substances From Environmental Matrices	NELAP	FL	03/25/2021

Annmarie Beach

The Pennsylvania Department of Environmental Protection Laboratory Accreditation Program is a NELAP recognized Accreditation Body. Customers are urged to verify the laboratory's current accreditation standing.

Battelle In-House QC Limits
Non-Potable Water

Analyte	CAS No.	Lower	Upper
HFPO-DA	13252-13-6	60	126
Adona	919005-14-4	61	130
11Cl-PF3OUdS	763051-92-9	56	125
9Cl-PF3ONS	756426-58-1	60	126

Battelle In-House QC Limits
Solid Samples

Analyte	CAS No.	Lower	Upper
HFPO-DA	13252-13-6	71	153
Adona	919005-14-4	61	139
11Cl-PF3OUdS	763051-92-9	40	160
9Cl-PF3ONS	756426-58-1	60	140

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

BUREAU OF LABORATORIES

LABORATORY ACCREDITATION PROGRAM

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certifies That

68-00571

Katahdin Analytical Services LLC

600 Technology Way, Scarborough, ME, 04074

Having duly met the requirement of
The act of June 29, 2002 (P.L. 596, No. 90)
dealing with Environmental Laboratories Accreditation
(27 Pa. C.S. 4104-4113) and the
National Environmental Laboratory Accreditation Program Standard
is hereby approved as an

Accredited Laboratory

to conduct analysis within the fields of accreditations more fully described in the attached Scope of Accreditation

NELAP accreditation granted by the PA DEP to an environmental laboratory is conditioned upon continued compliance with the current edition of the NELAC Standard or TNI Standard and the following Subchapters and Sections of 25 Pa. Code Chapter 252: Subchapter A (relating to general provisions); Subchapter B (relating to application, fees and supporting documents); Subchapter E (relating to proficiency test study requirements); Subchapter F (relating to assessment requirements); Subchapter G (relating to miscellaneous provisions); Section 252.307; and Section 252.401.

Expiration Date: **11/30/2021**

Certificate Number: **011**

Annmarie Beach

Annmarie Beach, Chief
Laboratory Accreditation Program
Bureau of Laboratories

Continued accreditation status depends on successful ongoing participation in the program
Certificate not transferable Surrender upon revocation
To be conspicuously displayed at the Laboratory
Not valid unless accompanied by a valid Scope of Accreditation
Shall not be used to imply endorsement by the Commonwealth of Pennsylvania
Customers are urged to verify the laboratory's current accreditation status
PA DEP is a NELAP recognized accreditation body

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 011-001 expiration date 11/30/2021. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Katahdin Analytical Services LLC
600 Technology Way
Scarborough, ME 04074
(207) 874-2400

DEP Laboratory ID: 68-00571
EPA Lab Code: ME00019
TNI Code: TNI00476

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
ASTM D516-02		Sulfate	NELAP	NH	11/14/2014
EPA 1631	E	Mercury	NELAP	NH	11/14/2014
EPA 1664	A	Oil and grease	NELAP	NH	11/14/2014
EPA 180.1		Turbidity	NELAP	NH	11/14/2014
EPA 200.7	4.4	Aluminum	NELAP	NH	11/14/2014
EPA 200.7	4.4	Antimony	NELAP	NH	11/14/2014
EPA 200.7	4.4	Arsenic	NELAP	NH	11/14/2014
EPA 200.7	4.4	Barium	NELAP	NH	11/14/2014
EPA 200.7	4.4	Beryllium	NELAP	NH	11/14/2014
EPA 200.7	4.4	Boron	NELAP	NH	11/14/2014
EPA 200.7	4.4	Cadmium	NELAP	NH	11/14/2014
EPA 200.7	4.4	Calcium	NELAP	NH	11/14/2014
EPA 200.7	4.4	Chromium	NELAP	NH	11/14/2014
EPA 200.7	4.4	Cobalt	NELAP	NH	11/14/2014
EPA 200.7	4.4	Copper	NELAP	NH	11/14/2014
EPA 200.7	4.4	Iron	NELAP	NH	11/14/2014
EPA 200.7	4.4	Lead	NELAP	NH	11/14/2014
EPA 200.7	4.4	Magnesium	NELAP	NH	11/14/2014
EPA 200.7	4.4	Manganese	NELAP	NH	11/14/2014
EPA 200.7	4.4	Molybdenum	NELAP	NH	11/14/2014
EPA 200.7	4.4	Nickel	NELAP	NH	11/14/2014
EPA 200.7	4.4	Potassium	NELAP	NH	11/14/2014
EPA 200.7	4.4	Selenium	NELAP	NH	11/14/2014
EPA 200.7	4.4	Silicon	NELAP	NH	11/14/2014
EPA 200.7	4.4	Silver	NELAP	NH	11/14/2014
EPA 200.7	4.4	Sodium	NELAP	NH	11/14/2014
EPA 200.7	4.4	Thallium	NELAP	NH	11/14/2014
EPA 200.7	4.4	Tin	NELAP	NH	11/14/2014
EPA 200.7	4.4	Titanium	NELAP	NH	11/14/2014
EPA 200.7	4.4	Vanadium	NELAP	NH	11/14/2014
EPA 200.7	4.4	Zinc	NELAP	NH	11/14/2014
EPA 200.8	5.4	Aluminum	NELAP	NH	11/14/2014
EPA 200.8	5.4	Antimony	NELAP	NH	11/14/2014
EPA 200.8	5.4	Arsenic	NELAP	NH	11/14/2014
EPA 200.8	5.4	Barium	NELAP	NH	11/14/2014
EPA 200.8	5.4	Beryllium	NELAP	NH	11/14/2014
EPA 200.8	5.4	Cadmium	NELAP	NH	11/14/2014
EPA 200.8	5.4	Chromium	NELAP	NH	11/14/2014
EPA 200.8	5.4	Cobalt	NELAP	NH	11/14/2014
EPA 200.8	5.4	Copper	NELAP	NH	11/14/2014
EPA 200.8	5.4	Lead	NELAP	NH	11/14/2014
EPA 200.8	5.4	Manganese	NELAP	NH	11/14/2014

Annmarie Beach

The Pennsylvania Department of Environmental Protection Laboratory Accreditation Program is a NELAP recognized Accreditation Body. Customers are urged to verify the laboratory's current accreditation standing.

Attached to Certificate of Accreditation 011-001 expiration date 11/30/2021. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Katahdin Analytical Services LLC
600 Technology Way
Scarborough, ME 04074
(207) 874-2400

DEP Laboratory ID: 68-00571
EPA Lab Code: ME00019
TNI Code: TNI00476

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 200.8	5.4	Molybdenum	NELAP	NH	11/14/2014
EPA 200.8	5.4	Nickel	NELAP	NH	11/14/2014
EPA 200.8	5.4	Selenium	NELAP	NH	11/14/2014
EPA 200.8	5.4	Silver	NELAP	NH	11/14/2014
EPA 200.8	5.4	Thallium	NELAP	NH	11/14/2014
EPA 200.8	5.4	Vanadium	NELAP	NH	11/14/2014
EPA 200.8	5.4	Zinc	NELAP	NH	11/14/2014
EPA 245.1	3.0	Mercury	NELAP	NH	11/14/2014
EPA 300.0	2.1	Bromide	NELAP	NH	11/14/2014
EPA 300.0	2.1	Chloride	NELAP	NH	11/14/2014
EPA 300.0	2.1	Fluoride	NELAP	NH	11/14/2014
EPA 300.0	2.1	Nitrate as N	NELAP	NH	11/14/2014
EPA 300.0	2.1	Nitrite as N	NELAP	NH	11/14/2014
EPA 300.0	2.1	Sulfate	NELAP	NH	11/14/2014
EPA 300.0	2.1	Total nitrate-nitrite	NELAP	NH	11/14/2014
EPA 3010	A	Hot plate acid digestion (HNO3 + HCl)	NELAP	NH	11/14/2014
EPA 3060	A	Alkaline digestion of Cr(VI)	NELAP	NH	11/14/2014
EPA 350.1	2.0	Ammonia as N	NELAP	NH	11/14/2014
EPA 3510	C	Separatory funnel liquid-liquid extraction	NELAP	NH	11/14/2014
EPA 3520	C	Continuous liquid-liquid extraction	NELAP	NH	11/14/2014
EPA 353.2		Nitrite as N	NELAP	NH	11/14/2014
EPA 353.2		Total nitrate-nitrite	NELAP	NH	11/14/2014
EPA 3535		Solid-phase extraction (SPE)	NELAP	NH	11/14/2014
EPA 3620	B	Florisil cleanup	NELAP	NH	11/14/2014
EPA 3630	C	Silica gel cleanup	NELAP	NH	11/14/2014
EPA 3640	A	Gel permeation cleanup (GPC)	NELAP	NH	11/14/2014
EPA 365.4		Phosphorus, total	NELAP	NH	11/14/2014
EPA 3660	B	Sulfur cleanup	NELAP	NH	11/14/2014
EPA 410.4	2.0	Chemical oxygen demand (COD)	NELAP	NH	11/14/2014
EPA 420.1		Total phenolics	NELAP	NH	11/14/2014
EPA 5030	C	Aqueous-phase purge-and-trap	NELAP	NH	11/14/2014
EPA 6010	C	Metals by ICP/AES	NELAP	NH	11/14/2014
EPA 6010	C	Aluminum	NELAP	NH	11/14/2014
EPA 6010	C	Antimony	NELAP	NH	11/14/2014
EPA 6010	C	Arsenic	NELAP	NH	11/14/2014
EPA 6010	C	Barium	NELAP	NH	11/14/2014
EPA 6010	C	Beryllium	NELAP	NH	11/14/2014
EPA 6010	C	Boron	NELAP	NH	11/14/2014
EPA 6010	C	Cadmium	NELAP	NH	11/14/2014
EPA 6010	C	Calcium	NELAP	NH	11/14/2014
EPA 6010	C	Chromium	NELAP	NH	11/14/2014
EPA 6010	C	Cobalt	NELAP	NH	11/14/2014

Annmarie Beach

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Katahdin Analytical Services LLC
600 Technology Way
Scarborough, ME 04074
(207) 874-2400

DEP Laboratory ID: 68-00571
EPA Lab Code: ME00019
TNI Code: TNI00476

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 6010	C	Copper	NELAP	NH	11/14/2014
EPA 6010	C	Iron	NELAP	NH	11/14/2014
EPA 6010	C	Lead	NELAP	NH	11/14/2014
EPA 6010	C	Magnesium	NELAP	NH	11/14/2014
EPA 6010	C	Manganese	NELAP	NH	11/14/2014
EPA 6010	C	Molybdenum	NELAP	NH	11/14/2014
EPA 6010	C	Nickel	NELAP	NH	11/14/2014
EPA 6010	C	Potassium	NELAP	NH	11/14/2014
EPA 6010	C	Selenium	NELAP	NH	11/14/2014
EPA 6010	C	Silver	NELAP	NH	11/14/2014
EPA 6010	C	Sodium	NELAP	NH	11/14/2014
EPA 6010	C	Strontium	NELAP	NH	11/14/2014
EPA 6010	C	Thallium	NELAP	NH	11/14/2014
EPA 6010	C	Tin	NELAP	NH	11/14/2014
EPA 6010	C	Titanium	NELAP	NH	11/14/2014
EPA 6010	C	Vanadium	NELAP	NH	11/14/2014
EPA 6010	C	Zinc	NELAP	NH	11/14/2014
EPA 6020	A	Metals by ICP/MS	NELAP	NH	11/14/2014
EPA 6020	A	Aluminum	NELAP	NH	11/14/2014
EPA 6020	A	Antimony	NELAP	NH	11/14/2014
EPA 6020	A	Arsenic	NELAP	NH	11/14/2014
EPA 6020	A	Barium	NELAP	NH	11/14/2014
EPA 6020	A	Beryllium	NELAP	NH	11/14/2014
EPA 6020	A	Cadmium	NELAP	NH	11/14/2014
EPA 6020	A	Chromium	NELAP	NH	11/14/2014
EPA 6020	A	Cobalt	NELAP	NH	11/14/2014
EPA 6020	A	Copper	NELAP	NH	11/14/2014
EPA 6020	A	Lead	NELAP	NH	11/14/2014
EPA 6020	A	Manganese	NELAP	NH	11/14/2014
EPA 6020	A	Nickel	NELAP	NH	11/14/2014
EPA 6020	A	Silver	NELAP	NH	11/14/2014
EPA 6020	A	Thallium	NELAP	NH	11/14/2014
EPA 6020	A	Zinc	NELAP	NH	11/14/2014
EPA 7470	A	Mercury	NELAP	NH	11/14/2014
EPA 8011		1,2-Dibromo-3-chloropropane (DBCP, Dibromochloropropane)	NELAP	NH	11/14/2014
EPA 8011		1,2-Dibromoethane (EDB, Ethylene dibromide)	NELAP	NH	11/14/2014
EPA 8015	C, D	Nonhalogenated organics by GC/FID	NELAP	NH	11/14/2014
EPA 8015	C	Ethanol	NELAP	NH	11/14/2014
EPA 8015	C	Ethylene glycol	NELAP	NH	11/14/2014
EPA 8015	C	Isobutyl alcohol (2-Methyl-1-propanol)	NELAP	NH	11/14/2014
EPA 8015	C	Methanol	NELAP	NH	11/14/2014

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600 Technology Way
Scarborough, ME 04074
(207) 874-2400

DEP Laboratory ID: 68-00571
EPA Lab Code: ME00019
TNI Code: TNI00476

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8015	C	n-Propanol (1-Propanol)	NELAP	NH	11/14/2014
EPA 8015	C, D	Diesel-range organics (DRO)	NELAP	NH	11/14/2014
EPA 8015	C, D	Gasoline-range organics (GRO)	NELAP	NH	11/14/2014
EPA 8015	C, D	Total petroleum hydrocarbons (TPH)	NELAP	NH	11/14/2014
EPA 8081	B	Organochlorine pesticides by GC/ECD	NELAP	NH	11/14/2014
EPA 8081	B	4,4'-DDD	NELAP	NH	11/14/2014
EPA 8081	B	4,4'-DDE	NELAP	NH	11/14/2014
EPA 8081	B	4,4'-DDT	NELAP	NH	11/14/2014
EPA 8081	B	Aldrin (HHDN)	NELAP	NH	11/14/2014
EPA 8081	B	Chlordane (tech.)	NELAP	NH	11/14/2014
EPA 8081	B	Dieldrin	NELAP	NH	11/14/2014
EPA 8081	B	Endosulfan I	NELAP	NH	11/14/2014
EPA 8081	B	Endosulfan II	NELAP	NH	11/14/2014
EPA 8081	B	Endosulfan sulfate	NELAP	NH	11/14/2014
EPA 8081	B	Endrin	NELAP	NH	11/14/2014
EPA 8081	B	Endrin aldehyde	NELAP	NH	11/14/2014
EPA 8081	B	Endrin ketone	NELAP	NH	11/14/2014
EPA 8081	B	Heptachlor	NELAP	NH	11/14/2014
EPA 8081	B	Heptachlor epoxide	NELAP	NH	11/14/2014
EPA 8081	B	Methoxychlor	NELAP	NH	11/14/2014
EPA 8081	B	Toxaphene (Chlorinated camphene)	NELAP	NH	11/14/2014
EPA 8081	B	alpha-BHC (alpha-Hexachlorocyclohexane)	NELAP	NH	11/14/2014
EPA 8081	B	alpha-Chlordane	NELAP	NH	11/14/2014
EPA 8081	B	beta-BHC (beta-Hexachlorocyclohexane)	NELAP	NH	11/14/2014
EPA 8081	B	delta-BHC (delta-Hexachlorocyclohexane)	NELAP	NH	11/14/2014
EPA 8081	B	gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	NELAP	NH	11/14/2014
EPA 8081	B	gamma-Chlordane	NELAP	NH	11/14/2014
EPA 8082	A	PCBs by GC/ECD	NELAP	NH	11/14/2014
EPA 8082	A	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ 206)	NELAP	NH	11/14/2014
EPA 8082	A	2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ 170)	NELAP	NH	11/14/2014
EPA 8082	A	2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ 187)	NELAP	NH	11/14/2014
EPA 8082	A	2,2',3,4,4',5',6-Heptachlorobiphenyl (BZ 183)	NELAP	NH	11/14/2014
EPA 8082	A	2,2',3,4,4',5'-Hexachlorobiphenyl (BZ 138)	NELAP	NH	11/14/2014
EPA 8082	A	2,2',3,4,5'-Pentachlorobiphenyl (BZ 87)	NELAP	NH	11/14/2014
EPA 8082	A	2,2',3,5'-Tetrachlorobiphenyl (BZ 44)	NELAP	NH	11/14/2014
EPA 8082	A	2,2',4,4',5,5'-Hexachlorobiphenyl (BZ 153)	NELAP	NH	11/14/2014
EPA 8082	A	2,2',4,5'-Tetrachlorobiphenyl (BZ 49)	NELAP	NH	11/14/2014
EPA 8082	A	2,2',4,5,5'-Pentachlorobiphenyl (BZ 101)	NELAP	NH	11/14/2014
EPA 8082	A	2,2',5,5'-Tetrachlorobiphenyl (BZ 52)	NELAP	NH	11/14/2014
EPA 8082	A	2,2',5-Trichlorobiphenyl (BZ 18)	NELAP	NH	11/14/2014
EPA 8082	A	2,3',4,4',5,5'-Hexachlorobiphenyl (BZ 167)	NELAP	NH	11/14/2014

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Katahdin Analytical Services LLC
600 Technology Way
Scarborough, ME 04074
(207) 874-2400

DEP Laboratory ID: 68-00571
EPA Lab Code: ME00019
TNI Code: TNI00476

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8082	A	2,3',4,4',5-Pentachlorobiphenyl (BZ 118)	NELAP	NH	11/14/2014
EPA 8082	A	2,3,3',4,4',5'-Hexachlorobiphenyl (BZ 157)	NELAP	NH	11/14/2014
EPA 8082	A	2,3,3',4,4',5,5'-Heptachlorobiphenyl (BZ 189)	NELAP	NH	11/14/2014
EPA 8082	A	2,3,3',4,4',5-Hexachlorobiphenyl (BZ 156)	NELAP	NH	11/14/2014
EPA 8082	A	2,3,3',4,4'-Pentachlorobiphenyl (BZ 105)	NELAP	NH	11/14/2014
EPA 8082	A	2,3,4,4',5-Pentachlorobiphenyl (BZ 114)	NELAP	NH	11/14/2014
EPA 8082	A	3,3',4,4',5,5'-Hexachlorobiphenyl (BZ 169)	NELAP	NH	11/14/2014
EPA 8082	A	3,3',4,4',5-Pentachlorobiphenyl (BZ 126)	NELAP	NH	11/14/2014
EPA 8082	A	3,3',4,4'-Tetrachlorobiphenyl (BZ 77)	NELAP	NH	11/14/2014
EPA 8082	A	Aroclor-1016 (PCB-1016)	NELAP	NH	11/14/2014
EPA 8082	A	Aroclor-1221 (PCB-1221)	NELAP	NH	11/14/2014
EPA 8082	A	Aroclor-1232 (PCB-1232)	NELAP	NH	11/14/2014
EPA 8082	A	Aroclor-1242 (PCB-1242)	NELAP	NH	11/14/2014
EPA 8082	A	Aroclor-1248 (PCB-1248)	NELAP	NH	11/14/2014
EPA 8082	A	Aroclor-1254 (PCB-1254)	NELAP	NH	11/14/2014
EPA 8082	A	Aroclor-1260 (PCB-1260)	NELAP	NH	11/14/2014
EPA 8151	A	Chlorinated herbicides by GC/ECD	NELAP	NH	10/28/2015
EPA 8151	A	2,4,5-T	NELAP	NH	11/14/2014
EPA 8151	A	2,4,5-TP (Silvex)	NELAP	NH	11/14/2014
EPA 8151	A	2,4-D	NELAP	NH	11/14/2014
EPA 8151	A	2,4-DB (Butoxon)	NELAP	NH	11/14/2014
EPA 8151	A	Dalapon (2,2-Dichloropropionic acid)	NELAP	NH	11/14/2014
EPA 8151	A	Dicamba	NELAP	NH	11/14/2014
EPA 8151	A	Dichloroprop (Dichlorprop)	NELAP	NH	11/14/2014
EPA 8151	A	Dinoseb (2-sec-Butyl-4,6-dinitrophenol, DNBP)	NELAP	NH	11/14/2014
EPA 8151	A	MCPA	NELAP	NH	11/14/2014
EPA 8151	A	MCPP (Mecoprop)	NELAP	NH	11/14/2014
EPA 8151	A	Pentachlorophenol (PCP)	NELAP	NH	11/14/2014
EPA 8260	B, C	VOCs by GC/MS	NELAP	NH	11/14/2014
EPA 8260	B, C	1,1,1,2-Tetrachloroethane	NELAP	NH	11/14/2014
EPA 8260	B, C	1,1,1-Trichloroethane	NELAP	NH	11/14/2014
EPA 8260	B, C	1,1,2,2-Tetrachloroethane	NELAP	NH	11/14/2014
EPA 8260	B, C	1,1,2-Trichloroethane	NELAP	NH	11/14/2014
EPA 8260	B, C	1,1-Dichloroethane	NELAP	NH	11/14/2014
EPA 8260	B, C	1,1-Dichloroethene (1,1-Dichloroethylene)	NELAP	NH	11/14/2014
EPA 8260	B, C	1,1-Dichloropropene	NELAP	NH	11/14/2014
EPA 8260	B, C	1,2,3-Trichlorobenzene	NELAP	NH	11/14/2014
EPA 8260	B, C	1,2,3-Trichloropropane (1,2,3-TCP)	NELAP	NH	11/14/2014
EPA 8260	B, C	1,2,4-Trichlorobenzene	NELAP	NH	11/14/2014
EPA 8260	B, C	1,2,4-Trimethylbenzene	NELAP	NH	11/14/2014
EPA 8260	B, C	1,2-Dibromo-3-chloropropane (DBCP, Dibromochloropropane)	NELAP	NH	11/14/2014

Annmarie Beach

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Scarborough, ME 04074
(207) 874-2400

DEP Laboratory ID: 68-00571
EPA Lab Code: ME00019
TNI Code: TNI00476

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8260	B, C	1,2-Dibromoethane (EDB, Ethylene dibromide)	NELAP	NH	11/14/2014
EPA 8260	B, C	1,2-Dichlorobenzene (o-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 8260	B, C	1,2-Dichloroethane	NELAP	NH	11/14/2014
EPA 8260	B, C	1,2-Dichloropropane	NELAP	NH	11/14/2014
EPA 8260	B, C	1,3,5-Trimethylbenzene	NELAP	NH	11/14/2014
EPA 8260	B, C	1,3-Dichlorobenzene (m-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 8260	B, C	1,3-Dichloropropane	NELAP	NH	11/14/2014
EPA 8260	B, C	1,4-Dichlorobenzene (p-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 8260	B, C	1,4-Dioxane (1,4-Diethyleneoxide)	NELAP	NH	11/14/2014
EPA 8260	B, C	2,2-Dichloropropane	NELAP	NH	11/14/2014
EPA 8260	B, C	2-Butanone (Methyl ethyl ketone, MEK)	NELAP	NH	11/14/2014
EPA 8260	B, C	2-Chloroethyl vinyl ether	NELAP	NH	11/14/2014
EPA 8260	B, C	2-Chlorotoluene	NELAP	NH	11/14/2014
EPA 8260	B, C	2-Hexanone	NELAP	NH	11/14/2014
EPA 8260	B, C	4-Chlorotoluene	NELAP	NH	11/14/2014
EPA 8260	B, C	4-Methyl-2-pentanone (MIBK)	NELAP	NH	11/14/2014
EPA 8260	B, C	Acetone	NELAP	NH	11/14/2014
EPA 8260	B, C	Acetonitrile	NELAP	NH	11/14/2014
EPA 8260	B, C	Acrolein (Propenal)	NELAP	NH	11/14/2014
EPA 8260	B, C	Acrylonitrile	NELAP	NH	11/14/2014
EPA 8260	B, C	Allyl chloride (3-Chloropropene)	NELAP	NH	11/14/2014
EPA 8260	B, C	Benzene	NELAP	NH	11/14/2014
EPA 8260	B, C	Benzyl chloride	NELAP	NH	11/14/2014
EPA 8260	B, C	Bromobenzene	NELAP	NH	11/14/2014
EPA 8260	B, C	Bromochloromethane	NELAP	NH	11/14/2014
EPA 8260	B, C	Bromodichloromethane	NELAP	NH	11/14/2014
EPA 8260	B, C	Bromoform	NELAP	NH	11/14/2014
EPA 8260	B, C	Carbon disulfide	NELAP	NH	11/14/2014
EPA 8260	B, C	Carbon tetrachloride	NELAP	NH	11/14/2014
EPA 8260	B, C	Chlorobenzene	NELAP	NH	11/14/2014
EPA 8260	B, C	Chloroethane	NELAP	NH	11/14/2014
EPA 8260	B, C	Chloroform	NELAP	NH	11/14/2014
EPA 8260	B, C	Chloroprene (2-Chloro-1,3-butadiene)	NELAP	NH	11/14/2014
EPA 8260	B, C	Cyclohexane	NELAP	NH	11/14/2014
EPA 8260	B, C	Dibromochloromethane	NELAP	NH	11/14/2014
EPA 8260	B, C	Dibromomethane	NELAP	NH	11/14/2014
EPA 8260	B, C	Dichlorodifluoromethane (Freon 12)	NELAP	NH	11/14/2014
EPA 8260	B, C	Diethyl ether (Ethyl ether)	NELAP	NH	11/14/2014
EPA 8260	B, C	Ethylbenzene	NELAP	NH	11/14/2014
EPA 8260	B, C	Iodomethane (Methyl iodide)	NELAP	NH	11/14/2014
EPA 8260	B, C	Isobutyl alcohol (2-Methyl-1-propanol)	NELAP	NH	11/14/2014
EPA 8260	B, C	Isopropyl alcohol (2-Propanol)	NELAP	NH	11/14/2014

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DEP Laboratory ID: 68-00571
EPA Lab Code: ME00019
TNI Code: TNI00476

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8260	B, C	Isopropylbenzene (Cumene)	NELAP	NH	11/14/2014
EPA 8260	B, C	Methacrylonitrile	NELAP	NH	11/14/2014
EPA 8260	B, C	Methyl acetate	NELAP	NH	11/14/2014
EPA 8260	B, C	Methyl bromide (Bromomethane)	NELAP	NH	11/14/2014
EPA 8260	B, C	Methyl chloride (Chloromethane)	NELAP	NH	11/14/2014
EPA 8260	B, C	Methyl tert-butyl ether (MTBE)	NELAP	NH	11/14/2014
EPA 8260	B, C	Methylcyclohexane	NELAP	NH	11/14/2014
EPA 8260	B, C	Methylene chloride (Dichloromethane)	NELAP	NH	11/14/2014
EPA 8260	B, C	Methylmethacrylate	NELAP	NH	11/14/2014
EPA 8260	B, C	Naphthalene	NELAP	NH	11/14/2014
EPA 8260	B, C	Pentachloroethane	NELAP	NH	11/14/2014
EPA 8260	B, C	Propionitrile (Ethyl cyanide)	NELAP	NH	11/14/2014
EPA 8260	B, C	Styrene	NELAP	NH	11/14/2014
EPA 8260	B, C	Tetrachloroethene (PCE, Perchloroethylene)	NELAP	NH	11/14/2014
EPA 8260	B, C	Toluene	NELAP	NH	11/14/2014
EPA 8260	B, C	Trichloroethene (TCE, Trichloroethylene)	NELAP	NH	11/14/2014
EPA 8260	B, C	Trichlorofluoromethane (Freon 11)	NELAP	NH	11/14/2014
EPA 8260	B, C	Vinyl acetate	NELAP	NH	11/14/2014
EPA 8260	B, C	Vinyl chloride (Chloroethene)	NELAP	NH	11/14/2014
EPA 8260	B, C	Xylenes, total	NELAP	NH	11/14/2014
EPA 8260	B, C	cis-1,2-Dichloroethene	NELAP	NH	11/14/2014
EPA 8260	B, C	cis-1,3-Dichloropropene	NELAP	NH	11/14/2014
EPA 8260	B, C	cis-1,4-Dichloro-2-butene	NELAP	NH	11/14/2014
EPA 8260	B, C	n-Butylbenzene	NELAP	NH	11/14/2014
EPA 8260	B, C	n-Propylbenzene	NELAP	NH	11/14/2014
EPA 8260	B, C	p-Isopropyltoluene (4-Isopropyltoluene)	NELAP	NH	11/14/2014
EPA 8260	B, C	sec-Butylbenzene	NELAP	NH	11/14/2014
EPA 8260	B, C	tert-Amyl methyl ether (TAME)	NELAP	NH	11/14/2014
EPA 8260	B, C	tert-Butyl alcohol (2-Methyl-2-propanol)	NELAP	NH	11/14/2014
EPA 8260	B, C	tert-Butylbenzene	NELAP	NH	11/14/2014
EPA 8260	B, C	trans-1,2-Dichloroethene	NELAP	NH	11/14/2014
EPA 8260	B, C	trans-1,3-Dichloropropene	NELAP	NH	11/14/2014
EPA 8260	B, C	trans-1,4-Dichloro-2-butene	NELAP	NH	11/14/2014
EPA 8270	C, D	SOCs by GC/MS	NELAP	NH	11/14/2014
EPA 8270	C, D	1,2,4,5-Tetrachlorobenzene	NELAP	NH	11/14/2014
EPA 8270	C, D	1,2,4-Trichlorobenzene	NELAP	NH	11/14/2014
EPA 8270	C, D	1,2-Dichlorobenzene (o-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 8270	C, D	1,2-Diphenylhydrazine	NELAP	NH	11/14/2014
EPA 8270	C, D	1,3,5-Trinitrobenzene (1,3,5-TNB)	NELAP	NH	11/14/2014
EPA 8270	C, D	1,3-Dichlorobenzene (m-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 8270	C, D	1,3-Dinitrobenzene (1,3-DNB)	NELAP	NH	11/14/2014
EPA 8270	C, D	1,4-Dichlorobenzene (p-Dichlorobenzene)	NELAP	NH	11/14/2014

Annmarie Beach

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Katahdin Analytical Services LLC
600 Technology Way
Scarborough, ME 04074
(207) 874-2400

DEP Laboratory ID: 68-00571
EPA Lab Code: ME00019
TNI Code: TNI00476

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8270	C, D	1,4-Naphthoquinone	NELAP	NH	11/14/2014
EPA 8270	C, D	1-Chloronaphthalene	NELAP	NH	11/14/2014
EPA 8270	C, D	1-Naphthylamine (alpha-Naphthylamine)	NELAP	NH	11/14/2014
EPA 8270	C, D	2,2'-oxybis(1-Chloropropane)	NELAP	NH	11/14/2014
EPA 8270	C, D	2,3,4,6-Tetrachlorophenol	NELAP	NH	11/14/2014
EPA 8270	C, D	2,4,5-Trichlorophenol	NELAP	NH	11/14/2014
EPA 8270	C, D	2,4,6-Trichlorophenol	NELAP	NH	11/14/2014
EPA 8270	C, D	2,4-Dichlorophenol	NELAP	NH	11/14/2014
EPA 8270	C, D	2,4-Dimethylphenol	NELAP	NH	11/14/2014
EPA 8270	C, D	2,4-Dinitrophenol	NELAP	NH	11/14/2014
EPA 8270	C, D	2,4-Dinitrotoluene (2,4-DNT)	NELAP	NH	11/14/2014
EPA 8270	C, D	2,6-Dichlorophenol	NELAP	NH	11/14/2014
EPA 8270	C, D	2,6-Dinitrotoluene (2,6-DNT)	NELAP	NH	11/14/2014
EPA 8270	C, D	2-Acetylaminofluorene	NELAP	NH	11/14/2014
EPA 8270	C, D	2-Chloronaphthalene	NELAP	NH	11/14/2014
EPA 8270	C, D	2-Chlorophenol	NELAP	NH	11/14/2014
EPA 8270	C, D	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	NELAP	NH	11/14/2014
EPA 8270	C, D	2-Methylnaphthalene	NELAP	NH	11/14/2014
EPA 8270	C, D	2-Methylphenol (o-Cresol)	NELAP	NH	11/14/2014
EPA 8270	C, D	2-Naphthylamine (beta-Naphthylamine)	NELAP	NH	11/14/2014
EPA 8270	C, D	2-Nitroaniline	NELAP	NH	11/14/2014
EPA 8270	C, D	2-Nitrophenol	NELAP	NH	11/14/2014
EPA 8270	C, D	2-Picoline (2-Methylpyridine)	NELAP	NH	11/14/2014
EPA 8270	C, D	3+4-Methylphenol (m+p-Cresol)	NELAP	NH	11/14/2014
EPA 8270	C, D	3,3'-Dichlorobenzidine	NELAP	NH	11/14/2014
EPA 8270	C, D	3,3'-Dimethylbenzidine	NELAP	NH	11/14/2014
EPA 8270	C, D	3-Methylcholanthrene	NELAP	NH	11/14/2014
EPA 8270	C, D	3-Nitroaniline	NELAP	NH	11/14/2014
EPA 8270	C, D	4-Aminobiphenyl	NELAP	NH	11/14/2014
EPA 8270	C, D	4-Bromophenyl phenyl ether	NELAP	NH	11/14/2014
EPA 8270	C, D	4-Chloro-3-methylphenol	NELAP	NH	11/14/2014
EPA 8270	C, D	4-Chloroaniline	NELAP	NH	11/14/2014
EPA 8270	C, D	4-Chlorophenyl phenyl ether	NELAP	NH	11/14/2014
EPA 8270	C, D	4-Nitroaniline	NELAP	NH	11/14/2014
EPA 8270	C, D	4-Nitrophenol	NELAP	NH	11/14/2014
EPA 8270	C, D	5-Nitro-o-toluidine	NELAP	NH	11/14/2014
EPA 8270	C, D	7,12-Dimethylbenz(a)anthracene	NELAP	NH	11/14/2014
EPA 8270	C, D	Acenaphthene	NELAP	NH	11/14/2014
EPA 8270	C, D	Acenaphthylene	NELAP	NH	11/14/2014
EPA 8270	C, D	Acetophenone	NELAP	NH	11/14/2014
EPA 8270	C, D	Aniline	NELAP	NH	11/14/2014

Annmarie Beach

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Katahdin Analytical Services LLC
600 Technology Way
Scarborough, ME 04074
(207) 874-2400

DEP Laboratory ID: 68-00571
EPA Lab Code: ME00019
TNI Code: TNI00476

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8270	C, D	Anthracene	NELAP	NH	11/14/2014
EPA 8270	C, D	Aramite	NELAP	NH	11/14/2014
EPA 8270	C, D	Benzaldehyde	NELAP	NH	11/14/2014
EPA 8270	C, D	Benzidine	NELAP	NH	11/14/2014
EPA 8270	C, D	Benzo[a]anthracene	NELAP	NH	11/14/2014
EPA 8270	C, D	Benzo[a]pyrene	NELAP	NH	11/14/2014
EPA 8270	C, D	Benzo[b]fluoranthene	NELAP	NH	11/14/2014
EPA 8270	C, D	Benzo[ghi]perylene	NELAP	NH	11/14/2014
EPA 8270	C, D	Benzo[k]fluoranthene	NELAP	NH	11/14/2014
EPA 8270	C, D	Benzoic acid	NELAP	NH	11/14/2014
EPA 8270	C, D	Benzyl alcohol	NELAP	NH	11/14/2014
EPA 8270	C, D	Benzyl butyl phthalate (Butyl benzyl phthalate)	NELAP	NH	11/14/2014
EPA 8270	C, D	Carbazole	NELAP	NH	11/14/2014
EPA 8270	C, D	Chlorobenzilate	NELAP	NH	11/14/2014
EPA 8270	C, D	Chrysene (Benzo[a]phenanthrene)	NELAP	NH	11/14/2014
EPA 8270	C, D	Di-n-butyl phthalate	NELAP	NH	11/14/2014
EPA 8270	C, D	Di-n-octyl phthalate	NELAP	NH	11/14/2014
EPA 8270	C, D	Diallate (cis or trans)	NELAP	NH	11/14/2014
EPA 8270	C, D	Dibenz[a,j]acridine	NELAP	NH	11/14/2014
EPA 8270	C, D	Dibenzo[a,h]anthracene	NELAP	NH	11/14/2014
EPA 8270	C, D	Dibenzofuran	NELAP	NH	11/14/2014
EPA 8270	C, D	Diethyl phthalate	NELAP	NH	11/14/2014
EPA 8270	C, D	Dimethoate	NELAP	NH	11/14/2014
EPA 8270	C, D	Dimethyl phthalate	NELAP	NH	11/14/2014
EPA 8270	C, D	Disulfoton	NELAP	NH	11/14/2014
EPA 8270	C, D	Ethyl methanesulfonate	NELAP	NH	11/14/2014
EPA 8270	C, D	Famphur	NELAP	NH	11/14/2014
EPA 8270	C, D	Fluoranthene	NELAP	NH	11/14/2014
EPA 8270	C, D	Fluorene	NELAP	NH	11/14/2014
EPA 8270	C, D	Hexachlorobenzene	NELAP	NH	11/14/2014
EPA 8270	C, D	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	NELAP	NH	11/14/2014
EPA 8270	C, D	Hexachlorocyclopentadiene	NELAP	NH	11/14/2014
EPA 8270	C, D	Hexachloroethane	NELAP	NH	11/14/2014
EPA 8270	C, D	Hexachlorophene	NELAP	NH	11/14/2014
EPA 8270	C, D	Hexachloropropene	NELAP	NH	11/14/2014
EPA 8270	C, D	Indeno(1,2,3-cd)pyrene	NELAP	NH	11/14/2014
EPA 8270	C, D	Isodrin	NELAP	NH	11/14/2014
EPA 8270	C, D	Isophorone	NELAP	NH	11/14/2014
EPA 8270	C, D	Isosafrole	NELAP	NH	11/14/2014
EPA 8270	C, D	Kepone	NELAP	NH	11/14/2014
EPA 8270	C, D	Methapyrilene	NELAP	NH	11/14/2014
EPA 8270	C, D	Methyl methanesulfonate	NELAP	NH	11/14/2014

Annmarie Beach

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Katahdin Analytical Services LLC
600 Technology Way
Scarborough, ME 04074
(207) 874-2400

DEP Laboratory ID: 68-00571
EPA Lab Code: ME00019
TNI Code: TNI00476

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8270	C, D	Methyl parathion (Parathion, methyl)	NELAP	NH	11/14/2014
EPA 8270	C, D	N-Nitrosodi-n-butylamine	NELAP	NH	11/14/2014
EPA 8270	C, D	N-Nitrosodi-n-propylamine	NELAP	NH	11/14/2014
EPA 8270	C, D	N-Nitrosodiethylamine	NELAP	NH	11/14/2014
EPA 8270	C, D	N-Nitrosodimethylamine	NELAP	NH	11/14/2014
EPA 8270	C, D	N-Nitrosodiphenylamine	NELAP	NH	11/14/2014
EPA 8270	C, D	N-Nitrosomethylethylamine	NELAP	NH	11/14/2014
EPA 8270	C, D	N-Nitrosomorpholine	NELAP	NH	11/14/2014
EPA 8270	C, D	N-Nitrosopiperidine	NELAP	NH	11/14/2014
EPA 8270	C, D	N-Nitrosopyrrolidine	NELAP	NH	11/14/2014
EPA 8270	C, D	Naphthalene	NELAP	NH	11/14/2014
EPA 8270	C, D	Nitrobenzene	NELAP	NH	11/14/2014
EPA 8270	C, D	O,O,O-Triethyl phosphorothioate	NELAP	NH	11/14/2014
EPA 8270	C, D	Parathion, ethyl (Ethyl parathion, Parathion)	NELAP	NH	11/14/2014
EPA 8270	C, D	Pentachlorobenzene	NELAP	NH	11/14/2014
EPA 8270	C, D	Pentachlorophenol (PCP)	NELAP	NH	11/14/2014
EPA 8270	C, D	Phenacetin	NELAP	NH	11/14/2014
EPA 8270	C, D	Phenanthrene	NELAP	NH	11/14/2014
EPA 8270	C, D	Phenol	NELAP	NH	11/14/2014
EPA 8270	C, D	Phorate (Thimet)	NELAP	NH	11/14/2014
EPA 8270	C, D	Pyrene	NELAP	NH	11/14/2014
EPA 8270	C, D	Pyridine	NELAP	NH	11/14/2014
EPA 8270	C, D	Safrole	NELAP	NH	11/14/2014
EPA 8270	C, D	Sulfotepp (Tetraethyl dithiopyrophosphate)	NELAP	NH	11/14/2014
EPA 8270	C, D	Thionazine (Thionazin, Zinophos)	NELAP	NH	11/14/2014
EPA 8270	C, D	bis(2-Chloroethoxy)methane	NELAP	NH	11/14/2014
EPA 8270	C, D	bis(2-Chloroethyl) ether	NELAP	NH	11/14/2014
EPA 8270	C, D	bis(2-Ethylhexyl) phthalate (DEHP)	NELAP	NH	11/14/2014
EPA 8330	A, B	Nitroaromatics and nitramines by HPLC/UV	NELAP	NH	11/14/2014
EPA 8330	A, B	1,3,5-Trinitrobenzene (1,3,5-TNB)	NELAP	NH	11/14/2014
EPA 8330	A, B	1,3-Dinitrobenzene (1,3-DNB)	NELAP	NH	11/14/2014
EPA 8330	A, B	2,4,6-Trinitrotoluene (2,4,6-TNT)	NELAP	NH	11/14/2014
EPA 8330	A, B	2,4-Dinitrotoluene (2,4-DNT)	NELAP	NH	11/14/2014
EPA 8330	A, B	2,6-Dinitrotoluene (2,6-DNT)	NELAP	NH	11/14/2014
EPA 8330	A, B	2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NELAP	NH	11/14/2014
EPA 8330	A, B	2-Nitrotoluene	NELAP	NH	11/14/2014
EPA 8330	A, B	3-Nitrotoluene	NELAP	NH	11/14/2014
EPA 8330	A, B	4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NELAP	NH	11/14/2014
EPA 8330	A, B	4-Nitrotoluene	NELAP	NH	11/14/2014
EPA 8330	A, B	Nitrobenzene	NELAP	NH	11/14/2014
EPA 8330	A, B	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	NELAP	NH	11/14/2014

Annmarie Beach

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pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Katahdin Analytical Services LLC
600 Technology Way
Scarborough, ME 04074
(207) 874-2400

DEP Laboratory ID: 68-00571
EPA Lab Code: ME00019
TNI Code: TNI00476

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8330	A, B	RDX (Hexahydro-1,3,5-trinitro-1,3,5-triazine)	NELAP	NH	11/14/2014
EPA 8330	B	Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	NELAP	NH	11/14/2014
EPA 8330	B	Nitroglycerin	NELAP	NH	11/14/2014
EPA 9012	A, B	Total cyanide	NELAP	NH	10/28/2015
EPA 9038		Sulfate	NELAP	NH	11/14/2014
EPA 9040	B, C	pH	NELAP	NH	10/28/2015
EPA 9056	A	Anions by IC	NELAP	NH	11/14/2014
EPA 9056	A	Bromide	NELAP	NH	11/14/2014
EPA 9056	A	Chloride	NELAP	NH	11/14/2014
EPA 9056	A	Fluoride	NELAP	NH	11/14/2014
EPA 9056	A	Nitrate as N	NELAP	NH	11/14/2014
EPA 9056	A	Nitrite as N	NELAP	NH	11/14/2014
EPA 9056	A	Sulfate	NELAP	NH	11/14/2014
EPA 9060	A	Total organic carbon (TOC)	NELAP	NH	04/03/2017
EPA 9065		Total phenolics	NELAP	NH	11/14/2014
EPA 9070	A	Oil and grease	NELAP	NH	04/03/2017
EPA 9251		Chloride	NELAP	NH	11/14/2014
SM 2120 B		Color	NELAP	NH	11/14/2014
SM 2130 B		Turbidity	NELAP	NH	11/14/2014
SM 2320 B		Alkalinity as CaCO3	NELAP	NH	11/14/2014
SM 2510 B		Conductivity	NELAP	NH	11/14/2014
SM 2540 B		Residue, total	NELAP	NH	11/14/2014
SM 2540 C		Residue, filterable (TDS)	NELAP	NH	11/14/2014
SM 2540 D		Residue, nonfilterable (TSS)	NELAP	NH	11/14/2014
SM 2540 F		Residue, settleable	NELAP	NH	11/14/2014
SM 3500-Cr D	18/19	Chromium VI	NELAP	NH	11/14/2014
SM 3500-Fe D	18/19	Iron	NELAP	NH	11/14/2014
SM 4500-Cl G		Total residual chlorine	NELAP	NH	11/14/2014
SM 4500-Cl- E		Chloride	NELAP	NH	11/14/2014
SM 4500-F- C		Fluoride	NELAP	NH	11/14/2014
SM 4500-H+ B		pH	NELAP	NH	11/14/2014
SM 4500-NH3 H	19-22	Ammonia as N	NELAP	NH	11/14/2014
SM 4500-P E		Orthophosphate as P	NELAP	NH	11/14/2014
SM 4500-SO3 B		Sulfite, SO3	NELAP	NH	11/14/2014
SM 5210 B		Biochemical oxygen demand (BOD)	NELAP	NH	11/14/2014
SM 5210 B		Carbonaceous BOD (CBOD)	NELAP	NH	11/14/2014
SM 5310 B		Total organic carbon (TOC)	NELAP	NH	11/14/2014
SM 5540 C		Surfactants as MBAS	NELAP	NH	11/14/2014

Matrix: Solid and Chemical Materials

Annmarie Beach

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DEP Laboratory ID: 68-00571
EPA Lab Code: ME00019
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Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 1010	A	Ignitability	NELAP	NH	11/14/2014
EPA 1311		Toxicity characteristic leaching procedure (TCLP)	NELAP	NH	11/14/2014
EPA 1312		Synthetic precipitation leaching procedure (SPLP)	NELAP	NH	11/14/2014
EPA 3050	B	Acid digestion of solids	NELAP	NH	10/28/2015
EPA 3060	A	Alkaline digestion of Cr(VI)	NELAP	NH	10/28/2015
EPA 3540	C	Soxhlet extraction	NELAP	NH	11/14/2014
EPA 3545		Pressurized fluid extraction (PFE)	NELAP	NH	11/14/2014
EPA 3550	B, C	Ultrasonic extraction	NELAP	NH	11/14/2014
EPA 3580	A	Waste dilution	NELAP	NH	11/14/2014
EPA 3585		Waste dilution for VOCs	NELAP	NH	11/14/2014
EPA 3620	B	Florisil cleanup	NELAP	NH	11/14/2014
EPA 3630	C	Silica gel cleanup	NELAP	NH	11/14/2014
EPA 3640	A	Gel permeation cleanup (GPC)	NELAP	NH	11/14/2014
EPA 3660	B	Sulfur cleanup	NELAP	NH	11/14/2014
EPA 5035	A	Closed-system purge-and-trap (bisulfate option)	NELAP	NH	11/14/2014
EPA 5035	A	Closed-system purge-and-trap (methanol option)	NELAP	NH	11/14/2014
EPA 5035	A	Closed-system purge-and-trap (unpreserved)	NELAP	NH	11/14/2014
EPA 6010	C	Metals by ICP/AES	NELAP	NH	11/14/2014
EPA 6010	C	Aluminum	NELAP	NH	11/14/2014
EPA 6010	C	Antimony	NELAP	NH	11/14/2014
EPA 6010	C	Arsenic	NELAP	NH	11/14/2014
EPA 6010	C	Barium	NELAP	NH	11/14/2014
EPA 6010	C	Beryllium	NELAP	NH	11/14/2014
EPA 6010	C	Boron	NELAP	NH	11/14/2014
EPA 6010	C	Cadmium	NELAP	NH	11/14/2014
EPA 6010	C	Calcium	NELAP	NH	11/14/2014
EPA 6010	C	Chromium	NELAP	NH	11/14/2014
EPA 6010	C	Cobalt	NELAP	NH	11/14/2014
EPA 6010	C	Copper	NELAP	NH	11/14/2014
EPA 6010	C	Iron	NELAP	NH	11/14/2014
EPA 6010	C	Lead	NELAP	NH	11/14/2014
EPA 6010	C	Lithium	NELAP	NH	11/14/2014
EPA 6010	C	Magnesium	NELAP	NH	11/14/2014
EPA 6010	C	Manganese	NELAP	NH	11/14/2014
EPA 6010	C	Molybdenum	NELAP	NH	11/14/2014
EPA 6010	C	Nickel	NELAP	NH	11/14/2014
EPA 6010	C	Potassium	NELAP	NH	11/14/2014
EPA 6010	C	Selenium	NELAP	NH	11/14/2014
EPA 6010	C	Silver	NELAP	NH	11/14/2014
EPA 6010	C	Sodium	NELAP	NH	11/14/2014

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(207) 874-2400

DEP Laboratory ID: 68-00571
EPA Lab Code: ME00019
TNI Code: TNI00476

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 6010	C	Strontium	NELAP	NH	11/14/2014
EPA 6010	C	Thallium	NELAP	NH	11/14/2014
EPA 6010	C	Tin	NELAP	NH	11/14/2014
EPA 6010	C	Titanium	NELAP	NH	11/14/2014
EPA 6010	C	Vanadium	NELAP	NH	11/14/2014
EPA 6010	C	Zinc	NELAP	NH	11/14/2014
EPA 6020	A	Metals by ICP/MS	NELAP	NH	11/14/2014
EPA 6020	A	Aluminum	NELAP	NH	11/14/2014
EPA 6020	A	Antimony	NELAP	NH	11/14/2014
EPA 6020	A	Arsenic	NELAP	NH	11/14/2014
EPA 6020	A	Barium	NELAP	NH	11/14/2014
EPA 6020	A	Beryllium	NELAP	NH	11/14/2014
EPA 6020	A	Boron	NELAP	NH	11/14/2014
EPA 6020	A	Cadmium	NELAP	NH	11/14/2014
EPA 6020	A	Calcium	NELAP	NH	11/14/2014
EPA 6020	A	Chromium	NELAP	NH	11/14/2014
EPA 6020	A	Cobalt	NELAP	NH	11/14/2014
EPA 6020	A	Copper	NELAP	NH	11/14/2014
EPA 6020	A	Iron	NELAP	NH	11/14/2014
EPA 6020	A	Lead	NELAP	NH	11/14/2014
EPA 6020	A	Magnesium	NELAP	NH	11/14/2014
EPA 6020	A	Manganese	NELAP	NH	11/14/2014
EPA 6020	A	Molybdenum	NELAP	NH	11/14/2014
EPA 6020	A	Nickel	NELAP	NH	11/14/2014
EPA 6020	A	Potassium	NELAP	NH	11/14/2014
EPA 6020	A	Selenium	NELAP	NH	11/14/2014
EPA 6020	A	Silver	NELAP	NH	11/14/2014
EPA 6020	A	Sodium	NELAP	NH	11/14/2014
EPA 6020	A	Thallium	NELAP	NH	11/14/2014
EPA 6020	A	Tin	NELAP	NH	11/14/2014
EPA 6020	A	Vanadium	NELAP	NH	11/14/2014
EPA 6020	A	Zinc	NELAP	NH	11/14/2014
EPA 7196	A	Chromium VI	NELAP	NH	11/14/2014
EPA 7471	A, B	Mercury	NELAP	NH	11/14/2014
EPA 8015	C	Nonhalogenated organics by GC/FID	NELAP	NH	11/14/2014
EPA 8015	C	Ethanol	NELAP	NH	11/14/2014
EPA 8015	C	Methanol	NELAP	NH	11/14/2014
EPA 8015	C	n-Propanol (1-Propanol)	NELAP	NH	11/14/2014
EPA 8081	B	Organochlorine pesticides by GC/ECD	NELAP	NH	11/14/2014
EPA 8081	B	4,4'-DDD	NELAP	NH	11/14/2014
EPA 8081	B	4,4'-DDE	NELAP	NH	11/14/2014
EPA 8081	B	4,4'-DDT	NELAP	NH	11/14/2014

Annmarie Beach

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Katahdin Analytical Services LLC
600 Technology Way
Scarborough, ME 04074
(207) 874-2400

DEP Laboratory ID: 68-00571
EPA Lab Code: ME00019
TNI Code: TNI00476

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8081	B	Aldrin (HHDN)	NELAP	NH	11/14/2014
EPA 8081	B	Chlordane (tech.)	NELAP	NH	11/14/2014
EPA 8081	B	Dieldrin	NELAP	NH	11/14/2014
EPA 8081	B	Endosulfan I	NELAP	NH	11/14/2014
EPA 8081	B	Endosulfan II	NELAP	NH	11/14/2014
EPA 8081	B	Endosulfan sulfate	NELAP	NH	11/14/2014
EPA 8081	B	Endrin	NELAP	NH	11/14/2014
EPA 8081	B	Endrin aldehyde	NELAP	NH	11/14/2014
EPA 8081	B	Endrin ketone	NELAP	NH	11/14/2014
EPA 8081	B	Heptachlor	NELAP	NH	11/14/2014
EPA 8081	B	Heptachlor epoxide	NELAP	NH	11/14/2014
EPA 8081	B	Methoxychlor	NELAP	NH	11/14/2014
EPA 8081	B	Toxaphene (Chlorinated camphene)	NELAP	NH	11/14/2014
EPA 8081	B	alpha-BHC (alpha-Hexachlorocyclohexane)	NELAP	NH	11/14/2014
EPA 8081	B	alpha-Chlordane	NELAP	NH	11/14/2014
EPA 8081	B	beta-BHC (beta-Hexachlorocyclohexane)	NELAP	NH	11/14/2014
EPA 8081	B	delta-BHC (delta-Hexachlorocyclohexane)	NELAP	NH	11/14/2014
EPA 8081	B	gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	NELAP	NH	11/14/2014
EPA 8081	B	gamma-Chlordane	NELAP	NH	11/14/2014
EPA 8082	A	PCBs by GC/ECD	NELAP	NH	11/14/2014
EPA 8082	A	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ 206)	NELAP	NH	11/14/2014
EPA 8082	A	2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ 170)	NELAP	NH	11/14/2014
EPA 8082	A	2,2',3,3',4,4'-Hexachlorobiphenyl (BZ 128)	NELAP	NH	11/14/2014
EPA 8082	A	2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ 187)	NELAP	NH	11/14/2014
EPA 8082	A	2,2',3,4,4',5',6-Heptachlorobiphenyl (BZ 183)	NELAP	NH	11/14/2014
EPA 8082	A	2,2',3,4,4',5'-Hexachlorobiphenyl (BZ 138)	NELAP	NH	11/14/2014
EPA 8082	A	2,2',3,4,4',5,5'-Heptachlorobiphenyl (BZ 180)	NELAP	NH	11/14/2014
EPA 8082	A	2,2',3,4,5'-Pentachlorobiphenyl (BZ 87)	NELAP	NH	11/14/2014
EPA 8082	A	2,2',3,5'-Tetrachlorobiphenyl (BZ 44)	NELAP	NH	11/14/2014
EPA 8082	A	2,2',4,4',5,5'-Hexachlorobiphenyl (BZ 153)	NELAP	NH	11/14/2014
EPA 8082	A	2,2',4,5'-Tetrachlorobiphenyl (BZ 49)	NELAP	NH	11/14/2014
EPA 8082	A	2,2',4,5,5'-Pentachlorobiphenyl (BZ 101)	NELAP	NH	11/14/2014
EPA 8082	A	2,2',5,5'-Tetrachlorobiphenyl (BZ 52)	NELAP	NH	11/14/2014
EPA 8082	A	2,2',5-Trichlorobiphenyl (BZ 18)	NELAP	NH	11/14/2014
EPA 8082	A	2,3',4,4'-Tetrachlorobiphenyl (BZ 66)	NELAP	NH	11/14/2014
EPA 8082	A	2,3,4,4',5-Pentachlorobiphenyl (BZ 114)	NELAP	NH	11/14/2014
EPA 8082	A	Aroclor-1016 (PCB-1016)	NELAP	NH	11/14/2014
EPA 8082	A	Aroclor-1221 (PCB-1221)	NELAP	NH	11/14/2014
EPA 8082	A	Aroclor-1232 (PCB-1232)	NELAP	NH	11/14/2014
EPA 8082	A	Aroclor-1242 (PCB-1242)	NELAP	NH	11/14/2014
EPA 8082	A	Aroclor-1248 (PCB-1248)	NELAP	NH	11/14/2014

Annmarie Beach

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Katahdin Analytical Services LLC
600 Technology Way
Scarborough, ME 04074
(207) 874-2400

DEP Laboratory ID: 68-00571
EPA Lab Code: ME00019
TNI Code: TNI00476

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8082	A	Aroclor-1254 (PCB-1254)	NELAP	NH	11/14/2014
EPA 8082	A	Aroclor-1260 (PCB-1260)	NELAP	NH	11/14/2014
EPA 8151	A	Chlorinated herbicides by GC/ECD	NELAP	NH	10/28/2015
EPA 8151	A	2,4,5-T	NELAP	NH	11/14/2014
EPA 8151	A	2,4,5-TP (Silvex)	NELAP	NH	11/14/2014
EPA 8151	A	2,4-D	NELAP	NH	11/14/2014
EPA 8151	A	2,4-DB (Butoxon)	NELAP	NH	11/14/2014
EPA 8151	A	Dalapon (2,2-Dichloropropionic acid)	NELAP	NH	11/14/2014
EPA 8151	A	Dicamba	NELAP	NH	11/14/2014
EPA 8151	A	Dichloroprop (Dichlorprop)	NELAP	NH	11/14/2014
EPA 8151	A	Dinoseb (2-sec-Butyl-4,6-dinitrophenol, DNBP)	NELAP	NH	11/14/2014
EPA 8151	A	MCPA	NELAP	NH	11/14/2014
EPA 8151	A	MCPP (Mecoprop)	NELAP	NH	11/14/2014
EPA 8151	A	Pentachlorophenol (PCP)	NELAP	NH	11/14/2014
EPA 8260	B, C	VOCs by GC/MS	NELAP	NH	11/14/2014
EPA 8260	B, C	1,1,1,2-Tetrachloroethane	NELAP	NH	11/14/2014
EPA 8260	B, C	1,1,1-Trichloroethane	NELAP	NH	11/14/2014
EPA 8260	B, C	1,1,2,2-Tetrachloroethane	NELAP	NH	11/14/2014
EPA 8260	B, C	1,1,2-Trichloroethane	NELAP	NH	11/14/2014
EPA 8260	B, C	1,1-Dichloroethane	NELAP	NH	11/14/2014
EPA 8260	B, C	1,1-Dichloroethene (1,1-Dichloroethylene)	NELAP	NH	11/14/2014
EPA 8260	B, C	1,1-Dichloropropene	NELAP	NH	11/14/2014
EPA 8260	B, C	1,2,3-Trichlorobenzene	NELAP	NH	11/14/2014
EPA 8260	B, C	1,2,3-Trichloropropane (1,2,3-TCP)	NELAP	NH	11/14/2014
EPA 8260	B, C	1,2,4-Trichlorobenzene	NELAP	NH	11/14/2014
EPA 8260	B, C	1,2,4-Trimethylbenzene	NELAP	NH	11/14/2014
EPA 8260	B, C	1,2-Dibromoethane (EDB, Ethylene dibromide)	NELAP	NH	11/14/2014
EPA 8260	B, C	1,2-Dichlorobenzene (o-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 8260	B, C	1,2-Dichloroethane	NELAP	NH	11/14/2014
EPA 8260	B, C	1,2-Dichloropropane	NELAP	NH	11/14/2014
EPA 8260	B, C	1,3,5-Trimethylbenzene	NELAP	NH	11/14/2014
EPA 8260	B, C	1,3-Dichlorobenzene (m-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 8260	B, C	1,3-Dichloropropane	NELAP	NH	11/14/2014
EPA 8260	B, C	1,4-Dichlorobenzene (p-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 8260	B, C	1,4-Dioxane (1,4-Diethyleneoxide)	NELAP	NH	11/14/2014
EPA 8260	B, C	2,2-Dichloropropane	NELAP	NH	11/14/2014
EPA 8260	B, C	2-Butanone (Methyl ethyl ketone, MEK)	NELAP	NH	11/14/2014
EPA 8260	B, C	2-Chloroethyl vinyl ether	NELAP	NH	11/14/2014
EPA 8260	B, C	2-Chlorotoluene	NELAP	NH	11/14/2014
EPA 8260	B, C	2-Hexanone	NELAP	NH	11/14/2014
EPA 8260	B, C	4-Chlorotoluene	NELAP	NH	11/14/2014
EPA 8260	B, C	4-Methyl-2-pentanone (MIBK)	NELAP	NH	11/14/2014

Annmarie Beach

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Katahdin Analytical Services LLC
600 Technology Way
Scarborough, ME 04074
(207) 874-2400

DEP Laboratory ID: 68-00571
EPA Lab Code: ME00019
TNI Code: TNI00476

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8260	B, C	Acetone	NELAP	NH	11/14/2014
EPA 8260	B, C	Acetonitrile	NELAP	NH	11/14/2014
EPA 8260	B, C	Acrolein (Propenal)	NELAP	NH	11/14/2014
EPA 8260	B, C	Acrylonitrile	NELAP	NH	11/14/2014
EPA 8260	B, C	Benzene	NELAP	NH	11/14/2014
EPA 8260	B, C	Bromobenzene	NELAP	NH	11/14/2014
EPA 8260	B, C	Bromochloromethane	NELAP	NH	11/14/2014
EPA 8260	B, C	Bromodichloromethane	NELAP	NH	11/14/2014
EPA 8260	B, C	Bromoform	NELAP	NH	11/14/2014
EPA 8260	B, C	Carbon disulfide	NELAP	NH	11/14/2014
EPA 8260	B, C	Carbon tetrachloride	NELAP	NH	11/14/2014
EPA 8260	B, C	Chlorobenzene	NELAP	NH	11/14/2014
EPA 8260	B, C	Chloroethane	NELAP	NH	11/14/2014
EPA 8260	B, C	Chloroform	NELAP	NH	11/14/2014
EPA 8260	B, C	Chloroprene (2-Chloro-1,3-butadiene)	NELAP	NH	11/14/2014
EPA 8260	B, C	Dibromochloromethane	NELAP	NH	11/14/2014
EPA 8260	B, C	Dibromomethane	NELAP	NH	11/14/2014
EPA 8260	B, C	Dichlorodifluoromethane (Freon 12)	NELAP	NH	11/14/2014
EPA 8260	B, C	Diethyl ether (Ethyl ether)	NELAP	NH	11/14/2014
EPA 8260	B, C	Ethylbenzene	NELAP	NH	11/14/2014
EPA 8260	B, C	Iodomethane (Methyl iodide)	NELAP	NH	11/14/2014
EPA 8260	B, C	Isobutyl alcohol (2-Methyl-1-propanol)	NELAP	NH	11/14/2014
EPA 8260	B, C	Isopropyl alcohol (2-Propanol)	NELAP	NH	11/14/2014
EPA 8260	B, C	Isopropylbenzene (Cumene)	NELAP	NH	11/14/2014
EPA 8260	B, C	Methacrylonitrile	NELAP	NH	11/14/2014
EPA 8260	B, C	Methyl bromide (Bromomethane)	NELAP	NH	11/14/2014
EPA 8260	B, C	Methyl chloride (Chloromethane)	NELAP	NH	11/14/2014
EPA 8260	B, C	Methyl tert-butyl ether (MTBE)	NELAP	NH	11/14/2014
EPA 8260	B, C	Methylene chloride (Dichloromethane)	NELAP	NH	11/14/2014
EPA 8260	B, C	Methylmethacrylate	NELAP	NH	11/14/2014
EPA 8260	B, C	Naphthalene	NELAP	NH	11/14/2014
EPA 8260	B, C	Tetrachloroethene (PCE, Perchloroethylene)	NELAP	NH	11/14/2014
EPA 8260	B, C	Toluene	NELAP	NH	11/14/2014
EPA 8260	B, C	Trichloroethene (TCE, Trichloroethylene)	NELAP	NH	11/14/2014
EPA 8260	B, C	Trichlorofluoromethane (Freon 11)	NELAP	NH	11/14/2014
EPA 8260	B, C	Vinyl acetate	NELAP	NH	11/14/2014
EPA 8260	B, C	Vinyl chloride (Chloroethene)	NELAP	NH	11/14/2014
EPA 8260	B, C	Xylenes, total	NELAP	NH	11/14/2014
EPA 8260	B, C	cis-1,2-Dichloroethene	NELAP	NH	11/14/2014
EPA 8260	B, C	cis-1,3-Dichloropropene	NELAP	NH	11/14/2014
EPA 8260	B, C	cis-1,4-Dichloro-2-butene	NELAP	NH	11/14/2014
EPA 8260	B, C	n-Butyl alcohol (n-Butanol, 1-Butanol)	NELAP	NH	11/14/2014

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(207) 874-2400

DEP Laboratory ID: 68-00571
EPA Lab Code: ME00019
TNI Code: TNI00476

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8260	B, C	n-Butylbenzene	NELAP	NH	11/14/2014
EPA 8260	B, C	n-Propylbenzene	NELAP	NH	11/14/2014
EPA 8260	B, C	p-Isopropyltoluene (4-Isopropyltoluene)	NELAP	NH	11/14/2014
EPA 8260	B, C	sec-Butylbenzene	NELAP	NH	11/14/2014
EPA 8260	B, C	tert-Butyl alcohol (2-Methyl-2-propanol)	NELAP	NH	11/14/2014
EPA 8260	B, C	tert-Butylbenzene	NELAP	NH	11/14/2014
EPA 8260	B, C	trans-1,2-Dichloroethene	NELAP	NH	11/14/2014
EPA 8260	B, C	trans-1,3-Dichloropropene	NELAP	NH	11/14/2014
EPA 8260	B, C	trans-1,4-Dichloro-2-butene	NELAP	NH	11/14/2014
EPA 8270	C, D	SOCs by GC/MS	NELAP	NH	11/14/2014
EPA 8270	C, D	1,2,4,5-Tetrachlorobenzene	NELAP	NH	11/14/2014
EPA 8270	C, D	1,2,4-Trichlorobenzene	NELAP	NH	11/14/2014
EPA 8270	C, D	1,2-Dichlorobenzene (o-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 8270	C, D	1,2-Dinitrobenzene (1,2-DNB)	NELAP	NH	11/14/2014
EPA 8270	C, D	1,2-Diphenylhydrazine	NELAP	NH	11/14/2014
EPA 8270	C, D	1,3,5-Trinitrobenzene (1,3,5-TNB)	NELAP	NH	11/14/2014
EPA 8270	C, D	1,3-Dichlorobenzene (m-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 8270	C, D	1,3-Dinitrobenzene (1,3-DNB)	NELAP	NH	11/14/2014
EPA 8270	C, D	1,4-Dichlorobenzene (p-Dichlorobenzene)	NELAP	NH	11/14/2014
EPA 8270	C, D	1,4-Dinitrobenzene (1,4-DNB)	NELAP	NH	11/14/2014
EPA 8270	C, D	1,4-Naphthoquinone	NELAP	NH	11/14/2014
EPA 8270	C, D	1-Chloronaphthalene	NELAP	NH	11/14/2014
EPA 8270	C, D	1-Naphthylamine (alpha-Naphthylamine)	NELAP	NH	11/14/2014
EPA 8270	C, D	2,2'-oxybis(1-Chloropropane)	NELAP	NH	11/14/2014
EPA 8270	C, D	2,3,4,6-Tetrachlorophenol	NELAP	NH	11/14/2014
EPA 8270	C, D	2,4,5-Trichlorophenol	NELAP	NH	11/14/2014
EPA 8270	C, D	2,4,6-Trichlorophenol	NELAP	NH	11/14/2014
EPA 8270	C, D	2,4-Dichlorophenol	NELAP	NH	11/14/2014
EPA 8270	C, D	2,4-Dimethylphenol	NELAP	NH	11/14/2014
EPA 8270	C, D	2,4-Dinitrophenol	NELAP	NH	11/14/2014
EPA 8270	C, D	2,4-Dinitrotoluene (2,4-DNT)	NELAP	NH	11/14/2014
EPA 8270	C, D	2,6-Dichlorophenol	NELAP	NH	11/14/2014
EPA 8270	C, D	2,6-Dinitrotoluene (2,6-DNT)	NELAP	NH	11/14/2014
EPA 8270	C, D	2-Acetylaminofluorene	NELAP	NH	11/14/2014
EPA 8270	C, D	2-Chloronaphthalene	NELAP	NH	11/14/2014
EPA 8270	C, D	2-Chlorophenol	NELAP	NH	11/14/2014
EPA 8270	C, D	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	NELAP	NH	11/14/2014
EPA 8270	C, D	2-Methylnaphthalene	NELAP	NH	11/14/2014
EPA 8270	C, D	2-Methylphenol (o-Cresol)	NELAP	NH	11/14/2014
EPA 8270	C, D	2-Naphthylamine (beta-Naphthylamine)	NELAP	NH	11/14/2014
EPA 8270	C, D	2-Nitroaniline	NELAP	NH	11/14/2014

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DEP Laboratory ID: 68-00571
EPA Lab Code: ME00019
TNI Code: TNI00476

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8270	C, D	2-Nitrophenol	NELAP	NH	11/14/2014
EPA 8270	C, D	3+4-Methylphenol (m+p-Cresol)	NELAP	NH	11/14/2014
EPA 8270	C, D	3,3'-Dichlorobenzidine	NELAP	NH	11/14/2014
EPA 8270	C, D	3,3'-Dimethylbenzidine	NELAP	NH	11/14/2014
EPA 8270	C, D	3-Methylcholanthrene	NELAP	NH	11/14/2014
EPA 8270	C, D	3-Nitroaniline	NELAP	NH	11/14/2014
EPA 8270	C, D	4-Aminobiphenyl	NELAP	NH	11/14/2014
EPA 8270	C, D	4-Bromophenyl phenyl ether	NELAP	NH	11/14/2014
EPA 8270	C, D	4-Chloro-3-methylphenol	NELAP	NH	11/14/2014
EPA 8270	C, D	4-Chloroaniline	NELAP	NH	11/14/2014
EPA 8270	C, D	4-Chlorophenyl phenyl ether	NELAP	NH	11/14/2014
EPA 8270	C, D	4-Nitroaniline	NELAP	NH	11/14/2014
EPA 8270	C, D	4-Nitrophenol	NELAP	NH	11/14/2014
EPA 8270	C, D	5-Nitro-o-toluidine	NELAP	NH	11/14/2014
EPA 8270	C, D	7,12-Dimethylbenz(a)anthracene	NELAP	NH	11/14/2014
EPA 8270	C, D	Acenaphthene	NELAP	NH	11/14/2014
EPA 8270	C, D	Acenaphthylene	NELAP	NH	11/14/2014
EPA 8270	C, D	Acetophenone	NELAP	NH	11/14/2014
EPA 8270	C, D	Aniline	NELAP	NH	11/14/2014
EPA 8270	C, D	Anthracene	NELAP	NH	11/14/2014
EPA 8270	C, D	Aramite	NELAP	NH	11/14/2014
EPA 8270	C, D	Benzaldehyde	NELAP	NH	11/14/2014
EPA 8270	C, D	Benzidine	NELAP	NH	11/14/2014
EPA 8270	C, D	Benzo[a]anthracene	NELAP	NH	11/14/2014
EPA 8270	C, D	Benzo[a]pyrene	NELAP	NH	11/14/2014
EPA 8270	C, D	Benzo[b]fluoranthene	NELAP	NH	11/14/2014
EPA 8270	C, D	Benzo[ghi]perylene	NELAP	NH	11/14/2014
EPA 8270	C, D	Benzo[k]fluoranthene	NELAP	NH	11/14/2014
EPA 8270	C, D	Benzoic acid	NELAP	NH	11/14/2014
EPA 8270	C, D	Benzyl alcohol	NELAP	NH	11/14/2014
EPA 8270	C, D	Benzyl butyl phthalate (Butyl benzyl phthalate)	NELAP	NH	11/14/2014
EPA 8270	C, D	Carbazole	NELAP	NH	11/14/2014
EPA 8270	C, D	Chlorobenzilate	NELAP	NH	11/14/2014
EPA 8270	C, D	Chrysene (Benzo[a]phenanthrene)	NELAP	NH	11/14/2014
EPA 8270	C, D	Di-n-butyl phthalate	NELAP	NH	11/14/2014
EPA 8270	C, D	Di-n-octyl phthalate	NELAP	NH	11/14/2014
EPA 8270	C, D	Diallate (cis or trans)	NELAP	NH	11/14/2014
EPA 8270	C, D	Dibenz[a,j]acridine	NELAP	NH	11/14/2014
EPA 8270	C, D	Dibenzo[a,h]anthracene	NELAP	NH	11/14/2014
EPA 8270	C, D	Dibenzofuran	NELAP	NH	11/14/2014
EPA 8270	C, D	Diethyl phthalate	NELAP	NH	11/14/2014
EPA 8270	C, D	Dimethoate	NELAP	NH	11/14/2014

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DEP Laboratory ID: 68-00571
EPA Lab Code: ME00019
TNI Code: TNI00476

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8270	C, D	Dimethyl phthalate	NELAP	NH	11/14/2014
EPA 8270	C, D	Disulfoton	NELAP	NH	11/14/2014
EPA 8270	C, D	Ethyl methanesulfonate	NELAP	NH	11/14/2014
EPA 8270	C, D	Famphur	NELAP	NH	11/14/2014
EPA 8270	C, D	Fluoranthene	NELAP	NH	11/14/2014
EPA 8270	C, D	Fluorene	NELAP	NH	11/14/2014
EPA 8270	C, D	Hexachlorobenzene	NELAP	NH	11/14/2014
EPA 8270	C, D	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	NELAP	NH	11/14/2014
EPA 8270	C, D	Hexachlorocyclopentadiene	NELAP	NH	11/14/2014
EPA 8270	C, D	Hexachloroethane	NELAP	NH	11/14/2014
EPA 8270	C, D	Hexachlorophene	NELAP	NH	11/14/2014
EPA 8270	C, D	Hexachloropropene	NELAP	NH	11/14/2014
EPA 8270	C, D	Indeno(1,2,3-cd)pyrene	NELAP	NH	11/14/2014
EPA 8270	C, D	Isodrin	NELAP	NH	11/14/2014
EPA 8270	C, D	Isophorone	NELAP	NH	11/14/2014
EPA 8270	C, D	Isosafrole	NELAP	NH	11/14/2014
EPA 8270	C, D	Kepone	NELAP	NH	11/14/2014
EPA 8270	C, D	Methapyrilene	NELAP	NH	11/14/2014
EPA 8270	C, D	Methyl methanesulfonate	NELAP	NH	11/14/2014
EPA 8270	C, D	Methyl parathion (Parathion, methyl)	NELAP	NH	11/14/2014
EPA 8270	C, D	N-Nitrosodi-n-butylamine	NELAP	NH	11/14/2014
EPA 8270	C, D	N-Nitrosodi-n-propylamine	NELAP	NH	11/14/2014
EPA 8270	C, D	N-Nitrosodiethylamine	NELAP	NH	11/14/2014
EPA 8270	C, D	N-Nitrosodimethylamine	NELAP	NH	11/14/2014
EPA 8270	C, D	N-Nitrosodiphenylamine	NELAP	NH	11/14/2014
EPA 8270	C, D	N-Nitrosomethylethylamine	NELAP	NH	11/14/2014
EPA 8270	C, D	N-Nitrosomorpholine	NELAP	NH	11/14/2014
EPA 8270	C, D	N-Nitrosopiperidine	NELAP	NH	11/14/2014
EPA 8270	C, D	Naphthalene	NELAP	NH	11/14/2014
EPA 8270	C, D	Nitrobenzene	NELAP	NH	11/14/2014
EPA 8270	C, D	O,O,O-Triethyl phosphorothioate	NELAP	NH	11/14/2014
EPA 8270	C, D	Parathion, ethyl (Ethyl parathion, Parathion)	NELAP	NH	11/14/2014
EPA 8270	C, D	Pentachlorobenzene	NELAP	NH	11/14/2014
EPA 8270	C, D	Pentachloronitrobenzene (PCNB)	NELAP	NH	11/14/2014
EPA 8270	C, D	Pentachlorophenol (PCP)	NELAP	NH	11/14/2014
EPA 8270	C, D	Phenacetin	NELAP	NH	11/14/2014
EPA 8270	C, D	Phenanthrene	NELAP	NH	11/14/2014
EPA 8270	C, D	Phenol	NELAP	NH	11/14/2014
EPA 8270	C, D	Phorate (Thimet)	NELAP	NH	11/14/2014
EPA 8270	C, D	Pronamide (Kerb)	NELAP	NH	11/14/2014
EPA 8270	C, D	Pyrene	NELAP	NH	11/14/2014
EPA 8270	C, D	Pyridine	NELAP	NH	11/14/2014

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The Pennsylvania Department of Environmental Protection Laboratory Accreditation Program is a NELAP recognized Accreditation Body. Customers are urged to verify the laboratory's current accreditation standing.

Attached to Certificate of Accreditation 011-001 expiration date 11/30/2021. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Katahdin Analytical Services LLC
600 Technology Way
Scarborough, ME 04074
(207) 874-2400

DEP Laboratory ID: 68-00571
EPA Lab Code: ME00019
TNI Code: TNI00476

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8270	C, D	Safrole	NELAP	NH	11/14/2014
EPA 8270	C, D	Sulfotepp (Tetraethyl dithiopyrophosphate)	NELAP	NH	11/14/2014
EPA 8270	C, D	Thionazine (Thionazin, Zinophos)	NELAP	NH	11/14/2014
EPA 8270	C, D	a,a-Dimethylphenethylamine (Phentermine)	NELAP	NH	11/14/2014
EPA 8270	C, D	bis(2-Chloroethoxy)methane	NELAP	NH	11/14/2014
EPA 8270	C, D	bis(2-Chloroethyl) ether	NELAP	NH	11/14/2014
EPA 8270	C, D	bis(2-Ethylhexyl) phthalate (DEHP)	NELAP	NH	11/14/2014
EPA 8270	C, D	o-Toluidine (2-Toluidine, 2-Methylaniline)	NELAP	NH	11/14/2014
EPA 8330	A, B	Nitroaromatics and nitramines by HPLC/UV	NELAP	NH	11/14/2014
EPA 8330	A, B	1,3,5-Trinitrobenzene (1,3,5-TNB)	NELAP	NH	11/14/2014
EPA 8330	A, B	1,3-Dinitrobenzene (1,3-DNB)	NELAP	NH	11/14/2014
EPA 8330	A, B	2,4,6-Trinitrotoluene (2,4,6-TNT)	NELAP	NH	11/14/2014
EPA 8330	A, B	2,4-Dinitrotoluene (2,4-DNT)	NELAP	NH	11/14/2014
EPA 8330	A, B	2,6-Dinitrotoluene (2,6-DNT)	NELAP	NH	11/14/2014
EPA 8330	A, B	2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NELAP	NH	11/14/2014
EPA 8330	A, B	2-Nitrotoluene	NELAP	NH	11/14/2014
EPA 8330	A, B	3-Nitrotoluene	NELAP	NH	11/14/2014
EPA 8330	A, B	4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NELAP	NH	11/14/2014
EPA 8330	A, B	4-Nitrotoluene	NELAP	NH	11/14/2014
EPA 8330	A, B	Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	NELAP	NH	11/14/2014
EPA 8330	A, B	Nitrobenzene	NELAP	NH	11/14/2014
EPA 8330	A, B	Nitroglycerin	NELAP	NH	11/14/2014
EPA 8330	A, B	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	NELAP	NH	11/14/2014
EPA 9012	A	Total cyanide	NELAP	NH	10/28/2015
EPA 9038		Sulfate	NELAP	NH	11/14/2014
EPA 9045	D	pH	NELAP	NH	11/14/2014
EPA 9056	A	Anions by IC	NELAP	NH	11/14/2014
EPA 9056	A	Chloride	NELAP	NH	11/14/2014
EPA 9056	A	Fluoride	NELAP	NH	11/14/2014
EPA 9056	A	Nitrate as N	NELAP	NH	11/14/2014
EPA 9056	A	Nitrite as N	NELAP	NH	11/14/2014
EPA 9056	A	Sulfate	NELAP	NH	11/14/2014
EPA 9060	A	Total organic carbon (TOC)	NELAP	NH	04/03/2017
EPA 9071	A, B	Oil and grease	NELAP	NH	11/14/2014
EPA 9095	B	Paint filter liquids test	NELAP	NH	04/03/2017
EPA 9251		Chloride	NELAP	NH	11/14/2014

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SAP Worksheet #15: Reference Limits and Evaluation Tables (Backup Laboratory is ELLE)

(UFP-QAPP Manual Section 2.8.1)

Matrix: Surface Water
Analytical Group: PFAS by Liquid Chromatograph/Tandem Mass Spectroscopy (LC/MS/MS) Compliant with Quality Systems Manual (QSM) 5.3 Table B-15 [1]

Analyte	CAS Number	Human Health PSL[2] (ppt)	PSL Reference[2]	Ecological PSL[3] (ppt)	PSL Reference[3]	Practical Quantitation Limit Goals (PQLG)[4] (ppt)	ELLE		
							LOQ (ppt)	LOD (ppt)	DL (ppt)
Perfluorooctanoic acid (PFOA)	335-67-1	1,400	RSL Calc	4,400	Divine et al. (2020)	467	2.00	1.00	0.500
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	1,400	RSL Calc	75	Divine et al. (2020)	25	2.00	1.00	0.500
Perfluorobutanesulfonic acid (PFBS)	375-73-5	21,000	RSL Calc	640,000	Divine et al. (2020)	213,333	2.00	1.00	0.500
Perfluorodecanoic acid (PFDA)	335-76-2	NA	NA	140,000	Divine et al. (2020)	46,667	2.00	1.00	0.500
Perfluorododecanoic acid (PFDoA)	307-55-1	NA	NA	72,000	Divine et al. (2020)	24,000	2.00	1.00	0.500
Perfluoroheptanoic acid (PFHpA)	375-85-9	NA	NA	870,000	Divine et al. (2020)	290,000	2.00	1.00	0.500
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	NA	NA	NA	NA	NA	2.00	1.00	0.500
Perfluorohexanoic acid (PFHxA)	307-24-4	NA	NA	210,000	Divine et al. (2020)	70,000	2.00	1.00	0.500
Perfluorononanoic acid (PFNA)	375-95-1	NA	NA	2,200	Divine et al. (2020)	733	2.00	1.00	0.500
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	NA	NA	NA	NA	NA	2.00	1.00	0.500
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	NA	NA	NA	NA	NA	2.00	1.00	0.500

Analyte	CAS Number	Human Health PSL[2] (ppt)	PSL Reference[2]	Ecological PSL[3] (ppt)	PSL Reference[3]	Practical Quantitation Limit Goals (PQLG)[4] (ppt)	ELLE		
							LOQ (ppt)	LOD (ppt)	DL (ppt)
Perfluoroundecanoic acid (PFUnA)	2058-94-8	NA	NA	49,000	Divine et al. (2020)	16,333	2.00	1.00	0.500
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	NA	NA	NA	NA	NA	2.00	1.20	0.600
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	NA	NA	NA	NA	NA	3.00	1.00	0.500
Hexafluoropropylene oxide dimer acid, (HFPO-DA)	13252-13-6	NA	NA	NA	NA	NA	3.00	1.00	0.500
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	NA	NA	NA	NA	NA	2.00	1.00	0.500
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	NA	NA	NA	NA	NA	2.00	1.00	0.500
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	NA	NA	NA	NA	NA	2.00	1.00	0.500

(1) The DoD QSM version 5.3 is being used to govern this effort (DoD, 2019). Analysis will be completed in accordance with ELLE SOPs. ELLE's accreditation meets the requirements of QSM 5.3 Table B-15.

(2) The screening levels for human health were derived using the EPA Regional Screen Level (RSL) Calculator based on a target cancer risk of 1E-6 (applicable to PFOA only) and a target hazard quotient of 0.1 with exposure assumptions for a recreational receptor outlined in the Phase I RI (Resolution, 2019). Additional detail is presented in Appendix B of March 2020 Final SAP. The EPA RSL calculator inputs that were published in the November 2020 RSL update were checked and there have been no updates to the exposure parameters or toxicity values used in the Final Phase I RI (Resolution, 2019). No new exposure parameters or toxicity values for other PFAS analytes in this Worksheet were published in the November 2020 RSL calculator update (EPA, 2020).

(3) Refer to Worksheet #11 Section 11.2.3 for discussion on ecological PSL selection and references.

(4) If the PSL is at least three times the DL, the PQLG is approximately one-third of the PSL; otherwise the PQLG is set equal to the PSL.

Results less than the DL will be reported as the LOD value followed by a "U" qualifier to indicate that the analyte was not detected at the indicated concentration level.

CAS = chemical abstract survey
DL = Detection limit
LOD = Limit of detection
LOQ = Limit of quantitation
NA = Not applicable
ppt = parts per trillion
PSL = project screening level
RSL Calc = EPA RSL Calculator

Matrix: Sediment

Analytical Group: PFAS by LC/MS/MS Compliant with QSM 5.3 Table B-15 [1]

Analyte	CAS Number	Human Health PSL[2] (ppb)	PSL Reference[2]	Ecological PSL[3] (ppb)	PSL Reference[3]	PQLG [4] (ppb)	ELLE		
							LOQ (ppb)	LOD (ppb)	DL (ppb)
PFAS by LC/MS/MS Compliant with QSM 5.3 Table B-15									
Perfluorooctanoic acid (PFOA)	335-67-1	851	RSL Calc	6	Divine et al. (2020)	2	0.600	0.400	0.200
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	851	RSL Calc	1.4	Divine et al. (2020)	0.47	0.600	0.400	0.200
Perfluorobutanesulfonic acid (PFBS)	375-73-5	13,000	RSL Calc	730	Divine et al. (2020)	243	2.00	1.60	0.400
Perfluorodecanoic acid (PFDA)	335-76-2	NA	NA	NA	NA	NA	0.600	0.400	0.200
Perfluorododecanoic acid (PFDoA)	307-55-1	NA	NA	NA	NA	NA	0.600	0.400	0.200
Perfluoroheptanoic acid (PFHpA)	375-85-9	NA	NA	NA	NA	NA	0.600	0.400	0.200
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	NA	NA	NA	NA	NA	0.600	0.400	0.200
Perfluorohexanoic acid (PFHxA)	307-24-4	NA	NA	1,800	Divine et al. (2020)	600	0.600	0.400	0.200
Perfluorononanoic acid (PFNA)	375-95-1	NA	NA	10	Divine et al. (2020)	3.33	0.600	0.400	0.200
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	NA	NA	NA	NA	NA	0.600	0.400	0.200
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	NA	NA	NA	NA	NA	0.600	0.400	0.200
Perfluoroundecanoic acid (PFUnA)	2058-94-8	NA	NA	NA	NA	NA	0.600	0.400	0.200
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	NA	NA	NA	NA	NA	2.00	0.400	0.200
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	NA	NA	NA	NA	NA	2.00	0.400	0.200
Hexafluoropropylene oxide dimer acid, (HFPO-DA)	13252-13-6	NA	NA	NA	NA	NA	3.00	1.60	0.400
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	NA	NA	NA	NA	NA	0.600	0.400	0.200
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	NA	NA	NA	NA	NA	2.00	0.400	0.200
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	NA	NA	NA	NA	NA	0.600	0.400	0.200

(1) The DoD QSM version 5.3 is being used to govern this effort (DoD, 2019). Analysis will be completed in accordance with ELLE SOPs. ELLE's accreditation meets the requirements of QSM 5.3 Table B-15.

(2) The screening levels for human health were derived using the EPA Regional Screen Level (RSL) Calculator based on a target cancer risk of 1E-6 (applicable to PFOA only) and a target hazard quotient of 0.1 with exposure assumptions for a recreational receptor outlined in the Phase I RI (Resolution, 2019). Additional detail is presented in Appendix B of March 2020 Final SAP. The EPA RSL calculator inputs that were published in the November 2020 RSL update were checked and there have been no updates to the exposure parameters or toxicity values used in the Final Phase I RI (Resolution, 2019). No new exposure parameters or toxicity values for other PFAS analytes in this Worksheet were published in the November 2020 RSL calculator update (EPA, 2020).

(3) Refer to Worksheet #11 Section 11.2.3 for discussion on ecological PSL selection and references. The PFOS sediment screening level for ecological receptors reported in wet weight, i.e., 67 ppb wet weight. If level is applied to samples without percent moisture data, then a percent moisture of 80% will be assumed, which yields a sample-specific PFOS screening level of 84 ppb.

(4) If the PSL is at least three times the DL, the PQLG is approximately one-third of the PSL; otherwise the PQLG is set equal to the PSL.

Results less than the DL will be reported as the LOD value followed by a "U" qualifier to indicate that the analyte was not detected at the indicated concentration level.

ppb = parts per billion

SAP Worksheet #23: Analytical SOP References Table (Backup Laboratory is ELLE)

(UFP-QAPP Manual Section 3.2.1)

Laboratory SOP Number	Title, Revision Date, and/or Number	Definitive or Screening Data	Matrix and Analytical Group	Instrument	Organization Performing Analysis	Variance to QSM? (Y/N)	Modified for Project Work? (Y/N)
WI36458	Polyfluorinated Alkyl Substances (PFAS) in Aqueous Samples by Method 537 Revision 1.1 Modified QSM 5.3 Table B-15 Using /LC/MS/MS, Rev 1, effective 01/28/2021	Definitive	Water PFAS	LC/MS/MS	ELLE	Y (see EIS in Worksheet #28)	N
WI23588	Preventative and Corrective Maintenance for the API 4000 and AB Sciex 4500 Liquid Chromatograph Mass Spectrometers (LC/MS/MS), Rev 1, effective 12/24/2018	NA	Water PFAS	LC/MS/MS	ELLE	N	N

Laboratory SOPs provided upon request.

SAP Worksheet #24: Analytical Instrument Calibration Table (Backup Laboratory is ELLE)

(UFP-QAPP Manual Section 3.2.2)

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
LCMSMS – PFAS by LCMSMS Compliant with Table B-15 of QSM 5.3	Initial Demonstration of PFOA Branched versus Linear Profile	Prior to analyzing any field samples	Prepare and analyze a qualitative standard used for identifying retention times of branched isomers of PFOA. Identify the retention times of branched isomers of PFOA in the purchased technical grade PFOA standard. This qualitative PFOA standard is not used for quantitation. This branched isomer identification check must be repeated any time changes occur that affect the analyte retention times.	NA	Analyst	WI12031, WI36458
LCMSMS – PFAS by LCMSMS Compliant with Table B-15 of QSM 5.3	Aqueous Sample Preparation	Each sample and associated batch QC samples.	Solid phase extraction (SPE) must be used unless samples are known to contain high PFAS concentrations (e.g., AFFF formulations). Inline SPE is acceptable. Samples of known high PFAS concentrations can be prepared by serial dilution instead of SPE, with documented project approval.	NA	NA	WI12031, WI36458
LCMSMS – PFAS by LCMSMS Compliant with Table B-15 of QSM 5.3	Solid Sample Preparation	Each sample and associated batch QC samples.	Entire sample received by the laboratory must be homogenized prior to sampling.	NA	NA	WI12031, WI36458
LCMSMS – PFAS by LCMSMS Compliant with Table B-15 of QSM 5.3	Sample Cleanup Procedure using ENVI-Carb or equivalent	Each sample and associated batch QC samples. NA to AFFF formulation samples.	Removal of interferences from matrix. Cleanup should reduce bias from matrix background	NA Flagging is not appropriate.	NA	WI12031, WI36458

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
LCMSMS – PFAS by LCMSMS Compliant with Table B-15 of QSM 5.3	Mass calibration	Initially prior to use and after performing major maintenance, as required to maintain documented instrument sensitivity and stability performance.	Calibrate the mass scale of the MS with calibration compounds and procedures described by the manufacturer. Entire range needs to be mass calibrated.	NA Flagging is not appropriate.	Analyst	WI12031, WI36458
LCMSMS – PFAS by LCMSMS Compliant with Table B-15 of QSM 5.3	Tune check	When the masses fall outside of the ±0.5 atomic mass unit of the true value (as determined by the product ion formulas).	Mass assignments of tuning standard within 0.5 atomic mass unit of true value. No samples will be analyzed without a valid tune.	Retune instrument and verify. If the tuning will not meet acceptance criteria, an instrument mass calibration must be performed and the tune check repeated. Flagging is not appropriate.	Analyst	WI12031, WI36458
LCMSMS – PFAS by LCMSMS Compliant with Table B-15 of QSM 5.3	Mass spectral acquisition rate	Each analyte extracted internal standard analyte, and injection internal standard analyte.	A minimum of 10 spectra scans are acquired across each chromatographic peak.	NA Flagging is not appropriate.	Analyst	WI12031, WI36458

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
LCMSMS – PFAS by LCMSMS Compliant with Table B-15 of QSM 5.3	Calibration, calibration verification, and spiking standards	All analytes.	Standards containing both branched and linear isomers must be used when commercially available. If not available, the total response of the analyte must be integrated (i.e., accounting for peaks that are identified as linear and branched isomers) and quantitated using a calibration curve that includes the linear isomer only for that analyte (e.g., PFOA). Standards containing both branched and linear isomers are to be used during method validation to make sure that the total response is quantitated for that analyte. Technical grade standards cannot be used for quantitative analysis.	NA Flagging is not appropriate.	Analyst	WI12031, WI36458

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
LCMSMS – PFAS by LCMSMS Compliant with Table B-15 of QSM 5.3	Ion Transitions (Parent-> Product)	Prior to method implementation.	The chemical derivation of the ion transitions, both those used for quantitation and those used for confirmation, must be documented. Two transitions and the ion transition ratio per analyte will be monitored and documented with the exception of PFBA and PFPeA. To avoid biasing results high due to known interferences for some transitions, the following transitions must be used for the quantification of the following analytes: PFOA: 413 —› 369 PFOS: 499 —› 80 PFHxS: 399 —› 80 PFBS: 299 —› 80 4:2 Fluorinated Telomer Sulfonates (FTS): 327 —› 307 6:2 FTS: 427 —› 407 8:2 FTS: 527 —› 507 NEtFOSAA: 584 —› 419 NMeFOSAA: 570 —›419 If these transitions are not used, the reason must be technically justified and documented (e.g., alternate transition was used due to observed interferences).	NA. Flagging is not appropriate.	Analyst	WI12031, WI36458

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
LCMSMS – PFAS by LCMSMS Compliant with Table B-15 of QSM 5.3	ICAL	At instrument set-up and after initial calibration verification (ICV) or CCV failure, prior to sample analysis.	The isotopically labeled analog of an analyte (extracted internal standard analyte) must be used for quantitation if commercially available (isotope dilution quantitation). If a labeled analog is not commercially available, the extracted internal standard analyte with the closest retention time to the analyte must be used for quantitation (internal standard quantitation). S/N Ratio: ≥ 10:1 for the ions used for quantification. For analytes having a promulgated standard, (e.g., Health Advisories for PFOA and PFOS), the qualitative (confirmation) transition ion must have an S/N Ratio of ≥ 3:1. The percent RSD of the response factors for the analytes must be <20%. Linear or non-linear calibrations must have r^2 ≥ 0.99 for each analyte. Analytes must be within 70 to 130% of their true value for each calibration standard. No samples will be analyzed until ICAL has passed. Isotope dilution or internal standard calibration is required for the analytes. External calibration is not allowed. Calibration can be linear (minimum of five standards) or quadratic (minimum of six standards); weighting is allowed.	Correct problem, then repeat ICAL. Flagging is not appropriate.	Analyst	WI12031, WI36458

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
LCMSMS – PFAS by LCMSMS Compliant with Table B-15 of QSM 5.3	Instrument sensitivity check (ISC)	Prior to analysis and at least once every 12 hours.	Analyte concentrations must be at LOQ; concentrations must be within 70% to 130% of their true values. No samples will be analyzed until ISC has met acceptance criteria. ISC can serve as the initial daily CCV.	Correct problem, rerun ISC. If problem persists, repeat ICAL. Flagging is not appropriate.	Analyst	WI12031, WI36458
LCMSMS – PFAS by LCMSMS Compliant with Table B-15 of QSM 5.3	ICV	Once after each ICAL, analysis of a second source standard prior to sample analysis.	Analyte concentrations must be within 70% to 130% of their true value. No samples will be analyzed until calibration has been verified.	Correct problem, rerun ICV. If that fails, repeat ICAL. Flagging is not appropriate.	Analyst	WI12031, WI36458

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Person Responsible for Corrective Action	SOP Reference
LCMSMS – PFAS by LCMSMS Compliant with Table B-15 of QSM 5.3	CCV	Prior to sample analysis, after every 10 field samples, and at the end of the analytical sequence.	Concentrations of analytes must range from the LOQ to the mid-level calibration concentration. Analyte concentrations must be within 70% to 130% of their true value. Results may not be reported without valid CCVs. ISC can serve as a bracketing CCV.	Immediately analyze two additional consecutive CCVs. If both pass, samples may be reported without reanalysis. If either fails, or if two consecutive CCVs cannot be run, perform CA(s) and repeat CCV and the associated samples since last successful CCV. Alternately, recalibrate if necessary, then re-analyze the associated samples since the last acceptable CCV. If reanalysis cannot be performed, data must be qualified and explained in the Case Narrative. Apply Q-flag to the results for the specific analyte(s) in the samples since the last acceptable calibration verification.	Analyst	WI12031, WI36458

SAP Worksheet #25: Analytical Instrument and Equipment Maintenance, Testing, and Inspection Table (Backup Laboratory is ELLE)

(UFP-QAPP Manual Section 3.2.3)

Instrument/ Equipment	Maintenance Activity	Testing Activity	Inspection Activity	Frequency	Acceptance Criteria	Corrective Action	Responsible Person	SOP Reference
LCMSMS	Backflush of column, injection port and pre-columns, cleaning of ion spray cone, adjustment of collision energies, others as needed	Calibration checks	Visual	As needed	Initial calibration or calibration verification passes method specifications	Perform additional maintenance prior to instrument calibration or calibration verification	ELLE Analysts	WI36458, WI23588

SAP Worksheet #26: Sample Handling System (Backup Laboratory is ELLE)

(UFP-QAPP Manual Appendix A)

Sample Handling System
SAMPLE COLLECTION, PACKAGING, AND SHIPMENT
Sample Collection (Personnel/Organization): FOL or designee/Tetra Tech
Sample Packaging (Personnel/Organization): FOL or designee/Tetra Tech
Coordination of Shipment (Personnel/Organization): FOL or designee/Tetra Tech
Type of Shipment/Carrier: Pickup at the Tetra Tech King of Prussia office via laboratory courier
SAMPLE RECEIPT AND ANALYSIS
Sample Receipt (Personnel/Organization): Sample Custodians/Battelle and backup PFAS laboratory is ELLE
Sample Custody and Storage (Personnel/Organization): Sample Custodians/ Battelle and backup PFAS laboratory is ELLE
Sample Preparation (Personnel/Organization): Organic Preparation Personnel/ Battelle and backup PFAS laboratory is ELLE
Sample Determinative Analysis (Personnel/Organization): Organic Preparation Personnel/ Battelle and backup PFAS laboratory is ELLE
SAMPLE ARCHIVING
Field Sample Storage (No. of days from sample collection): 60 days from receipt
Sample Extract/Digestate Storage (No. of days from extraction/digestion): 3 months from sample digestion/extraction
Biological Sample Storage (No. of days from sample collection): NA
SAMPLE DISPOSAL
Personnel/Organization: Sample Custodians/ Battelle and backup PFAS laboratory is ELLE

SAP Worksheet #28: Laboratory QC Samples Table (Backup Laboratory is ELLE)

(UFP-QAPP Manual Section 3.4)

Matrix	Surface Water and Sediment
Analytical Group	PFAS
Analytical Method/ SOP Reference	PFAS by LCMSMS Compliant with Table B-15 of QSM 5.3 / WI12031, WI36458

QC Sample	Frequency and Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for CA	Data Quality Indicator	MPC
Instrument Blanks	Immediately following the highest standard analyzed and daily prior to sample analysis.	Concentration of each analyte must be ≤ ½ the LOQ. Note: Successful analysis following the highest standard analyzed determines the highest concentration at which carryover does not occur. The highest standard analyzed may be analyzed as part of the calibration curve or following the calibration curve. If analyzed following the calibration curve, it is not used to extend out the calibration range. It is used only to document a higher concentration at which carryover still does not occur. If sample concentrations exceed this range and the sample(s) following exceed this acceptance criteria (>½ LOQ), they must be re-analyzed.	If acceptance criteria are not met after the highest calibration standard, calibration must be performed using a lower concentration for the highest standard until acceptance criteria are met. If acceptance criteria are not met after the highest standard that is not included in the calibration, the standard cannot be used to determine the highest concentration in samples at which carryover does not occur. If acceptance criteria are not met, additional instrument blanks must be analyzed until acceptance criteria are met. Additional samples will not be analyzed until acceptance criteria are met. Flagging is only appropriate in cases when the sample cannot be re-analyzed and when there is no more sample left.	Analyst, Supervisor	Accuracy/Bias/ Contamination	Same as Method/SOP QC Acceptance Limits.

Matrix	Surface Water and Sediment
Analytical Group	PFAS
Analytical Method/ SOP Reference	PFAS by LCMSMS Compliant with Table B-15 of QSM 5.3 / WI12031, WI36458

QC Sample	Frequency and Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for CA	Data Quality Indicator	MPC
Extracted Internal Standard Analytes	Every field sample, standard, blank, and QC sample.	Added to sample prior to extraction. For aqueous samples prepared by serial dilution instead of SPE, added to samples prior to analysis. Extracted Internal Standard Analyte recoveries must be within 50% to 150% of the true value.	For all PFAS compounds if EIS recovery is <50%, will check for laboratory error and correct if identified. If no laboratory error is identified, additional corrective action will be performed if EIS recovery is <10%. If EIS recovery is >10% and samples have detections above the reporting limit, no additional corrective action is performed. If EIS recovery is >10% and samples have no detections for associated native analytes, the native analyte response will be evaluated to confirm the validity of the reporting limit. Reporting limits will be proportionately increased as necessary and appropriate to ensure that reported values accurately reflect the sensitivity of the analysis (ELLE requested variance). If recoveries are acceptable for QC samples but not field samples, the field samples must be re-prepared and re-analyzed (greater dilution may be needed). If recoveries are unacceptable for QC samples, correct the problem and re-analyze the associated failed field samples.	Analyst, Supervisor	Accuracy/Bias	Same as Method/SOP QC Acceptance Limits.

Matrix	Surface Water and Sediment
Analytical Group	PFAS
Analytical Method/ SOP Reference	PFAS by LCMSMS Compliant with Table B-15 of QSM 5.3 / WI12031, WI36458

QC Sample	Frequency and Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for CA	Data Quality Indicator	MPC
			Apply Q-flag and discuss in the Case Narrative only if reanalysis confirms failures in exactly the same manner. Failing analytes will be thoroughly documented in the Case Narrative.			
Injection Internal Standard Analytes	Every field sample, standard, blank, and QC sample. Alternative Injection Internal Standard Analytes are recommended when there is obvious chromatographic interference.	Added to aliquot of sample dilutions, QC samples, and standards just prior to analysis. Peak areas must be within -50% to +50% of the area measured in the ICAL midpoint standard. On days when ICAL is not performed, the peak areas must be within -50% to +50% of the peak area measured in daily initial CCV.	If peak areas are unacceptable, analyze a second aliquot of the extract or sample if enough extract remains. If there is not enough extract, re-analyze the first aliquot. If the second analysis meets acceptance criteria, report the second analysis. If it fails, either analysis may be reported with the appropriate flags. Apply Q-flag and discuss in the Case Narrative.	Analyst, Supervisor	Accuracy/Bias	Same as Method/SOP QC Acceptance Limits.

Matrix	Surface Water and Sediment
Analytical Group	PFAS
Analytical Method/ SOP Reference	PFAS by LCMSMS Compliant with Table B-15 of QSM 5.3 / WI12031, WI36458

QC Sample	Frequency and Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for CA	Data Quality Indicator	MPC
MB	One per preparatory batch.	No analytes detected >1/2 LOQ or > 1/10 the amount measured in any sample or 1/10 the regulatory limit, whichever is greater.	Correct problem. If required, re-prepare and re-analyze MB and the QC samples and field samples processed with the contaminated blank. If reanalysis cannot be performed, data must be qualified and explained in the Case Narrative. Apply B-flag to the results for the specific analyte(s) in the samples in the associated preparatory batch. Results may not be reported without a valid MB. Flagging is only appropriate in cases where the samples cannot be re-analyzed.	Analyst, Supervisor	Accuracy/Bias/ Contamination	Same as Method/SOP QC Acceptance Limits.

Matrix	Surface Water and Sediment
Analytical Group	PFAS
Analytical Method/ SOP Reference	PFAS by LCMSMS Compliant with Table B-15 of QSM 5.3 / WI12031, WI36458

QC Sample	Frequency and Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for CA	Data Quality Indicator	MPC
LCS	One per preparatory batch.	Blank spiked with the analytes at a concentration ≥ LOQ and ≤ the mid-level calibration concentration. Use limits in QSM 5.3 and table below. Results may not be reported without a valid LCS.	Correct problem, then re-prepare and re-analyze the LCS and the samples in the associated preparatory batch for failed analytes, if sufficient sample material is available. If reanalysis cannot be performed, data must be qualified and explained in the Case Narrative. Apply Q-flag to specific analyte(s) in the samples in the associated preparatory batch. Flagging is only appropriate in cases where the samples cannot be re-analyzed.	Analyst, Supervisor	Accuracy/Bias	Same as Method/SOP QC Acceptance Limits.
MS	One per preparatory batch. Not required for aqueous samples prepared by serial dilution instead of SPE.	Sample spiked with the analytes at a concentration ≥ LOQ and ≤ the mid-level calibration concentration. Use limits in QSM 5.3 and table below.	Examine the project-specific requirements. Contact Tetra Tech as to additional measures to be taken. For the specific analyte(s) in the parent sample, apply J-flag if acceptance criteria are not met and explain in the Case Narrative. For matrix evaluation only. If MS results are outside the limits, the data will be evaluated to determine the source(s) of difference, i.e., matrix effect or analytical error.	Analyst, Supervisor	Accuracy/Bias	Same as Method/SOP QC Acceptance Limits.

Matrix	Surface Water and Sediment
Analytical Group	PFAS
Analytical Method/ SOP Reference	PFAS by LCMSMS Compliant with Table B-15 of QSM 5.3 / WI12031, WI36458

QC Sample	Frequency and Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for CA	Data Quality Indicator	MPC
MSD or MD	For MSD: One per preparatory batch. The MD is a second aliquot of the field sample that has been prepared by serial dilution. For MD: Each aqueous sample prepared by serial dilution instead of SPE.	For MSD: Sample spiked with the analytes at a concentration ≥ LOQ and ≤ the mid-level calibration concentration. For MSD: Use limits in QSM 5.3 and table below. For Sample/MD: RPD ≤ 30% (between MS and MSD or sample and MD).	Examine the project-specific requirements. Contact Tetra Tech as to additional measures to be taken. The data will be evaluated to determine the source of difference. For the specific analyte(s) in the parent sample, apply J-flag if acceptance criteria are not met and explain in the Case Narrative.	Analyst, Supervisor	Precision/ Accuracy/Bias	Same as Method/SOP QC Acceptance Limits.

Matrix	Surface Water and Sediment
Analytical Group	PFAS
Analytical Method/ SOP Reference	PFAS by LCMSMS Compliant with Table B-15 of QSM 5.3 / WI12031, WI36458

QC Sample	Frequency and Number	Method/SOP QC Acceptance Limits	Corrective Action	Person(s) Responsible for CA	Data Quality Indicator	MPC
Post Spike Sample	Only applies to aqueous samples prepared by serial dilution instead of SPE that have reported value of "<LOQ" for analyte(s).	Spike aliquot(s) of sample at the final dilution(s) reported for sample with the analytes that have reported value of "<LOQ" in the final dilution. The spike must be at the LOQ concentration to be reported with the sample (the "<LOQ" value). When analyte concentrations are calculated as "<LOQ," the spike must recover within 70% to 130% of its true value. When analyte concentrations are calculated as "<LOQ," results may not be reported without acceptable post spike recoveries.	When analyte concentrations are calculated as "<LOQ" and the spike recovery does not meet the 70% to 130% acceptance criteria, the sample, sample duplicate, and post spike sample must be re-analyzed at consecutively higher dilutions until the criteria are met. Flagging is not appropriate.	Analyst, Supervisor	Accuracy/Bias	Same as Method/SOP QC Acceptance Limits.

ELLE Laboratory Limits
(February 2021)

Matrix	MethodDesc	Analyte	CASNUM	Analytical_Method	Reference	LCSLow	LCSUp	RPD	MDL	MDL_Units	RL	RL_Units	LOD	LOD_Units
Water	PFAS for QSM 5.3, Table B-15	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	763051-92-9	QSM B15	DOD 5.3	70	130	30	0.5	ng/L	2	ng/L	1	ng/L
Water	PFAS for QSM 5.3, Table B-15	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	756426-58-1	QSM B15	DOD 5.3	70	130	30	0.5	ng/L	2	ng/L	1	ng/L
Water	PFAS for QSM 5.3, Table B-15	DONA	919005-14-4	QSM B15	DOD 5.3	70	130	30	0.5	ng/L	2	ng/L	1	ng/L
Water	PFAS for QSM 5.3, Table B-15	N-ethylperfluorooctanesulfonamidoacetic acid	2991-50-6	QSM B15	DOD 5.3	61	135	30	0.5	ng/L	3	ng/L	1	ng/L
Water	PFAS for QSM 5.3, Table B-15	N-methylperfluorooctanesulfonamidoacetic acid	2355-31-9	QSM B15	DOD 5.3	65	136	30	0.6	ng/L	2	ng/L	1.2	ng/L
Water	PFAS for QSM 5.3, Table B-15	Perfluoro(2-propoxypropanoic) acid	13252-13-6	QSM B15	DOD 5.3	70	130	30	0.5	ng/L	3	ng/L	1	ng/L
Water	PFAS for QSM 5.3, Table B-15	Perfluorobutanesulfonic acid	375-73-5	QSM B15	DOD 5.3	72	130	30	0.5	ng/L	2	ng/L	1	ng/L
Water	PFAS for QSM 5.3, Table B-15	Perfluorodecanoic acid	335-76-2	QSM B15	DOD 5.3	71	129	30	0.5	ng/L	2	ng/L	1	ng/L
Water	PFAS for QSM 5.3, Table B-15	Perfluorododecanoic acid	307-55-1	QSM B15	DOD 5.3	72	134	30	0.5	ng/L	2	ng/L	1	ng/L
Water	PFAS for QSM 5.3, Table B-15	Perfluoroheptanoic acid	375-85-9	QSM B15	DOD 5.3	72	130	30	0.5	ng/L	2	ng/L	1	ng/L
Water	PFAS for QSM 5.3, Table B-15	Perfluorohexanesulfonic acid	355-46-4	QSM B15	DOD 5.3	68	131	30	0.5	ng/L	2	ng/L	1	ng/L
Water	PFAS for QSM 5.3, Table B-15	Perfluorohexanoic acid	307-24-4	QSM B15	DOD 5.3	72	129	30	0.5	ng/L	2	ng/L	1	ng/L
Water	PFAS for QSM 5.3, Table B-15	Perfluorononanoic acid	375-95-1	QSM B15	DOD 5.3	69	130	30	0.5	ng/L	2	ng/L	1	ng/L
Water	PFAS for QSM 5.3, Table B-15	Perfluorooctanesulfonic acid	1763-23-1	QSM B15	DOD 5.3	65	140	30	0.5	ng/L	2	ng/L	1	ng/L
Water	PFAS for QSM 5.3, Table B-15	Perfluorooctanoic acid	335-67-1	QSM B15	DOD 5.3	71	133	30	0.5	ng/L	2	ng/L	1	ng/L
Water	PFAS for QSM 5.3, Table B-15	Perfluorotetradecanoic acid	376-06-7	QSM B15	DOD 5.3	71	132	30	0.5	ng/L	2	ng/L	1	ng/L
Water	PFAS for QSM 5.3, Table B-15	Perfluorotridecanoic acid	72629-94-8	QSM B15	DOD 5.3	65	144	30	0.5	ng/L	2	ng/L	1	ng/L
Water	PFAS for QSM 5.3, Table B-15	Perfluoroundecanoic acid	2058-94-8	QSM B15	DOD 5.3	69	133	30	0.5	ng/L	2	ng/L	1	ng/L

SAP Worksheet #30: Analytical Services Table (Backup Laboratory is ELLE)

(UFP-QAPP Manual Section 3.5.2.3)

Matrix	Analytical Group	Sample Locations/ID Numbers	Backup Laboratory Analytical SOP	Data Package Turnaround Time	Laboratory/Organization[1] (name and address, contact person and telephone number)	Backup Laboratory/ Organization[2] (name and address, contact person and telephone number)
Surface Water and Sediment	PFAS	See Worksheet #18	PFAS by LCMSMS Compliant with Table B-15 of QSM 5.3 / WI36458	21 business days to Tetra Tech	Battelle (see original SAP document)	Stephen Gordon Laboratory PM Eurofins Lancaster Laboratories Environmental, LLC 2425 New Holland Pike Lancaster, PA 17601 412-525-0071 StephenGordon@eurofinsus.com

(1) Primary Laboratory meets accreditation requirements to support project needs. See footnotes, Worksheet #31.

(2) The DoD ELAP accreditation documentation, PADEP accreditation documentation, as well as all applicable laboratory worksheet information for the backup analytical laboratory for PFAS analysis, ELLE, is included in Appendix D.

ELLE Laboratory Limits
(February 2021)

Matrix	MethodDesc	Analyte	CASNUM	Analytical_Method	Reference	LCSLow	LCSUp	RPD
Solid	PFAS for QSM 5.3, Table B-15	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	763051-92-9	QSM B15	DOD 5.3	70	130	30
Solid	PFAS for QSM 5.3, Table B-15	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	756426-58-1	QSM B15	DOD 5.3	70	130	30
Solid	PFAS for QSM 5.3, Table B-15	DONA	919005-14-4	QSM B15	DOD 5.3	70	130	30
Solid	PFAS for QSM 5.3, Table B-15	N-ethylperfluorooctanesulfonamidoacetic acid	2991-50-6	QSM B15	DOD 5.3	61	139	30
Solid	PFAS for QSM 5.3, Table B-15	N-methylperfluorooctanesulfonamidoacetic acid	2355-31-9	QSM B15	DOD 5.3	63	144	30
Solid	PFAS for QSM 5.3, Table B-15	Perfluoro(2-propoxypropanoic) acid	13252-13-6	QSM B15	DOD 5.3	70	130	30
Solid	PFAS for QSM 5.3, Table B-15	Perfluorobutanesulfonic acid	375-73-5	QSM B15	DOD 5.3	72	128	30
Solid	PFAS for QSM 5.3, Table B-15	Perfluorodecanoic acid	335-76-2	QSM B15	DOD 5.3	69	133	30
Solid	PFAS for QSM 5.3, Table B-15	Perfluorododecanoic acid	307-55-1	QSM B15	DOD 5.3	69	135	30
Solid	PFAS for QSM 5.3, Table B-15	Perfluoroheptanoic acid	375-85-9	QSM B15	DOD 5.3	71	131	30
Solid	PFAS for QSM 5.3, Table B-15	Perfluorohexanesulfonic acid	355-46-4	QSM B15	DOD 5.3	67	130	30
Solid	PFAS for QSM 5.3, Table B-15	Perfluorohexanoic acid	307-24-4	QSM B15	DOD 5.3	70	132	30
Solid	PFAS for QSM 5.3, Table B-15	Perfluorononanoic acid	375-95-1	QSM B15	DOD 5.3	72	129	30
Solid	PFAS for QSM 5.3, Table B-15	Perfluorooctanesulfonic acid	1763-23-1	QSM B15	DOD 5.3	68	136	30
Solid	PFAS for QSM 5.3, Table B-15	Perfluorooctanoic acid	335-67-1	QSM B15	DOD 5.3	69	133	30
Solid	PFAS for QSM 5.3, Table B-15	Perfluorotetradecanoic acid	376-06-7	QSM B15	DOD 5.3	69	133	30
Solid	PFAS for QSM 5.3, Table B-15	Perfluorotridecanoic acid	72629-94-8	QSM B15	DOD 5.3	66	139	30
Solid	PFAS for QSM 5.3, Table B-15	Perfluoroundecanoic acid	2058-94-8	QSM B15	DOD 5.3	64	136	30
Water	PFAS for QSM 5.3, Table B-15	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	763051-92-9	QSM B15	DOD 5.3	70	130	30
Water	PFAS for QSM 5.3, Table B-15	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	756426-58-1	QSM B15	DOD 5.3	70	130	30
Water	PFAS for QSM 5.3, Table B-15	DONA	919005-14-4	QSM B15	DOD 5.3	70	130	30
Water	PFAS for QSM 5.3, Table B-15	N-ethylperfluorooctanesulfonamidoacetic acid	2991-50-6	QSM B15	DOD 5.3	61	135	30
Water	PFAS for QSM 5.3, Table B-15	N-methylperfluorooctanesulfonamidoacetic acid	2355-31-9	QSM B15	DOD 5.3	65	136	30
Water	PFAS for QSM 5.3, Table B-15	Perfluoro(2-propoxypropanoic) acid	13252-13-6	QSM B15	DOD 5.3	70	130	30
Water	PFAS for QSM 5.3, Table B-15	Perfluorobutanesulfonic acid	375-73-5	QSM B15	DOD 5.3	72	130	30
Water	PFAS for QSM 5.3, Table B-15	Perfluorodecanoic acid	335-76-2	QSM B15	DOD 5.3	71	129	30
Water	PFAS for QSM 5.3, Table B-15	Perfluorododecanoic acid	307-55-1	QSM B15	DOD 5.3	72	134	30
Water	PFAS for QSM 5.3, Table B-15	Perfluoroheptanoic acid	375-85-9	QSM B15	DOD 5.3	72	130	30
Water	PFAS for QSM 5.3, Table B-15	Perfluorohexanesulfonic acid	355-46-4	QSM B15	DOD 5.3	68	131	30
Water	PFAS for QSM 5.3, Table B-15	Perfluorohexanoic acid	307-24-4	QSM B15	DOD 5.3	72	129	30
Water	PFAS for QSM 5.3, Table B-15	Perfluorononanoic acid	375-95-1	QSM B15	DOD 5.3	69	130	30
Water	PFAS for QSM 5.3, Table B-15	Perfluorooctanesulfonic acid	1763-23-1	QSM B15	DOD 5.3	65	140	30
Water	PFAS for QSM 5.3, Table B-15	Perfluorooctanoic acid	335-67-1	QSM B15	DOD 5.3	71	133	30
Water	PFAS for QSM 5.3, Table B-15	Perfluorotetradecanoic acid	376-06-7	QSM B15	DOD 5.3	71	132	30
Water	PFAS for QSM 5.3, Table B-15	Perfluorotridecanoic acid	72629-94-8	QSM B15	DOD 5.3	65	144	30
Water	PFAS for QSM 5.3, Table B-15	Perfluoroundecanoic acid	2058-94-8	QSM B15	DOD 5.3	69	133	30

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL LLC
2425 New Holland Pike
Lancaster, PA 17601
Dorothy M. Love Phone: 717-556-7327

ENVIRONMENTAL

Valid To: November 30, 2022 Certificate Number: 0001.01

In recognition of the successful completion of the A2LA evaluation process (including an assessment of the laboratory's compliance with the 2009 TNI Environmental Testing Laboratory Standard, and the requirements of the DoD Environmental Laboratory Accreditation Program (DoD ELAP) as detailed in version 5.3 of the DoD/DOE Quality Systems Manual for Environmental Laboratories, accreditation is granted to this laboratory to perform recognized EPA methods using the following testing technologies and in the analyte categories identified below:

Testing Technologies

Atomic Absorption/ICP-AES Spectrometry, ICP-MS Spectrometry, Gas Chromatography, Gas Chromatography/Mass Spectrometry, Gravimetry, High Performance Liquid Chromatography, Ion Chromatography, Misc.-Electronic Probes (pH, F^-, O_2), Oxygen Demand, Spectrophotometry (Visible), Spectrophotometry (Automated), Titrimetry, TCLP, Total Organic Carbon, Turbidity, Liquid Chromatography/Mass Spectrometry/Mass Spectrometry, High Resolution Gas Chromatography/Mass Spectrometry

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Demands				
COD	----------	EPA 410.4	----------	----------
Total Organic Carbon	----------	EPA 9060A SM 5310C-2011	EPA 9060A SM 5310C-2011	EPA 9060A SM 5310 B-2011
Anions				
Ammonia	----------	EPA 350.1	EPA 350.1	SM 4500-NH3 B/C-2011
Fluoride	----------	EPA 300.0 EPA 9056A	EPA 9056A	EPA 9056A EPA 300.0
Nitrate (as N)	----------	EPA 300.0 EPA 9056A	EPA 9056A	EPA 9056A EPA 300.0
Nitrite (as N)	----------	EPA 300.0 EPA 9056A	EPA 9056A	EPA 9056A EPA 300.0

5202 Presidents Court, Suite 220 | Frederick, MD 21703-8515 | Phone: 301 644 3248 | Fax: 240 454 9449 | www.A2LA.org

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Bromide	----------	EPA 300.0 EPA 9056A	EPA 9056A	EPA 9056A EPA 300.0
Chloride	----------	EPA 300.0 EPA 9056A	EPA 9056A	EPA 9056A EPA 300.0
Sulfate	----------	EPA 300.0 EPA 9056A	EPA 9056A	EPA 9056A EPA 300.0
Wet Chemistry				
Alkalinity	----------	SM 2320B-2011	----------	----------
Corrosivity	----------	----------	SW-846 Chapter 7	SW-846 Chapter 7
Cyanide	----------	EPA 9012B	EPA 9012B	EPA 9012B
Filterable Residue (TDS)	----------	SM 2540C-2011	----------	----------
Flashpoint	----------	----------	EPA1010A	EPA 1010A
Grain Size	----------	----------	----------	ASTM D422
Hexavalent Chromium Digestion	----------	----------	----------	EPA 3060A
Hexavalent Chromium	----------	EPA 7196A EPA 7199	EPA 7196A EPA 7199	EPA 7196A EPA 7199
Ignitability	----------	----------	40 CFR 261.21	40 CFR 261.21
Nitrate/Nitrite	----------	----------	EPA 353.2	----------
Non-filterable Residue (TSS)	----------	SM 2540D-2011	----------	----------
pH	----------	SM 4500 H+B-2011 EPA 9040B EPA 9040C	EPA 9040B EPA 9040C	EPA 9045C EPA 9045D
Phenol	----------	EPA 9066	EPA 9066	----------
Reactivity	----------	----------	SW-846 Chapter 7.3	SW-846 Chapter 7.3
Sulfide	----------	EPA 376.1 EPA 376.2 SM 4500 S2D-2011 SM 4500 S2F-2011	----------	----------
Total Residue	----------	SM 2540B-2011	----------	SM 2540G-2011
Metals				
Metals Digestion	----------	EPA 3005A EPA 3010A EPA 3020A	EPA 3010A EPA 3020A	EPA 3050B
Aluminum	----------	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B
Antimony	----------	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B
Arsenic	----------	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Barium	----------	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B
Beryllium	----------	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B
Boron	----------	EPA 6010C EPA 6010D	EPA 6010C EPA 6010D	EPA 6010C EPA 6010D
Cadmium	----------	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B
Calcium	----------	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B
Chromium	----------	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B
Cobalt	----------	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B
Copper	----------	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B
Iron	----------	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B
Lead	----------	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B
Lithium	----------	EPA 6010C EPA 6010D	EPA 6010C EPA 6010D	EPA 6010C EPA 6010D
Molybdenum	----------	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B
Magnesium	----------	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Manganese	----------	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B
Mercury	----------	EPA 7470A	EPA 7470A	EPA 7471A EPA 7471B
Nickel	----------	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B
Potassium	----------	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B
Selenium	----------	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B
Silicon	----------	EPA 6010C EPA 6010D	EPA 6010C EPA 6010D	EPA 6010C EPA 6010D
Silver	----------	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B
Sodium	----------	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B
Strontium	----------	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B
Sulfur	----------	EPA 6010C EPA 6010D	EPA 6010C EPA 6010D	EPA 6010C EPA 6010D
Thallium	----------	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B
Thorium	----------	EPA 6010C EPA 6010D	EPA 6010C EPA 6010D	EPA 6010C EPA 6010D
Tin	----------	EPA 6010C EPA 6010D	EPA 6010C EPA 6010D	EPA 6010C EPA 6010D
Titanium	----------	EPA 6010C EPA 6010D	EPA 6010C EPA 6010D	EPA 6010C EPA 6010D
Tungsten	----------	EPA 6010C EPA 6010D	EPA 6010C EPA 6010D	EPA 6010C EPA 6010D

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Uranium	----------	EPA 6020A EPA 6020B	EPA 6020A EPA 6020B	EPA 6020A EPA 6020B
Vanadium	----------	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B
Zinc	----------	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B	EPA 6010C EPA 6010D EPA 6020A EPA 6020B
Zirconium	----------	EPA 6010C EPA 6010D	EPA 6010C EPA 6010D	EPA 6010C EPA 6010D
Purgeable Organics (Volatiles)				
Volatile Preparation	----------	EPA 5030C	EPA 5030C	EPA 5035A
Acetone	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Acetonitrile	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Acrolein	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Acrylonitrile	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Allyl chloride	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
tert-Amyl Alcohol	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
tert-Amyl Methyl Ether	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
tert-Butyl Alcohol	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
tert-Butyl Formate	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Benzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Bromobenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Bromochloromethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Bromodichloromethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Bromoform	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Bromomethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
2-Butanone	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
n-Butylbenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
sec-Butylbenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
tert-Butylbenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Carbon disulfide	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Carbon tetrachloride	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
2-Chloro-1,3-butadiene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Chloroacetonitrile	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Chlorobenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1-Chlorobutane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Chlorodifluoromethane	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Chloroethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
2-Chloroethyl Vinyl Ether	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Chloroform	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
1-Chlorohexane	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Chloromethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
2-Chlorotoluene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
4-Chlorotoluene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Cyclohexane	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Cyclohexanone	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Di-Isopropyl ether	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Dibromochloromethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,2-Dibromo-3-chloropropane	EPA 524.2	EPA 8260C/D EPA 8011	EPA 8260C/D EPA 8011	EPA 8260C/D
Dibromomethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,2-Dibromoethane (EDB)	----------	EPA 8260C/D EPA 8011	EPA 8260C/D EPA 8011	EPA 8260C/D
1,2-Dichlorobenzene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,3-Dichlorobenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,4-Dichlorobenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
trans-1,4-dichloro-2-butene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Dichlorodi-fluoromethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,1-Dichloroethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,2-Dichloroethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,1-Dichloroethene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
cis-1,2-Dichloroethene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
trans-1,2-Dichloroethene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Dichlorofluoromethane	EPA 524.2	----------	----------	----------
1,2-Dichloropropane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,3-Dichloropropane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
2,2-Dichloropropane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,1-Dichloropropene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
cis-1,3-Dichloropropene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
trans-1,3-Dichloropropene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,4-Dioxane	----------	EPA 8260C/D EPA 8260C/D SIM	EPA 8260C/D EPA 8260C/D SIM	EPA 8260C/D EPA 8260C/D SIM
Ethanol	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Ethylbenzene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Ethyl ether	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Ethyl Methacrylate	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Ethyl Tert-Butyl Ether	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Freon-113	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Gasoline Range Organics (GRO) [Volatile Petroleum Hydrocarbons (VPH)]	----------	EPA 8015C EPA 8015D EPA 8260C/D NW TPH-Gx MA VPH AK101	EPA 8015C EPA 8015D EPA 8260C/D NW TPH-Gx MA VPH AK101	EPA 8015C EPA 8015D EPA 8260C/D NW TPH-Gx MA VPH AK101
Heptane	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Hexane	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
2-Hexanone	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D

Parameter/Analyte	Potable Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Hexachlorobutadiene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Hexachloroethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Isobutyl Alcohol	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Isopropyl Alcohol	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Isopropylbenzene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,4-Isopropyltoluene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Methylacrylonitrile	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Methyl Acetate		EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Methyl Acrylate	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Methyl Iodide	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Methyl Ethyl ketone	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Methylene Chloride	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Methyl Isobutyl Ketone	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Methyl Methacrylate	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Methyl Tert-Butyl Ether	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
4-Methyl-2-pentanone	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Methylcyclohexane		EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
2-Nitropropane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Naphthalene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Pentachloroethane	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Propionitrile	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
n-Propylbenzene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Styrene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Tert-Amyl Ethyl Ether		EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,1,1,2-Tetrachloroethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,1,2,2-Tetrachloroethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Tetrachloroethene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Tetrahydrofuran	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Toluene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,2,3-Trichlorobenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,2,4-Trichlorobenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,1,1-Trichloroethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,1,2-Trichloroethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Trichloroethene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Trichlorofluoromethane	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,2,3-Trichloropropane	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,2,4-Trimethylbenzene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,3,5-Trimethylbenzene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Vinyl Acetate	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Vinyl Chloride	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Xylenes, Total	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,2-Xylene (o-Xylene)	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,3+1,4-Xylene (m+p Xylene)	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D

Parameter/Analyte	Potable Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Extractable Organics (Semivolatiles)				
Acenaphthene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Acenaphthylene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Acetophenone	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Acetylaminofluorene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Alkylated PAHs	----------	EPA 8270D/E SIM	EPA 8270D/E SIM	EPA 8270D/E SIM
4-Aminobiphenyl	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Amino-4,6-dinitrotoluene	----------	EPA 8330B	EPA 8330B	EPA 8330B
4-Amino-2,6-dinitrotoluene	----------	EPA 8330B	EPA 8330B	EPA 8330B
Aniline	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Anthracene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Atrazine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Benzaldehyde	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Benzidine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Benzoic acid	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Benzo (a) anthracene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Benzo (b) fluoranthene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Benzo (k) fluoranthene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Benzo (ghi) perylene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Benzo (a) pyrene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Benzo (e) pyrene	----------	EPA 8270D/E SIM	EPA 8270D/E SIM	EPA 8270D/E SIM
Benzyl Alcohol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Biphenyl	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
bis (2-Chloroethoxy) Methane	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
bis (2-Chloroethyl) Ether	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
bis (2-Chloroisopropyl) Ether	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
bis (2-Ethylhexyl) Phthalate	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
4-Bromophenylphenyl Ether	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Butyl benzyl Phthalate	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM

Parameter/Analyte	Potable Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Caprolactam	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Carbazole	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Carbon Range Organics C8-C44 (including subsets of this range i.e. HRO, MRO, ORO, RRO)	----------	EPA 8015C EPA 8015D	EPA 8015C EPA 8015D	EPA 8015C EPA 8015D
4-Chloroaniline	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
4-Chloro-3-methylphenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Chlorobenzilate	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1-Chloronaphthalene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Chloronaphthalene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Chlorophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
4-Chlorophenyl phenyl ether	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Chrysene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Cresols (Methyl phenols)	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
cis-/trans-Diallate	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2,4-Diamino-6-nitrotoluene	----------	EPA 8330B	EPA 8330B	EPA 8330B
2,6-Diamino-4-nitrotoluene	----------	EPA 8330B	EPA 8330B	EPA 8330B
Dibenzo (a,h) acridine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Dibenzo (a,h) anthracene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Dibenzofuran	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
1,2-Dichlorobenzene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1,3-Dichlorobenzene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1,4-Dichlorobenzene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
3,3-Dichlorobenzidine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Diesel Range Organics (DRO) [Extractable Petroleum Hydrocarbons (EPH)]	----------	EPA 8015C EPA 8015D NWTPH DX MA EPH TX1005/1006 AK102/103 AK102/103-SV	EPA 8015C EPA 8015D NWTPH DX MA EPH TX1005/1006 AK102/103 AK102/103-SV	EPA 8015C EPA 8015D NWTPH DX MA EPH TX1005/1006 AK102/103
2,4-Dichlorophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2,6-Dichlorophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Diethyl Phthalate	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Dimethoate	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
p-Dimethylaminoazobenze	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
7,12-Dimethylbenz (a) anthracene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2,4-Dimethylphenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Dimethyl Phthalate	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
3,3'-Dimethylbenzidine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E

Parameter/Analyte	Potable Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Di-n-butyl Phthalate	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Di-n-octyl phthalate	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
3,5-Dinitroaniline	----------	EPA 8330B	EPA 8330B	EPA 8330B
1,3-Dinitrobenzene	----------	EPA 8270D/E EPA 8330B	EPA 8270D/E EPA 8330B	EPA 8270D/E EPA 8330B
1,4-Dinitrobenzene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2,4-Dinitrophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2,4-Dinitrotoluene	----------	EPA 8270D/E EPA 8330B	EPA 8270D/E EPA 8330B	EPA 8270D/E EPA 8330B
2,6-Dinitrotoluene	----------	EPA 8270D/E EPA 8330B	EPA 8270D/E EPA 8330B	EPA 8270D/E EPA 8330B
1,4-Dioxane	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Diphenylamine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Diphenyl ether	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1,2-Diphenylhydrazine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Ethyl Methane Sulfonate	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Fluoroanthene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Fluorene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Hexachlorobenzene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Hexachlorobutadiene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Hexachlorocyclo-pentadiene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Hexachloroethane	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Hexachloropropene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	----------	EPA 8330B	EPA 8330B	EPA 8330B
Indeno (1,2,3-cd) Pyrene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Isodrin	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Isophorone	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E

Parameter/Analyte	Potable Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Isosafrole	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
3-Methycholanthrene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Methyl-4,6-dinitrophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Methyl methane sulfonate	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1-Methylnaphthalene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
2-Methylnaphthalene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
2-Methylphenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
4-Methylphenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Naphthalene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
1,4-Naphthoquinone	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1-Naphthylamine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Naphthylamine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
4-Nitroquinoline-1-oxide	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Nitroaniline	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
3-Nitroaniline	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
4-Nitroaniline	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Nitrobenzene	----------	EPA 8270D/E EPA 8330B	EPA 8270D/E EPA 8330B	EPA 8270D/E EPA 8330B
Nitroglycerin	----------	EPA 8330B	EPA 8330B	EPA 8330B
2-Nitrophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
4-Nitrophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Nitrotoluene	----------	EPA 8330B	EPA 8330B	EPA 8330B
3-Nitrotoluene	----------	EPA 8330B	EPA 8330B	EPA 8330B
4-Nitrotoluene	----------	EPA 8330B	EPA 8330B	EPA 8330B
5-Nitro-o-toluidine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
n-Nitroso-di-n-butylamine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
n-Nitrosodiethylamine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
n-Nitrosodimethylamine	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
n-Nitrosodimethylethylamine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
n-Nitrosomorpholine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
n-Nitrosodi-n-propylamine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
n-Nitrosodiphenylamine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
n-Nitrosopiperidine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
n-Nitrosopyrrolidine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	----------	EPA 8330B	EPA 8330B	EPA 8330B

Parameter/Analyte	Potable Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
2,2-Oxybis (1-chloropropane)	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Pentachlorobenzene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Pentachloronitrobenzene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Pentachlorophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Pentaerythritol Tetranitrate (PETN)	----------	EPA 8330B	EPA 8330B	EPA 8330B
Perylene	----------	EPA 8270D/E SIM	EPA 8270D/E SIM	EPA 8270D/E SIM
Phenacetin	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Phenanthrene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Phenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Picoline	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Pronamide	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Pyrene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Pyridine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Safrole	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1,2,4,5- Tetrachlorobenzene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2,3,4,6-Tetrachlorophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Tetraethyl dithiopyrophosphate	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Tetraethy lead	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Tetryl	----------	EPA 8330B	EPA 8330B	EPA 8330B
Thionazin	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
o-Toluidine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1,2,4-Trichlorobenzene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1,3,5-Trinitrobenzene	----------	EPA 8330B	EPA 8330B	EPA 8330B
2,4,5-Trichlorophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2,4,6-Trichlorophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
O,O,O-Tri-ethylphosphorothioate	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2,4,6-Trinitrotoluene	----------	EPA 8330B	EPA 8330B	EPA 8330B
Organochlorine Pesticides				
Aldrin	----------	EPA 8081B	EPA 8081B	EPA 8081B
alpha-BHC	----------	EPA 8081B	EPA 8081B	EPA 8081B
beta-BHC	----------	EPA 8081B	EPA 8081B	EPA 8081B
delta-BHC	----------	EPA 8081B	EPA 8081B	EPA 8081B
gamma-BHC (Lindane)	----------	EPA 8081B	EPA 8081B	EPA 8081B

Parameter/Analyte	Potable Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
alpha-Chlordane	----------	EPA 8081B	EPA 8081B	EPA 8081B
Chlordane (Technical)	----------	EPA 8081B	EPA 8081B	EPA 8081B
Chlorobenzilate	----------	EPA 8081B	EPA 8081B	EPA 8081B
2,4'-DDD	----------	EPA 8081B	EPA 8081B	EPA 8081B
2,4'-DDE	----------	EPA 8081B	EPA 8081B	EPA 8081B
2,4'-DDT	----------	EPA 8081B	EPA 8081B	EPA 8081B
4,4'-DDD	----------	EPA 8081B	EPA 8081B	EPA 8081B
4,4'-DDE	----------	EPA 8081B	EPA 8081B	EPA 8081B
4,4'-DDT	----------	EPA 8081B	EPA 8081B	EPA 8081B
Diallate	----------	EPA 8081B	EPA 8081B	EPA 8081B
1.2-Dibromo-3-chloropropane (DBCP)	----------	EPA 8081B	EPA 8081B	EPA 8081B
Dieldrin	----------	EPA 8081B	EPA 8081B	EPA 8081B
Dinoseb	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Endosulfan I (alpha)	----------	EPA 8081B	EPA 8081B	EPA 8081B
Endosulfan II (beta)	----------	EPA 8081B	EPA 8081B	EPA 8081B
Endosulfan Sulfate	----------	EPA 8081B	EPA 8081B	EPA 8081B
Endrin	----------	EPA 8081B	EPA 8081B	EPA 8081B
Endrin Aldehyde	----------	EPA 8081B	EPA 8081B	EPA 8081B
Endrin Ketone	----------	EPA 8081B	EPA 8081B	EPA 8081B
gamma-Chlordane	----------	EPA 8081B	EPA 8081B	EPA 8081B
Heptachlor	----------	EPA 8081B	EPA 8081B	EPA 8081B
Heptachlor Epoxide	----------	EPA 8081B	EPA 8081B	EPA 8081B
Hexachlorobenzene	----------	EPA 8081B	EPA 8081B	EPA 8081B
Hexachlorocyclopentadiene	----------	EPA 8081B	EPA 8081B	EPA 8081B
Isodrin	----------	EPA 8081B	EPA 8081B	EPA 8081B
Methoxychlor	----------	EPA 8081B	EPA 8081B	EPA 8081B
Mirex	----------	EPA 8081B	EPA 8081B	EPA 8081B
Toxaphene	----------	EPA 8081B	EPA 8081B	EPA 8081B
PCBs (Aroclors)				
PCB-1016 (Arochlor)	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB-1221	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB-1232	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB-1242	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB-1248	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB-1254	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB-1260	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB-1262	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB-1268	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB congeners (209)	----------	EPA 1668A EPA 1668C	EPA 1668A EPA 1668C	EPA 1668A EPA 1668C

Parameter/Analyte	Potable Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Herbicides				
2,4,5-T	----------	EPA 8151A	EPA 8151A	EPA 8151A
2,4,5-TP (Silvex)	----------	EPA 8151A	EPA 8151A	EPA 8151A
2,4-D	----------	EPA 8151A	EPA 8151A	EPA 8151A
2,4-DB	----------	EPA 8151A	EPA 8151A	EPA 8151A
Dalapon	----------	EPA 8151A	EPA 8151A	EPA 8151A
Dicamba	----------	EPA 8151A	EPA 8151A	EPA 8151A
Dichlorprop	----------	EPA 8151A	EPA 8151A	EPA 8151A
Dinoseb	----------	EPA 8151A	EPA 8151A	EPA 8151A
MCPA	----------	EPA 8151A	EPA 8151A	EPA 8151A
MCPP	----------	EPA 8151A	EPA 8151A	EPA 8151A
Pentachlorophenol	----------	EPA 8151A	EPA 8151A	EPA 8151A
PCB Homologues				
Monochlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Dichlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Trichlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Tetrachlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Pentachlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Hexachlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Heptachlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Octachlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Nonachlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Decachlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Dioxins/Furans				
2,3,7,8-TCDD	EPA 1613B	EPA 8290A	EPA 8290A	EPA 8290A
2,3,7,8-TCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,7,8-PeCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
2,3,4,7,8-PeCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,7,8-PeCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,4,7,8-HxCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,6,7,8-HxCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
2,3,4,6,7,8-HxCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,7,8,9-HxCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,4,7,8,-HxCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,6,7,8-HxCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,7,8,9-HxCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,4,6,7,8-HpCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,4,7,8,9-HpCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,4,6,7,8-HpCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
OCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
OCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
Total HpCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
Total HpCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
Total HxCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
Total HxCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
Total PeCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A

Parameter/Analyte	Potable Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Total PeCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
Total TCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
Total TCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
Misc. Headspace Analysis				
Carbon dioxide	----------	RSK-175	RSK-175	----------
Ethane	----------	RSK-175	RSK-175	----------
Ethene	----------	RSK-175	RSK-175	----------
Methane	----------	RSK-175	RSK-175	----------
Hazardous Waste Characteristics				
Toxicity Characteristic Leaching Procedure	----------	----------	EPA 1311	EPA 1311
Synthetic Precipitation Leaching Procedure	----------	----------	EPA 1312	EPA 1312
ASTM Leaching Procedure	----------	----------	ASTM D3987-85	ASTM D3987-85
Other				
Perchlorate	----------	EPA 6850	EPA 6850	EPA 6850
Hydrazine	----------	EPA 8315A MOD	EPA 8315A MOD	EPA 8315A MOD
Formaldehyde	----------	----------	EPA 8315A	EPA 8315A
Methylhydrazine	----------	EPA 8315A MOD	EPA 8315A MOD	EPA 8315A MOD
1,1-Dimethylhydrazine	----------	EPA 8315A MOD	EPA 8315A MOD	EPA 8315A MOD
Volatile Preparation	----------	EPA 5030A EPA 5030C	EPA 5030A EPA 5030C	EPA 5035 EPA 5035A
Organic Extraction/Cleanup	----------	EPA 3510C EPA 3511 EPA 3660B, 3620C, 3665A	EPA 3510C EPA 3511 EPA 3660B, 3620C, 3665A	EPA 3546 EPA 3550C EPA 3660B, 3620C, 3665A, 3640A

Parameter/Analyte	Drinking Water	Nonpotable Water	Solid Haz.Waste
Per and Polyfluoroalkyl Substances (PFAS)			
N-ethyl Perfluorooctane-Sulfonamidoacetic Acid (NetFOSAA)	EPA 537 EPA 537.1	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
N-methyl Perfluoroctane-Sulfonamidoacetic Acid (NMeFOSAA)	EPA 537 EPA 537.1	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
Perfluorobutanesulfonic Acid (PFBS)	EPA 537 EPA 537.1	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
Perfluorodecanoic Acid (PFDA)	EPA 537 EPA 537.1	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15

Parameter/Analyte	Drinking Water	Nonpotable Water	Solid Haz.Waste
Perfluorododecanoic Acid (PFDoDA)	EPA 537 EPA 537.1	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
Perfluoroheptanoic Acid (PFHpA)	EPA 537 EPA 537.1	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
Perfluorohexanesulfonic Acid (PFHxS)	EPA 537 EPA 537.1	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
Perfluorohexanoic Acid (PFHxA)	EPA 537 EPA 537.1	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
Perfluorononanoic Acid (PFNA)	EPA 537 EPA 537.1	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
Perfluorooctanesulfonic Acid (PFOS)	EPA 537 EPA 537.1	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
Perfluorooctanoic Acid (PFOA)	EPA 537 EPA 537.1	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
Perfluorotetradecanoic Acid (PFTeDA)	EPA 537 EPA 537.1	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
Perfluorotridecanoic Acid (PFTrDA)	EPA 537 EPA 537.1	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
Perfluoroundecanoic Acid (PFUnDA)	EPA 537 EPA 537.1	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid (HFPODA)	EPA 537.1	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537.1	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	EPA 537.1	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	EPA 537.1	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
Perfluoro-n-butanoic Acid (PFBA)	----------	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
Perfluoro-n-pentanoic Acid (PFPeA)	----------	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15

Parameter/Analyte	Drinking Water	Nonpotable Water	Solid Haz.Waste
8:2 Fluorotelomersulfonic Acid (8:2FTS)	----------	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
4:2 Fluorotelomersulfonic Acid (4:2-FTS)	----------	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
Perfluoropentanesulfonic Acid (PFPeS)	----------	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
6:2 Fluorotelomersulfonic Acid (6:2-FTS)	----------	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
Perfluoroheptanesulfonic Acid (PFHpS)	----------	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
Perfluorononanesulfonic Acid (PFNS)	----------	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
Perfluorodecanesulfonic Acid (PFDS)	----------	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
10:2 Fluorotelomersulfonic Acid (10:2-FTS)	----------	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
Perfluorododecanesulfonic Acid (PFDoDS)	----------	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
Perfluorohexadecanoic Acid (PFHxDA)	----------	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
Perfluorooctadecanoic Acid (PFODA)	----------	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
Perfluorooctanesulfonamide (PFOSA)	----------	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol (NMePFOSAE)	----------	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
N-methylperfluoro-1-octanesulfonamide (NMePFOSA)	----------	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15
(N-ethylperfluoro-1-octanesulfonamido)-ethanol (NEtPFOSAE)	----------	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15

Parameter/Analyte	Drinking Water	Nonpotable Water	Solid Haz.Waste
N-ethylperfluoro-1-octanesulfonamide (NEtPFOSA)	----------	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3 Table B-15

End of DoD ELAP section of scope

Start of KY, WY, and ISO 17025 section of scope

In addition, in recognition of the successful completion of the A2LA evaluation process (including an assessment of the laboratory's compliance with ISO IEC 17025:2017, the 2009 TNI Environmental Testing Laboratory Standard, and for the test methods applicable to Kentucky Statute KRS 224.60-130(2)(a), and for the test methods applicable to the Wyoming Storage Tank Remediation Laboratory Accreditation Program), accreditation is granted to this laboratory to perform recognized EPA methods using the following testing technologies and in the analyte categories identified below:

Testing Technologies

Atomic Absorption/ICP-AES Spectrometry, ICP-MS Spectrometry, Gas Chromatography, Gas Chromatography/Mass Spectrometry, Gravimetry, High Performance Liquid Chromatography, Ion Chromatography, Misc.-Electronic Probes (pH, F^-, O_2), Oxygen Demand, Spectrophotometry (Visible), Spectrophotometry (Automated), Titrimetry, TCLP, Total Organic Carbon, Turbidity, Liquid Chromatography/Mass Spectrometry/Mass Spectrometry, High Resolution Gas Chromatography/Mass Spectrometry

Parameter/Analyte	Tissue	Nonpotable Water	Solid Hazardous Waste	
			Aqueous	Solid
Other				
Perchlorate	Food & Food Products EPA 6850	EPA 6850	EPA 6850	EPA 6850
Hydrazine	----------	EPA 8315A MOD	EPA 8315A MOD	EPA 8315A MOD
Methylhydrazine	----------	EPA 8315A MOD	EPA 8315A MOD	EPA 8315A MOD
1,1-Dimethylhydrazine	----------	EPA 8315A MOD	EPA 8315A MOD	EPA 8315A MOD
Volatile Preparation	----------	EPA 5030A EPA 5030C	EPA 5030A EPA 5030C	EPA 5035 EPA 5035A
Organic Extraction/ Cleanup	EPA 3546 EPA 3550C EPA 3660B EPA 3620C EPA 3665A EPA 3640A	EPA 3510C EPA 3511 EPA 3660B EPA 3620C EPA 3665A	EPA 3510C EPA 3511 EPA 3660B EPA 3620C EPA 3665A	EPA 3546 EPA 3550C EPA 3660B EPA 3620C EPA 3665A EPA 3640A
Kentucky UST Program				
Metals				
Arsenic	----------	----------	EPA 6010B	EPA 6010B
Barium	----------	----------	EPA 6010B	EPA 6010B

Parameter/Analyte	Tissue	Nonpotable Water	Solid Hazardous Waste	
			Aqueous	Solid
Cadmium	----------	----------	EPA 6010B	EPA 6010B
Chromium	----------	----------	EPA 6010B	EPA 6010B
Lead	----------	----------	EPA 6010B	EPA 6010B
Mercury	----------	----------	EPA 7470A	EPA 7471A
Selenium	----------	----------	EPA 6010B	EPA 6010B
Silver	----------	----------	EPA 6010B	EPA 6010B

Parameter/Analyte	Tissue	Nonpotable Water	Solid Hazardous Waste	
			Aqueous	Solid
Purgeable Organics (Volatiles)				
Diesel Range Organics (DRO)	----------	EPA 8015C EPA 8015D	EPA 8015C EPA 8015D	EPA 8015C EPA 8015D
Gasoline Range Organics (GRO)	----------	EPA 8015C EPA 8015D	EPA 8015C EPA 8015D	EPA 8015C EPA 8015D
Wyoming Storage Tank Program				
Metals				
Cadmium	----------	----------	EPA 6010C	EPA 6010C
Chromium	----------	----------	EPA 6010C	EPA 6010C
Chromium (Total, hexavalent)	----------	----------	EPA 7196A	EPA 7196A
Lead	----------	----------	EPA 6010C	EPA 6010C
Purgeable Organics (Volatiles)				
Volatile Preparation	----------	----------	EPA 5030C EPA 5030C	EPA 5035 EPA 5035A
Benzene	----------	----------	EPA 5030C EPA 8260D	EPA 8260D
1,2-Dichloroethane	----------	----------	EPA 8260D	EPA 8260D
Diisopropyl Ether	----------	----------	EPA 5030C EPA 8260D	EPA 8260D
Ethyl Benzene	----------	----------	EPA 5030C EPA 8260D	EPA 8260D
Ethyl tert-butyl Ether	----------	----------	EPA 8260D	EPA 8260D
Methyl tert-butyl Ether	----------	----------	EPA 5030C EPA 8260D	EPA 8260D
Naphthalene	----------	----------	EPA 5030C EPA 8260D	EPA 8260D
Toluene	----------	----------	EPA 5030C EPA 8260D	EPA 8260D
Tert-amyl Methyl Ether	----------	----------	EPA 5030C EPA 8260D	EPA 8260D
Tert-butyl Alcohol	----------	----------	EPA 5030C EPA 8260D	EPA 8260D
Xylenes, total	----------	----------	EPA 5030C EPA 8260D	EPA 8260D

Parameter/Analyte	Tissue	Nonpotable Water	Solid Hazardous Waste	
			Aqueous	Solid
Gasoline Range Organics (GRO C6-C10)	----------	----------	EPA 5030C EPA 8260D	EPA 8260D
Extractable Organics (Semivolatiles)				
Diesel Range Organics (DRO C10-C32)	----------	----------	EPA 8015C w/ EPA 3630 cleanup	EPA 8015C w/ EPA 3630 cleanup

Food and Feed (WHO 29)	**Food/Feed**			
2,3,7,8-TCDD	EPA 1613B	----------	----------	----------
2,3,7,8-TCDF	EPA 1613B	----------	----------	----------
1,2,3,7,8-PeCDF	EPA 1613B	----------	----------	----------
2,3,4,7,8-PeCDF	EPA 1613B	----------	----------	----------
1,2,3,7,8-PeCDD	EPA 1613B	----------	----------	----------
1,2,3,4,7,8-HxCDF	EPA 1613B	----------	----------	----------
1,2,3,6,7,8-HxCDF	EPA 1613B	----------	----------	----------
2,3,4,6,7,8-HxCDF	EPA 1613B	----------	----------	----------
1,2,3,7,8,9-HxCDF	EPA 1613B	----------	----------	----------
1,2,3,4,7,8-HxCDD	EPA 1613B	----------	----------	----------
1,2,3,6,7,8-HxCDD	EPA 1613B	----------	----------	----------
1,2,3,7,8,9-HxCDD	EPA 1613B	----------	----------	----------
1,2,3,4,6,7,8-HpCDF	EPA 1613B	----------	----------	----------
1,2,3,4,7,8,9-HpCDF	EPA 1613B	----------	----------	----------
1,2,3,4,6,7,8-HpCDD	EPA 1613B	----------	----------	----------
OCDF	EPA 1613B	----------	----------	----------
OCDD	EPA 1613B	----------	----------	----------
Total HpCDD	EPA 1613B	----------	----------	----------
Total HpCDF	EPA 1613B	----------	----------	----------
Total HxCDD	EPA 1613B	----------	----------	----------
Total HxCDF	EPA 1613B	----------	----------	----------
Total PeCDD	EPA 1613B	----------	----------	----------
Total PeCDF	EPA 1613B	----------	----------	----------
Total TCDD	EPA 1613B	----------	----------	----------
Total TCDF	EPA 1613B	----------	----------	----------
6 marker PCBs (PCB28, PCB52, PCB101, PCB138, PCB153, and PCB180)	EPA 1668A EPA 1668C	----------	----------	----------

Parameter/Analyte	Tissue	Nonpotable Water	Solid Hazardous Waste	
			Aqueous	Solid

12 Dioxin-like PCBs (dl-PCBs)/coplanar PCBs (PCB77, PCB81, PCB105, PCB114, PCB118, PCB123, PCB126, PCB156, PCB157, PCB167, PCB169, and PCB189)	EPA 1668A EPA 1668C	----------	----------	----------

Parameter/Analyte	Drinking Water	Nonpotable Water	Solid Haz.Waste
Per and Polyfluoroalkyl Substances (PFAS)			
N-ethyl perfluorooctane-sulfonamidoacetic acid (NetFOSAA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
N-methyl perfluoroctane-sulfonamidoacetic acid (NMeFOSAA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorobutanesulfonic acid (PFBS)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorodecanoic acid (PFDA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorododecanoic acid (PFDoDA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluoroheptanoic acid (PFHpA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorohexanesulfonic acid (PFHxS)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorohexanoic acid (PFHxA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorononanoic acid (PFNA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorooctanesulfonic acid (PFOS)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorooctanoic acid (PFOA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorotetradecanoic acid (PFTeDA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorotridecanoic acid (PFTrDA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluoroundecanoic acid (PFUnDA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid (HFPODA)	EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluoro-n-butanoic acid (PFBA)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluoro-n-pentanoic acid (PFPeA)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
8:2 Fluorotelomersulfonic acid (8:2FTS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod

Parameter/Analyte	Drinking Water	Nonpotable Water	Solid Haz.Waste
4:2 Fluorotelomersulfonic acid (4:2-FTS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluoropentanesulfonic acid (PFPeS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
6:2 Fluorotelomersulfonic acid (6:2-FTS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluoroheptanesulfonic acid (PFHpS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorononanesulfonic acid (PFNS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorodecanesulfonic acid (PFDS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
10:2 Fluorotelomersulfonic acid (10:2-FTS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorododecanesulfonic acid (PFDoDS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorohexadecanoic acid (PFHxDA)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorooctadecanoic acid (PFODA)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluorooctanesulfonamide (PFOSA)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol (NMePFOSAE)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
N-methylperfluoro-1-octanesulfonamide (NMePFOSA)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol (NEtPFOSAE)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
N-ethylperfluoro-1-octanesulfonamide (NEtPFOSA)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod

End of KY, WY, and ISO 17025 section of scope

Accredited Laboratory

A2LA has accredited

EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC

Lancaster, PA

for technical competence in the field of

Environmental Testing

In recognition of the successful completion of the A2LA evaluation process that includes an assessment of the laboratory's compliance with ISO/IEC 17025:2017, the 2009 TNI Environmental Testing Laboratory Standard, and the requirements of the Department of Defense Environmental Laboratory Accreditation Program (DoD ELAP) as detailed in version 5.3 of the DoD/DOE Quality System Manual for Environmental Laboratories (QSM), accreditation is granted to this laboratory to perform recognized EPA methods as defined on the associated A2LA Environmental Scope of Accreditation. This accreditation demonstrates technical competence for this defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated *April 2017*).

Presented this 28th day of January 2021.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 1.01
Valid to November 30, 2022

For the tests to which this accreditation applies, please refer to the laboratory's Environmental Scope of Accreditation.

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 020-001 expiration date 01/31/2022. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 110.2		Color	NELAP	PA	04/04/2005
EPA 1613	B	2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	NELAP	PA	10/05/2010
EPA 1664	A	Oil and grease	NELAP	PA	05/24/2011
EPA 1664	B	Oil and grease	NELAP	PA	01/27/2014
EPA 180.1		Turbidity	NELAP	PA	04/04/2005
EPA 200.7	4.4	Barium	NELAP	PA	01/22/2001
EPA 200.7	4.4	Calcium	NELAP	PA	11/28/2001
EPA 200.7	4.4	Chromium	NELAP	PA	01/22/2001
EPA 200.7	4.4	Cobalt	NELAP	PA	10/16/2008
EPA 200.7	4.4	Copper	NELAP	PA	01/22/2001
EPA 200.7	4.4	Iron	NELAP	PA	04/04/2005
EPA 200.7	4.4	Lithium	NELAP	PA	11/13/2012
EPA 200.7	4.4	Magnesium	NELAP	PA	12/04/2007
EPA 200.7	4.4	Manganese	NELAP	PA	04/04/2005
EPA 200.7	4.4	Nickel	NELAP	PA	01/22/2001
EPA 200.7	4.4	Potassium	NELAP	PA	05/24/2011
EPA 200.7	4.4	Silver	NELAP	PA	01/26/2001
EPA 200.7	4.4	Sodium	NELAP	PA	01/22/2001
EPA 200.7	4.4	Strontium	NELAP	PA	05/24/2011
EPA 200.7	4.4	Sulfur	NELAP	PA	11/09/2012
EPA 200.7	4.4	Tin	NELAP	PA	11/03/2008
EPA 200.7	4.4	Vanadium	NELAP	PA	10/16/2008
EPA 200.7	4.4	Zinc	NELAP	PA	04/04/2005
EPA 200.8	5.4	Aluminum	NELAP	PA	01/25/2019
EPA 200.8	5.4	Antimony	NELAP	PA	02/10/2005
EPA 200.8	5.4	Arsenic	NELAP	PA	02/10/2005
EPA 200.8	5.4	Barium	NELAP	PA	11/16/2011
EPA 200.8	5.4	Beryllium	NELAP	PA	02/10/2005
EPA 200.8	5.4	Cadmium	NELAP	PA	02/10/2005
EPA 200.8	5.4	Calcium	NELAP	PA	11/16/2011
EPA 200.8	5.4	Chromium	NELAP	PA	02/10/2005
EPA 200.8	5.4	Copper	NELAP	PA	03/09/2007
EPA 200.8	5.4	Iron	NELAP	PA	11/02/2012
EPA 200.8	5.4	Lead	NELAP	PA	02/10/2005
EPA 200.8	5.4	Magnesium	NELAP	PA	11/02/2012
EPA 200.8	5.4	Manganese	NELAP	PA	11/16/2011
EPA 200.8	5.4	Nickel	NELAP	PA	02/10/2005
EPA 200.8	5.4	Potassium	NELAP	PA	11/16/2011
EPA 200.8	5.4	Selenium	NELAP	PA	02/10/2005
EPA 200.8	5.4	Sodium	NELAP	PA	11/16/2011
EPA 200.8	5.4	Strontium	NELAP	PA	11/16/2011

Annmarie Beach

The Pennsylvania Department of Environmental Protection Laboratory Accreditation Program is a NELAP recognized Accreditation Body. Customers are urged to verify the laboratory's current accreditation standing.

Attached to Certificate of Accreditation 020-001 expiration date 01/31/2022. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environmental LLC
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Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 200.8	5.4	Thallium	NELAP	PA	02/10/2005
EPA 200.8	5.4	Zinc	NELAP	PA	11/16/2011
EPA 245.1	3.0	Mercury	NELAP	PA	08/29/2001
EPA 300.0	2.1	Chloride	NELAP	PA	05/17/2005
EPA 300.0	2.1	Fluoride	NELAP	PA	01/22/2004
EPA 300.0	2.1	Nitrate as N	NELAP	PA	10/31/2002
EPA 300.0	2.1	Nitrite as N	NELAP	PA	10/31/2002
EPA 300.0	2.1	Sulfate	NELAP	PA	07/07/2003
EPA 335.4		Cyanide	NELAP	PA	07/11/2006
EPA 353.2		Nitrate as N	NELAP	PA	02/28/2002
EPA 353.2		Nitrite as N	NELAP	PA	02/28/2002
EPA 353.2		Total nitrate-nitrite	NELAP	PA	05/24/2011
EPA 524.2	4.1	1,1,1,2-Tetrachloroethane	NELAP	PA	10/31/2002
EPA 524.2	4.1	1,1,1-Trichloroethane	NELAP	PA	03/06/2018
EPA 524.2	4.1	1,1,2,2-Tetrachloroethane	NELAP	PA	10/31/2002
EPA 524.2	4.1	1,1,2-Trichloroethane	NELAP	PA	03/06/2018
EPA 524.2	4.1	1,1-Dichloro-2-propanone (1,1-Dichloropropanone)	NELAP	PA	05/17/2005
EPA 524.2	4.1	1,1-Dichloroethane	NELAP	PA	10/31/2002
EPA 524.2	4.1	1,1-Dichloroethene (1,1-Dichloroethylene)	NELAP	PA	03/06/2018
EPA 524.2	4.1	1,1-Dichloropropene	NELAP	PA	10/31/2002
EPA 524.2	4.1	1,2,3-Trichlorobenzene	NELAP	PA	04/04/2005
EPA 524.2	4.1	1,2,3-Trichloropropane (1,2,3-TCP)	NELAP	PA	10/31/2002
EPA 524.2	4.1	1,2,4-Trichlorobenzene	NELAP	PA	03/06/2018
EPA 524.2	4.1	1,2,4-Trimethylbenzene	NELAP	PA	04/04/2005
EPA 524.2	4.1	1,2-Dichlorobenzene (o-Dichlorobenzene)	NELAP	PA	03/06/2018
EPA 524.2	4.1	1,2-Dichloroethane	NELAP	PA	03/06/2018
EPA 524.2	4.1	1,2-Dichloropropane	NELAP	PA	03/06/2018
EPA 524.2	4.1	1,3,5-Trimethylbenzene	NELAP	PA	05/17/2005
EPA 524.2	4.1	1,3-Dichlorobenzene (m-Dichlorobenzene)	NELAP	PA	10/31/2002
EPA 524.2	4.1	1,3-Dichloropropane	NELAP	PA	10/31/2002
EPA 524.2	4.1	1,4-Dichlorobenzene (p-Dichlorobenzene)	NELAP	PA	03/06/2018
EPA 524.2	4.1	1-Chlorobutane	NELAP	PA	05/24/2007
EPA 524.2	4.1	2,2-Dichloropropane	NELAP	PA	10/31/2002
EPA 524.2	4.1	2-Butanone (Methyl ethyl ketone, MEK)	NELAP	PA	05/24/2007
EPA 524.2	4.1	2-Chlorotoluene	NELAP	PA	10/31/2002
EPA 524.2	4.1	2-Hexanone	NELAP	PA	05/24/2007
EPA 524.2	4.1	2-Nitropropane	NELAP	PA	05/24/2007
EPA 524.2	4.1	4-Chlorotoluene	NELAP	PA	10/31/2002
EPA 524.2	4.1	4-Methyl-2-pentanone (MIBK)	NELAP	PA	05/24/2007
EPA 524.2	4.1	Acetone	NELAP	PA	05/24/2007
EPA 524.2	4.1	Acrylonitrile	NELAP	PA	05/24/2007

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Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 524.2	4.1	Allyl chloride (3-Chloropropene)	NELAP	PA	07/03/2007
EPA 524.2	4.1	Benzene	NELAP	PA	03/06/2018
EPA 524.2	4.1	Bromobenzene	NELAP	PA	10/31/2002
EPA 524.2	4.1	Bromochloromethane	NELAP	PA	04/04/2005
EPA 524.2	4.1	Bromodichloromethane	NELAP	PA	11/03/2016
EPA 524.2	4.1	Bromoform	NELAP	PA	11/03/2016
EPA 524.2	4.1	Carbon disulfide	NELAP	PA	05/24/2007
EPA 524.2	4.1	Carbon tetrachloride	NELAP	PA	03/06/2018
EPA 524.2	4.1	Chloroacetonitrile	NELAP	PA	05/24/2007
EPA 524.2	4.1	Chlorobenzene	NELAP	PA	03/06/2018
EPA 524.2	4.1	Chloroethane	NELAP	PA	10/31/2002
EPA 524.2	4.1	Chloroform	NELAP	PA	11/03/2016
EPA 524.2	4.1	Dibromochloromethane	NELAP	PA	11/03/2016
EPA 524.2	4.1	Dibromomethane	NELAP	PA	10/31/2002
EPA 524.2	4.1	Dichlorodifluoromethane (Freon 12)	NELAP	PA	04/04/2005
EPA 524.2	4.1	Diethyl ether (Ethyl ether)	NELAP	PA	05/24/2007
EPA 524.2	4.1	Diisopropyl ether (DIPE)	NELAP	PA	01/07/2010
EPA 524.2	4.1	Ethyl methacrylate	NELAP	PA	05/24/2007
EPA 524.2	4.1	Ethyl tert-butyl ether (ETBE)	NELAP	PA	01/24/2007
EPA 524.2	4.1	Ethylbenzene	NELAP	PA	03/06/2018
EPA 524.2	4.1	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	NELAP	PA	04/04/2005
EPA 524.2	4.1	Isopropylbenzene (Cumene)	NELAP	PA	04/04/2005
EPA 524.2	4.1	Methacrylonitrile	NELAP	PA	05/24/2007
EPA 524.2	4.1	Methyl bromide (Bromomethane)	NELAP	PA	10/31/2002
EPA 524.2	4.1	Methyl chloride (Chloromethane)	NELAP	PA	10/31/2002
EPA 524.2	4.1	Methyl iodide (Iodomethane)	NELAP	PA	05/24/2007
EPA 524.2	4.1	Methyl tert-butyl ether (MTBE)	NELAP	PA	04/04/2005
EPA 524.2	4.1	Methylacrylate	NELAP	PA	05/24/2007
EPA 524.2	4.1	Methylene chloride (Dichloromethane)	NELAP	PA	03/06/2018
EPA 524.2	4.1	Methylmethacrylate	NELAP	PA	05/24/2007
EPA 524.2	4.1	Naphthalene	NELAP	PA	05/17/2005
EPA 524.2	4.1	Nitrobenzene	NELAP	PA	05/17/2005
EPA 524.2	4.1	Pentachloroethane	NELAP	PA	05/24/2007
EPA 524.2	4.1	Propionitrile (Ethyl cyanide)	NELAP	PA	05/24/2007
EPA 524.2	4.1	Styrene	NELAP	PA	03/06/2018
EPA 524.2	4.1	Tetrachloroethene (PCE, Perchloroethylene)	NELAP	PA	03/06/2018
EPA 524.2	4.1	Tetrahydrofuran (THF)	NELAP	PA	05/24/2007
EPA 524.2	4.1	Toluene	NELAP	PA	03/06/2018
EPA 524.2	4.1	Total trihalomethanes (TTHMs)	NELAP	PA	10/31/2002
EPA 524.2	4.1	Trichloroethene (TCE, Trichloroethylene)	NELAP	PA	03/06/2018
EPA 524.2	4.1	Trichlorofluoromethane (Freon 11)	NELAP	PA	04/04/2005
EPA 524.2	4.1	Vinyl chloride (Chloroethene)	NELAP	PA	03/06/2018

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Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 524.2	4.1	Xylenes, total	NELAP	PA	03/06/2018
EPA 524.2	4.1	cis-1,2-Dichloroethene	NELAP	PA	03/06/2018
EPA 524.2	4.1	cis-1,3-Dichloropropene	NELAP	PA	10/31/2002
EPA 524.2	4.1	m+p-Xylene	NELAP	PA	03/06/2018
EPA 524.2	4.1	n-Butylbenzene	NELAP	PA	04/04/2005
EPA 524.2	4.1	n-Propylbenzene	NELAP	PA	05/17/2005
EPA 524.2	4.1	o-Xylene	NELAP	PA	03/06/2018
EPA 524.2	4.1	p-Isopropyltoluene (4-Isopropyltoluene)	NELAP	PA	05/17/2005
EPA 524.2	4.1	sec-Butylbenzene	NELAP	PA	04/04/2005
EPA 524.2	4.1	tert-Amyl methyl ether (TAME)	NELAP	PA	01/24/2007
EPA 524.2	4.1	tert-Butyl alcohol (2-Methyl-2-propanol)	NELAP	PA	05/24/2007
EPA 524.2	4.1	tert-Butylbenzene	NELAP	PA	04/04/2005
EPA 524.2	4.1	trans-1,2-Dichloroethene	NELAP	PA	03/06/2018
EPA 524.2	4.1	trans-1,3-Dichloropropene	NELAP	PA	10/31/2002
EPA 524.2	4.1	trans-1,4-Dichloro-2-butene	NELAP	PA	05/24/2007
EPA 525.2	2.0	2,3-Dichlorobiphenyl (BZ 5)	NELAP	PA	05/17/2005
EPA 525.2	2.0	Acenaphthene	NELAP	PA	05/25/2007
EPA 525.2	2.0	Acenaphthylene	NELAP	PA	04/28/2010
EPA 525.2	2.0	Benzo[a]anthracene	NELAP	PA	05/25/2007
EPA 525.2	2.0	Benzo[a]pyrene	NELAP	PA	01/24/2001
EPA 525.2	2.0	Benzo[b]fluoranthene	NELAP	PA	06/04/2007
EPA 525.2	2.0	Benzo[ghi]perylene	NELAP	PA	07/03/2007
EPA 525.2	2.0	Benzo[k]fluoranthene	NELAP	PA	06/04/2007
EPA 525.2	2.0	Benzyl butyl phthalate (Butyl benzyl phthalate)	NELAP	PA	05/25/2007
EPA 525.2	2.0	Chrysene (Benzo[a]phenanthrene)	NELAP	PA	05/25/2007
EPA 525.2	2.0	Di-n-butyl phthalate	NELAP	PA	05/25/2007
EPA 525.2	2.0	Dibenzo[a,h]anthracene	NELAP	PA	05/25/2007
EPA 525.2	2.0	Diethyl phthalate	NELAP	PA	05/25/2007
EPA 525.2	2.0	Dimethyl phthalate	NELAP	PA	05/25/2007
EPA 525.2	2.0	Fluoranthene	NELAP	PA	03/07/2012
EPA 525.2	2.0	Fluorene	NELAP	PA	02/07/2012
EPA 525.2	2.0	Indeno(1,2,3-cd)pyrene	NELAP	PA	02/07/2012
EPA 525.2	2.0	Phenanthrene	NELAP	PA	05/25/2007
EPA 525.2	2.0	Pyrene	NELAP	PA	05/25/2007
EPA 525.2	2.0	bis(2-Ethylhexyl) phthalate (DEHP)	NELAP	PA	01/24/2001
EPA 531.1	3.1	3-Hydroxycarbofuran	NELAP	PA	11/07/2006
EPA 531.1	3.1	Aldicarb (Temik)	NELAP	PA	04/14/2015
EPA 531.1	3.1	Aldicarb sulfone	NELAP	PA	01/24/2001
EPA 531.1	3.1	Aldicarb sulfoxide	NELAP	PA	01/24/2001
EPA 531.1	3.1	Carbaryl (Sevin)	NELAP	PA	10/09/2002
EPA 531.1	3.1	Carbofuran (Furaden)	NELAP	PA	01/24/2001
EPA 531.1	3.1	Methomyl (Lannate)	NELAP	PA	01/24/2001

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Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 531.1	3.1	Oxamyl (Vydate)	NELAP	PA	01/24/2001
EPA 533		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	NELAP	PA	11/03/2020
EPA 533		1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	NELAP	PA	11/03/2020
EPA 533		1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	NELAP	PA	11/03/2020
EPA 533		1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	NELAP	PA	11/03/2020
EPA 533		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NELAP	PA	11/03/2020
EPA 533		9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	NELAP	PA	11/03/2020
EPA 533		Hexafluoropropylene oxide dimer acid (HFPO-DA)	NELAP	PA	11/03/2020
EPA 533		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NELAP	PA	11/03/2020
EPA 533		Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NELAP	PA	11/03/2020
EPA 533		Perfluoro-3-methoxypropanoic acid (PFMPA)	NELAP	PA	11/03/2020
EPA 533		Perfluoro-4-methoxybutanoic acid (PFMBA)	NELAP	PA	11/03/2020
EPA 533		Perfluorobutanesulfonic acid (PFBS)	NELAP	PA	11/03/2020
EPA 533		Perfluorobutanoic acid (PFBA)	NELAP	PA	11/03/2020
EPA 533		Perfluorodecanoic acid (PFDA)	NELAP	PA	11/03/2020
EPA 533		Perfluorododecanoic acid (PFDoA)	NELAP	PA	11/03/2020
EPA 533		Perfluoroheptanesulfonic acid (PFHpS)	NELAP	PA	11/03/2020
EPA 533		Perfluoroheptanoic acid (PFHpA)	NELAP	PA	11/03/2020
EPA 533		Perfluorohexanesulfonic acid (PFHxS)	NELAP	PA	11/03/2020
EPA 533		Perfluorohexanoic acid (PFHxA)	NELAP	PA	11/03/2020
EPA 533		Perfluorononanoic acid (PFNA)	NELAP	PA	11/03/2020
EPA 533		Perfluorooctanesulfonic acid (PFOS)	NELAP	PA	11/03/2020
EPA 533		Perfluorooctanoic acid (PFOA)	NELAP	PA	11/03/2020
EPA 533		Perfluoropentane sulfonic acid (PFPeS)	NELAP	PA	11/03/2020
EPA 533		Perfluoropentanoic acid (PFPeA)	NELAP	PA	11/03/2020
EPA 533		Perfluoroundecanoic acid (PFUnA)	NELAP	PA	11/03/2020
EPA 537	1.1	Perfluorobutanesulfonic acid (PFBS)	NELAP	PA	05/14/2018
EPA 537	1.1	Perfluorodecanoic acid (PFDA)	NELAP	PA	05/14/2018
EPA 537	1.1	Perfluorododecanoic acid (PFDoA)	NELAP	PA	05/14/2018
EPA 537	1.1	Perfluoroheptanoic acid (PFHpA)	NELAP	PA	05/14/2018
EPA 537	1.1	Perfluorohexanesulfonic acid (PFHxS)	NELAP	PA	05/14/2018
EPA 537	1.1	Perfluorohexanoic acid (PFHxA)	NELAP	PA	05/14/2018
EPA 537	1.1	Perfluorononanoic acid (PFNA)	NELAP	PA	05/14/2018
EPA 537	1.1	Perfluorooctanesulfonic acid (PFOS)	NELAP	PA	05/14/2018
EPA 537	1.1	Perfluorooctanoic acid (PFOA)	NELAP	PA	05/14/2018
EPA 537	1.1	Perfluorotetradecanoic acid (PFTA)	NELAP	PA	05/14/2018
EPA 537	1.1	Perfluorotridecanoic acid (PFTrDA)	NELAP	PA	05/14/2018
EPA 537	1.1	Perfluoroundecanoic acid (PFUnA)	NELAP	PA	05/14/2018

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Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 537	1.1	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NELAP	PA	07/16/2018
EPA 537	1.1	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NELAP	PA	05/14/2018
EPA 537.1		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	NELAP	PA	08/01/2019
EPA 537.1		4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NELAP	PA	08/01/2019
EPA 537.1		9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	NELAP	PA	08/01/2019
EPA 537.1		Hexafluoropropylene oxide dimer acid (HFPO-DA)	NELAP	PA	08/01/2019
EPA 537.1		Perfluorobutanesulfonic acid (PFBS)	NELAP	PA	08/01/2019
EPA 537.1		Perfluorodecanoic acid (PFDA)	NELAP	PA	08/01/2019
EPA 537.1		Perfluorododecanoic acid (PFDoA)	NELAP	PA	08/01/2019
EPA 537.1		Perfluoroheptanoic acid (PFHpA)	NELAP	PA	08/01/2019
EPA 537.1		Perfluorohexanesulfonic acid (PFHxS)	NELAP	PA	08/01/2019
EPA 537.1		Perfluorohexanoic acid (PFHxA)	NELAP	PA	08/01/2019
EPA 537.1		Perfluorononanoic acid (PFNA)	NELAP	PA	08/01/2019
EPA 537.1		Perfluorooctanesulfonic acid (PFOS)	NELAP	PA	08/01/2019
EPA 537.1		Perfluorooctanoic acid (PFOA)	NELAP	PA	08/01/2019
EPA 537.1		Perfluorotetradecanoic acid (PFTA)	NELAP	PA	08/01/2019
EPA 537.1		Perfluorotridecanoic acid (PFTrDA)	NELAP	PA	08/01/2019
EPA 537.1		Perfluoroundecanoic acid (PFUnA)	NELAP	PA	08/01/2019
EPA 537.1		n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NELAP	PA	08/01/2019
EPA 537.1		n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NELAP	PA	08/01/2019
EPA 8015	C, D	Nonhalogenated organics by GC/FID	NELAP	PA	05/24/2011
EPA 8015	B, C, D	Ethane	NELAP	PA	05/24/2011
EPA 8015	B, C, D	Methane	NELAP	PA	05/24/2011
EPA 8015	B, C, D	Propane	NELAP	PA	11/09/2012
RSK-175		Acetylene (Ethyne)	NELAP	PA	11/19/2015
RSK-175		Carbon dioxide	NELAP	PA	11/19/2015
RSK-175		Ethane	NELAP	PA	11/19/2015
RSK-175		Ethene	NELAP	PA	11/19/2015
RSK-175		Isobutane (2-Methylpropane)	NELAP	PA	11/19/2015
RSK-175		Methane	NELAP	PA	11/19/2015
RSK-175		n-Butane	NELAP	PA	11/19/2015
SM 2120 B		Color	NELAP	PA	05/25/2005
SM 2130 B		Turbidity	NELAP	PA	05/17/2005
SM 2320 B		Alkalinity as CaCO3	NELAP	PA	01/24/2001
SM 2340 C		Total hardness as CaCO3	NELAP	PA	05/24/2011
SM 2510 B		Conductivity	NELAP	PA	05/17/2005
SM 2540 B		Residue, total	NELAP	PA	09/04/2018
SM 2540 C		Total dissolved solids (TDS)	NELAP	PA	06/02/2004

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
SM 2540 D		Residue, nonfilterable (TSS)	NELAP	PA	05/24/2011
SM 2550 B		Temperature, deg. C	NELAP	PA	04/04/2005
SM 4500-Cl F		Total residual chlorine	NELAP	PA	05/24/2011
SM 4500-F- C		Fluoride	NELAP	PA	10/15/2003
SM 4500-H+ B		pH	NELAP	PA	05/16/2007
SM 4500-P E		Orthophosphate as P	NELAP	PA	06/12/2007
SM 4500-SiO2 C	20-22	Silica, dissolved	NELAP	PA	05/24/2007
SM 5310 C		Total organic carbon (TOC)	NELAP	PA	04/18/2013
SM 5540 C		Surfactants as MBAS	NELAP	PA	05/24/2007

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
AK-101		Gasoline-range organics (GRO)	NELAP	PA	12/12/2005
AK-102		Diesel-range organics (DRO)	NELAP	PA	12/12/2005
ASTM D7511-09		Total cyanide	NELAP	PA	02/15/2013
ASTM D7511-12		Total cyanide	NELAP	PA	01/25/2019
EPA 1010	A	Ignitability	NELAP	PA	08/30/2019
EPA 1010		Ignitability	NELAP	PA	12/12/2005
EPA 130.2		Hardness	NELAP	PA	01/19/2005
EPA 1311		Toxicity characteristic leaching procedure (TCLP)	NELAP	PA	12/12/2005
EPA 1312		Synthetic precipitation leaching procedure (SPLP)	NELAP	PA	12/12/2005
EPA 160.1		Residue, filterable (TDS)	NELAP	PA	01/19/2005
EPA 160.4		Residue, volatile	NELAP	PA	01/19/2005
EPA 1613	B	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	NELAP	PA	06/30/2010
EPA 1613	B	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	NELAP	PA	06/30/2010
EPA 1613	B	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	NELAP	PA	06/30/2010
EPA 1613	B	1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	NELAP	PA	06/30/2010
EPA 1613	B	1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	NELAP	PA	06/30/2010
EPA 1613	B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	NELAP	PA	06/30/2010
EPA 1613	B	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	NELAP	PA	06/30/2010
EPA 1613	B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	NELAP	PA	06/30/2010
EPA 1613	B	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	NELAP	PA	06/30/2010
EPA 1613	B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	NELAP	PA	06/30/2010
EPA 1613	B	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	NELAP	PA	06/30/2010
EPA 1613	B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	NELAP	PA	06/30/2010
EPA 1613	B	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	NELAP	PA	06/30/2010
EPA 1613	B	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	NELAP	PA	06/30/2010
EPA 1613	B	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	NELAP	PA	06/30/2010

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 1613	B	2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)(Dioxin)	NELAP	PA	06/30/2010
EPA 1613	B	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	NELAP	PA	06/30/2010
EPA 1613	B	Total heptachlorodibenzo-p-dioxin (HpCDD)	NELAP	PA	08/06/2010
EPA 1613	B	Total heptachlorodibenzofuran (HpCDF)	NELAP	PA	08/06/2010
EPA 1613	B	Total hexachlorodibenzo-p-dioxin (HxCDD)	NELAP	PA	08/06/2010
EPA 1613	B	Total hexachlorodibenzofuran (HxCDF)	NELAP	PA	08/06/2010
EPA 1613	B	Total pentachlorodibenzo-p-dioxin (PeCDD)	NELAP	PA	08/06/2010
EPA 1613	B	Total pentachlorodibenzofuran (PeCDF)	NELAP	PA	08/06/2010
EPA 1613	B	Total tetrachlorodibenzo-p-dioxin (TCDD)	NELAP	PA	08/06/2010
EPA 1613	B	Total tetrachlorodibenzofuran (TCDF)	NELAP	PA	08/06/2010
EPA 1664	A	Non-polar material	NELAP	PA	03/27/2018
EPA 1664	A	Oil and grease	NELAP	PA	01/19/2005
EPA 1664	B	Non-polar material	NELAP	PA	01/31/2020
EPA 1664	B	Oil and grease	NELAP	PA	01/27/2014
EPA 1666	A	4-Methyl-2-pentanone (MIBK)	NELAP	PA	12/12/2005
EPA 1666	A	Diisopropyl ether (DIPE)	NELAP	PA	01/19/2005
EPA 1666	A	Ethyl acetate	NELAP	PA	01/19/2005
EPA 1666	A	Isobutyraldehyde	NELAP	PA	01/19/2005
EPA 1666	A	Isopropyl acetate	NELAP	PA	01/19/2005
EPA 1666	A	Isopropyl alcohol (2-Propanol)	NELAP	PA	12/02/2009
EPA 1666	A	Methyl formate	NELAP	PA	01/19/2005
EPA 1666	A	Tetrahydrofuran (THF)	NELAP	PA	01/19/2005
EPA 1666	A	Xylenes, total	NELAP	PA	01/19/2005
EPA 1666	A	n-Amyl acetate (n-Pentyl acetate)	NELAP	PA	04/04/2005
EPA 1666	A	n-Amyl alcohol (1-Pentanol)	NELAP	PA	04/04/2005
EPA 1666	A	n-Butyl acetate	NELAP	PA	04/04/2005
EPA 1666	A	n-Heptane	NELAP	PA	01/19/2005
EPA 1666	A	n-Hexane	NELAP	PA	01/19/2005
EPA 1666	A	tert-Butyl alcohol (2-Methyl-2-propanol)	NELAP	PA	04/04/2005
EPA 1668	A, C	PCBs as congeners by HRGC/HRMS	NELAP	PA	03/04/2015
EPA 1668	A, C	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ 206)	NELAP	PA	02/01/2013
EPA 1668	A, C	2,2',3,3',4,4',5,5'-Octachlorobiphenyl (BZ 194)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,4',5,6'-Octachlorobiphenyl (BZ 196)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (BZ 207)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,4',5,6-Octachlorobiphenyl (BZ 195)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ 170)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,4',6,6'-Octachlorobiphenyl (BZ 197)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,4',6-Heptachlorobiphenyl (BZ 171)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,4'-Hexachlorobiphenyl (BZ 128)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,5',6'-Heptachlorobiphenyl (BZ 177)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,5',6,6'-Octachlorobiphenyl (BZ 201)	NELAP	PA	12/17/2012

Annmarie Beach

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Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 1668	A, C	2,2',3,3',4,5',6-Heptachlorobiphenyl (BZ 175)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,5'-Hexachlorobiphenyl (BZ 130)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,5,5',6'-Octachlorobiphenyl (BZ 199)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (BZ 208)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,5,5',6-Octachlorobiphenyl (BZ 198)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,5,5'-Heptachlorobiphenyl (BZ 172)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,5,6'-Heptachlorobiphenyl (BZ 174)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,5,6,6'-Octachlorobiphenyl (BZ 200)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,5,6-Heptachlorobiphenyl (BZ 173)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,5-Hexachlorobiphenyl (BZ 129)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,6'-Hexachlorobiphenyl (BZ 132)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,6,6'-Heptachlorobiphenyl (BZ 176)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,6-Hexachlorobiphenyl (BZ 131)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4-Pentachlorobiphenyl (BZ 82)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',5,5',6,6'-Octachlorobiphenyl (BZ 202)	NELAP	PA	02/01/2013
EPA 1668	A, C	2,2',3,3',5,5',6-Heptachlorobiphenyl (BZ 178)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',5,5'-Hexachlorobiphenyl (BZ 133)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',5,6'-Hexachlorobiphenyl (BZ 135)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',5,6,6'-Heptachlorobiphenyl (BZ 179)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',5,6-Hexachlorobiphenyl (BZ 134)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',5-Pentachlorobiphenyl (BZ 83)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',6,6'-Hexachlorobiphenyl (BZ 136)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',6-Pentachlorobiphenyl (BZ 84)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3'-Tetrachlorobiphenyl (BZ 40)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4',5',6-Hexachlorobiphenyl (BZ 149)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4',5'-Pentachlorobiphenyl (BZ 97)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ 187)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4',5,5'-Hexachlorobiphenyl (BZ 146)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4',5,6'-Hexachlorobiphenyl (BZ 148)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4',5,6,6'-Heptachlorobiphenyl (BZ 188)	NELAP	PA	02/01/2013
EPA 1668	A, C	2,2',3,4',5,6-Hexachlorobiphenyl (BZ 147)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4',5-Pentachlorobiphenyl (BZ 90)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4',6'-Pentachlorobiphenyl (BZ 98)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4',6,6'-Hexachlorobiphenyl (BZ 150)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4',6-Pentachlorobiphenyl (BZ 91)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4'-Tetrachlorobiphenyl (BZ 42)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,4',5',6-Heptachlorobiphenyl (BZ 183)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,4',5'-Hexachlorobiphenyl (BZ 138)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,4',5,5',6-Octachlorobiphenyl (BZ 203)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,4',5,5'-Heptachlorobiphenyl (BZ 180)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,4',5,6'-Heptachlorobiphenyl (BZ 182)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,4',5,6,6'-Octachlorobiphenyl (BZ 204)	NELAP	PA	12/17/2012

Annmarie Beach

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Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 1668	A, C	2,2',3,4,4',5,6-Heptachlorobiphenyl (BZ 181)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,4',5-Hexachlorobiphenyl (BZ 137)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,4',6'-Hexachlorobiphenyl (BZ 140)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,4',6,6'-Heptachlorobiphenyl (BZ 184)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,4',6-Hexachlorobiphenyl (BZ 139)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,4'-Pentachlorobiphenyl (BZ 85)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,5',6-Hexachlorobiphenyl (BZ 144)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,5'-Pentachlorobiphenyl (BZ 87)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,5,5',6-Heptachlorobiphenyl (BZ 185)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,5,5'-Hexachlorobiphenyl (BZ 141)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,5,6'-Hexachlorobiphenyl (BZ 143)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,5,6,6'-Heptachlorobiphenyl (BZ 186)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,5,6-Hexachlorobiphenyl (BZ 142)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,5-Pentachlorobiphenyl (BZ 86)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,6'-Pentachlorobiphenyl (BZ 89)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,6,6'-Hexachlorobiphenyl (BZ 145)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,6-Pentachlorobiphenyl (BZ 88)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4-Tetrachlorobiphenyl (BZ 41)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,5',6-Pentachlorobiphenyl (BZ 95)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,5'-Tetrachlorobiphenyl (BZ 44)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,5,5',6-Hexachlorobiphenyl (BZ 151)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,5,5'-Pentachlorobiphenyl (BZ 92)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,5,6'-Pentachlorobiphenyl (BZ 94)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,5,6,6'-Hexachlorobiphenyl (BZ 152)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,5,6-Pentachlorobiphenyl (BZ 93)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,5-Tetrachlorobiphenyl (BZ 43)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,6'-Tetrachlorobiphenyl (BZ 46)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,6,6'-Pentachlorobiphenyl (BZ 96)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,6-Tetrachlorobiphenyl (BZ 45)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3-Trichlorobiphenyl (BZ 16)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4,4',5,5'-Hexachlorobiphenyl (BZ 153)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4,4',5,6'-Hexachlorobiphenyl (BZ 154)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4,4',5-Pentachlorobiphenyl (BZ 99)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4,4',6,6'-Hexachlorobiphenyl (BZ 155)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4,4',6-Pentachlorobiphenyl (BZ 100)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4,4'-Tetrachlorobiphenyl (BZ 47)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4,5',6-Pentachlorobiphenyl (BZ 103)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4,5'-Tetrachlorobiphenyl (BZ 49)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4,5,5'-Pentachlorobiphenyl (BZ 101)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4,5,6'-Pentachlorobiphenyl (BZ 102)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4,5-Tetrachlorobiphenyl (BZ 48)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4,6'-Tetrachlorobiphenyl (BZ 51)	NELAP	PA	12/17/2012

Annmarie Beach

The Pennsylvania Department of Environmental Protection Laboratory Accreditation Program is a NELAP recognized Accreditation Body. Customers are urged to verify the laboratory's current accreditation standing.

Attached to Certificate of Accreditation 020-001 expiration date 01/31/2022. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 1668	A, C	2,2',4,6,6'-Pentachlorobiphenyl (BZ 104)	NELAP	PA	02/01/2013
EPA 1668	A, C	2,2',4,6-Tetrachlorobiphenyl (BZ 50)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4-Trichlorobiphenyl (BZ 17)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',5,5'-Tetrachlorobiphenyl (BZ 52)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',5,6'-Tetrachlorobiphenyl (BZ 53)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',5-Trichlorobiphenyl (BZ 18)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',6,6'-Tetrachlorobiphenyl (BZ 54)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',6-Trichlorobiphenyl (BZ 19)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2'-Dichlorobiphenyl (BZ 4)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4',5',6-Pentachlorobiphenyl (BZ 125)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4',5'-Tetrachlorobiphenyl (BZ 76)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4',5,5'-Pentachlorobiphenyl (BZ 124)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4',5-Tetrachlorobiphenyl (BZ 70)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4',6-Tetrachlorobiphenyl (BZ 71)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4'-Trichlorobiphenyl (BZ 33)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4,4',5',6-Hexachlorobiphenyl (BZ 168)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4,4',5'-Pentachlorobiphenyl (BZ 123)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4,4',5,5'-Hexachlorobiphenyl (BZ 167)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4,4',5-Pentachlorobiphenyl (BZ 118)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4,4',6-Pentachlorobiphenyl (BZ 119)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4,4'-Tetrachlorobiphenyl (BZ 66)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4,5',6-Pentachlorobiphenyl (BZ 121)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4,5'-Tetrachlorobiphenyl (BZ 68)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4,5,5'-Pentachlorobiphenyl (BZ 120)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4,5-Tetrachlorobiphenyl (BZ 67)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4,6-Tetrachlorobiphenyl (BZ 69)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4-Trichlorobiphenyl (BZ 25)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',5',6-Tetrachlorobiphenyl (BZ 73)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',5'-Trichlorobiphenyl (BZ 34)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',5,5'-Tetrachlorobiphenyl (BZ 72)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',5-Trichlorobiphenyl (BZ 26)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',6-Trichlorobiphenyl (BZ 27)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3'-Dichlorobiphenyl (BZ 6)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4',5',6-Hexachlorobiphenyl (BZ 164)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4',5'-Pentachlorobiphenyl (BZ 122)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4',5,5',6-Heptachlorobiphenyl (BZ 193)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4',5,5'-Hexachlorobiphenyl (BZ 162)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4',5,6-Hexachlorobiphenyl (BZ 163)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4',5-Pentachlorobiphenyl (BZ 107)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4',6-Pentachlorobiphenyl (BZ 110)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4'-Tetrachlorobiphenyl (BZ 56)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,4',5',6-Heptachlorobiphenyl (BZ 191)	NELAP	PA	12/17/2012

Annmarie Beach

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Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 1668	A, C	2,3,3',4,4',5'-Hexachlorobiphenyl (BZ 157)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,4',5,5',6-Octachlorobiphenyl (BZ 205)	NELAP	PA	02/01/2013
EPA 1668	A, C	2,3,3',4,4',5,5'-Heptachlorobiphenyl (BZ 189)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,4',5,6-Heptachlorobiphenyl (BZ 190)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,4',5-Hexachlorobiphenyl (BZ 156)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,4',6-Hexachlorobiphenyl (BZ 158)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,4'-Pentachlorobiphenyl (BZ 105)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,5',6-Hexachlorobiphenyl (BZ 161)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,5'-Pentachlorobiphenyl (BZ 108)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,5,5',6-Heptachlorobiphenyl (BZ 192)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,5,5'-Hexachlorobiphenyl (BZ 159)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,5,6-Hexachlorobiphenyl (BZ 160)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,5-Pentachlorobiphenyl (BZ 106)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,6-Pentachlorobiphenyl (BZ 109)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4-Tetrachlorobiphenyl (BZ 55)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',5',6-Pentachlorobiphenyl (BZ 113)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',5'-Tetrachlorobiphenyl (BZ 58)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',5,5',6-Hexachlorobiphenyl (BZ 165)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',5,5'-Pentachlorobiphenyl (BZ 111)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',5,6-Pentachlorobiphenyl (BZ 112)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',5-Tetrachlorobiphenyl (BZ 57)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',6-Tetrachlorobiphenyl (BZ 59)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3'-Trichlorobiphenyl (BZ 20)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,4',5,6-Pentachlorobiphenyl (BZ 117)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,4',5-Tetrachlorobiphenyl (BZ 63)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,4',6-Tetrachlorobiphenyl (BZ 64)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,4'-Trichlorobiphenyl (BZ 22)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,4,4',5,6-Hexachlorobiphenyl (BZ 166)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,4,4',5-Pentachlorobiphenyl (BZ 114)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,4,4',6-Pentachlorobiphenyl (BZ 115)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,4,4'-Tetrachlorobiphenyl (BZ 60)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,4,5,6-Pentachlorobiphenyl (BZ 116)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,4,5-Tetrachlorobiphenyl (BZ 61)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,4,6-Tetrachlorobiphenyl (BZ 62)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,4-Trichlorobiphenyl (BZ 21)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,5,6-Tetrachlorobiphenyl (BZ 65)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,5-Trichlorobiphenyl (BZ 23)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,6-Trichlorobiphenyl (BZ 24)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3-Dichlorobiphenyl (BZ 5)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,4',5-Trichlorobiphenyl (BZ 31)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,4',6-Trichlorobiphenyl (BZ 32)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,4'-Dichlorobiphenyl (BZ 8)	NELAP	PA	12/17/2012

Annmarie Beach

The Pennsylvania Department of Environmental Protection Laboratory Accreditation Program is a NELAP recognized Accreditation Body. Customers are urged to verify the laboratory's current accreditation standing.

Attached to Certificate of Accreditation 020-001 expiration date 01/31/2022. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 1668	A, C	2,4,4',5-Tetrachlorobiphenyl (BZ 74)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,4,4',6-Tetrachlorobiphenyl (BZ 75)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,4,4'-Trichlorobiphenyl (BZ 28)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,4,5-Trichlorobiphenyl (BZ 29)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,4,6-Trichlorobiphenyl (BZ 30)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,4-Dichlorobiphenyl (BZ 7)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,5-Dichlorobiphenyl (BZ 9)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,6-Dichlorobiphenyl (BZ 10)	NELAP	PA	12/17/2012
EPA 1668	A, C	2-Chlorobiphenyl (BZ 1)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,3',4,4',5,5'-Hexachlorobiphenyl (BZ 169)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,3',4,4',5-Pentachlorobiphenyl (BZ 126)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,3',4,4'-Tetrachlorobiphenyl (BZ 77)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,3',4,5'-Tetrachlorobiphenyl (BZ 79)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,3',4,5,5'-Pentachlorobiphenyl (BZ 127)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,3',4,5-Tetrachlorobiphenyl (BZ 78)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,3',4-Trichlorobiphenyl (BZ 35)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,3',5,5'-Tetrachlorobiphenyl (BZ 80)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,3',5-Trichlorobiphenyl (BZ 36)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,3'-Dichlorobiphenyl (BZ 11)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,4',5-Trichlorobiphenyl (BZ 39)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,4'-Dichlorobiphenyl (BZ 13)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,4,4',5-Tetrachlorobiphenyl (BZ 81)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,4,4'-Trichlorobiphenyl (BZ 37)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,4,5-Trichlorobiphenyl (BZ 38)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,4-Dichlorobiphenyl (BZ 12)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,5-Dichlorobiphenyl (BZ 14)	NELAP	PA	12/17/2012
EPA 1668	A, C	3-Chlorobiphenyl (BZ 2)	NELAP	PA	12/17/2012
EPA 1668	A, C	4,4'-Dichlorobiphenyl (BZ 15)	NELAP	PA	12/17/2012
EPA 1668	A, C	4-Chlorobiphenyl (BZ 3)	NELAP	PA	12/17/2012
EPA 1668	A, C	Decachlorobiphenyl	NELAP	PA	02/01/2013
EPA 1671	A	Acetonitrile	NELAP	PA	01/19/2005
EPA 1671	A	Diethylamine	NELAP	PA	01/19/2005
EPA 1671	A	Dimethyl sulfoxide	NELAP	PA	01/19/2005
EPA 1671	A	Ethanol	NELAP	PA	01/19/2005
EPA 1671	A	Methanol	NELAP	PA	01/19/2005
EPA 1671	A	Methyl cellosolve (2-Methoxyethanol)	NELAP	PA	01/19/2005
EPA 1671	A	Triethylamine	NELAP	PA	01/19/2005
EPA 1671	A	n-Propanol (1-Propanol)	NELAP	PA	01/19/2005
EPA 170.1		Temperature, deg. C	NELAP	PA	04/04/2005
EPA 180.1		Turbidity	NELAP	PA	01/19/2005
EPA 200.7	4.4	Aluminum	NELAP	PA	05/01/2020
EPA 200.7	4.4	Antimony	NELAP	PA	01/19/2005

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Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 200.7	4.4	Arsenic	NELAP	PA	01/19/2005
EPA 200.7	4.4	Barium	NELAP	PA	01/19/2005
EPA 200.7	4.4	Beryllium	NELAP	PA	01/19/2005
EPA 200.7	4.4	Boron	NELAP	PA	01/19/2005
EPA 200.7	4.4	Cadmium	NELAP	PA	01/19/2005
EPA 200.7	4.4	Calcium	NELAP	PA	01/19/2005
EPA 200.7	4.4	Chromium	NELAP	PA	01/19/2005
EPA 200.7	4.4	Cobalt	NELAP	PA	01/19/2005
EPA 200.7	4.4	Copper	NELAP	PA	01/19/2005
EPA 200.7	4.4	Iron	NELAP	PA	01/19/2005
EPA 200.7	4.4	Lead	NELAP	PA	01/19/2005
EPA 200.7	4.4	Lithium	NELAP	PA	02/07/2012
EPA 200.7	4.4	Magnesium	NELAP	PA	01/19/2005
EPA 200.7	4.4	Manganese	NELAP	PA	01/19/2005
EPA 200.7	4.4	Molybdenum	NELAP	PA	01/19/2005
EPA 200.7	4.4	Nickel	NELAP	PA	01/19/2005
EPA 200.7	4.4	Potassium	NELAP	PA	01/19/2005
EPA 200.7	4.4	Selenium	NELAP	PA	01/19/2005
EPA 200.7	4.4	Silver	NELAP	PA	04/04/2005
EPA 200.7	4.4	Sodium	NELAP	PA	01/19/2005
EPA 200.7	4.4	Strontium	NELAP	PA	05/24/2011
EPA 200.7	4.4	Tellurium	NELAP	PA	02/04/2016
EPA 200.7	4.4	Thallium	NELAP	PA	05/01/2020
EPA 200.7	4.4	Thorium	NELAP	PA	11/19/2015
EPA 200.7	4.4	Tin	NELAP	PA	01/19/2005
EPA 200.7	4.4	Titanium	NELAP	PA	01/19/2005
EPA 200.7	4.4	Tungsten	NELAP	PA	11/19/2015
EPA 200.7	4.4	Vanadium	NELAP	PA	01/19/2005
EPA 200.7	4.4	Zinc	NELAP	PA	01/19/2005
EPA 200.7	4.4	Zirconium	NELAP	PA	07/29/2015
EPA 200.8	5.4	Aluminum	NELAP	PA	01/07/2010
EPA 200.8	5.4	Antimony	NELAP	PA	04/04/2005
EPA 200.8	5.4	Arsenic	NELAP	PA	04/04/2005
EPA 200.8	5.4	Barium	NELAP	PA	04/04/2005
EPA 200.8	5.4	Beryllium	NELAP	PA	04/04/2005
EPA 200.8	5.4	Cadmium	NELAP	PA	04/04/2005
EPA 200.8	5.4	Calcium	NELAP	PA	01/07/2010
EPA 200.8	5.4	Chromium	NELAP	PA	04/04/2005
EPA 200.8	5.4	Cobalt	NELAP	PA	11/23/2010
EPA 200.8	5.4	Copper	NELAP	PA	04/04/2005
EPA 200.8	5.4	Iron	NELAP	PA	11/23/2010
EPA 200.8	5.4	Lead	NELAP	PA	04/04/2005

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Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 200.8	5.4	Magnesium	NELAP	PA	01/07/2010
EPA 200.8	5.4	Manganese	NELAP	PA	11/23/2010
EPA 200.8	5.4	Molybdenum	NELAP	PA	01/07/2010
EPA 200.8	5.4	Nickel	NELAP	PA	04/04/2005
EPA 200.8	5.4	Potassium	NELAP	PA	01/07/2010
EPA 200.8	5.4	Selenium	NELAP	PA	12/12/2005
EPA 200.8	5.4	Silver	NELAP	PA	05/01/2020
EPA 200.8	5.4	Sodium	NELAP	PA	01/07/2010
EPA 200.8	5.4	Strontium	NELAP	PA	01/07/2010
EPA 200.8	5.4	Thallium	NELAP	PA	05/31/2006
EPA 200.8	5.4	Tin	NELAP	PA	01/07/2010
EPA 200.8	5.4	Titanium	NELAP	PA	09/19/2019
EPA 200.8	5.4	Uranium (mass)	NELAP	PA	11/19/2015
EPA 200.8	5.4	Vanadium	NELAP	PA	01/07/2010
EPA 200.8	5.4	Zinc	NELAP	PA	01/18/2011
EPA 218.6		Chromium VI	NELAP	PA	04/04/2005
EPA 245.1	3.0	Mercury	NELAP	PA	01/19/2005
EPA 300.0	2.1	Bromide	NELAP	PA	04/04/2005
EPA 300.0	2.1	Chloride	NELAP	PA	01/19/2005
EPA 300.0	2.1	Fluoride	NELAP	PA	05/25/2005
EPA 300.0	2.1	Nitrate as N	NELAP	PA	01/19/2005
EPA 300.0	2.1	Nitrite as N	NELAP	PA	01/19/2005
EPA 300.0	2.1	Sulfate	NELAP	PA	01/19/2005
EPA 3005	A	Preconcentration under acid	NELAP	PA	12/12/2005
EPA 3010	A	Hot plate acid digestion (HNO3 + HCl)	NELAP	PA	12/12/2005
EPA 3020	A	Hot plate acid digestion (HNO3 only)	NELAP	PA	12/12/2005
EPA 305.2		Acidity as CaCO3	NELAP	PA	03/27/2018
EPA 3060	A	Alkaline digestion of Cr(VI)	NELAP	PA	01/24/2007
EPA 310.1		Alkalinity as CaCO3	NELAP	PA	11/19/2015
EPA 335.4		Total cyanide	NELAP	PA	01/19/2005
EPA 350.1	2.0	Ammonia as N	NELAP	PA	10/09/2013
EPA 350.3		Ammonia as N	NELAP	PA	01/19/2016
EPA 351.2		Kjeldahl nitrogen, total (TKN)	NELAP	PA	06/25/2020
EPA 3510	C	Separatory funnel liquid-liquid extraction	NELAP	PA	12/12/2005
EPA 3511		Organic compounds in water by microextraction	NELAP	PA	03/07/2012
EPA 3520	C	Continuous liquid-liquid extraction	NELAP	PA	12/12/2005
EPA 353.2		Nitrate as N	NELAP	PA	01/19/2005
EPA 353.2		Nitrite as N	NELAP	PA	01/19/2005
EPA 353.2		Total nitrate-nitrite	NELAP	PA	04/04/2005
EPA 3620	B	Florisil cleanup	NELAP	PA	12/12/2005
EPA 3620	C	Florisil cleanup	NELAP	PA	09/04/2018
EPA 3630	C	Silica gel cleanup	NELAP	PA	12/12/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 3640	A	Gel permeation cleanup (GPC)	NELAP	PA	12/12/2005
EPA 365.1		Phosphorus, total	NELAP	PA	07/21/2020
EPA 365.3		Orthophosphate as P	NELAP	PA	06/25/2020
EPA 3660	B	Sulfur cleanup	NELAP	PA	12/12/2005
EPA 370.1		Silica, dissolved	NELAP	PA	11/19/2015
EPA 375.4		Sulfate	NELAP	PA	04/04/2005
EPA 410.4	2.0	Chemical oxygen demand (COD)	NELAP	PA	04/01/2005
EPA 415.1		Total organic carbon (TOC)	NELAP	PA	01/19/2005
EPA 420.4		Total phenolics	NELAP	PA	04/17/2007
EPA 425.1		Surfactants as MBAS	NELAP	PA	01/19/2005
EPA 5030	B	Aqueous-phase purge-and-trap	NELAP	PA	12/12/2005
EPA 5030	C	Aqueous-phase purge-and-trap	NELAP	PA	01/27/2014
EPA 524.2	4.1	1,2,4-Trimethylbenzene	NELAP	PA	05/14/2018
EPA 524.2	4.1	1,2-Dichlorobenzene (o-Dichlorobenzene)	NELAP	PA	01/18/2011
EPA 524.2	4.1	1,2-Dichloroethane	NELAP	PA	01/18/2011
EPA 524.2	4.1	1,3,5-Trimethylbenzene	NELAP	PA	05/14/2018
EPA 524.2	4.1	4-Methyl-2-pentanone (MIBK)	NELAP	PA	05/24/2011
EPA 524.2	4.1	Acetone	NELAP	PA	01/18/2011
EPA 524.2	4.1	Acrolein (Propenal)	NELAP	PA	11/19/2015
EPA 524.2	4.1	Benzene	NELAP	PA	01/18/2011
EPA 524.2	4.1	Chlorobenzene	NELAP	PA	01/18/2011
EPA 524.2	4.1	Chloroform	NELAP	PA	01/18/2011
EPA 524.2	4.1	Dichlorodifluoromethane (Freon 12)	NELAP	PA	11/19/2015
EPA 524.2	4.1	Diisopropyl ether (DIPE)	NELAP	PA	11/19/2015
EPA 524.2	4.1	Ethyl tert-butyl ether (ETBE)	NELAP	PA	11/19/2015
EPA 524.2	4.1	Ethylbenzene	NELAP	PA	05/14/2018
EPA 524.2	4.1	Isopropylbenzene (Cumene)	NELAP	PA	05/14/2018
EPA 524.2	4.1	Methylene chloride (Dichloromethane)	NELAP	PA	05/24/2011
EPA 524.2	4.1	Naphthalene	NELAP	PA	05/14/2018
EPA 524.2	4.1	Tetrahydrofuran (THF)	NELAP	PA	05/24/2011
EPA 524.2	4.1	Toluene	NELAP	PA	01/18/2011
EPA 524.2	4.1	m+p-Xylene	NELAP	PA	07/25/2011
EPA 524.2	4.1	n-Butylbenzene	NELAP	PA	05/14/2018
EPA 524.2	4.1	n-Hexane	NELAP	PA	11/19/2015
EPA 524.2	4.1	n-Propylbenzene	NELAP	PA	05/14/2018
EPA 524.2	4.1	o-Xylene	NELAP	PA	05/24/2011
EPA 524.2	4.1	p-Isopropyltoluene (4-Isopropyltoluene)	NELAP	PA	05/14/2018
EPA 524.2	4.1	sec-Butylbenzene	NELAP	PA	05/14/2018
EPA 524.2	4.1	tert-Amyl methyl ether (TAME)	NELAP	PA	11/19/2015
EPA 531.1	3.1	3-Hydroxycarbofuran	NELAP	PA	11/19/2015
EPA 531.1	3.1	Aldicarb (Temik)	NELAP	PA	11/19/2015
EPA 531.1	3.1	Aldicarb sulfone	NELAP	PA	11/19/2015

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Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 531.1	3.1	Aldicarb sulfoxide	NELAP	PA	11/19/2015
EPA 531.1	3.1	Methiocarb (Mesurol)	NELAP	PA	11/19/2015
EPA 531.1	3.1	Methomyl (Lannate)	NELAP	PA	11/19/2015
EPA 531.1	3.1	Propoxur (Baygon)	NELAP	PA	11/19/2015
EPA 537 Isotope Dilution	1.1	10:2 Fluorotelomersulfonate (10:2 FTS)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	NELAP	PA	11/03/2020
EPA 537 Isotope Dilution	1.1	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	NELAP	PA	11/04/2019
EPA 537 Isotope Dilution	1.1	1H, 1H, 2H, 2H-Perfluorododecane sulfonic acid (10:2-FTS)	NELAP	PA	11/04/2019
EPA 537 Isotope Dilution	1.1	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	NELAP	PA	11/04/2019
EPA 537 Isotope Dilution	1.1	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	NELAP	PA	11/04/2019
EPA 537 Isotope Dilution	1.1	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NELAP	PA	11/03/2020
EPA 537 Isotope Dilution	1.1	6:2 Fluorotelomersulfonate (6:2FTS)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	8:2 Flurotelomersulfonate (8:2FTS)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	NELAP	PA	11/03/2020
EPA 537 Isotope Dilution	1.1	Fluorotelomer sulfonate (4:2FTS)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Hexafluoropropylene oxide dimer acid (HFPO-DA)	NELAP	PA	11/03/2020
EPA 537 Isotope Dilution	1.1	N-Ethylperfluorooctanesulfonamide (EtFOSA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	N-Methylperfluorooctanesulfonamide (MeFOSA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	N-ethylperfluoro-1-octanesulfonamido ethanol (N-EtFOSE)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	N-methylperfluoro-1-octanesulfonamido ethanol (N-MeFOSE)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorobutanesulfonic acid (PFBS)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorobutanoic acid (PFBA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorodecane sulfonate (PFDS)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorodecane sulfonic acid (PFDS)	NELAP	PA	11/04/2019
EPA 537 Isotope Dilution	1.1	Perfluorodecanoic acid (PFDA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorododecane sulfonate	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorododecane sulfonic acid (PFDoS)	NELAP	PA	11/04/2019

Annmarie Beach

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Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 537 Isotope Dilution	1.1	Perfluorododecanoic acid (PFDoA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluoroheptanesulfonic acid (PFHpS)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluoroheptanoic acid (PFHpA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorohexadecanoic acid (PFHxDA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorohexanesulfonic acid (PFHxS)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorohexanoic acid (PFHxA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorononane sulfonic acid (PFNS)	NELAP	PA	11/04/2019
EPA 537 Isotope Dilution	1.1	Perfluorononanesulfonate (PFNS)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorononanoic acid (PFNA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorooctadecanoic acid (PFODA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorooctane sulfonamide (PFOSA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorooctanesulfonic acid (PFOS)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorooctanoic acid (PFOA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluoropentane sulfonic acid (PFPeS)	NELAP	PA	11/04/2019
EPA 537 Isotope Dilution	1.1	Perfluoropentanesulfonate (PFPeS)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluoropentanoic acid (PFPeA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorotetradecanoic acid (PFTA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorotridecanoic acid (PFTrDA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluoroundecanoic acid (PFUnA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NELAP	PA	08/30/2019
EPA 6010	B, C	Metals by ICP/AES	NELAP	PA	03/26/2012
EPA 6010	D	Metals by ICP/AES	NELAP	PA	07/09/2018
EPA 6010	B, C, D	Aluminum	NELAP	PA	05/01/2020
EPA 6010	B, C, D	Antimony	NELAP	PA	12/12/2005
EPA 6010	B, C, D	Arsenic	NELAP	PA	12/12/2005
EPA 6010	B, C, D	Barium	NELAP	PA	12/12/2005
EPA 6010	B, C, D	Beryllium	NELAP	PA	12/12/2005

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Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 6010	B, C, D	Boron	NELAP	PA	12/12/2005
EPA 6010	B, C, D	Cadmium	NELAP	PA	12/12/2005
EPA 6010	B, C, D	Calcium	NELAP	PA	12/12/2005
EPA 6010	B, C, D	Chromium	NELAP	PA	12/12/2005
EPA 6010	B, C, D	Cobalt	NELAP	PA	12/12/2005
EPA 6010	B, C, D	Copper	NELAP	PA	12/12/2005
EPA 6010	B, C, D	Iron	NELAP	PA	12/12/2005
EPA 6010	B, C, D	Lead	NELAP	PA	12/12/2005
EPA 6010	B, C, D	Lithium	NELAP	PA	01/18/2011
EPA 6010	B, C, D	Magnesium	NELAP	PA	12/12/2005
EPA 6010	B, C, D	Manganese	NELAP	PA	12/12/2005
EPA 6010	B, C, D	Molybdenum	NELAP	PA	12/12/2005
EPA 6010	B, C, D	Nickel	NELAP	PA	12/12/2005
EPA 6010	B, C, D	Potassium	NELAP	PA	12/12/2005
EPA 6010	B, C, D	Selenium	NELAP	PA	12/12/2005
EPA 6010	B, C, D	Silver	NELAP	PA	12/12/2005
EPA 6010	B, C, D	Sodium	NELAP	PA	12/12/2005
EPA 6010	B, C, D	Strontium	NELAP	PA	12/12/2005
EPA 6010	B, C, D	Sulfur	NELAP	PA	12/19/2011
EPA 6010	B, C, D	Tellurium	NELAP	PA	02/04/2016
EPA 6010	B, C, D	Thallium	NELAP	PA	05/01/2020
EPA 6010	B, C, D	Thorium	NELAP	PA	11/19/2015
EPA 6010	B, C, D	Tin	NELAP	PA	12/12/2005
EPA 6010	B, C, D	Titanium	NELAP	PA	12/12/2005
EPA 6010	B, C, D	Tungsten	NELAP	PA	11/19/2015
EPA 6010	B, C, D	Vanadium	NELAP	PA	12/12/2005
EPA 6010	B, C, D	Zinc	NELAP	PA	12/12/2005
EPA 6010	B, C, D	Zirconium	NELAP	PA	07/29/2015
EPA 6020	A	Metals by ICP/MS	NELAP	PA	03/26/2012
EPA 6020	B	Metals by ICP/MS	NELAP	PA	07/09/2018
EPA 6020		Metals by ICP/MS	NELAP	PA	12/12/2005
EPA 6020	A, B	Aluminum	NELAP	PA	01/07/2010
EPA 6020	A, B	Antimony	NELAP	PA	12/12/2005
EPA 6020	A, B	Arsenic	NELAP	PA	12/12/2005
EPA 6020	A, B	Barium	NELAP	PA	12/12/2005
EPA 6020	A, B	Beryllium	NELAP	PA	12/12/2005
EPA 6020	A, B	Cadmium	NELAP	PA	12/12/2005
EPA 6020	A, B	Calcium	NELAP	PA	01/07/2010
EPA 6020	A, B	Chromium	NELAP	PA	12/12/2005
EPA 6020	A, B	Cobalt	NELAP	PA	11/23/2010
EPA 6020	A, B	Copper	NELAP	PA	12/12/2005
EPA 6020	A, B	Iron	NELAP	PA	11/23/2010

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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 6020	A, B	Lead	NELAP	PA	12/12/2005
EPA 6020	A, B	Magnesium	NELAP	PA	01/07/2010
EPA 6020	A, B	Manganese	NELAP	PA	11/23/2010
EPA 6020	A, B	Molybdenum	NELAP	PA	01/07/2010
EPA 6020	A, B	Nickel	NELAP	PA	07/23/2008
EPA 6020	A, B	Potassium	NELAP	PA	01/07/2010
EPA 6020	A, B	Selenium	NELAP	PA	12/12/2005
EPA 6020	A, B	Silver	NELAP	PA	05/01/2020
EPA 6020	A, B	Sodium	NELAP	PA	01/07/2010
EPA 6020	A, B	Strontium	NELAP	PA	01/07/2010
EPA 6020	A, B	Thallium	NELAP	PA	12/12/2005
EPA 6020	A, B	Tin	NELAP	PA	01/07/2010
EPA 6020	A, B	Titanium	NELAP	PA	09/19/2019
EPA 6020	A, B	Uranium (mass)	NELAP	PA	11/19/2015
EPA 6020	A, B	Vanadium	NELAP	PA	01/07/2010
EPA 6020	A, B	Zinc	NELAP	PA	01/18/2011
EPA 608.3		2,4'-DDD	NELAP	PA	05/14/2018
EPA 608.3		2,4'-DDE	NELAP	PA	05/14/2018
EPA 608.3		2,4'-DDT	NELAP	PA	05/14/2018
EPA 608.3		4,4'-DDD	NELAP	PA	05/14/2018
EPA 608.3		4,4'-DDE	NELAP	PA	05/14/2018
EPA 608.3		4,4'-DDT	NELAP	PA	05/14/2018
EPA 608.3		Aldrin (HHDN)	NELAP	PA	05/14/2018
EPA 608.3		Aroclor-1016 (PCB-1016)	NELAP	PA	05/14/2018
EPA 608.3		Aroclor-1221 (PCB-1221)	NELAP	PA	07/16/2018
EPA 608.3		Aroclor-1232 (PCB-1232)	NELAP	PA	07/16/2018
EPA 608.3		Aroclor-1242 (PCB-1242)	NELAP	PA	07/16/2018
EPA 608.3		Aroclor-1248 (PCB-1248)	NELAP	PA	07/16/2018
EPA 608.3		Aroclor-1254 (PCB-1254)	NELAP	PA	07/16/2018
EPA 608.3		Aroclor-1260 (PCB-1260)	NELAP	PA	05/14/2018
EPA 608.3		Chlordane (tech.)	NELAP	PA	05/14/2018
EPA 608.3		Dieldrin	NELAP	PA	07/05/2018
EPA 608.3		Endosulfan I	NELAP	PA	05/14/2018
EPA 608.3		Endosulfan II	NELAP	PA	05/14/2018
EPA 608.3		Endosulfan sulfate	NELAP	PA	05/14/2018
EPA 608.3		Endrin	NELAP	PA	05/14/2018
EPA 608.3		Endrin aldehyde	NELAP	PA	05/14/2018
EPA 608.3		Endrin ketone	NELAP	PA	05/14/2018
EPA 608.3		Heptachlor	NELAP	PA	05/14/2018
EPA 608.3		Heptachlor epoxide	NELAP	PA	05/14/2018
EPA 608.3		Methoxychlor	NELAP	PA	05/14/2018
EPA 608.3		Mirex	NELAP	PA	05/14/2018

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 608.3		Telodrin	NELAP	PA	05/14/2018
EPA 608.3		Toxaphene (Chlorinated camphene)	NELAP	PA	05/14/2018
EPA 608.3		alpha-BHC (alpha-Hexachlorocyclohexane)	NELAP	PA	05/14/2018
EPA 608.3		alpha-Chlordane	NELAP	PA	05/14/2018
EPA 608.3		beta-BHC (beta-Hexachlorocyclohexane)	NELAP	PA	05/14/2018
EPA 608.3		delta-BHC (delta-Hexachlorocyclohexane)	NELAP	PA	05/14/2018
EPA 608.3		gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	NELAP	PA	05/14/2018
EPA 608.3		gamma-Chlordane	NELAP	PA	05/14/2018
EPA 624.1		1,1,1,2-Tetrachloroethane	NELAP	PA	05/14/2018
EPA 624.1		1,1,1-Trichloro-2,2,2-trifluoroethane (Freon 113a)	NELAP	PA	07/16/2018
EPA 624.1		1,1,1-Trichloroethane	NELAP	PA	05/14/2018
EPA 624.1		1,1,2,2-Tetrachloroethane	NELAP	PA	05/14/2018
EPA 624.1		1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NELAP	PA	05/14/2018
EPA 624.1		1,1,2-Trichloroethane	NELAP	PA	05/14/2018
EPA 624.1		1,1-Dichloroethane	NELAP	PA	05/14/2018
EPA 624.1		1,1-Dichloroethene (1,1-Dichloroethylene)	NELAP	PA	05/14/2018
EPA 624.1		1,1-Dichloropropene	NELAP	PA	05/14/2018
EPA 624.1		1,2,3-Trichlorobenzene	NELAP	PA	05/14/2018
EPA 624.1		1,2,3-Trichloropropane (1,2,3-TCP)	NELAP	PA	05/14/2018
EPA 624.1		1,2,4-Trichlorobenzene	NELAP	PA	05/14/2018
EPA 624.1		1,2,4-Trimethylbenzene	NELAP	PA	05/14/2018
EPA 624.1		1,2-Dibromo-3-chloropropane (DBCP, Dibromochloropropane)	NELAP	PA	05/14/2018
EPA 624.1		1,2-Dibromoethane (EDB, Ethylene dibromide)	NELAP	PA	05/14/2018
EPA 624.1		1,2-Dichlorobenzene (o-Dichlorobenzene)	NELAP	PA	05/14/2018
EPA 624.1		1,2-Dichloroethane	NELAP	PA	05/14/2018
EPA 624.1		1,2-Dichloropropane	NELAP	PA	05/14/2018
EPA 624.1		1,3,5-Trimethylbenzene	NELAP	PA	05/14/2018
EPA 624.1		1,3-Dichlorobenzene (m-Dichlorobenzene)	NELAP	PA	05/14/2018
EPA 624.1		1,3-Dichloropropane	NELAP	PA	05/14/2018
EPA 624.1		1,4-Dichlorobenzene (p-Dichlorobenzene)	NELAP	PA	05/14/2018
EPA 624.1		1,4-Dioxane (1,4-Diethyleneoxide)	NELAP	PA	05/14/2018
EPA 624.1		2,2-Dichloropropane	NELAP	PA	05/14/2018
EPA 624.1		2-Butanone (Methyl ethyl ketone, MEK)	NELAP	PA	05/14/2018
EPA 624.1		2-Chloroethyl vinyl ether	NELAP	PA	07/16/2018
EPA 624.1		2-Chlorotoluene	NELAP	PA	05/14/2018
EPA 624.1		2-Hexanone	NELAP	PA	05/14/2018
EPA 624.1		4-Chlorotoluene	NELAP	PA	05/14/2018
EPA 624.1		4-Methyl-2-pentanone (MIBK)	NELAP	PA	05/14/2018
EPA 624.1		Acetone	NELAP	PA	05/14/2018
EPA 624.1		Acetonitrile	NELAP	PA	05/14/2018

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 624.1		Acrolein (Propenal)	NELAP	PA	05/14/2018
EPA 624.1		Acrylonitrile	NELAP	PA	05/14/2018
EPA 624.1		Benzene	NELAP	PA	05/14/2018
EPA 624.1		Benzyl chloride	NELAP	PA	05/14/2018
EPA 624.1		Bromobenzene	NELAP	PA	05/14/2018
EPA 624.1		Bromochloromethane	NELAP	PA	05/14/2018
EPA 624.1		Bromodichloromethane	NELAP	PA	05/14/2018
EPA 624.1		Bromoform	NELAP	PA	05/14/2018
EPA 624.1		Carbon disulfide	NELAP	PA	05/14/2018
EPA 624.1		Carbon tetrachloride	NELAP	PA	05/14/2018
EPA 624.1		Chlorobenzene	NELAP	PA	05/14/2018
EPA 624.1		Chlorodifluoromethane (Freon 22)	NELAP	PA	05/14/2018
EPA 624.1		Chloroethane	NELAP	PA	05/14/2018
EPA 624.1		Chloroform	NELAP	PA	07/05/2018
EPA 624.1		Chloroprene (2-Chloro-1,3-butadiene)	NELAP	PA	05/14/2018
EPA 624.1		Cyclohexane	NELAP	PA	05/14/2018
EPA 624.1		Dibromochloromethane	NELAP	PA	05/14/2018
EPA 624.1		Dibromomethane	NELAP	PA	05/14/2018
EPA 624.1		Dichlorodifluoromethane (Freon 12)	NELAP	PA	05/14/2018
EPA 624.1		Dichlorofluoromethane (Freon 21)	NELAP	PA	05/14/2018
EPA 624.1		Diisopropyl ether (DIPE)	NELAP	PA	05/14/2018
EPA 624.1		Ethyl acetate	NELAP	PA	05/14/2018
EPA 624.1		Ethyl methacrylate	NELAP	PA	05/14/2018
EPA 624.1		Ethylbenzene	NELAP	PA	05/14/2018
EPA 624.1		Freon-123A	NELAP	PA	05/14/2018
EPA 624.1		Hexachlorobutadiene (1,3-Hexachlorobutadiene)	NELAP	PA	05/14/2018
EPA 624.1		Isobutyl alcohol (2-Methyl-1-propanol)	NELAP	PA	05/14/2018
EPA 624.1		Isopropyl acetate	NELAP	PA	05/14/2018
EPA 624.1		Isopropyl alcohol (2-Propanol)	NELAP	PA	05/14/2018
EPA 624.1		Isopropylbenzene (Cumene)	NELAP	PA	05/14/2018
EPA 624.1		Methacrylonitrile	NELAP	PA	05/14/2018
EPA 624.1		Methyl bromide (Bromomethane)	NELAP	PA	05/14/2018
EPA 624.1		Methyl chloride (Chloromethane)	NELAP	PA	05/14/2018
EPA 624.1		Methyl iodide (Iodomethane)	NELAP	PA	05/14/2018
EPA 624.1		Methyl tert-butyl ether (MTBE)	NELAP	PA	05/14/2018
EPA 624.1		Methylene chloride (Dichloromethane)	NELAP	PA	05/14/2018
EPA 624.1		Methylmethacrylate	NELAP	PA	05/14/2018
EPA 624.1		Naphthalene	NELAP	PA	05/14/2018
EPA 624.1		Propionitrile (Ethyl cyanide)	NELAP	PA	05/14/2018
EPA 624.1		Styrene	NELAP	PA	05/14/2018
EPA 624.1		Tetrachloroethene (PCE, Perchloroethylene)	NELAP	PA	05/14/2018
EPA 624.1		Tetrahydrofuran (THF)	NELAP	PA	05/14/2018

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DEP Laboratory ID: 36-00037
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Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 624.1		Toluene	NELAP	PA	05/14/2018
EPA 624.1		Trichloroethene (TCE, Trichloroethylene)	NELAP	PA	05/14/2018
EPA 624.1		Trichlorofluoromethane (Freon 11)	NELAP	PA	05/14/2018
EPA 624.1		Vinyl acetate	NELAP	PA	05/14/2018
EPA 624.1		Vinyl chloride (Chloroethene)	NELAP	PA	05/14/2018
EPA 624.1		Xylenes, total	NELAP	PA	05/14/2018
EPA 624.1		cis-1,2-Dichloroethene	NELAP	PA	05/14/2018
EPA 624.1		cis-1,3-Dichloropropene	NELAP	PA	05/14/2018
EPA 624.1		cis-1,4-Dichloro-2-butene	NELAP	PA	05/14/2018
EPA 624.1		m+p-Xylene	NELAP	PA	05/14/2018
EPA 624.1		n-Butyl acetate	NELAP	PA	05/14/2018
EPA 624.1		n-Butylbenzene	NELAP	PA	05/14/2018
EPA 624.1		n-Heptane	NELAP	PA	05/14/2018
EPA 624.1		n-Hexane	NELAP	PA	05/14/2018
EPA 624.1		n-Propyl acetate	NELAP	PA	05/14/2018
EPA 624.1		n-Propylbenzene	NELAP	PA	05/14/2018
EPA 624.1		o-Xylene	NELAP	PA	05/14/2018
EPA 624.1		p-Isopropyltoluene (4-Isopropyltoluene)	NELAP	PA	05/14/2018
EPA 624.1		sec-Butylbenzene	NELAP	PA	05/14/2018
EPA 624.1		tert-Amyl ethyl ether (TAEE)	NELAP	PA	05/14/2018
EPA 624.1		tert-Amyl methyl ether (TAME)	NELAP	PA	07/05/2018
EPA 624.1		tert-Butyl alcohol (2-Methyl-2-propanol)	NELAP	PA	05/14/2018
EPA 624.1		tert-Butyl ethyl ether	NELAP	PA	07/16/2018
EPA 624.1		tert-Butylbenzene	NELAP	PA	05/14/2018
EPA 624.1		trans-1,2-Dichloroethene	NELAP	PA	05/14/2018
EPA 624.1		trans-1,3-Dichloropropene	NELAP	PA	05/14/2018
EPA 624.1		trans-1,4-Dichloro-2-butene	NELAP	PA	05/14/2018
EPA 625.1		1,1'-Biphenyl (Biphenyl, Lemonene)	NELAP	PA	05/14/2018
EPA 625.1		1,2,4,5-Tetrachlorobenzene	NELAP	PA	05/14/2018
EPA 625.1		1,2,4-Trichlorobenzene	NELAP	PA	05/14/2018
EPA 625.1		1,2-Dichlorobenzene (o-Dichlorobenzene)	NELAP	PA	05/14/2018
EPA 625.1		1,2-Diphenylhydrazine	NELAP	PA	05/14/2018
EPA 625.1		1,3-Dichlorobenzene (m-Dichlorobenzene)	NELAP	PA	05/14/2018
EPA 625.1		1,4-Dichlorobenzene (p-Dichlorobenzene)	NELAP	PA	05/14/2018
EPA 625.1		1,4-Dioxane (1,4-Diethyleneoxide)	NELAP	PA	05/14/2018
EPA 625.1		1-Methylnaphthalene	NELAP	PA	05/14/2018
EPA 625.1		1-Methylphenanthrene	NELAP	PA	05/14/2018
EPA 625.1		2,2'-oxybis(1-Chloropropane)	NELAP	PA	05/14/2018
EPA 625.1		2,3,4,6-Tetrachlorophenol	NELAP	PA	05/14/2018
EPA 625.1		2,3-Dichloroaniline	NELAP	PA	05/14/2018
EPA 625.1		2,3-Dinitrotoluene	NELAP	PA	05/14/2018
EPA 625.1		2,4,5-Trichlorophenol	NELAP	PA	05/14/2018

Annmarie Beach

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Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 625.1		2,4,6-Trichlorophenol	NELAP	PA	05/14/2018
EPA 625.1		2,4-Dichlorophenol	NELAP	PA	05/14/2018
EPA 625.1		2,4-Dimethylphenol	NELAP	PA	05/14/2018
EPA 625.1		2,4-Dinitrophenol	NELAP	PA	05/14/2018
EPA 625.1		2,4-Dinitrotoluene (2,4-DNT)	NELAP	PA	05/14/2018
EPA 625.1		2,6-Dichlorophenol	NELAP	PA	05/14/2018
EPA 625.1		2,6-Dinitrotoluene (2,6-DNT)	NELAP	PA	05/14/2018
EPA 625.1		2-Chloronaphthalene	NELAP	PA	05/14/2018
EPA 625.1		2-Chlorophenol	NELAP	PA	05/14/2018
EPA 625.1		2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	NELAP	PA	05/14/2018
EPA 625.1		2-Methylnaphthalene	NELAP	PA	05/14/2018
EPA 625.1		2-Methylphenol (o-Cresol)	NELAP	PA	05/14/2018
EPA 625.1		2-Nitroaniline	NELAP	PA	05/14/2018
EPA 625.1		2-Nitrophenol	NELAP	PA	05/14/2018
EPA 625.1		3+4-Methylphenol (m+p-Cresol)	NELAP	PA	05/14/2018
EPA 625.1		3,3'-Dichlorobenzidine	NELAP	PA	05/14/2018
EPA 625.1		3-Nitroaniline	NELAP	PA	05/14/2018
EPA 625.1		4-Bromophenyl phenyl ether	NELAP	PA	05/14/2018
EPA 625.1		4-Chloro-3-methylphenol	NELAP	PA	05/14/2018
EPA 625.1		4-Chloroaniline	NELAP	PA	05/14/2018
EPA 625.1		4-Chlorophenyl phenyl ether	NELAP	PA	05/14/2018
EPA 625.1		4-Nitroaniline	NELAP	PA	05/14/2018
EPA 625.1		4-Nitrophenol	NELAP	PA	05/14/2018
EPA 625.1		Acenaphthene	NELAP	PA	05/14/2018
EPA 625.1		Acenaphthylene	NELAP	PA	05/14/2018
EPA 625.1		Acetophenone	NELAP	PA	05/14/2018
EPA 625.1		Aniline	NELAP	PA	05/14/2018
EPA 625.1		Anthracene	NELAP	PA	05/14/2018
EPA 625.1		Benzidine	NELAP	PA	05/14/2018
EPA 625.1		Benzo[a]anthracene	NELAP	PA	05/14/2018
EPA 625.1		Benzo[a]pyrene	NELAP	PA	05/14/2018
EPA 625.1		Benzo[b]fluoranthene	NELAP	PA	05/14/2018
EPA 625.1		Benzo[ghi]perylene	NELAP	PA	05/14/2018
EPA 625.1		Benzo[k]fluoranthene	NELAP	PA	05/14/2018
EPA 625.1		Benzoic acid	NELAP	PA	05/14/2018
EPA 625.1		Benzyl alcohol	NELAP	PA	05/14/2018
EPA 625.1		Butyl benzyl phthalate (Benzyl butyl phthalate)	NELAP	PA	05/14/2018
EPA 625.1		Carbazole	NELAP	PA	05/14/2018
EPA 625.1		Chrysene (Benzo[a]phenanthrene)	NELAP	PA	05/14/2018
EPA 625.1		Di-n-butyl phthalate	NELAP	PA	05/14/2018
EPA 625.1		Di-n-octyl phthalate	NELAP	PA	05/14/2018

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Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 625.1		Dibenzo[a,h]anthracene	NELAP	PA	05/14/2018
EPA 625.1		Dibenzofuran	NELAP	PA	05/14/2018
EPA 625.1		Diethyl phthalate	NELAP	PA	05/14/2018
EPA 625.1		Dimethyl phthalate	NELAP	PA	05/14/2018
EPA 625.1		Diphenyl ether	NELAP	PA	05/14/2018
EPA 625.1		Fluoranthene	NELAP	PA	05/14/2018
EPA 625.1		Fluorene	NELAP	PA	05/14/2018
EPA 625.1		Hexachlorobenzene	NELAP	PA	05/14/2018
EPA 625.1		Hexachlorobutadiene (1,3-Hexachlorobutadiene)	NELAP	PA	05/14/2018
EPA 625.1		Hexachlorocyclopentadiene	NELAP	PA	05/14/2018
EPA 625.1		Hexachloroethane	NELAP	PA	05/14/2018
EPA 625.1		Indeno(1,2,3-cd)pyrene	NELAP	PA	05/14/2018
EPA 625.1		Isophorone	NELAP	PA	05/14/2018
EPA 625.1		N-Nitrosodi-n-butylamine	NELAP	PA	05/14/2018
EPA 625.1		N-Nitrosodi-n-propylamine	NELAP	PA	05/14/2018
EPA 625.1		N-Nitrosodiethylamine	NELAP	PA	05/14/2018
EPA 625.1		N-Nitrosodimethylamine	NELAP	PA	05/14/2018
EPA 625.1		N-Nitrosodiphenylamine	NELAP	PA	05/14/2018
EPA 625.1		N-Nitrosopyrrolidine	NELAP	PA	05/14/2018
EPA 625.1		Naphthalene	NELAP	PA	05/14/2018
EPA 625.1		Nitrobenzene	NELAP	PA	05/14/2018
EPA 625.1		Pentachlorobenzene	NELAP	PA	05/14/2018
EPA 625.1		Pentachlorophenol (PCP)	NELAP	PA	05/14/2018
EPA 625.1		Phenanthrene	NELAP	PA	05/14/2018
EPA 625.1		Phenol	NELAP	PA	05/14/2018
EPA 625.1		Pyrene	NELAP	PA	05/14/2018
EPA 625.1		Pyridine	NELAP	PA	05/14/2018
EPA 625.1		alpha-Terpineol	NELAP	PA	05/14/2018
EPA 625.1		bis(2-Chloroethoxy)methane	NELAP	PA	05/14/2018
EPA 625.1		bis(2-Chloroethyl) ether	NELAP	PA	05/14/2018
EPA 625.1		bis(2-Chloroisopropyl)ether	NELAP	PA	07/16/2018
EPA 625.1		bis(2-Ethylhexyl) phthalate (DEHP)	NELAP	PA	05/14/2018
EPA 625.1		n-Decane	NELAP	PA	05/14/2018
EPA 625.1		n-Docosane	NELAP	PA	05/14/2018
EPA 625.1		n-Eicosane	NELAP	PA	05/14/2018
EPA 625.1		n-Hexadecane	NELAP	PA	05/14/2018
EPA 625.1		n-Octadecane	NELAP	PA	05/14/2018
EPA 625.1		n-Tetradecane	NELAP	PA	05/14/2018
EPA 625.1		o-Toluidine (2-Toluidine, 2-Methylaniline)	NELAP	PA	05/14/2018
EPA 625.1 SIM		1,4-Dioxane (1,4-Diethyleneoxide)	NELAP	PA	09/24/2020
EPA 625.1 SIM		1-Methylnaphthalene	NELAP	PA	09/24/2020
EPA 625.1 SIM		2-Methylnaphthalene	NELAP	PA	09/24/2020

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 625.1 SIM		Acenaphthene	NELAP	PA	09/24/2020
EPA 625.1 SIM		Acenaphthylene	NELAP	PA	09/24/2020
EPA 625.1 SIM		Anthracene	NELAP	PA	09/24/2020
EPA 625.1 SIM		Benzo[a]anthracene	NELAP	PA	09/24/2020
EPA 625.1 SIM		Benzo[a]pyrene	NELAP	PA	09/24/2020
EPA 625.1 SIM		Benzo[b]fluoranthene	NELAP	PA	09/24/2020
EPA 625.1 SIM		Benzo[e]pyrene	NELAP	PA	09/24/2020
EPA 625.1 SIM		Benzo[ghi]perylene	NELAP	PA	09/24/2020
EPA 625.1 SIM		Benzo[k]fluoranthene	NELAP	PA	09/24/2020
EPA 625.1 SIM		Butyl benzyl phthalate (Benzyl butyl phthalate)	NELAP	PA	09/24/2020
EPA 625.1 SIM		Chrysene (Benzo[a]phenanthrene)	NELAP	PA	09/24/2020
EPA 625.1 SIM		Di-n-butyl phthalate	NELAP	PA	09/24/2020
EPA 625.1 SIM		Di-n-octyl phthalate	NELAP	PA	09/24/2020
EPA 625.1 SIM		Dibenzo[a,h]anthracene	NELAP	PA	09/24/2020
EPA 625.1 SIM		Dibenzofuran	NELAP	PA	09/24/2020
EPA 625.1 SIM		Diethyl phthalate	NELAP	PA	09/24/2020
EPA 625.1 SIM		Dimethyl phthalate	NELAP	PA	09/24/2020
EPA 625.1 SIM		Diphenylamine	NELAP	PA	09/24/2020
EPA 625.1 SIM		Fluoranthene	NELAP	PA	09/24/2020
EPA 625.1 SIM		Fluorene	NELAP	PA	09/24/2020
EPA 625.1 SIM		Hexachlorobenzene	NELAP	PA	09/24/2020
EPA 625.1 SIM		Indeno(1,2,3-cd)pyrene	NELAP	PA	09/24/2020
EPA 625.1 SIM		N-Nitrosodimethylamine	NELAP	PA	09/24/2020
EPA 625.1 SIM		N-Nitrosodiphenylamine	NELAP	PA	09/24/2020
EPA 625.1 SIM		Naphthalene	NELAP	PA	09/24/2020
EPA 625.1 SIM		Perylene	NELAP	PA	09/24/2020
EPA 625.1 SIM		Phenanthrene	NELAP	PA	09/24/2020
EPA 625.1 SIM		Pyrene	NELAP	PA	09/24/2020
EPA 625.1 SIM		Quinoline	NELAP	PA	09/24/2020
EPA 625.1 SIM		bis(2-Chloroethyl) ether	NELAP	PA	09/24/2020
EPA 625.1 SIM		bis(2-Ethylhexyl) phthalate (DEHP)	NELAP	PA	09/24/2020
EPA 680		Decachlorobiphenyl	NELAP	PA	01/19/2016
EPA 680		Dichlorobiphenyls	NELAP	PA	01/19/2016
EPA 680		Heptachlorobiphenyls	NELAP	PA	01/19/2016
EPA 680		Hexachlorbiphenyls	NELAP	PA	01/19/2016
EPA 680		Monochlorobiphenyls	NELAP	PA	01/19/2016
EPA 680		Nonachlorobiphenyls	NELAP	PA	01/19/2016
EPA 680		Octachlorobiphenyls	NELAP	PA	01/19/2016
EPA 680		Pentachlorobiphenyls	NELAP	PA	01/19/2016
EPA 680		Tetrachlorobiphenyls	NELAP	PA	01/19/2016
EPA 680		Trichlorobiphenyls	NELAP	PA	01/19/2016
EPA 6850		Perchlorate	NELAP	PA	01/19/2011

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 7196	A	Chromium VI	NELAP	PA	04/06/2006
EPA 7199		Chromium VI	NELAP	PA	01/04/2006
EPA 7470	A	Mercury	NELAP	PA	11/21/2005
EPA 8011		1,2-Dibromo-3-chloropropane (DBCP, Dibromochloropropane)	NELAP	PA	05/02/2006
EPA 8011		1,2-Dibromoethane (EDB, Ethylene dibromide)	NELAP	PA	12/12/2005
EPA 8015	B, C	Nonhalogenated organics by GC/FID	NELAP	PA	03/26/2012
EPA 8015	D	Nonhalogenated organics by GC/FID	NELAP	PA	07/29/2015
EPA 8015	B, C, D	Diesel-range organics (DRO)	NELAP	PA	12/12/2005
EPA 8015	B, C, D	Diethylene glycol	NELAP	PA	01/20/2012
EPA 8015	B, C, D	Ethane	NELAP	PA	12/04/2007
EPA 8015	B, C, D	Ethanol	NELAP	PA	12/04/2007
EPA 8015	B, C, D	Ethene	NELAP	PA	12/04/2007
EPA 8015	B, C, D	Ethylene glycol	NELAP	PA	12/04/2007
EPA 8015	B, C, D	Gasoline-range organics (GRO)	NELAP	PA	12/12/2005
EPA 8015	B, C, D	Isobutyl alcohol (2-Methyl-1-propanol)	NELAP	PA	02/07/2012
EPA 8015	B, C, D	Isopropyl alcohol (2-Propanol)	NELAP	PA	12/04/2007
EPA 8015	B, C, D	Methane	NELAP	PA	12/04/2007
EPA 8015	B, C, D	Methanol	NELAP	PA	12/04/2007
EPA 8015	B, C, D	Propane	NELAP	PA	12/04/2007
EPA 8015	B, C, D	Propylene glycol	NELAP	PA	01/20/2012
EPA 8015	B, C, D	Total petroleum hydrocarbons (TPH)	NELAP	PA	01/24/2007
EPA 8015	B, C, D	Triethylene glycol	NELAP	PA	01/20/2012
EPA 8015	B, C, D	n-Butyl alcohol (n-Butanol, 1-Butanol)	NELAP	PA	02/07/2012
EPA 8015	B, C, D	n-Propanol (1-Propanol)	NELAP	PA	02/07/2012
EPA 8081	A	Organochlorine pesticides by GC/ECD	NELAP	PA	03/26/2012
EPA 8081	B	Organochlorine pesticides by GC/ECD	NELAP	PA	01/01/2013
EPA 8081	A, B	2,4'-DDD	NELAP	PA	11/19/2015
EPA 8081	A, B	2,4'-DDE	NELAP	PA	11/19/2015
EPA 8081	A, B	2,4'-DDT	NELAP	PA	11/19/2015
EPA 8081	A, B	4,4'-DDD	NELAP	PA	02/10/2006
EPA 8081	A, B	4,4'-DDE	NELAP	PA	12/12/2005
EPA 8081	A, B	4,4'-DDT	NELAP	PA	12/12/2005
EPA 8081	A, B	Aldrin (HHDN)	NELAP	PA	12/12/2005
EPA 8081	A, B	Chlordane (tech.)	NELAP	PA	12/12/2005
EPA 8081	A, B	Dieldrin	NELAP	PA	12/12/2005
EPA 8081	A, B	Endosulfan I	NELAP	PA	02/10/2006
EPA 8081	A, B	Endosulfan II	NELAP	PA	12/12/2005
EPA 8081	A, B	Endosulfan sulfate	NELAP	PA	12/12/2005
EPA 8081	A, B	Endrin	NELAP	PA	12/12/2005
EPA 8081	A, B	Endrin aldehyde	NELAP	PA	12/12/2005
EPA 8081	A, B	Endrin ketone	NELAP	PA	02/10/2006

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8081	A, B	Heptachlor	NELAP	PA	12/12/2005
EPA 8081	A, B	Heptachlor epoxide	NELAP	PA	12/12/2005
EPA 8081	A, B	Kepone	NELAP	PA	05/02/2006
EPA 8081	A, B	Methoxychlor	NELAP	PA	12/12/2005
EPA 8081	A, B	Mirex	NELAP	PA	12/12/2005
EPA 8081	A, B	Toxaphene (Chlorinated camphene)	NELAP	PA	12/12/2005
EPA 8081	A, B	alpha-BHC (alpha-Hexachlorocyclohexane)	NELAP	PA	02/10/2006
EPA 8081	A, B	alpha-Chlordane	NELAP	PA	02/10/2006
EPA 8081	A, B	beta-BHC (beta-Hexachlorocyclohexane)	NELAP	PA	02/10/2006
EPA 8081	A, B	delta-BHC (delta-Hexachlorocyclohexane)	NELAP	PA	02/10/2006
EPA 8081	A, B	gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	NELAP	PA	02/10/2006
EPA 8081	A, B	gamma-Chlordane	NELAP	PA	02/10/2006
EPA 8082	A	PCBs by GC/ECD	NELAP	PA	03/26/2012
EPA 8082		PCBs by GC/ECD	NELAP	PA	12/11/2006
EPA 8082	A	Aroclor-1016 (PCB-1016)	NELAP	PA	12/11/2006
EPA 8082	A	Aroclor-1221 (PCB-1221)	NELAP	PA	12/11/2006
EPA 8082	A	Aroclor-1232 (PCB-1232)	NELAP	PA	12/11/2006
EPA 8082	A	Aroclor-1242 (PCB-1242)	NELAP	PA	12/11/2006
EPA 8082	A	Aroclor-1248 (PCB-1248)	NELAP	PA	12/11/2006
EPA 8082	A	Aroclor-1254 (PCB-1254)	NELAP	PA	12/11/2006
EPA 8082	A	Aroclor-1260 (PCB-1260)	NELAP	PA	12/11/2006
EPA 8082	A	Aroclor-1262 (PCB-1262)	NELAP	PA	07/23/2008
EPA 8082	A	Aroclor-1268 (PCB-1268)	NELAP	PA	07/23/2008
EPA 8082	A	Decachlorobiphenyl	NELAP	PA	12/17/2012
EPA 8151	A	Chlorinated herbicides by GC/ECD	NELAP	PA	03/26/2012
EPA 8151	A	2,4,5-T	NELAP	PA	12/12/2005
EPA 8151	A	2,4,5-TP (Silvex)	NELAP	PA	12/12/2005
EPA 8151	A	2,4-D	NELAP	PA	12/12/2005
EPA 8151	A	2,4-DB (Butoxon)	NELAP	PA	12/12/2005
EPA 8151	A	Dalapon (2,2-Dichloropropionic acid)	NELAP	PA	12/12/2005
EPA 8151	A	Dicamba	NELAP	PA	12/12/2005
EPA 8151	A	Dichloroprop (Dichlorprop)	NELAP	PA	01/24/2007
EPA 8151	A	Dinoseb (2-sec-Butyl-4,6-dinitrophenol, DNBP)	NELAP	PA	12/12/2005
EPA 8151	A	MCPA	NELAP	PA	12/12/2005
EPA 8151	A	MCPP (Mecoprop)	NELAP	PA	12/12/2005
EPA 8151	A	Pentachlorophenol (PCP)	NELAP	PA	12/12/2005
EPA 8151	A	Picloram (4-Amino-3,5,6-trichloro-2-pyridinecarboxylic acid)	NELAP	PA	12/12/2005
EPA 8260	B, C	VOCs by GC/MS	NELAP	PA	03/26/2012
EPA 8260	D	VOCs by GC/MS	NELAP	PA	11/04/2019
EPA 8260	B, C	1,3-Dichloro-2-butene	NELAP	PA	01/19/2016

Annmarie Beach

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Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8260	B, C	3,3'-Dimethyl-1-butanol	NELAP	PA	04/17/2009
EPA 8260	B, C	Crotonaldehyde	NELAP	PA	10/30/2014
EPA 8260	B, C	Cyclohexanone	NELAP	PA	06/07/2012
EPA 8260	B, C	Dimethyl ether	NELAP	PA	06/07/2012
EPA 8260	B, C	Epichlorohydrin (1-Chloro-2,3-epoxypropane)	NELAP	PA	04/17/2009
EPA 8260	B, C	Ethylene oxide	NELAP	PA	10/30/2014
EPA 8260	B, C	Gasoline-range organics (GRO)	NELAP	PA	06/08/2006
EPA 8260	B, C	n-Propylamine	NELAP	PA	12/12/2005
EPA 8260	B, C	tert-Amyl alcohol (2-Methyl-2-butanol)	NELAP	PA	04/17/2009
EPA 8260	B, C	tert-Butyl formate	NELAP	PA	04/17/2009
EPA 8260	B, C, D	1,1,1,2-Tetrachloroethane	NELAP	PA	12/12/2005
EPA 8260	B, C, D	1,1,1-Trichloroethane	NELAP	PA	12/12/2005
EPA 8260	B, C, D	1,1,2,2-Tetrachloroethane	NELAP	PA	12/12/2005
EPA 8260	B, C, D	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NELAP	PA	12/12/2005
EPA 8260	B, C, D	1,1,2-Trichloroethane	NELAP	PA	12/12/2005
EPA 8260	B, C, D	1,1-Dichloroethane	NELAP	PA	12/12/2005
EPA 8260	B, C, D	1,1-Dichloroethene (1,1-Dichloroethylene)	NELAP	PA	12/12/2005
EPA 8260	B, C, D	1,1-Dichloropropene	NELAP	PA	12/12/2005
EPA 8260	B, C, D	1,2,3-Trichlorobenzene	NELAP	PA	12/12/2005
EPA 8260	B, C, D	1,2,3-Trichloropropane (1,2,3-TCP)	NELAP	PA	12/12/2005
EPA 8260	B, C, D	1,2,3-Trimethylbenzene	NELAP	PA	01/19/2016
EPA 8260	B, C, D	1,2,4-Trichlorobenzene	NELAP	PA	12/12/2005
EPA 8260	B, C, D	1,2,4-Trimethylbenzene	NELAP	PA	12/12/2005
EPA 8260	B, C, D	1,2-Dibromo-3-chloropropane (DBCP, Dibromochloropropane)	NELAP	PA	12/12/2005
EPA 8260	B, C, D	1,2-Dibromoethane (EDB, Ethylene dibromide)	NELAP	PA	12/12/2005
EPA 8260	B, C, D	1,2-Dichloro-1,1,2-trifluoroethane	NELAP	PA	03/19/2015
EPA 8260	B, C, D	1,2-Dichlorobenzene (o-Dichlorobenzene)	NELAP	PA	12/12/2005
EPA 8260	B, C, D	1,2-Dichloroethane	NELAP	PA	12/12/2005
EPA 8260	B, C, D	1,2-Dichloropropane	NELAP	PA	12/12/2005
EPA 8260	B, C, D	1,2-Diethylbenzene	NELAP	PA	01/19/2016
EPA 8260	B, C, D	1,3,5-Trichlorobenzene	NELAP	PA	01/19/2016
EPA 8260	B, C, D	1,3,5-Trimethylbenzene	NELAP	PA	12/12/2005
EPA 8260	B, C, D	1,3-Butadiene (Divinyl)	NELAP	PA	01/19/2016
EPA 8260	B, C, D	1,3-Dichlorobenzene (m-Dichlorobenzene)	NELAP	PA	12/12/2005
EPA 8260	B, C, D	1,3-Dichloropropane	NELAP	PA	12/12/2005
EPA 8260	B, C, D	1,3-Diethylbenzene	NELAP	PA	01/19/2016
EPA 8260	B, C, D	1,4-Dichlorobenzene (p-Dichlorobenzene)	NELAP	PA	12/12/2005
EPA 8260	B, C, D	1,4-Dioxane (1,4-Diethyleneoxide)	NELAP	PA	12/12/2005
EPA 8260	B, C, D	2,2-Dichloropropane	NELAP	PA	05/02/2006
EPA 8260	B, C, D	2-Butanone (Methyl ethyl ketone, MEK)	NELAP	PA	05/02/2006
EPA 8260	B, C, D	2-Chloroethyl vinyl ether	NELAP	PA	12/12/2005

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Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8260	B, C, D	2-Chlorotoluene	NELAP	PA	12/12/2005
EPA 8260	B, C, D	2-Hexanone	NELAP	PA	12/12/2005
EPA 8260	B, C, D	2-Nitropropane	NELAP	PA	01/19/2011
EPA 8260	B, C, D	4-Chlorotoluene	NELAP	PA	12/12/2005
EPA 8260	B, C, D	4-Methyl-2-pentanone (MIBK)	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Acetone	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Acetonitrile	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Acrolein (Propenal)	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Acrylonitrile	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Allyl chloride (3-Chloropropene)	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Benzene	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Benzyl chloride	NELAP	PA	07/03/2007
EPA 8260	B, C, D	Bromobenzene	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Bromochloromethane	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Bromodichloromethane	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Bromoform	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Carbon disulfide	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Carbon tetrachloride	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Chlorobenzene	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Chloroethane	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Chloroform	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Chloroprene (2-Chloro-1,3-butadiene)	NELAP	PA	07/03/2007
EPA 8260	B, C, D	Cyclohexane	NELAP	PA	07/03/2007
EPA 8260	B, C, D	Dibromochloromethane	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Dibromomethane	NELAP	PA	05/02/2006
EPA 8260	B, C, D	Dichlorodifluoromethane (Freon 12)	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Diethyl ether (Ethyl ether)	NELAP	PA	02/01/2011
EPA 8260	B, C, D	Diisopropyl ether (DIPE)	NELAP	PA	07/03/2007
EPA 8260	B, C, D	Ethanol	NELAP	PA	01/24/2007
EPA 8260	B, C, D	Ethyl acetate	NELAP	PA	01/24/2007
EPA 8260	B, C, D	Ethyl methacrylate	NELAP	PA	01/24/2007
EPA 8260	B, C, D	Ethyl tert-butyl ether (ETBE)	NELAP	PA	01/24/2007
EPA 8260	B, C, D	Ethylbenzene	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Freon 113 (1,1,2-Trichloro-1,2,2-trifluoroethane)	NELAP	PA	03/04/2015
EPA 8260	B, C, D	Heptane	NELAP	PA	01/20/2012
EPA 8260	B, C, D	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Isobutyl alcohol (2-Methyl-1-propanol)	NELAP	PA	07/03/2007
EPA 8260	B, C, D	Isopropyl alcohol (2-Propanol)	NELAP	PA	01/18/2011
EPA 8260	B, C, D	Isopropylbenzene (Cumene)	NELAP	PA	05/02/2006
EPA 8260	B, C, D	Methacrylonitrile	NELAP	PA	07/03/2007
EPA 8260	B, C, D	Methyl acetate	NELAP	PA	01/24/2007
EPA 8260	B, C, D	Methyl bromide (Bromomethane)	NELAP	PA	12/12/2005

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Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8260	B, C, D	Methyl chloride (Chloromethane)	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Methyl iodide (Iodomethane)	NELAP	PA	05/25/2007
EPA 8260	B, C, D	Methyl tert-butyl ether (MTBE)	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Methylcyclohexane	NELAP	PA	01/21/2009
EPA 8260	B, C, D	Methylene chloride (Dichloromethane)	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Methylmethacrylate	NELAP	PA	05/25/2007
EPA 8260	B, C, D	Naphthalene	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Pentachloroethane	NELAP	PA	01/24/2007
EPA 8260	B, C, D	Propionitrile (Ethyl cyanide)	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Styrene	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Tetrachloroethene (PCE, Perchloroethylene)	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Tetrahydrofuran (THF)	NELAP	PA	01/18/2011
EPA 8260	B, C, D	Toluene	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Trichloroethene (TCE, Trichloroethylene)	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Trichlorofluoromethane (Freon 11)	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Vinyl acetate	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Vinyl chloride (Chloroethene)	NELAP	PA	12/12/2005
EPA 8260	B, C, D	Xylenes, total	NELAP	PA	12/12/2005
EPA 8260	B, C, D	cis-1,2-Dichloroethene	NELAP	PA	12/12/2005
EPA 8260	B, C, D	cis-1,3-Dichloropropene	NELAP	PA	12/12/2005
EPA 8260	B, C, D	m+p-Xylene	NELAP	PA	04/17/2009
EPA 8260	B, C, D	n-Butyl acetate	NELAP	PA	01/19/2016
EPA 8260	B, C, D	n-Butyl alcohol (n-Butanol, 1-Butanol)	NELAP	PA	04/17/2009
EPA 8260	B, C, D	n-Butylbenzene	NELAP	PA	12/12/2005
EPA 8260	B, C, D	n-Hexane	NELAP	PA	01/20/2012
EPA 8260	B, C, D	n-Propylbenzene	NELAP	PA	01/24/2007
EPA 8260	B, C, D	o-Xylene	NELAP	PA	04/17/2009
EPA 8260	B, C, D	p-Isopropyltoluene (4-Isopropyltoluene)	NELAP	PA	01/24/2007
EPA 8260	B, C, D	sec-Butylbenzene	NELAP	PA	12/12/2005
EPA 8260	B, C, D	tert-Amyl methyl ether (TAME)	NELAP	PA	01/24/2007
EPA 8260	B, C, D	tert-Butyl alcohol (2-Methyl-2-propanol)	NELAP	PA	12/12/2005
EPA 8260	B, C, D	tert-Butylbenzene	NELAP	PA	12/12/2005
EPA 8260	B, C, D	trans-1,2-Dichloroethene	NELAP	PA	12/12/2005
EPA 8260	B, C, D	trans-1,3-Dichloropropene	NELAP	PA	12/12/2005
EPA 8260	B, C, D	trans-1,4-Dichloro-2-butene	NELAP	PA	07/03/2007
EPA 8260 SIM	D	VOCs by GC/MS	NELAP	PA	09/29/2020
EPA 8260 SIM	B, C, D	1,4-Dioxane (1,4-Diethyleneoxide)	NELAP	PA	12/04/2007
EPA 8270	C, D	SOCs by GC/MS	NELAP	PA	03/26/2012
EPA 8270	E	SOCs by GC/MS	NELAP	PA	06/25/2020
EPA 8270	C, D	1,2,3,4-Tetrachlorobenzene	NELAP	PA	07/03/2007
EPA 8270	C, D	1,2,3,4-Tetrahydronaphthalene	NELAP	PA	04/17/2009
EPA 8270	C, D	1,2,3,5-Tetrachlorobenzene	NELAP	PA	07/03/2007

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Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8270	C, D	1,3,5-Trinitrobenzene (1,3,5-TNB)	NELAP	PA	12/12/2005
EPA 8270	C, D	1,4-Phenylenediamine	NELAP	PA	12/12/2005
EPA 8270	C, D	2-Butoxyethanol	NELAP	PA	02/07/2012
EPA 8270	C, D	Aramite	NELAP	PA	12/12/2005
EPA 8270	C, D	Benzenethiol	NELAP	PA	04/17/2009
EPA 8270	C, D	Disulfoton	NELAP	PA	12/12/2005
EPA 8270	C, D	Famphur	NELAP	PA	12/12/2005
EPA 8270	C, D	Kepone	NELAP	PA	12/12/2005
EPA 8270	C, D	Methapyrilene	NELAP	PA	12/12/2005
EPA 8270	C, D	N,N-Dimethylacetamide	NELAP	PA	04/17/2009
EPA 8270	C, D	N,N-Dimethylformamide	NELAP	PA	04/17/2009
EPA 8270	C, D	Phthalic anhydride	NELAP	PA	01/21/2009
EPA 8270	C, D	Tetraethyl lead	NELAP	PA	03/07/2012
EPA 8270	C, D	a,a-Dimethylphenethylamine (Phentermine)	NELAP	PA	12/12/2005
EPA 8270	C, D	a-Methylstyrene	NELAP	PA	04/17/2009
EPA 8270	C, D	bis(2-Chloromethyl) ether	NELAP	PA	01/21/2009
EPA 8270	C, D	tris-(2,3-Dibromopropyl) phosphate (tris-BP)	NELAP	PA	04/17/2009
EPA 8270	C, D, E	1,1'-Biphenyl (Biphenyl, Lemonene)	NELAP	PA	04/17/2009
EPA 8270	C, D, E	1,2,4,5-Tetrachlorobenzene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	1,2,4-Trichlorobenzene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	1,2-Dichlorobenzene (o-Dichlorobenzene)	NELAP	PA	12/12/2005
EPA 8270	C, D, E	1,2-Diphenylhydrazine	NELAP	PA	12/12/2005
EPA 8270	C, D, E	1,3-Dichlorobenzene (m-Dichlorobenzene)	NELAP	PA	12/12/2005
EPA 8270	C, D, E	1,3-Dinitrobenzene (1,3-DNB)	NELAP	PA	12/12/2005
EPA 8270	C, D, E	1,4-Dichlorobenzene (p-Dichlorobenzene)	NELAP	PA	12/12/2005
EPA 8270	C, D, E	1,4-Dinitrobenzene (1,4-DNB)	NELAP	PA	04/17/2009
EPA 8270	C, D, E	1,4-Dioxane (1,4-Diethyleneoxide)	NELAP	PA	04/17/2009
EPA 8270	C, D, E	1,4-Naphthoquinone	NELAP	PA	12/12/2005
EPA 8270	C, D, E	1-Chloronaphthalene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	1-Methylnaphthalene	NELAP	PA	04/17/2009
EPA 8270	C, D, E	1-Naphthylamine (alpha-Naphthylamine)	NELAP	PA	12/12/2005
EPA 8270	C, D, E	2,2'-Oxybis(1-chloropropane) (bis(2-Chloro-1-methylethyl) ether)	NELAP	PA	01/19/2011
EPA 8270	C, D, E	2,2'-oxybis(1-Chloropropane)	NELAP	PA	12/12/2005
EPA 8270	C, D, E	2,3,4,6-Tetrachlorophenol	NELAP	PA	12/12/2005
EPA 8270	C, D, E	2,4,5-Trichlorophenol	NELAP	PA	12/12/2005
EPA 8270	C, D, E	2,4,6-Trichlorophenol	NELAP	PA	12/12/2005
EPA 8270	C, D, E	2,4-Dichlorophenol	NELAP	PA	12/12/2005
EPA 8270	C, D, E	2,4-Dimethylphenol	NELAP	PA	12/12/2005
EPA 8270	C, D, E	2,4-Dinitrophenol	NELAP	PA	12/12/2005
EPA 8270	C, D, E	2,4-Dinitrotoluene (2,4-DNT)	NELAP	PA	12/12/2005
EPA 8270	C, D, E	2,6-Dichlorophenol	NELAP	PA	12/12/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8270	C, D, E	2,6-Dinitrotoluene (2,6-DNT)	NELAP	PA	12/12/2005
EPA 8270	C, D, E	2-Acetylaminofluorene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	2-Chloronaphthalene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	2-Chlorophenol	NELAP	PA	12/12/2005
EPA 8270	C, D, E	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	NELAP	PA	12/12/2005
EPA 8270	C, D, E	2-Methylnaphthalene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	2-Methylphenol (o-Cresol)	NELAP	PA	12/12/2005
EPA 8270	C, D, E	2-Naphthylamine (beta-Naphthylamine)	NELAP	PA	12/12/2005
EPA 8270	C, D, E	2-Nitroaniline	NELAP	PA	12/12/2005
EPA 8270	C, D, E	2-Nitrophenol	NELAP	PA	12/12/2005
EPA 8270	C, D, E	2-Picoline (2-Methylpyridine)	NELAP	PA	05/02/2006
EPA 8270	C, D, E	3+4-Methylphenol (m+p-Cresol)	NELAP	PA	12/12/2005
EPA 8270	C, D, E	3,3'-Dichlorobenzidine	NELAP	PA	12/12/2005
EPA 8270	C, D, E	3,3'-Dimethylbenzidine	NELAP	PA	07/03/2007
EPA 8270	C, D, E	3-Methylcholanthrene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	3-Nitroaniline	NELAP	PA	12/12/2005
EPA 8270	C, D, E	4,4'-Methylenebis(2-chloroaniline)	NELAP	PA	12/12/2005
EPA 8270	C, D, E	4-Aminobiphenyl	NELAP	PA	12/12/2005
EPA 8270	C, D, E	4-Bromophenyl phenyl ether	NELAP	PA	12/12/2005
EPA 8270	C, D, E	4-Chloro-3-methylphenol	NELAP	PA	12/12/2005
EPA 8270	C, D, E	4-Chloroaniline	NELAP	PA	12/12/2005
EPA 8270	C, D, E	4-Chlorophenyl phenyl ether	NELAP	PA	12/12/2005
EPA 8270	C, D, E	4-Nitroaniline	NELAP	PA	12/12/2005
EPA 8270	C, D, E	4-Nitrophenol	NELAP	PA	12/12/2005
EPA 8270	C, D, E	4-Nitroquinoline-1-oxide	NELAP	PA	07/03/2007
EPA 8270	C, D, E	5-Nitro-o-toluidine	NELAP	PA	12/12/2005
EPA 8270	C, D, E	6-Methylchrysene	NELAP	PA	01/19/2011
EPA 8270	C, D, E	7,12-Dimethylbenz(a)anthracene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Acenaphthene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Acenaphthylene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Acetophenone	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Aniline	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Anthracene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Atrazine	NELAP	PA	01/22/2007
EPA 8270	C, D, E	Benzaldehyde	NELAP	PA	04/17/2009
EPA 8270	C, D, E	Benzidine	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Benzo[a]anthracene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Benzo[a]pyrene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Benzo[b]fluoranthene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Benzo[ghi]perylene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Benzo[k]fluoranthene	NELAP	PA	12/12/2005

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8270	C, D, E	Benzoic acid	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Benzyl alcohol	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Butyl benzyl phthalate (Benzyl butyl phthalate)	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Caprolactam	NELAP	PA	04/17/2009
EPA 8270	C, D, E	Carbazole	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Chlorobenzilate	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Chrysene (Benzo[a]phenanthrene)	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Di-n-butyl phthalate	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Di-n-octyl phthalate	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Diallate (cis or trans)	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Dibenz[a,h]acridine	NELAP	PA	04/17/2009
EPA 8270	C, D, E	Dibenz[a,j]acridine	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Dibenzo[a,h]anthracene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Dibenzofuran	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Diethyl phthalate	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Dimethoate	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Dimethyl phthalate	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Dimethylaminoazobenzene (4-Dimethylaminoazobenzene)	NELAP	PA	05/02/2006
EPA 8270	C, D, E	Dinoseb (2-sec-Butyl-4,6-dinitrophenol, DNBP)	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Diphenylamine	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Ethyl methanesulfonate	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Fluoranthene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Fluorene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Hexachlorobenzene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Hexachlorocyclopentadiene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Hexachloroethane	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Hexachloropropene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Indene	NELAP	PA	04/17/2009
EPA 8270	C, D, E	Indeno(1,2,3-cd)pyrene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Isodrin	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Isophorone	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Isosafrole	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Methyl methanesulfonate	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Methyl parathion (Parathion, methyl)	NELAP	PA	05/25/2007
EPA 8270	C, D, E	N-Nitrosodi-n-butylamine	NELAP	PA	12/12/2005
EPA 8270	C, D, E	N-Nitrosodi-n-propylamine	NELAP	PA	12/12/2005
EPA 8270	C, D, E	N-Nitrosodiethylamine	NELAP	PA	12/12/2005
EPA 8270	C, D, E	N-Nitrosodimethylamine	NELAP	PA	12/12/2005
EPA 8270	C, D, E	N-Nitrosodiphenylamine	NELAP	PA	12/12/2005
EPA 8270	C, D, E	N-Nitrosomethylethylamine	NELAP	PA	12/12/2005

Annmarie Beach

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Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8270	C, D, E	N-Nitrosomorpholine	NELAP	PA	12/12/2005
EPA 8270	C, D, E	N-Nitrosopiperidine	NELAP	PA	12/12/2005
EPA 8270	C, D, E	N-Nitrosopyrrolidine	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Naphthalene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Nitrobenzene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	O,O,O-Triethyl phosphorothioate	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Parathion, ethyl (Ethyl parathion, Parathion)	NELAP	PA	05/25/2007
EPA 8270	C, D, E	Pentachlorobenzene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Pentachloronitrobenzene (PCNB)	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Pentachlorophenol (PCP)	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Phenacetin	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Phenanthrene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Phenol	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Phorate (Thimet)	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Pronamide (Kerb)	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Pyrene	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Pyridine	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Quinoline	NELAP	PA	04/17/2009
EPA 8270	C, D, E	Safrole	NELAP	PA	12/12/2005
EPA 8270	C, D, E	Sulfotepp (Tetraethyl dithiopyrophosphate)	NELAP	PA	04/17/2009
EPA 8270	C, D, E	Thionazine (Thionazin, Zinophos)	NELAP	PA	12/12/2005
EPA 8270	C, D, E	bis(2-Chloroethoxy)methane	NELAP	PA	12/12/2005
EPA 8270	C, D, E	bis(2-Chloroethyl) ether	NELAP	PA	12/12/2005
EPA 8270	C, D, E	bis(2-Ethylhexyl) phthalate (DEHP)	NELAP	PA	12/12/2005
EPA 8270	C, D, E	o-Toluidine (2-Toluidine, 2-Methylaniline)	NELAP	PA	12/12/2005
EPA 8270	C, D, E	p-(Dimethylamino)azobenzene	NELAP	PA	04/17/2009
EPA 8270 SIM	E	SOCs by GC/MS	NELAP	PA	09/29/2020
EPA 8270 SIM	C, D, E	1,4-Dioxane (1,4-Diethyleneoxide)	NELAP	PA	08/01/2018
EPA 8270 SIM	C, D, E	1-Methylnaphthalene	NELAP	PA	07/25/2011
EPA 8270 SIM	C, D, E	2-Methylnaphthalene	NELAP	PA	05/23/2012
EPA 8270 SIM	C, D, E	Acenaphthene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Acenaphthylene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Anthracene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Benzo[a]anthracene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Benzo[a]pyrene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Benzo[b]fluoranthene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Benzo[ghi]perylene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Benzo[k]fluoranthene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Chrysene (Benzo[a]phenanthrene)	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Dibenzo[a,h]anthracene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Fluoranthene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Fluorene	NELAP	PA	12/04/2007

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Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8270 SIM	C, D, E	Indeno(1,2,3-cd)pyrene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Naphthalene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Phenanthrene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Pyrene	NELAP	PA	12/04/2007
EPA 8290	A	PCDDs and PCDFs by HRGC-HRMS	NELAP	PA	03/04/2015
EPA 8290		PCDDs and PCDFs by HRGC-HRMS	NELAP	PA	03/26/2012
EPA 8290	A	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	NELAP	PA	06/30/2010
EPA 8290	A	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	NELAP	PA	06/30/2010
EPA 8290	A	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	NELAP	PA	06/30/2010
EPA 8290	A	1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	NELAP	PA	06/30/2010
EPA 8290	A	1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	NELAP	PA	06/30/2010
EPA 8290	A	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	NELAP	PA	06/30/2010
EPA 8290	A	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	NELAP	PA	08/06/2010
EPA 8290	A	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	NELAP	PA	06/30/2010
EPA 8290	A	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	NELAP	PA	06/30/2010
EPA 8290	A	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	NELAP	PA	06/30/2010
EPA 8290	A	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	NELAP	PA	06/30/2010
EPA 8290	A	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	NELAP	PA	06/30/2010
EPA 8290	A	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	NELAP	PA	06/30/2010
EPA 8290	A	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	NELAP	PA	06/30/2010
EPA 8290	A	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	NELAP	PA	08/06/2010
EPA 8290	A	2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)(Dioxin)	NELAP	PA	06/30/2010
EPA 8290	A	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	NELAP	PA	06/30/2010
EPA 8290	A	Total TCDD	NELAP	PA	06/30/2010
EPA 8290	A	Total TCDF	NELAP	PA	06/30/2010
EPA 8290	A	Total heptachlorodibenzo-p-dioxin (HpCDD)	NELAP	PA	06/30/2010
EPA 8290	A	Total heptachlorodibenzofuran (HpCDF)	NELAP	PA	06/30/2010
EPA 8290	A	Total hexachlorodibenzo-p-dioxin (HxCDD)	NELAP	PA	06/30/2010
EPA 8290	A	Total hexachlorodibenzofuran (HxCDF)	NELAP	PA	06/30/2010
EPA 8290	A	Total pentachlorodibenzo-p-dioxin (PeCDD)	NELAP	PA	06/30/2010
EPA 8290	A	Total pentachlorodibenzofuran (PeCDF)	NELAP	PA	06/30/2010
EPA 8315	A	Carbonyl compounds by HPLC	NELAP	PA	03/26/2012
EPA 8315		Carbonyl compounds by HPLC	NELAP	PA	12/12/2005
EPA 8315	A	2,5-Dimethylbenzaldehyde	NELAP	PA	12/12/2005
EPA 8315	A	Acetaldehyde	NELAP	PA	12/12/2005
EPA 8315	A	Formaldehyde	NELAP	PA	12/12/2005
EPA 8330	B	Nitroaromatics and nitramines by HPLC/UV	NELAP	PA	07/29/2015
EPA 8330	B	1,3,5-Trinitrobenzene (1,3,5-TNB)	NELAP	PA	12/12/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8330	B	1,3-Dinitrobenzene (1,3-DNB)	NELAP	PA	12/12/2005
EPA 8330	B	2,4,6-Trinitrotoluene (2,4,6-TNT)	NELAP	PA	12/12/2005
EPA 8330	B	2,4-Diamino-6-nitrotoluene	NELAP	PA	07/29/2015
EPA 8330	B	2,4-Dinitrotoluene (2,4-DNT)	NELAP	PA	06/11/2007
EPA 8330	B	2,6-Diamino-4-nitrotoluene	NELAP	PA	07/29/2015
EPA 8330	B	2,6-Dinitrotoluene (2,6-DNT)	NELAP	PA	06/11/2007
EPA 8330	B	2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NELAP	PA	12/12/2005
EPA 8330	B	2-Nitrotoluene	NELAP	PA	12/12/2005
EPA 8330	B	3,5-Dinitroaniline	NELAP	PA	07/29/2015
EPA 8330	B	3-Nitrotoluene	NELAP	PA	12/12/2005
EPA 8330	B	4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NELAP	PA	12/12/2005
EPA 8330	B	4-Nitrotoluene	NELAP	PA	12/12/2005
EPA 8330	B	Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	NELAP	PA	12/12/2005
EPA 8330	B	Nitrobenzene	NELAP	PA	06/11/2007
EPA 8330	B	Nitroglycerin	NELAP	PA	01/24/2007
EPA 8330	B	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	NELAP	PA	12/12/2005
EPA 8330	B	Pentaerythritol tetranitrate (PETN)	NELAP	PA	05/02/2006
EPA 8330	B	RDX (Hexahydro-1,3,5-trinitro-1,3,5-triazine)	NELAP	PA	12/12/2005
EPA 9012	A, B	Total cyanide	NELAP	PA	05/24/2011
EPA 9040	C	pH	NELAP	PA	12/12/2005
EPA 9050	A	Conductivity	NELAP	PA	01/27/2014
EPA 9050		Conductivity	NELAP	PA	12/12/2005
EPA 9056	A	Anions by IC	NELAP	PA	03/19/2015
EPA 9056	A	Bromide	NELAP	PA	12/12/2005
EPA 9056	A	Chloride	NELAP	PA	12/12/2005
EPA 9056	A	Fluoride	NELAP	PA	12/12/2005
EPA 9056	A	Nitrate as N	NELAP	PA	12/12/2005
EPA 9056	A	Nitrite as N	NELAP	PA	01/19/2005
EPA 9056	A	Sulfate	NELAP	PA	12/12/2005
EPA 9060	A	Total organic carbon (TOC)	NELAP	PA	12/12/2005
EPA 9066		Total phenolics	NELAP	PA	12/12/2005
HACH 10360	1.2	Oxygen (dissolved)	NELAP	PA	06/01/2020
MA DEP EPH	1.1	C11-C22 Aromatics	NELAP	PA	07/15/2013
MA DEP EPH	1.1	C19-C36 Aliphatics	NELAP	PA	07/15/2013
MA DEP EPH	1.1	C9-C18 Aliphatics	NELAP	PA	07/15/2013
MA DEP VPH	1.1	C5-C8 Aliphatics	NELAP	PA	07/15/2013
MA DEP VPH	1.1	C9-C10 Aromatics	NELAP	PA	07/29/2015
MA DEP VPH	1.1	C9-C12 Aliphatics	NELAP	PA	07/15/2013
MA DEP VPH	2.1	C5-C8 Aliphatics	NELAP	PA	07/16/2018
MA DEP VPH	2.1	C9-C10 Aromatics	NELAP	PA	07/16/2018
MA DEP VPH	2.1	C9-C12 Aliphatics	NELAP	PA	07/16/2018

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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
NWTPH-Dx		Diesel-range organics (DRO)	NELAP	PA	12/12/2005
NWTPH-Gx		Gasoline-range organics (GRO)	NELAP	PA	12/12/2005
OIA 1677-09		Available cyanide	NELAP	PA	10/09/2013
OIA 1677-09		Free cyanide	NELAP	PA	10/09/2013
RSK-175		Acetylene (Ethyne)	NELAP	PA	01/20/2012
RSK-175		Carbon dioxide	NELAP	PA	11/19/2015
RSK-175		Ethane	NELAP	PA	06/29/2010
RSK-175		Ethene	NELAP	PA	06/29/2010
RSK-175		Isobutane (2-Methylpropane)	NELAP	PA	11/19/2015
RSK-175		Methane	NELAP	PA	06/29/2010
RSK-175		Propane	NELAP	PA	06/29/2010
RSK-175		n-Butane	NELAP	PA	12/22/2011
SM 2120 B		Color	NELAP	PA	07/21/2020
SM 2310 B		Acidity as CaCO3	NELAP	PA	03/27/2018
SM 2320 B		Alkalinity as CaCO3	NELAP	PA	01/19/2005
SM 2340 C		Total hardness as CaCO3	NELAP	PA	04/17/2007
SM 2510 B		Conductivity	NELAP	PA	12/12/2005
SM 2540 B		Residue, total	NELAP	PA	04/17/2007
SM 2540 C		Residue, filterable (TDS)	NELAP	PA	04/17/2007
SM 2540 D		Residue, nonfilterable (TSS)	NELAP	PA	04/17/2007
SM 2540 F		Residue, settleable	NELAP	PA	04/17/2007
SM 2550 B		Temperature, deg. C	NELAP	PA	08/30/2019
SM 3500-Cr B	20-22	Chromium VI	NELAP	PA	05/24/2007
SM 3500-Fe B	20-22	Ferrous iron	NELAP	PA	06/15/2009
SM 4500-Cl F		Total residual chlorine	NELAP	PA	01/11/2012
SM 4500-Cl- C		Chloride	NELAP	PA	04/17/2007
SM 4500-F- B		Preliminary distillation of fluoride	NELAP	PA	04/28/2010
SM 4500-F- C		Fluoride	NELAP	PA	01/19/2005
SM 4500-H+ B		pH	NELAP	PA	04/17/2007
SM 4500-NH3 B		Ammonia distillation	NELAP	PA	04/17/2007
SM 4500-NH3 C		Ammonia as N	NELAP	PA	07/05/2018
SM 4500-NH3 D		Ammonia as N	NELAP	PA	04/17/2007
SM 4500-O G		Oxygen (dissolved)	NELAP	PA	04/17/2007
SM 4500-P B		Preliminary treatment of phosphate samples	NELAP	PA	04/28/2010
SM 4500-P E		Orthophosphate as P	NELAP	PA	06/25/2020
SM 4500-P F		Phosphorus, total	NELAP	PA	07/21/2020
SM 4500-S2- D		Sulfide	NELAP	PA	04/17/2007
SM 4500-S2- F		Sulfide	NELAP	PA	04/17/2007
SM 4500-SO3 B		Sulfite, SO3	NELAP	PA	04/17/2007
SM 4500-SiO2 C	20-22	Silica, as SiO2	NELAP	PA	05/25/2007
SM 4500-SiO2 C	20-22	Silica, dissolved	NELAP	PA	05/24/2007
SM 5210 B		Biochemical oxygen demand (BOD)	NELAP	PA	04/04/2005

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DEP Laboratory ID: 36-00037
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PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
SM 5210 B		Carbonaceous BOD (CBOD)	NELAP	PA	05/14/2018
SM 5310 C		Total organic carbon (TOC)	NELAP	PA	05/24/2007
SM 5540 C		Surfactants as MBAS	NELAP	PA	04/17/2007
SOP (00037) T-PFAS-WI14355	13	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	1H, 1H, 2H, 2H-Perfluorododecane sulfonic acid (10:2-FTS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	Hexafluoropropylene oxide dimer acid (HFPO-DA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	N-Ethylperfluorooctanesulfonamide (EtFOSA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	N-Methylperfluorooctanesulfonamide (MeFOSA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	N-ethylperfluoro-1-octanesulfonamido ethanol (N-EtFOSE)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	N-methylperfluoro-1-octanesulfonamido ethanol (N-MeFOSE)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	Perfluorobutanesulfonic acid (PFBS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	Perfluorobutanoic acid (PFBA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	Perfluorodecane sulfonic acid (PFDS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	Perfluorodecanoic acid (PFDA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	Perfluorododecane sulfonic acid (PFDoS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	Perfluorododecanoic acid (PFDoA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	Perfluoroheptanesulfonic acid (PFHpS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	Perfluoroheptanoic acid (PFHpA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	Perfluorohexadecanoic acid (PFHxDA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	Perfluorohexanesulfonic acid (PFHxS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	Perfluorohexanoic acid (PFHxA)	NELAP	PA	11/03/2020

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DEP Laboratory ID: 36-00037
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PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
SOP (00037) T-PFAS-WI14355	13	Perfluorononane sulfonic acid (PFNS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	Perfluorononanoic acid (PFNA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	Perfluorooctadecanoic acid (PFODA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	Perfluorooctane sulfonamide (PFOSA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	Perfluorooctanesulfonic acid (PFOS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	Perfluorooctanoic acid (PFOA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	Perfluoropentane sulfonic acid (PFPeS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	Perfluoropentanoic acid (PFPeA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	Perfluorotetradecanoic acid (PFTA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	Perfluorotridecanoic acid (PFTrDA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	Perfluoroundecanoic acid (PFUnA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NELAP	PA	11/03/2020
TX1005 (TNRCC)		Total petroleum hydrocarbons (TPH)	NELAP	PA	12/12/2005
TX1006 (TNRCC)		Total petroleum hydrocarbons (TPH)	NELAP	PA	12/12/2005
WA-EPH		Diesel-range organics (DRO)	NELAP	PA	12/12/2005
WA-VPH		Gasoline-range organics (GRO)	NELAP	PA	12/12/2005

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
AK-101		Gasoline-range organics (GRO)	NELAP	PA	12/12/2005
AK-102		Diesel-range organics (DRO)	NELAP	PA	12/12/2005
AK-103		Residual-range organics (RRO)	NELAP	PA	03/19/2015
ASTM D3987-12		Shake extraction of solid waste with water	NELAP	PA	08/30/2019
ASTM D3987-85		Shake extraction of solid waste with water	NELAP	PA	07/21/2017
EPA 1010	A	Ignitability	NELAP	PA	11/19/2015
EPA 1010		Ignitability	NELAP	PA	01/19/2005
EPA 1311		Toxicity characteristic leaching procedure (TCLP)	NELAP	PA	12/12/2005
EPA 1312		Synthetic precipitation leaching procedure (SPLP)	NELAP	PA	12/12/2005
EPA 1613	B	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	NELAP	PA	07/05/2018
EPA 1613	B	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	NELAP	PA	07/05/2018

Annmarie Beach

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Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 1613	B	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	NELAP	PA	07/05/2018
EPA 1613	B	1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	NELAP	PA	07/05/2018
EPA 1613	B	1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	NELAP	PA	07/05/2018
EPA 1613	B	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	NELAP	PA	07/05/2018
EPA 1613	B	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	NELAP	PA	07/05/2018
EPA 1613	B	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	NELAP	PA	07/05/2018
EPA 1613	B	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	NELAP	PA	07/05/2018
EPA 1613	B	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	NELAP	PA	07/05/2018
EPA 1613	B	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	NELAP	PA	07/05/2018
EPA 1613	B	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	NELAP	PA	07/05/2018
EPA 1613	B	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	NELAP	PA	07/05/2018
EPA 1613	B	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	NELAP	PA	07/05/2018
EPA 1613	B	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	NELAP	PA	07/05/2018
EPA 1613	B	2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)(Dioxin)	NELAP	PA	07/05/2018
EPA 1613	B	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	NELAP	PA	07/05/2018
EPA 1668	A, C	PCBs as congeners by HRGC/HRMS	NELAP	PA	03/04/2015
EPA 1668	A, C	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ 206)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,4',5,5'-Octachlorobiphenyl (BZ 194)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,4',5,6'-Octachlorobiphenyl (BZ 196)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (BZ 207)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,4',5,6-Octachlorobiphenyl (BZ 195)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ 170)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,4',6,6'-Octachlorobiphenyl (BZ 197)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,4',6-Heptachlorobiphenyl (BZ 171)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,4'-Hexachlorobiphenyl (BZ 128)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,5',6'-Heptachlorobiphenyl (BZ 177)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,5',6,6'-Octachlorobiphenyl (BZ 201)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,5',6-Heptachlorobiphenyl (BZ 175)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,5'-Hexachlorobiphenyl (BZ 130)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,5,5',6'-Octachlorobiphenyl (BZ 199)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (BZ 208)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,5,5',6-Octachlorobiphenyl (BZ 198)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,5,5'-Heptachlorobiphenyl (BZ 172)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,5,6'-Heptachlorobiphenyl (BZ 174)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,5,6,6'-Octachlorobiphenyl (BZ 200)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,5,6-Heptachlorobiphenyl (BZ 173)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,5-Hexachlorobiphenyl (BZ 129)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,6'-Hexachlorobiphenyl (BZ 132)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4,6,6'-Heptachlorobiphenyl (BZ 176)	NELAP	PA	12/17/2012

Annmarie Beach

The Pennsylvania Department of Environmental Protection Laboratory Accreditation Program is a NELAP recognized Accreditation Body. Customers are urged to verify the laboratory's current accreditation standing.

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Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 1668	A, C	2,2',3,3',4,6-Hexachlorobiphenyl (BZ 131)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',4-Pentachlorobiphenyl (BZ 82)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',5,5',6,6'-Octachlorobiphenyl (BZ 202)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',5,5',6-Heptachlorobiphenyl (BZ 178)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',5,5'-Hexachlorobiphenyl (BZ 133)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',5,6'-Hexachlorobiphenyl (BZ 135)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',5,6,6'-Heptachlorobiphenyl (BZ 179)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',5,6-Hexachlorobiphenyl (BZ 134)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',5-Pentachlorobiphenyl (BZ 83)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',6,6'-Hexachlorobiphenyl (BZ 136)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3',6-Pentachlorobiphenyl (BZ 84)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,3'-Tetrachlorobiphenyl (BZ 40)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4',5',6-Hexachlorobiphenyl (BZ 149)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4',5'-Pentachlorobiphenyl (BZ 97)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ 187)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4',5,5'-Hexachlorobiphenyl (BZ 146)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4',5,6'-Hexachlorobiphenyl (BZ 148)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4',5,6,6'-Heptachlorobiphenyl (BZ 188)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4',5,6-Hexachlorobiphenyl (BZ 147)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4',5-Pentachlorobiphenyl (BZ 90)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4',6'-Pentachlorobiphenyl (BZ 98)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4',6,6'-Hexachlorobiphenyl (BZ 150)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4',6-Pentachlorobiphenyl (BZ 91)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4'-Tetrachlorobiphenyl (BZ 42)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,4',5',6-Heptachlorobiphenyl (BZ 183)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,4',5'-Hexachlorobiphenyl (BZ 138)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,4',5,5',6-Octachlorobiphenyl (BZ 203)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,4',5,5'-Heptachlorobiphenyl (BZ 180)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,4',5,6'-Heptachlorobiphenyl (BZ 182)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,4',5,6,6'-Octachlorobiphenyl (BZ 204)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,4',5,6-Heptachlorobiphenyl (BZ 181)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,4',5-Hexachlorobiphenyl (BZ 137)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,4',6'-Hexachlorobiphenyl (BZ 140)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,4',6,6'-Heptachlorobiphenyl (BZ 184)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,4',6-Hexachlorobiphenyl (BZ 139)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,4'-Pentachlorobiphenyl (BZ 85)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,5',6-Hexachlorobiphenyl (BZ 144)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,5'-Pentachlorobiphenyl (BZ 87)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,5,5',6-Heptachlorobiphenyl (BZ 185)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,5,5'-Hexachlorobiphenyl (BZ 141)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,5,6'-Hexachlorobiphenyl (BZ 143)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,5,6,6'-Heptachlorobiphenyl (BZ 186)	NELAP	PA	12/17/2012

Annmarie Beach

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Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 1668	A, C	2,2',3,4,5,6-Hexachlorobiphenyl (BZ 142)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,5-Pentachlorobiphenyl (BZ 86)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,6'-Pentachlorobiphenyl (BZ 89)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,6,6'-Hexachlorobiphenyl (BZ 145)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4,6-Pentachlorobiphenyl (BZ 88)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,4-Tetrachlorobiphenyl (BZ 41)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,5',6-Pentachlorobiphenyl (BZ 95)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,5'-Tetrachlorobiphenyl (BZ 44)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,5,5',6-Hexachlorobiphenyl (BZ 151)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,5,5'-Pentachlorobiphenyl (BZ 92)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,5,6'-Pentachlorobiphenyl (BZ 94)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,5,6,6'-Hexachlorobiphenyl (BZ 152)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,5,6-Pentachlorobiphenyl (BZ 93)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,5-Tetrachlorobiphenyl (BZ 43)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,6'-Tetrachlorobiphenyl (BZ 46)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,6,6'-Pentachlorobiphenyl (BZ 96)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3,6-Tetrachlorobiphenyl (BZ 45)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',3-Trichlorobiphenyl (BZ 16)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4,4',5,5'-Hexachlorobiphenyl (BZ 153)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4,4',5,6'-Hexachlorobiphenyl (BZ 154)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4,4',5-Pentachlorobiphenyl (BZ 99)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4,4',6,6'-Hexachlorobiphenyl (BZ 155)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4,4',6-Pentachlorobiphenyl (BZ 100)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4,4'-Tetrachlorobiphenyl (BZ 47)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4,5',6-Pentachlorobiphenyl (BZ 103)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4,5'-Tetrachlorobiphenyl (BZ 49)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4,5,5'-Pentachlorobiphenyl (BZ 101)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4,5,6'-Pentachlorobiphenyl (BZ 102)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4,5-Tetrachlorobiphenyl (BZ 48)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4,6'-Tetrachlorobiphenyl (BZ 51)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4,6,6'-Pentachlorobiphenyl (BZ 104)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4,6-Tetrachlorobiphenyl (BZ 50)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',4-Trichlorobiphenyl (BZ 17)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',5,5'-Tetrachlorobiphenyl (BZ 52)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',5,6'-Tetrachlorobiphenyl (BZ 53)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',5-Trichlorobiphenyl (BZ 18)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',6,6'-Tetrachlorobiphenyl (BZ 54)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2',6-Trichlorobiphenyl (BZ 19)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,2'-Dichlorobiphenyl (BZ 4)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4',5',6-Pentachlorobiphenyl (BZ 125)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4',5'-Tetrachlorobiphenyl (BZ 76)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4',5,5'-Pentachlorobiphenyl (BZ 124)	NELAP	PA	12/17/2012

Annmarie Beach

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 1668	A, C	2,3',4',5-Tetrachlorobiphenyl (BZ 70)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4',6-Tetrachlorobiphenyl (BZ 71)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4'-Trichlorobiphenyl (BZ 33)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4,4',5',6-Hexachlorobiphenyl (BZ 168)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4,4',5'-Pentachlorobiphenyl (BZ 123)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4,4',5,5'-Hexachlorobiphenyl (BZ 167)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4,4',5-Pentachlorobiphenyl (BZ 118)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4,4',6-Pentachlorobiphenyl (BZ 119)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4,4'-Tetrachlorobiphenyl (BZ 66)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4,5',6-Pentachlorobiphenyl (BZ 121)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4,5'-Tetrachlorobiphenyl (BZ 68)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4,5,5'-Pentachlorobiphenyl (BZ 120)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4,5-Tetrachlorobiphenyl (BZ 67)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4,6-Tetrachlorobiphenyl (BZ 69)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',4-Trichlorobiphenyl (BZ 25)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',5',6-Tetrachlorobiphenyl (BZ 73)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',5'-Trichlorobiphenyl (BZ 34)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',5,5'-Tetrachlorobiphenyl (BZ 72)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',5-Trichlorobiphenyl (BZ 26)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3',6-Trichlorobiphenyl (BZ 27)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3'-Dichlorobiphenyl (BZ 6)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4',5',6-Hexachlorobiphenyl (BZ 164)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4',5'-Pentachlorobiphenyl (BZ 122)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4',5,5',6-Heptachlorobiphenyl (BZ 193)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4',5,5'-Hexachlorobiphenyl (BZ 162)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4',5,6-Hexachlorobiphenyl (BZ 163)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4',5-Pentachlorobiphenyl (BZ 107)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4',6-Pentachlorobiphenyl (BZ 110)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4'-Tetrachlorobiphenyl (BZ 56)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,4',5',6-Heptachlorobiphenyl (BZ 191)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,4',5'-Hexachlorobiphenyl (BZ 157)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,4',5,5',6-Octachlorobiphenyl (BZ 205)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,4',5,5'-Heptachlorobiphenyl (BZ 189)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,4',5,6-Heptachlorobiphenyl (BZ 190)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,4',5-Hexachlorobiphenyl (BZ 156)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,4',6-Hexachlorobiphenyl (BZ 158)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,4'-Pentachlorobiphenyl (BZ 105)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,5',6-Hexachlorobiphenyl (BZ 161)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,5'-Pentachlorobiphenyl (BZ 108)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,5,5',6-Heptachlorobiphenyl (BZ 192)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,5,5'-Hexachlorobiphenyl (BZ 159)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,5,6-Hexachlorobiphenyl (BZ 160)	NELAP	PA	12/17/2012

Annmarie Beach

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Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 1668	A, C	2,3,3',4,5-Pentachlorobiphenyl (BZ 106)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4,6-Pentachlorobiphenyl (BZ 109)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',4-Tetrachlorobiphenyl (BZ 55)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',5',6-Pentachlorobiphenyl (BZ 113)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',5'-Tetrachlorobiphenyl (BZ 58)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',5,5',6-Hexachlorobiphenyl (BZ 165)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',5,5'-Pentachlorobiphenyl (BZ 111)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',5,6-Pentachlorobiphenyl (BZ 112)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',5-Tetrachlorobiphenyl (BZ 57)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3',6-Tetrachlorobiphenyl (BZ 59)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,3'-Trichlorobiphenyl (BZ 20)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,4',5,6-Pentachlorobiphenyl (BZ 117)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,4',5-Tetrachlorobiphenyl (BZ 63)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,4',6-Tetrachlorobiphenyl (BZ 64)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,4'-Trichlorobiphenyl (BZ 22)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,4,4',5,6-Hexachlorobiphenyl (BZ 166)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,4,4',5-Pentachlorobiphenyl (BZ 114)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,4,4',6-Pentachlorobiphenyl (BZ 115)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,4,4'-Tetrachlorobiphenyl (BZ 60)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,4,5,6-Pentachlorobiphenyl (BZ 116)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,4,5-Tetrachlorobiphenyl (BZ 61)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,4,6-Tetrachlorobiphenyl (BZ 62)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,4-Trichlorobiphenyl (BZ 21)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,5,6-Tetrachlorobiphenyl (BZ 65)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,5-Trichlorobiphenyl (BZ 23)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3,6-Trichlorobiphenyl (BZ 24)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,3-Dichlorobiphenyl (BZ 5)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,4',5-Trichlorobiphenyl (BZ 31)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,4',6-Trichlorobiphenyl (BZ 32)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,4'-Dichlorobiphenyl (BZ 8)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,4,4',5-Tetrachlorobiphenyl (BZ 74)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,4,4',6-Tetrachlorobiphenyl (BZ 75)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,4,4'-Trichlorobiphenyl (BZ 28)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,4,5-Trichlorobiphenyl (BZ 29)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,4,6-Trichlorobiphenyl (BZ 30)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,4-Dichlorobiphenyl (BZ 7)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,5-Dichlorobiphenyl (BZ 9)	NELAP	PA	12/17/2012
EPA 1668	A, C	2,6-Dichlorobiphenyl (BZ 10)	NELAP	PA	12/17/2012
EPA 1668	A, C	2-Chlorobiphenyl (BZ 1)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,3',4,4',5,5'-Hexachlorobiphenyl (BZ 169)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,3',4,4',5-Pentachlorobiphenyl (BZ 126)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,3',4,4'-Tetrachlorobiphenyl (BZ 77)	NELAP	PA	12/17/2012

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Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 1668	A, C	3,3',4,5'-Tetrachlorobiphenyl (BZ 79)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,3',4,5,5'-Pentachlorobiphenyl (BZ 127)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,3',4,5-Tetrachlorobiphenyl (BZ 78)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,3',4-Trichlorobiphenyl (BZ 35)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,3',5,5'-Tetrachlorobiphenyl (BZ 80)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,3',5-Trichlorobiphenyl (BZ 36)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,3'-Dichlorobiphenyl (BZ 11)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,4',5-Trichlorobiphenyl (BZ 39)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,4'-Dichlorobiphenyl (BZ 13)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,4,4',5-Tetrachlorobiphenyl (BZ 81)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,4,4'-Trichlorobiphenyl (BZ 37)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,4,5-Trichlorobiphenyl (BZ 38)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,4-Dichlorobiphenyl (BZ 12)	NELAP	PA	12/17/2012
EPA 1668	A, C	3,5-Dichlorobiphenyl (BZ 14)	NELAP	PA	12/17/2012
EPA 1668	A, C	3-Chlorobiphenyl (BZ 2)	NELAP	PA	12/17/2012
EPA 1668	A, C	4,4'-Dichlorobiphenyl (BZ 15)	NELAP	PA	12/17/2012
EPA 1668	A, C	4-Chlorobiphenyl (BZ 3)	NELAP	PA	12/17/2012
EPA 1668	A, C	Decachlorobiphenyl	NELAP	PA	12/17/2012
EPA 300.0	2.1	Bromide	NELAP	PA	03/09/2016
EPA 300.0	2.1	Chloride	NELAP	PA	11/27/2019
EPA 300.0	2.1	Fluoride	NELAP	PA	10/16/2012
EPA 300.0	2.1	Nitrate as N	NELAP	PA	11/27/2019
EPA 300.0	2.1	Nitrite as N	NELAP	PA	10/16/2012
EPA 300.0	2.1	Sulfate	NELAP	PA	10/16/2012
EPA 3050	B	Acid digestion of solids	NELAP	PA	04/04/2005
EPA 3060	A	Alkaline digestion of Cr(VI)	NELAP	PA	04/04/2005
EPA 351.2		Kjeldahl nitrogen, total (TKN)	NELAP	PA	08/30/2019
EPA 3510	C	Separatory funnel liquid-liquid extraction	NELAP	PA	04/04/2005
EPA 3540	C	Soxhlet extraction	NELAP	PA	04/04/2005
EPA 3546		Microwave extraction	NELAP	PA	09/25/2009
EPA 3550	B	Ultrasonic extraction	NELAP	PA	04/04/2005
EPA 3550	C	Ultrasonic extraction	NELAP	PA	03/04/2015
EPA 3580	A	Waste dilution	NELAP	PA	06/25/2020
EPA 3620	B	Florisil cleanup	NELAP	PA	04/04/2005
EPA 3620	C	Florisil cleanup	NELAP	PA	09/04/2018
EPA 3630	C	Silica gel cleanup	NELAP	PA	04/04/2005
EPA 3640	A	Gel permeation cleanup (GPC)	NELAP	PA	04/04/2005
EPA 365.1		Phosphorus, total	NELAP	PA	11/19/2015
EPA 3660	B	Sulfur cleanup	NELAP	PA	04/04/2005
EPA 3665	A	Sulfuric acid/permanganate clean-up	NELAP	PA	04/04/2005
EPA 5030		Bulk purge-and-trap (methanol)	NELAP	PA	12/04/2007
EPA 5035	A	Closed-system purge-and-trap (bisulfate option)	NELAP	PA	09/04/2018

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 5035	A	Closed-system purge-and-trap (methanol option)	NELAP	PA	09/04/2018
EPA 5035	A	Closed-system purge-and-trap (unpreserved)	NELAP	PA	09/04/2018
EPA 5035		Closed-system purge-and-trap (bisulfate option)	NELAP	PA	12/12/2005
EPA 5035		Closed-system purge-and-trap (methanol option)	NELAP	PA	04/04/2005
EPA 5035		Closed-system purge-and-trap (unpreserved)	NELAP	PA	04/04/2005
EPA 537 Isotope Dilution	1.1	10:2 Fluorotelomersulfonate (10:2 FTS)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	NELAP	PA	11/03/2020
EPA 537 Isotope Dilution	1.1	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	NELAP	PA	11/04/2019
EPA 537 Isotope Dilution	1.1	1H, 1H, 2H, 2H-Perfluorododecane sulfonic acid (10:2-FTS)	NELAP	PA	11/04/2019
EPA 537 Isotope Dilution	1.1	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	NELAP	PA	11/04/2019
EPA 537 Isotope Dilution	1.1	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	NELAP	PA	11/04/2019
EPA 537 Isotope Dilution	1.1	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NELAP	PA	11/03/2020
EPA 537 Isotope Dilution	1.1	6:2 Fluorotelomersulfonate (6:2FTS)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	8:2 Flurotelomersulfonate (8:2FTS)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	NELAP	PA	11/03/2020
EPA 537 Isotope Dilution	1.1	Fluorotelomer sulfonate (4:2FTS)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Hexafluoropropylene oxide dimer acid (HFPO-DA)	NELAP	PA	11/03/2020
EPA 537 Isotope Dilution	1.1	N-Ethylperfluorooctanesulfonamide (EtFOSA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	N-Methylperfluorooctanesulfonamide (MeFOSA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	N-ethylperfluoro-1-octanesulfonamido ethanol (N-EtFOSE)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	N-methylperfluoro-1-octanesulfonamido ethanol (N-MeFOSE)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorobutanesulfonic acid (PFBS)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorobutanoic acid (PFBA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorodecane sulfonate (PFDS)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorodecane sulfonic acid (PFDS)	NELAP	PA	11/04/2019
EPA 537 Isotope Dilution	1.1	Perfluorodecanoic acid (PFDA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorododecane sulfonate	NELAP	PA	08/30/2019

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 537 Isotope Dilution	1.1	Perfluorododecane sulfonic acid (PFDoS)	NELAP	PA	11/04/2019
EPA 537 Isotope Dilution	1.1	Perfluorododecanoic acid (PFDoA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluoroheptanesulfonic acid (PFHpS)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluoroheptanoic acid (PFHpA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorohexadecanoic acid (PFHxDA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorohexanesulfonic acid (PFHxS)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorohexanoic acid (PFHxA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorononane sulfonic acid (PFNS)	NELAP	PA	11/04/2019
EPA 537 Isotope Dilution	1.1	Perfluorononanesulfonate (PFNS)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorononanoic acid (PFNA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorooctadecanoic acid (PFODA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorooctane sulfonamide (PFOSA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorooctanesulfonic acid (PFOS)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorooctanoic acid (PFOA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluoropentane sulfonic acid (PFPeS)	NELAP	PA	11/04/2019
EPA 537 Isotope Dilution	1.1	Perfluoropentanesulfonate (PFPeS)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluoropentanoic acid (PFPeA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorotetradecanoic acid (PFTA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluorotridecanoic acid (PFTrDA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	Perfluoroundecanoic acid (PFUnA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NELAP	PA	08/30/2019
EPA 6010	B, C	Metals by ICP/AES	NELAP	PA	03/26/2012
EPA 6010	D	Metals by ICP/AES	NELAP	PA	07/09/2018
EPA 6010	B, C, D	Aluminum	NELAP	PA	01/19/2005
EPA 6010	B, C, D	Antimony	NELAP	PA	01/19/2005
EPA 6010	B, C, D	Arsenic	NELAP	PA	01/19/2005
EPA 6010	B, C, D	Barium	NELAP	PA	01/19/2005

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 6010	B, C, D	Beryllium	NELAP	PA	01/19/2005
EPA 6010	B, C, D	Boron	NELAP	PA	01/19/2005
EPA 6010	B, C, D	Cadmium	NELAP	PA	01/19/2005
EPA 6010	B, C, D	Calcium	NELAP	PA	01/19/2005
EPA 6010	B, C, D	Chromium	NELAP	PA	01/19/2005
EPA 6010	B, C, D	Cobalt	NELAP	PA	01/19/2005
EPA 6010	B, C, D	Copper	NELAP	PA	01/19/2005
EPA 6010	B, C, D	Iron	NELAP	PA	01/19/2005
EPA 6010	B, C, D	Lead	NELAP	PA	01/19/2005
EPA 6010	B, C, D	Lithium	NELAP	PA	01/20/2012
EPA 6010	B, C, D	Magnesium	NELAP	PA	01/19/2005
EPA 6010	B, C, D	Manganese	NELAP	PA	01/19/2005
EPA 6010	B, C, D	Molybdenum	NELAP	PA	01/19/2005
EPA 6010	B, C, D	Nickel	NELAP	PA	01/19/2005
EPA 6010	B, C, D	Potassium	NELAP	PA	01/19/2005
EPA 6010	B, C, D	Selenium	NELAP	PA	01/19/2005
EPA 6010	B, C, D	Silica, as SiO2	NELAP	PA	01/20/2012
EPA 6010	B, C, D	Silver	NELAP	PA	01/19/2005
EPA 6010	B, C, D	Sodium	NELAP	PA	01/19/2005
EPA 6010	B, C, D	Strontium	NELAP	PA	01/19/2005
EPA 6010	B, C, D	Sulfur	NELAP	PA	12/19/2011
EPA 6010	B, C, D	Tellurium	NELAP	PA	02/04/2016
EPA 6010	B, C, D	Thallium	NELAP	PA	01/19/2005
EPA 6010	B, C, D	Thorium	NELAP	PA	11/19/2015
EPA 6010	B, C, D	Tin	NELAP	PA	01/19/2005
EPA 6010	B, C, D	Titanium	NELAP	PA	01/19/2005
EPA 6010	B, C, D	Tungsten	NELAP	PA	11/19/2015
EPA 6010	B, C, D	Vanadium	NELAP	PA	01/19/2005
EPA 6010	B, C, D	Zinc	NELAP	PA	01/19/2005
EPA 6010	B, C, D	Zirconium	NELAP	PA	07/29/2015
EPA 6020	A	Metals by ICP/MS	NELAP	PA	03/26/2012
EPA 6020	B	Metals by ICP/MS	NELAP	PA	07/09/2018
EPA 6020		Metals by ICP/MS	NELAP	PA	01/19/2005
EPA 6020	A, B	Aluminum	NELAP	PA	04/29/2010
EPA 6020	A, B	Antimony	NELAP	PA	01/19/2005
EPA 6020	A, B	Arsenic	NELAP	PA	01/19/2005
EPA 6020	A, B	Barium	NELAP	PA	01/20/2012
EPA 6020	A, B	Beryllium	NELAP	PA	01/19/2005
EPA 6020	A, B	Cadmium	NELAP	PA	01/19/2005
EPA 6020	A, B	Calcium	NELAP	PA	04/29/2010
EPA 6020	A, B	Chromium	NELAP	PA	01/19/2005
EPA 6020	A, B	Cobalt	NELAP	PA	04/29/2010

Annmarie Beach

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Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 6020	A, B	Copper	NELAP	PA	01/19/2005
EPA 6020	A, B	Iron	NELAP	PA	04/29/2010
EPA 6020	A, B	Lead	NELAP	PA	01/19/2005
EPA 6020	A, B	Magnesium	NELAP	PA	04/29/2010
EPA 6020	A, B	Manganese	NELAP	PA	04/29/2010
EPA 6020	A, B	Molybdenum	NELAP	PA	07/25/2011
EPA 6020	A, B	Nickel	NELAP	PA	04/04/2005
EPA 6020	A, B	Potassium	NELAP	PA	04/29/2010
EPA 6020	A, B	Selenium	NELAP	PA	04/04/2005
EPA 6020	A, B	Silver	NELAP	PA	02/23/2010
EPA 6020	A, B	Sodium	NELAP	PA	04/29/2010
EPA 6020	A, B	Strontium	NELAP	PA	04/29/2010
EPA 6020	A, B	Thallium	NELAP	PA	01/19/2005
EPA 6020	A, B	Tin	NELAP	PA	04/29/2010
EPA 6020	A, B	Titanium	NELAP	PA	04/29/2010
EPA 6020	A, B	Uranium (mass)	NELAP	PA	11/19/2015
EPA 6020	A, B	Vanadium	NELAP	PA	01/07/2010
EPA 6020	A, B	Zinc	NELAP	PA	02/01/2011
EPA 680		Decachlorobiphenyl	NELAP	PA	01/19/2016
EPA 680		Dichlorobiphenyls	NELAP	PA	01/19/2016
EPA 680		Heptachlorobiphenyls	NELAP	PA	01/19/2016
EPA 680		Hexachlorbiphenyls	NELAP	PA	01/19/2016
EPA 680		Monochlorobiphenyls	NELAP	PA	01/19/2016
EPA 680		Nonachlorobiphenyls	NELAP	PA	01/19/2016
EPA 680		Octachlorobiphenyls	NELAP	PA	01/19/2016
EPA 680		Pentachlorobiphenyls	NELAP	PA	01/19/2016
EPA 680		Tetrachlorobiphenyls	NELAP	PA	01/19/2016
EPA 680		Trichlorobiphenyls	NELAP	PA	01/19/2016
EPA 6850		Perchlorate	NELAP	PA	01/19/2011
EPA 7.3.3.2		Reactive cyanide	NELAP	PA	12/12/2005
EPA 7.3.4.2		Reactive sulfide	NELAP	PA	12/12/2005
EPA 7196	A	Chromium VI	NELAP	PA	07/09/2018
EPA 7199		Chromium VI	NELAP	PA	05/02/2006
EPA 7471	A, B	Mercury	NELAP	PA	10/17/2007
EPA 8011		1,2-Dibromo-3-chloropropane (DBCP, Dibromochloropropane)	NELAP	PA	07/05/2018
EPA 8011		1,2-Dibromoethane (EDB, Ethylene dibromide)	NELAP	PA	07/09/2018
EPA 8015	B, C	Nonhalogenated organics by GC/FID	NELAP	PA	03/26/2012
EPA 8015	D	Nonhalogenated organics by GC/FID	NELAP	PA	07/29/2015
EPA 8015	B, C, D	Diesel-range organics (DRO)	NELAP	PA	04/04/2005
EPA 8015	B, C, D	Ethanol	NELAP	PA	01/19/2005
EPA 8015	B, C, D	Ethylene glycol	NELAP	PA	12/04/2007

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Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8015	B, C, D	Gasoline-range organics (GRO)	NELAP	PA	04/04/2005
EPA 8015	B, C, D	Isopropyl alcohol (2-Propanol)	NELAP	PA	12/04/2007
EPA 8015	B, C, D	Methanol	NELAP	PA	01/19/2005
EPA 8015	B, C, D	Triethylene glycol	NELAP	PA	07/05/2018
EPA 8081	A	Organochlorine pesticides by GC/ECD	NELAP	PA	03/26/2012
EPA 8081	B	Organochlorine pesticides by GC/ECD	NELAP	PA	01/01/2013
EPA 8081	A, B	2,4'-DDD	NELAP	PA	11/19/2015
EPA 8081	A, B	2,4'-DDE	NELAP	PA	11/19/2015
EPA 8081	A, B	2,4'-DDT	NELAP	PA	11/19/2015
EPA 8081	A, B	4,4'-DDD	NELAP	PA	01/19/2005
EPA 8081	A, B	4,4'-DDE	NELAP	PA	01/19/2005
EPA 8081	A, B	4,4'-DDT	NELAP	PA	01/19/2005
EPA 8081	A, B	Aldrin (HHDN)	NELAP	PA	01/19/2005
EPA 8081	A, B	Chlordane (tech.)	NELAP	PA	01/19/2005
EPA 8081	A, B	Dieldrin	NELAP	PA	01/19/2005
EPA 8081	A, B	Endosulfan I	NELAP	PA	01/19/2005
EPA 8081	A, B	Endosulfan II	NELAP	PA	01/19/2005
EPA 8081	A, B	Endosulfan sulfate	NELAP	PA	01/19/2005
EPA 8081	A, B	Endrin	NELAP	PA	01/19/2005
EPA 8081	A, B	Endrin aldehyde	NELAP	PA	01/19/2005
EPA 8081	A, B	Endrin ketone	NELAP	PA	01/19/2005
EPA 8081	A, B	Heptachlor	NELAP	PA	01/19/2005
EPA 8081	A, B	Heptachlor epoxide	NELAP	PA	01/19/2005
EPA 8081	A, B	Kepone	NELAP	PA	01/19/2005
EPA 8081	A, B	Methoxychlor	NELAP	PA	01/19/2005
EPA 8081	A, B	Mirex	NELAP	PA	01/19/2005
EPA 8081	A, B	Toxaphene (Chlorinated camphene)	NELAP	PA	01/19/2005
EPA 8081	A, B	alpha-BHC (alpha-Hexachlorocyclohexane)	NELAP	PA	01/19/2005
EPA 8081	A, B	alpha-Chlordane	NELAP	PA	04/04/2005
EPA 8081	A, B	beta-BHC (beta-Hexachlorocyclohexane)	NELAP	PA	01/19/2005
EPA 8081	A, B	delta-BHC (delta-Hexachlorocyclohexane)	NELAP	PA	01/19/2005
EPA 8081	A, B	gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	NELAP	PA	01/19/2005
EPA 8081	A, B	gamma-Chlordane	NELAP	PA	04/04/2005
EPA 8082	A	PCBs by GC/ECD	NELAP	PA	03/26/2012
EPA 8082		PCBs by GC/ECD	NELAP	PA	01/02/2007
EPA 8082	A	Aroclor-1016 (PCB-1016)	NELAP	PA	01/02/2007
EPA 8082	A	Aroclor-1016 (in oil)	NELAP	PA	07/09/2018
EPA 8082	A	Aroclor-1221 (PCB-1221)	NELAP	PA	01/02/2007
EPA 8082	A	Aroclor-1221 (in oil)	NELAP	PA	07/09/2018
EPA 8082	A	Aroclor-1232 (PCB-1232)	NELAP	PA	01/02/2007
EPA 8082	A	Aroclor-1232 (in oil)	NELAP	PA	07/09/2018

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Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8082	A	Aroclor-1242 (PCB-1242)	NELAP	PA	01/02/2007
EPA 8082	A	Aroclor-1242 (in oil)	NELAP	PA	07/09/2018
EPA 8082	A	Aroclor-1248 (PCB-1248)	NELAP	PA	01/02/2007
EPA 8082	A	Aroclor-1248 (in oil)	NELAP	PA	07/09/2018
EPA 8082	A	Aroclor-1254 (PCB-1254)	NELAP	PA	01/02/2007
EPA 8082	A	Aroclor-1254 (in oil)	NELAP	PA	07/09/2018
EPA 8082	A	Aroclor-1260 (PCB-1260)	NELAP	PA	01/02/2007
EPA 8082	A	Aroclor-1260 (in oil)	NELAP	PA	07/09/2018
EPA 8082	A	Aroclor-1262 (PCB-1262)	NELAP	PA	07/23/2008
EPA 8082	A	Aroclor-1268 (PCB-1268)	NELAP	PA	07/23/2008
EPA 8082	A	Decachlorobiphenyl	NELAP	PA	12/17/2012
EPA 8151	A	Chlorinated herbicides by GC/ECD	NELAP	PA	03/26/2012
EPA 8151	A	2,4,5-T	NELAP	PA	01/19/2005
EPA 8151	A	2,4,5-TP (Silvex)	NELAP	PA	01/19/2005
EPA 8151	A	2,4-D	NELAP	PA	01/19/2005
EPA 8151	A	2,4-DB (Butoxon)	NELAP	PA	04/04/2005
EPA 8151	A	Dalapon (2,2-Dichloropropionic acid)	NELAP	PA	01/19/2005
EPA 8151	A	Dicamba	NELAP	PA	01/19/2005
EPA 8151	A	Dichloroprop (Dichlorprop)	NELAP	PA	01/19/2005
EPA 8151	A	Dinoseb (2-sec-Butyl-4,6-dinitrophenol, DNBP)	NELAP	PA	01/19/2005
EPA 8151	A	MCPA	NELAP	PA	01/19/2005
EPA 8151	A	MCPP (Mecoprop)	NELAP	PA	05/02/2006
EPA 8151	A	Pentachlorophenol (PCP)	NELAP	PA	01/19/2005
EPA 8151	A	Picloram (4-Amino-3,5,6-trichloro-2-pyridinecarboxylic acid)	NELAP	PA	01/19/2005
EPA 8260	B, C	VOCs by GC/MS	NELAP	PA	03/26/2012
EPA 8260	D	VOCs by GC/MS	NELAP	PA	11/04/2019
EPA 8260	B, C	2-Chloroethyl vinyl ether	NELAP	PA	01/19/2005
EPA 8260	B, C	3,3'-Dimethyl-1-butanol	NELAP	PA	04/17/2009
EPA 8260	B, C	4-Chloro-2-nitrophenol	NELAP	PA	05/02/2006
EPA 8260	B, C	Crotonaldehyde	NELAP	PA	10/30/2014
EPA 8260	B, C	Epichlorohydrin (1-Chloro-2,3-epoxypropane)	NELAP	PA	01/04/2006
EPA 8260	B, C	Ethylene oxide	NELAP	PA	10/30/2014
EPA 8260	B, C	Gasoline-range organics (GRO)	NELAP	PA	06/08/2006
EPA 8260	B, C	tert-Amyl alcohol (2-Methyl-2-butanol)	NELAP	PA	04/17/2009
EPA 8260	B, C	tert-Butyl ethyl ether	NELAP	PA	05/25/2007
EPA 8260	B, C	tert-Butyl formate	NELAP	PA	04/17/2009
EPA 8260	B, C, D	1,1,1,2-Tetrachloroethane	NELAP	PA	06/25/2020
EPA 8260	B, C, D	1,1,1-Trichloroethane	NELAP	PA	01/19/2005
EPA 8260	B, C, D	1,1,2,2-Tetrachloroethane	NELAP	PA	01/19/2005
EPA 8260	B, C, D	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NELAP	PA	05/02/2006
EPA 8260	B, C, D	1,1,2-Trichloroethane	NELAP	PA	06/25/2020

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Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8260	B, C, D	1,1-Dichloroethane	NELAP	PA	01/19/2005
EPA 8260	B, C, D	1,1-Dichloroethene (1,1-Dichloroethylene)	NELAP	PA	01/19/2005
EPA 8260	B, C, D	1,1-Dichloropropene	NELAP	PA	01/19/2005
EPA 8260	B, C, D	1,2,3-Trichlorobenzene	NELAP	PA	01/19/2005
EPA 8260	B, C, D	1,2,3-Trichloropropane (1,2,3-TCP)	NELAP	PA	06/25/2020
EPA 8260	B, C, D	1,2,3-Trimethylbenzene	NELAP	PA	09/04/2018
EPA 8260	B, C, D	1,2,4-Trichlorobenzene	NELAP	PA	06/25/2020
EPA 8260	B, C, D	1,2,4-Trimethylbenzene	NELAP	PA	01/19/2005
EPA 8260	B, C, D	1,2-Dibromo-3-chloropropane (DBCP, Dibromochloropropane)	NELAP	PA	06/25/2020
EPA 8260	B, C, D	1,2-Dibromoethane (EDB, Ethylene dibromide)	NELAP	PA	06/25/2020
EPA 8260	B, C, D	1,2-Dichlorobenzene (o-Dichlorobenzene)	NELAP	PA	06/25/2020
EPA 8260	B, C, D	1,2-Dichloroethane	NELAP	PA	06/25/2020
EPA 8260	B, C, D	1,2-Dichloropropane	NELAP	PA	01/19/2005
EPA 8260	B, C, D	1,3,5-Trimethylbenzene	NELAP	PA	01/19/2005
EPA 8260	B, C, D	1,3-Dichlorobenzene (m-Dichlorobenzene)	NELAP	PA	01/19/2005
EPA 8260	B, C, D	1,3-Dichloropropane	NELAP	PA	01/19/2005
EPA 8260	B, C, D	1,4-Dichlorobenzene (p-Dichlorobenzene)	NELAP	PA	06/25/2020
EPA 8260	B, C, D	1,4-Dioxane (1,4-Diethyleneoxide)	NELAP	PA	01/19/2005
EPA 8260	B, C, D	2,2-Dichloropropane	NELAP	PA	01/19/2005
EPA 8260	B, C, D	2-Butanone (Methyl ethyl ketone, MEK)	NELAP	PA	01/19/2005
EPA 8260	B, C, D	2-Chlorotoluene	NELAP	PA	05/02/2006
EPA 8260	B, C, D	2-Hexanone	NELAP	PA	06/25/2020
EPA 8260	B, C, D	2-Nitropropane	NELAP	PA	12/17/2012
EPA 8260	B, C, D	4-Chlorotoluene	NELAP	PA	01/19/2005
EPA 8260	B, C, D	4-Methyl-2-pentanone (MIBK)	NELAP	PA	06/25/2020
EPA 8260	B, C, D	Acetone	NELAP	PA	01/19/2005
EPA 8260	B, C, D	Acetonitrile	NELAP	PA	01/04/2006
EPA 8260	B, C, D	Acrolein (Propenal)	NELAP	PA	01/19/2005
EPA 8260	B, C, D	Acrylonitrile	NELAP	PA	01/19/2005
EPA 8260	B, C, D	Allyl chloride (3-Chloropropene)	NELAP	PA	01/19/2005
EPA 8260	B, C, D	Benzene	NELAP	PA	01/19/2005
EPA 8260	B, C, D	Benzyl chloride	NELAP	PA	01/04/2006
EPA 8260	B, C, D	Bromobenzene	NELAP	PA	01/19/2005
EPA 8260	B, C, D	Bromochloromethane	NELAP	PA	01/19/2005
EPA 8260	B, C, D	Bromodichloromethane	NELAP	PA	01/19/2005
EPA 8260	B, C, D	Bromoform	NELAP	PA	06/25/2020
EPA 8260	B, C, D	Carbon disulfide	NELAP	PA	01/19/2005
EPA 8260	B, C, D	Carbon tetrachloride	NELAP	PA	01/19/2005
EPA 8260	B, C, D	Chlorobenzene	NELAP	PA	06/25/2020
EPA 8260	B, C, D	Chloroethane	NELAP	PA	01/19/2005
EPA 8260	B, C, D	Chloroform	NELAP	PA	01/19/2005

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DEP Laboratory ID: 36-00037
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Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8260	B, C, D	Chloroprene (2-Chloro-1,3-butadiene)	NELAP	PA	04/17/2009
EPA 8260	B, C, D	Cyclohexane	NELAP	PA	06/29/2010
EPA 8260	B, C, D	Cyclohexanone	NELAP	PA	07/03/2007
EPA 8260	B, C, D	Dibromochloromethane	NELAP	PA	06/25/2020
EPA 8260	B, C, D	Dibromomethane	NELAP	PA	01/19/2005
EPA 8260	B, C, D	Dichlorodifluoromethane (Freon 12)	NELAP	PA	01/19/2005
EPA 8260	B, C, D	Diisopropyl ether (DIPE)	NELAP	PA	07/03/2007
EPA 8260	B, C, D	Ethanol	NELAP	PA	01/04/2006
EPA 8260	B, C, D	Ethyl acetate	NELAP	PA	01/04/2006
EPA 8260	B, C, D	Ethyl methacrylate	NELAP	PA	01/04/2006
EPA 8260	B, C, D	Ethyl tert-butyl ether (ETBE)	NELAP	PA	07/03/2007
EPA 8260	B, C, D	Ethylbenzene	NELAP	PA	06/25/2020
EPA 8260	B, C, D	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	NELAP	PA	01/19/2005
EPA 8260	B, C, D	Isobutyl alcohol (2-Methyl-1-propanol)	NELAP	PA	07/03/2007
EPA 8260	B, C, D	Isopropyl alcohol (2-Propanol)	NELAP	PA	01/19/2005
EPA 8260	B, C, D	Isopropylbenzene (Cumene)	NELAP	PA	08/07/2005
EPA 8260	B, C, D	Methacrylonitrile	NELAP	PA	01/24/2007
EPA 8260	B, C, D	Methyl acetate	NELAP	PA	06/29/2010
EPA 8260	B, C, D	Methyl bromide (Bromomethane)	NELAP	PA	01/19/2005
EPA 8260	B, C, D	Methyl chloride (Chloromethane)	NELAP	PA	01/19/2005
EPA 8260	B, C, D	Methyl iodide (Iodomethane)	NELAP	PA	05/02/2006
EPA 8260	B, C, D	Methyl tert-butyl ether (MTBE)	NELAP	PA	01/19/2005
EPA 8260	B, C, D	Methylcyclohexane	NELAP	PA	01/21/2009
EPA 8260	B, C, D	Methylene chloride (Dichloromethane)	NELAP	PA	01/19/2005
EPA 8260	B, C, D	Methylmethacrylate	NELAP	PA	05/02/2006
EPA 8260	B, C, D	Naphthalene	NELAP	PA	06/25/2020
EPA 8260	B, C, D	Pentachloroethane	NELAP	PA	01/24/2007
EPA 8260	B, C, D	Propionitrile (Ethyl cyanide)	NELAP	PA	01/24/2007
EPA 8260	B, C, D	Styrene	NELAP	PA	01/19/2005
EPA 8260	B, C, D	Tetrachloroethene (PCE, Perchloroethylene)	NELAP	PA	01/19/2005
EPA 8260	B, C, D	Tetrahydrofuran (THF)	NELAP	PA	06/07/2012
EPA 8260	B, C, D	Toluene	NELAP	PA	06/25/2020
EPA 8260	B, C, D	Trichloroethene (TCE, Trichloroethylene)	NELAP	PA	01/19/2005
EPA 8260	B, C, D	Trichlorofluoromethane (Freon 11)	NELAP	PA	01/19/2005
EPA 8260	B, C, D	Vinyl acetate	NELAP	PA	01/19/2005
EPA 8260	B, C, D	Vinyl chloride (Chloroethene)	NELAP	PA	01/19/2005
EPA 8260	B, C, D	Xylenes, total	NELAP	PA	01/19/2005
EPA 8260	B, C, D	cis-1,2-Dichloroethene	NELAP	PA	01/19/2005
EPA 8260	B, C, D	cis-1,3-Dichloropropene	NELAP	PA	06/25/2020
EPA 8260	B, C, D	m+p-Xylene	NELAP	PA	01/24/2007
EPA 8260	B, C, D	n-Butyl acetate	NELAP	PA	01/19/2016
EPA 8260	B, C, D	n-Butyl alcohol (n-Butanol, 1-Butanol)	NELAP	PA	01/19/2005

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DEP Laboratory ID: 36-00037
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TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8260	B, C, D	n-Butylbenzene	NELAP	PA	01/19/2005
EPA 8260	B, C, D	n-Hexane	NELAP	PA	09/04/2018
EPA 8260	B, C, D	n-Propylbenzene	NELAP	PA	01/04/2006
EPA 8260	B, C, D	o-Xylene	NELAP	PA	01/24/2007
EPA 8260	B, C, D	p-Isopropyltoluene (4-Isopropyltoluene)	NELAP	PA	01/24/2007
EPA 8260	B, C, D	sec-Butylbenzene	NELAP	PA	01/19/2005
EPA 8260	B, C, D	tert-Amyl methyl ether (TAME)	NELAP	PA	07/03/2007
EPA 8260	B, C, D	tert-Butyl alcohol (2-Methyl-2-propanol)	NELAP	PA	01/19/2005
EPA 8260	B, C, D	tert-Butylbenzene	NELAP	PA	01/19/2005
EPA 8260	B, C, D	trans-1,2-Dichloroethene	NELAP	PA	01/19/2005
EPA 8260	B, C, D	trans-1,3-Dichloropropene	NELAP	PA	01/19/2005
EPA 8260	B, C, D	trans-1,4-Dichloro-2-butene	NELAP	PA	07/03/2007
EPA 8260	D	2-Chloroethyl vinyl ether	NELAP	PA	05/01/2020
EPA 8260 SIM	B, C	1,4-Dioxane (1,4-Diethyleneoxide)	NELAP	PA	04/17/2009
EPA 8270	C, D	SOCs by GC/MS	NELAP	PA	03/26/2012
EPA 8270	E	SOCs by GC/MS	NELAP	PA	06/25/2020
EPA 8270	C, D	1,2,3,4-Tetrachlorobenzene	NELAP	PA	07/03/2007
EPA 8270	C, D	1,2,3,4-Tetrahydronaphthalene	NELAP	PA	12/04/2007
EPA 8270	C, D	1,2,3,5-Tetrachlorobenzene	NELAP	PA	07/03/2007
EPA 8270	C, D	1,2-Dinitrobenzene (1,2-DNB)	NELAP	PA	01/19/2005
EPA 8270	C, D	1,3,5-Trinitrobenzene (1,3,5-TNB)	NELAP	PA	01/04/2006
EPA 8270	C, D	1,4-Phenylenediamine	NELAP	PA	01/19/2005
EPA 8270	C, D	3,3'-Dimethoxybenzidine	NELAP	PA	04/17/2009
EPA 8270	C, D	Aramite	NELAP	PA	05/17/2005
EPA 8270	C, D	Benzenethiol	NELAP	PA	12/04/2007
EPA 8270	C, D	Disulfoton	NELAP	PA	07/01/2007
EPA 8270	C, D	Famphur	NELAP	PA	05/02/2006
EPA 8270	C, D	Kepone	NELAP	PA	05/02/2006
EPA 8270	C, D	Malononitrile	NELAP	PA	05/23/2013
EPA 8270	C, D	Methapyrilene	NELAP	PA	01/19/2005
EPA 8270	C, D	N,N-Dimethylacetamide	NELAP	PA	12/04/2007
EPA 8270	C, D	N,N-Dimethylformamide	NELAP	PA	12/04/2007
EPA 8270	C, D	Phthalic anhydride	NELAP	PA	01/21/2009
EPA 8270	C, D	Tetraethyl lead	NELAP	PA	03/07/2012
EPA 8270	C, D	a,a-Dimethylphenethylamine (Phentermine)	NELAP	PA	05/02/2006
EPA 8270	C, D	bis(2-Chloromethyl) ether	NELAP	PA	01/21/2009
EPA 8270	C, D	bis(2-Ethylhexyl) adipate (di(2-Ethylhexyl) adipate)	NELAP	PA	01/21/2009
EPA 8270	C, D	p-Chloronitrobenzene	NELAP	PA	01/21/2009
EPA 8270	C, D	tris-(2,3-Dibromopropyl) phosphate (tris-BP)	NELAP	PA	12/04/2007
EPA 8270	C, D, E	1,1'-Biphenyl (Biphenyl, Lemonene)	NELAP	PA	12/04/2007
EPA 8270	C, D, E	1,2,4,5-Tetrachlorobenzene	NELAP	PA	04/04/2005
EPA 8270	C, D, E	1,2,4-Trichlorobenzene	NELAP	PA	01/19/2005

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Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8270	C, D, E	1,2-Dichlorobenzene (o-Dichlorobenzene)	NELAP	PA	01/19/2005
EPA 8270	C, D, E	1,2-Diphenylhydrazine	NELAP	PA	05/02/2006
EPA 8270	C, D, E	1,3-Dichlorobenzene (m-Dichlorobenzene)	NELAP	PA	01/19/2005
EPA 8270	C, D, E	1,3-Dinitrobenzene (1,3-DNB)	NELAP	PA	01/19/2005
EPA 8270	C, D, E	1,4-Dichlorobenzene (p-Dichlorobenzene)	NELAP	PA	01/19/2005
EPA 8270	C, D, E	1,4-Dinitrobenzene (1,4-DNB)	NELAP	PA	05/02/2006
EPA 8270	C, D, E	1,4-Dioxane (1,4-Diethyleneoxide)	NELAP	PA	12/04/2007
EPA 8270	C, D, E	1,4-Naphthoquinone	NELAP	PA	01/19/2005
EPA 8270	C, D, E	1-Chloronaphthalene	NELAP	PA	01/04/2006
EPA 8270	C, D, E	1-Methylnaphthalene	NELAP	PA	12/04/2007
EPA 8270	C, D, E	1-Naphthylamine (alpha-Naphthylamine)	NELAP	PA	04/04/2005
EPA 8270	C, D, E	2,2'-Oxybis(1-chloropropane) (bis(2-Chloro-1-methylethyl) ether)	NELAP	PA	10/30/2014
EPA 8270	C, D, E	2,2'-oxybis(1-Chloropropane)	NELAP	PA	01/04/2006
EPA 8270	C, D, E	2,3,4,6-Tetrachlorophenol	NELAP	PA	01/19/2005
EPA 8270	C, D, E	2,4,5-Trichlorophenol	NELAP	PA	01/19/2005
EPA 8270	C, D, E	2,4,6-Trichlorophenol	NELAP	PA	01/19/2005
EPA 8270	C, D, E	2,4-Dichlorophenol	NELAP	PA	01/19/2005
EPA 8270	C, D, E	2,4-Dimethylphenol	NELAP	PA	01/19/2005
EPA 8270	C, D, E	2,4-Dinitrophenol	NELAP	PA	01/19/2005
EPA 8270	C, D, E	2,4-Dinitrotoluene (2,4-DNT)	NELAP	PA	01/19/2005
EPA 8270	C, D, E	2,6-Dichlorophenol	NELAP	PA	01/19/2005
EPA 8270	C, D, E	2,6-Dinitrotoluene (2,6-DNT)	NELAP	PA	01/19/2005
EPA 8270	C, D, E	2-Acetylaminofluorene	NELAP	PA	01/19/2005
EPA 8270	C, D, E	2-Chloronaphthalene	NELAP	PA	01/19/2005
EPA 8270	C, D, E	2-Chlorophenol	NELAP	PA	01/19/2005
EPA 8270	C, D, E	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	NELAP	PA	01/19/2005
EPA 8270	C, D, E	2-Methylnaphthalene	NELAP	PA	01/19/2005
EPA 8270	C, D, E	2-Methylphenol (o-Cresol)	NELAP	PA	01/19/2005
EPA 8270	C, D, E	2-Naphthylamine (beta-Naphthylamine)	NELAP	PA	05/17/2005
EPA 8270	C, D, E	2-Nitroaniline	NELAP	PA	04/04/2005
EPA 8270	C, D, E	2-Nitrophenol	NELAP	PA	01/19/2005
EPA 8270	C, D, E	2-Picoline (2-Methylpyridine)	NELAP	PA	01/19/2005
EPA 8270	C, D, E	3+4-Methylphenol (m+p-Cresol)	NELAP	PA	01/19/2005
EPA 8270	C, D, E	3,3'-Dichlorobenzidine	NELAP	PA	01/19/2005
EPA 8270	C, D, E	3,3'-Dimethylbenzidine	NELAP	PA	01/19/2005
EPA 8270	C, D, E	3-Methylcholanthrene	NELAP	PA	01/19/2005
EPA 8270	C, D, E	3-Nitroaniline	NELAP	PA	01/19/2005
EPA 8270	C, D, E	4,4'-Methylenebis(2-chloroaniline)	NELAP	PA	01/19/2005
EPA 8270	C, D, E	4-Aminobiphenyl	NELAP	PA	01/19/2005
EPA 8270	C, D, E	4-Bromophenyl phenyl ether	NELAP	PA	01/19/2005

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Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8270	C, D, E	4-Chloro-3-methylphenol	NELAP	PA	01/19/2005
EPA 8270	C, D, E	4-Chloroaniline	NELAP	PA	01/19/2005
EPA 8270	C, D, E	4-Chlorophenyl phenyl ether	NELAP	PA	01/19/2005
EPA 8270	C, D, E	4-Nitroaniline	NELAP	PA	04/04/2005
EPA 8270	C, D, E	4-Nitrophenol	NELAP	PA	01/19/2005
EPA 8270	C, D, E	4-Nitroquinoline-1-oxide	NELAP	PA	07/03/2007
EPA 8270	C, D, E	5-Nitro-o-toluidine	NELAP	PA	04/04/2005
EPA 8270	C, D, E	6-Methylchrysene	NELAP	PA	12/04/2007
EPA 8270	C, D, E	7,12-Dimethylbenz(a)anthracene	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Acenaphthene	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Acenaphthylene	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Acetophenone	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Aniline	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Anthracene	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Atrazine	NELAP	PA	01/12/2007
EPA 8270	C, D, E	Benzaldehyde	NELAP	PA	12/04/2007
EPA 8270	C, D, E	Benzidine	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Benzo[a]anthracene	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Benzo[a]pyrene	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Benzo[b]fluoranthene	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Benzo[ghi]perylene	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Benzo[k]fluoranthene	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Benzoic acid	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Benzyl alcohol	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Butyl benzyl phthalate (Benzyl butyl phthalate)	NELAP	PA	05/17/2005
EPA 8270	C, D, E	Caprolactam	NELAP	PA	12/04/2007
EPA 8270	C, D, E	Carbazole	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Chlorobenzilate	NELAP	PA	05/02/2006
EPA 8270	C, D, E	Chrysene (Benzo[a]phenanthrene)	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Di-n-butyl phthalate	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Di-n-octyl phthalate	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Diallate (cis or trans)	NELAP	PA	05/02/2006
EPA 8270	C, D, E	Dibenz[a,h]acridine	NELAP	PA	12/04/2007
EPA 8270	C, D, E	Dibenz[a,j]acridine	NELAP	PA	05/17/2005
EPA 8270	C, D, E	Dibenzo[a,h]anthracene	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Dibenzofuran	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Diethyl phthalate	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Dimethoate	NELAP	PA	05/02/2006
EPA 8270	C, D, E	Dimethyl phthalate	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Diphenylamine	NELAP	PA	05/02/2006
EPA 8270	C, D, E	Ethyl methanesulfonate	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Fluoranthene	NELAP	PA	01/19/2005

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Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8270	C, D, E	Fluorene	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Hexachlorobenzene	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Hexachlorocyclopentadiene	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Hexachloroethane	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Hexachloropropene	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Indene	NELAP	PA	12/04/2007
EPA 8270	C, D, E	Indeno(1,2,3-cd)pyrene	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Isodrin	NELAP	PA	05/02/2006
EPA 8270	C, D, E	Isophorone	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Isosafrole	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Methyl methanesulfonate	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Methyl parathion (Parathion, methyl)	NELAP	PA	05/25/2007
EPA 8270	C, D, E	N-Nitrosodi-n-butylamine	NELAP	PA	01/19/2005
EPA 8270	C, D, E	N-Nitrosodi-n-propylamine	NELAP	PA	01/19/2005
EPA 8270	C, D, E	N-Nitrosodiethylamine	NELAP	PA	01/19/2005
EPA 8270	C, D, E	N-Nitrosodimethylamine	NELAP	PA	01/19/2005
EPA 8270	C, D, E	N-Nitrosodiphenylamine	NELAP	PA	01/19/2005
EPA 8270	C, D, E	N-Nitrosomethylethylamine	NELAP	PA	01/19/2005
EPA 8270	C, D, E	N-Nitrosomorpholine	NELAP	PA	01/19/2005
EPA 8270	C, D, E	N-Nitrosopiperidine	NELAP	PA	01/19/2005
EPA 8270	C, D, E	N-Nitrosopyrrolidine	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Naphthalene	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Nitrobenzene	NELAP	PA	01/04/2006
EPA 8270	C, D, E	O,O,O-Triethyl phosphorothioate	NELAP	PA	05/02/2006
EPA 8270	C, D, E	Parathion, ethyl (Ethyl parathion, Parathion)	NELAP	PA	05/25/2007
EPA 8270	C, D, E	Pentachlorobenzene	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Pentachloronitrobenzene (PCNB)	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Pentachlorophenol (PCP)	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Phenacetin	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Phenanthrene	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Phenol	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Phorate (Thimet)	NELAP	PA	05/02/2006
EPA 8270	C, D, E	Pronamide (Kerb)	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Pyrene	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Pyridine	NELAP	PA	04/04/2005
EPA 8270	C, D, E	Quinoline	NELAP	PA	12/04/2007
EPA 8270	C, D, E	Safrole	NELAP	PA	01/19/2005
EPA 8270	C, D, E	Sulfotepp (Tetraethyl dithiopyrophosphate)	NELAP	PA	12/04/2007
EPA 8270	C, D, E	Thionazine (Thionazin, Zinophos)	NELAP	PA	05/02/2006
EPA 8270	C, D, E	bis(2-Chloroethoxy)methane	NELAP	PA	01/19/2005
EPA 8270	C, D, E	bis(2-Chloroethyl) ether	NELAP	PA	01/19/2005

Annmarie Beach

The Pennsylvania Department of Environmental Protection Laboratory Accreditation Program is a NELAP recognized Accreditation Body. Customers are urged to verify the laboratory's current accreditation standing.

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Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8270	C, D, E	bis(2-Ethylhexyl) phthalate (DEHP)	NELAP	PA	01/19/2005
EPA 8270	C, D, E	o-Toluidine (2-Toluidine, 2-Methylaniline)	NELAP	PA	01/19/2005
EPA 8270	C, D, E	p-(Dimethylamino)azobenzene	NELAP	PA	05/02/2006
EPA 8270 SIM	E	SOCs by GC/MS	NELAP	PA	09/29/2020
EPA 8270 SIM	C, D, E	1,4-Dioxane (1,4-Diethyleneoxide)	NELAP	PA	05/14/2018
EPA 8270 SIM	C, D, E	1-Methylnaphthalene	NELAP	PA	07/25/2011
EPA 8270 SIM	C, D, E	2-Methylnaphthalene	NELAP	PA	05/23/2012
EPA 8270 SIM	C, D, E	Acenaphthene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Acenaphthylene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Anthracene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Benzo[a]anthracene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Benzo[a]pyrene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Benzo[b]fluoranthene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Benzo[ghi]perylene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Benzo[k]fluoranthene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Chrysene (Benzo[a]phenanthrene)	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Dibenzo[a,h]anthracene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Fluoranthene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Fluorene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Indeno(1,2,3-cd)pyrene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Naphthalene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Phenanthrene	NELAP	PA	12/04/2007
EPA 8270 SIM	C, D, E	Pyrene	NELAP	PA	12/04/2007
EPA 8290	A	PCDDs and PCDFs by HRGC-HRMS	NELAP	PA	03/04/2015
EPA 8290		PCDDs and PCDFs by HRGC-HRMS	NELAP	PA	03/26/2012
EPA 8290	A	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	NELAP	PA	06/30/2010
EPA 8290	A	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	NELAP	PA	06/30/2010
EPA 8290	A	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	NELAP	PA	06/30/2010
EPA 8290	A	1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	NELAP	PA	06/30/2010
EPA 8290	A	1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	NELAP	PA	06/30/2010
EPA 8290	A	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	NELAP	PA	06/30/2010
EPA 8290	A	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	NELAP	PA	08/06/2010
EPA 8290	A	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	NELAP	PA	06/30/2010
EPA 8290	A	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	NELAP	PA	06/30/2010
EPA 8290	A	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	NELAP	PA	06/30/2010
EPA 8290	A	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	NELAP	PA	06/30/2010
EPA 8290	A	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	NELAP	PA	06/30/2010
EPA 8290	A	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	NELAP	PA	06/30/2010
EPA 8290	A	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	NELAP	PA	06/30/2010

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Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8290	A	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	NELAP	PA	08/06/2010
EPA 8290	A	2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)(Dioxin)	NELAP	PA	06/30/2010
EPA 8290	A	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	NELAP	PA	06/30/2010
EPA 8290	A	Total TCDD	NELAP	PA	06/30/2010
EPA 8290	A	Total TCDF	NELAP	PA	06/30/2010
EPA 8290	A	Total heptachlorodibenzo-p-dioxin (HpCDD)	NELAP	PA	06/30/2010
EPA 8290	A	Total heptachlorodibenzofuran (HpCDF)	NELAP	PA	06/30/2010
EPA 8290	A	Total hexachlorodibenzo-p-dioxin (HxCDD)	NELAP	PA	06/30/2010
EPA 8290	A	Total hexachlorodibenzofuran (HxCDF)	NELAP	PA	06/30/2010
EPA 8290	A	Total pentachlorodibenzo-p-dioxin (PeCDD)	NELAP	PA	06/30/2010
EPA 8290	A	Total pentachlorodibenzofuran (PeCDF)	NELAP	PA	06/30/2010
EPA 8315	A	Carbonyl compounds by HPLC	NELAP	PA	03/26/2012
EPA 8315		Carbonyl compounds by HPLC	NELAP	PA	01/19/2005
EPA 8315	A	2,5-Dimethylbenzaldehyde	NELAP	PA	01/21/2009
EPA 8315	A	Acetaldehyde	NELAP	PA	01/21/2009
EPA 8315	A	Formaldehyde	NELAP	PA	01/19/2005
EPA 8318	A	3-Hydroxycarbofuran	NELAP	PA	04/04/2005
EPA 8318	A	Aldicarb (Temik)	NELAP	PA	04/04/2005
EPA 8318	A	Aldicarb sulfone	NELAP	PA	04/04/2005
EPA 8318	A	Aldicarb sulfoxide	NELAP	PA	12/12/2005
EPA 8318	A	Carbaryl (Sevin)	NELAP	PA	04/04/2005
EPA 8318	A	Carbofuran (Furaden)	NELAP	PA	04/04/2005
EPA 8318	A	Methiocarb (Mesurol)	NELAP	PA	04/04/2005
EPA 8318	A	Methomyl (Lannate)	NELAP	PA	04/04/2005
EPA 8318	A	N-Methylcarbamates by HPLC	NELAP	PA	10/15/2012
EPA 8318	A	Oxamyl (Vydate)	NELAP	PA	12/12/2005
EPA 8318	A	Propoxur (Baygon)	NELAP	PA	04/04/2005
EPA 8330	B	Nitroaromatics and nitramines by HPLC/UV	NELAP	PA	07/29/2015
EPA 8330	B	1,3,5-Trinitrobenzene (1,3,5-TNB)	NELAP	PA	01/19/2005
EPA 8330	B	1,3-Dinitrobenzene (1,3-DNB)	NELAP	PA	01/19/2005
EPA 8330	B	2,4,6-Trinitrotoluene (2,4,6-TNT)	NELAP	PA	01/19/2005
EPA 8330	B	2,4-Diamino-6-nitrotoluene	NELAP	PA	07/29/2015
EPA 8330	B	2,4-Dinitrotoluene (2,4-DNT)	NELAP	PA	01/19/2005
EPA 8330	B	2,6-Diamino-4-nitrotoluene	NELAP	PA	07/29/2015
EPA 8330	B	2,6-Dinitrotoluene (2,6-DNT)	NELAP	PA	01/19/2005
EPA 8330	B	2-Amino-4,6-dinitrotoluene (2-Am-DNT)	NELAP	PA	01/19/2005
EPA 8330	B	2-Nitrotoluene	NELAP	PA	01/19/2005
EPA 8330	B	3,5-Dinitroaniline	NELAP	PA	07/29/2015
EPA 8330	B	3-Nitrotoluene	NELAP	PA	01/19/2005
EPA 8330	B	4-Amino-2,6-dinitrotoluene (4-Am-DNT)	NELAP	PA	01/19/2005
EPA 8330	B	4-Nitrotoluene	NELAP	PA	01/19/2005

Annmarie Beach

Attached to Certificate of Accreditation 020-001 expiration date 01/31/2022. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
EPA 8330	B	Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	NELAP	PA	01/19/2005
EPA 8330	B	Nitrobenzene	NELAP	PA	01/19/2005
EPA 8330	B	Nitroglycerin	NELAP	PA	10/09/2013
EPA 8330	B	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	NELAP	PA	01/24/2006
EPA 8330	B	Pentaerythritol tetranitrate (PETN)	NELAP	PA	11/21/2005
EPA 8330	B	RDX (Hexahydro-1,3,5-trinitro-1,3,5-triazine)	NELAP	PA	01/19/2005
EPA 9012	A, B	Total cyanide	NELAP	PA	05/24/2011
EPA 9045	C, D	pH	NELAP	PA	11/19/2008
EPA 9050	A	Conductivity	NELAP	PA	01/27/2014
EPA 9050		Conductivity	NELAP	PA	05/17/2005
EPA 9056	A	Anions by IC	NELAP	PA	07/05/2018
EPA 9056	A	Bromide	NELAP	PA	07/05/2018
EPA 9056	A	Chloride	NELAP	PA	11/27/2019
EPA 9056	A	Fluoride	NELAP	PA	07/05/2018
EPA 9056	A	Nitrate as N	NELAP	PA	11/27/2019
EPA 9056	A	Nitrite as N	NELAP	PA	07/05/2018
EPA 9056	A	Sulfate	NELAP	PA	07/05/2018
EPA 9071	B	Oil and grease	NELAP	PA	01/19/2005
EPA 9071	B	Total petroleum hydrocarbons (TPH)	NELAP	PA	11/19/2015
EPA 9095	A	Paint filter liquids test	NELAP	PA	01/24/2007
EPA 9095	B	Paint filter liquids test	NELAP	PA	11/19/2015
EPA Lloyd Kahn Method		Total organic carbon (TOC)	NELAP	PA	10/09/2013
MA DEP EPH	1.1	C11-C22 Aromatics	NELAP	PA	07/15/2013
MA DEP EPH	1.1	C19-C36 Aliphatics	NELAP	PA	07/15/2013
MA DEP EPH	1.1	C9-C18 Aliphatics	NELAP	PA	07/15/2013
MA DEP VPH	1.1	C5-C8 Aliphatics	NELAP	PA	07/15/2013
MA DEP VPH	1.1	C9-C10 Aromatics	NELAP	PA	07/15/2013
MA DEP VPH	1.1	C9-C12 Aliphatics	NELAP	PA	07/15/2013
MA DEP VPH	2.1	C5-C8 Aliphatics	NELAP	PA	07/16/2018
MA DEP VPH	2.1	C9-C10 Aromatics	NELAP	PA	07/16/2018
MA DEP VPH	2.1	C9-C12 Aliphatics	NELAP	PA	07/16/2018
NWTPH-Dx		Diesel-range organics (DRO)	NELAP	PA	12/12/2005
NWTPH-Gx		Gasoline-range organics (GRO)	NELAP	PA	12/12/2005
SM 2540 E		Fixed suspended solids	NELAP	PA	01/19/2016
SM 2540 E		Residue, volatile	NELAP	PA	01/19/2016
SM 2540 E		Volatile dissolved solids	NELAP	PA	01/19/2016
SM 2540 E		Volatile suspended solids	NELAP	PA	01/19/2016
SM 2540 G		Percent moisture in soil	NELAP	PA	11/19/2015
SM 2540 G		Residue, total	NELAP	PA	02/25/2014
SM 2540 G		Residue, volatile	NELAP	PA	11/19/2015

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Eurofins Lancaster Laboratories Environmental LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
SM 2540 G		Total, fixed, and volatile residue	NELAP	PA	03/19/2015
SM 4500-NH3 B		Ammonia distillation	NELAP	PA	08/30/2019
SM 4500-NH3 C		Ammonia as N	NELAP	PA	08/30/2019
SM 5310 B		Total organic carbon (TOC)	NELAP	PA	10/09/2013
SOP (00037) T-PFAS-WI12031	10	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	1H, 1H, 2H, 2H-Perfluorododecane sulfonic acid (10:2-FTS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	Hexafluoropropylene oxide dimer acid (HFPO-DA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	N-Ethylperfluorooctanesulfonamide (EtFOSA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	N-Methylperfluorooctanesulfonamide (MeFOSA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	N-ethylperfluoro-1-octanesulfonamido ethanol (N-EtFOSE)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	N-methylperfluoro-1-octanesulfonamido ethanol (N-MeFOSE)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	Perfluorobutanesulfonic acid (PFBS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	Perfluorobutanoic acid (PFBA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	Perfluorodecane sulfonic acid (PFDS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	Perfluorodecanoic acid (PFDA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	Perfluorododecane sulfonic acid (PFDoS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	Perfluorododecanoic acid (PFDoA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	Perfluoroheptanesulfonic acid (PFHpS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	Perfluoroheptanoic acid (PFHpA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	Perfluorohexadecanoic acid (PFHxDA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	Perfluorohexanesulfonic acid (PFHxS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	Perfluorohexanoic acid (PFHxA)	NELAP	PA	11/03/2020

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	Analyte	Accreditation Type	Primary State	Effective Date
SOP (00037) T-PFAS-WI12031	10	Perfluorononane sulfonic acid (PFNS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	Perfluorononanoic acid (PFNA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	Perfluorooctadecanoic acid (PFODA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	Perfluorooctane sulfonamide (PFOSA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	Perfluorooctanesulfonic acid (PFOS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	Perfluorooctanoic acid (PFOA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	Perfluoropentane sulfonic acid (PFPeS)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	Perfluoropentanoic acid (PFPeA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	Perfluorotetradecanoic acid (PFTA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	Perfluorotridecanoic acid (PFTrDA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	Perfluoroundecanoic acid (PFUnA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NELAP	PA	11/03/2020
TX1005 (TNRCC)		Total petroleum hydrocarbons (TPH)	NELAP	PA	12/12/2005
TX1006 (TNRCC)		Total petroleum hydrocarbons (TPH)	NELAP	PA	12/12/2005
WA-EPH		Diesel-range organics (DRO)	NELAP	PA	12/12/2005
WA-VPH		Gasoline-range organics (GRO)	NELAP	PA	12/12/2005

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APPENDIX E
ECOLOGICAL PROJECT SCREENING LEVEL DOCUMENTATION

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PFAS Ecological Screening Levels for Surface Water

Analyte	CAS Number	Conder[1]	Divine[2]			Minimum Value (mg/L)
		Aquatic Organism Water Quality Screening Level (mg/L)	Aquatic Organism Water Quality Screening Level (mg/L)	Bird Risk-Based Screening Level (mg/L)	Mammal Risk-Based Screening Level (mg/L)	
Perfluorooctanoic acid (PFOA)	335-67-1	1.11E+00	3.9E+00	--	**4.4E-03**	4.4E-03
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	5.85E-03	5.1E-02	**7.5E-05**	2.1E-04	7.5E-05
Perfluorobutanesulfonic acid (PFBS)	375-73-5	--	3.4E+00	**6.4E-01**	9.4E-01	6.4E-01
Perfluorodecanoic acid (PFDA)	335-76-2	--	**1.4E-01**	--	--	1.4E-01
Perfluorododecanoic acid (PFDoA)	307-55-1	--	**7.2E-02**	--	--	7.2E-02
Perfluoroheptanoic acid (PFHpA)	375-85-9	--	**8.7E-01**	--	--	8.7E-01
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	--	--	--	--	--
Perfluorohexanoic acid (PFHxA)	307-24-4	--	2.3E+00	--	**2.1E-01**	2.1E-01
Perfluorononanoic acid (PFNA)	375-95-1	--	1.2E-01	--	**2.2E-03**	2.2E-03
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	--	--	--	--	--
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	--	--	--	--	--
Perfluoroundecanoic acid (PFUnA)	2058-94-8	--	**4.9E-02**	--	--	4.9E-02
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	--	--	--	--	--
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	--	--	--	--	--
Hexafluoropropylene oxide dimer acid, (HFPO-DA)	13252-13-6	--	--	--	--	--
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	--	--	--	--	--
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	--	--	--	--	--
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	--	--	--	--	--

Sources:

1 - Conder. et al., 2020. Technical Report: Guidance for Assessing the Ecological Risks of PFAS to Threatened and Endangered Species at Aqueous Film Forming Foam Impacted Sites. Revision 2. Geosyntec Consultants and Colorado School of Mines. SERDP Project: ER18-1614 (Table 6). September. Values selected are the 5 percent Hazardous Concentrations for freshwater.

2 - Divine, et al., 2020. Approach for Assessing PFAS Risk to Threatened and Endangered Species. SERDP Project ER18-1653 (Tables 7 and 11a). March.

-- - Value is not available

Shaded cells are the minimum values

PFAS Ecological Screening Levels for Sediment

Analyte	CAS Number	EA Freshwater Sediment PNEC [1] (mg/kg)	Divine [2]		Minimum Value (mg/kg)
			Bird Risk-based Screening Level (mg/kg)	Mammal Risk-Based Screening Level (mg/kg)	
Perfluorooctanoic acid (PFOA)	335-67-1	--	--	**6.00E-03**	6.00E-03
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	8.38E-02	**1.40E-03**	5.30E-03	1.40E-03
Perfluorobutanesulfonic acid (PFBS)	375-73-5	--	**7.30E-01**	1.10E+00	7.30E-01
Perfluorodecanoic acid (PFDA)	335-76-2	--	--	--	--
Perfluorododecanoic acid (PFDoA)	307-55-1	--	--	--	--
Perfluoroheptanoic acid (PFHpA)	375-85-9	--	--	--	--
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	--	--	--	--
Perfluorohexanoic acid (PFHxA)	307-24-4	--	--	**1.80E+00**	1.80E+00
Perfluorononanoic acid (PFNA)	375-95-1	--	--	**1.00E-02**	1.00E-02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	--	--	--	--
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	--	--	--	--
Perfluoroundecanoic acid (PFUnA)	2058-94-8	--	--	--	--
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	--	--	--	--
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	--	--	--	--
Hexafluoropropylene oxide dimer acid, (HFPO-DA)	13252-13-6	--	--	--	--
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	--	--	--	--
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	--	--	--	--
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	--	--	--	--

1 - Screening level from Environmental Agency, 2004. Environmental Risk Evaluation Report: Perfluorooctanesulphonate (PFOS). The freshwater sediment predicted no effect concentration of 67 µg/kg wet weight for PFOS was converted to dry weight assuming a percent moisture for sediment samples of 80 percent. No other invertebrates sediment screening levels are available in Conder, et al. (2020) or Divine, et al. (2020).

2 - Divine, et al., 2020. Approach for Assessing PFAS Risk to Threatened and Endangered Species. SERDP Project ER18-1653 (Table 11a). March.

-- - Value is not available

Shaded cells are the minimum values

TETRA TECH

FIELD TASK MODIFICATION REQUEST FORM

NASJRB Willow Grove	WE04	3
Project/Installation Name	**CTO & Project Number**	**Task Mod. Number**
SAP for PFAS Surface Water and Sediment Sampling (NIRIS #1281)	**On-base and Off-base**	**8/29/2022**
Modification To (e.g. Work Plan)	**Site/Sample Location**	**Date**

Activity Description: This Field Task Modification Request Form (FTMR) documents that sediment samples will be analyzed for pH, oxidation reduction potential (ORP), temperature, and specific conductance in accordance with discussion with the EPA in the Response to EPA Comments document dated March 15, 2022 (Tetra Tech, 2022a). The annual sediment sampling events currently planned for September 2022 and September 2023 will include sampling of these parameters for all locations in the sampling sequence for those events. Sediment temperature will be a field-measured parameter while pH, ORP, and specific conductance will be analyzed by Eurofins Lancaster Laboratory in Lancaster, Pennsylvania.

Analytical procedures, bottleware, and laboratory information is detailed in the *Draft Final Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan) for Phase 2 Remedial Investigation for Per- and Poly-fluoroalkyl Substances [PFAS] in On-Base Soil, Sediment, and Surface Water, and VOCs in Former Fire Training Area Soil* (hereafter referred to as On-base Soil PFAS SAP (Tetra Tech, 2022b).

Reason for Change: The original SAP did not include these parameters and the addition of these parameters will aid in interpretation of fate and transport of PFAS. No field quality control samples are required as the decision rules are not based on these data; rather these data will be used in the nature and extent discussion of the Phase 2 PFAS remedial investigation.

Recommended Disposition: Use this form in conjugation with the original approved Off-base Surface Water and Sediment SAP and FTMR Numbers 1 and 2 for additional project details (Tetra Tech, 2020a, 2020b, 2021). Use the On-base Soil PFAS SAP for analytical procedures, bottleware, field equipment, laboratory information, and data validation procedures found in Worksheets 14, 19, 21, 22, and 34-36 (Tetra Tech, 2022b). The locations to be sampled are those that receive concurrence by Navy/U.S. Geological Survey prior to each event. The selected sampling locations may vary, but all possible locations are listed in Table 1 below as well as in the SAP and/or the SAP FTMRs. Per Worksheets 34-36 in the On-base Soil PFAS SAP data for these parameters will only receive a Step 1 data verification review. Sample result validation is not conducted, and a formal data validation report will not be issued.

Sue Herbst

Requester, e.g., Project Chemist (Signature)	8/292022 Date

Approved Disposition:

Tricia E Moore — 09/08/2022
Project Manager (Signature) — Date

Michelle Coffman — 09/08/2022
Quality Assurance Manager (Signature) — Date

Distribution:
Program/Project File – NASJRB Willow Grove
Project/Task Order Manager – Tricia Moore

Field Operations Leader – Seth Oshier — Seth Oshier
Field Operations Leader – Dan Albanese — Daniel Albanese
Field Operations Leader – Chris Sinisi
Field Operations Leader – Don Whalen — Donald Whalen
Field Operations Leader – Bill Burger — William Burger

References:

Tetra Tech, 2020a. *Final Sampling and Analysis Plan for PFAS Surface Water and Sediment Sampling, Former NASJRB Willow Grove, Pennsylvania*. March.

Tetra Tech, 2020b. *Field Task Modification Request Number 1 to the Final Sampling and Analysis Plan for PFAS Surface Water and Sediment Sampling, Former NASJRB Willow Grove*, Pennsylvania. August.

Tetra Tech, 2021. *Field Task Modification Request Number 2 to the Final Sampling and Analysis Plan for PFAS Surface Water and Sediment Sampling, Former NASJRB Willow Grove*, Pennsylvania. July.

Tetra Tech, 2022a. *EPA Comments on the Draft Annual Technical Memorandum for Per- and Polyfluoroalkyl Substances, July 2019, October 2019, January 2020, and May 2020 Surface Water Sampling and July 2019 Sediment Sampling; Draft Technical Memorandum for PFAS Surface Water and Sediment Sampling, September 2020 (Round 5); and Technical Memorandum for Per- and Polyfluoroalkyl Substances Surface Water Sampling, January 2021, and the Surface Water and Sediment PFAS SAP FTMR No. 2*. March.

Tetra Tech, 2022b. *Draft Final Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan) for Phase 2 Remedial Investigation for PFAS in On-Base Soil, Sediment, and Surface Water, and VOCs in Former Fire Training Area Soil Former Fire Training Area, Building 177, Former Rifle Range Area, Building 80, Building 680, Building 681, Northern Ponded Area, Building 175, Building 183, Building 13, General Areas, and 1979 Aircraft On-Base Incident Area, Former NASJRB Willow Grove, Horsham Township, Pennsylvania*. April.

Table 1 – Sediment Locations

WGNA-Little Neshaminy REF1	WGNA-SW/SED-01	WGNA-SW/SED-20	WGNA-SW/SED-36A	WGNA-SW/SED-51
WGNA-Neshaminy REF 1	WGNA-SW/SED-03	WGNA-SW/SED-26	WGNA-SW/SED-39A	WGNA-SW/SED-52
WGNA-Neshaminy REF 2	WGNA-SW/SED-05	WGNA-SW/SED-27	WGNA-SW/SED-41	WGNA-SW/SED-53
WGNA-Neshaminy REF 3	WGNA-SW/SED-08A	WGNA-SW/SED-28	WGNA-SW/SED-42	WGNA-SW/SED-54
WGNA-Neshaminy REF 4	WGNA-SW/SED-10	WGNA-SW/SED-30	WGNA-SW/SED-45	WGNA-SW/SED-56
WGNA-Park Creek REF1	WGNA-SW/SED-14	WGNA-SW/SED-31	WGNA-SW/SED-46	WGNA-SW/SED-57
WGNA-Park Creek REF2	WGNA-SW/SED-16	WGNA-SW/SED-33	WGNA-SW/SED-47	WGNA-SW/SED-63
WGNA-Pennypack REF 1	WGNA-SW/SED-17	WGNA-SW/SED-34A	WGNA-SW/SED-48	WGNA-SW/SED-64
WGNA-Pennypack REF 2	WGNA-SW/SED-19	WGNA-SW/SED-36	WGNA-SW/SED-49	

TETRA TECH

FIELD TASK MODIFICATION REQUEST FORM

NASJRB Willow Grove	WE04	4
Project/Installation Name	**CTO & Project Number**	**Task Mod. Number**
SAP for PFAS Surface Water and Sediment Sampling (NIRIS #1281)	**On-base and Off-base**	**10/1/2023**
Modification To (e.g., Work Plan)	**Site/Sample Location**	**Date**

Activity Description: This Field Task Modification Request Form (FTMR) documents that sediment samples will be analyzed for Total Organic Carbon (TOC) via Llyod Kahn at Eurofins Lancaster Laboratories (ELLE) in Lancaster, Pennsylvania. ELLE will analyze aqueous rinsate blanks for TOC via method 9060A following the same procedures in the SAP. Perfluorobutanoic acid (PFBA) will be added to the list of PFAS analytes for surface water and sediment. PFAS analysis, with the inclusion of PFBA, will be analyzed by Battelle in Norwell, Massachusetts. Human health and ecological project screening levels (PSLs) have also been updated.

Analytical procedures, bottleware, and laboratory information are detailed in the *Final Sampling and Analysis Plan (Field Sampling Plan and Quality Assurance Project Plan) for PFAS Surface Water and Sediment Sampling,* and SAP FTMRs No. 1, 2, and 3 (Tetra Tech, 2020a, 2020b, 2021, 2022).

Reason for Change: The original SAP denotes TOC will be run by Katahdin Analytical in Scarborough, Maine. However, due to changes in instrumentation, the lab cannot currently run TOC. Therefore, ELLE will run the TOC samples via Llyod Kahn for solid (sediment), and 9060A for aqueous. ELLE is certified for these methods, as applicable by both DOD and PA. The United States Environmental Protection Agency (USEPA) added a regional screening level (RSL) for PFBA in the May 2023 RSL tables publication. As such, it will be added to the PFAS list for surface water and sediment samples. PFAS analytes perfluorohexanesulfonic acid (PFHxS), perfluorononanoic acid (PFNA), and hexafluoropropylene oxide dimer acid, (HFPO-DA) have also been added to the RSL tables since the original SAP was written, therefore PSLs were updated for these analytes as well. The original SAP lists Battelle as the laboratory for PFAS analysis and this will not change. Battelle is certified for PFAS, including PFBA and analytes detailed above, as applicable by both DOD and PA.

Recommended Disposition: Update SAP to record the changes described above with revised Worksheets attached, as applicable.

Amanda Barnhart — **9/29/23**

Requester, e.g., Project Chemist (Signature) — Date

Approved Disposition: As recommended above.

Lucia E Moore — **10/1/23**

Project Manager (Signature) — Date

Distribution:
Program/Project File – NASJRB Willow Grove

Approved for public release: distribution unlimited

Project/Task Order Manager – Tricia Moore
Project/Task Order Deputy Manager – Sue Herbert
Data Validation Manager – Joseph Samchuck
Field Operations Leader – Chris Sinisi
Field Operations Leader – Scott Berry
Field Operations Leader – Kevin Soffera

References:

Tetra Tech, 2020a. *Final Sampling and Analysis Plan for PFAS Surface Water and Sediment Sampling, Former NASJRB Willow Grove, Pennsylvania*. March.
Tetra Tech, 2020b. *SAP FTMR No.1 for PFAS Surface Water and Sediment Sampling, Former NASJRB Willow Grove, Pennsylvania*. August.
Tetra Tech, 2021. *SAP FTMR No.2, for PFAS Surface Water and Sediment Sampling, Former NASJRB Willow Grove, Pennsylvania*. April.
Tetra Tech, 2022. *SAP FTMR No.3, for PFAS Surface Water and Sediment Sampling, Former NASJRB Willow Grove, Pennsylvania*. April.

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APPENDIX D - LABORATORY CERTIFICATIONS

SAP Worksheet #3 -- Distribution List
(UFP-QAPP Manual Section 2.3.1)

Only additional recipients have been added to this Worksheet.

Name of Sampling and Analysis Plan (SAP) Recipients	Title/Role	Organization	Telephone Number	E-mail Address or Mailing Address
Stephen Gordon (electronic copy)	ELLE Project Manager/ Oversees project-specific laboratory operations	Eurofins Lancaster	412-525-0071	Stephen.Gordon@et.eurofinsus.com

SAP Worksheet #15 -- Reference Limits and Evaluation Table
(UFP-QAPP Manual Section 2.8.1)

Matrix: Surface Water
Analytical Group: Per- and polyfluoroalkyl substances (PFAS) by Liquid Chromatograph/Tandem Mass Spectroscopy (LC/MS/MS) Compliant with Quality Systems Manual (QSM) 5.4 Table B-15 [1]

Analyte	Chemical Abstract Survey (CAS) Number	Human Health PSL[2] parts per trillion (ppt)	PSL Reference[2]	Ecological PSL[3] (ppt)	PSL Reference[3]	Battelle		
						Limit of Quantitation (LOQ) (ppt)	Limit of Detection (LOD) (ppt)	Detection Limit (DL) (ppt)
Perfluorooctanoic acid (PFOA)	335-67-1	210	RSL Calc	307,00	Grippo et al. (2021)	0.005	0.0025	0.00107
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	140	RSL Calc	2,080	Grippo et al. (2021)	0.005	0.0025	0.00101
Perfluorobutanoic acid (PFBA)	375-22-4	34,000	RSL Calc	64,600	Grippo et al. (2021)	0.005	0.0035	0.00151
Perfluorobutanesulfonic acid (PFBS)	375-73-5	21,000	RSL Calc	400,000	Grippo et al. (2021)	0.005	0.0025	0.000866
Perfluorodecanoic acid (PFDA)	335-76-2	NA	NA	140,000	Grippo et al. (2021)	0.005	0.0025	0.000784
Perfluorododecanoic acid (PFDoA)	307-55-1	NA	NA	660	Divine et al. (2020)	0.005	0.0025	0.000760
Perfluoroheptanoic acid (PFHpA)	375-85-9	NA	NA	870,000	Divine et al. (2020)	0.005	0.0025	0.000941
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	1,200	RSL Calc	5,500	Grippo et al. (2021)	0.005	0.0025	0.000997
Perfluorohexanoic acid (PFHxA)	307-24-4	NA	NA	28,800	Grippo et al. (2021)	0.005	0.0025	0.000913
Perfluorononanoic acid (PFNA)	375-95-1	170	RSL Calc	2,200	Grippo et al. (2021)	0.005	0.0025	0.000833
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	NA	NA	NA	NA	0.005	0.0025	0.000791
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	NA	NA	NA	NA	0.005	0.0025	0.000742
Perfluoroundecanoic acid (PFUnA)	2058-94-8	NA	NA	49,000	Divine et al. (2020)	0.005	0.0025	0.000752
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	NA	NA	NA	NA	0.005	0.0025	0.000990

Analyte	Chemical Abstract Survey (CAS) Number	Human Health PSL[2] parts per trillion (ppt)	PSL Reference[2]	Ecological PSL[3] (ppt)	PSL Reference[3]	Battelle		
						Limit of Quantitation (LOQ) (ppt)	Limit of Detection (LOD) (ppt)	Detection Limit (DL) (ppt)
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	NA	NA	NA	NA	0.005	0.0025	0.00103
Hexafluoropropylene oxide dimer acid, (HFPO-DA)	13252-13-6	210	RSL Calc	NA	NA	0.005	0.0025	0.000865
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	NA	NA	NA	NA	0.005	0.0025	0.000103
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	NA	NA	NA	NA	0.005	0.0025	0.000869
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	NA	NA	NA	NA	0.005	0.0025	0.0009

(1) The DoD QSM version 5.4 is being used to govern this effort. Analysis will be completed in accordance with Battelle SOPs. Battelle's accreditation meets the requirements of QSM 5.4 Table B-15.

(2) Environmental Protection Agency (EPA) RSL calculator target hazard quotient of 0.1 used for a recreational swimmer based on May 2023 tables (EPA, 2023) based on site-specific exposure assumptions.

(3) Ecological screening levels for PFAS have not been developed by EPA. Therefore, ecological PSLs for aquatic invertebrate and wildlife values were identified based on a review of the literature. All ecological wildlife PSLs are based on Grippo, et. al., 2021. The aquatic organism PSLs for PFOA, PFOS, PFBS, PFBA, PFDA, PFHxA, and PFNA are based on Grippo, et. al., 2021, and PFDoA, PFHpA, and PFUNA are based on Divine et al., 2020. Divine et al. (2020) wildlife values are NOAEL-based. The lower of the aquatic invertebrate and the ecological wildlife values was used and referenced in the above table.

DoD=Department of Defense
QSM=Quality Systems Manual
NA=Not applicable
RSL CALC=EPA RSL Calculator
Results less than the DL will be reported as the LOD value followed by a "U" qualifier to indicate that the analyte was not detected at the indicated concentration level.

Matrix: Sediment
Analytical Group: PFAS by LC/MS/MS Compliant with QSM 5.4 Table B-15 [1]

Analyte	CAS Number	Human Health PSL[2] parts per billion (ppb)	PSL Reference[2]	Ecological PSL[3] (ppb)	PSL Reference[3]	Battelle		
						LOQ (ppb)	LOD (ppb)	DL (ppb)
Perfluorooctanoic acid (PFOA)	335-67-1	130	RSL Calc	6	Divine et al. (2020)	1.00	0.50	0.214
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	85	RSL Calc	1.4	Divine et al. (2020)	1.00	0.50	0.175
Perfluorobutanoic acid (PFBA)	375-22-4	53,000	RSL Calc	22,000	Divine et al. (2020)	2.00	0.50	0.2019
Perfluorobutanesulfonic acid (PFBS)	375-73-5	13,000	RSL Calc	730	Divine et al. (2020)	1.00	0.50	0.171
Perfluorodecanoic acid (PFDA)	335-76-2	NA	NA	NA	NA	1.00	0.50	0.158
Perfluorododecanoic acid (PFDoA)	307-55-1	NA	NA	NA	NA	1.00	0.50	0.160
Perfluoroheptanoic acid (PFHpA)	375-85-9	NA	NA	NA	NA	1.00	0.50	0.168
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	850	RSL Calc	NA	NA	1.00	0.50	0.173
Perfluorohexanoic acid (PFHxA)	307-24-4	NA	NA	1,800	Divine et al. (2020)	1.00	0.50	0.178
Perfluorononanoic acid (PFNA)	375-95-1	130	RSL Calc	10	Divine et al. (2020)	1.00	0.50	0.157
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	NA	NA	NA	NA	2.00	0.50	0.162
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	NA	NA	NA	NA	1.00	0.50	0.161
Perfluoroundecanoic acid (PFUnA)	2058-94-8	NA	NA	NA	NA	1.00	0.50	0.156
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2355-31-9	NA	NA	NA	NA	2.00	0.50	0.159
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2991-50-6	NA	NA	NA	NA	2.00	0.50	0.165
Hexafluoropropylene oxide dimer acid, (HFPO-DA)	13252-13-6	160	RSL Calc	NA	NA	2.00	0.50	0.159
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	763051-92-9	NA	NA	NA	NA	2.00	0.50	0.150
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	NA	NA	NA	NA	2.00	0.50	0.154
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	NA	NA	NA	NA	2.00	0.50	0.160

(1) The DoD QSM version 5.4 is being used to govern this effort. Analysis will be completed in accordance with Battelle SOPs. Battelle's accreditation meets the requirements of QSM 5.4 Table B-15.

(2) DoD (2023) directs the use of the EPA RSLs for screening criteria of environmental investigation data and provides screening values based on the recreator receptor scenario for sediment. The screening levels for human health were derived using the EPA RSL Calculator based on a target cancer risk of 1E-6 (applicable to PFOA only) and a target HQ of 0.1 with exposure assumptions for a recreational receptor.

(3) Ecological screening levels for PFAS have not been developed by EPA. Therefore, ecological PSLs were identified based on a review of the available literature.

Results less than the DL will be reported as the LOD value followed by a “U” qualifier to indicate that the analyte was not detected at the indicated concentration level.

Matrix: Sediment
Analytical Group: Total Organic Carbon (TOC)

Analyte	CAS Number	Human Health PSL milligram per kilogram (mg/kg)	PSL Reference	Ecological PSL (mg/kg)	PSL Reference	PQLG (mg/kg)	ELLE		
							LOQ (mg/kg)	LOD (mg/kg)	DL (mg/kg)
Total Organic Carbon	NA	NA	NA	NA	NA	NA	300	200	100

Results less than the DL will be reported as the LOD value followed by a “U” flag to indicate that the analyte was not detected at the indicated concentration level.

SAP Worksheet #19 -- Field Sampling Requirements Table

(UFP-QAPP Manual Section 3.1.1)

Matrix	Analytical Group	Analytical and Preparation Method / SOP Reference	Containers (number, size, and type)	Sample Volume (units)	Preservation Requirements (chemical, temperature, light protected)	Maximum Holding Time[1] (preparation / analysis)
Sediment	Total Organic Carbon	Lloyd Kahn; WI11627	4 or 8 ounce glass jar	20 g	Cool to ≤ 6 ° C	14 days to analysis

(1) Maximum holding time is calculated from the time the sample is collected to the time the sample is prepared/extracted.

SAP Worksheet #23 -- Analytical SOP References Table
(UFP-QAPP Manual Section 3.2.1)

Laboratory SOP Number[(1)]	Title, Revision Date, and/or Number	Definitive or Screening Data	Matrix and Analytical Group	Instrument	Organization Performing Analysis	Variance to QSM? (Y/N)	Modified for Project Work? (Y/N)
WI11627	TOC and TC in Solids and Sludges by Combustion by SM 5310B, EPA 415.1, SW-846 9060/9060A, Lloyd Kahn, Version 18, effective 11/04/2022	Definitive	Sediment / TOC	TOC Analyzer	ELLE	N	N

(1) ELLE is accredited for this method and matrix by the Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP) under the Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.4 (October 2021) and by the Pennsylvania Bureau of Laboratories Laboratory Accreditation Program. The accreditations are located in Appendix D.

SAP Worksheet #24 -- Analytical Instrument Calibration Table
(UFP-QAPP Manual Section 3.2.2)

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action (CA)	Person Responsible for CA	SOP Reference
TOC Analyzer	Initial calibration with a minimum 4 points ranging from 0.3 mg C to 6 mg C	Monthly or after continuing calibration fails	r2 ≥0.995. %Relative Error for low and mid-point cal standards must meet lab criteria	Perform more aggressive instrument maintenance and recalibrate	ELLE Analyst	WI11627
TOC Analyzer	ICB Standard	After each initial calibration	No analytes detected > RL	Perform more aggressive instrument maintenance and recalibrate	ELLE Analyst	WI11627
TOC Analyzer	ICV Standard	After each initial calibration	Laboratory Acceptance Criteria	Reanalyze the ICV. If ICV fails again do system maintenance and recalibrate	ELLE Analyst	WI11627
TOC Analyzer	CCV Standard	After every 10 analyses, and at the end of the sequence	Manufacturer acceptance limits	All affected samples are reanalyzed	ELLE Analyst	WI11627
TOC Analyzer	CCB Standard	After every 10 analyses, and at the end of the sequence	No analytes detected > RL	All affected samples are reanalyzed	ELLE Analyst	WI11627

SAP Worksheet #25 -- Analytical Instrument and Equipment Maintenance, Testing, and Inspection Table
(UFP-QAPP Manual Section 3.2.3)

Instrument/ Equipment	Maintenance Activity	Testing Activity	Inspection Activity	Frequency	Acceptance Criteria	CA	Responsible Person	SOP Reference
TOC Analyzer	As needed replacement of components	Calibration checks	Visual inspection of components	As needed maintenance/calibration checks every 10 injections	Manufacturer acceptance limits	Recalibration	ELLE Analyst	WI11627
Analytical balance	Assure the balance is in a vibration-free area, is level, and the interior housing is clean	Verification with ASTM certified weights	Visual inspection and weight verification	Each day of use	The reading must be ±0.1% or ±0.5mg, whichever is greater.	1) verify cleanliness of weights 2) remove balance from service and place a call to service firm 3) management must evaluate data generated since last acceptable reading to determine any potential impacts to data quality	ELLE Analyst	SOP11880

SAP Worksheet #28 -- Laboratory QC Samples Table

(UFP-QAPP Manual Section 3.4)

Matrix	**Sediment**
Analytical Group	**Total Organic Carbon**
Analytical Method / SOP Reference	**Lloyd Kahn / WI11627**

QC Sample	Frequency/ Number	Method/SOP QC Acceptance Limits[1]	Corrective Action	Person(s) Responsible for Corrective Action	DQI	MPC
Method Blank (MB)	1 per preparation batch of up to 20 samples.	The absolute value must be < ½ LOQ, <1/10 the amount measured in any sample, or <1/10 the regulatory limit, whichever is greater. Samples < ½ LOQ may be reported with failed MB.	Reanalyze blank to confirm detections. If detects confirm, reprepare samples that are not ND or not >10x the blank value.	ELLE Analyst	Accuracy/Laboratory Contamination	No analytes detected > 1/2LOQ or >1/10 the amount measured in any sample or 1/10 the regulatory limit, whichever is greater
Laboratory Control Sample (LCS)	1 per preparation batch of up to 20 samples	Laboratory statistical limits for compounds and RPD	Correct problem, reprepare and reanalyze the LCS and all sample associated	ELLE Analyst	Accuracy/Bias/Precision	Results within acceptance limits
Matrix Spike/Matrix Spike Duplicate (MS/MSD)	One is performed for each preparation batch of 20 samples.	Laboratory statistical limits for RPD	Flag data	ELLE Analyst	Precision	Results within acceptance limits

SAP Worksheet #30 -- Analytical Services Table

(UFP-QAPP Manual Section 3.5.2.3)

Analytical Group	Sample Locations/ID Numbers	Analytical SOP	Data Package Turnaround Time	Laboratory/Organization[1] (name and address, contact person and telephone number)	Backup Laboratory/Organization (name and address, contact person and telephone number)
Total Organic Carbon	See Worksheet #18 in FTMR No. 2	WI11627	21 days	Stephen Gordon Eurofins – Lancaster 2425 New Holland Pike Lancaster, PA, 17601 412-525-0071 Stephen.Gordon@et.eurofinsus.com	NA

(1) Eurofins - Lancaster is accredited for TOC analysis by the DoD-ELAP under the DoD QSM for Environmental Laboratories, Version 5.4 (October 2021) and by the Pennsylvania Bureau of Laboratories Laboratory Accreditation Program. The accreditations are located in Appendix D.

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APPENDIX D
LABORATORY CERTIFICATIONS

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PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc.
has assessed the Organization of:

Battelle
141 Longwater Drive, Suite 202, Norwell, MA 02061

(Hereinafter called the Organization) and hereby declares that Organization has met the requirements of ISO/IEC 17025:2017 General Requirements for the competence of Testing and Calibration Laboratories and the United States Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP) requirements identified within the DoD/DOE Quality Systems Manual (DoD/DOE QSM) Version 5.4 October 2021 and is accredited in accordance with the:

United States Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP)

This accreditation demonstrates the technical competence for the defined scope and the operation of a laboratory quality management system
(as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

Environmental Testing
(As detailed in the supplement)

Accreditation claims for such activities shall only be made from the addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation Body's duty to observe and comply with the said rules.

Initial Accreditation Date:	*Issue Date:*	*Expiration Date*
November 17, 2016	March 28, 2023	April 30, 2025

For PJLA

Tracy Szerszen
President

Accreditation No:	*Certificate No:*
91667	L23-262

Perry Johnson Laboratory Accreditation, Inc. (PJLA)
755 W. Big Beaver, Suite 1325
Troy, Michigan 48084

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: **www.pjlabs.com**

Certificate of Accreditation: Supplement

Battelle
141 Longwater Drive, Suite 202, Norwell, MA 02061
Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
Draft EPA Method 1633 by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)	10123429
Aqueous	
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	9490
1H, 1H, 2H, 2H-Perfluorodecanesulfonic Acid (8:2 Fluorotelomersulfonic Acid, 8:2FTS)	6948
1H, 1H, 2H, 2H-Perfluorohexanesulfonic Acid (4:2 Fluorotelomersulfonic Acid, 4:2FTS)	6946
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2 Fluorotelomersulfonic Acid, 6:2FTS)	6947
2H,2H,3H,3H-Perfluorodecanoic Acid (7:3 FTCA, 3-Perfluoroheptyl Propanoic Acid)	9340
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3 FTCA)	9338
4,4,5,5,6,6,6-Heptafluorohexanoi Acid (3:3 FTCA, 3-Perfluoropropyl Propanoic Acid)	9353
4,8-dioxa-3H-perfluorononanoic Acid (ADONA)	6951
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9-Cl-PF3ONS)	6952
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	9460
N-ethyl perfluorooctanesulfonamide (EtFOSA)	9395
N-ethyl perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	4847
N-ethyl perfluorooctanesulfonamidoethanol (EtFOSE)	9431
N-methyl perfluorooctanesulfonamide (MeFOSA)	9433
N-methyl perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	4846
N-methyl perfluorooctanesulfonamidoethanol (MeFOSE)	6949
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	6956
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	6957
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	6965
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	6966
Perfluorobutanesulfonic Acid (PFBS)	6918
Perfluorobutanoic Acid (PFBA)	6915
Perfluorodecanesulfonic Acid (PFDS)	6920
Perfluorodecanoic Acid (PFDA)	6905
Perfluorododecanesulfonic Acid (PFDoS)	6923
Perfluorododecanoic Acid (PFDoA)	6903
Perfluoroheptanesulfonic Acid (PFHpS)	9470
Perfluoroheptanoic Acid (PFHpA)	6908
Perfluorohexanesulfonic Acid (PFHxS)	6927
Perfluorohexanoic Acid (PFHxA)	6913
Perfluorononanesulfonic Acid (PFNS)	6929
Perfluorononanoic Acid (PFNA)	6906
Perfluorooctanesulfonamide (PFOSA)	6917
Perfluorooctanesulfonic Acid (PFOS)	6931
Perfluorooctanoic Acid (PFOA)	6912
Perfluoropentanesulfonic Acid (PFPeS)	6934

Certificate of Accreditation: Supplement

Battelle
141 Longwater Drive, Suite 202, Norwell, MA 02061
Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
Draft EPA Method 1633 by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)	10123429
Aqueous	
Perfluoropentanoic Acid (PFPeA)	6914
Perfluorotetradecanoic Acid (PFTeDA)	6902
Perfluorotridecanoic Acid (PFTrDA)	9563
Perfluoroundecanoic Acid (PFUnA)	6904
Solid	
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	9490
1H, 1H, 2H, 2H-Perfluorodecanesulfonic Acid (8:2 Fluorotelomersulfonic Acid, 8:2FTS)	6948
1H, 1H, 2H, 2H-Perfluorohexanesulfonic Acid (4:2 Fluorotelomersulfonic Acid, 4:2FTS)	6946
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2 Fluorotelomersulfonic Acid, 6:2FTS)	6947
2H,2H,3H,3H-Perfluorodecanoic Acid (7:3 FTCA, 3-Perfluoroheptyl Propanoic Acid)	9340
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3 FTCA)	9338
4,4,5,5,6,6,6-Heptafluorohexanoi Acid (3:3 FTCA, 3-Perfluoropropyl Propanoic Acid)	9353
4,8-dioxa-3H-perfluorononanoic Acid (ADONA)	6951
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9-Cl-PF3ONS)	6952
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	9460
N-ethyl perfluorooctanesulfonamide (EtFOSA)	9395
N-ethyl perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	4847
N-ethyl perfluorooctanesulfonamidoethanol (EtFOSE)	9431
N-methyl perfluorooctanesulfonamide (MeFOSA)	9433
N-methyl perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	4846
N-methyl perfluorooctanesulfonamidoethanol (MeFOSE)	6949
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	6956
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	6957
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	6965
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	6966
Perfluorobutanesulfonic Acid (PFBS)	6918
Perfluorobutanoic Acid (PFBA)	6915
Perfluorodecanesulfonic Acid (PFDS)	6920
Perfluorodecanoic Acid (PFDA)	6905
Perfluorododecanesulfonic Acid (PFDoS)	6923
Perfluorododecanoic Acid (PFDoA)	6903
Perfluoroheptanesulfonic Acid (PFHpS)	9470
Perfluoroheptanoic Acid (PFHpA)	6908
Perfluorohexanesulfonic Acid (PFHxS)	6927
Perfluorohexanoic Acid (PFHxA)	6913
Perfluorononanesulfonic Acid (PFNS)	6929

Certificate of Accreditation: Supplement

Battelle
141 Longwater Drive, Suite 202, Norwell, MA 02061
Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
Draft EPA Method 1633 by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)	10123429
Solid	
Perfluorononanoic Acid (PFNA)	6906
Perfluorooctanesulfonamide (PFOSA)	6917
Perfluorooctanesulfonic Acid (PFOS)	6931
Perfluorooctanoic Acid (PFOA)	6912
Perfluoropentanesulfonic Acid (PFPeS)	6934
Perfluoropentanoic Acid (PFPeA)	6914
Perfluorotetradecanoic Acid (PFTeDA)	6902
Perfluorotridecanoic Acid (PFTrDA)	9563
Perfluoroundecanoic Acid (PFUnA)	6904
Tissue	
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	9490
1H, 1H, 2H, 2H-Perfluorodecanesulfonic Acid (8:2 Fluorotelomersulfonic Acid, 8:2FTS)	6948
1H, 1H, 2H, 2H-Perfluorohexanesulfonic Acid (4:2 Fluorotelomersulfonic Acid, 4:2FTS)	6946
1H, 1H, 2H, 2H-Perfluorooctanesulfonic Acid (6:2 Fluorotelomersulfonic Acid, 6:2FTS)	6947
2H,2H,3H,3H-Perfluorodecanoic Acid (7:3 FTCA, 3-Perfluoroheptyl Propanoic Acid)	9340
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3 FTCA)	9338
4,4,5,5,6,6,6-Heptafluorohexanoi Acid (3:3 FTCA, 3-Perfluoropropyl Propanoic Acid)	9353
4,8-dioxa-3H-perfluorononanoic Acid (ADONA)	6951
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9-Cl-PF3ONS)	6952
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	9460
N-ethyl perfluorooctanesulfonamide (EtFOSA)	9395
N-ethyl perfluorooctanesulfonamidoacetic Acid (EtFOSAA)	4847
N-ethyl perfluorooctanesulfonamidoethanol (EtFOSE)	9431
N-methyl perfluorooctanesulfonamide (MeFOSA)	9433
N-methyl perfluorooctanesulfonamidoacetic Acid (MeFOSAA)	4846
N-methyl perfluorooctanesulfonamidoethanol (MeFOSE)	6949
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	6956
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	6957
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	6965
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	6966
Perfluorobutanesulfonic Acid (PFBS)	6918
Perfluorobutanoic Acid (PFBA)	6915
Perfluorodecanesulfonic Acid (PFDS)	6920
Perfluorodecanoic Acid (PFDA)	6905
Perfluorododecanesulfonic Acid (PFDoS)	6923
Perfluorododecanoic Acid (PFDoA)	6903

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Battelle
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Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
Draft EPA Method 1633 by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)	10123429
Tissue	
Perfluoroheptanesulfonic Acid (PFHpS)	9470
Perfluoroheptanoic Acid (PFHpA)	6908
Perfluorohexanesulfonic Acid (PFHxS)	6927
Perfluorohexanoic Acid (PFHxA)	6913
Perfluorononanesulfonic Acid (PFNS)	6929
Perfluorononanoic Acid (PFNA)	6906
Perfluorooctanesulfonamide (PFOSA)	6917
Perfluorooctanesulfonic Acid (PFOS)	6931
Perfluorooctanoic Acid (PFOA)	6912
Perfluoropentanesulfonic Acid (PFPeS)	6934
Perfluoropentanoic Acid (PFPeA)	6914
Perfluorotetradecanoic Acid (PFTeDA)	6902
Perfluorotridecanoic Acid (PFTrDA)	9563
Perfluoroundecanoic Acid (PFUnA)	6904
EPA 533 by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)	10091619
Drinking Water	
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	9490
1H, 1H, 2H, 2H-Perfluorodecane Sulfonic Acid (8:2 FTS)	6948
1H, 1H, 2H, 2H-Perfluorohexane Sulfonic Acid (4:2 FTS)	6946
1H, 1H, 2H, 2H-Perfluorooctane Sulfonic Acid (6:2 FTS)	6947
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9-Cl-PF3ONS)	6952
Ammonium 4,8-Dioxa-3H-Perfluorononanoate (ADONA)	6953
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA) – GenX	9460
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	6956
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	6957
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	6965
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	6966
Perfluorobutanesulfonic Acid (PFBS)	6918
Perfluorobutanoic Acid (PFBA)	6915
Perfluorodecanoic Acid (PFDA)	6905
Perfluorododecanoic Acid (PFDoA)	6903
Perfluoroheptanesulfonic Acid (PFHpS)	9470
Perfluoroheptanoic Acid (PFHpA)	6908
Perfluorohexanesulfonic Acid (PFHxS)	6927
Perfluorohexanoic Acid (PFHxA)	6913
Perfluorononanoic Acid (PFNA)	6906

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Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
EPA 533 by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)	10091619
Drinking Water	
Perfluorooctanesulfonic Acid (PFOS)	6931
Perfluorooctanoic Acid (PFOA)	6912
Perfluoropentanesulfonic Acid (PFPeS)	6934
Perfluoropentanoic Acid (PFPeA)	6914
Perfluoroundecanoic Acid (PFUnA)	6904
EPA 537.1.1 by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)	10091642
Drinking Water	
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	9490
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9-Cl-PF3ONS)	6952
Ammonium 4,8-Dioxa-3H-Perfluorononanoate (ADONA)	6953
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA) – GenX	9460
N-Ethylperfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	4846
N-Methylperfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	4847
Perfluorobutanesulfonic Acid (PFBS)	6918
Perfluorodecanoic Acid (PFDA)	6905
Perfluorododecanoic Acid (PFDoA)	6903
Perfluoroheptanoic Acid (PFHpA)	6908
Perfluorohexanesulfonic Acid (PFHxS)	6927
Perfluorohexanoic Acid (PFHxA)	6913
Perfluorononanoic Acid (PFNA)	6906
Perfluorooctanesulfonic Acid (PFOS)	6931
Perfluorooctanoic Acid (PFOA)	6912
Perfluorotetradecanoic Acid (PFTeDA)	6902
Perfluorotridecanoic Acid (PFTrDA)	9563
Perfluoroundecanoic Acid (PFUnA)	6904
EPA 8081 MOD (Battelle SOP 5-128) by Gas Chromatography Electron Capture Detector (GC/ECD)	10178402
Aqueous	
2,4'-DDD	8580
2,4'-DDE	8585
2,4'-DDT	8590
4,4'-DDD	7355
4,4'-DDE	7360
4,4'-DDT	7365
Aldrin	7025
alpha-BHC (a-BHC, alpha-Hexachlorocyclohexane)	7110
alpha-Chlordane (cis-Chlordane)	7240

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	Code
Organic	
EPA 8081 MOD (Battelle SOP 5-128) by Gas Chromatography Electron Capture Detector (GC/ECD)	10178402
Aqueous	
beta-BHC (b-BHC, beta-Hexachlorocyclohexane)	7115
Chlorpyrifos (Dursban)	7300
cis-Nonachlor	7925
delta-BHC (d-BHC)	7105
Dieldrin	7470
Endosulfan I	7510
Endosulfan II	7515
Endosulfan Sulfate	7520
Endrin	7540
Endrin Aldehyde	7530
Endrin Ketone	7535
gamma-BHC (γ-BHC, Lindane)	7120
gamma-Chlordane	7245
Heptachlor	7685
Heptachlor Epoxide	7690
Hexachlorobenzene	6275
Methoxychlor	7810
Mirex	7870
Oxychlordane	3890
PCB-101 (2,2',4,5,5'-Pentachlorobiphenyl)	8980
PCB-105 (2,3,3',4,4'-Pentachlorobiphenyl)	8985
PCB-110 (2,3,3',4',6-Pentachlorobiphenyl)	8990
PCB-118 (2,3',4,4',5-Pentachlorobiphenyl)	8995
PCB-126 (3,3',4,4',5-Pentachlorobiphenyl)	9015
PCB-128 (2,2',3,3',4,4'-Hexachlorobiphenyl)	9020
PCB-129 (2,2',3,3',4,5-Hexachlorobiphenyl)	9118
PCB-138 (2,2',3,4,4',5'-Hexachlorobiphenyl)	9025
PCB-153 (2,2',4,4',5,5'-Hexachlorobiphenyl)	9040
PCB-169 (3,3',4,4',5,5'-Hexachlorobiphenyl)	9060
PCB-170 (2,2',3,3',4,4',5-Heptachlorobiphenyl)	9065
PCB-18 (2,2',5-Trichlorobiphenyl)	8930
PCB-180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl)	9134
PCB-183 (2,2',3,4,4',5',6-Heptachlorobiphenyl)	9075
PCB-184 (2,2',3,4,4',6,6'-Heptachlorobiphenyl)	9139
PCB-187 (2,2',3,4',5,5',6-Heptachlorobiphenyl)	9080
PCB-195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl)	9103

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Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
EPA 8081 MOD (Battelle SOP 5-128) by Gas Chromatography Electron Capture Detector (GC/ECD)	10178402
Aqueous	
PCB-206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)	9095
PCB-209 (2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl)	9105
PCB-28 (2,4,4'-Trichlorobiphenyl)	9252
PCB-44 (2,2',3,5'-Tetrachlorobiphenyl)	8945
PCB-49 (2,2',4,5'-Tetrachlorobiphenyl)	8950
PCB-52 (2,2',5,5'-Tetrachlorobiphenyl)	8955
PCB-66 (2,3',4,4'-Tetrachlorobiphenyl)	8960
PCB-77 (3,3',4,4'-Tetrachlorobiphenyl)	8965
PCB-8 (2,4'-Dichlorobiphenyl)	9256
PCB-87 (2,2',3,4,5'-Pentachlorobiphenyl)	8975
trans-Nonachlor	7910
Solid	
2,4'-DDD	8580
2,4'-DDE	8585
2,4'-DDT	8590
4,4'-DDD	7355
4,4'-DDE	7360
4,4'-DDT	7365
Aldrin	7025
alpha-BHC (a-BHC, alpha-Hexachlorocyclohexane)	7110
alpha-Chlordane (cis-Chlordane)	7240
beta-BHC (b-BHC, beta-Hexachlorocyclohexane)	7115
Chlorpyrifos (Dursban)	7300
cis-Nonachlor	7925
delta-BHC (d-BHC)	7105
Dieldrin	7470
Endosulfan I	7510
Endosulfan II	7515
Endosulfan Sulfate	7520
Endrin	7540
Endrin Aldehyde	7530
Endrin Ketone	7535
gamma-BHC (γ-BHC, Lindane)	7120
gamma-Chlordane	7245
Heptachlor	7685
Heptachlor Epoxide	7690

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Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
EPA 8081 MOD (Battelle SOP 5-128) by Gas Chromatography Electron Capture Detector (GC/ECD)	10178402
Solid	
Hexachlorobenzene	6275
Methoxychlor	7810
Mirex	7870
Oxychlordane	3890
PCB-101 (2,2',4,5,5'-Pentachlorobiphenyl)	8980
PCB-105 (2,3,3',4,4'-Pentachlorobiphenyl)	8985
PCB-110 (2,3,3',4',6-Pentachlorobiphenyl)	8990
PCB-118 (2,3',4,4',5-Pentachlorobiphenyl)	8995
PCB-126 (3,3',4,4',5-Pentachlorobiphenyl)	9015
PCB-128 (2,2',3,3',4,4'-Hexachlorobiphenyl)	9020
PCB-129 (2,2',3,3',4,5-Hexachlorobiphenyl)	9118
PCB-138 (2,2',3,4,4',5'-Hexachlorobiphenyl)	9025
PCB-153 (2,2',4,4',5,5'-Hexachlorobiphenyl)	9040
PCB-169 (3,3',4,4',5,5'-Hexachlorobiphenyl)	9060
PCB-170 (2,2',3,3',4,4',5-Heptachlorobiphenyl)	9065
PCB-18 (2,2',5-Trichlorobiphenyl)	8930
PCB-180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl)	9134
PCB-183 (2,2',3,4,4',5',6-Heptachlorobiphenyl)	9075
PCB-184 (2,2',3,4,4',6,6'-Heptachlorobiphenyl)	9139
PCB-187 (2,2',3,4',5,5',6-Heptachlorobiphenyl)	9080
PCB-195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl)	9103
PCB-206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)	9095
PCB-209 (2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl)	9105
PCB-28 (2,4,4'-Trichlorobiphenyl)	9252
PCB-44 (2,2',3,5'-Tetrachlorobiphenyl)	8945
PCB-49 (2,2',4,5'-Tetrachlorobiphenyl)	8950
PCB-52 (2,2',5,5'-Tetrachlorobiphenyl)	8955
PCB-66 (2,3',4,4'-Tetrachlorobiphenyl)	8960
PCB-77 (3,3',4,4'-Tetrachlorobiphenyl)	8965
PCB-8 (2,4'-Dichlorobiphenyl)	9256
PCB-87 (2,2',3,4,5'-Pentachlorobiphenyl)	8975
trans-Nonachlor	7910
Tissue	
2,4'-DDD	8580
2,4'-DDE	8585
2,4'-DDT	8590

Certificate of Accreditation: Supplement

Battelle
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Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
EPA 8081 MOD (Battelle SOP 5-128) by Gas Chromatography Electron Capture Detector (GC/ECD)	10178402
Tissue	
4,4'-DDD	7355
4,4'-DDE	7360
4,4'-DDT	7365
Aldrin	7025
alpha-BHC (a-BHC, alpha-Hexachlorocyclohexane)	7110
alpha-Chlordane (cis-Chlordane)	7240
beta-BHC (b-BHC, beta-Hexachlorocyclohexane)	7115
Chlorpyrifos (Dursban)	7300
cis-Nonachlor	7925
delta-BHC (d-BHC)	7105
Dieldrin	7470
Endosulfan I	7510
Endosulfan II	7515
Endosulfan Sulfate	7520
Endrin	7540
Endrin Aldehyde	7530
Endrin Ketone	7535
gamma-BHC (γ-BHC, Lindane)	7120
gamma-Chlordane	7245
Heptachlor	7685
Heptachlor Epoxide	7690
Hexachlorobenzene	6275
Methoxychlor	7810
Mirex	7870
Oxychlordane	3890
PCB-101 (2,2',4,5,5'-Pentachlorobiphenyl)	8980
PCB-105 (2,3,3',4,4'-Pentachlorobiphenyl)	8985
PCB-110 (2,3,3',4',6-Pentachlorobiphenyl)	8990
PCB-118 (2,3',4,4',5-Pentachlorobiphenyl)	8995
PCB-126 (3,3',4,4',5-Pentachlorobiphenyl)	9015
PCB-128 (2,2',3,3',4,4'-Hexachlorobiphenyl)	9020
PCB-129 (2,2',3,3',4,5-Hexachlorobiphenyl)	9118
PCB-138 (2,2',3,4,4',5'-Hexachlorobiphenyl)	9025
PCB-153 (2,2',4,4',5,5'-Hexachlorobiphenyl)	9040
PCB-169 (3,3',4,4',5,5'-Hexachlorobiphenyl)	9060
PCB-170 (2,2',3,3',4,4',5-Heptachlorobiphenyl)	9065

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	Code
Organic	
EPA 8081 MOD (Battelle SOP 5-128) by Gas Chromatography Electron Capture Detector (GC/ECD)	10178402
Tissue	
PCB-18 (2,2',5-Trichlorobiphenyl)	8930
PCB-180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl)	9134
PCB-183 (2,2',3,4,4',5',6-Heptachlorobiphenyl)	9075
PCB-184 (2,2',3,4,4',6,6'-Heptachlorobiphenyl)	9139
PCB-187 (2,2',3,4',5,5',6-Heptachlorobiphenyl)	9080
PCB-195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl)	9103
PCB-206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)	9095
PCB-209 (2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl)	9105
PCB-28 (2,4,4'-Trichlorobiphenyl)	9252
PCB-44 (2,2',3,5'-Tetrachlorobiphenyl)	8945
PCB-49 (2,2',4,5'-Tetrachlorobiphenyl)	8950
PCB-52 (2,2',5,5'-Tetrachlorobiphenyl)	8955
PCB-66 (2,3',4,4'-Tetrachlorobiphenyl)	8960
PCB-77 (3,3',4,4'-Tetrachlorobiphenyl)	8965
PCB-8 (2,4'-Dichlorobiphenyl)	9256
PCB-87 (2,2',3,4,5'-Pentachlorobiphenyl)	8975
trans-Nonachlor	7910
EPA 8270E MOD (Battelle SOP 5-157) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Aqueous	
1,4-Dichlorobenzene	4620
1-Methylnaphthalene	6380
1-Methylphenanthrene	9501
2,3,5-Trimethylnaphthalene	6852
2,6-Dimethylnaphthalene	6188
2-Chloronaphthalene	5795
2-Methylnaphthalene	6385
2-Methylphenanthrene	4953
3,6-Dimethylphenanthrene	5957
Acenaphthene	5500
Acenaphthylene	5505
Anthracene	5555
Benzo(a)Anthracene	5575
Benzo(a)Pyrene	5580
Benzo(b)Fluoranthene	5585
Benzo(b)Thiophene	NC
Benzo(e)Pyrene	5605

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	Code
Organic	
EPA 8270E MOD (Battelle SOP 5-157) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Aqueous	
Benzo(g,h,i)Perylene	5590
Benzo(k)Fluoranthene	5600
Chrysene	5855
cis-Decalin	4621
Dibenz(a,h)Anthracene	5895
Dibenzofuran	5905
Dibenzothiophene	5910
Fluoranthene	6265
Fluorene	6270
Indeno(1,2,3,cd)Pyrene	6315
Naphthalene	5005
Perylene	6608
Phenanthrene	6615
Pyrene	6665
trans-Decalin	9587
Solid	
1,4-Dichlorobenzene	4620
1-Methylnaphthalene	6380
1-Methylphenanthrene	9501
2,3,5-Trimethylnaphthalene	6852
2,6-Dimethylnaphthalene	6188
2-Chloronaphthalene	5795
2-Methylnaphthalene	6385
2-Methylphenanthrene	4953
3,6-Dimethylphenanthrene	5957
Acenaphthene	5500
Acenaphthylene	5505
Anthracene	5555
Benzo(a)Anthracene	5575
Benzo(a)Pyrene	5580
Benzo(b)Fluoranthene	5585
Benzo(b)Thiophene	NC
Benzo(e)Pyrene	5605
Benzo(g,h,i)Perylene	5590
Benzo(k)Fluoranthene	5600
Chrysene	5855

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Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
EPA 8270E MOD (Battelle SOP 5-157) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Solid	
cis-Decalin	4621
Dibenz(a,h)Anthracene	5895
Dibenzofuran	5905
Dibenzothiophene	5910
Fluoranthene	6265
Fluorene	6270
Indeno(1,2,3,cd)Pyrene	6315
Naphthalene	5005
Perylene	6608
Phenanthrene	6615
Pyrene	6665
trans-Decalin	9587
Tissue	
1,4-Dichlorobenzene	4620
1-Methylnaphthalene	6380
1-Methylphenanthrene	9501
2,3,5-Trimethylnaphthalene	6852
2,6-Dimethylnaphthalene	6188
2-Chloronaphthalene	5795
2-Methylnaphthalene	6385
2-Methylphenanthrene	4953
3,6-Dimethylphenanthrene	5957
Acenaphthene	5500
Acenaphthylene	5505
Anthracene	5555
Benzo(a)Anthracene	5575
Benzo(a)Pyrene	5580
Benzo(b)Fluoranthene	5585
Benzo(b)Thiophene	NC
Benzo(e)Pyrene	5605
Benzo(g,h,i)Perylene	5590
Benzo(k)Fluoranthene	5600
Chrysene	5855
cis-Decalin	4621
Dibenz(a,h)Anthracene	5895
Dibenzofuran	5905

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Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
EPA 8270E MOD (Battelle SOP 5-157) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Tissue	
Dibenzothiophene	5910
Fluoranthene	6265
Fluorene	6270
Indeno(1,2,3,cd)Pyrene	6315
Naphthalene	5005
Perylene	6608
Phenanthrene	6615
Pyrene	6665
trans-Decalin	9587
EPA 8270E MOD (Battelle SOP 5-315) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Aqueous	
2,4'-DDD	8580
2,4'-DDE	8585
2,4'-DDT	8590
4,4'-DDD	7355
4,4'-DDE	7360
4,4'-DDT	7365
Biphenyl	5640
PCB-1 (2-Chlorobiphenyl, 2-Monochlorobiphenyl)	8915
PCB-100 (2,2',4,4',6-Pentachlorobiphenyl)	9177
PCB-101 (2,2',4,5,5'-Pentachlorobiphenyl)	8980
PCB-104 (2,2',4,6,6'-Pentachlorobiphenyl)	9182
PCB-105 (2,3,3',4,4'-Pentachlorobiphenyl)	8985
PCB-11 (3,3'-Dichlorobiphenyl)	8925
PCB-110 (2,3,3',4',6-Pentachlorobiphenyl)	8990
PCB-114 (2,3,4,4',5-Pentachlorobiphenyl)	9005
PCB-115 (2,3,4,4',6-Pentachlorobiphenyl)	9219
PCB-118 (2,3',4,4',5-Pentachlorobiphenyl)	8995
PCB-12 (3,4-Dichlorobiphenyl)	9270
PCB-123 (2,3',4,4',5'-Pentachlorobiphenyl)	9000
PCB-124 (2,3',4',5,5'-Pentachlorobiphenyl)	9222
PCB-125 (2,3',4',5',6-Pentachlorobiphenyl)	9224
PCB-126 (3,3',4,4',5-Pentachlorobiphenyl)	9015
PCB-127 (3,3',4,5,5'-Pentachlorobiphenyl)	9260
PCB-128 (2,2',3,3',4,4'-Hexachlorobiphenyl)	9020
PCB-13 (3,4'-Dichlorobiphenyl)	9269

Certificate of Accreditation: Supplement

Battelle
141 Longwater Drive, Suite 202, Norwell, MA 02061
Contact Name: Jonathan Thorn Phone: 781-681-5565

Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
EPA 8270E MOD (Battelle SOP 5-315) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Aqueous	
PCB-130 (2,2',3,3',4,5'-Hexachlorobiphenyl)	9117
PCB-131 (2,2',3,3',4,6-Hexachlorobiphenyl)	9121
PCB-134 (2,2',3,3',5,6-Hexachlorobiphenyl)	9128
PCB-135 (2,2',3,3',5,6'-Hexachlorobiphenyl)	9127
PCB-136 (2,2',3,3',6,6'-Hexachlorobiphenyl)	9130
PCB-137 (2,2',3,4,4',5-Hexachlorobiphenyl)	9138
PCB-138 (2,2',3,4,4',5'-Hexachlorobiphenyl)	9025
PCB-139 (2,2',3,4,4',6-Hexachlorobiphenyl)	9141
PCB-140 (2,2',3,4,4',6'-Hexachlorobiphenyl)	9140
PCB-141 (2,2',3,4,5,5'-Hexachlorobiphenyl)	9030
PCB-144 (2,2',3,4,5',6-Hexachlorobiphenyl)	9150
PCB-146 (2,2',3,4',5,5'-Hexachlorobiphenyl)	9144
PCB-149 (2,2',3,4',5',6-Hexachlorobiphenyl)	9151
PCB-15 (4,4'-Dichlorobiphenyl)	9273
PCB-151 (2,2',3,5,5',6-Hexachlorobiphenyl)	9035
PCB-153 (2,2’,4,4’,5,5’-Hexachlorobiphenyl)	9040
PCB-154 (2,2',4,4',5,6'-Hexachlorobiphenyl)	9174
PCB-155 (2,2',4,4',6,6'-Hexachlorobiphenyl)	9176
PCB-156 (2,3,3',4,4',5-Hexachlorobiphenyl)	9050
PCB-157 (2,3,3’,4,4’,5’-Hexachlorobiphenyl)	9045
PCB-158 (2,3,3',4,4',6-Hexachlorobiphenyl)	9193
PCB-16 (2,2',3-Trichlorobiphenyl)	9173
PCB-163 (2,3,3',4',5,6-Hexachlorobiphenyl)	9199
PCB-164 (2,3,3',4',5',6-Hexachlorobiphenyl)	9201
PCB-166 (2,3,4,4',5,6-Hexachlorobiphenyl)	9217
PCB-167 (2,3',4,4',5,5'-Hexachlorobiphenyl)	9055
PCB-169 (3,3',4,4',5,5'-Hexachlorobiphenyl)	9060
PCB-17 (2,2',4-Trichlorobiphenyl)	9185
PCB-170 (2,2',3,3',4,4',5-Heptachlorobiphenyl)	9065
PCB-171 (2,2',3,3',4,4',6-Heptachlorobiphenyl)	9106
PCB-172 (2,2',3,3',4,5,5'-Heptachlorobiphenyl)	9110
PCB-173 (2,2',3,3',4,5,6-Heptachlorobiphenyl)	9113
PCB-174 (2,2',3,3',4,5,6'-Heptachlorobiphenyl)	9116
PCB-175 (2,2',3,3',4,5',6-Heptachlorobiphenyl)	9115
PCB-176 (2,2',3,3',4,6,6'-Heptachlorobiphenyl)	9119
PCB-177 (2,2',3,3',4,5',6'-Heptachlorobiphenyl)	9114

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Organic	
EPA 8270E MOD (Battelle SOP 5-315) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Aqueous	
PCB-178 (2,2',3,3',5,5',6-Heptachlorobiphenyl)	9124
PCB-179 (2,2',3,3',5,6,6'-Heptachlorobiphenyl)	9126
PCB-18 (2,2',5-Trichlorobiphenyl)	8930
PCB-180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl)	9134
PCB-183 (2,2',3,4,4',5',6-Heptachlorobiphenyl)	9075
PCB-184 (2,2',3,4,4',6,6'-Heptachlorobiphenyl)	9139
PCB-185 (2,2',3,4,5,5',6-Heptachlorobiphenyl)	9143
PCB-187 (2,2',3,4',5,5',6-Heptachlorobiphenyl)	9080
PCB-188 (2,2',3,4',5,6,6'-Heptachlorobiphenyl)	9146
PCB-189 (2,3,3',4,4',5,5'-Heptachlorobiphenyl)	9085
PCB-19 (2,2',6-Trichlorobiphenyl)	9188
PCB-190 (2,3,3',4,4',5,6-Heptachlorobiphenyl)	9191
PCB-191 (2,3,3',4,4',5',6-Heptachlorobiphenyl)	9192
PCB-193 (2,3,3',4',5,5',6-Heptachlorobiphenyl)	9195
PCB-194 (2,2',3,3',4,4',5,5'-Octachlorobiphenyl)	9090
PCB-195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl)	9103
PCB-197 (2,2',3,3',4,4',6,6'-Octachlorobiphenyl)	9104
PCB-198 (2,2',3,3',4,5,5',6-Octachlorobiphenyl)	9109
PCB-199 (2,2',3,3',4,5,5',6'-Octachlorobiphenyl)	9108
PCB-200 (2,2',3,3',4,5,6,6'-Octachlorobiphenyl)	9111
PCB-201 (2,2',3,3',4,5',6,6'-Octachlorobiphenyl)	9112
PCB-202 (2,2',3,3',5,5',6,6'-Octachlorobiphenyl)	9123
PCB-203 (2,2',3,4,4',5,5',6-Octachlorobiphenyl)	9133
PCB-205 (2,3,3',4,4',5,5',6-Octachlorobiphenyl)	9190
PCB-206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)	9095
PCB-207 (2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl)	9101
PCB-208 (2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl)	9107
PCB-209 (2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl)	9105
PCB-22 (2,3,4'-Trichlorobiphenyl)	9241
PCB-24 (2,3,6-Trichlorobiphenyl)	9247
PCB-25 (2,3',4-Trichlorobiphenyl)	9240
PCB-26 (2,3',5-Trichlorobiphenyl)	8935
PCB-27 (2,3',6-Trichlorobiphenyl)	9248
PCB-28 (2,4,4'-Trichlorobiphenyl)	9252
PCB-29 (2,4,5-Trichlorobiphenyl)	9253
PCB-3 (4-Chlorobiphenyl, 4-Monochlorobiphenyl)	9274

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	Code
Organic	
EPA 8270E MOD (Battelle SOP 5-315) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Aqueous	
PCB-30 (2,4,6-Trichlorobiphenyl)	9254
PCB-31 (2,4',5-Trichlorobiphenyl)	8940
PCB-32 (2,4',6-Trichlorobiphenyl)	9255
PCB-33 (2,3',4'-Trichlorobiphenyl)	9239
PCB-37 (3,4,4'-Trichlorobiphenyl)	9266
PCB-4 (2,2'-Dichlorobiphenyl)	9189
PCB-40 (2,2',3,3'-Tetrachlorobiphenyl)	9132
PCB-41 (2,2',3,4-Tetrachlorobiphenyl)	9163
PCB-42 (2,2',3,4'-Tetrachlorobiphenyl)	9162
PCB-43 (2,2',3,5-Tetrachlorobiphenyl)	9169
PCB-44 (2,2',3,5'-Tetrachlorobiphenyl)	8945
PCB-45 (2,2',3,6-Tetrachlorobiphenyl)	9172
PCB-46 (2,2',3,6'-Tetrachlorobiphenyl)	9171
PCB-47 (2,2',4,4'-Tetrachlorobiphenyl)	9178
PCB-48 (2,2',4,5-Tetrachlorobiphenyl)	9181
PCB-49 (2,2',4,5'-Tetrachlorobiphenyl)	8950
PCB-5 (2,3-Dichlorobiphenyl)	8920
PCB-50 (2,2',4,6-Tetrachlorobiphenyl)	9184
PCB-51 (2,2',4,6'-Tetrachlorobiphenyl)	9183
PCB-52 (2,2',5,5'-Tetrachlorobiphenyl)	8955
PCB-53 (2,2',5,6'-Tetrachlorobiphenyl)	9186
PCB-54 (2,2',6,6'-Tetrachlorobiphenyl)	9187
PCB-56 (2,3,3',4'-Tetrachlorobiphenyl)	9207
PCB-6 (2,3'-Dichlorobiphenyl)	9249
PCB-60 (2,3,4,4'-Tetrachlorobiphenyl)	9221
PCB-63 (2,3,4',5-Tetrachlorobiphenyl)	9233
PCB-64 (2,3,4',6-Tetrachlorobiphenyl)	9236
PCB-66 (2,3',4,4'-Tetrachlorobiphenyl)	8960
PCB-67 (2,3',4,5-Tetrachlorobiphenyl)	9232
PCB-7 (2,4-Dichlorobiphenyl)	9257
PCB-70 (2,3',4',5-Tetrachlorobiphenyl)	9230
PCB-71 (2,3',4',6-Tetrachlorobiphenyl)	9237
PCB-74 (2,4,4',5-Tetrachlorobiphenyl)	9250
PCB-75 (2,4,4',6-Tetrachlorobiphenyl)	9251
PCB-77 (3,3',4,4'-Tetrachlorobiphenyl)	8965
PCB-8 (2,4'-Dichlorobiphenyl)	9256

Certificate of Accreditation: Supplement

Battelle
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Organic	
EPA 8270E MOD (Battelle SOP 5-315) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Aqueous	
PCB-80 (3,3',5,5'-Tetrachlorobiphenyl)	9264
PCB-81 (3,4,4',5-Tetrachlorobiphenyl)	8970
PCB-82 (2,2',3,3',4-Pentachlorobiphenyl)	9122
PCB-83 (2,2',3,3',5-Pentachlorobiphenyl)	9129
PCB-84 (2,2',3,3',6-Pentachlorobiphenyl)	9131
PCB-85 (2,2',3,4,4'-Pentachlorobiphenyl)	9142
PCB-87 (2,2',3,4,5'-Pentachlorobiphenyl)	8975
PCB-9 (2,5-Dichlorobiphenyl)	9258
PCB-91 (2,2',3,4',6-Pentachlorobiphenyl)	9160
PCB-92 (2,2',3,5,5'-Pentachlorobiphenyl)	9164
PCB-95 (2,2',3,5',6-Pentachlorobiphenyl)	9166
PCB-97 (2,2',3,4',5'-Pentachlorobiphenyl)	9154
PCB-99 (2,2',4,4',5-Pentachlorobiphenyl)	9175
Solid	
2,4'-DDD	8580
2,4'-DDE	8585
2,4'-DDT	8590
4,4'-DDD	7355
4,4'-DDE	7360
4,4'-DDT	7365
Biphenyl	5640
PCB-1 (2-Chlorobiphenyl, 2-Monochlorobiphenyl)	8915
PCB-100 (2,2',4,4',6-Pentachlorobiphenyl)	9177
PCB-101 (2,2',4,5,5'-Pentachlorobiphenyl)	8980
PCB-104 (2,2',4,6,6'-Pentachlorobiphenyl)	9182
PCB-105 (2,3,3',4,4'-Pentachlorobiphenyl)	8985
PCB-11 (3,3'-Dichlorobiphenyl)	8925
PCB-110 (2,3,3',4',6-Pentachlorobiphenyl)	8990
PCB-114 (2,3,4,4',5-Pentachlorobiphenyl)	9005
PCB-115 (2,3,4,4',6-Pentachlorobiphenyl)	9219
PCB-118 (2,3',4,4',5-Pentachlorobiphenyl)	8995
PCB-12 (3,4-Dichlorobiphenyl)	9270
PCB-123 (2,3',4,4',5'-Pentachlorobiphenyl)	9000
PCB-124 (2,3',4',5,5'-Pentachlorobiphenyl)	9222
PCB-125 (2,3',4',5',6-Pentachlorobiphenyl)	9224
PCB-126 (3,3',4,4',5-Pentachlorobiphenyl)	9015

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	Code
Organic	
EPA 8270E MOD (Battelle SOP 5-315) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Solid	
PCB-127 (3,3',4,5,5'-Pentachlorobiphenyl)	9260
PCB-128 (2,2',3,3',4,4'-Hexachlorobiphenyl)	9020
PCB-13 (3,4'-Dichlorobiphenyl)	9269
PCB-130 (2,2',3,3',4,5'-Hexachlorobiphenyl)	9117
PCB-131 (2,2',3,3',4,6-Hexachlorobiphenyl)	9121
PCB-134 (2,2',3,3',5,6-Hexachlorobiphenyl)	9128
PCB-135 (2,2',3,3',5,6'-Hexachlorobiphenyl)	9127
PCB-136 (2,2',3,3',6,6'-Hexachlorobiphenyl)	9130
PCB-137 (2,2',3,4,4',5-Hexachlorobiphenyl)	9138
PCB-138 (2,2',3,4,4',5'-Hexachlorobiphenyl)	9025
PCB-139 (2,2',3,4,4',6-Hexachlorobiphenyl)	9141
PCB-140 (2,2',3,4,4',6'-Hexachlorobiphenyl)	9140
PCB-141 (2,2',3,4,5,5'-Hexachlorobiphenyl)	9030
PCB-144 (2,2',3,4,5',6-Hexachlorobiphenyl)	9150
PCB-146 (2,2',3,4',5,5'-Hexachlorobiphenyl)	9144
PCB-149 (2,2',3,4',5',6-Hexachlorobiphenyl)	9151
PCB-15 (4,4'-Dichlorobiphenyl)	9273
PCB-151 (2,2',3,5,5',6-Hexachlorobiphenyl)	9035
PCB-153 (2,2’,4,4’,5,5’-Hexachlorobiphenyl)	9040
PCB-154 (2,2',4,4',5,6'-Hexachlorobiphenyl)	9174
PCB-155 (2,2',4,4',6,6'-Hexachlorobiphenyl)	9176
PCB-156 (2,3,3',4,4',5-Hexachlorobiphenyl)	9050
PCB-157 (2,3,3’,4,4’,5’-Hexachlorobiphenyl)	9045
PCB-158 (2,3,3',4,4',6-Hexachlorobiphenyl)	9193
PCB-16 (2,2',3-Trichlorobiphenyl)	9173
PCB-163 (2,3,3',4',5,6-Hexachlorobiphenyl)	9199
PCB-164 (2,3,3',4',5',6-Hexachlorobiphenyl)	9201
PCB-166 (2,3,4,4',5,6-Hexachlorobiphenyl)	9217
PCB-167 (2,3',4,4',5,5'-Hexachlorobiphenyl)	9055
PCB-169 (3,3',4,4',5,5'-Hexachlorobiphenyl)	9060
PCB-17 (2,2',4-Trichlorobiphenyl)	9185
PCB-170 (2,2',3,3',4,4',5-Heptachlorobiphenyl)	9065
PCB-171 (2,2',3,3',4,4',6-Heptachlorobiphenyl)	9106
PCB-172 (2,2',3,3',4,5,5'-Heptachlorobiphenyl)	9110
PCB-173 (2,2',3,3',4,5,6-Heptachlorobiphenyl)	9113
PCB-174 (2,2',3,3',4,5,6'-Heptachlorobiphenyl)	9116

Certificate of Accreditation: Supplement

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	Code
Organic	
EPA 8270E MOD (Battelle SOP 5-315) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Solid	
PCB-175 (2,2',3,3',4,5',6-Heptachlorobiphenyl)	9115
PCB-176 (2,2',3,3',4,6,6'-Heptachlorobiphenyl)	9119
PCB-177 (2,2',3,3',4,5',6'-Heptachlorobiphenyl)	9114
PCB-178 (2,2',3,3',5,5',6-Heptachlorobiphenyl)	9124
PCB-179 (2,2',3,3',5,6,6'-Heptachlorobiphenyl)	9126
PCB-18 (2,2',5-Trichlorobiphenyl)	8930
PCB-180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl)	9134
PCB-183 (2,2',3,4,4',5',6-Heptachlorobiphenyl)	9075
PCB-184 (2,2',3,4,4',6,6'-Heptachlorobiphenyl)	9139
PCB-185 (2,2',3,4,5,5',6-Heptachlorobiphenyl)	9143
PCB-187 (2,2',3,4',5,5',6-Heptachlorobiphenyl)	9080
PCB-188 (2,2',3,4',5,6,6'-Heptachlorobiphenyl)	9146
PCB-189 (2,3,3',4,4',5,5'-Heptachlorobiphenyl)	9085
PCB-19 (2,2',6-Trichlorobiphenyl)	9188
PCB-190 (2,3,3',4,4',5,6-Heptachlorobiphenyl)	9191
PCB-191 (2,3,3',4,4',5',6-Heptachlorobiphenyl)	9192
PCB-193 (2,3,3',4',5,5',6-Heptachlorobiphenyl)	9195
PCB-194 (2,2',3,3',4,4',5,5'-Octachlorobiphenyl)	9090
PCB-195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl)	9103
PCB-197 (2,2',3,3',4,4',6,6'-Octachlorobiphenyl)	9104
PCB-198 (2,2',3,3',4,5,5',6-Octachlorobiphenyl)	9109
PCB-199 (2,2',3,3',4,5,5',6'-Octachlorobiphenyl)	9108
PCB-200 (2,2',3,3',4,5,6,6'-Octachlorobiphenyl)	9111
PCB-201 (2,2',3,3',4,5',6,6'-Octachlorobiphenyl)	9112
PCB-202 (2,2',3,3',5,5',6,6'-Octachlorobiphenyl)	9123
PCB-203 (2,2',3,4,4',5,5',6-Octachlorobiphenyl)	9133
PCB-205 (2,3,3',4,4',5,5',6-Octachlorobiphenyl)	9190
PCB-206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)	9095
PCB-207 (2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl)	9101
PCB-208 (2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl)	9107
PCB-209 (2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl)	9105
PCB-22 (2,3,4'-Trichlorobiphenyl)	9241
PCB-24 (2,3,6-Trichlorobiphenyl)	9247
PCB-25 (2,3',4-Trichlorobiphenyl)	9240
PCB-26 (2,3',5-Trichlorobiphenyl)	8935
PCB-27 (2,3',6-Trichlorobiphenyl)	9248

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	Code
Organic	
EPA 8270E MOD (Battelle SOP 5-315) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Solid	
PCB-28 (2,4,4'-Trichlorobiphenyl)	9252
PCB-29 (2,4,5-Trichlorobiphenyl)	9253
PCB-3 (4-Chlorobiphenyl, 4-Monochlorobiphenyl)	9274
PCB-30 (2,4,6-Trichlorobiphenyl)	9254
PCB-31 (2,4',5-Trichlorobiphenyl)	8940
PCB-32 (2,4',6-Trichlorobiphenyl)	9255
PCB-33 (2,3',4'-Trichlorobiphenyl)	9239
PCB-37 (3,4,4'-Trichlorobiphenyl)	9266
PCB-4 (2,2'-Dichlorobiphenyl)	9189
PCB-40 (2,2',3,3'-Tetrachlorobiphenyl)	9132
PCB-41 (2,2',3,4-Tetrachlorobiphenyl)	9163
PCB-42 (2,2',3,4'-Tetrachlorobiphenyl)	9162
PCB-43 (2,2',3,5-Tetrachlorobiphenyl)	9169
PCB-44 (2,2',3,5'-Tetrachlorobiphenyl)	8945
PCB-45 (2,2',3,6-Tetrachlorobiphenyl)	9172
PCB-46 (2,2',3,6'-Tetrachlorobiphenyl)	9171
PCB-47 (2,2',4,4'-Tetrachlorobiphenyl)	9178
PCB-48 (2,2',4,5-Tetrachlorobiphenyl)	9181
PCB-49 (2,2',4,5'-Tetrachlorobiphenyl)	8950
PCB-5 (2,3-Dichlorobiphenyl)	8920
PCB-50 (2,2',4,6-Tetrachlorobiphenyl)	9184
PCB-51 (2,2',4,6'-Tetrachlorobiphenyl)	9183
PCB-52 (2,2',5,5'-Tetrachlorobiphenyl)	8955
PCB-53 (2,2',5,6'-Tetrachlorobiphenyl)	9186
PCB-54 (2,2',6,6'-Tetrachlorobiphenyl)	9187
PCB-56 (2,3,3',4'-Tetrachlorobiphenyl)	9207
PCB-6 (2,3'-Dichlorobiphenyl)	9249
PCB-60 (2,3,4,4'-Tetrachlorobiphenyl)	9221
PCB-63 (2,3,4',5-Tetrachlorobiphenyl)	9233
PCB-64 (2,3,4',6-Tetrachlorobiphenyl)	9236
PCB-66 (2,3',4,4'-Tetrachlorobiphenyl)	8960
PCB-67 (2,3',4,5-Tetrachlorobiphenyl)	9232
PCB-7 (2,4-Dichlorobiphenyl)	9257
PCB-70 (2,3',4',5-Tetrachlorobiphenyl)	9230
PCB-71 (2,3',4',6-Tetrachlorobiphenyl)	9237
PCB-74 (2,4,4',5-Tetrachlorobiphenyl)	9250

Certificate of Accreditation: Supplement

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Organic	
EPA 8270E MOD (Battelle SOP 5-315) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Solid	
PCB-75 (2,4,4',6-Tetrachlorobiphenyl)	9251
PCB-77 (3,3',4,4'-Tetrachlorobiphenyl)	8965
PCB-8 (2,4'-Dichlorobiphenyl)	9256
PCB-80 (3,3',5,5'-Tetrachlorobiphenyl)	9264
PCB-81 (3,4,4',5-Tetrachlorobiphenyl)	8970
PCB-82 (2,2',3,3',4-Pentachlorobiphenyl)	9122
PCB-83 (2,2',3,3',5-Pentachlorobiphenyl)	9129
PCB-84 (2,2',3,3',6-Pentachlorobiphenyl)	9131
PCB-85 (2,2',3,4,4'-Pentachlorobiphenyl)	9142
PCB-87 (2,2',3,4,5'-Pentachlorobiphenyl)	8975
PCB-9 (2,5-Dichlorobiphenyl)	9258
PCB-91 (2,2',3,4',6-Pentachlorobiphenyl)	9160
PCB-92 (2,2',3,5,5'-Pentachlorobiphenyl)	9164
PCB-95 (2,2',3,5',6-Pentachlorobiphenyl)	9166
PCB-97 (2,2',3,4',5'-Pentachlorobiphenyl)	9154
PCB-99 (2,2',4,4',5-Pentachlorobiphenyl)	9175
Tissue	
2,4'-DDD	8580
2,4'-DDE	8585
2,4'-DDT	8590
4,4'-DDD	7355
4,4'-DDE	7360
4,4'-DDT	7365
Biphenyl	5640
PCB-1 (2-Chlorobiphenyl, 2-Monochlorobiphenyl)	8915
PCB-100 (2,2',4,4',6-Pentachlorobiphenyl)	9177
PCB-101 (2,2',4,5,5'-Pentachlorobiphenyl)	8980
PCB-104 (2,2',4,6,6'-Pentachlorobiphenyl)	9182
PCB-105 (2,3,3',4,4'-Pentachlorobiphenyl)	8985
PCB-11 (3,3'-Dichlorobiphenyl)	8925
PCB-110 (2,3,3',4',6-Pentachlorobiphenyl)	8990
PCB-114 (2,3,4,4',5-Pentachlorobiphenyl)	9005
PCB-115 (2,3,4,4',6-Pentachlorobiphenyl)	9219
PCB-118 (2,3',4,4',5-Pentachlorobiphenyl)	8995
PCB-12 (3,4-Dichlorobiphenyl)	9270
PCB-123 (2,3',4,4',5'-Pentachlorobiphenyl)	9000

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Battelle
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	Code
Organic	
EPA 8270E MOD (Battelle SOP 5-315) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Tissue	
PCB-124 (2,3',4',5,5'-Pentachlorobiphenyl)	9222
PCB-125 (2,3',4',5',6-Pentachlorobiphenyl)	9224
PCB-126 (3,3',4,4',5-Pentachlorobiphenyl)	9015
PCB-127 (3,3',4,5,5'-Pentachlorobiphenyl)	9260
PCB-128 (2,2',3,3',4,4'-Hexachlorobiphenyl)	9020
PCB-13 (3,4'-Dichlorobiphenyl)	9269
PCB-130 (2,2',3,3',4,5'-Hexachlorobiphenyl)	9117
PCB-131 (2,2',3,3',4,6-Hexachlorobiphenyl)	9121
PCB-134 (2,2',3,3',5,6-Hexachlorobiphenyl)	9128
PCB-135 (2,2',3,3',5,6'-Hexachlorobiphenyl)	9127
PCB-136 (2,2',3,3',6,6'-Hexachlorobiphenyl)	9130
PCB-137 (2,2',3,4,4',5-Hexachlorobiphenyl)	9138
PCB-138 (2,2',3,4,4',5'-Hexachlorobiphenyl)	9025
PCB-139 (2,2',3,4,4',6-Hexachlorobiphenyl)	9141
PCB-140 (2,2',3,4,4',6'-Hexachlorobiphenyl)	9140
PCB-141 (2,2',3,4,5,5'-Hexachlorobiphenyl)	9030
PCB-144 (2,2',3,4,5',6-Hexachlorobiphenyl)	9150
PCB-146 (2,2',3,4',5,5'-Hexachlorobiphenyl)	9144
PCB-149 (2,2',3,4',5',6-Hexachlorobiphenyl)	9151
PCB-15 (4,4'-Dichlorobiphenyl)	9273
PCB-151 (2,2',3,5,5',6-Hexachlorobiphenyl)	9035
PCB-153 (2,2’,4,4’,5,5’-Hexachlorobiphenyl)	9040
PCB-154 (2,2',4,4',5,6'-Hexachlorobiphenyl)	9174
PCB-155 (2,2',4,4',6,6'-Hexachlorobiphenyl)	9176
PCB-156 (2,3,3',4,4',5-Hexachlorobiphenyl)	9050
PCB-157 (2,3,3’,4,4’,5’-Hexachlorobiphenyl)	9045
PCB-158 (2,3,3',4,4',6-Hexachlorobiphenyl)	9193
PCB-16 (2,2',3-Trichlorobiphenyl)	9173
PCB-163 (2,3,3',4',5,6-Hexachlorobiphenyl)	9199
PCB-164 (2,3,3',4',5',6-Hexachlorobiphenyl)	9201
PCB-166 (2,3,4,4',5,6-Hexachlorobiphenyl)	9217
PCB-167 (2,3',4,4',5,5'-Hexachlorobiphenyl)	9055
PCB-169 (3,3',4,4',5,5'-Hexachlorobiphenyl)	9060
PCB-17 (2,2',4-Trichlorobiphenyl)	9185
PCB-170 (2,2',3,3',4,4',5-Heptachlorobiphenyl)	9065
PCB-171 (2,2',3,3',4,4',6-Heptachlorobiphenyl)	9106

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	Code
Organic	
EPA 8270E MOD (Battelle SOP 5-315) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Tissue	
PCB-172 (2,2',3,3',4,5,5'-Heptachlorobiphenyl)	9110
PCB-173 (2,2',3,3',4,5,6-Heptachlorobiphenyl)	9113
PCB-174 (2,2',3,3',4,5,6'-Heptachlorobiphenyl)	9116
PCB-175 (2,2',3,3',4,5',6-Heptachlorobiphenyl)	9115
PCB-176 (2,2',3,3',4,6,6'-Heptachlorobiphenyl)	9119
PCB-177 (2,2',3,3',4,5',6'-Heptachlorobiphenyl)	9114
PCB-178 (2,2',3,3',5,5',6-Heptachlorobiphenyl)	9124
PCB-179 (2,2',3,3',5,6,6'-Heptachlorobiphenyl)	9126
PCB-18 (2,2',5-Trichlorobiphenyl)	8930
PCB-180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl)	9134
PCB-183 (2,2',3,4,4',5',6-Heptachlorobiphenyl)	9075
PCB-184 (2,2',3,4,4',6,6'-Heptachlorobiphenyl)	9139
PCB-185 (2,2',3,4,5,5',6-Heptachlorobiphenyl)	9143
PCB-187 (2,2',3,4',5,5',6-Heptachlorobiphenyl)	9080
PCB-188 (2,2',3,4',5,6,6'-Heptachlorobiphenyl)	9146
PCB-189 (2,3,3',4,4',5,5'-Heptachlorobiphenyl)	9085
PCB-19 (2,2',6-Trichlorobiphenyl)	9188
PCB-190 (2,3,3',4,4',5,6-Heptachlorobiphenyl)	9191
PCB-191 (2,3,3',4,4',5',6-Heptachlorobiphenyl)	9192
PCB-193 (2,3,3',4',5,5',6-Heptachlorobiphenyl)	9195
PCB-194 (2,2',3,3',4,4',5,5'-Octachlorobiphenyl)	9090
PCB-195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl)	9103
PCB-197 (2,2',3,3',4,4',6,6'-Octachlorobiphenyl)	9104
PCB-198 (2,2',3,3',4,5,5',6-Octachlorobiphenyl)	9109
PCB-199 (2,2',3,3',4,5,5',6'-Octachlorobiphenyl)	9108
PCB-200 (2,2',3,3',4,5,6,6'-Octachlorobiphenyl)	9111
PCB-201 (2,2',3,3',4,5',6,6'-Octachlorobiphenyl)	9112
PCB-202 (2,2',3,3',5,5',6,6'-Octachlorobiphenyl)	9123
PCB-203 (2,2',3,4,4',5,5',6-Octachlorobiphenyl)	9133
PCB-205 (2,3,3',4,4',5,5',6-Octachlorobiphenyl)	9190
PCB-206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)	9095
PCB-207 (2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl)	9101
PCB-208 (2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl)	9107
PCB-209 (2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl)	9105
PCB-22 (2,3,4'-Trichlorobiphenyl)	9241
PCB-24 (2,3,6-Trichlorobiphenyl)	9247

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	Code
Organic	
EPA 8270E MOD (Battelle SOP 5-315) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Tissue	
PCB-25 (2,3',4-Trichlorobiphenyl)	9240
PCB-26 (2,3',5-Trichlorobiphenyl)	8935
PCB-27 (2,3',6-Trichlorobiphenyl)	9248
PCB-28 (2,4,4'-Trichlorobiphenyl)	9252
PCB-29 (2,4,5-Trichlorobiphenyl)	9253
PCB-3 (4-Chlorobiphenyl, 4-Monochlorobiphenyl)	9274
PCB-30 (2,4,6-Trichlorobiphenyl)	9254
PCB-31 (2,4',5-Trichlorobiphenyl)	8940
PCB-32 (2,4',6-Trichlorobiphenyl)	9255
PCB-33 (2,3',4'-Trichlorobiphenyl)	9239
PCB-37 (3,4,4'-Trichlorobiphenyl)	9266
PCB-4 (2,2'-Dichlorobiphenyl)	9189
PCB-40 (2,2',3,3'-Tetrachlorobiphenyl)	9132
PCB-41 (2,2',3,4-Tetrachlorobiphenyl)	9163
PCB-42 (2,2',3,4'-Tetrachlorobiphenyl)	9162
PCB-43 (2,2',3,5-Tetrachlorobiphenyl)	9169
PCB-44 (2,2',3,5'-Tetrachlorobiphenyl)	8945
PCB-45 (2,2',3,6-Tetrachlorobiphenyl)	9172
PCB-46 (2,2',3,6'-Tetrachlorobiphenyl)	9171
PCB-47 (2,2',4,4'-Tetrachlorobiphenyl)	9178
PCB-48 (2,2',4,5-Tetrachlorobiphenyl)	9181
PCB-49 (2,2',4,5'-Tetrachlorobiphenyl)	8950
PCB-5 (2,3-Dichlorobiphenyl)	8920
PCB-50 (2,2',4,6-Tetrachlorobiphenyl)	9184
PCB-51 (2,2',4,6'-Tetrachlorobiphenyl)	9183
PCB-52 (2,2',5,5'-Tetrachlorobiphenyl)	8955
PCB-53 (2,2',5,6'-Tetrachlorobiphenyl)	9186
PCB-54 (2,2',6,6'-Tetrachlorobiphenyl)	9187
PCB-56 (2,3,3',4'-Tetrachlorobiphenyl)	9207
PCB-6 (2,3'-Dichlorobiphenyl)	9249
PCB-60 (2,3,4,4'-Tetrachlorobiphenyl)	9221
PCB-63 (2,3,4',5-Tetrachlorobiphenyl)	9233
PCB-64 (2,3,4',6-Tetrachlorobiphenyl)	9236
PCB-66 (2,3',4,4'-Tetrachlorobiphenyl)	8960
PCB-67 (2,3',4,5-Tetrachlorobiphenyl)	9232
PCB-7 (2,4-Dichlorobiphenyl)	9257

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	Code
Organic	
EPA 8270E MOD (Battelle SOP 5-315) by Gas Chromatography Mass Spectrometry (GC/MS)	10242543
Tissue	
PCB-70 (2,3',4',5-Tetrachlorobiphenyl)	9230
PCB-71 (2,3',4',6-Tetrachlorobiphenyl)	9237
PCB-74 (2,4,4',5-Tetrachlorobiphenyl)	9250
PCB-75 (2,4,4',6-Tetrachlorobiphenyl)	9251
PCB-77 (3,3',4,4'-Tetrachlorobiphenyl)	8965
PCB-8 (2,4'-Dichlorobiphenyl)	9256
PCB-80 (3,3',5,5'-Tetrachlorobiphenyl)	9264
PCB-81 (3,4,4',5-Tetrachlorobiphenyl)	8970
PCB-82 (2,2',3,3',4-Pentachlorobiphenyl)	9122
PCB-83 (2,2',3,3',5-Pentachlorobiphenyl)	9129
PCB-84 (2,2',3,3',6-Pentachlorobiphenyl)	9131
PCB-85 (2,2',3,4,4'-Pentachlorobiphenyl)	9142
PCB-87 (2,2',3,4,5'-Pentachlorobiphenyl)	8975
PCB-9 (2,5-Dichlorobiphenyl)	9258
PCB-91 (2,2',3,4',6-Pentachlorobiphenyl)	9160
PCB-92 (2,2',3,5,5'-Pentachlorobiphenyl)	9164
PCB-95 (2,2',3,5',6-Pentachlorobiphenyl)	9166
PCB-97 (2,2',3,4',5'-Pentachlorobiphenyl)	9154
PCB-99 (2,2',4,4',5-Pentachlorobiphenyl)	9175
PFAS by LC/MS/MS Compliant with Table B-15 of QSM 5.3 or Latest Version by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)	90000451
Aqueous	
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	9490
1H, 1H, 2H, 2H-Perfluorodecane Sulfonic Acid (8:2 FTS)	6948
1H, 1H, 2H, 2H-Perfluorododecane Sulfonic Acid (10:2 FTS)	9616
1H, 1H, 2H, 2H-Perfluorohexane Sulfonic Acid (4:2 FTS)	6946
1H, 1H, 2H, 2H-Perfluorooctane Sulfonic Acid (6:2 FTS)	6947
2H,2H,3H,3H-Perfluorodecanoic Acid (7:3 FTCA, 3-Perfluoroheptyl Propanoic Acid)	9340
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3 FTCA)	9338
4,4,5,5,6,6,6-Heptafluorohexanoi Acid (3:3 FTCA, 3-Perfluoropropyl Propanoic Acid)	9353
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9-Cl-PF3ONS)	6952
Ammonium 4,8-Dioxa-3H-Perfluorononanoate (ADONA)	6953
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA) – GenX	9460
N-Ethyl Perfluorooctanesulfonamide (NEtFOSA)	9395
N-Ethyl Perfluorooctanesulfonamidoethanol (NEtFOSE)	9431
N-Ethylperfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	4846

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	Code
Organic	
PFAS by LC/MS/MS Compliant with Table B-15 of QSM 5.3 or Latest Version by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)	90000451
Aqueous	
N-Methylperfluorooctanesulfonamide (NMeFOSA)	6954
N-Methylperfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	4847
N-Methylperfluorooctanesulfonamidoethanol (MeFOSE)	6949
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	6956
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	6957
Perfluoro-1-Octanesulfonamide (PFOSA)	9665
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	6965
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	6966
Perfluorobutanesulfonic Acid (PFBS)	6918
Perfluorobutanoic Acid (PFBA)	6915
Perfluorodecanesulfonic Acid (PFDS)	6920
Perfluorodecanoic Acid (PFDA)	6905
Perfluorododecanesulfonic Acid (PFDoS)	6923
Perfluorododecanoic Acid (PFDoA)	6903
Perfluoroheptanesulfonic Acid (PFHpS)	9470
Perfluoroheptanoic Acid (PFHpA)	6908
Perfluorohexadecanoic Acid (PFHxDA)	6958
Perfluorohexanesulfonic Acid (PFHxS)	6927
Perfluorohexanoic Acid (PFHxA)	6913
Perfluorononanesulfonic Acid (PFNS)	6929
Perfluorononanoic Acid (PFNA)	6906
Perfluorooctadecanoic Acid (PFODA)	6916
Perfluorooctanesulfonic Acid (PFOS)	6931
Perfluorooctanoic Acid (PFOA)	6912
Perfluoropentanesulfonic Acid (PFPeS)	6934
Perfluoropentanoic Acid (PFPeA)	6914
Perfluorotetradecanoic Acid (PFTeDA)	6902
Perfluorotridecanoic Acid (PFTrDA)	9563
Perfluoroundecanoic Acid (PFUnA)	6904
Solid	
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	9490
1H, 1H, 2H, 2H-Perfluorodecane Sulfonic Acid (8:2 FTS)	6948
1H, 1H, 2H, 2H-Perfluorododecane Sulfonic Acid (10:2 FTS)	9616
1H, 1H, 2H, 2H-Perfluorohexane Sulfonic Acid (4:2 FTS)	6946
1H, 1H, 2H, 2H-Perfluorooctane Sulfonic Acid (6:2 FTS)	6947

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	Code
Organic	
PFAS by LC/MS/MS Compliant with Table B-15 of QSM 5.3 or Latest Version by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)	90000451
Solid	
2H,2H,3H,3H-Perfluorodecanoic Acid (7:3 FTCA, 3-Perfluoroheptyl Propanoic Acid)	9340
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3 FTCA)	9338
4,4,5,5,6,6,6-Heptafluorohexanoi Acid (3:3 FTCA, 3-Perfluoropropyl Propanoic Acid)	9353
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9-Cl-PF3ONS)	6952
Ammonium 4,8-Dioxa-3H-Perfluorononanoate (ADONA)	6953
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA) – GenX	9460
N-Ethyl Perfluorooctanesulfonamide (NEtFOSA)	9395
N-Ethyl Perfluorooctanesulfonamidoethanol (NEtFOSE)	9431
N-Ethylperfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	4846
N-Methylperfluorooctanesulfonamide (NMeFOSA)	6954
N-Methylperfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	4847
N-Methylperfluorooctanesulfonamidoethanol (MeFOSE)	6949
Nonafluoro-3,6-Dioxaheptanoic Acid (NFDHA)	6956
Perfluoro(2-Ethoxyethane)Sulfonic Acid (PFEESA)	6957
Perfluoro-1-Octanesulfonamide (PFOSA)	9665
Perfluoro-3-Methoxypropanoic Acid (PFMPA)	6965
Perfluoro-4-Methoxybutanoic Acid (PFMBA)	6966
Perfluorobutanesulfonic Acid (PFBS)	6918
Perfluorobutanoic Acid (PFBA)	6915
Perfluorodecanesulfonic Acid (PFDS)	6920
Perfluorodecanoic Acid (PFDA)	6905
Perfluorododecanesulfonic Acid (PFDoS)	6923
Perfluorododecanoic Acid (PFDoA)	6903
Perfluoroheptanesulfonic Acid (PFHpS)	9470
Perfluoroheptanoic Acid (PFHpA)	6908
Perfluorohexadecanoic Acid (PFHxDA)	6958
Perfluorohexanesulfonic Acid (PFHxS)	6927
Perfluorohexanoic Acid (PFHxA)	6913
Perfluorononanesulfonic Acid (PFNS)	6929
Perfluorononanoic Acid (PFNA)	6906
Perfluorooctadecanoic Acid (PFODA)	6916
Perfluorooctanesulfonic Acid (PFOS)	6931
Perfluorooctanoic Acid (PFOA)	6912
Perfluoropentanesulfonic Acid (PFPeS)	6934
Perfluoropentanoic Acid (PFPeA)	6914

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	Code
Organic	
PFAS by LC/MS/MS Compliant with Table B-15 of QSM 5.3 or Latest Version by Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)	90000451
Solid	
Perfluorotetradecanoic Acid (PFTeDA)	6902
Perfluorotridecanoic Acid (PFTrDA)	9563
Perfluoroundecanoic Acid (PFUnA)	6904
Tissue	
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	9490
1H, 1H, 2H, 2H-Perfluorodecane Sulfonic Acid (8:2 FTS)	6948
1H, 1H, 2H, 2H-Perfluorohexane Sulfonic Acid (4:2 FTS)	6946
1H, 1H, 2H, 2H-Perfluorooctane Sulfonic Acid (6:2 FTS)	6947
2H,2H,3H,3H-Perfluorodecanoic Acid (7:3 FTCA, 3-Perfluoroheptyl Propanoic Acid)	9340
2H,2H,3H,3H-Perfluorooctanoic Acid (5:3 FTCA)	9338
4,4,5,5,6,6,6-Heptafluorohexanoi Acid (3:3 FTCA, 3-Perfluoropropyl Propanoic Acid)	9353
9-Chlorohexadecafluoro-3-Oxanonane-1-Sulfonic Acid (9-Cl-PF3ONS)	6952
Ammonium 4,8-Dioxa-3H-Perfluorononanoate (ADONA)	6953
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA) – GenX	9460
N-Ethylperfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	4846
N-Methylperfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	4847
Perfluoro-1-Octanesulfonamide (PFOSA)	9665
Perfluorobutanesulfonic Acid (PFBS)	6918
Perfluorobutanoic Acid (PFBA)	6915
Perfluorodecanesulfonic Acid (PFDS)	6920
Perfluorodecanoic Acid (PFDA)	6905
Perfluorododecanoic Acid (PFDoA)	6903
Perfluoroheptanesulfonic Acid (PFHpS)	9470
Perfluoroheptanoic Acid (PFHpA)	6908
Perfluorohexanesulfonic Acid (PFHxS)	6927
Perfluorohexanoic Acid (PFHxA)	6913
Perfluorononanesulfonic Acid (PFNS)	6929
Perfluorononanoic Acid (PFNA)	6906
Perfluorooctanesulfonic Acid (PFOS)	6931
Perfluorooctanoic Acid (PFOA)	6912
Perfluoropentanesulfonic Acid (PFPeS)	6934
Perfluoropentanoic Acid (PFPeA)	6914
Perfluorotetradecanoic Acid (PFTeDA)	6902
Perfluorotridecanoic Acid (PFTrDA)	9563
Perfluoroundecanoic Acid (PFUnA)	6904

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Accreditation is granted to the facility to perform the following testing:

		Code
Preparation		
Aqueous		
EPA 3510C	Separatory Funnel Liquid-Liquid Extraction	
EPA 3640A MOD (Battelle SOP 5-191)	Gel-Permeation Cleanup	
EPA 3660B MOD (Battelle SOP 5-328)	Sulfur Cleanup	
Solid		
EPA 3640A MOD (Battelle SOP 5-191)	Gel-Permeation Cleanup	
EPA 3660B MOD (Battelle SOP 5-328)	Sulfur Cleanup	
NOAA NOS ORCA 71	Orbital Shaker	
Tissue		
EPA 3640A MOD (Battelle SOP 5-191)	Gel-Permeation Cleanup	
EPA 3660B MOD (Battelle SOP 5-328)	Sulfur Cleanup	
NOAA NOS ORCA 71	Orbital Shaker Tissuemizer	

Footnotes:
> Method codes are typically based on The NELAC Institute (TNI) Laboratory Accreditation Management System (LAMS) and are used to compare to the laboratory reported Performance Test (PT) results. Although the method code may not represent the specific method version, it is the method code used to represent the method/technology used to report PTs. (NC = No Code)

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

BUREAU OF LABORATORIES

LABORATORY ACCREDITATION PROGRAM

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certifies That

68-05687

Battelle Analytical Chemistry Services

101 Long Water Drive, Suite 202, Norwell, MA, 02061

Having duly met the requirement of
The act of June 29, 2002 (P.L. 596, No. 90)
dealing with Environmental Laboratories Accreditation
(27 Pa. C.S. 4104-4113) and the
National Environmental Laboratory Accreditation Program Standard
is hereby approved as an

Accredited Laboratory

to conduct analysis within the fields of accreditations more fully described in the attached Scope of Accreditation

NELAP accreditation granted by the PA DEP to an environmental laboratory is conditioned upon continued compliance with the current edition of the NELAC Standard or TNI Standard and the following Subchapters and Sections of 25 Pa. Code Chapter 252: Subchapter A (relating to general provisions); Subchapter B (relating to application, fees and supporting documents); Subchapter E (relating to proficiency test study requirements); Subchapter F (relating to assessment requirements); Subchapter G (relating to miscellaneous provisions); Section 252.307; and Section 252.401.

Expiration Date: **03/31/2024**

Certificate Number: **005**

Annmarie Beach

Annmarie Beach, Chief
Laboratory Accreditation Program
Bureau of Laboratories

Continued accreditation status depends on successful ongoing participation in the program
Certificate not transferable Surrender upon revocation
To be conspicuously displayed at the Laboratory
Not valid unless accompanied by a valid Scope of Accreditation
Shall not be used to imply endorsement by the Commonwealth of Pennsylvania
Customers are urged to verify the laboratory's current accreditation status
PA DEP is a NELAP recognized accreditation body

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 005-001 expiration date 03/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Battelle Analytical Chemistry Services
101 Long Water Drive Suite 202
Norwell, MA 02061
(781) 681-5565

DEP Laboratory ID: 68-05687
EPA Lab Code: MA00056
TNI Code: TNI00280
PADWIS ID: 05687

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 537.1	1.0	10091642	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	FL	12/24/2019
EPA 537.1	1.0	10091642	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	FL	12/24/2019
EPA 537.1	1.0	10091642	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	FL	12/24/2019
EPA 537.1	1.0	10091642	Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	FL	12/24/2019
EPA 537.1	1.0	10091642	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	FL	10/23/2019
EPA 537.1	1.0	10091642	Perfluorodecanoic acid (PFDA)	6905	NELAP	FL	10/23/2019
EPA 537.1	1.0	10091642	Perfluorododecanoic acid (PFDoA)	6903	NELAP	FL	10/23/2019
EPA 537.1	1.0	10091642	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	FL	10/23/2019
EPA 537.1	1.0	10091642	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	FL	10/23/2019
EPA 537.1	1.0	10091642	Perfluorohexanoic acid (PFHxA)	6913	NELAP	FL	10/23/2019
EPA 537.1	1.0	10091642	Perfluorononanoic acid (PFNA)	6906	NELAP	FL	10/23/2019
EPA 537.1	1.0	10091642	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	FL	10/23/2019
EPA 537.1	1.0	10091642	Perfluorooctanoic acid (PFOA)	6912	NELAP	FL	10/23/2019
EPA 537.1	1.0	10091642	Perfluorotetradecanoic acid (PFTA)	6902	NELAP	FL	10/23/2019
EPA 537.1	1.0	10091642	Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	FL	10/23/2019
EPA 537.1	1.0	10091642	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	FL	10/23/2019
EPA 537.1	1.0	10091642	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	FL	10/23/2019
EPA 537.1	1.0	10091642	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	FL	10/23/2019

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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DEP Laboratory ID: 68-05687
EPA Lab Code: MA00056
TNI Code: TNI00280
PADWIS ID: 05687

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1633 (draft)	draft	10123429	Perfluorodecanesulfonic acid (PFDS)	6920	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorododecanesulfonic acid (PFDoS)	6923	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorononanesulfonic acid (PFNS)	6929	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluoropentanesulfonic acid (PFPeS)	6934	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	6948	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	6946	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	6947	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	2H,2H,3H,3H-Perfluorodecanoic acid (3-Perfluoroheptyl propanoic acid) (7:3 FTCA)	9340	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	9338	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	4,4,5,5,6,6,6-Heptafluorohexanoic acid (3-Perfluoropropyl propanoic acid) (3:3 FTCA)	9353	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	03/17/2023

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Laboratory Scope of Accreditation

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Battelle Analytical Chemistry Services
101 Long Water Drive Suite 202
Norwell, MA 02061
(781) 681-5565

DEP Laboratory ID: 68-05687
EPA Lab Code: MA00056
TNI Code: TNI00280
PADWIS ID: 05687

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1633 (draft)	draft	10123429	N-Ethylperfluorooctanesulfonamide (EtFOSA)	9395	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	N-Methylperfluorooctanesulfonamide (MeFOSA)	9433	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	N-ethylperfluoro-1-octanesulfonamido ethanol (N-EtFOSE)	9431	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	N-methylperfluoro-1-octanesulfonamido ethanol (N-MeFOSE)	6949	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	6956	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	6957	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluoro-3-methoxypropanoic acid (PFMPA)	6965	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluoro-4-methoxybutanoic acid (PFMBA)	6966	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorobutanoic acid (PFBA)	6915	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluoroheptanesulfonic acid (PFHpS)	9470	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorononanoic acid (PFNA)	6906	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorooctane sulfonamide (PFOSA)	6917	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	03/17/2023

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DEP Laboratory ID: 68-05687
EPA Lab Code: MA00056
TNI Code: TNI00280
PADWIS ID: 05687

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1633 (draft)	draft	10123429	Perfluoropentanoic acid (PFPeA)	6914	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	03/17/2023
EPA 537.1 Isotope Dilution	1.0	10091620	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	Perfluorononanoic acid (PFNA)	6906	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	04/08/2021

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(781) 681-5565

DEP Laboratory ID: 68-05687
EPA Lab Code: MA00056
TNI Code: TNI00280
PADWIS ID: 05687

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 537.1 Isotope Dilution	1.0	10091620	Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	04/08/2021
EPA 537.1 Isotope Dilution	1.0	10091620	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	04/08/2021
SOP (05687) 5-369	10		Ammonium 4,8-Dioxa-3H-Perfluorononanoate (ADONA)	6953	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		N-Methylperfluorooctanesulfonamidoethanol (MeFOSE)	9434	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorodecanesulfonic acid (PFDS)	6920	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorododecanesulfonic acid (PFDoS)	6923	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorononanesulfonic acid (PFNS)	6929	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorooctane sulfonate (PFOS)	6909	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	6948	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		1H, 1H, 2H, 2H-Perfluorododecane sulfonic acid (10:2-FTS)	9616	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	6946	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	6947	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		2-Amino-4,6-dinitrotoluene (2-Am-DNT)	9303	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		2H,2H,3H,3H-Perfluorodecanoic acid (3-Perfluoroheptyl propanoic acid) (7:3 FTCA)	9340	NELAP	PA	03/17/2023

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PADWIS ID: 05687

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (05687) 5-369	10		2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	9338	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		4,4,5,5,6,6,6-Heptafluorohexanoic acid (3-Perfluoropropyl propanoic acid) (3:3 FTCA)	9353	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		N-Ethylperfluorooctane sulfonamide EtFOSAm	9395	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		N-Ethylperfluorooctanesulfonamide (EtFOSA)	9395	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		N-Methylperfluorooctanesulfonamide (MeFOSA)	9433	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		N-ethylperfluoro-1-octanesulfonamido ethanol (N-EtFOSE)	9431	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	6956	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	6957	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluoro-3-methoxypropanoic acid (PFMPA)	6965	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluoro-4-methoxybutanoic acid (PFMBA)	6966	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorobutanoic acid (PFBA)	6915	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluoroheptanesulfonic acid (PFHpS)	9470	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorohexadecanoic acid (PFHxDA)	6901	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	03/17/2023

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PADWIS ID: 05687

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (05687) 5-369	10		Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorononanoic acid (PFNA)	6906	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorooctane sulfonamide (PFOSA)	6917	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	03/17/2023

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1633 (draft)	draft	10123429	Perfluorodecanesulfonic acid (PFDS)	6920	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorododecanesulfonic acid (PFDoS)	6923	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorononanesulfonic acid (PFNS)	6929	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluoropentanesulfonic acid (PFPeS)	6934	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	6948	NELAP	PA	03/17/2023

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 005-001 expiration date 03/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Battelle Analytical Chemistry Services
101 Long Water Drive Suite 202
Norwell, MA 02061
(781) 681-5565

DEP Laboratory ID: 68-05687
EPA Lab Code: MA00056
TNI Code: TNI00280
PADWIS ID: 05687

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1633 (draft)	draft	10123429	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	6946	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	6947	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	2H,2H,3H,3H-Perfluorodecanoic acid (3-Perfluoroheptyl propanoic acid) (7:3 FTCA)	9340	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	9338	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	4,4,5,5,6,6,6-Heptafluorohexanoic acid (3-Perfluoropropyl propanoic acid) (3:3 FTCA)	9353	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	N-Ethylperfluorooctanesulfonamide (EtFOSA)	9395	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	N-Methylperfluorooctanesulfonamide (MeFOSA)	9433	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	N-ethylperfluoro-1-octanesulfonamido ethanol (N-EtFOSE)	9431	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	N-methylperfluoro-1-octanesulfonamido ethanol (N-MeFOSE)	6949	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	6956	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	6957	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluoro-3-methoxypropanoic acid (PFMPA)	6965	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluoro-4-methoxybutanoic acid (PFMBA)	6966	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorobutanoic acid (PFBA)	6915	NELAP	PA	03/17/2023

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Norwell, MA 02061
(781) 681-5565

DEP Laboratory ID: 68-05687
EPA Lab Code: MA00056
TNI Code: TNI00280
PADWIS ID: 05687

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1633 (draft)	draft	10123429	Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluoroheptanesulfonic acid (PFHpS)	9470	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorononanoic acid (PFNA)	6906	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorooctane sulfonamide (PFOSA)	6917	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluoropentanoic acid (PFPeA)	6914	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	03/17/2023
EPA 1633 (draft)	draft	10123429	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Ammonium 4,8-Dioxa-3H-Perfluorononanoate (ADONA)	6953	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		N-Methylperfluorooctanesulfonamidoethanol (MeFOSE)	9434	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorodecanesulfonic acid (PFDS)	6920	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorododecanesulfonic acid (PFDoS)	6923	NELAP	PA	03/17/2023

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DEP Laboratory ID: 68-05687
EPA Lab Code: MA00056
TNI Code: TNI00280
PADWIS ID: 05687

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (05687) 5-369	10		Perfluorononanesulfonic acid (PFNS)	6929	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorooctane sulfonate (PFOS)	6909	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	6948	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		1H, 1H, 2H, 2H-Perfluorododecane sulfonic acid (10:2-FTS)	9616	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	6946	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	6947	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		2-Amino-4,6-dinitrotoluene (2-Am-DNT)	9303	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		2H,2H,3H,3H-Perfluorodecanoic acid (3-Perfluoroheptyl propanoic acid) (7:3 FTCA)	9340	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	9338	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		4,4,5,5,6,6,6-Heptafluorohexanoic acid (3-Perfluoropropyl propanoic acid) (3:3 FTCA)	9353	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		N-Ethylperfluorooctane sulfonamide EtFOSAm	9395	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		N-Ethylperfluorooctanesulfonamide (EtFOSA)	9395	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		N-Methylperfluorooctanesulfonamide (MeFOSA)	9433	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		N-ethylperfluoro-1-octanesulfonamido ethanol (N-EtFOSE)	9431	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	6956	NELAP	PA	03/17/2023

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DEP Laboratory ID: 68-05687
EPA Lab Code: MA00056
TNI Code: TNI00280
PADWIS ID: 05687

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (05687) 5-369	10		Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	6957	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluoro-3-methoxypropanoic acid (PFMPA)	6965	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluoro-4-methoxybutanoic acid (PFMBA)	6966	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorobutanoic acid (PFBA)	6915	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluoroheptanesulfonic acid (PFHpS)	9470	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorohexadecanoic acid (PFHxDA)	6901	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorononanoic acid (PFNA)	6906	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorooctane sulfonamide (PFOSA)	6917	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	03/17/2023
SOP (05687) 5-369	10		n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	03/17/2023

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Norwell, MA 02061
(781) 681-5565

DEP Laboratory ID: 68-05687
EPA Lab Code: MA00056
TNI Code: TNI00280
PADWIS ID: 05687

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (05687) 5-370	13	60002655	Extraction of Poly-and Perfluoroalkyl Substances From Environmental Matrices		NELAP	PA	03/24/2022

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SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

EUROFINS LANCASTER LABORATORIES ENVIRONMENT TESTING LLC
2425 New Holland Pike
Lancaster, PA 17601
Kenneth Boley Phone: 717-556-9413

ENVIRONMENTAL

Valid To: November 30, 2024 Certificate Number: 0001.01

In recognition of the successful completion of the A2LA evaluation process (including an assessment of the laboratory's compliance with the 2009 TNI Environmental Testing Laboratory Standard, and the requirements of the DoD Environmental Laboratory Accreditation Program (DoD ELAP) as detailed in version 5.4 of the DoD/DOE Quality Systems Manual for Environmental Laboratories, accreditation is granted to this laboratory to perform recognized EPA methods using the following testing technologies and in the analyte categories identified below:

Testing Technologies

Atomic Absorption/ICP-AES Spectrometry, ICP-MS Spectrometry, Gas Chromatography, Gas Chromatography/Mass Spectrometry, Gravimetry, High Performance Liquid Chromatography, Ion Chromatography, Misc.-Electronic Probes (pH, F^-, O_2), Oxygen Demand, Spectrophotometry (Visible), Spectrophotometry (Automated), Titrimetry, TCLP, Total Organic Carbon, Turbidity, Liquid Chromatography/Mass Spectrometry/Mass Spectrometry, High Resolution Gas Chromatography/Mass Spectrometry

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Demands				
COD	----------	EPA 410.4	EPA 410.4	----------
Total Organic Carbon	----------	EPA 9060A SM 5310C-2014	EPA 9060A SM 5310C-2014	EPA 9060A SM 5310C-2014 Lloyd Kahn
Anions				
Ammonia	----------	EPA 350.1	EPA 350.1	SM 4500-NH3 B/C-2011
Fluoride	----------	EPA 300.0 EPA 9056A	EPA 300.0 EPA 9056A	EPA 300.0 EPA 9056A
Nitrate (as N)	----------	EPA 300.0 EPA 353.2 EPA 9056A	EPA 300.0 EPA 353.2 EPA 9056A	EPA 300.0 EPA 353.2 EPA 9056A
Nitrite (as N)	----------	EPA 300.0 EPA 353.2 EPA 9056A	EPA 300.0 EPA 353.2 EPA 9056A	EPA 300.0 EPA 353.2 EPA 9056A

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Nitrate Nitrite Total	----------	EPA 300.0 EPA 9056A	EPA 300.0 EPA 9056A	EPA 300.0 EPA 9056A
Bromide	----------	EPA 300.0 EPA 9056A	EPA 300.0 EPA 9056A	----------
Chloride	----------	EPA 300.0 EPA 9056A	EPA 300.0 EPA 9056A	EPA 300.0 EPA 9056A
Sulfate	----------	EPA 300.0 EPA 9056A	EPA 300.0 EPA 9056A	EPA 300.0 EPA 9056A
Wet Chemistry				
Alkalinity	----------	SM 2320B-2011	SM 2320B-2011	----------
Corrosivity	----------	----------	SW-846 Chapter 7	SW-846 Chapter 7
Conductivity		SM 2510B-2011	SM 2510B-2011	----------
Cyanide	----------	EPA 9012B	EPA 9012B	EPA 9012B
Filterable Residue (TDS)	----------	SM 2540C-2015	SM 2540C-2015	----------
Flashpoint	----------	EPA 1010A/B	EPA 1010A/B	EPA 1010A/B
Grain Size	----------	----------	----------	ASTM D422 MOD
Hardness	----------	EPA 130.2 SM 2340B-2011 SM 2340C-2011	EPA 130.2 SM 2340B-2011 SM 2340C-2011	----------
Hexavalent Chromium Digestion	----------	----------	----------	EPA 3060A
Hexavalent Chromium	----------	EPA 218.6 EPA 7196A EPA 7199	EPA 7196A EPA 7199	EPA 7196A EPA 7199
Ignitability	----------	----------	40 CFR 261.21	40 CFR 261.21
Non-filterable Residue (TSS)	----------	SM 2540D-2015	SM 2540D-2015	----------
Paint Filter	----------	----------	----------	EPA 9095B
pH	----------	SM 4500 H+B-2011 EPA 9040B/C	EPA 9040B/C	EPA 9045C/D
Phenol	----------	EPA 9066	EPA 9066	----------
Reactivity Prep	----------	----------	SW-846 Chapter 7.3	SW-846 Chapter 7.3
Reactive Cyanide	----------	----------	EPA 9012B	EPA 9012B
Reactive Sulfide	----------	----------	EPA 9034	EPA 9034
Sulfide	----------	EPA 376.1 EPA 376.2 SM 4500 S2D-2011 SM 4500 S2F-2011	EPA 376.1 EPA 376.2 SM 4500 S2D-2011 SM 4500 S2F-2011	----------
Total Kjeldahl Nitrogen (TKN)	----------	EPA 351.2	EPA 351.2	EPA 351.2
Total Residue	----------	SM 2540B-2015	SM 2540B-2015	SM 2540G-2015
Metals				
Metals Digestion	----------	EPA 3005A	EPA 3005A	EPA 3050B
Aluminum	EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Antimony	EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B
Arsenic	EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B
Barium	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B
Beryllium	EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B
Boron	----------	EPA 200.7 EPA 6010C/D	EPA 6010C/D	EPA 6010C/D
Cadmium	EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B
Calcium	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B
Chromium	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B
Cobalt	EPA 200.7	EPA 200.7 EPA 200.8 EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B
Copper	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B
Iron	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B
Lead	EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Lithium	EPA 200.7	EPA 200.7 EPA 6010C/D	EPA 6010C/D	EPA 6010C/D
Molybdenum	----------	EPA 200.7 EPA 200.8 EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B
Magnesium	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B
Manganese	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B
Mercury	EPA 245.1	EPA 245.1 EPA 7470A	EPA 245.1 EPA 7470A	EPA 7471A EPA 7471B
Nickel	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B
Potassium	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B
Selenium	EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B
Silicon	----------	EPA 200.7 EPA 6010C/D	EPA 6010C/D	EPA 6010C/D
Silver	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B
Sodium	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B
Strontium	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B
Sulfur	EPA 200.7	EPA 200.7 EPA 6010C/D	EPA 6010C/D	EPA 6010C/D
Thallium	EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Thorium	----------	EPA 6010C/D	EPA 6010C/D	EPA 6010C/D
Tin	EPA 200.7	EPA 200.7 EPA 6010C/D	EPA 6010C/D	EPA 6010C/D
Titanium	----------	EPA 200.7 EPA 200.8 EPA 6010C/D	EPA 6010C/D	EPA 6010C/D
Tungsten	----------	EPA 6010C/D	EPA 6010C/D	EPA 6010C/D
Uranium	----------	EPA 200.8 EPA 6020B	EPA 6020B	EPA 6020B
Vanadium	EPA 200.7	EPA 200.7 EPA 200.8 EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B
Zinc	EPA 200.7 EPA 200.8	EPA 200.7 EPA 200.8 EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B	EPA 6010C/D EPA 6020B
Zirconium	----------	EPA 6010C/D	EPA 6010C/D	EPA 6010C/D
Purgeable Organics (Volatiles)				
Volatile Preparation	----------	EPA 5030C	EPA 5030C	EPA 5035A
Acetone	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Acetonitrile	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Acrolein	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Acrylonitrile	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Allyl chloride	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
tert-Amyl Alcohol	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
tert-Amyl Methyl Ether	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
tert-Butyl Alcohol	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
tert-Butyl Formate	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Benzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Bromobenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Bromochloromethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Bromodichloromethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Bromoform	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Bromomethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
2-Butanone	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
n-Butylbenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
sec-Butylbenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
tert-Butylbenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Carbon disulfide	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Carbon tetrachloride	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
2-Chloro-1,3-butadiene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Chloroacetonitrile	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Chlorobenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1-Chlorobutane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Chlorodifluoromethane	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Chloroethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
2-Chloroethyl Vinyl Ether	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Chloroform	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1-Chlorohexane	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Chloromethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
2-Chlorotoluene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
4-Chlorotoluene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Cyclohexane	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Cyclohexanone	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Di-Isopropyl ether	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Dibromochloromethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,2-Dibromo-3-chloropropane	EPA 524.2	EPA 8260C/D EPA 8011	EPA 8260C/D EPA 8011	EPA 8260C/D
Dibromomethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,2-Dibromoethane (EDB)	----------	EPA 8260C/D EPA 8011	EPA 8260C/D EPA 8011	EPA 8260C/D
1,2-Dichlorobenzene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,3-Dichlorobenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,4-Dichlorobenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
trans-1,4-dichloro-2-butene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Dichlorodi-fluoromethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,1-Dichloroethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,2-Dichloroethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,1-Dichloroethene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
cis-1,2-Dichloroethene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
trans-1,2-Dichloroethene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Dichlorofluoromethane	EPA 524.2	----------	----------	----------
1,2-Dichloropropane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,3-Dichloropropane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
2,2-Dichloropropane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,1-Dichloropropene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
cis-1,3-Dichloropropene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
trans-1,3-Dichloropropene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,4-Dioxane	----------	EPA 8260C/D EPA 8260C/D SIM	EPA 8260C/D EPA 8260C/D SIM	EPA 8260C/D EPA 8260C/D SIM
Ethanol	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Ethylbenzene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Ethyl ether	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Ethyl Methacrylate	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Ethyl Tert-Butyl Ether	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Freon-113	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Gasoline Range Organics (GRO) [Volatile Petroleum Hydrocarbons (VPH)]	----------	EPA 8015C EPA 8015D EPA 8260C/D NW TPH-Gx MA VPH AK101	EPA 8015C EPA 8015D EPA 8260C/D NW TPH-Gx MA VPH AK101	EPA 8015C EPA 8015D EPA 8260C/D NW TPH-Gx MA VPH AK101
Heptane	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Hexane	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
2-Hexanone	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Hexachlorobutadiene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Hexachloroethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Isopropyl Alcohol	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Isopropylbenzene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,4-Isopropyltoluene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Methylacrylonitrile	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Methyl Acetate	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Methyl Acrylate	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Methyl Iodide	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Methylene Chloride	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Methyl Methacrylate	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Methyl Tert-Butyl Ether	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
4-Methyl-2-pentanone	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Methylcyclohexane	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
2-Nitropropane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Naphthalene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Pentachloroethane	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Propionitrile	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
n-Propylbenzene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Styrene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Tert-Amyl Ethyl Ether	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,1,1,2-Tetrachloroethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,1,2,2-Tetrachloroethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Tetrachloroethene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Tetrahydrofuran	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Toluene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,2,3-Trichlorobenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,2,4-Trichlorobenzene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,1,1-Trichloroethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,1,2-Trichloroethane	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Trichloroethene	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Trichlorofluoromethane	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,2,3-Trichloropropane	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,2,4-Trimethylbenzene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,3,5-Trimethylbenzene	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
130BVinyl Acetate	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Vinyl Chloride	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Xylenes, Total	----------	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,2-Xylene (o-Xylene)	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
1,3+1,4-Xylene (m+p Xylene)	EPA 524.2	EPA 8260C/D	EPA 8260C/D	EPA 8260C/D
Extractable Organics (Semivolatiles)				
Acenaphthene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Acenaphthylene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Acetophenone	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Acetylaminofluorene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Alkylated PAHs	----------	EPA 8270D/E SIM	EPA 8270D/E SIM	EPA 8270D/E SIM
4-Aminobiphenyl	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Amino-4,6-dinitrotoluene	----------	EPA 8330B	EPA 8330B	----------
4-Amino-2,6-dinitrotoluene	----------	EPA 8330B	EPA 8330B	----------
Aniline	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Anthracene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Atrazine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Benzaldehyde	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Benzidine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Benzoic acid	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Benzo (a) anthracene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Benzo (b) fluoranthene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Benzo (k) fluoranthene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Benzo (ghi) perylene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Benzo (a) pyrene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Benzo (e) pyrene	----------	EPA 8270D/E SIM	EPA 8270D/E SIM	EPA 8270D/E SIM
Benzyl Alcohol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Biphenyl	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
bis (2-Chloroethoxy) Methane	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
bis (2-Chloroethyl) Ether	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
bis (2-Ethylhexyl) Phthalate	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
4-Bromophenylphenyl Ether	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Butyl benzyl Phthalate	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Caprolactam	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Carbazole	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Carbon Range Organics C8-C44 (including subsets of this range i.e. HRO, MRO, ORO, RRO)	----------	EPA 8015C EPA 8015D	EPA 8015C EPA 8015D	EPA 8015C EPA 8015D
4-Chloroaniline	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
4-Chloro-3-methylphenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Chlorobenzilate	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1-Chloronaphthalene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Chloronaphthalene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Chlorophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
4-Chlorophenyl phenyl ether	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Chrysene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Cresols (Methyl phenols)	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
cis-/trans-Diallate	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2,4-Diamino-6-nitrotoluene	----------	EPA 8330B	EPA 8330B	----------
2,6-Diamino-4-nitrotoluene	----------	EPA 8330B	EPA 8330B	----------
Dibenzo (a,h) acridine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Dibenzo (a,h) anthracene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Dibenzofuran	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
1,2-Dichlorobenzene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1,3-Dichlorobenzene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1,4-Dichlorobenzene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
3,3-Dichlorobenzidine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Diesel Range Organics (DRO) [Extractable Petroleum Hydrocarbons (EPH)]	----------	EPA 8015C EPA 8015D NWTPH DX MA EPH TX1005 AK102/103 AK102/103-SV	EPA 8015C EPA 8015D NWTPH DX MA EPH TX1005 AK102/103 AK102/103-SV	EPA 8015C EPA 8015D NWTPH DX MA EPH TX1005 AK102/103

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
2,4-Dichlorophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2,6-Dichlorophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Diethyl Phthalate	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Dimethoate	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
p-Dimethylaminoazobenze	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
7,12-Dimethylbenz (a) anthracene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2,4-Dimethylphenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Dimethyl Phthalate	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
3,3'-Dimethylbenzidine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Di-n-butyl Phthalate	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Di-n-octyl phthalate	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
3,5-Dinitroaniline	----------	EPA 8330B	EPA 8330B	----------
1,3-Dinitrobenzene	----------	EPA 8270D/E EPA 8330B	EPA 8270D/E EPA 8330B	EPA 8270D/E
1,4-Dinitrobenzene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2,4-Dinitrophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2,4-Dinitrotoluene	----------	EPA 8270D/E EPA 8330B	EPA 8270D/E EPA 8330B	EPA 8270D/E
2,6-Dinitrotoluene	----------	EPA 8270D/E EPA 8330B	EPA 8270D/E EPA 8330B	EPA 8270D/E
1,4-Dioxane	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Diphenylamine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Diphenyl ether	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1,2-Diphenylhydrazine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Ethyl Methanesulfonate	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Fluoroanthene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Fluorene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Hexachlorobenzene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Hexachlorobutadiene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Hexachlorocyclo-pentadiene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Hexachloroethane	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Hexachloropropene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	----------	EPA 8330B	EPA 8330B	----------

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Indeno (1,2,3-cd) Pyrene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Isodrin	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Isophorone	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Isosafrole	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
3-Methycholanthrene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Methyl-4,6-dinitrophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Methyl methane sulfonate	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1-Methylnaphthalene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
2-Methylnaphthalene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
2-Methylphenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
4-Methylphenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Naphthalene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
1,4-Naphthoquinone	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1-Naphthylamine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Naphthylamine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
4-Nitroquinoline-1-oxide	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Nitroaniline	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
3-Nitroaniline	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
4-Nitroaniline	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Nitrobenzene	----------	EPA 8270D/E EPA 8330B	EPA 8270D/E EPA 8330B	EPA 8270D/E
Nitroglycerin	----------	EPA 8330B	EPA 8330B	----------
2-Nitrophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
4-Nitrophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Nitrotoluene	----------	EPA 8330B	EPA 8330B	----------
3-Nitrotoluene	----------	EPA 8330B	EPA 8330B	----------
4-Nitrotoluene	----------	EPA 8330B	EPA 8330B	----------
5-Nitro-o-toluidine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
n-Nitroso-di-n-butylamine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
n-Nitrosodiethylamine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
n-Nitrosodimethylamine	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
n-Nitrosomethylethylamine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
n-Nitrosomorpholine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
n-Nitrosodi-n-propylamine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
n-Nitrosodiphenylamine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
n-Nitrosopiperidine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
n-Nitrosopyrrolidine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	----------	EPA 8330B	EPA 8330B	EPA 8330B MOD
2,2-Oxybis (1-chloropropane)	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Pentachlorobenzene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Pentachloronitrobenzene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Pentachlorophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Pentaerythritol Tetranitrate (PETN)	----------	EPA 8330B	EPA 8330B	----------
Perylene	----------	EPA 8270D/E SIM	EPA 8270D/E SIM	EPA 8270D/E SIM
Phenacetin	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Phenanthrene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Phenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2-Picoline	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Pronamide	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Pyrene	----------	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM	EPA 8270D/E EPA 8270D/E SIM
Pyridine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Safrole	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1,2,4,5- Tetrachlorobenzene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2,3,4,6-Tetrachlorophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Tetraethyl dithiopyrophosphate	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Tetraethy lead	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Tetryl	----------	EPA 8330B	EPA 8330B	----------
Thionazin	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
o-Toluidine	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1,2,4-Trichlorobenzene	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
1,3,5-Trinitrobenzene	----------	EPA 8330B	EPA 8330B	----------
2,4,5-Trichlorophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2,4,6-Trichlorophenol	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
O,O,O-Tri-ethylphosphorothioate	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
2,4,6-Trinitrotoluene	----------	EPA 8330B	EPA 8330B	----------
Organochlorine Pesticides				
Aldrin	----------	EPA 8081B	EPA 8081B	EPA 8081B
alpha-BHC	----------	EPA 8081B	EPA 8081B	EPA 8081B
beta-BHC	----------	EPA 8081B	EPA 8081B	EPA 8081B
delta-BHC	----------	EPA 8081B	EPA 8081B	EPA 8081B
gamma-BHC (Lindane)	----------	EPA 8081B	EPA 8081B	EPA 8081B
alpha-Chlordane	----------	EPA 8081B	EPA 8081B	EPA 8081B
Chlordane (Technical)	----------	EPA 8081B	EPA 8081B	EPA 8081B
2,4'-DDD	----------	EPA 8081B	EPA 8081B	EPA 8081B
2,4'-DDE	----------	EPA 8081B	EPA 8081B	EPA 8081B
2,4'-DDT	----------	EPA 8081B	EPA 8081B	EPA 8081B
4,4'-DDD	----------	EPA 8081B	EPA 8081B	EPA 8081B

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
4,4'-DDE	----------	EPA 8081B	EPA 8081B	EPA 8081B
4,4'-DDT	----------	EPA 8081B	EPA 8081B	EPA 8081B
Dieldrin	----------	EPA 8081B	EPA 8081B	EPA 8081B
Dinoseb	----------	EPA 8270D/E	EPA 8270D/E	EPA 8270D/E
Endosulfan I (alpha)	----------	EPA 8081B	EPA 8081B	EPA 8081B
Endosulfan II (beta)	----------	EPA 8081B	EPA 8081B	EPA 8081B
Endosulfan Sulfate	----------	EPA 8081B	EPA 8081B	EPA 8081B
Endrin	----------	EPA 8081B	EPA 8081B	EPA 8081B
Endrin Aldehyde	----------	EPA 8081B	EPA 8081B	EPA 8081B
Endrin Ketone	----------	EPA 8081B	EPA 8081B	EPA 8081B
gamma-Chlordane	----------	EPA 8081B	EPA 8081B	EPA 8081B
Heptachlor	----------	EPA 8081B	EPA 8081B	EPA 8081B
Heptachlor Epoxide	----------	EPA 8081B	EPA 8081B	EPA 8081B
Hexachlorobenzene	----------	EPA 8081B	EPA 8081B	EPA 8081B
Hexachlorocyclopentadiene	----------	EPA 8081B	EPA 8081B	EPA 8081B
Methoxychlor	----------	EPA 8081B	EPA 8081B	EPA 8081B
Mirex	----------	EPA 8081B	EPA 8081B	EPA 8081B
Toxaphene	----------	EPA 8081B	EPA 8081B	EPA 8081B
PCBs (Aroclors)				
PCB-1016 (Arochlor)	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB-1221	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB-1232	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB-1242	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB-1248	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB-1254	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB-1260	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB-1262	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB-1268	----------	EPA 8082A	EPA 8082A	EPA 8082A
PCB congeners (209)	----------	EPA 1668A EPA 1668C	EPA 1668A EPA 1668C	EPA 1668A EPA 1668C
Herbicides				
2,4,5-T	----------	EPA 8151A	EPA 8151A	EPA 8151A
2,4,5-TP (Silvex)	----------	EPA 8151A	EPA 8151A	EPA 8151A
2,4-D	----------	EPA 8151A	EPA 8151A	EPA 8151A
2,4-DB	----------	EPA 8151A	EPA 8151A	EPA 8151A
Dalapon	----------	EPA 8151A	EPA 8151A	EPA 8151A
Dicamba	----------	EPA 8151A	EPA 8151A	EPA 8151A
Dichlorprop	----------	EPA 8151A	EPA 8151A	EPA 8151A
Dinoseb	----------	EPA 8151A	EPA 8151A	EPA 8151A
MCPA	----------	EPA 8151A	EPA 8151A	EPA 8151A
MCPP	----------	EPA 8151A	EPA 8151A	EPA 8151A
Pentachlorophenol	----------	EPA 8151A	EPA 8151A	EPA 8151A
PCB Homologues				
Monochlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Dichlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Trichlorobiphenyls	----------	EPA 680	EPA 680	EPA 680

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
Tetrachlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Pentachlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Hexachlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Heptachlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Octachlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Nonachlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Decachlorobiphenyls	----------	EPA 680	EPA 680	EPA 680
Dioxins/Furans				
2,3,7,8-TCDD	EPA 1613B	EPA 8290A	EPA 8290A	EPA 8290A
2,3,7,8-TCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,7,8-PeCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
2,3,4,7,8-PeCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,7,8-PeCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,4,7,8-HxCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,6,7,8-HxCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
2,3,4,6,7,8-HxCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,7,8,9-HxCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,4,7,8,-HxCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,6,7,8-HxCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,7,8,9-HxCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,4,6,7,8-HpCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,4,7,8,9-HpCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
1,2,3,4,6,7,8-HpCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
OCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
OCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
Total HpCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
Total HpCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
Total HxCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
Total HxCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
Total PeCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
Total PeCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
Total TCDD	----------	EPA 8290A	EPA 8290A	EPA 8290A
Total TCDF	----------	EPA 8290A	EPA 8290A	EPA 8290A
Misc. Headspace Analysis				
Carbon dioxide	----------	RSK-175	RSK-175	----------
Ethane	----------	RSK-175	RSK-175	----------
Ethene	----------	RSK-175	RSK-175	----------
Methane	----------	RSK-175	RSK-175	----------
Acetylene	----------	RSK-175	RSK-175	----------
Propane	----------	RSK-175	RSK-175	----------
Hazardous Waste Characteristics				
342BToxicity Characteristic Leaching Procedure	----------	----------	EPA 1311	EPA 1311
343BSynthetic Precipitation Leaching Procedure	----------	----------	EPA 1312	EPA 1312

Parameter/Analyte	Drinking Water	Non-Potable Water	Solid Hazardous Waste	
			Aqueous	Solid
344BASTM Leaching Procedure	----------	----------	ASTM D3987-85	ASTM D3987-85
Other				
Perchlorate	----------	EPA 6850	EPA 6850	EPA 6850
Hydrazine	----------	EPA 8315A MOD	EPA 8315A MOD	EPA 8315A MOD
Formaldehyde	----------	----------	EPA 8315A	EPA 8315A
Methylhydrazine	----------	EPA 8315A MOD	EPA 8315A MOD	EPA 8315A MOD
1,1-Dimethylhydrazine	----------	EPA 8315A MOD	EPA 8315A MOD	EPA 8315A MOD
Acetic Acid	----------	EPA 8015D	EPA 8015D	----------
Butryic acid	----------	EPA 8015D	EPA 8015D	----------
Lactic Acid	----------	EPA 8015D	EPA 8015D	----------
Propionic Acid	----------	EPA 8015D	EPA 8015D	----------
Pyruvic Acid	----------	EPA 8015D	EPA 8015D	----------
Citric Acid	----------	EPA 8015D	EPA 8015D	----------
Formic Acid	----------	EPA 8015D	EPA 8015D	----------
Oxalic Acid	----------	EPA 8015D	EPA 8015D	----------
Quinic Acid	----------	EPA 8015D	EPA 8015D	----------
Succinic Acid	----------	EPA 8015D	EPA 8015D	----------
Tartaric Acid	----------	EPA 8015D	EPA 8015D	----------
Volatile Preparation	----------	EPA 5030C	EPA 5030C	EPA 5035 EPA 5035A
352BOrganic Extraction/Cleanup	----------	EPA 3510C EPA 3511 EPA 3660B, 3620C, 3665A	EPA 3510C EPA 3511 EPA 3660B, 3620C, 3665A	EPA 3546 EPA 3550C EPA 3660B, 3620C, 3665A, 3640A

Parameter/Analyte	Drinking Water	Nonpotable Water	Solid Haz.Waste
Per and Polyfluoroalkyl Substances (PFAS)			
N-ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	EPA 537 EPA 537.1	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
N-methyl perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	EPA 537 EPA 537.1	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
Perfluorobutanesulfonic Acid (PFBS)	EPA 537 EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
Perfluorodecanoic Acid (PFDA)	EPA 537 EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15

Parameter/Analyte	Drinking Water	Nonpotable Water	Solid Haz.Waste
		EPA Draft Method 1633	EPA Draft Method 1633
Perfluorododecanoic Acid (PFDoA)	EPA 537 EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
Perfluoroheptanoic Acid (PFHpA)	EPA 537 EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
Perfluorohexanesulfonic Acid (PFHxS)	EPA 537 EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
Perfluorohexanoic Acid (PFHxA)	EPA 537 EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
Perfluorononanoic Acid (PFNA)	EPA 537 EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
Perfluorooctanesulfonic Acid (PFOS)	EPA 537 EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
Perfluorooctanoic Acid (PFOA)	EPA 537 EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
Perfluorotetradecanoic Acid (PFTeDA)	EPA 537 EPA 537.1	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
Perfluorotridecanoic Acid (PFTrDA)	EPA 537 EPA 537.1	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
Perfluoroundecanoic Acid (PFUnA)	EPA 537 EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15

Parameter/Analyte	Drinking Water	Nonpotable Water	Solid Haz.Waste
		EPA Draft Method 1633	EPA Draft Method 1633
Hexafluoropropylene oxide dimer acid (HF-PODA)	EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
4,8-Dioxa-3*H*-perfluorononanoic acid (ADONA)	EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	EPA 537.1 EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
Perfluorobutanoic Acid (PFBA)	EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
Perfluoropentanoic Acid (PFPeA)	EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2FTS)	EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
Perfluoropentanesulfonic Acid (PFPeS)	EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633

Parameter/Analyte	Drinking Water	Nonpotable Water	Solid Haz.Waste
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
Perfluoroheptanesulfonic Acid (PFHpS)	EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
Perfluorononanesulfonic Acid (PFNS)	----------	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
374BPerfluorodecanesulfonic Acid (PFDS)	----------	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
10:2 Fluorotelomersulfonic Acid (10:2-FTS)	----------	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15
Perfluorododecanesulfonic Acid (PFDoS)	----------	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
Perfluorohexadecanoic Acid (PFHxDA)	----------	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15
Perfluorooctadecanoic Acid (PFODA)	----------	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15
Perfluorooctanesulfonamide (PFOSA)	----------	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	----------	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
N-methyl perfluorooctanesulfonamide (NMeFOSA)	----------	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15

Parameter/Analyte	Drinking Water	Nonpotable Water	Solid Haz.Waste
		EPA Draft Method 1633	EPA Draft Method 1633
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	----------	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
N-ethylperfluorooctanesulfonamide (NEtFOSA)	----------	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
Perfluoro-3-methoxypropanoic acid (PFMPA)	EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
Perfluoro-4-methoxybutanoic acid (PFMBA)	EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	EPA 533	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
3-Perfluoropropylpropanoic acid (3:3 FTCA)	---	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
2*H*,2*H*,3*H*,3*H*-Perfluorooctanoic acid (5:3 FTCA)	---	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	---	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633	PFAS by LCMSMS Compliant with QSM 5.3/5.4 Table B-15 EPA Draft Method 1633

End of DoD ELAP section of scope

In addition, in recognition of the successful completion of the A2LA evaluation process (including an assessment of the

laboratory's compliance with ISO IEC 17025:2017, the 2009 TNI Environmental Testing Laboratory Standard, and for the test methods applicable to Kentucky Statute KRS 224.60-130(2)(a), and for the test methods applicable to the Wyoming Storage Tank Remediation Laboratory Accreditation Program), accreditation is granted to this laboratory to perform recognized EPA methods using the following testing technologies and in the analyte categories identified below:

Testing Technologies

Atomic Absorption/ICP-AES Spectrometry, ICP-MS Spectrometry, Gas Chromatography, Gas Chromatography/Mass Spectrometry, Gravimetry, High Performance Liquid Chromatography, Ion Chromatography, Misc.-Electronic Probes (pH, F^-, O_2), Oxygen Demand, Spectrophotometry (Visible), Spectrophotometry (Automated), Titrimetry, TCLP, Total Organic Carbon, Turbidity, Liquid Chromatography/Mass Spectrometry/Mass Spectrometry, High Resolution Gas Chromatography/Mass Spectrometry

Parameter/Analyte	Tissue	Nonpotable Water	Solid Hazardous Waste	
			Aqueous	Solid
Other				
Perchlorate	Food & Food Products EPA 6850	EPA 6850	EPA 6850	EPA 6850
Hydrazine	----------	EPA 8315A MOD	EPA 8315A MOD	EPA 8315A MOD
Methylhydrazine	----------	EPA 8315A MOD	EPA 8315A MOD	EPA 8315A MOD
1,1-Dimethylhydrazine	----------	EPA 8315A MOD	EPA 8315A MOD	EPA 8315A MOD
Volatile Preparation	----------	EPA 5030A EPA 5030C	EPA 5030A EPA 5030C	EPA 5035 EPA 5035A
Organic Extraction/ Cleanup	EPA 3546 EPA 3550C EPA 3660B EPA 3620C EPA 3665A EPA 3640A	EPA 3510C EPA 3511 EPA 3660B EPA 3620C EPA 3665A	EPA 3510C EPA 3511 EPA 3660B EPA 3620C EPA 3665A	EPA 3546 EPA 3550C EPA 3660B EPA 3620C EPA 3665A EPA 3640A

Parameter/Analyte	Tissue	Nonpotable Water	Solid Hazardous Waste	
			Aqueous	Solid
Kentucky UST Program				
Metals				
Arsenic	----------	----------	EPA 6010B	EPA 6010B
Barium	----------	----------	EPA 6010B	EPA 6010B
Cadmium	----------	----------	EPA 6010B	EPA 6010B
Chromium	----------	----------	EPA 6010B	EPA 6010B
Lead	----------	----------	EPA 6010B	EPA 6010B
Mercury	----------	----------	EPA 7470A	EPA 7471A
Selenium	----------	----------	EPA 6010B	EPA 6010B
Silver	----------	----------	EPA 6010B	EPA 6010B
Purgeable Organics (Volatiles)				

Parameter/Analyte	Tissue	Nonpotable Water	Solid Hazardous Waste	
			Aqueous	Solid
Diesel Range Organics (DRO)	----------	EPA 8015C EPA 8015D	EPA 8015C EPA 8015D	EPA 8015C EPA 8015D
Gasoline Range Organics (GRO)	----------	EPA 8015C EPA 8015D	EPA 8015C EPA 8015D	EPA 8015C EPA 8015D
Wyoming Storage Tank Program				
Metals				
Cadmium	----------	----------	EPA 6010C	EPA 6010C
Chromium	----------	----------	EPA 6010C	EPA 6010C
Chromium (Total, hexavalent)	----------	----------	EPA 7196A	EPA 7196A
Lead	----------	----------	EPA 6010C	EPA 6010C
Purgeable Organics (Volatiles)				
Volatile Preparation	----------	----------	EPA 5030C EPA 5030C	EPA 5035 EPA 5035A
Benzene	----------	----------	EPA 5030C EPA 8260D	EPA 8260D
1,2-Dichloroethane	----------	----------	EPA 8260D	EPA 8260D
1,2-Dibromoethane	----------	----------	EPA 8011	EPA 8011
Diisopropyl Ether	----------	----------	EPA 5030C EPA 8260D	EPA 8260D
Ethyl Benzene	----------	----------	EPA 5030C EPA 8260D	EPA 8260D
Ethyl tert-butyl Ether	----------	----------	EPA 8260D	EPA 8260D
Methyl tert-butyl Ether	----------	----------	EPA 5030C EPA 8260D	EPA 8260D
Naphthalene	----------	----------	EPA 5030C EPA 8260D	EPA 8260D
Toluene	----------	----------	EPA 5030C EPA 8260D	EPA 8260D
Tert-amyl Methyl Ether	----------	----------	EPA 5030C EPA 8260D	EPA 8260D
Tert-butyl Alcohol	----------	----------	EPA 5030C EPA 8260D	EPA 8260D
Xylenes, total	----------	----------	EPA 5030C EPA 8260D	EPA 8260D
Gasoline Range Organics (GRO C6-C10)	----------	----------	EPA 5030C EPA 8260D	EPA 8260D
Extractable Organics (Semivolatiles)				
Diesel Range Organics (DRO C10-C32)	----------	----------	EPA 8015C w/ EPA 3630 cleanup	EPA 8015C w/ EPA 3630 cleanup

End of KY, WY, and ISO 17025 section of scope

In recognition of the successful completion of the A2LA evaluation process, including an assessment of the laboratory's compliance with ISO/IEC 17025:2017 accreditation is granted to this laboratory to perform recognized EPA methods using the following testing technologies and, in the analyte, categories identified below:

Food and Feed (WHO 29)	**Food/Feed**
2,3,7,8-TCDD	EPA 1613B
2,3,7,8-TCDF	EPA 1613B
1,2,3,7,8-PeCDF	EPA 1613B
2,3,4,7,8-PeCDF	EPA 1613B
1,2,3,7,8-PeCDD	EPA 1613B
1,2,3,4,7,8-HxCDF	EPA 1613B
1,2,3,6,7,8-HxCDF	EPA 1613B
2,3,4,6,7,8-HxCDF	EPA 1613B
1,2,3,7,8,9-HxCDF	EPA 1613B
1,2,3,4,7,8-HxCDD	EPA 1613B
1,2,3,6,7,8-HxCDD	EPA 1613B
1,2,3,7,8,9-HxCDD	EPA 1613B
1,2,3,4,6,7,8-HpCDF	EPA 1613B
1,2,3,4,7,8,9-HpCDF	EPA 1613B
1,2,3,4,6,7,8-HpCDD	EPA 1613B
OCDF	EPA 1613B
OCDD	EPA 1613B
Food and Feed (WHO 29)	**Food/Feed**
6 marker PCBs (PCB28, PCB52, PCB101, PCB138, PCB153, and PCB180)	EPA 1668C
(PCB77, PCB81, PCB105, PCB114, PCB118, PCB123, PCB126, PCB156, PCB157, PCB167, PCB169, and PCB189)	EPA 1668C

Parameter/Analyte	**Tissue**	**Nonpotable Water**	**Solid Hazardous Waste**	
			Aqueous	**Solid**
12 Dioxin-like PCBs (dl-PCBs)/coplanar PCBs (PCB77, PCB81, PCB105, PCB114, PCB118, PCB123, PCB126, PCB156, PCB157, PCB167, PCB169, & PCB189)	EPA 1668C	----------	----------	----------

Parameter/Analyte	Drinking Water	Nonpotable Water	Solid Haz.Waste
441B**Per and Polyfluoroalkyl Substances (PFAS)**			
442BN-ethyl perfluorooctane-sulfonamidoacetic acid (NetFOSAA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
443BN-methyl perfluoroctane-sulfonamidoacetic acid (NMeFOSAA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
444BPerfluorobutanesulfonic acid (PFBS)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
445BPerfluorodecanoic acid (PFDA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
446BPerfluorododecanoic acid (PFDoDA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
447BPerfluoroheptanoic acid (PFHpA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
448BPerfluorohexanesulfonic acid (PFHxS)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
449BPerfluorohexanoic acid (PFHxA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
450BPerfluorononanoic acid (PFNA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
451BPerfluorooctanesulfonic acid (PFOS)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
452BPerfluorooctanoic acid (PFOA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
453BPerfluorotetradecanoic acid (PFTeDA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
454BPerfluorotridecanoic acid (PFTrDA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
455BPerfluoroundecanoic acid (PFUnDA)	EPA 537 Ver. 1.1 EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid (HFPODA)	EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
4,8-Dioxa-3H-perfluorononanoic acid (DONA)	EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	EPA 537.1	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
456BPerfluoro-n-butanoic acid (PFBA)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
457BPerfluoro-n-pentanoic acid (PFPeA)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod

Parameter/Analyte	Drinking Water	Nonpotable Water	Solid Haz.Waste
458B8:2 Fluorotelomersulfonic acid (8:2FTS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
459B4:2 Fluorotelomersulfonic acid (4:2-FTS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
460BPerfluoropentanesulfonic acid (PFPeS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
461B6:2 Fluorotelomersulfonic acid (6:2-FTS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
Perfluoroheptanesulfonic acid (PFHpS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
462BPerfluorononanesulfonic acid (PFNS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
463BPerfluorodecanesulfonic acid (PFDS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
464B10:2 Fluorotelomersulfonic acid (10:2-FTS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
465BPerfluorododecanesulfonic acid (PFDoDS)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
466BPerfluorohexadecanoic acid (PFHxDA)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
467BPerfluorooctadecanoic acid (PFODA)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
468BPerfluorooctanesulfonamide (PFOSA)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
469B2-(N-methylperfluoro-1-octanesulfonamido)-ethanol (NMePFOSAE)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
470BN-methylperfluoro-1-octanesulfonamide (NMePFOSA)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
471B2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol (NEtPFOSAE)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod
472BN-ethylperfluoro-1-octanesulfonamide (NEtPFOSA)	----------	EPA 537 Ver.1.1 Mod	EPA 537 Ver.1.1 Mod

Accredited Laboratory

A2LA has accredited

EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC

Lancaster, PA

for technical competence in the field of

Environmental Testing

In recognition of the successful completion of the A2LA evaluation process that includes an assessment of the laboratory's compliance with ISO/IEC 17025:2017, the 2009 TNI Environmental Testing Laboratory Standard, and the requirements of the Department of Defense Environmental Laboratory Accreditation Program (DoD ELAP) as detailed in version 5.4 of the DoD/DOE Quality System Manual for Environmental Laboratories (QSM), accreditation is granted to this laboratory to perform recognized EPA methods as defined on the associated A2LA Environmental Scope of Accreditation. This accreditation demonstrates technical competence for this defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated *April 2017*).

Presented this 21st day of November 2022.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 1.01
Valid to November 30, 2024

For the tests to which this accreditation applies, please refer to the laboratory's Environmental Scope of Accreditation.

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

BUREAU OF LABORATORIES

LABORATORY ACCREDITATION PROGRAM

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NELAP RECOGNIZED TNI ACCREDITATION BODY

Certifies That

36-00037

Eurofins Lancaster Laboratories Environment Testing, LLC

2425 New Holland Pike, Lancaster, PA, 17601-5994

Having duly met the requirement of
The act of June 29, 2002 (P.L. 596, No. 90)
dealing with Environmental Laboratories Accreditation
(27 Pa. C.S. 4104-4113) and the
National Environmental Laboratory Accreditation Program Standard
is hereby approved as an

Accredited Laboratory

to conduct analysis within the fields of accreditations more fully described in the attached Scope of Accreditation

NELAP accreditation granted by the PA DEP to an environmental laboratory is conditioned upon continued compliance with the current edition of the NELAC Standard or TNI Standard and the following Subchapters and Sections of 25 Pa. Code Chapter 252: Subchapter A (relating to general provisions); Subchapter B (relating to application, fees and supporting documents); Subchapter E (relating to proficiency test study requirements); Subchapter F (relating to assessment requirements); Subchapter G (relating to miscellaneous provisions); Section 252.307; and Section 252.401.

Expiration Date: **01/31/2024**

Certificate Number: **023**

Annmarie Beach

Annmarie Beach, Chief
Laboratory Accreditation Program
Bureau of Laboratories

Continued accreditation status depends on successful ongoing participation in the program
Certificate not transferable Surrender upon revocation
To be conspicuously displayed at the Laboratory
Not valid unless accompanied by a valid Scope of Accreditation
Shall not be used to imply endorsement by the Commonwealth of Pennsylvania
Customers are urged to verify the laboratory's current accreditation status
PA DEP is a NELAP recognized accreditation body

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 110.2		10005604	Color	1605	NELAP	PA	04/04/2005
EPA 1613	B	10120602	2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	9618	NELAP	PA	10/05/2010
EPA 1664	A	10127807	Oil and grease	1803	NELAP	PA	05/24/2011
EPA 1664	B	10261617	Oil and grease	1803	NELAP	PA	01/27/2014
EPA 180.1	2	10011800	Turbidity	2055	NELAP	PA	04/04/2005
EPA 200.7	4.4	10013806	Barium	1015	NELAP	PA	01/22/2001
EPA 200.7	4.4	10013806	Calcium	1035	NELAP	PA	11/28/2001
EPA 200.7	4.4	10013806	Chromium	1040	NELAP	PA	01/22/2001
EPA 200.7	4.4	10013806	Cobalt	1050	NELAP	PA	10/16/2008
EPA 200.7	4.4	10013806	Copper	1055	NELAP	PA	01/22/2001
EPA 200.7	4.4	10013806	Iron	1070	NELAP	PA	04/04/2005
EPA 200.7	4.4	10013806	Lithium	1080	NELAP	PA	11/13/2012
EPA 200.7	4.4	10013806	Magnesium	1085	NELAP	PA	12/04/2007
EPA 200.7	4.4	10013806	Manganese	1090	NELAP	PA	04/04/2005
EPA 200.7	4.4	10013806	Nickel	1105	NELAP	PA	01/22/2001
EPA 200.7	4.4	10013806	Potassium	1125	NELAP	PA	05/24/2011
EPA 200.7	4.4	10013806	Silver	1150	NELAP	PA	01/26/2001
EPA 200.7	4.4	10013806	Sodium	1155	NELAP	PA	01/22/2001
EPA 200.7	4.4	10013806	Strontium	1160	NELAP	PA	05/24/2011
EPA 200.7	4.4	10013806	Sulfur	2017	NELAP	PA	11/09/2012
EPA 200.7	4.4	10013806	Tin	1175	NELAP	PA	11/03/2008
EPA 200.7	4.4	10013806	Vanadium	1185	NELAP	PA	10/16/2008

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The Pennsylvania Department of Environmental Protection Laboratory Accreditation Program is a NELAP recognized Accreditation Body. Customers are urged to verify the laboratory's current accreditation standing.

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 200.7	4.4	10013806	Zinc	1190	NELAP	PA	04/04/2005
EPA 200.8	5.4	10014605	Aluminum	1000	NELAP	PA	01/25/2019
EPA 200.8	5.4	10014605	Antimony	1005	NELAP	PA	02/10/2005
EPA 200.8	5.4	10014605	Arsenic	1010	NELAP	PA	02/10/2005
EPA 200.8	5.4	10014605	Barium	1015	NELAP	PA	11/16/2011
EPA 200.8	5.4	10014605	Beryllium	1020	NELAP	PA	02/10/2005
EPA 200.8	5.4	10014605	Cadmium	1030	NELAP	PA	02/10/2005
EPA 200.8	5.4	10014605	Calcium	1035	NELAP	PA	11/16/2011
EPA 200.8	5.4	10014605	Chromium	1040	NELAP	PA	02/10/2005
EPA 200.8	5.4	10014605	Copper	1055	NELAP	PA	03/09/2007
EPA 200.8	5.4	10014605	Iron	1070	NELAP	PA	11/02/2012
EPA 200.8	5.4	10014605	Lead	1075	NELAP	PA	02/10/2005
EPA 200.8	5.4	10014605	Magnesium	1085	NELAP	PA	11/02/2012
EPA 200.8	5.4	10014605	Manganese	1090	NELAP	PA	11/16/2011
EPA 200.8	5.4	10014605	Nickel	1105	NELAP	PA	02/10/2005
EPA 200.8	5.4	10014605	Potassium	1125	NELAP	PA	11/16/2011
EPA 200.8	5.4	10014605	Selenium	1140	NELAP	PA	02/10/2005
EPA 200.8	5.4	10014605	Sodium	1155	NELAP	PA	11/16/2011
EPA 200.8	5.4	10014605	Strontium	1160	NELAP	PA	11/16/2011
EPA 200.8	5.4	10014605	Thallium	1165	NELAP	PA	02/10/2005
EPA 200.8	5.4	10014605	Zinc	1190	NELAP	PA	11/16/2011
EPA 245.1	3.0	10036609	Mercury	1095	NELAP	PA	08/29/2001

Annmarie Beach

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 300.0	2.1	10053200	Chloride	1575	NELAP	PA	05/17/2005
EPA 300.0	2.1	10053200	Fluoride	1730	NELAP	PA	11/10/2022
EPA 300.0	2.1	10053200	Nitrate as N	1810	NELAP	PA	10/31/2002
EPA 300.0	2.1	10053200	Nitrite as N	1840	NELAP	PA	10/31/2002
EPA 300.0	2.1	10053200	Sulfate	2000	NELAP	PA	07/07/2003
EPA 335.4	1.0	10061402	Cyanide	1635	NELAP	PA	07/11/2006
EPA 353.2	2.0	10067604	Nitrate as N	1810	NELAP	PA	02/28/2002
EPA 353.2	2.0	10067604	Nitrite as N	1840	NELAP	PA	02/28/2002
EPA 353.2	2.0	10067604	Total nitrate-nitrite	1825	NELAP	PA	05/24/2011
EPA 524.2	4.1	10088809	1,1,1,2-Tetrachloroethane	5105	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	1,1,1-Trichloroethane	5160	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	1,1,2,2-Tetrachloroethane	5110	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	1,1,2-Trichloroethane	5165	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	1,1-Dichloro-2-propanone (1,1-Dichloropropanone)	7450	NELAP	PA	05/17/2005
EPA 524.2	4.1	10088809	1,1-Dichloroethane	4630	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	1,1-Dichloroethene (1,1-Dichloroethylene)	4640	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	1,1-Dichloropropene	4670	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	1,2,3-Trichlorobenzene	5150	NELAP	PA	04/04/2005
EPA 524.2	4.1	10088809	1,2,3-Trichloropropane (1,2,3-TCP)	5180	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	1,2,4-Trichlorobenzene	5155	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	1,2,4-Trimethylbenzene	5210	NELAP	PA	04/04/2005
EPA 524.2	4.1	10088809	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	03/06/2018

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 524.2	4.1	10088809	1,2-Dichloroethane	4635	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	1,2-Dichloropropane	4655	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	1,3,5-Trimethylbenzene	5215	NELAP	PA	05/17/2005
EPA 524.2	4.1	10088809	1,3-Dichlorobenzene (m-Dichlorobenzene)	4615	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	1,3-Dichloropropane	4660	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	1,4-Dichlorobenzene (p-Dichlorobenzene)	4620	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	1-Chlorobutane	4480	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	2,2-Dichloropropane	4665	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	2-Butanone (Methyl ethyl ketone, MEK)	4410	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	2-Chlorotoluene	4535	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	2-Hexanone	4860	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	2-Nitropropane	5020	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	4-Chlorotoluene	4540	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	4-Methyl-2-pentanone (MIBK)	4995	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	Acetone	4315	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	Acrylonitrile	4340	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	Allyl chloride (3-Chloropropene)	4355	NELAP	PA	07/03/2007
EPA 524.2	4.1	10088809	Benzene	4375	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	Bromobenzene	4385	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	Bromochloromethane	4390	NELAP	PA	04/04/2005
EPA 524.2	4.1	10088809	Bromodichloromethane	4395	NELAP	PA	11/03/2016
EPA 524.2	4.1	10088809	Bromoform	4400	NELAP	PA	11/03/2016

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 524.2	4.1	10088809	Carbon disulfide	4450	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	Carbon tetrachloride	4455	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	Chloroacetonitrile	4470	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	Chlorobenzene	4475	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	Chloroethane	4485	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	Chloroform	4505	NELAP	PA	11/03/2016
EPA 524.2	4.1	10088809	Dibromochloromethane	4575	NELAP	PA	11/03/2016
EPA 524.2	4.1	10088809	Dibromomethane	4595	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	Dichlorodifluoromethane (Freon 12)	4625	NELAP	PA	04/04/2005
EPA 524.2	4.1	10088809	Diethyl ether (Ethyl ether)	4725	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	Diisopropyl ether (DIPE)	9375	NELAP	PA	01/07/2010
EPA 524.2	4.1	10088809	Ethyl methacrylate	4810	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	Ethyl tert-butyl ether (ETBE)	4770	NELAP	PA	01/24/2007
EPA 524.2	4.1	10088809	Ethylbenzene	4765	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	4835	NELAP	PA	04/04/2005
EPA 524.2	4.1	10088809	Isopropylbenzene (Cumene)	4900	NELAP	PA	04/04/2005
EPA 524.2	4.1	10088809	Methacrylonitrile	4925	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	Methyl bromide (Bromomethane)	4950	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	Methyl chloride (Chloromethane)	4960	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	Methyl iodide (Iodomethane)	4870	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	Methyl tert-butyl ether (MTBE)	5000	NELAP	PA	04/04/2005
EPA 524.2	4.1	10088809	Methylacrylate	4945	NELAP	PA	05/24/2007

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 524.2	4.1	10088809	Methylene chloride (Dichloromethane)	4975	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	Methylmethacrylate	4990	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	Naphthalene	5005	NELAP	PA	05/17/2005
EPA 524.2	4.1	10088809	Nitrobenzene	5015	NELAP	PA	05/17/2005
EPA 524.2	4.1	10088809	Pentachloroethane	5035	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	Propionitrile (Ethyl cyanide)	5080	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	Styrene	5100	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	Tetrachloroethene (PCE, Perchloroethylene)	5115	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	Tetrahydrofuran (THF)	5120	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	Toluene	5140	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	Total trihalomethanes (TTHMs)	5205	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	Trichloroethene (TCE, Trichloroethylene)	5170	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	Trichlorofluoromethane (Freon 11)	5175	NELAP	PA	04/04/2005
EPA 524.2	4.1	10088809	Vinyl chloride (Chloroethene)	5235	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	Xylenes, total	5260	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	cis-1,2-Dichloroethene	4645	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	cis-1,3-Dichloropropene	4680	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	m+p-Xylene	5240	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	n-Butylbenzene	4435	NELAP	PA	04/04/2005
EPA 524.2	4.1	10088809	n-Propylbenzene	5090	NELAP	PA	05/17/2005
EPA 524.2	4.1	10088809	o-Xylene	5250	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	p-Isopropyltoluene (4-Isopropyltoluene)	4910	NELAP	PA	05/17/2005

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 524.2	4.1	10088809	sec-Butylbenzene	4440	NELAP	PA	04/04/2005
EPA 524.2	4.1	10088809	tert-Amyl methyl ether (TAME)	4370	NELAP	PA	01/24/2007
EPA 524.2	4.1	10088809	tert-Butyl alcohol (2-Methyl-2-propanol)	4420	NELAP	PA	05/24/2007
EPA 524.2	4.1	10088809	tert-Butylbenzene	4445	NELAP	PA	04/04/2005
EPA 524.2	4.1	10088809	trans-1,2-Dichloroethene	4700	NELAP	PA	03/06/2018
EPA 524.2	4.1	10088809	trans-1,3-Dichloropropene	4685	NELAP	PA	10/31/2002
EPA 524.2	4.1	10088809	trans-1,4-Dichloro-2-butene	4605	NELAP	PA	05/24/2007
EPA 531.1	3.1	10091006	3-Hydroxycarbofuran	7710	NELAP	PA	11/07/2006
EPA 531.1	3.1	10091006	Aldicarb (Temik)	7010	NELAP	PA	04/14/2015
EPA 531.1	3.1	10091006	Aldicarb sulfone	7015	NELAP	PA	01/24/2001
EPA 531.1	3.1	10091006	Aldicarb sulfoxide	7020	NELAP	PA	01/24/2001
EPA 531.1	3.1	10091006	Carbaryl (Sevin)	7195	NELAP	PA	10/09/2002
EPA 531.1	3.1	10091006	Carbofuran (Furaden)	7205	NELAP	PA	01/24/2001
EPA 531.1	3.1	10091006	Methomyl (Lannate)	7805	NELAP	PA	01/24/2001
EPA 531.1	3.1	10091006	Oxamyl (Vydate)	7940	NELAP	PA	01/24/2001
EPA 533	1.0	10091619	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	6948	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	6946	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	6947	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	PA	11/03/2020

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 533	1.0	10091619	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	6956	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	6957	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluoro-3-methoxypropanoic acid (PFMPA)	6965	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluoro-4-methoxybutanoic acid (PFMBA)	6966	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluorobutanoic acid (PFBA)	6915	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluoroheptanesulfonic acid (PFHpS)	9470	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluorononanoic acid (PFNA)	6906	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluoropentane sulfonic acid (PFPeS)	6934	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluoropentanoic acid (PFPeA)	6914	NELAP	PA	11/03/2020
EPA 533	1.0	10091619	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	11/03/2020
EPA 537	1.1	10091675	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	05/14/2018

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 537	1.1	10091675	Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	05/14/2018
EPA 537	1.1	10091675	Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	05/14/2018
EPA 537	1.1	10091675	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	05/14/2018
EPA 537	1.1	10091675	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	05/14/2018
EPA 537	1.1	10091675	Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	05/14/2018
EPA 537	1.1	10091675	Perfluorononanoic acid (PFNA)	6906	NELAP	PA	05/14/2018
EPA 537	1.1	10091675	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	PA	05/14/2018
EPA 537	1.1	10091675	Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	05/14/2018
EPA 537	1.1	10091675	Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	05/14/2018
EPA 537	1.1	10091675	Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	05/14/2018
EPA 537	1.1	10091675	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	05/14/2018
EPA 537	1.1	10091675	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	07/16/2018
EPA 537	1.1	10091675	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	05/14/2018
EPA 537.1	1.0	10091642	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	08/01/2019

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 537.1	1.0	10091642	Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	Perfluorononanoic acid (PFNA)	6906	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	08/01/2019
EPA 537.1	1.0	10091642	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	08/01/2019
EPA 8015	D	10305609	Nonhalogenated organics by GC/FID	9435	NELAP	PA	05/24/2011
EPA 8015	B	10173601	Ethane	4747	NELAP	PA	05/24/2011
EPA 8015	B	10173601	Methane	4926	NELAP	PA	05/24/2011
EPA 8015	B	10173601	Propane	5029	NELAP	PA	11/09/2012
EPA 8015	C	10173816	Ethane	4747	NELAP	PA	05/24/2011
EPA 8015	C	10173816	Methane	4926	NELAP	PA	05/24/2011
EPA 8015	C	10173816	Propane	5029	NELAP	PA	11/09/2012
EPA 8015	D	10305609	Ethane	4747	NELAP	PA	05/24/2011

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8015	D	10305609	Methane	4926	NELAP	PA	05/24/2011
EPA 8015	D	10305609	Propane	5029	NELAP	PA	11/09/2012
RSK-175		10212905	Acetylene (Ethyne)	4323	NELAP	PA	11/19/2015
RSK-175		10212905	Carbon dioxide	3755	NELAP	PA	11/19/2015
RSK-175		10212905	Ethane	4747	NELAP	PA	11/19/2015
RSK-175		10212905	Ethene	4752	NELAP	PA	11/19/2015
RSK-175		10212905	Isobutane (2-Methylpropane)	4942	NELAP	PA	11/19/2015
RSK-175		10212905	Methane	4926	NELAP	PA	11/19/2015
RSK-175		10212905	n-Butane	5007	NELAP	PA	11/19/2015
SM 2120B - 2001	Online ed.	20039309	Color	1605	NELAP	PA	05/25/2005
SM 2120B - 2011	Online ed.	20039310	Color	1605	NELAP	PA	05/25/2005
SM 2130B - 2001	21st ed.	20042608	Turbidity	2055	NELAP	PA	05/17/2005
SM 2130B - 2011	Online ed.	20048220	Turbidity	2055	NELAP	PA	05/17/2005
SM 2320B - 1997	Online ed.	20045607	Alkalinity as CaCO3	1505	NELAP	PA	01/24/2001
SM 2320B - 2011	Online ed.	20045618	Alkalinity as CaCO3	1505	NELAP	PA	01/24/2001
SM 2340C - 1997	Online ed.	20047603	Total hardness as CaCO3	1755	NELAP	PA	05/24/2011
SM 2340C - 2011	Online ed.	20047614	Total hardness as CaCO3	1755	NELAP	PA	05/24/2011
SM 2510B - 1997	21st ed.	20048402	Conductivity	1610	NELAP	PA	05/17/2005
SM 2510B - 2011	Online ed.	20048617	Conductivity	1610	NELAP	PA	05/17/2005
SM 2540B - 1997	20th ed.	20049007	Residue, total	1950	NELAP	PA	09/04/2018
SM 2540B - 2011	22nd ed.	20049212	Residue, total	1950	NELAP	PA	09/04/2018
SM 2540B - 2015	Online ed.	20049438	Residue, total	1950	NELAP	PA	09/04/2018

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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SM 2540C - 1997	Online ed.	20050402	Residue, filterable (TDS)	1955	NELAP	PA	06/02/2004
SM 2540C - 2011	Online ed.	20050413	Residue, filterable (TDS)	1955	NELAP	PA	06/02/2004
SM 2540C - 2015	Online ed.	20050435	Residue, filterable (TDS)	1955	NELAP	PA	06/02/2004
SM 2540D - 1997	21st ed.	20051007	Residue, nonfilterable (TSS)	1960	NELAP	PA	05/24/2011
SM 2540D - 2011	22nd ed.	20051018	Residue, nonfilterable (TSS)	1960	NELAP	PA	05/24/2011
SM 2540D - 2015	Online ed.	20051223	Residue, nonfilterable (TSS)	1960	NELAP	PA	05/24/2011
SM 2550B - 2010	Online ed.	20053229	Temperature, deg. C	2030	NELAP	PA	04/04/2005
SM 4500-Cl F - 2000	21st ed.	20080608	Total residual chlorine	1940	NELAP	PA	05/24/2011
SM 4500-Cl F - 2011	Online ed.	20080824	Total residual chlorine	1940	NELAP	PA	05/24/2011
SM 4500-F- C - 1997	Online ed.	20102403	Fluoride	1730	NELAP	PA	10/15/2003
SM 4500-F- C - 2011	Online ed.	20102414	Fluoride	1730	NELAP	PA	10/15/2003
SM 4500-H + B - 2000	21st ed.	20105004	pH	1900	NELAP	PA	05/16/2007
SM 4500-H + B - 2011	Online ed.	20105220	pH	1900	NELAP	PA	05/16/2007
SM 4500-P E - 1999	21st ed.	20124009	Orthophosphate as P	1870	NELAP	PA	06/12/2007
SM 4500-P E - 2011	Online ed.	20124225	Orthophosphate as P	1870	NELAP	PA	06/12/2007
SM 4500-SiO2 C - 1997	21st ed.	20128409	Silica, dissolved	1995	NELAP	PA	05/24/2007
SM 4500-SiO2 C - 2011	Online ed.	20128614	Silica, dissolved	1995	NELAP	PA	05/24/2007
SM 5310C - 2000	21st ed.	20138607	Total organic carbon (TOC)	2040	NELAP	PA	04/18/2013
SM 5310C - 2011	Online ed.	20138823	Total organic carbon (TOC)	2040	NELAP	PA	04/18/2013
SM 5310C - 2014	Online ed.	20138834	Total organic carbon (TOC)	2040	NELAP	PA	04/18/2013
SM 5540C - 2000	Online ed.	20145055	Surfactants as MBAS	2025	NELAP	PA	05/24/2007
SM 5540C - 2011	Online ed.	20145066	Surfactants as MBAS	2025	NELAP	PA	05/24/2007

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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Drinking Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
AK-101		90015002	Gasoline-range organics (GRO)	9408	NELAP	PA	12/12/2005
AK-102		90015206	Diesel-range organics (DRO)	9369	NELAP	PA	12/12/2005
ASTM D7511-09		30032985	Total cyanide	1645	NELAP	PA	02/15/2013
ASTM D7511-17		30033068	Total cyanide	1645	NELAP	PA	01/25/2019
EPA 1010	A	10234807	Ignitability	1780	NELAP	PA	08/30/2019
EPA 1010	B	10234830	Flashpoint	6117	NELAP	PA	09/14/2021
EPA 1010		10116606	Ignitability	1780	NELAP	PA	12/12/2005
EPA 130.2		10007202	Total hardness as CaCO3	1755	NELAP	PA	01/10/2023
EPA 1311		10118806	Toxicity characteristic leaching procedure (TCLP)	1466	NELAP	PA	12/12/2005
EPA 1312		10119003	Synthetic precipitation leaching procedure (SPLP)	1460	NELAP	PA	12/12/2005
EPA 160.1		10009208	Residue, filterable (TDS)	1955	NELAP	PA	01/19/2005
EPA 1613	B	10120602	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	9519	NELAP	PA	06/30/2010
EPA 1613	B	10120602	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	9516	NELAP	PA	06/30/2010
EPA 1613	B	10120602	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	9426	NELAP	PA	06/30/2010
EPA 1613	B	10120602	1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	9420	NELAP	PA	06/30/2010

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DEP Laboratory ID: 36-00037
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TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1613	B	10120602	1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	9423	NELAP	PA	06/30/2010
EPA 1613	B	10120602	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	9453	NELAP	PA	06/30/2010
EPA 1613	B	10120602	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	9471	NELAP	PA	06/30/2010
EPA 1613	B	10120602	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	9456	NELAP	PA	06/30/2010
EPA 1613	B	10120602	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	9474	NELAP	PA	06/30/2010
EPA 1613	B	10120602	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	9459	NELAP	PA	06/30/2010
EPA 1613	B	10120602	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	9477	NELAP	PA	06/30/2010
EPA 1613	B	10120602	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	9540	NELAP	PA	06/30/2010
EPA 1613	B	10120602	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	9543	NELAP	PA	06/30/2010
EPA 1613	B	10120602	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	9480	NELAP	PA	06/30/2010
EPA 1613	B	10120602	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	9549	NELAP	PA	06/30/2010
EPA 1613	B	10120602	2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)(Dioxin)	9618	NELAP	PA	06/30/2010
EPA 1613	B	10120602	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	9612	NELAP	PA	06/30/2010
EPA 1613	B	10120602	Total heptachlorodibenzo-p-dioxin (HpCDD)	9438	NELAP	PA	08/06/2010
EPA 1613	B	10120602	Total heptachlorodibenzofuran (HpCDF)	9444	NELAP	PA	08/06/2010
EPA 1613	B	10120602	Total hexachlorodibenzo-p-dioxin (HxCDD)	9468	NELAP	PA	08/06/2010
EPA 1613	B	10120602	Total hexachlorodibenzofuran (HxCDF)	9483	NELAP	PA	08/06/2010
EPA 1613	B	10120602	Total pentachlorodibenzo-p-dioxin (PeCDD)	9555	NELAP	PA	08/06/2010
EPA 1613	B	10120602	Total pentachlorodibenzofuran (PeCDF)	9552	NELAP	PA	08/06/2010
EPA 1613	B	10120602	Total tetrachlorodibenzo-p-dioxin (TCDD)	9609	NELAP	PA	08/06/2010

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1613	B	10120602	Total tetrachlorodibenzofuran (TCDF)	9615	NELAP	PA	08/06/2010
EPA 1633 (draft)	draft	10123429	Perfluorodecanesulfonic acid (PFDS)	6920	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorododecanesulfonic acid (PFDoS)	6923	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorononanesulfonic acid (PFNS)	6929	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluoropentanesulfonic acid (PFPeS)	6934	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	6948	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	6946	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	6947	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	2H,2H,3H,3H-Perfluorodecanoic acid (3-Perfluoroheptyl propanoic acid) (7:3 FTCA)	9340	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	9338	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	4,4,5,5,6,6,6-Heptafluorohexanoic acid (3-Perfluoropropyl propanoic acid) (3:3 FTCA)	9353	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	N-Ethylperfluorooctanesulfonamide (EtFOSA)	9395	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	N-Methylperfluorooctanesulfonamide (MeFOSA)	9433	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	N-ethylperfluoro-1-octanesulfonamido ethanol (N-EtFOSE)	9431	NELAP	PA	07/27/2022

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Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1633 (draft)	draft	10123429	N-methylperfluoro-1-octanesulfonamido ethanol (N-MeFOSE)	6949	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	6956	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	6957	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluoro-3-methoxypropanoic acid (PFMPA)	6965	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluoro-4-methoxybutanoic acid (PFMBA)	6966	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorobutanoic acid (PFBA)	6915	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluoroheptanesulfonic acid (PFHpS)	9470	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorononanoic acid (PFNA)	6906	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorooctane sulfonamide (PFOSA)	6917	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluoropentanoic acid (PFPeA)	6914	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	07/27/2022

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TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1633 (draft)	draft	10123429	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	07/27/2022
EPA 1664	A	10127807	Non-polar material	1853	NELAP	PA	03/27/2018
EPA 1664	A	10127807	Oil and grease	1803	NELAP	PA	01/19/2005
EPA 1664	B	10261617	Non-polar material	1853	NELAP	PA	01/31/2020
EPA 1664	B	10261617	Oil and grease	1803	NELAP	PA	01/27/2014
EPA 1666	A	10128208	4-Methyl-2-pentanone (MIBK)	4995	NELAP	PA	12/12/2005
EPA 1666	A	10128208	Diisopropyl ether (DIPE)	9375	NELAP	PA	01/19/2005
EPA 1666	A	10128208	Ethyl acetate	4755	NELAP	PA	01/19/2005
EPA 1666	A	10128208	Isobutyraldehyde	4880	NELAP	PA	01/19/2005
EPA 1666	A	10128208	Isopropyl acetate	4890	NELAP	PA	01/19/2005
EPA 1666	A	10128208	Isopropyl alcohol (2-Propanol)	4895	NELAP	PA	12/02/2009
EPA 1666	A	10128208	Methyl formate	4980	NELAP	PA	01/19/2005
EPA 1666	A	10128208	Tetrahydrofuran (THF)	5120	NELAP	PA	01/19/2005
EPA 1666	A	10128208	Xylenes, total	5260	NELAP	PA	01/19/2005
EPA 1666	A	10128208	m+p-Xylene	5240	NELAP	PA	01/11/2022
EPA 1666	A	10128208	n-Amyl acetate (n-Pentyl acetate)	4360	NELAP	PA	04/04/2005
EPA 1666	A	10128208	n-Amyl alcohol (1-Pentanol)	4365	NELAP	PA	04/04/2005
EPA 1666	A	10128208	n-Butyl acetate	4403	NELAP	PA	04/04/2005
EPA 1666	A	10128208	n-Heptane	4825	NELAP	PA	01/19/2005

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Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1666	A	10128208	n-Hexane	4855	NELAP	PA	01/19/2005
EPA 1666	A	10128208	o-Xylene	5250	NELAP	PA	01/11/2022
EPA 1666	A	10128208	tert-Butyl alcohol (2-Methyl-2-propanol)	4420	NELAP	PA	04/04/2005
EPA 1668	A	10262007	PCBs as congeners by HRGC/HRMS	8875	NELAP	PA	03/04/2015
EPA 1668	C	10262109	PCBs as congeners by HRGC/HRMS	8875	NELAP	PA	03/04/2015
EPA 1668	A	10262007	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ 206)	9095	NELAP	PA	02/01/2013
EPA 1668	A	10262007	2,2',3,3',4,4',5,5'-Octachlorobiphenyl (BZ 194)	9090	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4',5,6'-Octachlorobiphenyl (BZ 196)	9102	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (BZ 207)	9101	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4',5,6-Octachlorobiphenyl (BZ 195)	9103	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ 170)	9065	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4',6,6'-Octachlorobiphenyl (BZ 197)	9104	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4',6-Heptachlorobiphenyl (BZ 171)	9106	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4'-Hexachlorobiphenyl (BZ 128)	9020	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5',6'-Heptachlorobiphenyl (BZ 177)	9114	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5',6,6'-Octachlorobiphenyl (BZ 201)	9112	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5',6-Heptachlorobiphenyl (BZ 175)	9115	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5'-Hexachlorobiphenyl (BZ 130)	9117	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5,5',6'-Octachlorobiphenyl (BZ 199)	9108	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (BZ 208)	9107	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5,5',6-Octachlorobiphenyl (BZ 198)	9109	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5,5'-Heptachlorobiphenyl (BZ 172)	9110	NELAP	PA	12/17/2012

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Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,2',3,3',4,5,6'-Heptachlorobiphenyl (BZ 174)	9116	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5,6,6'-Octachlorobiphenyl (BZ 200)	9111	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5,6-Heptachlorobiphenyl (BZ 173)	9113	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5-Hexachlorobiphenyl (BZ 129)	9118	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,6'-Hexachlorobiphenyl (BZ 132)	9120	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,6,6'-Heptachlorobiphenyl (BZ 176)	9119	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,6-Hexachlorobiphenyl (BZ 131)	9121	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4-Pentachlorobiphenyl (BZ 82)	9122	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',5,5',6,6'-Octachlorobiphenyl (BZ 202)	9123	NELAP	PA	02/01/2013
EPA 1668	A	10262007	2,2',3,3',5,5',6-Heptachlorobiphenyl (BZ 178)	9124	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',5,5'-Hexachlorobiphenyl (BZ 133)	9125	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',5,6'-Hexachlorobiphenyl (BZ 135)	9127	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',5,6,6'-Heptachlorobiphenyl (BZ 179)	9126	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',5,6-Hexachlorobiphenyl (BZ 134)	9128	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',5-Pentachlorobiphenyl (BZ 83)	9129	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',6,6'-Hexachlorobiphenyl (BZ 136)	9130	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',6-Pentachlorobiphenyl (BZ 84)	9131	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3'-Tetrachlorobiphenyl (BZ 40)	9132	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5',6-Hexachlorobiphenyl (BZ 149)	9151	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5'-Pentachlorobiphenyl (BZ 97)	9154	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ 187)	9080	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5,5'-Hexachlorobiphenyl (BZ 146)	9144	NELAP	PA	12/17/2012

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,2',3,4',5,6'-Hexachlorobiphenyl (BZ 148)	9147	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5,6,6'-Heptachlorobiphenyl (BZ 188)	9146	NELAP	PA	02/01/2013
EPA 1668	A	10262007	2,2',3,4',5,6-Hexachlorobiphenyl (BZ 147)	9149	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5-Pentachlorobiphenyl (BZ 90)	9155	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',6'-Pentachlorobiphenyl (BZ 98)	9159	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',6,6'-Hexachlorobiphenyl (BZ 150)	9157	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',6-Pentachlorobiphenyl (BZ 91)	9160	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4'-Tetrachlorobiphenyl (BZ 42)	9162	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5',6-Heptachlorobiphenyl (BZ 183)	9075	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5'-Hexachlorobiphenyl (BZ 138)	9025	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5,5',6-Octachlorobiphenyl (BZ 203)	9133	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5,5'-Heptachlorobiphenyl (BZ 180)	9134	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5,6'-Heptachlorobiphenyl (BZ 182)	9136	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5,6,6'-Octachlorobiphenyl (BZ 204)	9135	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5,6-Heptachlorobiphenyl (BZ 181)	9137	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5-Hexachlorobiphenyl (BZ 137)	9138	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',6'-Hexachlorobiphenyl (BZ 140)	9140	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',6,6'-Heptachlorobiphenyl (BZ 184)	9139	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',6-Hexachlorobiphenyl (BZ 139)	9141	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4'-Pentachlorobiphenyl (BZ 85)	9142	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5',6-Hexachlorobiphenyl (BZ 144)	9150	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5'-Pentachlorobiphenyl (BZ 87)	8975	NELAP	PA	12/17/2012

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Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,2',3,4,5,5',6-Heptachlorobiphenyl (BZ 185)	9143	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5,5'-Hexachlorobiphenyl (BZ 141)	9030	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5,6'-Hexachlorobiphenyl (BZ 143)	9152	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5,6,6'-Heptachlorobiphenyl (BZ 186)	9145	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5,6-Hexachlorobiphenyl (BZ 142)	9148	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5-Pentachlorobiphenyl (BZ 86)	9153	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,6'-Pentachlorobiphenyl (BZ 89)	9161	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,6,6'-Hexachlorobiphenyl (BZ 145)	9156	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,6-Pentachlorobiphenyl (BZ 88)	9158	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4-Tetrachlorobiphenyl (BZ 41)	9163	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5',6-Pentachlorobiphenyl (BZ 95)	9166	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5'-Tetrachlorobiphenyl (BZ 44)	8945	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5,5',6-Hexachlorobiphenyl (BZ 151)	9035	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5,5'-Pentachlorobiphenyl (BZ 92)	9164	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5,6'-Pentachlorobiphenyl (BZ 94)	9167	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5,6,6'-Hexachlorobiphenyl (BZ 152)	9165	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5,6-Pentachlorobiphenyl (BZ 93)	9168	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5-Tetrachlorobiphenyl (BZ 43)	9169	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,6'-Tetrachlorobiphenyl (BZ 46)	9171	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,6,6'-Pentachlorobiphenyl (BZ 96)	9170	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,6-Tetrachlorobiphenyl (BZ 45)	9172	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3-Trichlorobiphenyl (BZ 16)	9173	NELAP	PA	12/17/2012

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
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PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,2',4,4',5,5'-Hexachlorobiphenyl (BZ 153)	9040	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,4',5,6'-Hexachlorobiphenyl (BZ 154)	9174	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,4',5-Pentachlorobiphenyl (BZ 99)	9175	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,4',6,6'-Hexachlorobiphenyl (BZ 155)	9176	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,4',6-Pentachlorobiphenyl (BZ 100)	9177	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,4'-Tetrachlorobiphenyl (BZ 47)	9178	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,5',6-Pentachlorobiphenyl (BZ 103)	9179	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,5'-Tetrachlorobiphenyl (BZ 49)	8950	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,5,5'-Pentachlorobiphenyl (BZ 101)	8980	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,5,6'-Pentachlorobiphenyl (BZ 102)	9180	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,5-Tetrachlorobiphenyl (BZ 48)	9181	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,6'-Tetrachlorobiphenyl (BZ 51)	9183	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,6,6'-Pentachlorobiphenyl (BZ 104)	9182	NELAP	PA	02/01/2013
EPA 1668	A	10262007	2,2',4,6-Tetrachlorobiphenyl (BZ 50)	9184	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4-Trichlorobiphenyl (BZ 17)	9185	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',5,5'-Tetrachlorobiphenyl (BZ 52)	8955	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',5,6'-Tetrachlorobiphenyl (BZ 53)	9186	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',5-Trichlorobiphenyl (BZ 18)	8930	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',6,6'-Tetrachlorobiphenyl (BZ 54)	9187	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',6-Trichlorobiphenyl (BZ 19)	9188	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2'-Dichlorobiphenyl (BZ 4)	9189	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4',5',6-Pentachlorobiphenyl (BZ 125)	9224	NELAP	PA	12/17/2012

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Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,3',4',5'-Tetrachlorobiphenyl (BZ 76)	9229	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4',5,5'-Pentachlorobiphenyl (BZ 124)	9222	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4',5-Tetrachlorobiphenyl (BZ 70)	9230	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4',6-Tetrachlorobiphenyl (BZ 71)	9237	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4'-Trichlorobiphenyl (BZ 33)	9239	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,4',5',6-Hexachlorobiphenyl (BZ 168)	9218	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,4',5'-Pentachlorobiphenyl (BZ 123)	9000	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,4',5,5'-Hexachlorobiphenyl (BZ 167)	9055	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,4',5-Pentachlorobiphenyl (BZ 118)	8995	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,4',6-Pentachlorobiphenyl (BZ 119)	9220	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,4'-Tetrachlorobiphenyl (BZ 66)	8960	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,5',6-Pentachlorobiphenyl (BZ 121)	9226	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,5'-Tetrachlorobiphenyl (BZ 68)	9231	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,5,5'-Pentachlorobiphenyl (BZ 120)	9223	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,5-Tetrachlorobiphenyl (BZ 67)	9232	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,6-Tetrachlorobiphenyl (BZ 69)	9235	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4-Trichlorobiphenyl (BZ 25)	9240	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',5',6-Tetrachlorobiphenyl (BZ 73)	9244	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',5'-Trichlorobiphenyl (BZ 34)	9246	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',5,5'-Tetrachlorobiphenyl (BZ 72)	9242	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',5-Trichlorobiphenyl (BZ 26)	8935	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',6-Trichlorobiphenyl (BZ 27)	9248	NELAP	PA	12/17/2012

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Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,3'-Dichlorobiphenyl (BZ 6)	9249	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',5',6-Hexachlorobiphenyl (BZ 164)	9201	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',5'-Pentachlorobiphenyl (BZ 122)	9202	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',5,5',6-Heptachlorobiphenyl (BZ 193)	9195	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',5,5'-Hexachlorobiphenyl (BZ 162)	9197	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',5,6-Hexachlorobiphenyl (BZ 163)	9199	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',5-Pentachlorobiphenyl (BZ 107)	9205	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',6-Pentachlorobiphenyl (BZ 110)	8990	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4'-Tetrachlorobiphenyl (BZ 56)	9207	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4',5',6-Heptachlorobiphenyl (BZ 191)	9192	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4',5'-Hexachlorobiphenyl (BZ 157)	9045	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4',5,5',6-Octachlorobiphenyl (BZ 205)	9190	NELAP	PA	02/01/2013
EPA 1668	A	10262007	2,3,3',4,4',5,5'-Heptachlorobiphenyl (BZ 189)	9085	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4',5,6-Heptachlorobiphenyl (BZ 190)	9191	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4',5-Hexachlorobiphenyl (BZ 156)	9050	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4',6-Hexachlorobiphenyl (BZ 158)	9193	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4'-Pentachlorobiphenyl (BZ 105)	8985	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,5',6-Hexachlorobiphenyl (BZ 161)	9200	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,5'-Pentachlorobiphenyl (BZ 108)	9203	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,5,5',6-Heptachlorobiphenyl (BZ 192)	9194	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,5,5'-Hexachlorobiphenyl (BZ 159)	9196	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,5,6-Hexachlorobiphenyl (BZ 160)	9198	NELAP	PA	12/17/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,3,3',4,5-Pentachlorobiphenyl (BZ 106)	9204	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,6-Pentachlorobiphenyl (BZ 109)	9206	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4-Tetrachlorobiphenyl (BZ 55)	9208	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',5',6-Pentachlorobiphenyl (BZ 113)	9212	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',5'-Tetrachlorobiphenyl (BZ 58)	9213	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',5,5',6-Hexachlorobiphenyl (BZ 165)	9209	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',5,5'-Pentachlorobiphenyl (BZ 111)	9210	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',5,6-Pentachlorobiphenyl (BZ 112)	9211	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',5-Tetrachlorobiphenyl (BZ 57)	9214	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',6-Tetrachlorobiphenyl (BZ 59)	9215	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3'-Trichlorobiphenyl (BZ 20)	9216	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4',5,6-Pentachlorobiphenyl (BZ 117)	9227	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4',5-Tetrachlorobiphenyl (BZ 63)	9233	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4',6-Tetrachlorobiphenyl (BZ 64)	9236	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4'-Trichlorobiphenyl (BZ 22)	9241	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4,4',5,6-Hexachlorobiphenyl (BZ 166)	9217	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4,4',5-Pentachlorobiphenyl (BZ 114)	9005	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4,4',6-Pentachlorobiphenyl (BZ 115)	9219	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4,4'-Tetrachlorobiphenyl (BZ 60)	9221	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4,5,6-Pentachlorobiphenyl (BZ 116)	9225	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4,5-Tetrachlorobiphenyl (BZ 61)	9228	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4,6-Tetrachlorobiphenyl (BZ 62)	9234	NELAP	PA	12/17/2012

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,3,4-Trichlorobiphenyl (BZ 21)	9238	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,5,6-Tetrachlorobiphenyl (BZ 65)	9243	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,5-Trichlorobiphenyl (BZ 23)	9245	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,6-Trichlorobiphenyl (BZ 24)	9247	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3-Dichlorobiphenyl (BZ 5)	8920	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4',5-Trichlorobiphenyl (BZ 31)	8940	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4',6-Trichlorobiphenyl (BZ 32)	9255	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4'-Dichlorobiphenyl (BZ 8)	9256	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4,4',5-Tetrachlorobiphenyl (BZ 74)	9250	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4,4',6-Tetrachlorobiphenyl (BZ 75)	9251	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4,4'-Trichlorobiphenyl (BZ 28)	9252	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4,5-Trichlorobiphenyl (BZ 29)	9253	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4,6-Trichlorobiphenyl (BZ 30)	9254	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4-Dichlorobiphenyl (BZ 7)	9257	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,5-Dichlorobiphenyl (BZ 9)	9258	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,6-Dichlorobiphenyl (BZ 10)	9259	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2-Chlorobiphenyl (BZ 1)	8915	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',4,4',5,5'-Hexachlorobiphenyl (BZ 169)	9060	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',4,4',5-Pentachlorobiphenyl (BZ 126)	9015	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',4,4'-Tetrachlorobiphenyl (BZ 77)	8965	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',4,5'-Tetrachlorobiphenyl (BZ 79)	9261	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',4,5,5'-Pentachlorobiphenyl (BZ 127)	9260	NELAP	PA	12/17/2012

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	3,3',4,5-Tetrachlorobiphenyl (BZ 78)	9262	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',4-Trichlorobiphenyl (BZ 35)	9263	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',5,5'-Tetrachlorobiphenyl (BZ 80)	9264	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',5-Trichlorobiphenyl (BZ 36)	9265	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3'-Dichlorobiphenyl (BZ 11)	8925	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,4',5-Trichlorobiphenyl (BZ 39)	9268	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,4'-Dichlorobiphenyl (BZ 13)	9269	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,4,4',5-Tetrachlorobiphenyl (BZ 81)	8970	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,4,4'-Trichlorobiphenyl (BZ 37)	9266	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,4,5-Trichlorobiphenyl (BZ 38)	9267	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,4-Dichlorobiphenyl (BZ 12)	9270	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,5-Dichlorobiphenyl (BZ 14)	9271	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3-Chlorobiphenyl (BZ 2)	9272	NELAP	PA	12/17/2012
EPA 1668	A	10262007	4,4'-Dichlorobiphenyl (BZ 15)	9273	NELAP	PA	12/17/2012
EPA 1668	A	10262007	4-Chlorobiphenyl (BZ 3)	9274	NELAP	PA	12/17/2012
EPA 1668	A	10262007	Decachlorobiphenyl	9105	NELAP	PA	02/01/2013
EPA 1668	C	10262109	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ 206)	9095	NELAP	PA	02/01/2013
EPA 1668	C	10262109	2,2',3,3',4,4',5,5'-Octachlorobiphenyl (BZ 194)	9090	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4',5,6'-Octachlorobiphenyl (BZ 196)	9102	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (BZ 207)	9101	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4',5,6-Octachlorobiphenyl (BZ 195)	9103	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ 170)	9065	NELAP	PA	12/17/2012

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,2',3,3',4,4',6,6'-Octachlorobiphenyl (BZ 197)	9104	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4',6-Heptachlorobiphenyl (BZ 171)	9106	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4'-Hexachlorobiphenyl (BZ 128)	9020	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5',6'-Heptachlorobiphenyl (BZ 177)	9114	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5',6,6'-Octachlorobiphenyl (BZ 201)	9112	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5',6-Heptachlorobiphenyl (BZ 175)	9115	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5'-Hexachlorobiphenyl (BZ 130)	9117	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,5',6'-Octachlorobiphenyl (BZ 199)	9108	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (BZ 208)	9107	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,5',6-Octachlorobiphenyl (BZ 198)	9109	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,5'-Heptachlorobiphenyl (BZ 172)	9110	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,6'-Heptachlorobiphenyl (BZ 174)	9116	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,6,6'-Octachlorobiphenyl (BZ 200)	9111	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,6-Heptachlorobiphenyl (BZ 173)	9113	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5-Hexachlorobiphenyl (BZ 129)	9118	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,6'-Hexachlorobiphenyl (BZ 132)	9120	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,6,6'-Heptachlorobiphenyl (BZ 176)	9119	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,6-Hexachlorobiphenyl (BZ 131)	9121	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4-Pentachlorobiphenyl (BZ 82)	9122	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',5,5',6,6'-Octachlorobiphenyl (BZ 202)	9123	NELAP	PA	02/01/2013
EPA 1668	C	10262109	2,2',3,3',5,5',6-Heptachlorobiphenyl (BZ 178)	9124	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',5,5'-Hexachlorobiphenyl (BZ 133)	9125	NELAP	PA	12/17/2012

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Laboratory Scope of Accreditation

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Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,2',3,3',5,6'-Hexachlorobiphenyl (BZ 135)	9127	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',5,6,6'-Heptachlorobiphenyl (BZ 179)	9126	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',5,6-Hexachlorobiphenyl (BZ 134)	9128	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',5-Pentachlorobiphenyl (BZ 83)	9129	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',6,6'-Hexachlorobiphenyl (BZ 136)	9130	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',6-Pentachlorobiphenyl (BZ 84)	9131	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3'-Tetrachlorobiphenyl (BZ 40)	9132	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5',6-Hexachlorobiphenyl (BZ 149)	9151	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5'-Pentachlorobiphenyl (BZ 97)	9154	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ 187)	9080	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5,5'-Hexachlorobiphenyl (BZ 146)	9144	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5,6'-Hexachlorobiphenyl (BZ 148)	9147	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5,6,6'-Heptachlorobiphenyl (BZ 188)	9146	NELAP	PA	02/01/2013
EPA 1668	C	10262109	2,2',3,4',5,6-Hexachlorobiphenyl (BZ 147)	9149	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5-Pentachlorobiphenyl (BZ 90)	9155	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',6'-Pentachlorobiphenyl (BZ 98)	9159	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',6,6'-Hexachlorobiphenyl (BZ 150)	9157	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',6-Pentachlorobiphenyl (BZ 91)	9160	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4'-Tetrachlorobiphenyl (BZ 42)	9162	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5',6-Heptachlorobiphenyl (BZ 183)	9075	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5'-Hexachlorobiphenyl (BZ 138)	9025	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5,5',6-Octachlorobiphenyl (BZ 203)	9133	NELAP	PA	12/17/2012

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
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Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,2',3,4,4',5,5'-Heptachlorobiphenyl (BZ 180)	9134	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5,6'-Heptachlorobiphenyl (BZ 182)	9136	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5,6,6'-Octachlorobiphenyl (BZ 204)	9135	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5,6-Heptachlorobiphenyl (BZ 181)	9137	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5-Hexachlorobiphenyl (BZ 137)	9138	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',6'-Hexachlorobiphenyl (BZ 140)	9140	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',6,6'-Heptachlorobiphenyl (BZ 184)	9139	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',6-Hexachlorobiphenyl (BZ 139)	9141	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4'-Pentachlorobiphenyl (BZ 85)	9142	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5',6-Hexachlorobiphenyl (BZ 144)	9150	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5'-Pentachlorobiphenyl (BZ 87)	8975	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5,5',6-Heptachlorobiphenyl (BZ 185)	9143	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5,5'-Hexachlorobiphenyl (BZ 141)	9030	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5,6'-Hexachlorobiphenyl (BZ 143)	9152	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5,6,6'-Heptachlorobiphenyl (BZ 186)	9145	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5,6-Hexachlorobiphenyl (BZ 142)	9148	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5-Pentachlorobiphenyl (BZ 86)	9153	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,6'-Pentachlorobiphenyl (BZ 89)	9161	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,6,6'-Hexachlorobiphenyl (BZ 145)	9156	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,6-Pentachlorobiphenyl (BZ 88)	9158	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4-Tetrachlorobiphenyl (BZ 41)	9163	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5',6-Pentachlorobiphenyl (BZ 95)	9166	NELAP	PA	12/17/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,2',3,5'-Tetrachlorobiphenyl (BZ 44)	8945	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5,5',6-Hexachlorobiphenyl (BZ 151)	9035	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5,5'-Pentachlorobiphenyl (BZ 92)	9164	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5,6'-Pentachlorobiphenyl (BZ 94)	9167	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5,6,6'-Hexachlorobiphenyl (BZ 152)	9165	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5,6-Pentachlorobiphenyl (BZ 93)	9168	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5-Tetrachlorobiphenyl (BZ 43)	9169	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,6'-Tetrachlorobiphenyl (BZ 46)	9171	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,6,6'-Pentachlorobiphenyl (BZ 96)	9170	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,6-Tetrachlorobiphenyl (BZ 45)	9172	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3-Trichlorobiphenyl (BZ 16)	9173	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,4',5,5'-Hexachlorobiphenyl (BZ 153)	9040	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,4',5,6'-Hexachlorobiphenyl (BZ 154)	9174	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,4',5-Pentachlorobiphenyl (BZ 99)	9175	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,4',6,6'-Hexachlorobiphenyl (BZ 155)	9176	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,4',6-Pentachlorobiphenyl (BZ 100)	9177	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,4'-Tetrachlorobiphenyl (BZ 47)	9178	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,5',6-Pentachlorobiphenyl (BZ 103)	9179	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,5'-Tetrachlorobiphenyl (BZ 49)	8950	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,5,5'-Pentachlorobiphenyl (BZ 101)	8980	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,5,6'-Pentachlorobiphenyl (BZ 102)	9180	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,5-Tetrachlorobiphenyl (BZ 48)	9181	NELAP	PA	12/17/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,2',4,6'-Tetrachlorobiphenyl (BZ 51)	9183	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,6,6'-Pentachlorobiphenyl (BZ 104)	9182	NELAP	PA	02/01/2013
EPA 1668	C	10262109	2,2',4,6-Tetrachlorobiphenyl (BZ 50)	9184	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4-Trichlorobiphenyl (BZ 17)	9185	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',5,5'-Tetrachlorobiphenyl (BZ 52)	8955	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',5,6'-Tetrachlorobiphenyl (BZ 53)	9186	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',5-Trichlorobiphenyl (BZ 18)	8930	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',6,6'-Tetrachlorobiphenyl (BZ 54)	9187	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',6-Trichlorobiphenyl (BZ 19)	9188	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2'-Dichlorobiphenyl (BZ 4)	9189	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4',5',6-Pentachlorobiphenyl (BZ 125)	9224	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4',5'-Tetrachlorobiphenyl (BZ 76)	9229	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4',5,5'-Pentachlorobiphenyl (BZ 124)	9222	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4',5-Tetrachlorobiphenyl (BZ 70)	9230	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4',6-Tetrachlorobiphenyl (BZ 71)	9237	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4'-Trichlorobiphenyl (BZ 33)	9239	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,4',5',6-Hexachlorobiphenyl (BZ 168)	9218	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,4',5'-Pentachlorobiphenyl (BZ 123)	9000	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,4',5,5'-Hexachlorobiphenyl (BZ 167)	9055	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,4',5-Pentachlorobiphenyl (BZ 118)	8995	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,4',6-Pentachlorobiphenyl (BZ 119)	9220	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,4'-Tetrachlorobiphenyl (BZ 66)	8960	NELAP	PA	12/17/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,3',4,5',6-Pentachlorobiphenyl (BZ 121)	9226	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,5'-Tetrachlorobiphenyl (BZ 68)	9231	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,5,5'-Pentachlorobiphenyl (BZ 120)	9223	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,5-Tetrachlorobiphenyl (BZ 67)	9232	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,6-Tetrachlorobiphenyl (BZ 69)	9235	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4-Trichlorobiphenyl (BZ 25)	9240	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',5',6-Tetrachlorobiphenyl (BZ 73)	9244	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',5'-Trichlorobiphenyl (BZ 34)	9246	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',5,5'-Tetrachlorobiphenyl (BZ 72)	9242	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',5-Trichlorobiphenyl (BZ 26)	8935	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',6-Trichlorobiphenyl (BZ 27)	9248	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3'-Dichlorobiphenyl (BZ 6)	9249	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',5',6-Hexachlorobiphenyl (BZ 164)	9201	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',5'-Pentachlorobiphenyl (BZ 122)	9202	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',5,5',6-Heptachlorobiphenyl (BZ 193)	9195	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',5,5'-Hexachlorobiphenyl (BZ 162)	9197	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',5,6-Hexachlorobiphenyl (BZ 163)	9199	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',5-Pentachlorobiphenyl (BZ 107)	9205	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',6-Pentachlorobiphenyl (BZ 110)	8990	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4'-Tetrachlorobiphenyl (BZ 56)	9207	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4',5',6-Heptachlorobiphenyl (BZ 191)	9192	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4',5'-Hexachlorobiphenyl (BZ 157)	9045	NELAP	PA	12/17/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,3,3',4,4',5,5',6-Octachlorobiphenyl (BZ 205)	9190	NELAP	PA	02/01/2013
EPA 1668	C	10262109	2,3,3',4,4',5,5'-Heptachlorobiphenyl (BZ 189)	9085	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4',5,6-Heptachlorobiphenyl (BZ 190)	9191	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4',5-Hexachlorobiphenyl (BZ 156)	9050	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4',6-Hexachlorobiphenyl (BZ 158)	9193	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4'-Pentachlorobiphenyl (BZ 105)	8985	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,5',6-Hexachlorobiphenyl (BZ 161)	9200	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,5'-Pentachlorobiphenyl (BZ 108)	9203	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,5,5',6-Heptachlorobiphenyl (BZ 192)	9194	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,5,5'-Hexachlorobiphenyl (BZ 159)	9196	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,5,6-Hexachlorobiphenyl (BZ 160)	9198	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,5-Pentachlorobiphenyl (BZ 106)	9204	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,6-Pentachlorobiphenyl (BZ 109)	9206	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4-Tetrachlorobiphenyl (BZ 55)	9208	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',5',6-Pentachlorobiphenyl (BZ 113)	9212	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',5'-Tetrachlorobiphenyl (BZ 58)	9213	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',5,5',6-Hexachlorobiphenyl (BZ 165)	9209	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',5,5'-Pentachlorobiphenyl (BZ 111)	9210	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',5,6-Pentachlorobiphenyl (BZ 112)	9211	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',5-Tetrachlorobiphenyl (BZ 57)	9214	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',6-Tetrachlorobiphenyl (BZ 59)	9215	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3'-Trichlorobiphenyl (BZ 20)	9216	NELAP	PA	12/17/2012

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,3,4',5,6-Pentachlorobiphenyl (BZ 117)	9227	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4',5-Tetrachlorobiphenyl (BZ 63)	9233	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4',6-Tetrachlorobiphenyl (BZ 64)	9236	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4'-Trichlorobiphenyl (BZ 22)	9241	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,4',5,6-Hexachlorobiphenyl (BZ 166)	9217	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,4',5-Pentachlorobiphenyl (BZ 114)	9005	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,4',6-Pentachlorobiphenyl (BZ 115)	9219	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,4'-Tetrachlorobiphenyl (BZ 60)	9221	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,5,6-Pentachlorobiphenyl (BZ 116)	9225	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,5-Tetrachlorobiphenyl (BZ 61)	9228	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,6-Tetrachlorobiphenyl (BZ 62)	9234	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4-Trichlorobiphenyl (BZ 21)	9238	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,5,6-Tetrachlorobiphenyl (BZ 65)	9243	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,5-Trichlorobiphenyl (BZ 23)	9245	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,6-Trichlorobiphenyl (BZ 24)	9247	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3-Dichlorobiphenyl (BZ 5)	8920	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4',5-Trichlorobiphenyl (BZ 31)	8940	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4',6-Trichlorobiphenyl (BZ 32)	9255	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4'-Dichlorobiphenyl (BZ 8)	9256	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4,4',5-Tetrachlorobiphenyl (BZ 74)	9250	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4,4',6-Tetrachlorobiphenyl (BZ 75)	9251	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4,4'-Trichlorobiphenyl (BZ 28)	9252	NELAP	PA	12/17/2012

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,4,5-Trichlorobiphenyl (BZ 29)	9253	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4,6-Trichlorobiphenyl (BZ 30)	9254	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4-Dichlorobiphenyl (BZ 7)	9257	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,5-Dichlorobiphenyl (BZ 9)	9258	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,6-Dichlorobiphenyl (BZ 10)	9259	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2-Chlorobiphenyl (BZ 1)	8915	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4,4',5,5'-Hexachlorobiphenyl (BZ 169)	9060	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4,4',5-Pentachlorobiphenyl (BZ 126)	9015	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4,4'-Tetrachlorobiphenyl (BZ 77)	8965	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4,5'-Tetrachlorobiphenyl (BZ 79)	9261	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4,5,5'-Pentachlorobiphenyl (BZ 127)	9260	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4,5-Tetrachlorobiphenyl (BZ 78)	9262	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4-Trichlorobiphenyl (BZ 35)	9263	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',5,5'-Tetrachlorobiphenyl (BZ 80)	9264	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',5-Trichlorobiphenyl (BZ 36)	9265	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3'-Dichlorobiphenyl (BZ 11)	8925	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,4',5-Trichlorobiphenyl (BZ 39)	9268	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,4'-Dichlorobiphenyl (BZ 13)	9269	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,4,4',5-Tetrachlorobiphenyl (BZ 81)	8970	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,4,4'-Trichlorobiphenyl (BZ 37)	9266	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,4,5-Trichlorobiphenyl (BZ 38)	9267	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,4-Dichlorobiphenyl (BZ 12)	9270	NELAP	PA	12/17/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	3,5-Dichlorobiphenyl (BZ 14)	9271	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3-Chlorobiphenyl (BZ 2)	9272	NELAP	PA	12/17/2012
EPA 1668	C	10262109	4,4'-Dichlorobiphenyl (BZ 15)	9273	NELAP	PA	12/17/2012
EPA 1668	C	10262109	4-Chlorobiphenyl (BZ 3)	9274	NELAP	PA	12/17/2012
EPA 1668	C	10262109	Decachlorobiphenyl	9105	NELAP	PA	02/01/2013
EPA 1671	A	10262201	Acetonitrile	4320	NELAP	PA	01/19/2005
EPA 1671	A	10262201	Diethylamine	4715	NELAP	PA	01/19/2005
EPA 1671	A	10262201	Dimethyl sulfoxide	4730	NELAP	PA	01/19/2005
EPA 1671	A	10262201	Ethanol	4750	NELAP	PA	01/19/2005
EPA 1671	A	10262201	Methanol	4930	NELAP	PA	01/19/2005
EPA 1671	A	10262201	Methyl cellosolve (2-Methoxyethanol)	4935	NELAP	PA	01/19/2005
EPA 1671	A	10262201	Triethylamine	5200	NELAP	PA	01/19/2005
EPA 1671	A	10262201	n-Propanol (1-Propanol)	5055	NELAP	PA	01/19/2005
EPA 1671		10130004	Acetonitrile	4320	NELAP	PA	01/20/2005
EPA 1671		10130004	Diethylamine	4715	NELAP	PA	01/20/2005
EPA 1671		10130004	Dimethyl sulfoxide	4730	NELAP	PA	01/20/2005
EPA 1671		10130004	Ethanol	4750	NELAP	PA	01/20/2005
EPA 1671		10130004	Methanol	4930	NELAP	PA	01/20/2005
EPA 1671		10130004	Methyl cellosolve (2-Methoxyethanol)	4935	NELAP	PA	01/20/2005
EPA 1671		10130004	Triethylamine	5200	NELAP	PA	01/20/2005
EPA 1671		10130004	n-Propanol (1-Propanol)	5055	NELAP	PA	01/20/2005
EPA 170.1		10011208	Temperature, deg. C	2030	NELAP	PA	04/04/2005

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 180.1	2	10011800	Turbidity	2055	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Aluminum	1000	NELAP	PA	05/01/2020
EPA 200.7	4.4	10013806	Antimony	1005	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Arsenic	1010	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Barium	1015	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Beryllium	1020	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Boron	1025	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Cadmium	1030	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Calcium	1035	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Chromium	1040	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Cobalt	1050	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Copper	1055	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Iron	1070	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Lead	1075	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Lithium	1080	NELAP	PA	02/07/2012
EPA 200.7	4.4	10013806	Magnesium	1085	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Manganese	1090	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Molybdenum	1100	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Nickel	1105	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Potassium	1125	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Selenium	1140	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Silver	1150	NELAP	PA	04/04/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 200.7	4.4	10013806	Sodium	1155	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Strontium	1160	NELAP	PA	05/24/2011
EPA 200.7	4.4	10013806	Tellurium	1162	NELAP	PA	02/04/2016
EPA 200.7	4.4	10013806	Thallium	1165	NELAP	PA	05/01/2020
EPA 200.7	4.4	10013806	Thorium	1170	NELAP	PA	11/19/2015
EPA 200.7	4.4	10013806	Tin	1175	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Titanium	1180	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Tungsten	1183	NELAP	PA	11/19/2015
EPA 200.7	4.4	10013806	Vanadium	1185	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Zinc	1190	NELAP	PA	01/19/2005
EPA 200.7	4.4	10013806	Zirconium	1192	NELAP	PA	07/29/2015
EPA 200.8	5.4	10014605	Aluminum	1000	NELAP	PA	01/07/2010
EPA 200.8	5.4	10014605	Antimony	1005	NELAP	PA	04/04/2005
EPA 200.8	5.4	10014605	Arsenic	1010	NELAP	PA	04/04/2005
EPA 200.8	5.4	10014605	Barium	1015	NELAP	PA	04/04/2005
EPA 200.8	5.4	10014605	Beryllium	1020	NELAP	PA	04/04/2005
EPA 200.8	5.4	10014605	Cadmium	1030	NELAP	PA	04/04/2005
EPA 200.8	5.4	10014605	Calcium	1035	NELAP	PA	01/07/2010
EPA 200.8	5.4	10014605	Chromium	1040	NELAP	PA	04/04/2005
EPA 200.8	5.4	10014605	Cobalt	1050	NELAP	PA	11/23/2010
EPA 200.8	5.4	10014605	Copper	1055	NELAP	PA	04/04/2005
EPA 200.8	5.4	10014605	Iron	1070	NELAP	PA	11/23/2010

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 200.8	5.4	10014605	Lead	1075	NELAP	PA	04/04/2005
EPA 200.8	5.4	10014605	Magnesium	1085	NELAP	PA	01/07/2010
EPA 200.8	5.4	10014605	Manganese	1090	NELAP	PA	11/23/2010
EPA 200.8	5.4	10014605	Molybdenum	1100	NELAP	PA	01/07/2010
EPA 200.8	5.4	10014605	Nickel	1105	NELAP	PA	04/04/2005
EPA 200.8	5.4	10014605	Potassium	1125	NELAP	PA	01/07/2010
EPA 200.8	5.4	10014605	Selenium	1140	NELAP	PA	12/12/2005
EPA 200.8	5.4	10014605	Silver	1150	NELAP	PA	11/10/2022
EPA 200.8	5.4	10014605	Sodium	1155	NELAP	PA	01/07/2010
EPA 200.8	5.4	10014605	Strontium	1160	NELAP	PA	01/07/2010
EPA 200.8	5.4	10014605	Thallium	1165	NELAP	PA	05/31/2006
EPA 200.8	5.4	10014605	Tin	1175	NELAP	PA	01/07/2010
EPA 200.8	5.4	10014605	Titanium	1180	NELAP	PA	09/19/2019
EPA 200.8	5.4	10014605	Uranium (mass)	1184	NELAP	PA	11/19/2015
EPA 200.8	5.4	10014605	Vanadium	1185	NELAP	PA	01/07/2010
EPA 200.8	5.4	10014605	Zinc	1190	NELAP	PA	01/18/2011
EPA 218.6	3.3	10028009	Chromium VI	1045	NELAP	PA	04/04/2005
EPA 245.1	3.0	10036609	Mercury	1095	NELAP	PA	01/19/2005
EPA 300.0	2.1	10053200	Bromide	1540	NELAP	PA	04/04/2005
EPA 300.0	2.1	10053200	Chloride	1575	NELAP	PA	01/19/2005
EPA 300.0	2.1	10053200	Fluoride	1730	NELAP	PA	05/25/2005
EPA 300.0	2.1	10053200	Nitrate as N	1810	NELAP	PA	01/19/2005

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 300.0	2.1	10053200	Nitrite as N	1840	NELAP	PA	01/19/2005
EPA 300.0	2.1	10053200	Sulfate	2000	NELAP	PA	01/19/2005
EPA 3005	A	10133207	Preconcentration under acid	1438	NELAP	PA	12/12/2005
EPA 3010	A	10133605	Hot plate acid digestion (HNO3 + HCl)	1420	NELAP	PA	12/12/2005
EPA 3020	A	10134404	Hot plate acid digestion (HNO3 only)	1422	NELAP	PA	12/12/2005
EPA 305.2		10054407	Acidity as CaCO3	1500	NELAP	PA	03/27/2018
EPA 3060	A	10136604	Alkaline digestion of Cr(VI)	1402	NELAP	PA	01/24/2007
EPA 310.1		10054805	Alkalinity as CaCO3	1505	NELAP	PA	11/19/2015
EPA 335.4	1.0	10061402	Total cyanide	1645	NELAP	PA	01/19/2005
EPA 350.1	2.0	10063602	Ammonia as N	1515	NELAP	PA	10/09/2013
EPA 350.3		10064401	Ammonia as N	1515	NELAP	PA	01/19/2016
EPA 351.2	2.0	10065404	Kjeldahl nitrogen, total (TKN)	1795	NELAP	PA	06/25/2020
EPA 3510	C	10138202	Separatory funnel liquid-liquid extraction	1444	NELAP	PA	12/12/2005
EPA 3511		10279819	Organic compounds in water by microextraction	7538	NELAP	PA	03/07/2012
EPA 3520	C	10139001	Continuous liquid-liquid extraction	1410	NELAP	PA	12/12/2005
EPA 353.2	2.0	10067604	Nitrate as N	1810	NELAP	PA	01/19/2005
EPA 353.2	2.0	10067604	Nitrite as N	1840	NELAP	PA	01/19/2005
EPA 353.2	2.0	10067604	Total nitrate-nitrite	1825	NELAP	PA	04/04/2005
EPA 3620	B	10145809	Florisil cleanup	1414	NELAP	PA	12/12/2005
EPA 3620	C	10146006	Florisil cleanup	1414	NELAP	PA	09/04/2018
EPA 3630	C	10146802	Silica gel cleanup	1446	NELAP	PA	12/12/2005
EPA 3640	A	10147203	Gel permeation cleanup (GPC)	1418	NELAP	PA	12/12/2005

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 365.1	2.0	10070005	Phosphorus, total	1910	NELAP	PA	07/21/2020
EPA 365.3		10070801	Orthophosphate as P	1870	NELAP	PA	06/25/2020
EPA 3660	B	10148400	Sulfur cleanup	1456	NELAP	PA	12/12/2005
EPA 370.1		10072001	Silica, dissolved	1995	NELAP	PA	11/19/2015
EPA 375.4		10073800	Sulfate	2000	NELAP	PA	04/04/2005
EPA 410.4	2.0	10077404	Chemical oxygen demand (COD)	1565	NELAP	PA	04/01/2005
EPA 415.1		10078407	Total organic carbon (TOC)	2040	NELAP	PA	01/19/2005
EPA 420.4	1.0	10080203	Total phenolics	1905	NELAP	PA	04/17/2007
EPA 425.1		10080601	Surfactants as MBAS	2025	NELAP	PA	01/19/2005
EPA 5030	B	10153409	Aqueous-phase purge-and-trap	1406	NELAP	PA	12/12/2005
EPA 5030	C	10284603	Aqueous-phase purge-and-trap	1406	NELAP	PA	01/27/2014
EPA 524.2	4.1	10088809	1,2,4-Trimethylbenzene	5210	NELAP	PA	05/14/2018
EPA 524.2	4.1	10088809	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	01/18/2011
EPA 524.2	4.1	10088809	1,2-Dichloroethane	4635	NELAP	PA	01/18/2011
EPA 524.2	4.1	10088809	1,3,5-Trimethylbenzene	5215	NELAP	PA	05/14/2018
EPA 524.2	4.1	10088809	4-Methyl-2-pentanone (MIBK)	4995	NELAP	PA	05/24/2011
EPA 524.2	4.1	10088809	Acetone	4315	NELAP	PA	01/18/2011
EPA 524.2	4.1	10088809	Acrolein (Propenal)	4325	NELAP	PA	11/19/2015
EPA 524.2	4.1	10088809	Benzene	4375	NELAP	PA	01/18/2011
EPA 524.2	4.1	10088809	Chlorobenzene	4475	NELAP	PA	01/18/2011
EPA 524.2	4.1	10088809	Chloroform	4505	NELAP	PA	01/18/2011
EPA 524.2	4.1	10088809	Dichlorodifluoromethane (Freon 12)	4625	NELAP	PA	11/19/2015

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Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 524.2	4.1	10088809	Diisopropyl ether (DIPE)	9375	NELAP	PA	11/19/2015
EPA 524.2	4.1	10088809	Ethyl tert-butyl ether (ETBE)	4770	NELAP	PA	11/19/2015
EPA 524.2	4.1	10088809	Ethylbenzene	4765	NELAP	PA	05/14/2018
EPA 524.2	4.1	10088809	Isopropylbenzene (Cumene)	4900	NELAP	PA	05/14/2018
EPA 524.2	4.1	10088809	Methylene chloride (Dichloromethane)	4975	NELAP	PA	05/24/2011
EPA 524.2	4.1	10088809	Naphthalene	5005	NELAP	PA	05/14/2018
EPA 524.2	4.1	10088809	Tetrahydrofuran (THF)	5120	NELAP	PA	05/24/2011
EPA 524.2	4.1	10088809	Toluene	5140	NELAP	PA	01/18/2011
EPA 524.2	4.1	10088809	m+p-Xylene	5240	NELAP	PA	07/25/2011
EPA 524.2	4.1	10088809	n-Butylbenzene	4435	NELAP	PA	05/14/2018
EPA 524.2	4.1	10088809	n-Hexane	4855	NELAP	PA	11/19/2015
EPA 524.2	4.1	10088809	n-Propylbenzene	5090	NELAP	PA	05/14/2018
EPA 524.2	4.1	10088809	o-Xylene	5250	NELAP	PA	05/24/2011
EPA 524.2	4.1	10088809	p-Isopropyltoluene (4-Isopropyltoluene)	4910	NELAP	PA	05/14/2018
EPA 524.2	4.1	10088809	sec-Butylbenzene	4440	NELAP	PA	05/14/2018
EPA 524.2	4.1	10088809	tert-Amyl methyl ether (TAME)	4370	NELAP	PA	11/19/2015
EPA 531.1	3.1	10091006	3-Hydroxycarbofuran	7710	NELAP	PA	11/19/2015
EPA 531.1	3.1	10091006	Aldicarb (Temik)	7010	NELAP	PA	11/19/2015
EPA 531.1	3.1	10091006	Aldicarb sulfone	7015	NELAP	PA	11/19/2015
EPA 531.1	3.1	10091006	Aldicarb sulfoxide	7020	NELAP	PA	11/19/2015
EPA 531.1	3.1	10091006	Methiocarb (Mesurol)	7800	NELAP	PA	11/19/2015
EPA 531.1	3.1	10091006	Methomyl (Lannate)	7805	NELAP	PA	11/19/2015

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 531.1	3.1	10091006	Propoxur (Baygon)	8080	NELAP	PA	11/19/2015
EPA 537 Isotope Dilution	1.1		11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	11/03/2020
EPA 537 Isotope Dilution	1.1		4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	PA	11/03/2020
EPA 537 Isotope Dilution	1.1		9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	11/03/2020
EPA 537 Isotope Dilution	1.1		Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	11/03/2020
EPA 537 Isotope Dilution	1.1		Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1		Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1		Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1		Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1		Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1		Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1		Perfluorononanoic acid (PFNA)	6906	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1		Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1		Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1		Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1		Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1		Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1		n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	08/30/2019
EPA 537 Isotope Dilution	1.1		n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	08/30/2019

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 6010	C	10155905	Metals by ICP/AES	1097	NELAP	PA	12/12/2005
EPA 6010	D	10155916	Metals by ICP/AES	1097	NELAP	PA	07/09/2018
EPA 6010	C	10155905	Aluminum	1000	NELAP	PA	05/01/2020
EPA 6010	C	10155905	Antimony	1005	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Arsenic	1010	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Barium	1015	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Beryllium	1020	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Boron	1025	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Cadmium	1030	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Calcium	1035	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Chromium	1040	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Cobalt	1050	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Copper	1055	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Iron	1070	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Lead	1075	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Lithium	1080	NELAP	PA	01/18/2011
EPA 6010	C	10155905	Magnesium	1085	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Manganese	1090	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Molybdenum	1100	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Nickel	1105	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Potassium	1125	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Selenium	1140	NELAP	PA	12/12/2005

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PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 6010	C	10155905	Silver	1150	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Sodium	1155	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Strontium	1160	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Sulfur	2017	NELAP	PA	12/19/2011
EPA 6010	C	10155905	Tellurium	1162	NELAP	PA	02/04/2016
EPA 6010	C	10155905	Thallium	1165	NELAP	PA	05/01/2020
EPA 6010	C	10155905	Thorium	1170	NELAP	PA	11/19/2015
EPA 6010	C	10155905	Tin	1175	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Titanium	1180	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Tungsten	1183	NELAP	PA	11/19/2015
EPA 6010	C	10155905	Vanadium	1185	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Zinc	1190	NELAP	PA	12/12/2005
EPA 6010	C	10155905	Zirconium	1192	NELAP	PA	07/29/2015
EPA 6010	D	10155916	Aluminum	1000	NELAP	PA	05/01/2020
EPA 6010	D	10155916	Antimony	1005	NELAP	PA	12/12/2005
EPA 6010	D	10155916	Arsenic	1010	NELAP	PA	12/12/2005
EPA 6010	D	10155916	Barium	1015	NELAP	PA	12/12/2005
EPA 6010	D	10155916	Beryllium	1020	NELAP	PA	12/12/2005
EPA 6010	D	10155916	Boron	1025	NELAP	PA	12/12/2005
EPA 6010	D	10155916	Cadmium	1030	NELAP	PA	12/12/2005
EPA 6010	D	10155916	Calcium	1035	NELAP	PA	12/12/2005
EPA 6010	D	10155916	Chromium	1040	NELAP	PA	12/12/2005

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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 6010	D	10155916	Cobalt	1050	NELAP	PA	12/12/2005
EPA 6010	D	10155916	Copper	1055	NELAP	PA	12/12/2005
EPA 6010	D	10155916	Iron	1070	NELAP	PA	12/12/2005
EPA 6010	D	10155916	Lead	1075	NELAP	PA	12/12/2005
EPA 6010	D	10155916	Lithium	1080	NELAP	PA	01/18/2011
EPA 6010	D	10155916	Magnesium	1085	NELAP	PA	12/12/2005
EPA 6010	D	10155916	Manganese	1090	NELAP	PA	12/12/2005
EPA 6010	D	10155916	Molybdenum	1100	NELAP	PA	12/12/2005
EPA 6010	D	10155916	Nickel	1105	NELAP	PA	12/12/2005
EPA 6010	D	10155916	Potassium	1125	NELAP	PA	12/12/2005
EPA 6010	D	10155916	Selenium	1140	NELAP	PA	12/12/2005
EPA 6010	D	10155916	Silver	1150	NELAP	PA	12/12/2005
EPA 6010	D	10155916	Sodium	1155	NELAP	PA	12/12/2005
EPA 6010	D	10155916	Strontium	1160	NELAP	PA	12/12/2005
EPA 6010	D	10155916	Sulfur	2017	NELAP	PA	12/19/2011
EPA 6010	D	10155916	Tellurium	1162	NELAP	PA	02/04/2016
EPA 6010	D	10155916	Thallium	1165	NELAP	PA	05/01/2020
EPA 6010	D	10155916	Thorium	1170	NELAP	PA	11/19/2015
EPA 6010	D	10155916	Tin	1175	NELAP	PA	12/12/2005
EPA 6010	D	10155916	Titanium	1180	NELAP	PA	12/12/2005
EPA 6010	D	10155916	Tungsten	1183	NELAP	PA	11/19/2015
EPA 6010	D	10155916	Vanadium	1185	NELAP	PA	12/12/2005

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TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 6010	D	10155916	Zinc	1190	NELAP	PA	12/12/2005
EPA 6010	D	10155916	Zirconium	1192	NELAP	PA	07/29/2015
EPA 6020	B	10156420	Metals by ICP/MS	1098	NELAP	PA	07/09/2018
EPA 6020	B	10156420	Aluminum	1000	NELAP	PA	01/07/2010
EPA 6020	B	10156420	Antimony	1005	NELAP	PA	12/12/2005
EPA 6020	B	10156420	Arsenic	1010	NELAP	PA	12/12/2005
EPA 6020	B	10156420	Barium	1015	NELAP	PA	12/12/2005
EPA 6020	B	10156420	Beryllium	1020	NELAP	PA	12/12/2005
EPA 6020	B	10156420	Cadmium	1030	NELAP	PA	12/12/2005
EPA 6020	B	10156420	Calcium	1035	NELAP	PA	01/07/2010
EPA 6020	B	10156420	Chromium	1040	NELAP	PA	12/12/2005
EPA 6020	B	10156420	Cobalt	1050	NELAP	PA	11/23/2010
EPA 6020	B	10156420	Copper	1055	NELAP	PA	12/12/2005
EPA 6020	B	10156420	Iron	1070	NELAP	PA	11/23/2010
EPA 6020	B	10156420	Lead	1075	NELAP	PA	12/12/2005
EPA 6020	B	10156420	Magnesium	1085	NELAP	PA	01/07/2010
EPA 6020	B	10156420	Manganese	1090	NELAP	PA	11/23/2010
EPA 6020	B	10156420	Molybdenum	1100	NELAP	PA	01/07/2010
EPA 6020	B	10156420	Nickel	1105	NELAP	PA	07/23/2008
EPA 6020	B	10156420	Potassium	1125	NELAP	PA	01/07/2010
EPA 6020	B	10156420	Selenium	1140	NELAP	PA	12/12/2005
EPA 6020	B	10156420	Silver	1150	NELAP	PA	11/10/2022

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 6020	B	10156420	Sodium	1155	NELAP	PA	01/07/2010
EPA 6020	B	10156420	Strontium	1160	NELAP	PA	01/07/2010
EPA 6020	B	10156420	Thallium	1165	NELAP	PA	12/12/2005
EPA 6020	B	10156420	Tin	1175	NELAP	PA	01/07/2010
EPA 6020	B	10156420	Titanium	1180	NELAP	PA	09/19/2019
EPA 6020	B	10156420	Uranium (mass)	1184	NELAP	PA	11/19/2015
EPA 6020	B	10156420	Vanadium	1185	NELAP	PA	01/07/2010
EPA 6020	B	10156420	Zinc	1190	NELAP	PA	01/18/2011
EPA 608.3		10296614	2,4'-DDD	8580	NELAP	PA	05/14/2018
EPA 608.3		10296614	2,4'-DDE	8585	NELAP	PA	05/14/2018
EPA 608.3		10296614	2,4'-DDT	8590	NELAP	PA	05/14/2018
EPA 608.3		10296614	4,4'-DDD	7355	NELAP	PA	05/14/2018
EPA 608.3		10296614	4,4'-DDE	7360	NELAP	PA	05/14/2018
EPA 608.3		10296614	4,4'-DDT	7365	NELAP	PA	05/14/2018
EPA 608.3		10296614	Aldrin (HHDN)	7025	NELAP	PA	05/14/2018
EPA 608.3		10296614	Aroclor-1016 (PCB-1016)	8880	NELAP	PA	05/14/2018
EPA 608.3		10296614	Aroclor-1221 (PCB-1221)	8885	NELAP	PA	07/16/2018
EPA 608.3		10296614	Aroclor-1232 (PCB-1232)	8890	NELAP	PA	07/16/2018
EPA 608.3		10296614	Aroclor-1242 (PCB-1242)	8895	NELAP	PA	07/16/2018
EPA 608.3		10296614	Aroclor-1248 (PCB-1248)	8900	NELAP	PA	07/16/2018
EPA 608.3		10296614	Aroclor-1254 (PCB-1254)	8905	NELAP	PA	07/16/2018
EPA 608.3		10296614	Aroclor-1260 (PCB-1260)	8910	NELAP	PA	05/14/2018

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 608.3		10296614	Chlordane (tech.)	7250	NELAP	PA	05/14/2018
EPA 608.3		10296614	Dieldrin	7470	NELAP	PA	07/05/2018
EPA 608.3		10296614	Endosulfan I	7510	NELAP	PA	05/14/2018
EPA 608.3		10296614	Endosulfan II	7515	NELAP	PA	05/14/2018
EPA 608.3		10296614	Endosulfan sulfate	7520	NELAP	PA	05/14/2018
EPA 608.3		10296614	Endrin	7540	NELAP	PA	05/14/2018
EPA 608.3		10296614	Endrin aldehyde	7530	NELAP	PA	05/14/2018
EPA 608.3		10296614	Endrin ketone	7535	NELAP	PA	05/14/2018
EPA 608.3		10296614	Heptachlor	7685	NELAP	PA	05/14/2018
EPA 608.3		10296614	Heptachlor epoxide	7690	NELAP	PA	05/14/2018
EPA 608.3		10296614	Methoxychlor	7810	NELAP	PA	05/14/2018
EPA 608.3		10296614	Mirex	7870	NELAP	PA	05/14/2018
EPA 608.3		10296614	Telodrin	8177	NELAP	PA	05/14/2018
EPA 608.3		10296614	Toxaphene (Chlorinated camphene)	8250	NELAP	PA	05/14/2018
EPA 608.3		10296614	alpha-BHC (alpha-Hexachlorocyclohexane)	7110	NELAP	PA	05/14/2018
EPA 608.3		10296614	alpha-Chlordane	7240	NELAP	PA	05/14/2018
EPA 608.3		10296614	beta-BHC (beta-Hexachlorocyclohexane)	7115	NELAP	PA	05/14/2018
EPA 608.3		10296614	delta-BHC (delta-Hexachlorocyclohexane)	7105	NELAP	PA	05/14/2018
EPA 608.3		10296614	gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	7120	NELAP	PA	05/14/2018
EPA 608.3		10296614	gamma-Chlordane	7245	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,1,1,2-Tetrachloroethane	5105	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,1,1-Trichloro-2,2,2-trifluoroethane (Freon 113a)	5195	NELAP	PA	07/16/2018

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PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 624.1		10298121	1,1,1-Trichloroethane	5160	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,1,2,2-Tetrachloroethane	5110	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5185	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,1,2-Trichloroethane	5165	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,1-Dichloroethane	4630	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,1-Dichloroethene (1,1-Dichloroethylene)	4640	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,1-Dichloropropene	4670	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,2,3-Trichlorobenzene	5150	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,2,3-Trichloropropane (1,2,3-TCP)	5180	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,2,4-Trichlorobenzene	5155	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,2,4-Trimethylbenzene	5210	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,2-Dibromo-3-chloropropane (DBCP, Dibromochloropropane)	4570	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,2-Dibromoethane (EDB, Ethylene dibromide)	4585	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,2-Dichloroethane	4635	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,2-Dichloropropane	4655	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,3,5-Trimethylbenzene	5215	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,3-Dichlorobenzene (m-Dichlorobenzene)	4615	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,3-Dichloropropane	4660	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,4-Dichlorobenzene (p-Dichlorobenzene)	4620	NELAP	PA	05/14/2018
EPA 624.1		10298121	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	05/14/2018

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Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 624.1		10298121	2,2-Dichloropropane	4665	NELAP	PA	05/14/2018
EPA 624.1		10298121	2-Butanone (Methyl ethyl ketone, MEK)	4410	NELAP	PA	05/14/2018
EPA 624.1		10298121	2-Chloroethyl vinyl ether	4500	NELAP	PA	07/16/2018
EPA 624.1		10298121	2-Chlorotoluene	4535	NELAP	PA	05/14/2018
EPA 624.1		10298121	2-Hexanone	4860	NELAP	PA	05/14/2018
EPA 624.1		10298121	4-Chlorotoluene	4540	NELAP	PA	05/14/2018
EPA 624.1		10298121	4-Methyl-2-pentanone (MIBK)	4995	NELAP	PA	05/14/2018
EPA 624.1		10298121	Acetone	4315	NELAP	PA	05/14/2018
EPA 624.1		10298121	Acetonitrile	4320	NELAP	PA	05/14/2018
EPA 624.1		10298121	Acrolein (Propenal)	4325	NELAP	PA	05/14/2018
EPA 624.1		10298121	Acrylonitrile	4340	NELAP	PA	05/14/2018
EPA 624.1		10298121	Benzene	4375	NELAP	PA	05/14/2018
EPA 624.1		10298121	Benzyl chloride	5635	NELAP	PA	05/14/2018
EPA 624.1		10298121	Bromobenzene	4385	NELAP	PA	05/14/2018
EPA 624.1		10298121	Bromochloromethane	4390	NELAP	PA	05/14/2018
EPA 624.1		10298121	Bromodichloromethane	4395	NELAP	PA	05/14/2018
EPA 624.1		10298121	Bromoform	4400	NELAP	PA	05/14/2018
EPA 624.1		10298121	Carbon disulfide	4450	NELAP	PA	05/14/2018
EPA 624.1		10298121	Carbon tetrachloride	4455	NELAP	PA	05/14/2018
EPA 624.1		10298121	Chlorobenzene	4475	NELAP	PA	05/14/2018
EPA 624.1		10298121	Chlorodifluoromethane (Freon 22)	4577	NELAP	PA	05/14/2018
EPA 624.1		10298121	Chloroethane	4485	NELAP	PA	05/14/2018

Annmarie Beach

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 624.1		10298121	Chloroform	4505	NELAP	PA	07/05/2018
EPA 624.1		10298121	Chloroprene (2-Chloro-1,3-butadiene)	4525	NELAP	PA	05/14/2018
EPA 624.1		10298121	Cyclohexane	4555	NELAP	PA	05/14/2018
EPA 624.1		10298121	Dibromochloromethane	4575	NELAP	PA	05/14/2018
EPA 624.1		10298121	Dibromomethane	4595	NELAP	PA	05/14/2018
EPA 624.1		10298121	Dichlorodifluoromethane (Freon 12)	4625	NELAP	PA	05/14/2018
EPA 624.1		10298121	Dichlorofluoromethane (Freon 21)	4627	NELAP	PA	05/14/2018
EPA 624.1		10298121	Diisopropyl ether (DIPE)	9375	NELAP	PA	05/14/2018
EPA 624.1		10298121	Ethyl acetate	4755	NELAP	PA	05/14/2018
EPA 624.1		10298121	Ethyl methacrylate	4810	NELAP	PA	05/14/2018
EPA 624.1		10298121	Ethylbenzene	4765	NELAP	PA	05/14/2018
EPA 624.1		10298121	Freon-123A	4697	NELAP	PA	05/14/2018
EPA 624.1		10298121	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	4835	NELAP	PA	05/14/2018
EPA 624.1		10298121	Isobutyl alcohol (2-Methyl-1-propanol)	4875	NELAP	PA	05/14/2018
EPA 624.1		10298121	Isopropyl acetate	4890	NELAP	PA	05/14/2018
EPA 624.1		10298121	Isopropyl alcohol (2-Propanol)	4895	NELAP	PA	05/14/2018
EPA 624.1		10298121	Isopropylbenzene (Cumene)	4900	NELAP	PA	05/14/2018
EPA 624.1		10298121	Methacrylonitrile	4925	NELAP	PA	05/14/2018
EPA 624.1		10298121	Methyl bromide (Bromomethane)	4950	NELAP	PA	05/14/2018
EPA 624.1		10298121	Methyl chloride (Chloromethane)	4960	NELAP	PA	05/14/2018
EPA 624.1		10298121	Methyl iodide (Iodomethane)	4870	NELAP	PA	05/14/2018
EPA 624.1		10298121	Methyl tert-butyl ether (MTBE)	5000	NELAP	PA	05/14/2018

Annmarie Beach

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 624.1		10298121	Methylene chloride (Dichloromethane)	4975	NELAP	PA	05/14/2018
EPA 624.1		10298121	Methylmethacrylate	4990	NELAP	PA	05/14/2018
EPA 624.1		10298121	Naphthalene	5005	NELAP	PA	05/14/2018
EPA 624.1		10298121	Propionitrile (Ethyl cyanide)	5080	NELAP	PA	05/14/2018
EPA 624.1		10298121	Styrene	5100	NELAP	PA	05/14/2018
EPA 624.1		10298121	Tetrachloroethene (PCE, Perchloroethylene)	5115	NELAP	PA	05/14/2018
EPA 624.1		10298121	Tetrahydrofuran (THF)	5120	NELAP	PA	05/14/2018
EPA 624.1		10298121	Toluene	5140	NELAP	PA	05/14/2018
EPA 624.1		10298121	Trichloroethene (TCE, Trichloroethylene)	5170	NELAP	PA	05/14/2018
EPA 624.1		10298121	Trichlorofluoromethane (Freon 11)	5175	NELAP	PA	05/14/2018
EPA 624.1		10298121	Vinyl acetate	5225	NELAP	PA	05/14/2018
EPA 624.1		10298121	Vinyl chloride (Chloroethene)	5235	NELAP	PA	05/14/2018
EPA 624.1		10298121	Xylenes, total	5260	NELAP	PA	05/14/2018
EPA 624.1		10298121	cis-1,2-Dichloroethene	4645	NELAP	PA	05/14/2018
EPA 624.1		10298121	cis-1,3-Dichloropropene	4680	NELAP	PA	05/14/2018
EPA 624.1		10298121	cis-1,4-Dichloro-2-butene	4600	NELAP	PA	05/14/2018
EPA 624.1		10298121	m+p-Xylene	5240	NELAP	PA	05/14/2018
EPA 624.1		10298121	n-Butyl acetate	4403	NELAP	PA	05/14/2018
EPA 624.1		10298121	n-Butylbenzene	4435	NELAP	PA	05/14/2018
EPA 624.1		10298121	n-Heptane	4825	NELAP	PA	05/14/2018
EPA 624.1		10298121	n-Hexane	4855	NELAP	PA	05/14/2018
EPA 624.1		10298121	n-Propyl acetate	5057	NELAP	PA	05/14/2018

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 624.1		10298121	n-Propylbenzene	5090	NELAP	PA	05/14/2018
EPA 624.1		10298121	o-Xylene	5250	NELAP	PA	05/14/2018
EPA 624.1		10298121	p-Isopropyltoluene (4-Isopropyltoluene)	4910	NELAP	PA	05/14/2018
EPA 624.1		10298121	sec-Butylbenzene	4440	NELAP	PA	05/14/2018
EPA 624.1		10298121	tert-Amyl ethyl ether (TAEE)	4369	NELAP	PA	05/14/2018
EPA 624.1		10298121	tert-Amyl methyl ether (TAME)	4370	NELAP	PA	07/05/2018
EPA 624.1		10298121	tert-Butyl alcohol (2-Methyl-2-propanol)	4420	NELAP	PA	05/14/2018
EPA 624.1		10298121	tert-Butyl ethyl ether	4770	NELAP	PA	07/16/2018
EPA 624.1		10298121	tert-Butylbenzene	4445	NELAP	PA	05/14/2018
EPA 624.1		10298121	trans-1,2-Dichloroethene	4700	NELAP	PA	05/14/2018
EPA 624.1		10298121	trans-1,3-Dichloropropene	4685	NELAP	PA	05/14/2018
EPA 624.1		10298121	trans-1,4-Dichloro-2-butene	4605	NELAP	PA	05/14/2018
EPA 625.1		10300024	1,1'-Biphenyl (Biphenyl, Lemonene)	6703	NELAP	PA	05/14/2018
EPA 625.1		10300024	1,2,4,5-Tetrachlorobenzene	6715	NELAP	PA	05/14/2018
EPA 625.1		10300024	1,2,4-Trichlorobenzene	5155	NELAP	PA	05/14/2018
EPA 625.1		10300024	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	05/14/2018
EPA 625.1		10300024	1,2-Diphenylhydrazine	6220	NELAP	PA	05/14/2018
EPA 625.1		10300024	1,3-Dichlorobenzene (m-Dichlorobenzene)	4615	NELAP	PA	05/14/2018
EPA 625.1		10300024	1,4-Dichlorobenzene (p-Dichlorobenzene)	4620	NELAP	PA	05/14/2018
EPA 625.1		10300024	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	05/14/2018
EPA 625.1		10300024	1-Methylnaphthalene	6380	NELAP	PA	05/14/2018
EPA 625.1		10300024	1-Methylphenanthrene	9501	NELAP	PA	05/14/2018

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 625.1		10300024	2,2'-Oxybis(1-chloropropane) (bis(2-Chloro-1-methylethyl) ether)	4659	NELAP	PA	05/14/2018
EPA 625.1		10300024	2,3,4,6-Tetrachlorophenol	6735	NELAP	PA	05/14/2018
EPA 625.1		10300024	2,3-Dichloroaniline	9363	NELAP	PA	05/14/2018
EPA 625.1		10300024	2,3-Dinitrotoluene	6014	NELAP	PA	05/14/2018
EPA 625.1		10300024	2,4,5-Trichlorophenol	6835	NELAP	PA	05/14/2018
EPA 625.1		10300024	2,4,6-Trichlorophenol	6840	NELAP	PA	05/14/2018
EPA 625.1		10300024	2,4-Dichlorophenol	6000	NELAP	PA	05/14/2018
EPA 625.1		10300024	2,4-Dimethylphenol	6130	NELAP	PA	05/14/2018
EPA 625.1		10300024	2,4-Dinitrophenol	6175	NELAP	PA	05/14/2018
EPA 625.1		10300024	2,4-Dinitrotoluene (2,4-DNT)	6185	NELAP	PA	05/14/2018
EPA 625.1		10300024	2,6-Dichlorophenol	6005	NELAP	PA	05/14/2018
EPA 625.1		10300024	2,6-Dinitrotoluene (2,6-DNT)	6190	NELAP	PA	05/14/2018
EPA 625.1		10300024	2-Chloronaphthalene	5795	NELAP	PA	05/14/2018
EPA 625.1		10300024	2-Chlorophenol	5800	NELAP	PA	05/14/2018
EPA 625.1		10300024	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	6360	NELAP	PA	05/14/2018
EPA 625.1		10300024	2-Methylnaphthalene	6385	NELAP	PA	05/14/2018
EPA 625.1		10300024	2-Methylphenol (o-Cresol)	6400	NELAP	PA	05/14/2018
EPA 625.1		10300024	2-Nitroaniline	6460	NELAP	PA	05/14/2018
EPA 625.1		10300024	2-Nitrophenol	6490	NELAP	PA	05/14/2018
EPA 625.1		10300024	3+4-Methylphenol (m+p-Cresol)	6412	NELAP	PA	05/14/2018
EPA 625.1		10300024	3,3'-Dichlorobenzidine	5945	NELAP	PA	05/14/2018

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 625.1		10300024	3-Nitroaniline	6465	NELAP	PA	05/14/2018
EPA 625.1		10300024	4-Bromophenyl phenyl ether	5660	NELAP	PA	05/14/2018
EPA 625.1		10300024	4-Chloro-3-methylphenol	5700	NELAP	PA	05/14/2018
EPA 625.1		10300024	4-Chloroaniline	5745	NELAP	PA	05/14/2018
EPA 625.1		10300024	4-Chlorophenyl phenyl ether	5825	NELAP	PA	05/14/2018
EPA 625.1		10300024	4-Nitroaniline	6470	NELAP	PA	05/14/2018
EPA 625.1		10300024	4-Nitrophenol	6500	NELAP	PA	05/14/2018
EPA 625.1		10300024	Acenaphthene	5500	NELAP	PA	05/14/2018
EPA 625.1		10300024	Acenaphthylene	5505	NELAP	PA	05/14/2018
EPA 625.1		10300024	Acetophenone	5510	NELAP	PA	05/14/2018
EPA 625.1		10300024	Aniline	5545	NELAP	PA	05/14/2018
EPA 625.1		10300024	Anthracene	5555	NELAP	PA	05/14/2018
EPA 625.1		10300024	Benzidine	5595	NELAP	PA	05/14/2018
EPA 625.1		10300024	Benzo[a]anthracene	5575	NELAP	PA	05/14/2018
EPA 625.1		10300024	Benzo[a]pyrene	5580	NELAP	PA	05/14/2018
EPA 625.1		10300024	Benzo[b]fluoranthene	5585	NELAP	PA	05/14/2018
EPA 625.1		10300024	Benzo[ghi]perylene	5590	NELAP	PA	05/14/2018
EPA 625.1		10300024	Benzo[k]fluoranthene	5600	NELAP	PA	05/14/2018
EPA 625.1		10300024	Benzoic acid	5610	NELAP	PA	05/14/2018
EPA 625.1		10300024	Benzyl alcohol	5630	NELAP	PA	05/14/2018
EPA 625.1		10300024	Butyl benzyl phthalate (Benzyl butyl phthalate)	5670	NELAP	PA	05/14/2018
EPA 625.1		10300024	Carbazole	5680	NELAP	PA	05/14/2018

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 625.1		10300024	Chrysene (Benzo[a]phenanthrene)	5855	NELAP	PA	05/14/2018
EPA 625.1		10300024	Di-n-butyl phthalate	5925	NELAP	PA	05/14/2018
EPA 625.1		10300024	Di-n-octyl phthalate	6200	NELAP	PA	05/14/2018
EPA 625.1		10300024	Dibenzo[a,h]anthracene	5895	NELAP	PA	05/14/2018
EPA 625.1		10300024	Dibenzofuran	5905	NELAP	PA	05/14/2018
EPA 625.1		10300024	Diethyl phthalate	6070	NELAP	PA	05/14/2018
EPA 625.1		10300024	Dimethyl phthalate	6135	NELAP	PA	05/14/2018
EPA 625.1		10300024	Diphenyl ether	6210	NELAP	PA	05/14/2018
EPA 625.1		10300024	Fluoranthene	6265	NELAP	PA	05/14/2018
EPA 625.1		10300024	Fluorene	6270	NELAP	PA	05/14/2018
EPA 625.1		10300024	Hexachlorobenzene	6275	NELAP	PA	05/14/2018
EPA 625.1		10300024	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	4835	NELAP	PA	05/14/2018
EPA 625.1		10300024	Hexachlorocyclopentadiene	6285	NELAP	PA	05/14/2018
EPA 625.1		10300024	Hexachloroethane	4840	NELAP	PA	05/14/2018
EPA 625.1		10300024	Indeno(1,2,3-cd)pyrene	6315	NELAP	PA	05/14/2018
EPA 625.1		10300024	Isophorone	6320	NELAP	PA	05/14/2018
EPA 625.1		10300024	N-Nitrosodi-n-butylamine	5025	NELAP	PA	05/14/2018
EPA 625.1		10300024	N-Nitrosodi-n-propylamine	6545	NELAP	PA	05/14/2018
EPA 625.1		10300024	N-Nitrosodiethylamine	6525	NELAP	PA	05/14/2018
EPA 625.1		10300024	N-Nitrosodimethylamine	6530	NELAP	PA	05/14/2018
EPA 625.1		10300024	N-Nitrosodiphenylamine	6535	NELAP	PA	05/14/2018
EPA 625.1		10300024	N-Nitrosopyrrolidine	6565	NELAP	PA	05/14/2018

Annmarie Beach

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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 625.1		10300024	Naphthalene	5005	NELAP	PA	05/14/2018
EPA 625.1		10300024	Nitrobenzene	5015	NELAP	PA	05/14/2018
EPA 625.1		10300024	Pentachlorobenzene	6590	NELAP	PA	05/14/2018
EPA 625.1		10300024	Pentachlorophenol (PCP)	6605	NELAP	PA	05/14/2018
EPA 625.1		10300024	Phenanthrene	6615	NELAP	PA	05/14/2018
EPA 625.1		10300024	Phenol	6625	NELAP	PA	05/14/2018
EPA 625.1		10300024	Pyrene	6665	NELAP	PA	05/14/2018
EPA 625.1		10300024	Pyridine	5095	NELAP	PA	05/14/2018
EPA 625.1		10300024	alpha-Terpineol	6700	NELAP	PA	05/14/2018
EPA 625.1		10300024	bis(2-Chloroethoxy)methane	5760	NELAP	PA	05/14/2018
EPA 625.1		10300024	bis(2-Chloroethyl) ether	5765	NELAP	PA	05/14/2018
EPA 625.1		10300024	bis(2-Chloroisopropyl)ether		NELAP	PA	07/16/2018
EPA 625.1		10300024	bis(2-Ethylhexyl) phthalate (DEHP)	6065	NELAP	PA	05/14/2018
EPA 625.1		10300024	n-Decane	5875	NELAP	PA	05/14/2018
EPA 625.1		10300024	n-Docosane	6230	NELAP	PA	05/14/2018
EPA 625.1		10300024	n-Eicosane	6240	NELAP	PA	05/14/2018
EPA 625.1		10300024	n-Hexadecane	6300	NELAP	PA	05/14/2018
EPA 625.1		10300024	n-Octadecane	6580	NELAP	PA	05/14/2018
EPA 625.1		10300024	n-Tetradecane	6745	NELAP	PA	05/14/2018
EPA 625.1		10300024	o-Toluidine (2-Toluidine, 2-Methylaniline)	5145	NELAP	PA	05/14/2018
EPA 625.1 SIM		10300035	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	1-Methylnaphthalene	6380	NELAP	PA	09/24/2020

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Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 625.1 SIM		10300035	2-Methylnaphthalene	6385	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Acenaphthene	5500	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Acenaphthylene	5505	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Anthracene	5555	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Benzo[a]anthracene	5575	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Benzo[a]pyrene	5580	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Benzo[b]fluoranthene	5585	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Benzo[e]pyrene	5605	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Benzo[ghi]perylene	5590	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Benzo[k]fluoranthene	5600	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Butyl benzyl phthalate (Benzyl butyl phthalate)	5670	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Chrysene (Benzo[a]phenanthrene)	5855	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Di-n-butyl phthalate	5925	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Di-n-octyl phthalate	6200	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Dibenzo[a,h]anthracene	5895	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Dibenzofuran	5905	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Diethyl phthalate	6070	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Dimethyl phthalate	6135	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Diphenylamine	6205	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Fluoranthene	6265	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Fluorene	6270	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Hexachlorobenzene	6275	NELAP	PA	09/24/2020

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 625.1 SIM		10300035	Indeno(1,2,3-cd)pyrene	6315	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	N-Nitrosodimethylamine	6530	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	N-Nitrosodiphenylamine	6535	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Naphthalene	5005	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Perylene	6608	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Phenanthrene	6615	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Pyrene	6665	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	Quinoline	6670	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	bis(2-Chloroethyl) ether	5765	NELAP	PA	09/24/2020
EPA 625.1 SIM		10300035	bis(2-Ethylhexyl) phthalate (DEHP)	6065	NELAP	PA	09/24/2020
EPA 680		10112002	Decachlorobiphenyl	9105	NELAP	PA	01/19/2016
EPA 680		10112002	Dichlorobiphenyls	8876	NELAP	PA	01/19/2016
EPA 680		10112002	Heptachlorobiphenyls	8877	NELAP	PA	01/19/2016
EPA 680		10112002	Hexachlorbiphenyls	8888	NELAP	PA	01/19/2016
EPA 680		10112002	Monochlorobiphenyls	8889	NELAP	PA	01/19/2016
EPA 680		10112002	Nonachlorobiphenyls	8891	NELAP	PA	01/19/2016
EPA 680		10112002	Octachlorobiphenyls	8892	NELAP	PA	01/19/2016
EPA 680		10112002	Pentachlorobiphenyls	8896	NELAP	PA	01/19/2016
EPA 680		10112002	Tetrachlorobiphenyls	8893	NELAP	PA	01/19/2016
EPA 680		10112002	Trichlorobiphenyls	8894	NELAP	PA	01/19/2016
EPA 6850		10304606	Perchlorate	1895	NELAP	PA	01/19/2011
EPA 7196	A	10162400	Chromium VI	1045	NELAP	PA	04/06/2006

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 7199		10163005	Chromium VI	1045	NELAP	PA	01/04/2006
EPA 7470	A	10165807	Mercury	1095	NELAP	PA	11/21/2005
EPA 8011		10173009	1,2-Dibromo-3-chloropropane (DBCP, Dibromochloropropane)	4570	NELAP	PA	05/02/2006
EPA 8011		10173009	1,2-Dibromoethane (EDB, Ethylene dibromide)	4585	NELAP	PA	12/12/2005
EPA 8015	B	10173601	Nonhalogenated organics by GC/FID	9435	NELAP	PA	03/26/2012
EPA 8015	D	10305609	Nonhalogenated organics by GC/FID	9435	NELAP	PA	07/29/2015
EPA 8015	B	10173601	Diesel-range organics (DRO)	9369	NELAP	PA	12/12/2005
EPA 8015	B	10173601	Diethylene glycol	4720	NELAP	PA	01/20/2012
EPA 8015	B	10173601	Ethane	4747	NELAP	PA	12/04/2007
EPA 8015	B	10173601	Ethanol	4750	NELAP	PA	12/04/2007
EPA 8015	B	10173601	Ethene	4752	NELAP	PA	12/04/2007
EPA 8015	B	10173601	Ethylene glycol	4785	NELAP	PA	12/04/2007
EPA 8015	B	10173601	Gasoline-range organics (GRO)	9408	NELAP	PA	12/12/2005
EPA 8015	B	10173601	Isobutyl alcohol (2-Methyl-1-propanol)	4875	NELAP	PA	02/07/2012
EPA 8015	B	10173601	Isopropyl alcohol (2-Propanol)	4895	NELAP	PA	12/04/2007
EPA 8015	B	10173601	Methane	4926	NELAP	PA	12/04/2007
EPA 8015	B	10173601	Methanol	4930	NELAP	PA	12/04/2007
EPA 8015	B	10173601	Propane	5029	NELAP	PA	12/04/2007
EPA 8015	B	10173601	Propylene glycol	6657	NELAP	PA	01/20/2012
EPA 8015	B	10173601	Total petroleum hydrocarbons (TPH)	2050	NELAP	PA	01/24/2007
EPA 8015	B	10173601	Triethylene glycol	9646	NELAP	PA	01/20/2012

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8015	B	10173601	n-Butyl alcohol (n-Butanol, 1-Butanol)	4425	NELAP	PA	02/07/2012
EPA 8015	B	10173601	n-Propanol (1-Propanol)	5055	NELAP	PA	02/07/2012
EPA 8015	C	10173816	Diesel-range organics (DRO)	9369	NELAP	PA	12/12/2005
EPA 8015	C	10173816	Diethylene glycol	4720	NELAP	PA	01/20/2012
EPA 8015	C	10173816	Ethane	4747	NELAP	PA	12/04/2007
EPA 8015	C	10173816	Ethanol	4750	NELAP	PA	12/04/2007
EPA 8015	C	10173816	Ethene	4752	NELAP	PA	12/04/2007
EPA 8015	C	10173816	Ethylene glycol	4785	NELAP	PA	12/04/2007
EPA 8015	C	10173816	Gasoline-range organics (GRO)	9408	NELAP	PA	12/12/2005
EPA 8015	C	10173816	Isobutyl alcohol (2-Methyl-1-propanol)	4875	NELAP	PA	02/07/2012
EPA 8015	C	10173816	Isopropyl alcohol (2-Propanol)	4895	NELAP	PA	12/04/2007
EPA 8015	C	10173816	Methane	4926	NELAP	PA	12/04/2007
EPA 8015	C	10173816	Methanol	4930	NELAP	PA	12/04/2007
EPA 8015	C	10173816	Propane	5029	NELAP	PA	12/04/2007
EPA 8015	C	10173816	Propylene glycol	6657	NELAP	PA	01/20/2012
EPA 8015	C	10173816	Total petroleum hydrocarbons (TPH)	2050	NELAP	PA	12/04/2007
EPA 8015	C	10173816	Triethylene glycol	9646	NELAP	PA	01/20/2012
EPA 8015	C	10173816	n-Butyl alcohol (n-Butanol, 1-Butanol)	4425	NELAP	PA	02/07/2012
EPA 8015	C	10173816	n-Propanol (1-Propanol)	5055	NELAP	PA	02/07/2012
EPA 8015	D	10305609	Diesel-range organics (DRO)	9369	NELAP	PA	12/12/2005
EPA 8015	D	10305609	Diethylene glycol	4720	NELAP	PA	01/20/2012
EPA 8015	D	10305609	Ethane	4747	NELAP	PA	12/04/2007

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8015	D	10305609	Ethanol	4750	NELAP	PA	12/04/2007
EPA 8015	D	10305609	Ethene	4752	NELAP	PA	12/04/2007
EPA 8015	D	10305609	Ethylene glycol	4785	NELAP	PA	12/04/2007
EPA 8015	D	10305609	Gasoline-range organics (GRO)	9408	NELAP	PA	12/12/2005
EPA 8015	D	10305609	Isobutyl alcohol (2-Methyl-1-propanol)	4875	NELAP	PA	02/07/2012
EPA 8015	D	10305609	Isopropyl alcohol (2-Propanol)	4895	NELAP	PA	12/04/2007
EPA 8015	D	10305609	Methane	4926	NELAP	PA	12/04/2007
EPA 8015	D	10305609	Methanol	4930	NELAP	PA	12/04/2007
EPA 8015	D	10305609	Propane	5029	NELAP	PA	12/04/2007
EPA 8015	D	10305609	Propylene glycol	6657	NELAP	PA	01/20/2012
EPA 8015	D	10305609	Total petroleum hydrocarbons (TPH)	2050	NELAP	PA	01/24/2007
EPA 8015	D	10305609	Triethylene glycol	9646	NELAP	PA	01/20/2012
EPA 8015	D	10305609	n-Butyl alcohol (n-Butanol, 1-Butanol)	4425	NELAP	PA	02/07/2012
EPA 8015	D	10305609	n-Propanol (1-Propanol)	5055	NELAP	PA	02/07/2012
EPA 8081	B	10178811	Organochlorine pesticides by GC/ECD	7937	NELAP	PA	01/01/2013
EPA 8081	B	10178811	2,4'-DDD	8580	NELAP	PA	11/19/2015
EPA 8081	B	10178811	2,4'-DDE	8585	NELAP	PA	11/19/2015
EPA 8081	B	10178811	2,4'-DDT	8590	NELAP	PA	11/19/2015
EPA 8081	B	10178811	4,4'-DDD	7355	NELAP	PA	02/10/2006
EPA 8081	B	10178811	4,4'-DDE	7360	NELAP	PA	12/12/2005
EPA 8081	B	10178811	4,4'-DDT	7365	NELAP	PA	12/12/2005
EPA 8081	B	10178811	Aldrin (HHDN)	7025	NELAP	PA	12/12/2005

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8081	B	10178811	Chlordane (tech.)	7250	NELAP	PA	12/12/2005
EPA 8081	B	10178811	Dieldrin	7470	NELAP	PA	12/12/2005
EPA 8081	B	10178811	Endosulfan I	7510	NELAP	PA	02/10/2006
EPA 8081	B	10178811	Endosulfan II	7515	NELAP	PA	12/12/2005
EPA 8081	B	10178811	Endosulfan sulfate	7520	NELAP	PA	12/12/2005
EPA 8081	B	10178811	Endrin	7540	NELAP	PA	12/12/2005
EPA 8081	B	10178811	Endrin aldehyde	7530	NELAP	PA	12/12/2005
EPA 8081	B	10178811	Endrin ketone	7535	NELAP	PA	02/10/2006
EPA 8081	B	10178811	Heptachlor	7685	NELAP	PA	12/12/2005
EPA 8081	B	10178811	Heptachlor epoxide	7690	NELAP	PA	12/12/2005
EPA 8081	B	10178811	Kepone	7740	NELAP	PA	05/02/2006
EPA 8081	B	10178811	Methoxychlor	7810	NELAP	PA	12/12/2005
EPA 8081	B	10178811	Mirex	7870	NELAP	PA	12/12/2005
EPA 8081	B	10178811	Toxaphene (Chlorinated camphene)	8250	NELAP	PA	12/12/2005
EPA 8081	B	10178811	alpha-BHC (alpha-Hexachlorocyclohexane)	7110	NELAP	PA	02/10/2006
EPA 8081	B	10178811	alpha-Chlordane	7240	NELAP	PA	02/10/2006
EPA 8081	B	10178811	beta-BHC (beta-Hexachlorocyclohexane)	7115	NELAP	PA	02/10/2006
EPA 8081	B	10178811	delta-BHC (delta-Hexachlorocyclohexane)	7105	NELAP	PA	02/10/2006
EPA 8081	B	10178811	gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	7120	NELAP	PA	02/10/2006
EPA 8081	B	10178811	gamma-Chlordane	7245	NELAP	PA	02/10/2006
EPA 8082	A	10179358	Aroclor-1016 (PCB-1016)	8880	NELAP	PA	12/11/2006
EPA 8082	A	10179358	Aroclor-1221 (PCB-1221)	8885	NELAP	PA	12/11/2006

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8082	A	10179358	Aroclor-1232 (PCB-1232)	8890	NELAP	PA	12/11/2006
EPA 8082	A	10179358	Aroclor-1242 (PCB-1242)	8895	NELAP	PA	12/11/2006
EPA 8082	A	10179358	Aroclor-1248 (PCB-1248)	8900	NELAP	PA	12/11/2006
EPA 8082	A	10179358	Aroclor-1254 (PCB-1254)	8905	NELAP	PA	12/11/2006
EPA 8082	A	10179358	Aroclor-1260 (PCB-1260)	8910	NELAP	PA	12/11/2006
EPA 8082	A	10179358	Aroclor-1262 (PCB-1262)	8912	NELAP	PA	07/23/2008
EPA 8082	A	10179358	Aroclor-1268 (PCB-1268)	8913	NELAP	PA	07/23/2008
EPA 8151	A	10183207	Chlorinated herbicides by GC/ECD	8542	NELAP	PA	03/26/2012
EPA 8151	A	10183207	2,4,5-T	8655	NELAP	PA	12/12/2005
EPA 8151	A	10183207	2,4,5-TP (Silvex)	8650	NELAP	PA	12/12/2005
EPA 8151	A	10183207	2,4-D	8545	NELAP	PA	12/12/2005
EPA 8151	A	10183207	2,4-DB (Butoxon)	8560	NELAP	PA	12/12/2005
EPA 8151	A	10183207	Dalapon (2,2-Dichloropropionic acid)	8555	NELAP	PA	12/12/2005
EPA 8151	A	10183207	Dicamba	8595	NELAP	PA	12/12/2005
EPA 8151	A	10183207	Dichloroprop (Dichlorprop)	8605	NELAP	PA	01/24/2007
EPA 8151	A	10183207	Dinoseb (2-sec-Butyl-4,6-dinitrophenol, DNBP)	8620	NELAP	PA	12/12/2005
EPA 8151	A	10183207	MCPA	7775	NELAP	PA	12/12/2005
EPA 8151	A	10183207	MCPP (Mecoprop)	7780	NELAP	PA	12/12/2005
EPA 8151	A	10183207	Pentachlorophenol (PCP)	6605	NELAP	PA	12/12/2005
EPA 8151	A	10183207	Picloram (4-Amino-3,5,6-trichloro-2-pyridinecarboxylic acid)	8645	NELAP	PA	12/12/2005
EPA 8260	B	10184802	VOCs by GC/MS	5242	NELAP	PA	03/26/2012

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	C	10307003	VOCs by GC/MS	5242	NELAP	PA	03/26/2012
EPA 8260	D	10307127	VOCs by GC/MS	5242	NELAP	PA	11/04/2019
EPA 8260	B	10184802	1,1,1,2-Tetrachloroethane	5105	NELAP	PA	12/12/2005
EPA 8260	B	10184802	1,1,1-Trichloroethane	5160	NELAP	PA	12/12/2005
EPA 8260	B	10184802	1,1,2,2-Tetrachloroethane	5110	NELAP	PA	12/12/2005
EPA 8260	B	10184802	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5185	NELAP	PA	12/12/2005
EPA 8260	B	10184802	1,1,2-Trichloroethane	5165	NELAP	PA	12/12/2005
EPA 8260	B	10184802	1,1-Dichloroethane	4630	NELAP	PA	12/12/2005
EPA 8260	B	10184802	1,1-Dichloroethene (1,1-Dichloroethylene)	4640	NELAP	PA	12/12/2005
EPA 8260	B	10184802	1,1-Dichloropropene	4670	NELAP	PA	12/12/2005
EPA 8260	B	10184802	1,2,3-Trichlorobenzene	5150	NELAP	PA	12/12/2005
EPA 8260	B	10184802	1,2,3-Trichloropropane (1,2,3-TCP)	5180	NELAP	PA	12/12/2005
EPA 8260	B	10184802	1,2,3-Trimethylbenzene	5182	NELAP	PA	01/19/2016
EPA 8260	B	10184802	1,2,4-Trichlorobenzene	5155	NELAP	PA	12/12/2005
EPA 8260	B	10184802	1,2,4-Trimethylbenzene	5210	NELAP	PA	12/12/2005
EPA 8260	B	10184802	1,2-Dibromo-3-chloropropane (DBCP, Dibromochloropropane)	4570	NELAP	PA	12/12/2005
EPA 8260	B	10184802	1,2-Dibromoethane (EDB, Ethylene dibromide)	4585	NELAP	PA	12/12/2005
EPA 8260	B	10184802	1,2-Dichloro-1,1,2-trifluoroethane	4697	NELAP	PA	03/19/2015
EPA 8260	B	10184802	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	12/12/2005
EPA 8260	B	10184802	1,2-Dichloroethane	4635	NELAP	PA	12/12/2005
EPA 8260	B	10184802	1,2-Dichloropropane	4655	NELAP	PA	12/12/2005

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	B	10184802	1,2-Diethylbenzene	4656	NELAP	PA	01/19/2016
EPA 8260	B	10184802	1,3,5-Trichlorobenzene	6800	NELAP	PA	01/19/2016
EPA 8260	B	10184802	1,3,5-Trimethylbenzene	5215	NELAP	PA	12/12/2005
EPA 8260	B	10184802	1,3-Butadiene (Divinyl)	9318	NELAP	PA	01/19/2016
EPA 8260	B	10184802	1,3-Dichloro-2-butene	9319	NELAP	PA	01/19/2016
EPA 8260	B	10184802	1,3-Dichlorobenzene (m-Dichlorobenzene)	4615	NELAP	PA	12/12/2005
EPA 8260	B	10184802	1,3-Dichloropropane	4660	NELAP	PA	12/12/2005
EPA 8260	B	10184802	1,3-Diethylbenzene	4676	NELAP	PA	01/19/2016
EPA 8260	B	10184802	1,4-Dichlorobenzene (p-Dichlorobenzene)	4620	NELAP	PA	12/12/2005
EPA 8260	B	10184802	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	12/12/2005
EPA 8260	B	10184802	2,2-Dichloropropane	4665	NELAP	PA	05/02/2006
EPA 8260	B	10184802	2-Butanone (Methyl ethyl ketone, MEK)	4410	NELAP	PA	05/02/2006
EPA 8260	B	10184802	2-Chloroethyl vinyl ether	4500	NELAP	PA	12/12/2005
EPA 8260	B	10184802	2-Chlorotoluene	4535	NELAP	PA	12/12/2005
EPA 8260	B	10184802	2-Hexanone	4860	NELAP	PA	12/12/2005
EPA 8260	B	10184802	2-Nitropropane	5020	NELAP	PA	01/19/2011
EPA 8260	B	10184802	3,3'-Dimethyl-1-butanol	6103	NELAP	PA	04/17/2009
EPA 8260	B	10184802	4-Chlorotoluene	4540	NELAP	PA	12/12/2005
EPA 8260	B	10184802	4-Methyl-2-pentanone (MIBK)	4995	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Acetone	4315	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Acetonitrile	4320	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Acrolein (Propenal)	4325	NELAP	PA	12/12/2005

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	B	10184802	Acrylonitrile	4340	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Allyl chloride (3-Chloropropene)	4355	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Benzene	4375	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Benzyl chloride	5635	NELAP	PA	07/03/2007
EPA 8260	B	10184802	Bromobenzene	4385	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Bromochloromethane	4390	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Bromodichloromethane	4395	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Bromoform	4400	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Carbon disulfide	4450	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Carbon tetrachloride	4455	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Chlorobenzene	4475	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Chloroethane	4485	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Chloroform	4505	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Chloroprene (2-Chloro-1,3-butadiene)	4525	NELAP	PA	07/03/2007
EPA 8260	B	10184802	Cyclohexane	4555	NELAP	PA	07/03/2007
EPA 8260	B	10184802	Cyclohexanone	4560	NELAP	PA	06/07/2012
EPA 8260	B	10184802	Dibromochloromethane	4575	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Dibromomethane	4595	NELAP	PA	05/02/2006
EPA 8260	B	10184802	Dichlorodifluoromethane (Freon 12)	4625	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Diethyl ether (Ethyl ether)	4725	NELAP	PA	02/01/2011
EPA 8260	B	10184802	Diisopropyl ether (DIPE)	9375	NELAP	PA	07/03/2007
EPA 8260	B	10184802	Dimethyl ether	4731	NELAP	PA	06/07/2012

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	B	10184802	Ethanol	4750	NELAP	PA	01/24/2007
EPA 8260	B	10184802	Ethyl acetate	4755	NELAP	PA	01/24/2007
EPA 8260	B	10184802	Ethyl methacrylate	4810	NELAP	PA	01/24/2007
EPA 8260	B	10184802	Ethyl tert-butyl ether (ETBE)	4770	NELAP	PA	01/24/2007
EPA 8260	B	10184802	Ethylbenzene	4765	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Freon 113 (1,1,2-Trichloro-1,2,2-trifluoroethane)	5185	NELAP	PA	03/04/2015
EPA 8260	B	10184802	Gasoline-range organics (GRO)	9408	NELAP	PA	06/08/2006
EPA 8260	B	10184802	Heptane	4825	NELAP	PA	01/20/2012
EPA 8260	B	10184802	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	4835	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Isobutyl alcohol (2-Methyl-1-propanol)	4875	NELAP	PA	07/03/2007
EPA 8260	B	10184802	Isopropyl alcohol (2-Propanol)	4895	NELAP	PA	01/18/2011
EPA 8260	B	10184802	Isopropylbenzene (Cumene)	4900	NELAP	PA	05/02/2006
EPA 8260	B	10184802	Methacrylonitrile	4925	NELAP	PA	07/03/2007
EPA 8260	B	10184802	Methyl acetate	4940	NELAP	PA	01/24/2007
EPA 8260	B	10184802	Methyl bromide (Bromomethane)	4950	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Methyl chloride (Chloromethane)	4960	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Methyl iodide (Iodomethane)	4870	NELAP	PA	05/25/2007
EPA 8260	B	10184802	Methyl tert-butyl ether (MTBE)	5000	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Methylcyclohexane	4965	NELAP	PA	01/21/2009
EPA 8260	B	10184802	Methylene chloride (Dichloromethane)	4975	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Methylmethacrylate	4990	NELAP	PA	05/25/2007
EPA 8260	B	10184802	Naphthalene	5005	NELAP	PA	12/12/2005

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	B	10184802	Pentachloroethane	5035	NELAP	PA	01/24/2007
EPA 8260	B	10184802	Propionitrile (Ethyl cyanide)	5080	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Styrene	5100	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Tetrachloroethene (PCE, Perchloroethylene)	5115	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Tetrahydrofuran (THF)	5120	NELAP	PA	01/18/2011
EPA 8260	B	10184802	Toluene	5140	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Trichloroethene (TCE, Trichloroethylene)	5170	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Trichlorofluoromethane (Freon 11)	5175	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Vinyl acetate	5225	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Vinyl chloride (Chloroethene)	5235	NELAP	PA	12/12/2005
EPA 8260	B	10184802	Xylenes, total	5260	NELAP	PA	12/12/2005
EPA 8260	B	10184802	cis-1,2-Dichloroethene	4645	NELAP	PA	12/12/2005
EPA 8260	B	10184802	cis-1,3-Dichloropropene	4680	NELAP	PA	12/12/2005
EPA 8260	B	10184802	m+p-Xylene	5240	NELAP	PA	04/17/2009
EPA 8260	B	10184802	n-Butyl acetate	4403	NELAP	PA	01/19/2016
EPA 8260	B	10184802	n-Butyl alcohol (n-Butanol, 1-Butanol)	4425	NELAP	PA	04/17/2009
EPA 8260	B	10184802	n-Butylbenzene	4435	NELAP	PA	12/12/2005
EPA 8260	B	10184802	n-Hexane	4855	NELAP	PA	01/20/2012
EPA 8260	B	10184802	n-Propylamine	5085	NELAP	PA	12/12/2005
EPA 8260	B	10184802	n-Propylbenzene	5090	NELAP	PA	01/24/2007
EPA 8260	B	10184802	o-Xylene	5250	NELAP	PA	04/17/2009
EPA 8260	B	10184802	p-Isopropyltoluene (4-Isopropyltoluene)	4910	NELAP	PA	01/24/2007

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	B	10184802	sec-Butylbenzene	4440	NELAP	PA	12/12/2005
EPA 8260	B	10184802	tert-Amyl alcohol (2-Methyl-2-butanol)	4368	NELAP	PA	04/17/2009
EPA 8260	B	10184802	tert-Amyl methyl ether (TAME)	4370	NELAP	PA	01/24/2007
EPA 8260	B	10184802	tert-Butyl alcohol (2-Methyl-2-propanol)	4420	NELAP	PA	12/12/2005
EPA 8260	B	10184802	tert-Butyl formate	9557	NELAP	PA	04/17/2009
EPA 8260	B	10184802	tert-Butylbenzene	4445	NELAP	PA	12/12/2005
EPA 8260	B	10184802	trans-1,2-Dichloroethene	4700	NELAP	PA	12/12/2005
EPA 8260	B	10184802	trans-1,3-Dichloropropene	4685	NELAP	PA	12/12/2005
EPA 8260	B	10184802	trans-1,4-Dichloro-2-butene	4605	NELAP	PA	07/03/2007
EPA 8260	C	10307003	1,1,1,2-Tetrachloroethane	5105	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,1,1-Trichloroethane	5160	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,1,2,2-Tetrachloroethane	5110	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5185	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,1,2-Trichloroethane	5165	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,1-Dichloroethane	4630	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,1-Dichloroethene (1,1-Dichloroethylene)	4640	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,1-Dichloropropene	4670	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,2,3-Trichlorobenzene	5150	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,2,3-Trichloropropane (1,2,3-TCP)	5180	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,2,3-Trimethylbenzene	5182	NELAP	PA	01/19/2016
EPA 8260	C	10307003	1,2,4-Trichlorobenzene	5155	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,2,4-Trimethylbenzene	5210	NELAP	PA	12/12/2005

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	C	10307003	1,2-Dibromo-3-chloropropane (DBCP, Dibromochloropropane)	4570	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,2-Dibromoethane (EDB, Ethylene dibromide)	4585	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,2-Dichloro-1,1,2-trifluoroethane	4697	NELAP	PA	03/19/2015
EPA 8260	C	10307003	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,2-Dichloroethane	4635	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,2-Dichloropropane	4655	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,2-Diethylbenzene	4656	NELAP	PA	01/19/2016
EPA 8260	C	10307003	1,3,5-Trichlorobenzene	6800	NELAP	PA	01/19/2016
EPA 8260	C	10307003	1,3,5-Trimethylbenzene	5215	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,3-Butadiene (Divinyl)	9318	NELAP	PA	01/19/2016
EPA 8260	C	10307003	1,3-Dichloro-2-butene	9319	NELAP	PA	01/19/2016
EPA 8260	C	10307003	1,3-Dichlorobenzene (m-Dichlorobenzene)	4615	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,3-Dichloropropane	4660	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,3-Diethylbenzene	4676	NELAP	PA	01/19/2016
EPA 8260	C	10307003	1,4-Dichlorobenzene (p-Dichlorobenzene)	4620	NELAP	PA	12/12/2005
EPA 8260	C	10307003	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	12/12/2005
EPA 8260	C	10307003	2,2-Dichloropropane	4665	NELAP	PA	05/02/2006
EPA 8260	C	10307003	2-Butanone (Methyl ethyl ketone, MEK)	4410	NELAP	PA	05/02/2006
EPA 8260	C	10307003	2-Chloroethyl vinyl ether	4500	NELAP	PA	12/12/2005
EPA 8260	C	10307003	2-Chlorotoluene	4535	NELAP	PA	12/12/2005
EPA 8260	C	10307003	2-Hexanone	4860	NELAP	PA	12/12/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	C	10307003	2-Nitropropane	5020	NELAP	PA	01/19/2011
EPA 8260	C	10307003	3,3'-Dimethyl-1-butanol	6103	NELAP	PA	04/17/2009
EPA 8260	C	10307003	4-Chlorotoluene	4540	NELAP	PA	12/12/2005
EPA 8260	C	10307003	4-Methyl-2-pentanone (MIBK)	4995	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Acetone	4315	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Acetonitrile	4320	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Acrolein (Propenal)	4325	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Acrylonitrile	4340	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Allyl chloride (3-Chloropropene)	4355	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Benzene	4375	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Benzyl chloride	5635	NELAP	PA	07/03/2007
EPA 8260	C	10307003	Bromobenzene	4385	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Bromochloromethane	4390	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Bromodichloromethane	4395	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Bromoform	4400	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Carbon disulfide	4450	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Carbon tetrachloride	4455	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Chlorobenzene	4475	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Chloroethane	4485	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Chloroform	4505	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Chloroprene (2-Chloro-1,3-butadiene)	4525	NELAP	PA	07/03/2007
EPA 8260	C	10307003	Cyclohexane	4555	NELAP	PA	07/03/2007

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	C	10307003	Cyclohexanone	4560	NELAP	PA	06/07/2012
EPA 8260	C	10307003	Dibromochloromethane	4575	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Dibromomethane	4595	NELAP	PA	05/02/2006
EPA 8260	C	10307003	Dichlorodifluoromethane (Freon 12)	4625	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Diethyl ether (Ethyl ether)	4725	NELAP	PA	02/01/2011
EPA 8260	C	10307003	Diisopropyl ether (DIPE)	9375	NELAP	PA	07/03/2007
EPA 8260	C	10307003	Dimethyl ether	4731	NELAP	PA	06/07/2012
EPA 8260	C	10307003	Ethanol	4750	NELAP	PA	01/24/2007
EPA 8260	C	10307003	Ethyl acetate	4755	NELAP	PA	01/24/2007
EPA 8260	C	10307003	Ethyl methacrylate	4810	NELAP	PA	01/24/2007
EPA 8260	C	10307003	Ethyl tert-butyl ether (ETBE)	4770	NELAP	PA	01/24/2007
EPA 8260	C	10307003	Ethylbenzene	4765	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Freon 113 (1,1,2-Trichloro-1,2,2-trifluoroethane)	5185	NELAP	PA	03/04/2015
EPA 8260	C	10307003	Gasoline-range organics (GRO)	9408	NELAP	PA	06/08/2006
EPA 8260	C	10307003	Heptane	4825	NELAP	PA	01/20/2012
EPA 8260	C	10307003	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	4835	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Isobutyl alcohol (2-Methyl-1-propanol)	4875	NELAP	PA	07/03/2007
EPA 8260	C	10307003	Isopropyl alcohol (2-Propanol)	4895	NELAP	PA	01/18/2011
EPA 8260	C	10307003	Isopropylbenzene (Cumene)	4900	NELAP	PA	05/02/2006
EPA 8260	C	10307003	Methacrylonitrile	4925	NELAP	PA	07/03/2007
EPA 8260	C	10307003	Methyl acetate	4940	NELAP	PA	01/24/2007
EPA 8260	C	10307003	Methyl bromide (Bromomethane)	4950	NELAP	PA	12/12/2005

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Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	C	10307003	Methyl chloride (Chloromethane)	4960	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Methyl iodide (Iodomethane)	4870	NELAP	PA	05/25/2007
EPA 8260	C	10307003	Methyl tert-butyl ether (MTBE)	5000	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Methylcyclohexane	4965	NELAP	PA	01/21/2009
EPA 8260	C	10307003	Methylene chloride (Dichloromethane)	4975	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Methylmethacrylate	4990	NELAP	PA	05/25/2007
EPA 8260	C	10307003	Naphthalene	5005	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Pentachloroethane	5035	NELAP	PA	01/24/2007
EPA 8260	C	10307003	Propionitrile (Ethyl cyanide)	5080	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Styrene	5100	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Tetrachloroethene (PCE, Perchloroethylene)	5115	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Tetrahydrofuran (THF)	5120	NELAP	PA	01/18/2011
EPA 8260	C	10307003	Toluene	5140	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Trichloroethene (TCE, Trichloroethylene)	5170	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Trichlorofluoromethane (Freon 11)	5175	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Vinyl acetate	5225	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Vinyl chloride (Chloroethene)	5235	NELAP	PA	12/12/2005
EPA 8260	C	10307003	Xylenes, total	5260	NELAP	PA	12/12/2005
EPA 8260	C	10307003	cis-1,2-Dichloroethene	4645	NELAP	PA	12/12/2005
EPA 8260	C	10307003	cis-1,3-Dichloropropene	4680	NELAP	PA	12/12/2005
EPA 8260	C	10307003	m+p-Xylene	5240	NELAP	PA	04/17/2009
EPA 8260	C	10307003	n-Butyl acetate	4403	NELAP	PA	01/19/2016

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	C	10307003	n-Butyl alcohol (n-Butanol, 1-Butanol)	4425	NELAP	PA	04/17/2009
EPA 8260	C	10307003	n-Butylbenzene	4435	NELAP	PA	12/12/2005
EPA 8260	C	10307003	n-Hexane	4855	NELAP	PA	01/20/2012
EPA 8260	C	10307003	n-Propylamine	5085	NELAP	PA	12/12/2005
EPA 8260	C	10307003	n-Propylbenzene	5090	NELAP	PA	01/24/2007
EPA 8260	C	10307003	o-Xylene	5250	NELAP	PA	04/17/2009
EPA 8260	C	10307003	p-Isopropyltoluene (4-Isopropyltoluene)	4910	NELAP	PA	01/24/2007
EPA 8260	C	10307003	sec-Butylbenzene	4440	NELAP	PA	12/12/2005
EPA 8260	C	10307003	tert-Amyl alcohol (2-Methyl-2-butanol)	4368	NELAP	PA	04/17/2009
EPA 8260	C	10307003	tert-Amyl methyl ether (TAME)	4370	NELAP	PA	01/24/2007
EPA 8260	C	10307003	tert-Butyl alcohol (2-Methyl-2-propanol)	4420	NELAP	PA	12/12/2005
EPA 8260	C	10307003	tert-Butyl formate	9557	NELAP	PA	04/17/2009
EPA 8260	C	10307003	tert-Butylbenzene	4445	NELAP	PA	12/12/2005
EPA 8260	C	10307003	trans-1,2-Dichloroethene	4700	NELAP	PA	12/12/2005
EPA 8260	C	10307003	trans-1,3-Dichloropropene	4685	NELAP	PA	12/12/2005
EPA 8260	C	10307003	trans-1,4-Dichloro-2-butene	4605	NELAP	PA	07/03/2007
EPA 8260	D	10307127	1,1,1,2-Tetrachloroethane	5105	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,1,1-Trichloroethane	5160	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,1,2,2-Tetrachloroethane	5110	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5185	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,1,2-Trichloroethane	5165	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,1-Dichloroethane	4630	NELAP	PA	12/12/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	D	10307127	1,1-Dichloroethene (1,1-Dichloroethylene)	4640	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,1-Dichloropropene	4670	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,2,3-Trichlorobenzene	5150	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,2,3-Trichloropropane (1,2,3-TCP)	5180	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,2,3-Trimethylbenzene	5182	NELAP	PA	01/19/2016
EPA 8260	D	10307127	1,2,4-Trichlorobenzene	5155	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,2,4-Trimethylbenzene	5210	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,2-Dibromo-3-chloropropane (DBCP, Dibromochloropropane)	4570	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,2-Dibromoethane (EDB, Ethylene dibromide)	4585	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,2-Dichloro-1,1,2-trifluoroethane	4697	NELAP	PA	03/19/2015
EPA 8260	D	10307127	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,2-Dichloroethane	4635	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,2-Dichloropropane	4655	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,2-Diethylbenzene	4656	NELAP	PA	01/19/2016
EPA 8260	D	10307127	1,3,5-Trichlorobenzene	6800	NELAP	PA	01/19/2016
EPA 8260	D	10307127	1,3,5-Trimethylbenzene	5215	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,3-Butadiene (Divinyl)	9318	NELAP	PA	01/19/2016
EPA 8260	D	10307127	1,3-Dichlorobenzene (m-Dichlorobenzene)	4615	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,3-Dichloropropane	4660	NELAP	PA	12/12/2005
EPA 8260	D	10307127	1,3-Diethylbenzene	4676	NELAP	PA	01/19/2016
EPA 8260	D	10307127	1,4-Dichlorobenzene (p-Dichlorobenzene)	4620	NELAP	PA	12/12/2005

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	D	10307127	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	12/12/2005
EPA 8260	D	10307127	2,2-Dichloropropane	4665	NELAP	PA	05/02/2006
EPA 8260	D	10307127	2-Butanone (Methyl ethyl ketone, MEK)	4410	NELAP	PA	05/02/2006
EPA 8260	D	10307127	2-Chloroethyl vinyl ether	4500	NELAP	PA	12/12/2005
EPA 8260	D	10307127	2-Chlorotoluene	4535	NELAP	PA	12/12/2005
EPA 8260	D	10307127	2-Hexanone	4860	NELAP	PA	12/12/2005
EPA 8260	D	10307127	2-Nitropropane	5020	NELAP	PA	01/19/2011
EPA 8260	D	10307127	4-Chlorotoluene	4540	NELAP	PA	12/12/2005
EPA 8260	D	10307127	4-Methyl-2-pentanone (MIBK)	4995	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Acetone	4315	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Acetonitrile	4320	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Acrolein (Propenal)	4325	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Acrylonitrile	4340	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Allyl chloride (3-Chloropropene)	4355	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Benzene	4375	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Benzyl chloride	5635	NELAP	PA	07/03/2007
EPA 8260	D	10307127	Bromobenzene	4385	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Bromochloromethane	4390	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Bromodichloromethane	4395	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Bromoform	4400	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Carbon disulfide	4450	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Carbon tetrachloride	4455	NELAP	PA	12/12/2005

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	D	10307127	Chlorobenzene	4475	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Chloroethane	4485	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Chloroform	4505	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Chloroprene (2-Chloro-1,3-butadiene)	4525	NELAP	PA	07/03/2007
EPA 8260	D	10307127	Cyclohexane	4555	NELAP	PA	07/03/2007
EPA 8260	D	10307127	Dibromochloromethane	4575	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Dibromomethane	4595	NELAP	PA	05/02/2006
EPA 8260	D	10307127	Dichlorodifluoromethane (Freon 12)	4625	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Diethyl ether (Ethyl ether)	4725	NELAP	PA	02/01/2011
EPA 8260	D	10307127	Diisopropyl ether (DIPE)	9375	NELAP	PA	07/03/2007
EPA 8260	D	10307127	Ethanol	4750	NELAP	PA	01/24/2007
EPA 8260	D	10307127	Ethyl acetate	4755	NELAP	PA	01/24/2007
EPA 8260	D	10307127	Ethyl methacrylate	4810	NELAP	PA	01/24/2007
EPA 8260	D	10307127	Ethyl tert-butyl ether (ETBE)	4770	NELAP	PA	01/24/2007
EPA 8260	D	10307127	Ethylbenzene	4765	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Freon 113 (1,1,2-Trichloro-1,2,2-trifluoroethane)	5185	NELAP	PA	03/04/2015
EPA 8260	D	10307127	Heptane	4825	NELAP	PA	01/20/2012
EPA 8260	D	10307127	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	4835	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Isobutyl alcohol (2-Methyl-1-propanol)	4875	NELAP	PA	07/03/2007
EPA 8260	D	10307127	Isopropyl alcohol (2-Propanol)	4895	NELAP	PA	01/18/2011
EPA 8260	D	10307127	Isopropylbenzene (Cumene)	4900	NELAP	PA	05/02/2006
EPA 8260	D	10307127	Methacrylonitrile	4925	NELAP	PA	07/03/2007

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Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	D	10307127	Methyl acetate	4940	NELAP	PA	01/24/2007
EPA 8260	D	10307127	Methyl bromide (Bromomethane)	4950	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Methyl chloride (Chloromethane)	4960	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Methyl iodide (Iodomethane)	4870	NELAP	PA	05/25/2007
EPA 8260	D	10307127	Methyl tert-butyl ether (MTBE)	5000	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Methylcyclohexane	4965	NELAP	PA	01/21/2009
EPA 8260	D	10307127	Methylene chloride (Dichloromethane)	4975	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Methylmethacrylate	4990	NELAP	PA	05/25/2007
EPA 8260	D	10307127	Naphthalene	5005	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Pentachloroethane	5035	NELAP	PA	01/24/2007
EPA 8260	D	10307127	Propionitrile (Ethyl cyanide)	5080	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Styrene	5100	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Tetrachloroethene (PCE, Perchloroethylene)	5115	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Tetrahydrofuran (THF)	5120	NELAP	PA	01/18/2011
EPA 8260	D	10307127	Toluene	5140	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Trichloroethene (TCE, Trichloroethylene)	5170	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Trichlorofluoromethane (Freon 11)	5175	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Vinyl acetate	5225	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Vinyl chloride (Chloroethene)	5235	NELAP	PA	12/12/2005
EPA 8260	D	10307127	Xylenes, total	5260	NELAP	PA	12/12/2005
EPA 8260	D	10307127	cis-1,2-Dichloroethene	4645	NELAP	PA	12/12/2005
EPA 8260	D	10307127	cis-1,3-Dichloropropene	4680	NELAP	PA	12/12/2005

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Laboratory Scope of Accreditation

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	D	10307127	m+p-Xylene	5240	NELAP	PA	04/17/2009
EPA 8260	D	10307127	n-Butyl acetate	4403	NELAP	PA	01/19/2016
EPA 8260	D	10307127	n-Butyl alcohol (n-Butanol, 1-Butanol)	4425	NELAP	PA	04/17/2009
EPA 8260	D	10307127	n-Butylbenzene	4435	NELAP	PA	12/12/2005
EPA 8260	D	10307127	n-Hexane	4855	NELAP	PA	01/20/2012
EPA 8260	D	10307127	n-Propylbenzene	5090	NELAP	PA	01/24/2007
EPA 8260	D	10307127	o-Xylene	5250	NELAP	PA	04/17/2009
EPA 8260	D	10307127	p-Isopropyltoluene (4-Isopropyltoluene)	4910	NELAP	PA	01/24/2007
EPA 8260	D	10307127	sec-Butylbenzene	4440	NELAP	PA	12/12/2005
EPA 8260	D	10307127	tert-Amyl methyl ether (TAME)	4370	NELAP	PA	01/24/2007
EPA 8260	D	10307127	tert-Butyl alcohol (2-Methyl-2-propanol)	4420	NELAP	PA	12/12/2005
EPA 8260	D	10307127	tert-Butylbenzene	4445	NELAP	PA	12/12/2005
EPA 8260	D	10307127	trans-1,2-Dichloroethene	4700	NELAP	PA	12/12/2005
EPA 8260	D	10307127	trans-1,3-Dichloropropene	4685	NELAP	PA	12/12/2005
EPA 8260	D	10307127	trans-1,4-Dichloro-2-butene	4605	NELAP	PA	07/03/2007
EPA 8260 SIM	D	10307138	VOCs by GC/MS	5242	NELAP	PA	09/29/2020
EPA 8260 SIM	B	10184904	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	12/04/2007
EPA 8260 SIM	C	10307105	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	12/04/2007
EPA 8260 SIM	D	10307138	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	12/04/2007
EPA 8270	C	10185805	SOCs by GC/MS	6687	NELAP	PA	03/26/2012
EPA 8270	D	10186002	SOCs by GC/MS	6687	NELAP	PA	03/26/2012
EPA 8270	E	10242543	SOCs by GC/MS	6687	NELAP	PA	06/25/2020

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	C	10185805	1,1'-Biphenyl (Biphenyl, Lemonene)	6703	NELAP	PA	04/17/2009
EPA 8270	C	10185805	1,2,3,4-Tetrachlorobenzene	6705	NELAP	PA	07/03/2007
EPA 8270	C	10185805	1,2,3,4-Tetrahydronaphthalene	6707	NELAP	PA	04/17/2009
EPA 8270	C	10185805	1,2,3,5-Tetrachlorobenzene	6710	NELAP	PA	07/03/2007
EPA 8270	C	10185805	1,2,4,5-Tetrachlorobenzene	6715	NELAP	PA	12/12/2005
EPA 8270	C	10185805	1,2,4-Trichlorobenzene	5155	NELAP	PA	12/12/2005
EPA 8270	C	10185805	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	12/12/2005
EPA 8270	C	10185805	1,2-Diphenylhydrazine	6220	NELAP	PA	12/12/2005
EPA 8270	C	10185805	1,3,5-Trinitrobenzene (1,3,5-TNB)	6885	NELAP	PA	12/12/2005
EPA 8270	C	10185805	1,3-Dichlorobenzene (m-Dichlorobenzene)	4615	NELAP	PA	12/12/2005
EPA 8270	C	10185805	1,3-Dinitrobenzene (1,3-DNB)	6160	NELAP	PA	12/12/2005
EPA 8270	C	10185805	1,4-Dichlorobenzene (p-Dichlorobenzene)	4620	NELAP	PA	12/12/2005
EPA 8270	C	10185805	1,4-Dinitrobenzene (1,4-DNB)	6165	NELAP	PA	04/17/2009
EPA 8270	C	10185805	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	04/17/2009
EPA 8270	C	10185805	1,4-Naphthoquinone	6420	NELAP	PA	12/12/2005
EPA 8270	C	10185805	1,4-Phenylenediamine	6630	NELAP	PA	12/12/2005
EPA 8270	C	10185805	1-Chloronaphthalene	5790	NELAP	PA	12/12/2005
EPA 8270	C	10185805	1-Methylnaphthalene	6380	NELAP	PA	04/17/2009
EPA 8270	C	10185805	1-Naphthylamine (alpha-Naphthylamine)	6425	NELAP	PA	12/12/2005
EPA 8270	C	10185805	2,2'-Oxybis(1-chloropropane) (bis(2-Chloro-1-methylethyl) ether)	4659	NELAP	PA	01/19/2011
EPA 8270	C	10185805	2,3,4,6-Tetrachlorophenol	6735	NELAP	PA	12/12/2005

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	C	10185805	2,4,5-Trichlorophenol	6835	NELAP	PA	12/12/2005
EPA 8270	C	10185805	2,4,6-Trichlorophenol	6840	NELAP	PA	12/12/2005
EPA 8270	C	10185805	2,4-Dichlorophenol	6000	NELAP	PA	12/12/2005
EPA 8270	C	10185805	2,4-Dimethylphenol	6130	NELAP	PA	12/12/2005
EPA 8270	C	10185805	2,4-Dinitrophenol	6175	NELAP	PA	12/12/2005
EPA 8270	C	10185805	2,4-Dinitrotoluene (2,4-DNT)	6185	NELAP	PA	12/12/2005
EPA 8270	C	10185805	2,6-Dichlorophenol	6005	NELAP	PA	12/12/2005
EPA 8270	C	10185805	2,6-Dinitrotoluene (2,6-DNT)	6190	NELAP	PA	12/12/2005
EPA 8270	C	10185805	2-Acetylaminofluorene	5515	NELAP	PA	12/12/2005
EPA 8270	C	10185805	2-Butoxyethanol	9322	NELAP	PA	02/07/2012
EPA 8270	C	10185805	2-Chloronaphthalene	5795	NELAP	PA	12/12/2005
EPA 8270	C	10185805	2-Chlorophenol	5800	NELAP	PA	12/12/2005
EPA 8270	C	10185805	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	6360	NELAP	PA	12/12/2005
EPA 8270	C	10185805	2-Methylnaphthalene	6385	NELAP	PA	12/12/2005
EPA 8270	C	10185805	2-Methylphenol (o-Cresol)	6400	NELAP	PA	12/12/2005
EPA 8270	C	10185805	2-Naphthylamine (beta-Naphthylamine)	6430	NELAP	PA	12/12/2005
EPA 8270	C	10185805	2-Nitroaniline	6460	NELAP	PA	12/12/2005
EPA 8270	C	10185805	2-Nitrophenol	6490	NELAP	PA	12/12/2005
EPA 8270	C	10185805	2-Picoline (2-Methylpyridine)	5050	NELAP	PA	05/02/2006
EPA 8270	C	10185805	3+4-Methylphenol (m+p-Cresol)	6412	NELAP	PA	12/12/2005
EPA 8270	C	10185805	3,3'-Dichlorobenzidine	5945	NELAP	PA	12/12/2005
EPA 8270	C	10185805	3,3'-Dimethylbenzidine	6120	NELAP	PA	07/03/2007

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2425 New Holland Pike
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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	C	10185805	3-Methylcholanthrene	6355	NELAP	PA	12/12/2005
EPA 8270	C	10185805	3-Nitroaniline	6465	NELAP	PA	12/12/2005
EPA 8270	C	10185805	4,4'-Methylenebis(2-chloroaniline)	6365	NELAP	PA	12/12/2005
EPA 8270	C	10185805	4-Aminobiphenyl	5540	NELAP	PA	12/12/2005
EPA 8270	C	10185805	4-Bromophenyl phenyl ether	5660	NELAP	PA	12/12/2005
EPA 8270	C	10185805	4-Chloro-3-methylphenol	5700	NELAP	PA	12/12/2005
EPA 8270	C	10185805	4-Chloroaniline	5745	NELAP	PA	12/12/2005
EPA 8270	C	10185805	4-Chlorophenyl phenyl ether	5825	NELAP	PA	12/12/2005
EPA 8270	C	10185805	4-Nitroaniline	6470	NELAP	PA	12/12/2005
EPA 8270	C	10185805	4-Nitrophenol	6500	NELAP	PA	12/12/2005
EPA 8270	C	10185805	4-Nitroquinoline-1-oxide	6510	NELAP	PA	07/03/2007
EPA 8270	C	10185805	5-Nitro-o-toluidine	6570	NELAP	PA	12/12/2005
EPA 8270	C	10185805	6-Methylchrysene	6112	NELAP	PA	01/19/2011
EPA 8270	C	10185805	7,12-Dimethylbenz(a)anthracene	6115	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Acenaphthene	5500	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Acenaphthylene	5505	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Acetophenone	5510	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Aniline	5545	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Anthracene	5555	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Aramite	5560	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Atrazine	7065	NELAP	PA	01/22/2007
EPA 8270	C	10185805	Benzaldehyde	5570	NELAP	PA	04/17/2009

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	C	10185805	Benzenethiol	5567	NELAP	PA	04/17/2009
EPA 8270	C	10185805	Benzidine	5595	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Benzo[a]anthracene	5575	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Benzo[a]pyrene	5580	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Benzo[b]fluoranthene	5585	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Benzo[ghi]perylene	5590	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Benzo[k]fluoranthene	5600	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Benzoic acid	5610	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Benzyl alcohol	5630	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Butyl benzyl phthalate (Benzyl butyl phthalate)	5670	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Caprolactam	7180	NELAP	PA	04/17/2009
EPA 8270	C	10185805	Carbazole	5680	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Chlorobenzilate	7260	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Chrysene (Benzo[a]phenanthrene)	5855	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Di-n-butyl phthalate	5925	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Di-n-octyl phthalate	6200	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Diallate (cis or trans)	7405	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Dibenz[a,h]acridine	9354	NELAP	PA	04/17/2009
EPA 8270	C	10185805	Dibenz[a,j]acridine	5900	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Dibenzo[a,h]anthracene	5895	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Dibenzofuran	5905	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Diethyl phthalate	6070	NELAP	PA	12/12/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	C	10185805	Dimethoate	7475	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Dimethyl phthalate	6135	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Dimethylaminoazobenzene (4-Dimethylaminoazobenzene)	6105	NELAP	PA	05/02/2006
EPA 8270	C	10185805	Dinoseb (2-sec-Butyl-4,6-dinitrophenol, DNBP)	8620	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Diphenylamine	6205	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Disulfoton	8625	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Ethyl methanesulfonate	6260	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Famphur	7580	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Fluoranthene	6265	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Fluorene	6270	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Hexachlorobenzene	6275	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	4835	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Hexachlorocyclopentadiene	6285	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Hexachloroethane	4840	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Hexachloropropene	6295	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Indene	6312	NELAP	PA	04/17/2009
EPA 8270	C	10185805	Indeno(1,2,3-cd)pyrene	6315	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Isodrin	7725	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Isophorone	6320	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Isosafrole	6325	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Kepone	7740	NELAP	PA	12/12/2005

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	C	10185805	Methapyrilene	6345	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Methyl methanesulfonate	6375	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Methyl parathion (Parathion, methyl)	7825	NELAP	PA	05/25/2007
EPA 8270	C	10185805	N,N-Dimethylacetamide	6443	NELAP	PA	04/17/2009
EPA 8270	C	10185805	N,N-Dimethylformamide	5010	NELAP	PA	04/17/2009
EPA 8270	C	10185805	N-Nitrosodi-n-butylamine	5025	NELAP	PA	12/12/2005
EPA 8270	C	10185805	N-Nitrosodi-n-propylamine	6545	NELAP	PA	12/12/2005
EPA 8270	C	10185805	N-Nitrosodiethylamine	6525	NELAP	PA	12/12/2005
EPA 8270	C	10185805	N-Nitrosodimethylamine	6530	NELAP	PA	12/12/2005
EPA 8270	C	10185805	N-Nitrosodiphenylamine	6535	NELAP	PA	12/12/2005
EPA 8270	C	10185805	N-Nitrosomethylethylamine	6550	NELAP	PA	12/12/2005
EPA 8270	C	10185805	N-Nitrosomorpholine	6555	NELAP	PA	12/12/2005
EPA 8270	C	10185805	N-Nitrosopiperidine	6560	NELAP	PA	12/12/2005
EPA 8270	C	10185805	N-Nitrosopyrrolidine	6565	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Naphthalene	5005	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Nitrobenzene	5015	NELAP	PA	12/12/2005
EPA 8270	C	10185805	O,O,O-Triethyl phosphorothioate	8290	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Parathion, ethyl (Ethyl parathion, Parathion)	7955	NELAP	PA	05/25/2007
EPA 8270	C	10185805	Pentachlorobenzene	6590	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Pentachloronitrobenzene (PCNB)	6600	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Pentachlorophenol (PCP)	6605	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Phenacetin	6610	NELAP	PA	12/12/2005

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	C	10185805	Phenanthrene	6615	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Phenol	6625	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Phorate (Thimet)	7985	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Phthalic anhydride	6640	NELAP	PA	01/21/2009
EPA 8270	C	10185805	Pronamide (Kerb)	6650	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Pyrene	6665	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Pyridine	5095	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Quinoline	6670	NELAP	PA	04/17/2009
EPA 8270	C	10185805	Safrole	6685	NELAP	PA	12/12/2005
EPA 8270	C	10185805	Sulfotepp (Tetraethyl dithiopyrophosphate)	8155	NELAP	PA	04/17/2009
EPA 8270	C	10185805	Tetraethyl lead	1211	NELAP	PA	03/07/2012
EPA 8270	C	10185805	Thionazine (Thionazin, Zinophos)	8235	NELAP	PA	12/12/2005
EPA 8270	C	10185805	a,a-Dimethylphenethylamine (Phentermine)	6125	NELAP	PA	12/12/2005
EPA 8270	C	10185805	a-Methylstyrene	4357	NELAP	PA	04/17/2009
EPA 8270	C	10185805	bis(2-Chloroethoxy)methane	5760	NELAP	PA	12/12/2005
EPA 8270	C	10185805	bis(2-Chloroethyl) ether	5765	NELAP	PA	12/12/2005
EPA 8270	C	10185805	bis(2-Chloromethyl) ether		NELAP	PA	01/21/2009
EPA 8270	C	10185805	bis(2-Ethylhexyl) phthalate (DEHP)	6065	NELAP	PA	12/12/2005
EPA 8270	C	10185805	o-Toluidine (2-Toluidine, 2-Methylaniline)	5145	NELAP	PA	12/12/2005
EPA 8270	C	10185805	p-(Dimethylamino)azobenzene	6105	NELAP	PA	04/17/2009
EPA 8270	C	10185805	tris-(2,3-Dibromopropyl) phosphate (tris-BP)	8310	NELAP	PA	04/17/2009
EPA 8270	D	10186002	1,1'-Biphenyl (Biphenyl, Lemonene)	6703	NELAP	PA	04/17/2009

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	1,2,3,4-Tetrachlorobenzene	6705	NELAP	PA	07/03/2007
EPA 8270	D	10186002	1,2,3,4-Tetrahydronaphthalene	6707	NELAP	PA	04/17/2009
EPA 8270	D	10186002	1,2,3,5-Tetrachlorobenzene	6710	NELAP	PA	07/03/2007
EPA 8270	D	10186002	1,2,4,5-Tetrachlorobenzene	6715	NELAP	PA	12/12/2005
EPA 8270	D	10186002	1,2,4-Trichlorobenzene	5155	NELAP	PA	12/12/2005
EPA 8270	D	10186002	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	12/12/2005
EPA 8270	D	10186002	1,2-Diphenylhydrazine	6220	NELAP	PA	12/12/2005
EPA 8270	D	10186002	1,3,5-Trinitrobenzene (1,3,5-TNB)	6885	NELAP	PA	12/12/2005
EPA 8270	D	10186002	1,3-Dichlorobenzene (m-Dichlorobenzene)	4615	NELAP	PA	12/12/2005
EPA 8270	D	10186002	1,3-Dinitrobenzene (1,3-DNB)	6160	NELAP	PA	12/12/2005
EPA 8270	D	10186002	1,4-Dichlorobenzene (p-Dichlorobenzene)	4620	NELAP	PA	12/12/2005
EPA 8270	D	10186002	1,4-Dinitrobenzene (1,4-DNB)	6165	NELAP	PA	04/17/2009
EPA 8270	D	10186002	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	04/17/2009
EPA 8270	D	10186002	1,4-Naphthoquinone	6420	NELAP	PA	12/12/2005
EPA 8270	D	10186002	1,4-Phenylenediamine	6630	NELAP	PA	12/12/2005
EPA 8270	D	10186002	1-Chloronaphthalene	5790	NELAP	PA	12/12/2005
EPA 8270	D	10186002	1-Methylnaphthalene	6380	NELAP	PA	04/17/2009
EPA 8270	D	10186002	1-Naphthylamine (alpha-Naphthylamine)	6425	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2,2'-Oxybis(1-chloropropane) (bis(2-Chloro-1-methylethyl) ether)	4659	NELAP	PA	01/19/2011
EPA 8270	D	10186002	2,3,4,6-Tetrachlorophenol	6735	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2,4,5-Trichlorophenol	6835	NELAP	PA	12/12/2005

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DEP Laboratory ID: 36-00037
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TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	2,4,6-Trichlorophenol	6840	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2,4-Dichlorophenol	6000	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2,4-Dimethylphenol	6130	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2,4-Dinitrophenol	6175	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2,4-Dinitrotoluene (2,4-DNT)	6185	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2,6-Dichlorophenol	6005	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2,6-Dinitrotoluene (2,6-DNT)	6190	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2-Acetylaminofluorene	5515	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2-Butoxyethanol	9322	NELAP	PA	02/07/2012
EPA 8270	D	10186002	2-Chloronaphthalene	5795	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2-Chlorophenol	5800	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	6360	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2-Methylnaphthalene	6385	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2-Methylphenol (o-Cresol)	6400	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2-Naphthylamine (beta-Naphthylamine)	6430	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2-Nitroaniline	6460	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2-Nitrophenol	6490	NELAP	PA	12/12/2005
EPA 8270	D	10186002	2-Picoline (2-Methylpyridine)	5050	NELAP	PA	05/02/2006
EPA 8270	D	10186002	3+4-Methylphenol (m+p-Cresol)	6412	NELAP	PA	12/12/2005
EPA 8270	D	10186002	3,3'-Dichlorobenzidine	5945	NELAP	PA	12/12/2005
EPA 8270	D	10186002	3,3'-Dimethylbenzidine	6120	NELAP	PA	07/03/2007
EPA 8270	D	10186002	3-Methylcholanthrene	6355	NELAP	PA	12/12/2005

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	3-Nitroaniline	6465	NELAP	PA	12/12/2005
EPA 8270	D	10186002	4,4'-Methylenebis(2-chloroaniline)	6365	NELAP	PA	12/12/2005
EPA 8270	D	10186002	4-Aminobiphenyl	5540	NELAP	PA	12/12/2005
EPA 8270	D	10186002	4-Bromophenyl phenyl ether	5660	NELAP	PA	12/12/2005
EPA 8270	D	10186002	4-Chloro-3-methylphenol	5700	NELAP	PA	12/12/2005
EPA 8270	D	10186002	4-Chloroaniline	5745	NELAP	PA	12/12/2005
EPA 8270	D	10186002	4-Chlorophenyl phenyl ether	5825	NELAP	PA	12/12/2005
EPA 8270	D	10186002	4-Nitroaniline	6470	NELAP	PA	12/12/2005
EPA 8270	D	10186002	4-Nitrophenol	6500	NELAP	PA	12/12/2005
EPA 8270	D	10186002	4-Nitroquinoline-1-oxide	6510	NELAP	PA	07/03/2007
EPA 8270	D	10186002	5-Nitro-o-toluidine	6570	NELAP	PA	12/12/2005
EPA 8270	D	10186002	6-Methylchrysene	6112	NELAP	PA	01/19/2011
EPA 8270	D	10186002	7,12-Dimethylbenz(a)anthracene	6115	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Acenaphthene	5500	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Acenaphthylene	5505	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Acetophenone	5510	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Aniline	5545	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Anthracene	5555	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Aramite	5560	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Atrazine	7065	NELAP	PA	01/22/2007
EPA 8270	D	10186002	Benzaldehyde	5570	NELAP	PA	04/17/2009
EPA 8270	D	10186002	Benzenethiol	5567	NELAP	PA	04/17/2009

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	Benzidine	5595	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Benzo[a]anthracene	5575	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Benzo[a]pyrene	5580	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Benzo[b]fluoranthene	5585	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Benzo[ghi]perylene	5590	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Benzo[k]fluoranthene	5600	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Benzoic acid	5610	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Benzyl alcohol	5630	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Butyl benzyl phthalate (Benzyl butyl phthalate)	5670	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Caprolactam	7180	NELAP	PA	04/17/2009
EPA 8270	D	10186002	Carbazole	5680	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Chlorobenzilate	7260	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Chrysene (Benzo[a]phenanthrene)	5855	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Di-n-butyl phthalate	5925	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Di-n-octyl phthalate	6200	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Diallate (cis or trans)	7405	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Dibenz[a,h]acridine	9354	NELAP	PA	04/17/2009
EPA 8270	D	10186002	Dibenz[a,j]acridine	5900	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Dibenzo[a,h]anthracene	5895	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Dibenzofuran	5905	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Diethyl phthalate	6070	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Dimethoate	7475	NELAP	PA	12/12/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	Dimethyl phthalate	6135	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Dimethylaminoazobenzene (4-Dimethylaminoazobenzene)	6105	NELAP	PA	05/02/2006
EPA 8270	D	10186002	Dinoseb (2-sec-Butyl-4,6-dinitrophenol, DNBP)	8620	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Diphenylamine	6205	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Disulfoton	8625	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Ethyl methanesulfonate	6260	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Famphur	7580	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Fluoranthene	6265	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Fluorene	6270	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Hexachlorobenzene	6275	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	4835	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Hexachlorocyclopentadiene	6285	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Hexachloroethane	4840	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Hexachloropropene	6295	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Indene	6312	NELAP	PA	04/17/2009
EPA 8270	D	10186002	Indeno(1,2,3-cd)pyrene	6315	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Isodrin	7725	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Isophorone	6320	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Isosafrole	6325	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Kepone	7740	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Methapyrilene	6345	NELAP	PA	12/12/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	Methyl methanesulfonate	6375	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Methyl parathion (Parathion, methyl)	7825	NELAP	PA	05/25/2007
EPA 8270	D	10186002	N,N-Dimethylacetamide	6443	NELAP	PA	04/17/2009
EPA 8270	D	10186002	N,N-Dimethylformamide	5010	NELAP	PA	04/17/2009
EPA 8270	D	10186002	N-Nitrosodi-n-butylamine	5025	NELAP	PA	12/12/2005
EPA 8270	D	10186002	N-Nitrosodi-n-propylamine	6545	NELAP	PA	12/12/2005
EPA 8270	D	10186002	N-Nitrosodiethylamine	6525	NELAP	PA	12/12/2005
EPA 8270	D	10186002	N-Nitrosodimethylamine	6530	NELAP	PA	12/12/2005
EPA 8270	D	10186002	N-Nitrosodiphenylamine	6535	NELAP	PA	12/12/2005
EPA 8270	D	10186002	N-Nitrosomethylethylamine	6550	NELAP	PA	12/12/2005
EPA 8270	D	10186002	N-Nitrosomorpholine	6555	NELAP	PA	12/12/2005
EPA 8270	D	10186002	N-Nitrosopiperidine	6560	NELAP	PA	12/12/2005
EPA 8270	D	10186002	N-Nitrosopyrrolidine	6565	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Naphthalene	5005	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Nitrobenzene	5015	NELAP	PA	12/12/2005
EPA 8270	D	10186002	O,O,O-Triethyl phosphorothioate	8290	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Parathion, ethyl (Ethyl parathion, Parathion)	7955	NELAP	PA	05/25/2007
EPA 8270	D	10186002	Pentachlorobenzene	6590	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Pentachloronitrobenzene (PCNB)	6600	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Pentachlorophenol (PCP)	6605	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Phenacetin	6610	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Phenanthrene	6615	NELAP	PA	12/12/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	Phenol	6625	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Phorate (Thimet)	7985	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Phthalic anhydride	6640	NELAP	PA	01/21/2009
EPA 8270	D	10186002	Pronamide (Kerb)	6650	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Pyrene	6665	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Pyridine	5095	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Quinoline	6670	NELAP	PA	04/17/2009
EPA 8270	D	10186002	Safrole	6685	NELAP	PA	12/12/2005
EPA 8270	D	10186002	Sulfotepp (Tetraethyl dithiopyrophosphate)	8155	NELAP	PA	04/17/2009
EPA 8270	D	10186002	Tetraethyl lead	1211	NELAP	PA	03/07/2012
EPA 8270	D	10186002	Thionazine (Thionazin, Zinophos)	8235	NELAP	PA	12/12/2005
EPA 8270	D	10186002	a,a-Dimethylphenethylamine (Phentermine)	6125	NELAP	PA	12/12/2005
EPA 8270	D	10186002	a-Methylstyrene	4357	NELAP	PA	04/17/2009
EPA 8270	D	10186002	bis(2-Chloroethoxy)methane	5760	NELAP	PA	12/12/2005
EPA 8270	D	10186002	bis(2-Chloroethyl) ether	5765	NELAP	PA	12/12/2005
EPA 8270	D	10186002	bis(2-Chloromethyl) ether		NELAP	PA	01/21/2009
EPA 8270	D	10186002	bis(2-Ethylhexyl) phthalate (DEHP)	6065	NELAP	PA	12/12/2005
EPA 8270	D	10186002	o-Toluidine (2-Toluidine, 2-Methylaniline)	5145	NELAP	PA	12/12/2005
EPA 8270	D	10186002	p-(Dimethylamino)azobenzene	6105	NELAP	PA	04/17/2009
EPA 8270	D	10186002	tris-(2,3-Dibromopropyl) phosphate (tris-BP)	8310	NELAP	PA	04/17/2009
EPA 8270	E	10242543	1,1'-Biphenyl (Biphenyl, Lemonene)	6703	NELAP	PA	04/17/2009
EPA 8270	E	10242543	1,2,4,5-Tetrachlorobenzene	6715	NELAP	PA	12/12/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	1,2,4-Trichlorobenzene	5155	NELAP	PA	12/12/2005
EPA 8270	E	10242543	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	12/12/2005
EPA 8270	E	10242543	1,2-Diphenylhydrazine	6220	NELAP	PA	12/12/2005
EPA 8270	E	10242543	1,3,5-Trinitrobenzene (1,3,5-TNB)	6885	NELAP	PA	12/15/2022
EPA 8270	E	10242543	1,3-Dichlorobenzene (m-Dichlorobenzene)	4615	NELAP	PA	12/12/2005
EPA 8270	E	10242543	1,3-Dinitrobenzene (1,3-DNB)	6160	NELAP	PA	12/12/2005
EPA 8270	E	10242543	1,4-Dichlorobenzene (p-Dichlorobenzene)	4620	NELAP	PA	12/12/2005
EPA 8270	E	10242543	1,4-Dinitrobenzene (1,4-DNB)	6165	NELAP	PA	04/17/2009
EPA 8270	E	10242543	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	04/17/2009
EPA 8270	E	10242543	1,4-Naphthoquinone	6420	NELAP	PA	12/12/2005
EPA 8270	E	10242543	1-Chloronaphthalene	5790	NELAP	PA	12/12/2005
EPA 8270	E	10242543	1-Methylnaphthalene	6380	NELAP	PA	04/17/2009
EPA 8270	E	10242543	1-Naphthylamine (alpha-Naphthylamine)	6425	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2,2'-Oxybis(1-chloropropane) (bis(2-Chloro-1-methylethyl) ether)	4659	NELAP	PA	01/19/2011
EPA 8270	E	10242543	2,3,4,6-Tetrachlorophenol	6735	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2,4,5-Trichlorophenol	6835	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2,4,6-Trichlorophenol	6840	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2,4-Dichlorophenol	6000	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2,4-Dimethylphenol	6130	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2,4-Dinitrophenol	6175	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2,4-Dinitrotoluene (2,4-DNT)	6185	NELAP	PA	12/12/2005

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DEP Laboratory ID: 36-00037
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PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	2,6-Dichlorophenol	6005	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2,6-Dinitrotoluene (2,6-DNT)	6190	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2-Acetylaminofluorene	5515	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2-Chloronaphthalene	5795	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2-Chlorophenol	5800	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	6360	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2-Methylnaphthalene	6385	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2-Methylphenol (o-Cresol)	6400	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2-Naphthylamine (beta-Naphthylamine)	6430	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2-Nitroaniline	6460	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2-Nitrophenol	6490	NELAP	PA	12/12/2005
EPA 8270	E	10242543	2-Picoline (2-Methylpyridine)	5050	NELAP	PA	05/02/2006
EPA 8270	E	10242543	3+4-Methylphenol (m+p-Cresol)	6412	NELAP	PA	12/12/2005
EPA 8270	E	10242543	3,3'-Dichlorobenzidine	5945	NELAP	PA	12/12/2005
EPA 8270	E	10242543	3,3'-Dimethylbenzidine	6120	NELAP	PA	07/03/2007
EPA 8270	E	10242543	3-Methylcholanthrene	6355	NELAP	PA	12/12/2005
EPA 8270	E	10242543	3-Nitroaniline	6465	NELAP	PA	12/12/2005
EPA 8270	E	10242543	4,4'-Methylenebis(2-chloroaniline)	6365	NELAP	PA	12/12/2005
EPA 8270	E	10242543	4-Aminobiphenyl	5540	NELAP	PA	12/12/2005
EPA 8270	E	10242543	4-Bromophenyl phenyl ether	5660	NELAP	PA	12/12/2005
EPA 8270	E	10242543	4-Chloro-3-methylphenol	5700	NELAP	PA	12/12/2005
EPA 8270	E	10242543	4-Chloroaniline	5745	NELAP	PA	12/12/2005

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DEP Laboratory ID: 36-00037
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PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	4-Chlorophenyl phenyl ether	5825	NELAP	PA	12/12/2005
EPA 8270	E	10242543	4-Nitroaniline	6470	NELAP	PA	12/12/2005
EPA 8270	E	10242543	4-Nitrophenol	6500	NELAP	PA	12/12/2005
EPA 8270	E	10242543	4-Nitroquinoline-1-oxide	6510	NELAP	PA	07/03/2007
EPA 8270	E	10242543	5-Nitro-o-toluidine	6570	NELAP	PA	12/12/2005
EPA 8270	E	10242543	6-Methylchrysene	6112	NELAP	PA	01/19/2011
EPA 8270	E	10242543	7,12-Dimethylbenz(a)anthracene	6115	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Acenaphthene	5500	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Acenaphthylene	5505	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Acetophenone	5510	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Aniline	5545	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Anthracene	5555	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Aramite	5560	NELAP	PA	12/15/2022
EPA 8270	E	10242543	Atrazine	7065	NELAP	PA	01/22/2007
EPA 8270	E	10242543	Benzaldehyde	5570	NELAP	PA	04/17/2009
EPA 8270	E	10242543	Benzidine	5595	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Benzo[a]anthracene	5575	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Benzo[a]pyrene	5580	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Benzo[b]fluoranthene	5585	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Benzo[ghi]perylene	5590	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Benzo[k]fluoranthene	5600	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Benzoic acid	5610	NELAP	PA	12/12/2005

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	Benzyl alcohol	5630	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Butyl benzyl phthalate (Benzyl butyl phthalate)	5670	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Caprolactam	7180	NELAP	PA	04/17/2009
EPA 8270	E	10242543	Carbazole	5680	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Chlorobenzilate	7260	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Chrysene (Benzo[a]phenanthrene)	5855	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Di-n-butyl phthalate	5925	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Di-n-octyl phthalate	6200	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Diallate (cis or trans)	7405	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Dibenz[a,h]acridine	9354	NELAP	PA	04/17/2009
EPA 8270	E	10242543	Dibenz[a,j]acridine	5900	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Dibenzo[a,h]anthracene	5895	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Dibenzofuran	5905	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Diethyl phthalate	6070	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Dimethoate	7475	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Dimethyl phthalate	6135	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Dimethylaminoazobenzene (4-Dimethylaminoazobenzene)	6105	NELAP	PA	05/02/2006
EPA 8270	E	10242543	Dinoseb (2-sec-Butyl-4,6-dinitrophenol, DNBP)	8620	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Diphenylamine	6205	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Disulfoton	8625	NELAP	PA	12/15/2022
EPA 8270	E	10242543	Ethyl methanesulfonate	6260	NELAP	PA	12/12/2005

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	Famphur	7580	NELAP	PA	12/15/2022
EPA 8270	E	10242543	Fluoranthene	6265	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Fluorene	6270	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Hexachlorobenzene	6275	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	4835	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Hexachlorocyclopentadiene	6285	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Hexachloroethane	4840	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Hexachloropropene	6295	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Indene	6312	NELAP	PA	04/17/2009
EPA 8270	E	10242543	Indeno(1,2,3-cd)pyrene	6315	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Isodrin	7725	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Isophorone	6320	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Isosafrole	6325	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Kepone	7740	NELAP	PA	12/15/2022
EPA 8270	E	10242543	Methyl methanesulfonate	6375	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Methyl parathion (Parathion, methyl)	7825	NELAP	PA	05/25/2007
EPA 8270	E	10242543	N,N-Dimethylaniline	6445	NELAP	PA	12/15/2022
EPA 8270	E	10242543	N-Nitrosodi-n-butylamine	5025	NELAP	PA	12/12/2005
EPA 8270	E	10242543	N-Nitrosodi-n-propylamine	6545	NELAP	PA	12/12/2005
EPA 8270	E	10242543	N-Nitrosodiethylamine	6525	NELAP	PA	12/12/2005
EPA 8270	E	10242543	N-Nitrosodimethylamine	6530	NELAP	PA	12/12/2005
EPA 8270	E	10242543	N-Nitrosodiphenylamine	6535	NELAP	PA	12/12/2005

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	N-Nitrosomethylethylamine	6550	NELAP	PA	12/12/2005
EPA 8270	E	10242543	N-Nitrosomorpholine	6555	NELAP	PA	12/12/2005
EPA 8270	E	10242543	N-Nitrosopiperidine	6560	NELAP	PA	12/12/2005
EPA 8270	E	10242543	N-Nitrosopyrrolidine	6565	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Naphthalene	5005	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Nitrobenzene	5015	NELAP	PA	12/12/2005
EPA 8270	E	10242543	O,O,O-Triethyl phosphorothioate	8290	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Parathion, ethyl (Ethyl parathion, Parathion)	7955	NELAP	PA	05/25/2007
EPA 8270	E	10242543	Pentachlorobenzene	6590	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Pentachloronitrobenzene (PCNB)	6600	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Pentachlorophenol (PCP)	6605	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Phenacetin	6610	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Phenanthrene	6615	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Phenol	6625	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Phorate (Thimet)	7985	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Pronamide (Kerb)	6650	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Pyrene	6665	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Pyridine	5095	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Quinoline	6670	NELAP	PA	04/17/2009
EPA 8270	E	10242543	Safrole	6685	NELAP	PA	12/12/2005
EPA 8270	E	10242543	Sulfotepp (Tetraethyl dithiopyrophosphate)	8155	NELAP	PA	04/17/2009
EPA 8270	E	10242543	Thionazine (Thionazin, Zinophos)	8235	NELAP	PA	12/12/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	Triethylamine	5200	NELAP	PA	12/15/2022
EPA 8270	E	10242543	alpha-Terpineol	6700	NELAP	PA	12/15/2022
EPA 8270	E	10242543	bis(2-Chloroethoxy)methane	5760	NELAP	PA	12/12/2005
EPA 8270	E	10242543	bis(2-Chloroethyl) ether	5765	NELAP	PA	12/12/2005
EPA 8270	E	10242543	bis(2-Ethylhexyl) phthalate (DEHP)	6065	NELAP	PA	12/12/2005
EPA 8270	E	10242543	o-Toluidine (2-Toluidine, 2-Methylaniline)	5145	NELAP	PA	12/12/2005
EPA 8270	E	10242543	p-(Dimethylamino)azobenzene	6105	NELAP	PA	04/17/2009
EPA 8270 SIM	E	10242565	SOCs by GC/MS	6687	NELAP	PA	09/29/2020
EPA 8270 SIM	C	10242407	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	08/01/2018
EPA 8270 SIM	C	10242407	1-Methylnaphthalene	6380	NELAP	PA	07/25/2011
EPA 8270 SIM	C	10242407	2-Methylnaphthalene	6385	NELAP	PA	05/23/2012
EPA 8270 SIM	C	10242407	Acenaphthene	5500	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Acenaphthylene	5505	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Anthracene	5555	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Benzo[a]anthracene	5575	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Benzo[a]pyrene	5580	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Benzo[b]fluoranthene	5585	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Benzo[ghi]perylene	5590	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Benzo[k]fluoranthene	5600	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Chrysene (Benzo[a]phenanthrene)	5855	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Dibenzo[a,h]anthracene	5895	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Fluoranthene	6265	NELAP	PA	12/04/2007

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270 SIM	C	10242407	Fluorene	6270	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Indeno(1,2,3-cd)pyrene	6315	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Naphthalene	5005	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Phenanthrene	6615	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Pyrene	6665	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	08/01/2018
EPA 8270 SIM	D	10242509	1-Methylnaphthalene	6380	NELAP	PA	07/25/2011
EPA 8270 SIM	D	10242509	2-Methylnaphthalene	6385	NELAP	PA	05/23/2012
EPA 8270 SIM	D	10242509	Acenaphthene	5500	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Acenaphthylene	5505	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Anthracene	5555	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Benzo[a]anthracene	5575	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Benzo[a]pyrene	5580	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Benzo[b]fluoranthene	5585	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Benzo[ghi]perylene	5590	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Benzo[k]fluoranthene	5600	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Chrysene (Benzo[a]phenanthrene)	5855	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Dibenzo[a,h]anthracene	5895	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Fluoranthene	6265	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Fluorene	6270	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Indeno(1,2,3-cd)pyrene	6315	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Naphthalene	5005	NELAP	PA	12/04/2007

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270 SIM	D	10242509	Phenanthrene	6615	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Pyrene	6665	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	08/01/2018
EPA 8270 SIM	E	10242565	1-Methylnaphthalene	6380	NELAP	PA	07/25/2011
EPA 8270 SIM	E	10242565	2-Methylnaphthalene	6385	NELAP	PA	05/23/2012
EPA 8270 SIM	E	10242565	Acenaphthene	5500	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Acenaphthylene	5505	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Anthracene	5555	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Benzo[a]anthracene	5575	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Benzo[a]pyrene	5580	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Benzo[b]fluoranthene	5585	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Benzo[ghi]perylene	5590	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Benzo[k]fluoranthene	5600	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Chrysene (Benzo[a]phenanthrene)	5855	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Dibenzo[a,h]anthracene	5895	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Fluoranthene	6265	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Fluorene	6270	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Indeno(1,2,3-cd)pyrene	6315	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Naphthalene	5005	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Phenanthrene	6615	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Pyrene	6665	NELAP	PA	12/04/2007
EPA 8290	A	10187403	PCDDs and PCDFs by HRGC-HRMS	6126	NELAP	PA	03/04/2015

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Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8290	A	10187403	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	9519	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	9516	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	9426	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	9420	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	9423	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	9453	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	9471	NELAP	PA	08/06/2010
EPA 8290	A	10187403	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	9456	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	9474	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	9459	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	9477	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	9540	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	9543	NELAP	PA	06/30/2010
EPA 8290	A	10187403	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	9480	NELAP	PA	06/30/2010
EPA 8290	A	10187403	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	9549	NELAP	PA	08/06/2010
EPA 8290	A	10187403	2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)(Dioxin)	9618	NELAP	PA	06/30/2010
EPA 8290	A	10187403	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	9612	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total TCDD	9609	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total TCDF	9615	NELAP	PA	06/30/2010

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PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8290	A	10187403	Total heptachlorodibenzo-p-dioxin (HpCDD)	9438	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total heptachlorodibenzofuran (HpCDF)	9444	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total hexachlorodibenzo-p-dioxin (HxCDD)	9468	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total hexachlorodibenzofuran (HxCDF)	9483	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total pentachlorodibenzo-p-dioxin (PeCDD)	9555	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total pentachlorodibenzofuran (PeCDF)	9552	NELAP	PA	06/30/2010
EPA 8315	A	10188008	Carbonyl compounds by HPLC	6658	NELAP	PA	03/26/2012
EPA 8315	A	10188008	Acetaldehyde	4300	NELAP	PA	12/12/2005
EPA 8315	A	10188008	Formaldehyde	4815	NELAP	PA	12/12/2005
EPA 8330	B	10308006	Nitroaromatics and nitramines by HPLC/UV	9355	NELAP	PA	07/29/2015
EPA 8330	B	10308006	1,3,5-Trinitrobenzene (1,3,5-TNB)	6885	NELAP	PA	12/12/2005
EPA 8330	B	10308006	1,3-Dinitrobenzene (1,3-DNB)	6160	NELAP	PA	12/12/2005
EPA 8330	B	10308006	2,4,6-Trinitrotoluene (2,4,6-TNT)	9651	NELAP	PA	12/12/2005
EPA 8330	B	10308006	2,4-Diamino-6-nitrotoluene	5882	NELAP	PA	07/29/2015
EPA 8330	B	10308006	2,4-Dinitrotoluene (2,4-DNT)	6185	NELAP	PA	06/11/2007
EPA 8330	B	10308006	2,6-Diamino-4-nitrotoluene	6181	NELAP	PA	07/29/2015
EPA 8330	B	10308006	2,6-Dinitrotoluene (2,6-DNT)	6190	NELAP	PA	06/11/2007
EPA 8330	B	10308006	2-Amino-4,6-dinitrotoluene (2-Am-DNT)	9303	NELAP	PA	12/12/2005
EPA 8330	B	10308006	2-Nitrotoluene	9507	NELAP	PA	12/12/2005
EPA 8330	B	10308006	3,5-Dinitroaniline	6150	NELAP	PA	07/29/2015
EPA 8330	B	10308006	3-Nitrotoluene	9510	NELAP	PA	12/12/2005
EPA 8330	B	10308006	4-Amino-2,6-dinitrotoluene (4-Am-DNT)	9306	NELAP	PA	12/12/2005

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Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8330	B	10308006	4-Nitrotoluene	9513	NELAP	PA	12/12/2005
EPA 8330	B	10308006	Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	6415	NELAP	PA	12/12/2005
EPA 8330	B	10308006	Nitrobenzene	5015	NELAP	PA	06/11/2007
EPA 8330	B	10308006	Nitroglycerin	6485	NELAP	PA	01/24/2007
EPA 8330	B	10308006	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	9522	NELAP	PA	12/12/2005
EPA 8330	B	10308006	Pentaerythritol tetranitrate (PETN)	9558	NELAP	PA	05/02/2006
EPA 8330	B	10308006	RDX (Hexahydro-1,3,5-trinitro-1,3,5-triazine)	9432	NELAP	PA	12/12/2005
EPA 9012	A	10193405	Total cyanide	1645	NELAP	PA	05/24/2011
EPA 9012	B	10243206	Total cyanide	1645	NELAP	PA	05/24/2011
EPA 9040	C	10244403	pH	1900	NELAP	PA	12/12/2005
EPA 9050	A	10198808	Conductivity	1610	NELAP	PA	01/27/2014
EPA 9050		10198604	Conductivity	1610	NELAP	PA	12/12/2005
EPA 9056	A	10199607	Anions by IC	1522	NELAP	PA	03/19/2015
EPA 9056	A	10199607	Bromide	1540	NELAP	PA	12/12/2005
EPA 9056	A	10199607	Chloride	1575	NELAP	PA	12/12/2005
EPA 9056	A	10199607	Fluoride	1730	NELAP	PA	12/12/2005
EPA 9056	A	10199607	Nitrate as N	1810	NELAP	PA	12/12/2005
EPA 9056	A	10199607	Nitrite as N	1840	NELAP	PA	01/19/2005
EPA 9056	A	10199607	Sulfate	2000	NELAP	PA	12/12/2005
EPA 9060	A	10244823	Total organic carbon (TOC)	2040	NELAP	PA	12/12/2005
EPA 9066		10200609	Total phenolics	1905	NELAP	PA	12/12/2005
HACH 10360	1.2	60027852	Oxygen (dissolved)	1880	NELAP	PA	06/01/2020

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
MA DEP EPH	1.1	90017202	C11-C22 Aromatics	6232	NELAP	PA	07/15/2013
MA DEP EPH	1.1	90017202	C19-C36 Aliphatics	6218	NELAP	PA	07/15/2013
MA DEP EPH	1.1	90017202	C9-C18 Aliphatics	6222	NELAP	PA	07/15/2013
MA DEP VPH	1.1	90017406	C5-C8 Aliphatics	6237	NELAP	PA	07/15/2013
MA DEP VPH	1.1	90017406	C9-C10 Aromatics	6238	NELAP	PA	07/29/2015
MA DEP VPH	1.1	90017406	C9-C12 Aliphatics	9670	NELAP	PA	07/15/2013
MA DEP VPH	2.1	90017451	C5-C8 Aliphatics	6237	NELAP	PA	07/16/2018
MA DEP VPH	2.1	90017451	C9-C10 Aromatics	6238	NELAP	PA	07/16/2018
MA DEP VPH	2.1	90017451	C9-C12 Aliphatics	9670	NELAP	PA	07/16/2018
NWTPH-Dx		90018409	Diesel-range organics (DRO)	9369	NELAP	PA	12/12/2005
NWTPH-Gx		90018603	Gasoline-range organics (GRO)	9408	NELAP	PA	12/12/2005
OIA 1677-09		60031450	Available cyanide	1523	NELAP	PA	10/09/2013
OIA 1677-09		60031450	Free cyanide	1640	NELAP	PA	10/09/2013
RSK-175		10212905	Acetylene (Ethyne)	4323	NELAP	PA	01/20/2012
RSK-175		10212905	Carbon dioxide	3755	NELAP	PA	11/19/2015
RSK-175		10212905	Ethane	4747	NELAP	PA	06/29/2010
RSK-175		10212905	Ethene	4752	NELAP	PA	06/29/2010
RSK-175		10212905	Isobutane (2-Methylpropane)	4942	NELAP	PA	11/19/2015
RSK-175		10212905	Methane	4926	NELAP	PA	06/29/2010
RSK-175		10212905	Propane	5029	NELAP	PA	06/29/2010
RSK-175		10212905	n-Butane	5007	NELAP	PA	12/22/2011
SM 2120 B		20039014	Color	1605	NELAP	PA	07/21/2020

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SM 2120B - 2011	Online ed.	20039310	Color	1605	NELAP	PA	07/21/2020
SM 2130B - 2011	Online ed.	20048220	Turbidity	2055	NELAP	PA	12/15/2022
SM 2310 B		20044411	Acidity as CaCO3	1500	NELAP	PA	03/27/2018
SM 2310B - 2011	Online ed.	20044615	Acidity as CaCO3	1500	NELAP	PA	03/27/2018
SM 2320 B		20045414	Alkalinity as CaCO3	1505	NELAP	PA	01/19/2005
SM 2320B - 2011	Online ed.	20045618	Alkalinity as CaCO3	1505	NELAP	PA	01/19/2005
SM 2340 C		20047410	Total hardness as CaCO3	1755	NELAP	PA	01/10/2023
SM 2340C - 2011	Online ed.	20047614	Total hardness as CaCO3	1755	NELAP	PA	01/10/2023
SM 2510 B		20048413	Conductivity	1610	NELAP	PA	12/12/2005
SM 2510B - 2011	Online ed.	20048617	Conductivity	1610	NELAP	PA	12/12/2005
SM 2540 B		20049212	Residue, total	1950	NELAP	PA	04/17/2007
SM 2540 C		20050424	Residue, filterable (TDS)	1955	NELAP	PA	04/17/2007
SM 2540 D		20051018	Residue, nonfilterable (TSS)	1960	NELAP	PA	10/20/2021
SM 2540 F		20052011	Residue, settleable	1965	NELAP	PA	04/17/2007
SM 2540B - 2015	Online ed.	20049438	Residue, total	1950	NELAP	PA	04/17/2007
SM 2540C - 2015	Online ed.	20050435	Residue, filterable (TDS)	1955	NELAP	PA	04/17/2007
SM 2540D - 2015	Online ed.	20051223	Residue, nonfilterable (TSS)	1960	NELAP	PA	10/20/2021
SM 2540F - 2015	Online ed.	20052226	Residue, settleable	1965	NELAP	PA	04/17/2007
SM 2550 B		20053127	Temperature, deg. C	2030	NELAP	PA	08/30/2019
SM 2550B - 2010	Online ed.	20053229	Temperature, deg. C	2030	NELAP	PA	08/30/2019
SM 3500-Cr B	20-22	20066017	Chromium VI	1045	NELAP	PA	05/24/2007
SM 3500-Cr B - 2011	Online ed.	20066266	Chromium VI	1045	NELAP	PA	05/24/2007

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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SM 3500-Fe B	20-22	20068819	Ferrous iron	1073	NELAP	PA	06/15/2009
SM 3500-Fe B - 2011	Online ed.	20069016	Ferrous iron	1073	NELAP	PA	06/15/2009
SM 4500-Cl F		20080619	Total residual chlorine	1940	NELAP	PA	01/11/2012
SM 4500-Cl F - 2011	Online ed.	20080824	Total residual chlorine	1940	NELAP	PA	01/11/2012
SM 4500-Cl- C		20085012	Chloride	1575	NELAP	PA	04/17/2007
SM 4500-Cl- C - 2011	Online ed.	20085216	Chloride	1575	NELAP	PA	04/17/2007
SM 4500-F- B		20101217	Preliminary distillation of fluoride	1477	NELAP	PA	04/28/2010
SM 4500-F- B - 2011	Online ed.	20101411	Preliminary distillation of fluoride	1477	NELAP	PA	04/28/2010
SM 4500-F- C		20102210	Fluoride	1730	NELAP	PA	01/19/2005
SM 4500-F- C - 2011	Online ed.	20102414	Fluoride	1730	NELAP	PA	01/19/2005
SM 4500-H + B - 2011	Online ed.	20105220	pH	1900	NELAP	PA	04/17/2007
SM 4500-H+ B		20105015	pH	1900	NELAP	PA	04/17/2007
SM 4500-NH3 B		20105811	Ammonia distillation	1404	NELAP	PA	04/17/2007
SM 4500-NH3 B - 2011	Online ed.	20106018	Ammonia distillation	1404	NELAP	PA	04/17/2007
SM 4500-NH3 C		20106610	Ammonia as N	1515	NELAP	PA	07/05/2018
SM 4500-NH3 C - 2011	Online ed.	20108412	Ammonia as N	1515	NELAP	PA	07/05/2018
SM 4500-NH3 D		20109211	Ammonia as N	1515	NELAP	PA	04/17/2007
SM 4500-NH3 D - 2011	Online ed.	20109415	Ammonia as N	1515	NELAP	PA	04/17/2007
SM 4500-P B		20122809	Preliminary treatment of phosphate samples	1479	NELAP	PA	04/28/2010
SM 4500-P B - 2011	Online ed.	20123368	Preliminary treatment of phosphate samples	1479	NELAP	PA	04/28/2010
SM 4500-P E		20124010	Orthophosphate as P	1870	NELAP	PA	06/25/2020
SM 4500-P E - 2011	Online ed.	20124225	Orthophosphate as P	1870	NELAP	PA	06/25/2020

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2425 New Holland Pike
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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SM 4500-P F		20124816	Phosphorus, total	1910	NELAP	PA	07/21/2020
SM 4500-P F - 2011	Online ed.	20125024	Phosphorus, total	1910	NELAP	PA	07/21/2020
SM 4500-S2- D		20125615	Sulfide	2005	NELAP	PA	04/17/2007
SM 4500-S2- D - 2011	Online ed.	20125864	Sulfide	2005	NELAP	PA	04/17/2007
SM 4500-S2- F		20126414	Sulfide	2005	NELAP	PA	04/17/2007
SM 4500-S2- F - 2011	Online ed.	20126663	Sulfide	2005	NELAP	PA	04/17/2007
SM 4500-SO3 B		20130410	Sulfite, SO3	2015	NELAP	PA	04/17/2007
SM 4500-SO3- B - 2011	Online ed.	20130636	Sulfite, SO3	2015	NELAP	PA	04/17/2007
SM 4500-SiO2 C	20-22	20128410	Silica, as SiO2	1990	NELAP	PA	05/25/2007
SM 4500-SiO2 C	20-22	20128410	Silica, dissolved	1995	NELAP	PA	05/24/2007
SM 4500-SiO2 C - 2011	Online ed.	20128614	Silica, as SiO2	1990	NELAP	PA	05/25/2007
SM 4500-SiO2 C - 2011	Online ed.	20128614	Silica, dissolved	1995	NELAP	PA	05/25/2007
SM 5210 B		20135017	Biochemical oxygen demand (BOD)	1530	NELAP	PA	04/04/2005
SM 5210 B		20135017	Carbonaceous BOD (CBOD)	1555	NELAP	PA	05/14/2018
SM 5210B - 2016	Online ed.	20135039	Biochemical oxygen demand (BOD)	1530	NELAP	PA	04/04/2005
SM 5210B - 2016	Online ed.	20135039	Carbonaceous BOD (CBOD)	1555	NELAP	PA	05/04/2018
SM 5310 C		20138618	Dissolved organic carbon (DOC)	1710	NELAP	PA	01/11/2022
SM 5310 C		20138618	Total organic carbon (TOC)	2040	NELAP	PA	05/24/2007
SM 5310C - 2014	Online ed.	20138834	Dissolved organic carbon (DOC)	1710	NELAP	PA	01/11/2022
SM 5310C - 2014	Online ed.	20138834	Total organic carbon (TOC)	2040	NELAP	PA	05/24/2007
SM 5540 C		20144814	Surfactants as MBAS	2025	NELAP	PA	04/17/2007
SM 5540C - 2011	Online ed.	20145066	Surfactants as MBAS	2025	NELAP	PA	04/17/2007

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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (00037) T-PFAS-WI14355	14	60002917	1,1,2,2-Tetrafluoro-2-(1,2,2,2-tetrafluoroethoxy)ethane-1-sulfonic acid (NVHOS)	9281	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	1,1,2,2-Tetrafluoro-2-[1,2,2,3,3-pentafluoro-1-(trifluoromethyl)propoxy]ethanesulfonic acid (R-PSDCA)	9282	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2,2,3,3-Tetrafluoro-3-{[1,1,1,2,3,3-hexafluoro-3-(1,2,2,2-tetrafluoroethoxy)propan-2yl]oxy}propanoic acid (Hydro-EVE Acid)	9283	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2,2-Difluoro-2-(trifluoromethoxy)acetic acid (PFMOAA)	9284	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2-Perfluorodecylethanoic acid (10:2 FTCA)	9285	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2-Perfluorohexylethanoic acid (6:2 FTCA)	9286	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2-Perfluorooctyl ethanoic acid (FOEA) (8:2 FTCA)	9316	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA) (PFECA B)	6956	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoro-2-ethoxypropanoic acid (PEPA)	9289	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoro-2-methoxypropanoic acid (PMPA)	9290	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoro-2-{[perfluoro-3-(perfluoroethoxy)-2-propanyl]oxy}ethanesulfonic acid (Hydro-PS Acid)	9288	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoro-3,5,7,9,11-pentaoxadodecanoic acid (PFO5DAO) (TAF)	9291	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoro-3,5,7,9-butaoxadecanoic acid (PFO4DAO)	9293	NELAP	PA	12/15/2022

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoro-3,5,7-trioxaoctanoic acid (PFO3OA)	9294	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoro-3,5-dioxahexanoic acid (PFO2HxA)	9295	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoro-4-ethylcyclohexanesulfonic acid (PFecHS)	9296	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoro-4-isopropoxybutanoic acid (PFPE-1) (PFECAG)	9298	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorobutylsulfonamide (FBSA)	6967	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorodecanesulfonic acid (PFDS)	6920	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorododecanesulfonic acid (PFDoS)	6923	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorononanesulfonic acid (PFNS)	6929	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoropropanesulfonic acid (PFPrS)	9320	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoropropionic acid (PFPrA) (PPF Acid)	9323	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	13	60002893	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	6948	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	1H, 1H, 2H, 2H-Perfluorododecane sulfonic acid (10:2-FTS)	9616	NELAP	PA	11/03/2020

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (00037) T-PFAS-WI14355	13	60002893	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	6946	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	6947	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	N-Ethylperfluorooctanesulfonamide (EtFOSA)	9395	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	N-Methylperfluorooctanesulfonamide (MeFOSA)	9433	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	N-ethylperfluoro-1-octanesulfonamido ethanol (N-EtFOSE)	9431	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	N-methylperfluoro-1-octanesulfonamido ethanol (N-MeFOSE)	6949	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorobutanoic acid (PFBA)	6915	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorodecane sulfonic acid (PFDS)	6920	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	11/03/2020

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Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorododecane sulfonic acid (PFDoS)	6923	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluoroheptanesulfonic acid (PFHpS)	9470	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorohexadecanoic acid (PFHxDA)	6901	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorononane sulfonic acid (PFNS)	6929	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorononanoic acid (PFNA)	6906	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorooctadecanoic acid (PFODA)	6916	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorooctane sulfonamide (PFOSA)	6917	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	11/03/2020

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DEP Laboratory ID: 36-00037
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TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluoropentane sulfonic acid (PFPeS)	6934	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluoropentanoic acid (PFPeA)	6914	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	13	60002893	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI14355	14	60002917	1,1,2,2,3,3,4,4,4-Nonafluoro-N,N-bis(2-hydroxyethyl)butane-1-sulfonamide	9925	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	6948	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	1H, 1H, 2H, 2H-Perfluorododecane sulfonic acid (10:2-FTS)	9616	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	6946	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	6947	NELAP	PA	12/15/2022

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Laboratory Scope of Accreditation

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (00037) T-PFAS-WI14355	14	60002917	2,2,3,3,4,5,5,5-octafluoro-4-(1,1,2,2-tetrafluoro-2-sulfoethoxy)pentanoic acid (R-PSDA)	9927	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2,2,3,3-Tetrafluoro-3-[1,1,1,2,3,3-hexafluoro-3-(1,2,2-trifluoroethenoxy)propan-2-yl]oxypropanoic acid (EVE Acid)	9928	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2,2,3,3-Tetrafluoro-3-methoxy propanoic acid (MTP)	9929	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2-Fluoro-2-[1,1,2,3,3,3-hexafluoro-2-(1,1,2,2,-tetrafluoro-2-sulfoethoxy)propoxy]acetic acid (Hydrolyzed PSDA)	9930	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2-{1-[difluoro(1,2,2-trifluoroethenyl)oxy]methyl}-1,2,2,2-tetrafluoroethoxy}-1,1,2,2-tetrafluoroethanesulfonic acid (PS Acid)	9926	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2H,2H,3H,3H-Perfluorodecanoic acid (3-Perfluoroheptyl propanoic acid) (7:3 FTCA)	9340	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	9338	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2H-Perfluoro-2-decenoic acid (FOUEA) (8:2 FTUCA)	4866	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2H-Perfluoro-2-dodecenoic acid (10:2 FTUCA)	9931	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	2H-Perfluoro-2-octenoic acid (FHUEA) (6:2 FTUCA)	4869	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	4,4,5,5,6,6,6-Heptafluorohexanoic acid (3-Perfluoropropyl propanoic acid) (3:3 FTCA)	9353	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	PA	12/15/2022

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Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (00037) T-PFAS-WI14355	14	60002917	4-(2-carboxy-1,1,2,2-tetrafluoroethoxy)-2,2,3,3,4,5,5,5-octafluoro-pentanoic acid (R-EVE)	9287	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	N-Ethylperfluorooctanesulfonamide (EtFOSA)	9395	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	N-Methylperfluorooctanesulfonamide (MeFOSA)	9433	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	N-ethylperfluoro-1-octanesulfonamido ethanol (N-EtFOSE)	9431	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	N-methylperfluoro-1-octanesulfonamido ethanol (N-MeFOSE)	6949	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	6957	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoro-3-methoxypropanoic acid (PFMPA)	6965	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoro-4-methoxybutanoic acid (PFMBA)	6966	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorobutanoic acid (PFBA)	6915	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	12/15/2022

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoroheptanesulfonic acid (PFHpS)	9470	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorohexadecanoic acid (PFHxDA)	6901	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorohexanesulfonamide (FHxSA)	6968	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorononanoic acid (PFNA)	6906	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorooctadecanoic acid (PFODA)	6916	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorooctane sulfonamide (PFOSA)	6917	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoropentane sulfonic acid (PFPeS)	6934	NELAP	PA	12/15/2022

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DEP Laboratory ID: 36-00037
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Matrix: Non-Potable Water

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoropentanoic acid (PFPeA)	6914	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	12/15/2022
SOP (00037) T-PFAS-WI14355	14	60002917	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	12/15/2022
TX1005 (TNRCC)	3	90019208	Total petroleum hydrocarbons (TPH)	2050	NELAP	PA	12/12/2005
TX1006 (TNRCC)		90019220	Total petroleum hydrocarbons (TPH)	2050	NELAP	PA	12/12/2005

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
AK-101		90015002	Gasoline-range organics (GRO)	9408	NELAP	PA	12/12/2005
AK-102		90015206	Diesel-range organics (DRO)	9369	NELAP	PA	12/12/2005
AK-103		90015400	Residual-range organics (RRO)	6751	NELAP	PA	03/19/2015
ASTM D3987-12		30030718	Shake extraction of solid waste with water	1386	NELAP	PA	08/30/2019
ASTM D3987-85		30030730	Shake extraction of solid waste with water	1386	NELAP	PA	07/21/2017

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Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1010	A	10234807	Ignitability	1780	NELAP	PA	11/19/2015
EPA 1010	B	10234830	Flashpoint	6117	NELAP	PA	09/14/2021
EPA 1010		10116606	Ignitability	1780	NELAP	PA	01/19/2005
EPA 1311		10118806	Toxicity characteristic leaching procedure (TCLP)	1466	NELAP	PA	12/12/2005
EPA 1312		10119003	Synthetic precipitation leaching procedure (SPLP)	1460	NELAP	PA	12/12/2005
EPA 1613	B	10120602	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	9519	NELAP	PA	07/05/2018
EPA 1613	B	10120602	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	9516	NELAP	PA	07/05/2018
EPA 1613	B	10120602	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	9426	NELAP	PA	07/05/2018
EPA 1613	B	10120602	1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	9420	NELAP	PA	07/05/2018
EPA 1613	B	10120602	1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	9423	NELAP	PA	07/05/2018
EPA 1613	B	10120602	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	9453	NELAP	PA	07/05/2018
EPA 1613	B	10120602	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	9471	NELAP	PA	07/05/2018
EPA 1613	B	10120602	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	9456	NELAP	PA	07/05/2018
EPA 1613	B	10120602	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	9474	NELAP	PA	07/05/2018
EPA 1613	B	10120602	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	9459	NELAP	PA	07/05/2018
EPA 1613	B	10120602	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	9477	NELAP	PA	07/05/2018
EPA 1613	B	10120602	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	9540	NELAP	PA	07/05/2018
EPA 1613	B	10120602	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	9543	NELAP	PA	07/05/2018
EPA 1613	B	10120602	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	9480	NELAP	PA	07/05/2018
EPA 1613	B	10120602	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	9549	NELAP	PA	07/05/2018

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1613	B	10120602	2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)(Dioxin)	9618	NELAP	PA	07/05/2018
EPA 1613	B	10120602	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	9612	NELAP	PA	07/05/2018
EPA 1633 (draft)	draft	10123429	Perfluorodecanesulfonic acid (PFDS)	6920	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorododecanesulfonic acid (PFDoS)	6923	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorononanesulfonic acid (PFNS)	6929	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluoropentanesulfonic acid (PFPeS)	6934	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	6948	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	6946	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	6947	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	2H,2H,3H,3H-Perfluorodecanoic acid (3-Perfluoroheptyl propanoic acid) (7:3 FTCA)	9340	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	2H,2H,3H,3H-Perfluorooctanoic acid (5:3 FTCA)	9338	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	4,4,5,5,6,6,6-Heptafluorohexanoic acid (3-Perfluoropropyl propanoic acid) (3:3 FTCA)	9353	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	N-Ethylperfluorooctanesulfonamide (EtFOSA)	9395	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	N-Methylperfluorooctanesulfonamide (MeFOSA)	9433	NELAP	PA	07/27/2022

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1633 (draft)	draft	10123429	N-ethylperfluoro-1-octanesulfonamido ethanol (N-EtFOSE)	9431	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	N-methylperfluoro-1-octanesulfonamido ethanol (N-MeFOSE)	6949	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	6956	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	6957	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluoro-3-methoxypropanoic acid (PFMPA)	6965	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluoro-4-methoxybutanoic acid (PFMBA)	6966	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorobutanoic acid (PFBA)	6915	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluoroheptanesulfonic acid (PFHpS)	9470	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorononanoic acid (PFNA)	6906	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorooctane sulfonamide (PFOSA)	6917	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluoropentanoic acid (PFPeA)	6914	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	07/27/2022

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1633 (draft)	draft	10123429	Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	07/27/2022
EPA 1633 (draft)	draft	10123429	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	07/27/2022
EPA 1668	A	10262007	PCBs as congeners by HRGC/HRMS	8875	NELAP	PA	03/04/2015
EPA 1668	C	10262109	PCBs as congeners by HRGC/HRMS	8875	NELAP	PA	03/04/2015
EPA 1668	A	10262007	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ 206)	9095	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4',5,5'-Octachlorobiphenyl (BZ 194)	9090	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4',5,6'-Octachlorobiphenyl (BZ 196)	9102	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (BZ 207)	9101	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4',5,6-Octachlorobiphenyl (BZ 195)	9103	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ 170)	9065	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4',6,6'-Octachlorobiphenyl (BZ 197)	9104	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4',6-Heptachlorobiphenyl (BZ 171)	9106	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,4'-Hexachlorobiphenyl (BZ 128)	9020	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5',6'-Heptachlorobiphenyl (BZ 177)	9114	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5',6,6'-Octachlorobiphenyl (BZ 201)	9112	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5',6-Heptachlorobiphenyl (BZ 175)	9115	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5'-Hexachlorobiphenyl (BZ 130)	9117	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5,5',6'-Octachlorobiphenyl (BZ 199)	9108	NELAP	PA	12/17/2012

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (BZ 208)	9107	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5,5',6-Octachlorobiphenyl (BZ 198)	9109	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5,5'-Heptachlorobiphenyl (BZ 172)	9110	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5,6'-Heptachlorobiphenyl (BZ 174)	9116	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5,6,6'-Octachlorobiphenyl (BZ 200)	9111	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5,6-Heptachlorobiphenyl (BZ 173)	9113	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,5-Hexachlorobiphenyl (BZ 129)	9118	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,6'-Hexachlorobiphenyl (BZ 132)	9120	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,6,6'-Heptachlorobiphenyl (BZ 176)	9119	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4,6-Hexachlorobiphenyl (BZ 131)	9121	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',4-Pentachlorobiphenyl (BZ 82)	9122	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',5,5',6,6'-Octachlorobiphenyl (BZ 202)	9123	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',5,5',6-Heptachlorobiphenyl (BZ 178)	9124	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',5,5'-Hexachlorobiphenyl (BZ 133)	9125	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',5,6'-Hexachlorobiphenyl (BZ 135)	9127	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',5,6,6'-Heptachlorobiphenyl (BZ 179)	9126	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',5,6-Hexachlorobiphenyl (BZ 134)	9128	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',5-Pentachlorobiphenyl (BZ 83)	9129	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',6,6'-Hexachlorobiphenyl (BZ 136)	9130	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3',6-Pentachlorobiphenyl (BZ 84)	9131	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,3'-Tetrachlorobiphenyl (BZ 40)	9132	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5',6-Hexachlorobiphenyl (BZ 149)	9151	NELAP	PA	12/17/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,2',3,4',5'-Pentachlorobiphenyl (BZ 97)	9154	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ 187)	9080	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5,5'-Hexachlorobiphenyl (BZ 146)	9144	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5,6'-Hexachlorobiphenyl (BZ 148)	9147	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5,6,6'-Heptachlorobiphenyl (BZ 188)	9146	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5,6-Hexachlorobiphenyl (BZ 147)	9149	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',5-Pentachlorobiphenyl (BZ 90)	9155	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',6'-Pentachlorobiphenyl (BZ 98)	9159	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',6,6'-Hexachlorobiphenyl (BZ 150)	9157	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4',6-Pentachlorobiphenyl (BZ 91)	9160	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4'-Tetrachlorobiphenyl (BZ 42)	9162	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5',6-Heptachlorobiphenyl (BZ 183)	9075	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5'-Hexachlorobiphenyl (BZ 138)	9025	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5,5',6-Octachlorobiphenyl (BZ 203)	9133	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5,5'-Heptachlorobiphenyl (BZ 180)	9134	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5,6'-Heptachlorobiphenyl (BZ 182)	9136	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5,6,6'-Octachlorobiphenyl (BZ 204)	9135	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5,6-Heptachlorobiphenyl (BZ 181)	9137	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',5-Hexachlorobiphenyl (BZ 137)	9138	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',6'-Hexachlorobiphenyl (BZ 140)	9140	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',6,6'-Heptachlorobiphenyl (BZ 184)	9139	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,4',6-Hexachlorobiphenyl (BZ 139)	9141	NELAP	PA	12/17/2012

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,2',3,4,4'-Pentachlorobiphenyl (BZ 85)	9142	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5',6-Hexachlorobiphenyl (BZ 144)	9150	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5'-Pentachlorobiphenyl (BZ 87)	8975	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5,5',6-Heptachlorobiphenyl (BZ 185)	9143	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5,5'-Hexachlorobiphenyl (BZ 141)	9030	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5,6'-Hexachlorobiphenyl (BZ 143)	9152	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5,6,6'-Heptachlorobiphenyl (BZ 186)	9145	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5,6-Hexachlorobiphenyl (BZ 142)	9148	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,5-Pentachlorobiphenyl (BZ 86)	9153	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,6'-Pentachlorobiphenyl (BZ 89)	9161	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,6,6'-Hexachlorobiphenyl (BZ 145)	9156	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4,6-Pentachlorobiphenyl (BZ 88)	9158	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,4-Tetrachlorobiphenyl (BZ 41)	9163	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5',6-Pentachlorobiphenyl (BZ 95)	9166	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5'-Tetrachlorobiphenyl (BZ 44)	8945	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5,5',6-Hexachlorobiphenyl (BZ 151)	9035	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5,5'-Pentachlorobiphenyl (BZ 92)	9164	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5,6'-Pentachlorobiphenyl (BZ 94)	9167	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5,6,6'-Hexachlorobiphenyl (BZ 152)	9165	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5,6-Pentachlorobiphenyl (BZ 93)	9168	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,5-Tetrachlorobiphenyl (BZ 43)	9169	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,6'-Tetrachlorobiphenyl (BZ 46)	9171	NELAP	PA	12/17/2012

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EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,2',3,6,6'-Pentachlorobiphenyl (BZ 96)	9170	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3,6-Tetrachlorobiphenyl (BZ 45)	9172	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',3-Trichlorobiphenyl (BZ 16)	9173	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,4',5,5'-Hexachlorobiphenyl (BZ 153)	9040	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,4',5,6'-Hexachlorobiphenyl (BZ 154)	9174	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,4',5-Pentachlorobiphenyl (BZ 99)	9175	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,4',6,6'-Hexachlorobiphenyl (BZ 155)	9176	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,4',6-Pentachlorobiphenyl (BZ 100)	9177	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,4'-Tetrachlorobiphenyl (BZ 47)	9178	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,5',6-Pentachlorobiphenyl (BZ 103)	9179	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,5'-Tetrachlorobiphenyl (BZ 49)	8950	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,5,5'-Pentachlorobiphenyl (BZ 101)	8980	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,5,6'-Pentachlorobiphenyl (BZ 102)	9180	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,5-Tetrachlorobiphenyl (BZ 48)	9181	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,6'-Tetrachlorobiphenyl (BZ 51)	9183	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,6,6'-Pentachlorobiphenyl (BZ 104)	9182	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4,6-Tetrachlorobiphenyl (BZ 50)	9184	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',4-Trichlorobiphenyl (BZ 17)	9185	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',5,5'-Tetrachlorobiphenyl (BZ 52)	8955	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',5,6'-Tetrachlorobiphenyl (BZ 53)	9186	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',5-Trichlorobiphenyl (BZ 18)	8930	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2',6,6'-Tetrachlorobiphenyl (BZ 54)	9187	NELAP	PA	12/17/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,2',6-Trichlorobiphenyl (BZ 19)	9188	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,2'-Dichlorobiphenyl (BZ 4)	9189	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4',5',6-Pentachlorobiphenyl (BZ 125)	9224	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4',5'-Tetrachlorobiphenyl (BZ 76)	9229	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4',5,5'-Pentachlorobiphenyl (BZ 124)	9222	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4',5-Tetrachlorobiphenyl (BZ 70)	9230	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4',6-Tetrachlorobiphenyl (BZ 71)	9237	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4'-Trichlorobiphenyl (BZ 33)	9239	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,4',5',6-Hexachlorobiphenyl (BZ 168)	9218	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,4',5'-Pentachlorobiphenyl (BZ 123)	9000	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,4',5,5'-Hexachlorobiphenyl (BZ 167)	9055	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,4',5-Pentachlorobiphenyl (BZ 118)	8995	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,4',6-Pentachlorobiphenyl (BZ 119)	9220	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,4'-Tetrachlorobiphenyl (BZ 66)	8960	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,5',6-Pentachlorobiphenyl (BZ 121)	9226	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,5'-Tetrachlorobiphenyl (BZ 68)	9231	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,5,5'-Pentachlorobiphenyl (BZ 120)	9223	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,5-Tetrachlorobiphenyl (BZ 67)	9232	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4,6-Tetrachlorobiphenyl (BZ 69)	9235	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',4-Trichlorobiphenyl (BZ 25)	9240	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',5',6-Tetrachlorobiphenyl (BZ 73)	9244	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',5'-Trichlorobiphenyl (BZ 34)	9246	NELAP	PA	12/17/2012

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,3',5,5'-Tetrachlorobiphenyl (BZ 72)	9242	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',5-Trichlorobiphenyl (BZ 26)	8935	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3',6-Trichlorobiphenyl (BZ 27)	9248	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3'-Dichlorobiphenyl (BZ 6)	9249	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',5',6-Hexachlorobiphenyl (BZ 164)	9201	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',5'-Pentachlorobiphenyl (BZ 122)	9202	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',5,5',6-Heptachlorobiphenyl (BZ 193)	9195	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',5,5'-Hexachlorobiphenyl (BZ 162)	9197	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',5,6-Hexachlorobiphenyl (BZ 163)	9199	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',5-Pentachlorobiphenyl (BZ 107)	9205	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4',6-Pentachlorobiphenyl (BZ 110)	8990	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4'-Tetrachlorobiphenyl (BZ 56)	9207	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4',5',6-Heptachlorobiphenyl (BZ 191)	9192	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4',5'-Hexachlorobiphenyl (BZ 157)	9045	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4',5,5',6-Octachlorobiphenyl (BZ 205)	9190	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4',5,5'-Heptachlorobiphenyl (BZ 189)	9085	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4',5,6-Heptachlorobiphenyl (BZ 190)	9191	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4',5-Hexachlorobiphenyl (BZ 156)	9050	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4',6-Hexachlorobiphenyl (BZ 158)	9193	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,4'-Pentachlorobiphenyl (BZ 105)	8985	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,5',6-Hexachlorobiphenyl (BZ 161)	9200	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,5'-Pentachlorobiphenyl (BZ 108)	9203	NELAP	PA	12/17/2012

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,3,3',4,5,5',6-Heptachlorobiphenyl (BZ 192)	9194	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,5,5'-Hexachlorobiphenyl (BZ 159)	9196	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,5,6-Hexachlorobiphenyl (BZ 160)	9198	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,5-Pentachlorobiphenyl (BZ 106)	9204	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4,6-Pentachlorobiphenyl (BZ 109)	9206	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',4-Tetrachlorobiphenyl (BZ 55)	9208	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',5',6-Pentachlorobiphenyl (BZ 113)	9212	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',5'-Tetrachlorobiphenyl (BZ 58)	9213	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',5,5',6-Hexachlorobiphenyl (BZ 165)	9209	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',5,5'-Pentachlorobiphenyl (BZ 111)	9210	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',5,6-Pentachlorobiphenyl (BZ 112)	9211	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',5-Tetrachlorobiphenyl (BZ 57)	9214	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3',6-Tetrachlorobiphenyl (BZ 59)	9215	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,3'-Trichlorobiphenyl (BZ 20)	9216	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4',5,6-Pentachlorobiphenyl (BZ 117)	9227	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4',5-Tetrachlorobiphenyl (BZ 63)	9233	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4',6-Tetrachlorobiphenyl (BZ 64)	9236	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4'-Trichlorobiphenyl (BZ 22)	9241	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4,4',5,6-Hexachlorobiphenyl (BZ 166)	9217	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4,4',5-Pentachlorobiphenyl (BZ 114)	9005	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4,4',6-Pentachlorobiphenyl (BZ 115)	9219	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4,4'-Tetrachlorobiphenyl (BZ 60)	9221	NELAP	PA	12/17/2012

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Laboratory Scope of Accreditation

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2425 New Holland Pike
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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	2,3,4,5,6-Pentachlorobiphenyl (BZ 116)	9225	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4,5-Tetrachlorobiphenyl (BZ 61)	9228	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4,6-Tetrachlorobiphenyl (BZ 62)	9234	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,4-Trichlorobiphenyl (BZ 21)	9238	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,5,6-Tetrachlorobiphenyl (BZ 65)	9243	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,5-Trichlorobiphenyl (BZ 23)	9245	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3,6-Trichlorobiphenyl (BZ 24)	9247	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,3-Dichlorobiphenyl (BZ 5)	8920	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4',5-Trichlorobiphenyl (BZ 31)	8940	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4',6-Trichlorobiphenyl (BZ 32)	9255	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4'-Dichlorobiphenyl (BZ 8)	9256	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4,4',5-Tetrachlorobiphenyl (BZ 74)	9250	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4,4',6-Tetrachlorobiphenyl (BZ 75)	9251	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4,4'-Trichlorobiphenyl (BZ 28)	9252	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4,5-Trichlorobiphenyl (BZ 29)	9253	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4,6-Trichlorobiphenyl (BZ 30)	9254	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,4-Dichlorobiphenyl (BZ 7)	9257	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,5-Dichlorobiphenyl (BZ 9)	9258	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2,6-Dichlorobiphenyl (BZ 10)	9259	NELAP	PA	12/17/2012
EPA 1668	A	10262007	2-Chlorobiphenyl (BZ 1)	8915	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',4,4',5,5'-Hexachlorobiphenyl (BZ 169)	9060	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',4,4',5-Pentachlorobiphenyl (BZ 126)	9015	NELAP	PA	12/17/2012

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
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Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	A	10262007	3,3',4,4'-Tetrachlorobiphenyl (BZ 77)	8965	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',4,5'-Tetrachlorobiphenyl (BZ 79)	9261	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',4,5,5'-Pentachlorobiphenyl (BZ 127)	9260	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',4,5-Tetrachlorobiphenyl (BZ 78)	9262	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',4-Trichlorobiphenyl (BZ 35)	9263	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',5,5'-Tetrachlorobiphenyl (BZ 80)	9264	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3',5-Trichlorobiphenyl (BZ 36)	9265	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,3'-Dichlorobiphenyl (BZ 11)	8925	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,4',5-Trichlorobiphenyl (BZ 39)	9268	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,4'-Dichlorobiphenyl (BZ 13)	9269	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,4,4',5-Tetrachlorobiphenyl (BZ 81)	8970	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,4,4'-Trichlorobiphenyl (BZ 37)	9266	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,4,5-Trichlorobiphenyl (BZ 38)	9267	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,4-Dichlorobiphenyl (BZ 12)	9270	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3,5-Dichlorobiphenyl (BZ 14)	9271	NELAP	PA	12/17/2012
EPA 1668	A	10262007	3-Chlorobiphenyl (BZ 2)	9272	NELAP	PA	12/17/2012
EPA 1668	A	10262007	4,4'-Dichlorobiphenyl (BZ 15)	9273	NELAP	PA	12/17/2012
EPA 1668	A	10262007	4-Chlorobiphenyl (BZ 3)	9274	NELAP	PA	12/17/2012
EPA 1668	A	10262007	Decachlorobiphenyl	9105	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ 206)	9095	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4',5,5'-Octachlorobiphenyl (BZ 194)	9090	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4',5,6'-Octachlorobiphenyl (BZ 196)	9102	NELAP	PA	12/17/2012

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DEP Laboratory ID: 36-00037
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Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (BZ 207)	9101	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4',5,6-Octachlorobiphenyl (BZ 195)	9103	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ 170)	9065	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4',6,6'-Octachlorobiphenyl (BZ 197)	9104	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4',6-Heptachlorobiphenyl (BZ 171)	9106	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,4'-Hexachlorobiphenyl (BZ 128)	9020	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5',6'-Heptachlorobiphenyl (BZ 177)	9114	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5',6,6'-Octachlorobiphenyl (BZ 201)	9112	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5',6-Heptachlorobiphenyl (BZ 175)	9115	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5'-Hexachlorobiphenyl (BZ 130)	9117	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,5',6'-Octachlorobiphenyl (BZ 199)	9108	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (BZ 208)	9107	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,5',6-Octachlorobiphenyl (BZ 198)	9109	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,5'-Heptachlorobiphenyl (BZ 172)	9110	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,6'-Heptachlorobiphenyl (BZ 174)	9116	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,6,6'-Octachlorobiphenyl (BZ 200)	9111	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5,6-Heptachlorobiphenyl (BZ 173)	9113	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,5-Hexachlorobiphenyl (BZ 129)	9118	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,6'-Hexachlorobiphenyl (BZ 132)	9120	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,6,6'-Heptachlorobiphenyl (BZ 176)	9119	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4,6-Hexachlorobiphenyl (BZ 131)	9121	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',4-Pentachlorobiphenyl (BZ 82)	9122	NELAP	PA	12/17/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,2',3,3',5,5',6,6'-Octachlorobiphenyl (BZ 202)	9123	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',5,5',6-Heptachlorobiphenyl (BZ 178)	9124	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',5,5'-Hexachlorobiphenyl (BZ 133)	9125	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',5,6'-Hexachlorobiphenyl (BZ 135)	9127	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',5,6,6'-Heptachlorobiphenyl (BZ 179)	9126	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',5,6-Hexachlorobiphenyl (BZ 134)	9128	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',5-Pentachlorobiphenyl (BZ 83)	9129	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',6,6'-Hexachlorobiphenyl (BZ 136)	9130	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3',6-Pentachlorobiphenyl (BZ 84)	9131	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,3'-Tetrachlorobiphenyl (BZ 40)	9132	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5,6-Hexachlorobiphenyl (BZ 149)	9151	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5-Pentachlorobiphenyl (BZ 97)	9154	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ 187)	9080	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5,5'-Hexachlorobiphenyl (BZ 146)	9144	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5,6'-Hexachlorobiphenyl (BZ 148)	9147	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5,6,6'-Heptachlorobiphenyl (BZ 188)	9146	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5,6-Hexachlorobiphenyl (BZ 147)	9149	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',5-Pentachlorobiphenyl (BZ 90)	9155	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',6'-Pentachlorobiphenyl (BZ 98)	9159	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',6,6'-Hexachlorobiphenyl (BZ 150)	9157	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4',6-Pentachlorobiphenyl (BZ 91)	9160	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4'-Tetrachlorobiphenyl (BZ 42)	9162	NELAP	PA	12/17/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,2',3,4,4',5',6-Heptachlorobiphenyl (BZ 183)	9075	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5'-Hexachlorobiphenyl (BZ 138)	9025	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5,5',6-Octachlorobiphenyl (BZ 203)	9133	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5,5'-Heptachlorobiphenyl (BZ 180)	9134	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5,6'-Heptachlorobiphenyl (BZ 182)	9136	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5,6,6'-Octachlorobiphenyl (BZ 204)	9135	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5,6-Heptachlorobiphenyl (BZ 181)	9137	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',5-Hexachlorobiphenyl (BZ 137)	9138	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',6'-Hexachlorobiphenyl (BZ 140)	9140	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',6,6'-Heptachlorobiphenyl (BZ 184)	9139	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4',6-Hexachlorobiphenyl (BZ 139)	9141	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,4'-Pentachlorobiphenyl (BZ 85)	9142	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5',6-Hexachlorobiphenyl (BZ 144)	9150	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5'-Pentachlorobiphenyl (BZ 87)	8975	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5,5',6-Heptachlorobiphenyl (BZ 185)	9143	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5,5'-Hexachlorobiphenyl (BZ 141)	9030	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5,6'-Hexachlorobiphenyl (BZ 143)	9152	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5,6,6'-Heptachlorobiphenyl (BZ 186)	9145	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5,6-Hexachlorobiphenyl (BZ 142)	9148	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,5-Pentachlorobiphenyl (BZ 86)	9153	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,6'-Pentachlorobiphenyl (BZ 89)	9161	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4,6,6'-Hexachlorobiphenyl (BZ 145)	9156	NELAP	PA	12/17/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,2',3,4,6-Pentachlorobiphenyl (BZ 88)	9158	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,4-Tetrachlorobiphenyl (BZ 41)	9163	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5',6-Pentachlorobiphenyl (BZ 95)	9166	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5'-Tetrachlorobiphenyl (BZ 44)	8945	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5,5',6-Hexachlorobiphenyl (BZ 151)	9035	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5,5'-Pentachlorobiphenyl (BZ 92)	9164	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5,6'-Pentachlorobiphenyl (BZ 94)	9167	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5,6,6'-Hexachlorobiphenyl (BZ 152)	9165	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5,6-Pentachlorobiphenyl (BZ 93)	9168	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,5-Tetrachlorobiphenyl (BZ 43)	9169	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,6'-Tetrachlorobiphenyl (BZ 46)	9171	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,6,6'-Pentachlorobiphenyl (BZ 96)	9170	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3,6-Tetrachlorobiphenyl (BZ 45)	9172	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',3-Trichlorobiphenyl (BZ 16)	9173	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,4',5,5'-Hexachlorobiphenyl (BZ 153)	9040	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,4',5,6'-Hexachlorobiphenyl (BZ 154)	9174	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,4',5-Pentachlorobiphenyl (BZ 99)	9175	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,4',6,6'-Hexachlorobiphenyl (BZ 155)	9176	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,4',6-Pentachlorobiphenyl (BZ 100)	9177	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,4'-Tetrachlorobiphenyl (BZ 47)	9178	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,5',6-Pentachlorobiphenyl (BZ 103)	9179	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,5'-Tetrachlorobiphenyl (BZ 49)	8950	NELAP	PA	12/17/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,2',4,5,5'-Pentachlorobiphenyl (BZ 101)	8980	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,5,6'-Pentachlorobiphenyl (BZ 102)	9180	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,5-Tetrachlorobiphenyl (BZ 48)	9181	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,6'-Tetrachlorobiphenyl (BZ 51)	9183	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,6,6'-Pentachlorobiphenyl (BZ 104)	9182	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4,6-Tetrachlorobiphenyl (BZ 50)	9184	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',4-Trichlorobiphenyl (BZ 17)	9185	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',5,5'-Tetrachlorobiphenyl (BZ 52)	8955	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',5,6'-Tetrachlorobiphenyl (BZ 53)	9186	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',5-Trichlorobiphenyl (BZ 18)	8930	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',6,6'-Tetrachlorobiphenyl (BZ 54)	9187	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2',6-Trichlorobiphenyl (BZ 19)	9188	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,2'-Dichlorobiphenyl (BZ 4)	9189	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4',5',6-Pentachlorobiphenyl (BZ 125)	9224	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4',5'-Tetrachlorobiphenyl (BZ 76)	9229	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4',5,5'-Pentachlorobiphenyl (BZ 124)	9222	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4',5-Tetrachlorobiphenyl (BZ 70)	9230	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4',6-Tetrachlorobiphenyl (BZ 71)	9237	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4'-Trichlorobiphenyl (BZ 33)	9239	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,4',5',6-Hexachlorobiphenyl (BZ 168)	9218	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,4',5'-Pentachlorobiphenyl (BZ 123)	9000	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,4',5,5'-Hexachlorobiphenyl (BZ 167)	9055	NELAP	PA	12/17/2012

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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,3',4,4',5-Pentachlorobiphenyl (BZ 118)	8995	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,4',6-Pentachlorobiphenyl (BZ 119)	9220	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,4'-Tetrachlorobiphenyl (BZ 66)	8960	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,5',6-Pentachlorobiphenyl (BZ 121)	9226	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,5'-Tetrachlorobiphenyl (BZ 68)	9231	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,5,5'-Pentachlorobiphenyl (BZ 120)	9223	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,5-Tetrachlorobiphenyl (BZ 67)	9232	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4,6-Tetrachlorobiphenyl (BZ 69)	9235	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',4-Trichlorobiphenyl (BZ 25)	9240	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',5',6-Tetrachlorobiphenyl (BZ 73)	9244	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',5'-Trichlorobiphenyl (BZ 34)	9246	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',5,5'-Tetrachlorobiphenyl (BZ 72)	9242	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',5-Trichlorobiphenyl (BZ 26)	8935	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3',6-Trichlorobiphenyl (BZ 27)	9248	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3'-Dichlorobiphenyl (BZ 6)	9249	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',5',6-Hexachlorobiphenyl (BZ 164)	9201	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',5'-Pentachlorobiphenyl (BZ 122)	9202	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',5,5',6-Heptachlorobiphenyl (BZ 193)	9195	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',5,5'-Hexachlorobiphenyl (BZ 162)	9197	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',5,6-Hexachlorobiphenyl (BZ 163)	9199	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',5-Pentachlorobiphenyl (BZ 107)	9205	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4',6-Pentachlorobiphenyl (BZ 110)	8990	NELAP	PA	12/17/2012

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
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Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,3,3',4'-Tetrachlorobiphenyl (BZ 56)	9207	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4',5',6-Heptachlorobiphenyl (BZ 191)	9192	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4',5'-Hexachlorobiphenyl (BZ 157)	9045	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4',5,5',6-Octachlorobiphenyl (BZ 205)	9190	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4',5,5'-Heptachlorobiphenyl (BZ 189)	9085	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4',5,6-Heptachlorobiphenyl (BZ 190)	9191	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4',5-Hexachlorobiphenyl (BZ 156)	9050	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4',6-Hexachlorobiphenyl (BZ 158)	9193	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,4'-Pentachlorobiphenyl (BZ 105)	8985	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,5',6-Hexachlorobiphenyl (BZ 161)	9200	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,5'-Pentachlorobiphenyl (BZ 108)	9203	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,5,5',6-Heptachlorobiphenyl (BZ 192)	9194	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,5,5'-Hexachlorobiphenyl (BZ 159)	9196	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,5,6-Hexachlorobiphenyl (BZ 160)	9198	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,5-Pentachlorobiphenyl (BZ 106)	9204	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4,6-Pentachlorobiphenyl (BZ 109)	9206	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',4-Tetrachlorobiphenyl (BZ 55)	9208	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',5',6-Pentachlorobiphenyl (BZ 113)	9212	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',5'-Tetrachlorobiphenyl (BZ 58)	9213	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',5,5',6-Hexachlorobiphenyl (BZ 165)	9209	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',5,5'-Pentachlorobiphenyl (BZ 111)	9210	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',5,6-Pentachlorobiphenyl (BZ 112)	9211	NELAP	PA	12/17/2012

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,3,3',5-Tetrachlorobiphenyl (BZ 57)	9214	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3',6-Tetrachlorobiphenyl (BZ 59)	9215	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,3'-Trichlorobiphenyl (BZ 20)	9216	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4',5,6-Pentachlorobiphenyl (BZ 117)	9227	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4',5-Tetrachlorobiphenyl (BZ 63)	9233	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4',6-Tetrachlorobiphenyl (BZ 64)	9236	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4'-Trichlorobiphenyl (BZ 22)	9241	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,4',5,6-Hexachlorobiphenyl (BZ 166)	9217	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,4',5-Pentachlorobiphenyl (BZ 114)	9005	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,4',6-Pentachlorobiphenyl (BZ 115)	9219	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,4'-Tetrachlorobiphenyl (BZ 60)	9221	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,5,6-Pentachlorobiphenyl (BZ 116)	9225	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,5-Tetrachlorobiphenyl (BZ 61)	9228	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4,6-Tetrachlorobiphenyl (BZ 62)	9234	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,4-Trichlorobiphenyl (BZ 21)	9238	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,5,6-Tetrachlorobiphenyl (BZ 65)	9243	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,5-Trichlorobiphenyl (BZ 23)	9245	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3,6-Trichlorobiphenyl (BZ 24)	9247	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,3-Dichlorobiphenyl (BZ 5)	8920	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4',5-Trichlorobiphenyl (BZ 31)	8940	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4',6-Trichlorobiphenyl (BZ 32)	9255	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4'-Dichlorobiphenyl (BZ 8)	9256	NELAP	PA	12/17/2012

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	2,4,4',5-Tetrachlorobiphenyl (BZ 74)	9250	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4,4',6-Tetrachlorobiphenyl (BZ 75)	9251	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4,4'-Trichlorobiphenyl (BZ 28)	9252	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4,5-Trichlorobiphenyl (BZ 29)	9253	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4,6-Trichlorobiphenyl (BZ 30)	9254	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,4-Dichlorobiphenyl (BZ 7)	9257	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,5-Dichlorobiphenyl (BZ 9)	9258	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2,6-Dichlorobiphenyl (BZ 10)	9259	NELAP	PA	12/17/2012
EPA 1668	C	10262109	2-Chlorobiphenyl (BZ 1)	8915	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4,4',5,5'-Hexachlorobiphenyl (BZ 169)	9060	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4,4',5-Pentachlorobiphenyl (BZ 126)	9015	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4,4'-Tetrachlorobiphenyl (BZ 77)	8965	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4,5'-Tetrachlorobiphenyl (BZ 79)	9261	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4,5,5'-Pentachlorobiphenyl (BZ 127)	9260	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4,5-Tetrachlorobiphenyl (BZ 78)	9262	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',4-Trichlorobiphenyl (BZ 35)	9263	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',5,5'-Tetrachlorobiphenyl (BZ 80)	9264	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3',5-Trichlorobiphenyl (BZ 36)	9265	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,3'-Dichlorobiphenyl (BZ 11)	8925	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,4',5-Trichlorobiphenyl (BZ 39)	9268	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,4'-Dichlorobiphenyl (BZ 13)	9269	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,4,4',5-Tetrachlorobiphenyl (BZ 81)	8970	NELAP	PA	12/17/2012

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 1668	C	10262109	3,4,4'-Trichlorobiphenyl (BZ 37)	9266	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,4,5-Trichlorobiphenyl (BZ 38)	9267	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,4-Dichlorobiphenyl (BZ 12)	9270	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3,5-Dichlorobiphenyl (BZ 14)	9271	NELAP	PA	12/17/2012
EPA 1668	C	10262109	3-Chlorobiphenyl (BZ 2)	9272	NELAP	PA	12/17/2012
EPA 1668	C	10262109	4,4'-Dichlorobiphenyl (BZ 15)	9273	NELAP	PA	12/17/2012
EPA 1668	C	10262109	4-Chlorobiphenyl (BZ 3)	9274	NELAP	PA	12/17/2012
EPA 1668	C	10262109	Decachlorobiphenyl	9105	NELAP	PA	12/17/2012
EPA 300.0	2.1	10053200	Chloride	1575	NELAP	PA	11/27/2019
EPA 300.0	2.1	10053200	Fluoride	1730	NELAP	PA	10/16/2012
EPA 300.0	2.1	10053200	Nitrate as N	1810	NELAP	PA	11/27/2019
EPA 300.0	2.1	10053200	Nitrite as N	1840	NELAP	PA	10/16/2012
EPA 300.0	2.1	10053200	Sulfate	2000	NELAP	PA	10/16/2012
EPA 3050	B	10135601	Acid digestion of solids	1400	NELAP	PA	04/04/2005
EPA 3060	A	10136604	Alkaline digestion of Cr(VI)	1402	NELAP	PA	04/04/2005
EPA 351.2	2.0	10065404	Kjeldahl nitrogen, total (TKN)	1795	NELAP	PA	08/30/2019
EPA 3510	C	10138202	Separatory funnel liquid-liquid extraction	1444	NELAP	PA	04/04/2005
EPA 3540	C	10140202	Soxhlet extraction	1452	NELAP	PA	04/04/2005
EPA 3546		10141205	Microwave extraction	1428	NELAP	PA	09/25/2009
EPA 3550	B	10141807	Ultrasonic extraction	1468	NELAP	PA	04/04/2005
EPA 3550	C	10142004	Ultrasonic extraction	1468	NELAP	PA	03/04/2015
EPA 3580	A	10143007	Waste dilution	1470	NELAP	PA	06/25/2020

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 3620	B	10145809	Florisil cleanup	1414	NELAP	PA	04/04/2005
EPA 3620	C	10146006	Florisil cleanup	1414	NELAP	PA	09/04/2018
EPA 3630	C	10146802	Silica gel cleanup	1446	NELAP	PA	04/04/2005
EPA 3640	A	10147203	Gel permeation cleanup (GPC)	1418	NELAP	PA	04/04/2005
EPA 365.1	2.0	10070005	Phosphorus, total	1910	NELAP	PA	11/19/2015
EPA 3660	B	10148400	Sulfur cleanup	1456	NELAP	PA	04/04/2005
EPA 3665	A	10148808	Sulfuric acid/permanganate clean-up	1458	NELAP	PA	04/04/2005
EPA 5030		10153001	Bulk purge-and-trap (methanol)	1417	NELAP	PA	12/04/2007
EPA 5035	A	10284807	Closed-system purge-and-trap (bisulfate option)	1390	NELAP	PA	09/04/2018
EPA 5035	A	10284807	Closed-system purge-and-trap (methanol option)	1392	NELAP	PA	09/04/2018
EPA 5035	A	10284807	Closed-system purge-and-trap (unpreserved)	1393	NELAP	PA	09/04/2018
EPA 5035		10154004	Closed-system purge-and-trap (bisulfate option)	1390	NELAP	PA	12/12/2005
EPA 5035		10154004	Closed-system purge-and-trap (methanol option)	1392	NELAP	PA	04/04/2005
EPA 5035		10154004	Closed-system purge-and-trap (unpreserved)	1393	NELAP	PA	04/04/2005
EPA 6010	C	10155905	Metals by ICP/AES	1097	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Metals by ICP/AES	1097	NELAP	PA	07/09/2018
EPA 6010	C	10155905	Aluminum	1000	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Antimony	1005	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Arsenic	1010	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Barium	1015	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Beryllium	1020	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Boron	1025	NELAP	PA	01/19/2005

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 6010	C	10155905	Cadmium	1030	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Calcium	1035	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Chromium	1040	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Cobalt	1050	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Copper	1055	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Iron	1070	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Lead	1075	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Lithium	1080	NELAP	PA	01/20/2012
EPA 6010	C	10155905	Magnesium	1085	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Manganese	1090	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Molybdenum	1100	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Nickel	1105	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Potassium	1125	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Selenium	1140	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Silica, as SiO2	1990	NELAP	PA	01/20/2012
EPA 6010	C	10155905	Silver	1150	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Sodium	1155	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Strontium	1160	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Sulfur	2017	NELAP	PA	12/19/2011
EPA 6010	C	10155905	Tellurium	1162	NELAP	PA	02/04/2016
EPA 6010	C	10155905	Thallium	1165	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Thorium	1170	NELAP	PA	11/19/2015

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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 6010	C	10155905	Tin	1175	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Titanium	1180	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Tungsten	1183	NELAP	PA	11/19/2015
EPA 6010	C	10155905	Vanadium	1185	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Zinc	1190	NELAP	PA	01/19/2005
EPA 6010	C	10155905	Zirconium	1192	NELAP	PA	07/29/2015
EPA 6010	D	10155916	Aluminum	1000	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Antimony	1005	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Arsenic	1010	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Barium	1015	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Beryllium	1020	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Boron	1025	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Cadmium	1030	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Calcium	1035	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Chromium	1040	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Cobalt	1050	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Copper	1055	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Iron	1070	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Lead	1075	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Lithium	1080	NELAP	PA	01/20/2012
EPA 6010	D	10155916	Magnesium	1085	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Manganese	1090	NELAP	PA	01/19/2005

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DEP Laboratory ID: 36-00037
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Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 6010	D	10155916	Molybdenum	1100	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Nickel	1105	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Potassium	1125	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Selenium	1140	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Silica, as SiO2	1990	NELAP	PA	01/20/2012
EPA 6010	D	10155916	Silver	1150	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Sodium	1155	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Strontium	1160	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Sulfur	2017	NELAP	PA	12/19/2011
EPA 6010	D	10155916	Tellurium	1162	NELAP	PA	02/04/2016
EPA 6010	D	10155916	Thallium	1165	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Thorium	1170	NELAP	PA	11/19/2015
EPA 6010	D	10155916	Tin	1175	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Titanium	1180	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Tungsten	1183	NELAP	PA	11/19/2015
EPA 6010	D	10155916	Vanadium	1185	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Zinc	1190	NELAP	PA	01/19/2005
EPA 6010	D	10155916	Zirconium	1192	NELAP	PA	07/29/2015
EPA 6020	B	10156420	Metals by ICP/MS	1098	NELAP	PA	07/09/2018
EPA 6020	B	10156420	Aluminum	1000	NELAP	PA	04/29/2010
EPA 6020	B	10156420	Antimony	1005	NELAP	PA	01/19/2005
EPA 6020	B	10156420	Arsenic	1010	NELAP	PA	01/19/2005

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PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 6020	B	10156420	Barium	1015	NELAP	PA	01/20/2012
EPA 6020	B	10156420	Beryllium	1020	NELAP	PA	01/19/2005
EPA 6020	B	10156420	Cadmium	1030	NELAP	PA	01/19/2005
EPA 6020	B	10156420	Calcium	1035	NELAP	PA	04/29/2010
EPA 6020	B	10156420	Chromium	1040	NELAP	PA	01/19/2005
EPA 6020	B	10156420	Cobalt	1050	NELAP	PA	04/29/2010
EPA 6020	B	10156420	Copper	1055	NELAP	PA	01/19/2005
EPA 6020	B	10156420	Iron	1070	NELAP	PA	04/29/2010
EPA 6020	B	10156420	Lead	1075	NELAP	PA	01/19/2005
EPA 6020	B	10156420	Magnesium	1085	NELAP	PA	04/29/2010
EPA 6020	B	10156420	Manganese	1090	NELAP	PA	04/29/2010
EPA 6020	B	10156420	Molybdenum	1100	NELAP	PA	07/25/2011
EPA 6020	B	10156420	Nickel	1105	NELAP	PA	04/04/2005
EPA 6020	B	10156420	Potassium	1125	NELAP	PA	04/29/2010
EPA 6020	B	10156420	Selenium	1140	NELAP	PA	04/04/2005
EPA 6020	B	10156420	Silver	1150	NELAP	PA	02/23/2010
EPA 6020	B	10156420	Sodium	1155	NELAP	PA	04/29/2010
EPA 6020	B	10156420	Strontium	1160	NELAP	PA	04/29/2010
EPA 6020	B	10156420	Thallium	1165	NELAP	PA	01/19/2005
EPA 6020	B	10156420	Tin	1175	NELAP	PA	04/29/2010
EPA 6020	B	10156420	Titanium	1180	NELAP	PA	04/29/2010
EPA 6020	B	10156420	Uranium (mass)	1184	NELAP	PA	11/19/2015

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 6020	B	10156420	Vanadium	1185	NELAP	PA	01/07/2010
EPA 6020	B	10156420	Zinc	1190	NELAP	PA	02/01/2011
EPA 680		10112002	Decachlorobiphenyl	9105	NELAP	PA	01/19/2016
EPA 680		10112002	Dichlorobiphenyls	8876	NELAP	PA	01/19/2016
EPA 680		10112002	Heptachlorobiphenyls	8877	NELAP	PA	01/19/2016
EPA 680		10112002	Hexachlorbiphenyls	8888	NELAP	PA	01/19/2016
EPA 680		10112002	Monochlorobiphenyls	8889	NELAP	PA	01/19/2016
EPA 680		10112002	Nonachlorobiphenyls	8891	NELAP	PA	01/19/2016
EPA 680		10112002	Octachlorobiphenyls	8892	NELAP	PA	01/19/2016
EPA 680		10112002	Pentachlorobiphenyls	8896	NELAP	PA	01/19/2016
EPA 680		10112002	Tetrachlorobiphenyls	8893	NELAP	PA	01/19/2016
EPA 680		10112002	Trichlorobiphenyls	8894	NELAP	PA	01/19/2016
EPA 6850		10304606	Perchlorate	1895	NELAP	PA	01/19/2011
EPA 7.3.3.2		10001204	Reactive cyanide	1923	NELAP	PA	12/12/2005
EPA 7.3.4.2		10001408	Reactive sulfide	1925	NELAP	PA	12/12/2005
EPA 7196	A	10162400	Chromium VI	1045	NELAP	PA	07/09/2018
EPA 7199		10163005	Chromium VI	1045	NELAP	PA	05/02/2006
EPA 7471	A	10166208	Mercury	1095	NELAP	PA	10/17/2007
EPA 7471	B	10166457	Mercury	1095	NELAP	PA	10/17/2007
EPA 8011		10173009	1,2-Dibromo-3-chloropropane (DBCP, Dibromochloropropane)	4570	NELAP	PA	07/05/2018
EPA 8011		10173009	1,2-Dibromoethane (EDB, Ethylene dibromide)	4585	NELAP	PA	08/03/2021

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8015	B	10173601	Nonhalogenated organics by GC/FID	9435	NELAP	PA	03/26/2012
EPA 8015	D	10305609	Nonhalogenated organics by GC/FID	9435	NELAP	PA	07/29/2015
EPA 8015	B	10173601	Diesel-range organics (DRO)	9369	NELAP	PA	04/04/2005
EPA 8015	B	10173601	Ethanol	4750	NELAP	PA	01/19/2005
EPA 8015	B	10173601	Ethylene glycol	4785	NELAP	PA	12/04/2007
EPA 8015	B	10173601	Gasoline-range organics (GRO)	9408	NELAP	PA	04/04/2005
EPA 8015	B	10173601	Isopropyl alcohol (2-Propanol)	4895	NELAP	PA	12/04/2007
EPA 8015	B	10173601	Methanol	4930	NELAP	PA	01/19/2005
EPA 8015	B	10173601	Triethylene glycol	9646	NELAP	PA	07/05/2018
EPA 8015	C	10173816	Diesel-range organics (DRO)	9369	NELAP	PA	04/04/2005
EPA 8015	C	10173816	Ethanol	4750	NELAP	PA	01/19/2005
EPA 8015	C	10173816	Ethylene glycol	4785	NELAP	PA	12/04/2007
EPA 8015	C	10173816	Gasoline-range organics (GRO)	9408	NELAP	PA	04/04/2005
EPA 8015	C	10173816	Isopropyl alcohol (2-Propanol)	4895	NELAP	PA	12/04/2007
EPA 8015	C	10173816	Methanol	4930	NELAP	PA	01/19/2005
EPA 8015	C	10173816	Triethylene glycol	9646	NELAP	PA	07/05/2018
EPA 8015	D	10305609	Diesel-range organics (DRO)	9369	NELAP	PA	04/04/2005
EPA 8015	D	10305609	Ethanol	4750	NELAP	PA	01/19/2005
EPA 8015	D	10305609	Ethylene glycol	4785	NELAP	PA	12/04/2007
EPA 8015	D	10305609	Gasoline-range organics (GRO)	9408	NELAP	PA	04/04/2005
EPA 8015	D	10305609	Isopropyl alcohol (2-Propanol)	4895	NELAP	PA	12/04/2007
EPA 8015	D	10305609	Methanol	4930	NELAP	PA	01/19/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8015	D	10305609	Triethylene glycol	9646	NELAP	PA	07/05/2018
EPA 8081	B	10178811	Organochlorine pesticides by GC/ECD	7937	NELAP	PA	01/01/2013
EPA 8081	B	10178811	2,4'-DDD	8580	NELAP	PA	11/19/2015
EPA 8081	B	10178811	2,4'-DDE	8585	NELAP	PA	11/19/2015
EPA 8081	B	10178811	2,4'-DDT	8590	NELAP	PA	11/19/2015
EPA 8081	B	10178811	4,4'-DDD	7355	NELAP	PA	01/19/2005
EPA 8081	B	10178811	4,4'-DDE	7360	NELAP	PA	01/19/2005
EPA 8081	B	10178811	4,4'-DDT	7365	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Aldrin (HHDN)	7025	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Chlordane (tech.)	7250	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Dieldrin	7470	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Endosulfan I	7510	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Endosulfan II	7515	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Endosulfan sulfate	7520	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Endrin	7540	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Endrin aldehyde	7530	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Endrin ketone	7535	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Heptachlor	7685	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Heptachlor epoxide	7690	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Kepone	7740	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Methoxychlor	7810	NELAP	PA	01/19/2005
EPA 8081	B	10178811	Mirex	7870	NELAP	PA	01/19/2005

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Lancaster, PA 17601-5994
(717) 656-2300

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EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8081	B	10178811	Toxaphene (Chlorinated camphene)	8250	NELAP	PA	01/19/2005
EPA 8081	B	10178811	alpha-BHC (alpha-Hexachlorocyclohexane)	7110	NELAP	PA	01/19/2005
EPA 8081	B	10178811	alpha-Chlordane	7240	NELAP	PA	04/04/2005
EPA 8081	B	10178811	beta-BHC (beta-Hexachlorocyclohexane)	7115	NELAP	PA	01/19/2005
EPA 8081	B	10178811	delta-BHC (delta-Hexachlorocyclohexane)	7105	NELAP	PA	01/19/2005
EPA 8081	B	10178811	gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	7120	NELAP	PA	01/19/2005
EPA 8081	B	10178811	gamma-Chlordane	7245	NELAP	PA	04/04/2005
EPA 8082	A	10179358	Aroclor-1016 (PCB-1016)	8880	NELAP	PA	01/02/2007
EPA 8082	A	10179358	Aroclor-1016 (in oil)	8880	NELAP	PA	07/09/2018
EPA 8082	A	10179358	Aroclor-1221 (PCB-1221)	8885	NELAP	PA	01/02/2007
EPA 8082	A	10179358	Aroclor-1221 (in oil)	8885	NELAP	PA	07/09/2018
EPA 8082	A	10179358	Aroclor-1232 (PCB-1232)	8890	NELAP	PA	01/02/2007
EPA 8082	A	10179358	Aroclor-1232 (in oil)	8890	NELAP	PA	07/09/2018
EPA 8082	A	10179358	Aroclor-1242 (PCB-1242)	8895	NELAP	PA	01/02/2007
EPA 8082	A	10179358	Aroclor-1242 (in oil)	8895	NELAP	PA	07/09/2018
EPA 8082	A	10179358	Aroclor-1248 (PCB-1248)	8900	NELAP	PA	01/02/2007
EPA 8082	A	10179358	Aroclor-1248 (in oil)	8900	NELAP	PA	07/09/2018
EPA 8082	A	10179358	Aroclor-1254 (PCB-1254)	8905	NELAP	PA	01/02/2007
EPA 8082	A	10179358	Aroclor-1254 (in oil)	8905	NELAP	PA	07/09/2018
EPA 8082	A	10179358	Aroclor-1260 (PCB-1260)	8910	NELAP	PA	01/02/2007
EPA 8082	A	10179358	Aroclor-1260 (in oil)	8910	NELAP	PA	07/09/2018
EPA 8082	A	10179358	Aroclor-1262 (PCB-1262)	8912	NELAP	PA	07/23/2008

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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8082	A	10179358	Aroclor-1268 (PCB-1268)	8913	NELAP	PA	07/23/2008
EPA 8151	A	10183207	Chlorinated herbicides by GC/ECD	8542	NELAP	PA	03/26/2012
EPA 8151	A	10183207	2,4,5-T	8655	NELAP	PA	01/19/2005
EPA 8151	A	10183207	2,4,5-TP (Silvex)	8650	NELAP	PA	01/19/2005
EPA 8151	A	10183207	2,4-D	8545	NELAP	PA	01/19/2005
EPA 8151	A	10183207	2,4-DB (Butoxon)	8560	NELAP	PA	04/04/2005
EPA 8151	A	10183207	Dalapon (2,2-Dichloropropionic acid)	8555	NELAP	PA	01/19/2005
EPA 8151	A	10183207	Dicamba	8595	NELAP	PA	01/19/2005
EPA 8151	A	10183207	Dichloroprop (Dichlorprop)	8605	NELAP	PA	01/19/2005
EPA 8151	A	10183207	Dinoseb (2-sec-Butyl-4,6-dinitrophenol, DNBP)	8620	NELAP	PA	01/19/2005
EPA 8151	A	10183207	MCPA	7775	NELAP	PA	01/19/2005
EPA 8151	A	10183207	MCPP (Mecoprop)	7780	NELAP	PA	05/02/2006
EPA 8151	A	10183207	Pentachlorophenol (PCP)	6605	NELAP	PA	01/19/2005
EPA 8151	A	10183207	Picloram (4-Amino-3,5,6-trichloro-2-pyridinecarboxylic acid)	8645	NELAP	PA	01/19/2005
EPA 8260	B	10184802	VOCs by GC/MS	5242	NELAP	PA	03/26/2012
EPA 8260	C	10307003	VOCs by GC/MS	5242	NELAP	PA	03/26/2012
EPA 8260	D	10307127	VOCs by GC/MS	5242	NELAP	PA	11/04/2019
EPA 8260	B	10184802	1,1,1,2-Tetrachloroethane	5105	NELAP	PA	06/25/2020
EPA 8260	B	10184802	1,1,1-Trichloroethane	5160	NELAP	PA	01/19/2005
EPA 8260	B	10184802	1,1,2,2-Tetrachloroethane	5110	NELAP	PA	01/19/2005
EPA 8260	B	10184802	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5185	NELAP	PA	05/02/2006

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	B	10184802	1,1,2-Trichloroethane	5165	NELAP	PA	06/25/2020
EPA 8260	B	10184802	1,1-Dichloroethane	4630	NELAP	PA	01/19/2005
EPA 8260	B	10184802	1,1-Dichloroethene (1,1-Dichloroethylene)	4640	NELAP	PA	01/19/2005
EPA 8260	B	10184802	1,1-Dichloropropene	4670	NELAP	PA	01/19/2005
EPA 8260	B	10184802	1,2,3-Trichlorobenzene	5150	NELAP	PA	01/19/2005
EPA 8260	B	10184802	1,2,3-Trichloropropane (1,2,3-TCP)	5180	NELAP	PA	06/25/2020
EPA 8260	B	10184802	1,2,3-Trimethylbenzene	5182	NELAP	PA	09/04/2018
EPA 8260	B	10184802	1,2,4-Trichlorobenzene	5155	NELAP	PA	06/25/2020
EPA 8260	B	10184802	1,2,4-Trimethylbenzene	5210	NELAP	PA	01/19/2005
EPA 8260	B	10184802	1,2-Dibromo-3-chloropropane (DBCP, Dibromochloropropane)	4570	NELAP	PA	06/25/2020
EPA 8260	B	10184802	1,2-Dibromoethane (EDB, Ethylene dibromide)	4585	NELAP	PA	06/25/2020
EPA 8260	B	10184802	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	06/25/2020
EPA 8260	B	10184802	1,2-Dichloroethane	4635	NELAP	PA	06/25/2020
EPA 8260	B	10184802	1,2-Dichloropropane	4655	NELAP	PA	01/19/2005
EPA 8260	B	10184802	1,3,5-Trimethylbenzene	5215	NELAP	PA	01/19/2005
EPA 8260	B	10184802	1,3-Dichlorobenzene (m-Dichlorobenzene)	4615	NELAP	PA	01/19/2005
EPA 8260	B	10184802	1,3-Dichloropropane	4660	NELAP	PA	01/19/2005
EPA 8260	B	10184802	1,4-Dichlorobenzene (p-Dichlorobenzene)	4620	NELAP	PA	06/25/2020
EPA 8260	B	10184802	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	01/19/2005
EPA 8260	B	10184802	2,2-Dichloropropane	4665	NELAP	PA	01/19/2005
EPA 8260	B	10184802	2-Butanone (Methyl ethyl ketone, MEK)	4410	NELAP	PA	01/19/2005

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	B	10184802	2-Chloroethyl vinyl ether	4500	NELAP	PA	01/19/2005
EPA 8260	B	10184802	2-Chlorotoluene	4535	NELAP	PA	05/02/2006
EPA 8260	B	10184802	2-Hexanone	4860	NELAP	PA	06/25/2020
EPA 8260	B	10184802	2-Nitropropane	5020	NELAP	PA	12/17/2012
EPA 8260	B	10184802	3,3'-Dimethyl-1-butanol	6103	NELAP	PA	04/17/2009
EPA 8260	B	10184802	4-Chloro-2-nitrophenol	5712	NELAP	PA	05/02/2006
EPA 8260	B	10184802	4-Chlorotoluene	4540	NELAP	PA	01/19/2005
EPA 8260	B	10184802	4-Methyl-2-pentanone (MIBK)	4995	NELAP	PA	06/25/2020
EPA 8260	B	10184802	Acetone	4315	NELAP	PA	01/19/2005
EPA 8260	B	10184802	Acetonitrile	4320	NELAP	PA	01/04/2006
EPA 8260	B	10184802	Acrolein (Propenal)	4325	NELAP	PA	01/19/2005
EPA 8260	B	10184802	Acrylonitrile	4340	NELAP	PA	01/19/2005
EPA 8260	B	10184802	Allyl chloride (3-Chloropropene)	4355	NELAP	PA	01/19/2005
EPA 8260	B	10184802	Benzene	4375	NELAP	PA	01/19/2005
EPA 8260	B	10184802	Benzyl chloride	5635	NELAP	PA	01/04/2006
EPA 8260	B	10184802	Bromobenzene	4385	NELAP	PA	01/19/2005
EPA 8260	B	10184802	Bromochloromethane	4390	NELAP	PA	01/19/2005
EPA 8260	B	10184802	Bromodichloromethane	4395	NELAP	PA	01/19/2005
EPA 8260	B	10184802	Bromoform	4400	NELAP	PA	06/25/2020
EPA 8260	B	10184802	Carbon disulfide	4450	NELAP	PA	01/19/2005
EPA 8260	B	10184802	Carbon tetrachloride	4455	NELAP	PA	01/19/2005
EPA 8260	B	10184802	Chlorobenzene	4475	NELAP	PA	06/25/2020

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DEP Laboratory ID: 36-00037
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PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	B	10184802	Chloroethane	4485	NELAP	PA	01/19/2005
EPA 8260	B	10184802	Chloroform	4505	NELAP	PA	01/19/2005
EPA 8260	B	10184802	Chloroprene (2-Chloro-1,3-butadiene)	4525	NELAP	PA	04/17/2009
EPA 8260	B	10184802	Crotonaldehyde	4545	NELAP	PA	10/30/2014
EPA 8260	B	10184802	Cyclohexane	4555	NELAP	PA	06/29/2010
EPA 8260	B	10184802	Cyclohexanone	4560	NELAP	PA	07/03/2007
EPA 8260	B	10184802	Dibromochloromethane	4575	NELAP	PA	06/25/2020
EPA 8260	B	10184802	Dibromomethane	4595	NELAP	PA	01/19/2005
EPA 8260	B	10184802	Dichlorodifluoromethane (Freon 12)	4625	NELAP	PA	01/19/2005
EPA 8260	B	10184802	Diisopropyl ether (DIPE)	9375	NELAP	PA	07/03/2007
EPA 8260	B	10184802	Epichlorohydrin (1-Chloro-2,3-epoxypropane)	4745	NELAP	PA	01/04/2006
EPA 8260	B	10184802	Ethanol	4750	NELAP	PA	01/04/2006
EPA 8260	B	10184802	Ethyl acetate	4755	NELAP	PA	01/04/2006
EPA 8260	B	10184802	Ethyl methacrylate	4810	NELAP	PA	01/04/2006
EPA 8260	B	10184802	Ethyl tert-butyl ether (ETBE)	4770	NELAP	PA	07/03/2007
EPA 8260	B	10184802	Ethylbenzene	4765	NELAP	PA	06/25/2020
EPA 8260	B	10184802	Ethylene oxide	4795	NELAP	PA	10/30/2014
EPA 8260	B	10184802	Gasoline-range organics (GRO)	9408	NELAP	PA	06/08/2006
EPA 8260	B	10184802	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	4835	NELAP	PA	01/19/2005
EPA 8260	B	10184802	Isobutyl alcohol (2-Methyl-1-propanol)	4875	NELAP	PA	07/03/2007
EPA 8260	B	10184802	Isopropyl alcohol (2-Propanol)	4895	NELAP	PA	01/19/2005
EPA 8260	B	10184802	Isopropylbenzene (Cumene)	4900	NELAP	PA	08/07/2005

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	B	10184802	Methacrylonitrile	4925	NELAP	PA	01/24/2007
EPA 8260	B	10184802	Methyl acetate	4940	NELAP	PA	06/29/2010
EPA 8260	B	10184802	Methyl bromide (Bromomethane)	4950	NELAP	PA	01/19/2005
EPA 8260	B	10184802	Methyl chloride (Chloromethane)	4960	NELAP	PA	01/19/2005
EPA 8260	B	10184802	Methyl iodide (Iodomethane)	4870	NELAP	PA	05/02/2006
EPA 8260	B	10184802	Methyl tert-butyl ether (MTBE)	5000	NELAP	PA	01/19/2005
EPA 8260	B	10184802	Methylcyclohexane	4965	NELAP	PA	01/21/2009
EPA 8260	B	10184802	Methylene chloride (Dichloromethane)	4975	NELAP	PA	01/19/2005
EPA 8260	B	10184802	Methylmethacrylate	4990	NELAP	PA	05/02/2006
EPA 8260	B	10184802	Naphthalene	5005	NELAP	PA	06/25/2020
EPA 8260	B	10184802	Pentachloroethane	5035	NELAP	PA	01/24/2007
EPA 8260	B	10184802	Propionitrile (Ethyl cyanide)	5080	NELAP	PA	01/24/2007
EPA 8260	B	10184802	Styrene	5100	NELAP	PA	01/19/2005
EPA 8260	B	10184802	Tetrachloroethene (PCE, Perchloroethylene)	5115	NELAP	PA	01/19/2005
EPA 8260	B	10184802	Tetrahydrofuran (THF)	5120	NELAP	PA	06/07/2012
EPA 8260	B	10184802	Toluene	5140	NELAP	PA	06/25/2020
EPA 8260	B	10184802	Trichloroethene (TCE, Trichloroethylene)	5170	NELAP	PA	01/19/2005
EPA 8260	B	10184802	Trichlorofluoromethane (Freon 11)	5175	NELAP	PA	01/19/2005
EPA 8260	B	10184802	Vinyl acetate	5225	NELAP	PA	01/19/2005
EPA 8260	B	10184802	Vinyl chloride (Chloroethene)	5235	NELAP	PA	01/19/2005
EPA 8260	B	10184802	Xylenes, total	5260	NELAP	PA	01/19/2005
EPA 8260	B	10184802	cis-1,2-Dichloroethene	4645	NELAP	PA	01/19/2005

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	B	10184802	cis-1,3-Dichloropropene	4680	NELAP	PA	06/25/2020
EPA 8260	B	10184802	m+p-Xylene	5240	NELAP	PA	01/24/2007
EPA 8260	B	10184802	n-Butyl acetate	4403	NELAP	PA	01/19/2016
EPA 8260	B	10184802	n-Butyl alcohol (n-Butanol, 1-Butanol)	4425	NELAP	PA	01/19/2005
EPA 8260	B	10184802	n-Butylbenzene	4435	NELAP	PA	01/19/2005
EPA 8260	B	10184802	n-Hexane	4855	NELAP	PA	09/04/2018
EPA 8260	B	10184802	n-Propylbenzene	5090	NELAP	PA	01/04/2006
EPA 8260	B	10184802	o-Xylene	5250	NELAP	PA	01/24/2007
EPA 8260	B	10184802	p-Isopropyltoluene (4-Isopropyltoluene)	4910	NELAP	PA	01/24/2007
EPA 8260	B	10184802	sec-Butylbenzene	4440	NELAP	PA	01/19/2005
EPA 8260	B	10184802	tert-Amyl alcohol (2-Methyl-2-butanol)	4368	NELAP	PA	04/17/2009
EPA 8260	B	10184802	tert-Amyl methyl ether (TAME)	4370	NELAP	PA	07/03/2007
EPA 8260	B	10184802	tert-Butyl alcohol (2-Methyl-2-propanol)	4420	NELAP	PA	01/19/2005
EPA 8260	B	10184802	tert-Butyl ethyl ether	4770	NELAP	PA	05/25/2007
EPA 8260	B	10184802	tert-Butyl formate	9557	NELAP	PA	04/17/2009
EPA 8260	B	10184802	tert-Butylbenzene	4445	NELAP	PA	01/19/2005
EPA 8260	B	10184802	trans-1,2-Dichloroethene	4700	NELAP	PA	01/19/2005
EPA 8260	B	10184802	trans-1,3-Dichloropropene	4685	NELAP	PA	01/19/2005
EPA 8260	B	10184802	trans-1,4-Dichloro-2-butene	4605	NELAP	PA	07/03/2007
EPA 8260	C	10307003	1,1,1,2-Tetrachloroethane	5105	NELAP	PA	06/25/2020
EPA 8260	C	10307003	1,1,1-Trichloroethane	5160	NELAP	PA	01/19/2005
EPA 8260	C	10307003	1,1,2,2-Tetrachloroethane	5110	NELAP	PA	01/19/2005

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	C	10307003	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5185	NELAP	PA	05/02/2006
EPA 8260	C	10307003	1,1,2-Trichloroethane	5165	NELAP	PA	06/25/2020
EPA 8260	C	10307003	1,1-Dichloroethane	4630	NELAP	PA	01/19/2005
EPA 8260	C	10307003	1,1-Dichloroethene (1,1-Dichloroethylene)	4640	NELAP	PA	01/19/2005
EPA 8260	C	10307003	1,1-Dichloropropene	4670	NELAP	PA	01/19/2005
EPA 8260	C	10307003	1,2,3-Trichlorobenzene	5150	NELAP	PA	01/19/2005
EPA 8260	C	10307003	1,2,3-Trichloropropane (1,2,3-TCP)	5180	NELAP	PA	06/25/2020
EPA 8260	C	10307003	1,2,3-Trimethylbenzene	5182	NELAP	PA	09/04/2018
EPA 8260	C	10307003	1,2,4-Trichlorobenzene	5155	NELAP	PA	06/25/2020
EPA 8260	C	10307003	1,2,4-Trimethylbenzene	5210	NELAP	PA	01/19/2005
EPA 8260	C	10307003	1,2-Dibromo-3-chloropropane (DBCP, Dibromochloropropane)	4570	NELAP	PA	06/25/2020
EPA 8260	C	10307003	1,2-Dibromoethane (EDB, Ethylene dibromide)	4585	NELAP	PA	06/25/2020
EPA 8260	C	10307003	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	06/25/2020
EPA 8260	C	10307003	1,2-Dichloroethane	4635	NELAP	PA	06/25/2020
EPA 8260	C	10307003	1,2-Dichloropropane	4655	NELAP	PA	01/19/2005
EPA 8260	C	10307003	1,3,5-Trimethylbenzene	5215	NELAP	PA	01/19/2005
EPA 8260	C	10307003	1,3-Dichlorobenzene (m-Dichlorobenzene)	4615	NELAP	PA	01/19/2005
EPA 8260	C	10307003	1,3-Dichloropropane	4660	NELAP	PA	01/19/2005
EPA 8260	C	10307003	1,4-Dichlorobenzene (p-Dichlorobenzene)	4620	NELAP	PA	06/25/2020
EPA 8260	C	10307003	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	01/19/2005
EPA 8260	C	10307003	2,2-Dichloropropane	4665	NELAP	PA	01/19/2005

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	C	10307003	2-Butanone (Methyl ethyl ketone, MEK)	4410	NELAP	PA	01/19/2005
EPA 8260	C	10307003	2-Chloroethyl vinyl ether	4500	NELAP	PA	01/19/2005
EPA 8260	C	10307003	2-Chlorotoluene	4535	NELAP	PA	05/02/2006
EPA 8260	C	10307003	2-Hexanone	4860	NELAP	PA	06/25/2020
EPA 8260	C	10307003	2-Nitropropane	5020	NELAP	PA	12/17/2012
EPA 8260	C	10307003	3,3'-Dimethyl-1-butanol	6103	NELAP	PA	04/17/2009
EPA 8260	C	10307003	4-Chloro-2-nitrophenol	5712	NELAP	PA	05/02/2006
EPA 8260	C	10307003	4-Chlorotoluene	4540	NELAP	PA	01/19/2005
EPA 8260	C	10307003	4-Methyl-2-pentanone (MIBK)	4995	NELAP	PA	06/25/2020
EPA 8260	C	10307003	Acetone	4315	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Acetonitrile	4320	NELAP	PA	01/04/2006
EPA 8260	C	10307003	Acrolein (Propenal)	4325	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Acrylonitrile	4340	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Allyl chloride (3-Chloropropene)	4355	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Benzene	4375	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Benzyl chloride	5635	NELAP	PA	01/04/2006
EPA 8260	C	10307003	Bromobenzene	4385	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Bromochloromethane	4390	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Bromodichloromethane	4395	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Bromoform	4400	NELAP	PA	06/25/2020
EPA 8260	C	10307003	Carbon disulfide	4450	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Carbon tetrachloride	4455	NELAP	PA	01/19/2005

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	C	10307003	Chlorobenzene	4475	NELAP	PA	06/25/2020
EPA 8260	C	10307003	Chloroethane	4485	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Chloroform	4505	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Chloroprene (2-Chloro-1,3-butadiene)	4525	NELAP	PA	04/17/2009
EPA 8260	C	10307003	Crotonaldehyde	4545	NELAP	PA	10/30/2014
EPA 8260	C	10307003	Cyclohexane	4555	NELAP	PA	06/29/2010
EPA 8260	C	10307003	Cyclohexanone	4560	NELAP	PA	07/03/2007
EPA 8260	C	10307003	Dibromochloromethane	4575	NELAP	PA	06/25/2020
EPA 8260	C	10307003	Dibromomethane	4595	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Dichlorodifluoromethane (Freon 12)	4625	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Diisopropyl ether (DIPE)	9375	NELAP	PA	07/03/2007
EPA 8260	C	10307003	Epichlorohydrin (1-Chloro-2,3-epoxypropane)	4745	NELAP	PA	01/04/2006
EPA 8260	C	10307003	Ethanol	4750	NELAP	PA	01/04/2006
EPA 8260	C	10307003	Ethyl acetate	4755	NELAP	PA	01/04/2006
EPA 8260	C	10307003	Ethyl methacrylate	4810	NELAP	PA	01/04/2006
EPA 8260	C	10307003	Ethyl tert-butyl ether (ETBE)	4770	NELAP	PA	07/03/2007
EPA 8260	C	10307003	Ethylbenzene	4765	NELAP	PA	06/25/2020
EPA 8260	C	10307003	Ethylene oxide	4795	NELAP	PA	10/30/2014
EPA 8260	C	10307003	Gasoline-range organics (GRO)	9408	NELAP	PA	06/08/2006
EPA 8260	C	10307003	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	4835	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Isobutyl alcohol (2-Methyl-1-propanol)	4875	NELAP	PA	07/03/2007
EPA 8260	C	10307003	Isopropyl alcohol (2-Propanol)	4895	NELAP	PA	01/19/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	C	10307003	Isopropylbenzene (Cumene)	4900	NELAP	PA	08/07/2005
EPA 8260	C	10307003	Methacrylonitrile	4925	NELAP	PA	01/24/2007
EPA 8260	C	10307003	Methyl acetate	4940	NELAP	PA	06/29/2010
EPA 8260	C	10307003	Methyl bromide (Bromomethane)	4950	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Methyl chloride (Chloromethane)	4960	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Methyl iodide (Iodomethane)	4870	NELAP	PA	05/02/2006
EPA 8260	C	10307003	Methyl tert-butyl ether (MTBE)	5000	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Methylcyclohexane	4965	NELAP	PA	01/21/2009
EPA 8260	C	10307003	Methylene chloride (Dichloromethane)	4975	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Methylmethacrylate	4990	NELAP	PA	05/02/2006
EPA 8260	C	10307003	Naphthalene	5005	NELAP	PA	06/25/2020
EPA 8260	C	10307003	Pentachloroethane	5035	NELAP	PA	01/24/2007
EPA 8260	C	10307003	Propionitrile (Ethyl cyanide)	5080	NELAP	PA	01/24/2007
EPA 8260	C	10307003	Styrene	5100	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Tetrachloroethene (PCE, Perchloroethylene)	5115	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Tetrahydrofuran (THF)	5120	NELAP	PA	06/07/2012
EPA 8260	C	10307003	Toluene	5140	NELAP	PA	06/25/2020
EPA 8260	C	10307003	Trichloroethene (TCE, Trichloroethylene)	5170	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Trichlorofluoromethane (Freon 11)	5175	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Vinyl acetate	5225	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Vinyl chloride (Chloroethene)	5235	NELAP	PA	01/19/2005
EPA 8260	C	10307003	Xylenes, total	5260	NELAP	PA	01/19/2005

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Laboratory Scope of Accreditation

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	C	10307003	cis-1,2-Dichloroethene	4645	NELAP	PA	01/19/2005
EPA 8260	C	10307003	cis-1,3-Dichloropropene	4680	NELAP	PA	06/25/2020
EPA 8260	C	10307003	m+p-Xylene	5240	NELAP	PA	01/24/2007
EPA 8260	C	10307003	n-Butyl acetate	4403	NELAP	PA	01/19/2016
EPA 8260	C	10307003	n-Butyl alcohol (n-Butanol, 1-Butanol)	4425	NELAP	PA	01/19/2005
EPA 8260	C	10307003	n-Butylbenzene	4435	NELAP	PA	01/19/2005
EPA 8260	C	10307003	n-Hexane	4855	NELAP	PA	09/04/2018
EPA 8260	C	10307003	n-Propylbenzene	5090	NELAP	PA	01/04/2006
EPA 8260	C	10307003	o-Xylene	5250	NELAP	PA	01/24/2007
EPA 8260	C	10307003	p-Isopropyltoluene (4-Isopropyltoluene)	4910	NELAP	PA	01/24/2007
EPA 8260	C	10307003	sec-Butylbenzene	4440	NELAP	PA	01/19/2005
EPA 8260	C	10307003	tert-Amyl alcohol (2-Methyl-2-butanol)	4368	NELAP	PA	04/17/2009
EPA 8260	C	10307003	tert-Amyl methyl ether (TAME)	4370	NELAP	PA	07/03/2007
EPA 8260	C	10307003	tert-Butyl alcohol (2-Methyl-2-propanol)	4420	NELAP	PA	01/19/2005
EPA 8260	C	10307003	tert-Butyl ethyl ether	4770	NELAP	PA	05/25/2007
EPA 8260	C	10307003	tert-Butyl formate	9557	NELAP	PA	04/17/2009
EPA 8260	C	10307003	tert-Butylbenzene	4445	NELAP	PA	01/19/2005
EPA 8260	C	10307003	trans-1,2-Dichloroethene	4700	NELAP	PA	01/19/2005
EPA 8260	C	10307003	trans-1,3-Dichloropropene	4685	NELAP	PA	01/19/2005
EPA 8260	C	10307003	trans-1,4-Dichloro-2-butene	4605	NELAP	PA	07/03/2007
EPA 8260	D	10307127	1,1,1,2-Tetrachloroethane	5105	NELAP	PA	06/25/2020
EPA 8260	D	10307127	1,1,1-Trichloroethane	5160	NELAP	PA	01/19/2005

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	D	10307127	1,1,2,2-Tetrachloroethane	5110	NELAP	PA	01/19/2005
EPA 8260	D	10307127	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5185	NELAP	PA	05/02/2006
EPA 8260	D	10307127	1,1,2-Trichloroethane	5165	NELAP	PA	06/25/2020
EPA 8260	D	10307127	1,1-Dichloroethane	4630	NELAP	PA	01/19/2005
EPA 8260	D	10307127	1,1-Dichloroethene (1,1-Dichloroethylene)	4640	NELAP	PA	01/19/2005
EPA 8260	D	10307127	1,1-Dichloropropene	4670	NELAP	PA	01/19/2005
EPA 8260	D	10307127	1,2,3-Trichlorobenzene	5150	NELAP	PA	01/19/2005
EPA 8260	D	10307127	1,2,3-Trichloropropane (1,2,3-TCP)	5180	NELAP	PA	06/25/2020
EPA 8260	D	10307127	1,2,3-Trimethylbenzene	5182	NELAP	PA	09/04/2018
EPA 8260	D	10307127	1,2,4-Trichlorobenzene	5155	NELAP	PA	06/25/2020
EPA 8260	D	10307127	1,2,4-Trimethylbenzene	5210	NELAP	PA	01/19/2005
EPA 8260	D	10307127	1,2-Dibromo-3-chloropropane (DBCP, Dibromochloropropane)	4570	NELAP	PA	06/25/2020
EPA 8260	D	10307127	1,2-Dibromoethane (EDB, Ethylene dibromide)	4585	NELAP	PA	06/25/2020
EPA 8260	D	10307127	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	06/25/2020
EPA 8260	D	10307127	1,2-Dichloroethane	4635	NELAP	PA	06/25/2020
EPA 8260	D	10307127	1,2-Dichloropropane	4655	NELAP	PA	01/19/2005
EPA 8260	D	10307127	1,3,5-Trimethylbenzene	5215	NELAP	PA	01/19/2005
EPA 8260	D	10307127	1,3-Dichlorobenzene (m-Dichlorobenzene)	4615	NELAP	PA	01/19/2005
EPA 8260	D	10307127	1,3-Dichloropropane	4660	NELAP	PA	01/19/2005
EPA 8260	D	10307127	1,4-Dichlorobenzene (p-Dichlorobenzene)	4620	NELAP	PA	06/25/2020
EPA 8260	D	10307127	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	01/19/2005

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EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	D	10307127	2,2-Dichloropropane	4665	NELAP	PA	01/19/2005
EPA 8260	D	10307127	2-Butanone (Methyl ethyl ketone, MEK)	4410	NELAP	PA	01/19/2005
EPA 8260	D	10307127	2-Chloroethyl vinyl ether	4500	NELAP	PA	05/01/2020
EPA 8260	D	10307127	2-Chlorotoluene	4535	NELAP	PA	05/02/2006
EPA 8260	D	10307127	2-Hexanone	4860	NELAP	PA	06/25/2020
EPA 8260	D	10307127	2-Nitropropane	5020	NELAP	PA	12/17/2012
EPA 8260	D	10307127	4-Chlorotoluene	4540	NELAP	PA	01/19/2005
EPA 8260	D	10307127	4-Methyl-2-pentanone (MIBK)	4995	NELAP	PA	06/25/2020
EPA 8260	D	10307127	Acetone	4315	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Acetonitrile	4320	NELAP	PA	01/04/2006
EPA 8260	D	10307127	Acrolein (Propenal)	4325	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Acrylonitrile	4340	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Allyl chloride (3-Chloropropene)	4355	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Benzene	4375	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Benzyl chloride	5635	NELAP	PA	01/04/2006
EPA 8260	D	10307127	Bromobenzene	4385	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Bromochloromethane	4390	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Bromodichloromethane	4395	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Bromoform	4400	NELAP	PA	06/25/2020
EPA 8260	D	10307127	Carbon disulfide	4450	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Carbon tetrachloride	4455	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Chlorobenzene	4475	NELAP	PA	06/25/2020

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	D	10307127	Chloroethane	4485	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Chloroform	4505	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Chloroprene (2-Chloro-1,3-butadiene)	4525	NELAP	PA	04/17/2009
EPA 8260	D	10307127	Cyclohexane	4555	NELAP	PA	06/29/2010
EPA 8260	D	10307127	Cyclohexanone	4560	NELAP	PA	07/03/2007
EPA 8260	D	10307127	Dibromochloromethane	4575	NELAP	PA	06/25/2020
EPA 8260	D	10307127	Dibromomethane	4595	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Dichlorodifluoromethane (Freon 12)	4625	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Diisopropyl ether (DIPE)	9375	NELAP	PA	07/03/2007
EPA 8260	D	10307127	Ethanol	4750	NELAP	PA	01/04/2006
EPA 8260	D	10307127	Ethyl acetate	4755	NELAP	PA	01/04/2006
EPA 8260	D	10307127	Ethyl methacrylate	4810	NELAP	PA	01/04/2006
EPA 8260	D	10307127	Ethyl tert-butyl ether (ETBE)	4770	NELAP	PA	07/03/2007
EPA 8260	D	10307127	Ethylbenzene	4765	NELAP	PA	06/25/2020
EPA 8260	D	10307127	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	4835	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Isobutyl alcohol (2-Methyl-1-propanol)	4875	NELAP	PA	07/03/2007
EPA 8260	D	10307127	Isopropyl alcohol (2-Propanol)	4895	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Isopropylbenzene (Cumene)	4900	NELAP	PA	08/07/2005
EPA 8260	D	10307127	Methacrylonitrile	4925	NELAP	PA	01/24/2007
EPA 8260	D	10307127	Methyl acetate	4940	NELAP	PA	06/29/2010
EPA 8260	D	10307127	Methyl bromide (Bromomethane)	4950	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Methyl chloride (Chloromethane)	4960	NELAP	PA	01/19/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	D	10307127	Methyl iodide (Iodomethane)	4870	NELAP	PA	05/02/2006
EPA 8260	D	10307127	Methyl tert-butyl ether (MTBE)	5000	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Methylcyclohexane	4965	NELAP	PA	01/21/2009
EPA 8260	D	10307127	Methylene chloride (Dichloromethane)	4975	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Methylmethacrylate	4990	NELAP	PA	05/02/2006
EPA 8260	D	10307127	Naphthalene	5005	NELAP	PA	06/25/2020
EPA 8260	D	10307127	Pentachloroethane	5035	NELAP	PA	01/24/2007
EPA 8260	D	10307127	Propionitrile (Ethyl cyanide)	5080	NELAP	PA	01/24/2007
EPA 8260	D	10307127	Styrene	5100	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Tetrachloroethene (PCE, Perchloroethylene)	5115	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Tetrahydrofuran (THF)	5120	NELAP	PA	06/07/2012
EPA 8260	D	10307127	Toluene	5140	NELAP	PA	06/25/2020
EPA 8260	D	10307127	Trichloroethene (TCE, Trichloroethylene)	5170	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Trichlorofluoromethane (Freon 11)	5175	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Vinyl acetate	5225	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Vinyl chloride (Chloroethene)	5235	NELAP	PA	01/19/2005
EPA 8260	D	10307127	Xylenes, total	5260	NELAP	PA	01/19/2005
EPA 8260	D	10307127	cis-1,2-Dichloroethene	4645	NELAP	PA	01/19/2005
EPA 8260	D	10307127	cis-1,3-Dichloropropene	4680	NELAP	PA	06/25/2020
EPA 8260	D	10307127	m+p-Xylene	5240	NELAP	PA	01/24/2007
EPA 8260	D	10307127	n-Butyl acetate	4403	NELAP	PA	01/19/2016
EPA 8260	D	10307127	n-Butyl alcohol (n-Butanol, 1-Butanol)	4425	NELAP	PA	01/19/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8260	D	10307127	n-Butylbenzene	4435	NELAP	PA	01/19/2005
EPA 8260	D	10307127	n-Hexane	4855	NELAP	PA	09/04/2018
EPA 8260	D	10307127	n-Propylbenzene	5090	NELAP	PA	01/04/2006
EPA 8260	D	10307127	o-Xylene	5250	NELAP	PA	01/24/2007
EPA 8260	D	10307127	p-Isopropyltoluene (4-Isopropyltoluene)	4910	NELAP	PA	01/24/2007
EPA 8260	D	10307127	sec-Butylbenzene	4440	NELAP	PA	01/19/2005
EPA 8260	D	10307127	tert-Amyl methyl ether (TAME)	4370	NELAP	PA	07/03/2007
EPA 8260	D	10307127	tert-Butyl alcohol (2-Methyl-2-propanol)	4420	NELAP	PA	01/19/2005
EPA 8260	D	10307127	tert-Butylbenzene	4445	NELAP	PA	01/19/2005
EPA 8260	D	10307127	trans-1,2-Dichloroethene	4700	NELAP	PA	01/19/2005
EPA 8260	D	10307127	trans-1,3-Dichloropropene	4685	NELAP	PA	01/19/2005
EPA 8260	D	10307127	trans-1,4-Dichloro-2-butene	4605	NELAP	PA	07/03/2007
EPA 8260 SIM	B	10184904	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	04/17/2009
EPA 8260 SIM	C	10307105	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	04/17/2009
EPA 8270	C	10185805	SOCs by GC/MS	6687	NELAP	PA	03/26/2012
EPA 8270	D	10186002	SOCs by GC/MS	6687	NELAP	PA	03/26/2012
EPA 8270	E	10242543	SOCs by GC/MS	6687	NELAP	PA	06/25/2020
EPA 8270	C	10185805	1,1'-Biphenyl (Biphenyl, Lemonene)	6703	NELAP	PA	12/04/2007
EPA 8270	C	10185805	1,2,3,4-Tetrachlorobenzene	6705	NELAP	PA	07/03/2007
EPA 8270	C	10185805	1,2,3,4-Tetrahydronaphthalene	6707	NELAP	PA	12/04/2007
EPA 8270	C	10185805	1,2,3,5-Tetrachlorobenzene	6710	NELAP	PA	07/03/2007
EPA 8270	C	10185805	1,2,4,5-Tetrachlorobenzene	6715	NELAP	PA	04/04/2005

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	C	10185805	1,2,4-Trichlorobenzene	5155	NELAP	PA	01/19/2005
EPA 8270	C	10185805	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	01/19/2005
EPA 8270	C	10185805	1,2-Dinitrobenzene (1,2-DNB)	6155	NELAP	PA	01/19/2005
EPA 8270	C	10185805	1,2-Diphenylhydrazine	6220	NELAP	PA	05/02/2006
EPA 8270	C	10185805	1,3,5-Trinitrobenzene (1,3,5-TNB)	6885	NELAP	PA	01/04/2006
EPA 8270	C	10185805	1,3-Dichlorobenzene (m-Dichlorobenzene)	4615	NELAP	PA	01/19/2005
EPA 8270	C	10185805	1,3-Dinitrobenzene (1,3-DNB)	6160	NELAP	PA	01/19/2005
EPA 8270	C	10185805	1,4-Dichlorobenzene (p-Dichlorobenzene)	4620	NELAP	PA	01/19/2005
EPA 8270	C	10185805	1,4-Dinitrobenzene (1,4-DNB)	6165	NELAP	PA	05/02/2006
EPA 8270	C	10185805	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	12/04/2007
EPA 8270	C	10185805	1,4-Naphthoquinone	6420	NELAP	PA	01/19/2005
EPA 8270	C	10185805	1,4-Phenylenediamine	6630	NELAP	PA	01/19/2005
EPA 8270	C	10185805	1-Chloronaphthalene	5790	NELAP	PA	01/04/2006
EPA 8270	C	10185805	1-Methylnaphthalene	6380	NELAP	PA	12/04/2007
EPA 8270	C	10185805	1-Naphthylamine (alpha-Naphthylamine)	6425	NELAP	PA	04/04/2005
EPA 8270	C	10185805	2,2'-Oxybis(1-chloropropane) (bis(2-Chloro-1-methylethyl) ether)	4659	NELAP	PA	10/30/2014
EPA 8270	C	10185805	2,3,4,6-Tetrachlorophenol	6735	NELAP	PA	01/19/2005
EPA 8270	C	10185805	2,4,5-Trichlorophenol	6835	NELAP	PA	01/19/2005
EPA 8270	C	10185805	2,4,6-Trichlorophenol	6840	NELAP	PA	01/19/2005
EPA 8270	C	10185805	2,4-Dichlorophenol	6000	NELAP	PA	01/19/2005
EPA 8270	C	10185805	2,4-Dimethylphenol	6130	NELAP	PA	01/19/2005

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Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	C	10185805	2,4-Dinitrophenol	6175	NELAP	PA	01/19/2005
EPA 8270	C	10185805	2,4-Dinitrotoluene (2,4-DNT)	6185	NELAP	PA	01/19/2005
EPA 8270	C	10185805	2,6-Dichlorophenol	6005	NELAP	PA	01/19/2005
EPA 8270	C	10185805	2,6-Dinitrotoluene (2,6-DNT)	6190	NELAP	PA	01/19/2005
EPA 8270	C	10185805	2-Acetylaminofluorene	5515	NELAP	PA	01/19/2005
EPA 8270	C	10185805	2-Chloronaphthalene	5795	NELAP	PA	01/19/2005
EPA 8270	C	10185805	2-Chlorophenol	5800	NELAP	PA	01/19/2005
EPA 8270	C	10185805	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	6360	NELAP	PA	01/19/2005
EPA 8270	C	10185805	2-Methylnaphthalene	6385	NELAP	PA	01/19/2005
EPA 8270	C	10185805	2-Methylphenol (o-Cresol)	6400	NELAP	PA	01/19/2005
EPA 8270	C	10185805	2-Naphthylamine (beta-Naphthylamine)	6430	NELAP	PA	05/17/2005
EPA 8270	C	10185805	2-Nitroaniline	6460	NELAP	PA	04/04/2005
EPA 8270	C	10185805	2-Nitrophenol	6490	NELAP	PA	01/19/2005
EPA 8270	C	10185805	2-Picoline (2-Methylpyridine)	5050	NELAP	PA	01/19/2005
EPA 8270	C	10185805	3+4-Methylphenol (m+p-Cresol)	6412	NELAP	PA	01/19/2005
EPA 8270	C	10185805	3,3'-Dichlorobenzidine	5945	NELAP	PA	01/19/2005
EPA 8270	C	10185805	3,3'-Dimethoxybenzidine	6100	NELAP	PA	04/17/2009
EPA 8270	C	10185805	3,3'-Dimethylbenzidine	6120	NELAP	PA	01/19/2005
EPA 8270	C	10185805	3-Methylcholanthrene	6355	NELAP	PA	01/19/2005
EPA 8270	C	10185805	3-Nitroaniline	6465	NELAP	PA	01/19/2005
EPA 8270	C	10185805	4,4'-Methylenebis(2-chloroaniline)	6365	NELAP	PA	01/19/2005
EPA 8270	C	10185805	4-Aminobiphenyl	5540	NELAP	PA	01/19/2005

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PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	C	10185805	4-Bromophenyl phenyl ether	5660	NELAP	PA	01/19/2005
EPA 8270	C	10185805	4-Chloro-3-methylphenol	5700	NELAP	PA	01/19/2005
EPA 8270	C	10185805	4-Chloroaniline	5745	NELAP	PA	01/19/2005
EPA 8270	C	10185805	4-Chlorophenyl phenyl ether	5825	NELAP	PA	01/19/2005
EPA 8270	C	10185805	4-Nitroaniline	6470	NELAP	PA	04/04/2005
EPA 8270	C	10185805	4-Nitrophenol	6500	NELAP	PA	01/19/2005
EPA 8270	C	10185805	4-Nitroquinoline-1-oxide	6510	NELAP	PA	07/03/2007
EPA 8270	C	10185805	5-Nitro-o-toluidine	6570	NELAP	PA	04/04/2005
EPA 8270	C	10185805	6-Methylchrysene	6112	NELAP	PA	12/04/2007
EPA 8270	C	10185805	7,12-Dimethylbenz(a)anthracene	6115	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Acenaphthene	5500	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Acenaphthylene	5505	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Acetophenone	5510	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Aniline	5545	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Anthracene	5555	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Aramite	5560	NELAP	PA	05/17/2005
EPA 8270	C	10185805	Atrazine	7065	NELAP	PA	01/12/2007
EPA 8270	C	10185805	Benzaldehyde	5570	NELAP	PA	12/04/2007
EPA 8270	C	10185805	Benzenethiol	5567	NELAP	PA	12/04/2007
EPA 8270	C	10185805	Benzidine	5595	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Benzo[a]anthracene	5575	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Benzo[a]pyrene	5580	NELAP	PA	01/19/2005

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	C	10185805	Benzo[b]fluoranthene	5585	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Benzo[ghi]perylene	5590	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Benzo[k]fluoranthene	5600	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Benzoic acid	5610	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Benzyl alcohol	5630	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Butyl benzyl phthalate (Benzyl butyl phthalate)	5670	NELAP	PA	05/17/2005
EPA 8270	C	10185805	Caprolactam	7180	NELAP	PA	12/04/2007
EPA 8270	C	10185805	Carbazole	5680	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Chlorobenzilate	7260	NELAP	PA	05/02/2006
EPA 8270	C	10185805	Chrysene (Benzo[a]phenanthrene)	5855	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Di-n-butyl phthalate	5925	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Di-n-octyl phthalate	6200	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Diallate (cis or trans)	7405	NELAP	PA	05/02/2006
EPA 8270	C	10185805	Dibenz[a,h]acridine	9354	NELAP	PA	12/04/2007
EPA 8270	C	10185805	Dibenz[a,j]acridine	5900	NELAP	PA	05/17/2005
EPA 8270	C	10185805	Dibenzo[a,h]anthracene	5895	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Dibenzofuran	5905	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Diethyl phthalate	6070	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Dimethoate	7475	NELAP	PA	05/02/2006
EPA 8270	C	10185805	Dimethyl phthalate	6135	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Diphenylamine	6205	NELAP	PA	05/02/2006
EPA 8270	C	10185805	Disulfoton	8625	NELAP	PA	07/01/2007

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	C	10185805	Ethyl methanesulfonate	6260	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Famphur	7580	NELAP	PA	05/02/2006
EPA 8270	C	10185805	Fluoranthene	6265	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Fluorene	6270	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Hexachlorobenzene	6275	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	4835	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Hexachlorocyclopentadiene	6285	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Hexachloroethane	4840	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Hexachloropropene	6295	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Indene	6312	NELAP	PA	12/04/2007
EPA 8270	C	10185805	Indeno(1,2,3-cd)pyrene	6315	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Isodrin	7725	NELAP	PA	05/02/2006
EPA 8270	C	10185805	Isophorone	6320	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Isosafrole	6325	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Kepone	7740	NELAP	PA	05/02/2006
EPA 8270	C	10185805	Malononitrile	4920	NELAP	PA	05/23/2013
EPA 8270	C	10185805	Methapyrilene	6345	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Methyl methanesulfonate	6375	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Methyl parathion (Parathion, methyl)	7825	NELAP	PA	05/25/2007
EPA 8270	C	10185805	N,N-Dimethylacetamide	6443	NELAP	PA	12/04/2007
EPA 8270	C	10185805	N,N-Dimethylformamide	5010	NELAP	PA	12/04/2007
EPA 8270	C	10185805	N-Nitrosodi-n-butylamine	5025	NELAP	PA	01/19/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	C	10185805	N-Nitrosodi-n-propylamine	6545	NELAP	PA	01/19/2005
EPA 8270	C	10185805	N-Nitrosodiethylamine	6525	NELAP	PA	01/19/2005
EPA 8270	C	10185805	N-Nitrosodimethylamine	6530	NELAP	PA	01/19/2005
EPA 8270	C	10185805	N-Nitrosodiphenylamine	6535	NELAP	PA	01/19/2005
EPA 8270	C	10185805	N-Nitrosomethylethylamine	6550	NELAP	PA	01/19/2005
EPA 8270	C	10185805	N-Nitrosomorpholine	6555	NELAP	PA	01/19/2005
EPA 8270	C	10185805	N-Nitrosopiperidine	6560	NELAP	PA	01/19/2005
EPA 8270	C	10185805	N-Nitrosopyrrolidine	6565	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Naphthalene	5005	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Nitrobenzene	5015	NELAP	PA	01/04/2006
EPA 8270	C	10185805	O,O,O-Triethyl phosphorothioate	8290	NELAP	PA	05/02/2006
EPA 8270	C	10185805	Parathion, ethyl (Ethyl parathion, Parathion)	7955	NELAP	PA	05/25/2007
EPA 8270	C	10185805	Pentachlorobenzene	6590	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Pentachloronitrobenzene (PCNB)	6600	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Pentachlorophenol (PCP)	6605	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Phenacetin	6610	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Phenanthrene	6615	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Phenol	6625	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Phorate (Thimet)	7985	NELAP	PA	05/02/2006
EPA 8270	C	10185805	Phthalic anhydride	6640	NELAP	PA	01/21/2009
EPA 8270	C	10185805	Pronamide (Kerb)	6650	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Pyrene	6665	NELAP	PA	01/19/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	C	10185805	Pyridine	5095	NELAP	PA	04/04/2005
EPA 8270	C	10185805	Quinoline	6670	NELAP	PA	12/04/2007
EPA 8270	C	10185805	Safrole	6685	NELAP	PA	01/19/2005
EPA 8270	C	10185805	Sulfotepp (Tetraethyl dithiopyrophosphate)	8155	NELAP	PA	12/04/2007
EPA 8270	C	10185805	Tetraethyl lead	1211	NELAP	PA	03/07/2012
EPA 8270	C	10185805	Thionazine (Thionazin, Zinophos)	8235	NELAP	PA	05/02/2006
EPA 8270	C	10185805	a,a-Dimethylphenethylamine (Phentermine)	6125	NELAP	PA	05/02/2006
EPA 8270	C	10185805	bis(2-Chloroethoxy)methane	5760	NELAP	PA	01/19/2005
EPA 8270	C	10185805	bis(2-Chloroethyl) ether	5765	NELAP	PA	01/19/2005
EPA 8270	C	10185805	bis(2-Chloromethyl) ether		NELAP	PA	01/21/2009
EPA 8270	C	10185805	bis(2-Ethylhexyl) adipate (di(2-Ethylhexyl) adipate)	6062	NELAP	PA	01/21/2009
EPA 8270	C	10185805	bis(2-Ethylhexyl) phthalate (DEHP)	6065	NELAP	PA	01/19/2005
EPA 8270	C	10185805	o-Toluidine (2-Toluidine, 2-Methylaniline)	5145	NELAP	PA	01/19/2005
EPA 8270	C	10185805	p-(Dimethylamino)azobenzene	6105	NELAP	PA	05/02/2006
EPA 8270	C	10185805	p-Chloronitrobenzene	9330	NELAP	PA	01/21/2009
EPA 8270	C	10185805	tris-(2,3-Dibromopropyl) phosphate (tris-BP)	8310	NELAP	PA	12/04/2007
EPA 8270	D	10186002	1,1'-Biphenyl (Biphenyl, Lemonene)	6703	NELAP	PA	12/04/2007
EPA 8270	D	10186002	1,2,3,4-Tetrachlorobenzene	6705	NELAP	PA	07/03/2007
EPA 8270	D	10186002	1,2,3,4-Tetrahydronaphthalene	6707	NELAP	PA	12/04/2007
EPA 8270	D	10186002	1,2,3,5-Tetrachlorobenzene	6710	NELAP	PA	07/03/2007
EPA 8270	D	10186002	1,2,4,5-Tetrachlorobenzene	6715	NELAP	PA	04/04/2005
EPA 8270	D	10186002	1,2,4-Trichlorobenzene	5155	NELAP	PA	01/19/2005

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	01/19/2005
EPA 8270	D	10186002	1,2-Dinitrobenzene (1,2-DNB)	6155	NELAP	PA	01/19/2005
EPA 8270	D	10186002	1,2-Diphenylhydrazine	6220	NELAP	PA	05/02/2006
EPA 8270	D	10186002	1,3,5-Trinitrobenzene (1,3,5-TNB)	6885	NELAP	PA	01/04/2006
EPA 8270	D	10186002	1,3-Dichlorobenzene (m-Dichlorobenzene)	4615	NELAP	PA	01/19/2005
EPA 8270	D	10186002	1,3-Dinitrobenzene (1,3-DNB)	6160	NELAP	PA	01/19/2005
EPA 8270	D	10186002	1,4-Dichlorobenzene (p-Dichlorobenzene)	4620	NELAP	PA	01/19/2005
EPA 8270	D	10186002	1,4-Dinitrobenzene (1,4-DNB)	6165	NELAP	PA	05/02/2006
EPA 8270	D	10186002	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	12/04/2007
EPA 8270	D	10186002	1,4-Naphthoquinone	6420	NELAP	PA	01/19/2005
EPA 8270	D	10186002	1,4-Phenylenediamine	6630	NELAP	PA	01/19/2005
EPA 8270	D	10186002	1-Chloronaphthalene	5790	NELAP	PA	01/04/2006
EPA 8270	D	10186002	1-Methylnaphthalene	6380	NELAP	PA	12/04/2007
EPA 8270	D	10186002	1-Naphthylamine (alpha-Naphthylamine)	6425	NELAP	PA	04/04/2005
EPA 8270	D	10186002	2,2'-Oxybis(1-chloropropane) (bis(2-Chloro-1-methylethyl) ether)	4659	NELAP	PA	10/30/2014
EPA 8270	D	10186002	2,3,4,6-Tetrachlorophenol	6735	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2,4,5-Trichlorophenol	6835	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2,4,6-Trichlorophenol	6840	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2,4-Dichlorophenol	6000	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2,4-Dimethylphenol	6130	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2,4-Dinitrophenol	6175	NELAP	PA	01/19/2005

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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	2,4-Dinitrotoluene (2,4-DNT)	6185	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2,6-Dichlorophenol	6005	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2,6-Dinitrotoluene (2,6-DNT)	6190	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2-Acetylaminofluorene	5515	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2-Chloronaphthalene	5795	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2-Chlorophenol	5800	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	6360	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2-Methylnaphthalene	6385	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2-Methylphenol (o-Cresol)	6400	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2-Naphthylamine (beta-Naphthylamine)	6430	NELAP	PA	05/17/2005
EPA 8270	D	10186002	2-Nitroaniline	6460	NELAP	PA	04/04/2005
EPA 8270	D	10186002	2-Nitrophenol	6490	NELAP	PA	01/19/2005
EPA 8270	D	10186002	2-Picoline (2-Methylpyridine)	5050	NELAP	PA	01/19/2005
EPA 8270	D	10186002	3+4-Methylphenol (m+p-Cresol)	6412	NELAP	PA	01/19/2005
EPA 8270	D	10186002	3,3'-Dichlorobenzidine	5945	NELAP	PA	01/19/2005
EPA 8270	D	10186002	3,3'-Dimethoxybenzidine	6100	NELAP	PA	04/17/2009
EPA 8270	D	10186002	3,3'-Dimethylbenzidine	6120	NELAP	PA	01/19/2005
EPA 8270	D	10186002	3-Methylcholanthrene	6355	NELAP	PA	01/19/2005
EPA 8270	D	10186002	3-Nitroaniline	6465	NELAP	PA	01/19/2005
EPA 8270	D	10186002	4,4'-Methylenebis(2-chloroaniline)	6365	NELAP	PA	01/19/2005
EPA 8270	D	10186002	4-Aminobiphenyl	5540	NELAP	PA	01/19/2005
EPA 8270	D	10186002	4-Bromophenyl phenyl ether	5660	NELAP	PA	01/19/2005

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	4-Chloro-3-methylphenol	5700	NELAP	PA	01/19/2005
EPA 8270	D	10186002	4-Chloroaniline	5745	NELAP	PA	01/19/2005
EPA 8270	D	10186002	4-Chlorophenyl phenyl ether	5825	NELAP	PA	01/19/2005
EPA 8270	D	10186002	4-Nitroaniline	6470	NELAP	PA	04/04/2005
EPA 8270	D	10186002	4-Nitrophenol	6500	NELAP	PA	01/19/2005
EPA 8270	D	10186002	4-Nitroquinoline-1-oxide	6510	NELAP	PA	07/03/2007
EPA 8270	D	10186002	5-Nitro-o-toluidine	6570	NELAP	PA	04/04/2005
EPA 8270	D	10186002	6-Methylchrysene	6112	NELAP	PA	12/04/2007
EPA 8270	D	10186002	7,12-Dimethylbenz(a)anthracene	6115	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Acenaphthene	5500	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Acenaphthylene	5505	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Acetophenone	5510	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Aniline	5545	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Anthracene	5555	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Aramite	5560	NELAP	PA	05/17/2005
EPA 8270	D	10186002	Atrazine	7065	NELAP	PA	01/12/2007
EPA 8270	D	10186002	Benzaldehyde	5570	NELAP	PA	12/04/2007
EPA 8270	D	10186002	Benzenethiol	5567	NELAP	PA	12/04/2007
EPA 8270	D	10186002	Benzidine	5595	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Benzo[a]anthracene	5575	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Benzo[a]pyrene	5580	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Benzo[b]fluoranthene	5585	NELAP	PA	01/19/2005

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	Benzo[ghi]perylene	5590	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Benzo[k]fluoranthene	5600	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Benzoic acid	5610	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Benzyl alcohol	5630	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Butyl benzyl phthalate (Benzyl butyl phthalate)	5670	NELAP	PA	05/17/2005
EPA 8270	D	10186002	Caprolactam	7180	NELAP	PA	12/04/2007
EPA 8270	D	10186002	Carbazole	5680	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Chlorobenzilate	7260	NELAP	PA	05/02/2006
EPA 8270	D	10186002	Chrysene (Benzo[a]phenanthrene)	5855	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Di-n-butyl phthalate	5925	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Di-n-octyl phthalate	6200	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Diallate (cis or trans)	7405	NELAP	PA	05/02/2006
EPA 8270	D	10186002	Dibenz[a,h]acridine	9354	NELAP	PA	12/04/2007
EPA 8270	D	10186002	Dibenz[a,j]acridine	5900	NELAP	PA	05/17/2005
EPA 8270	D	10186002	Dibenzo[a,h]anthracene	5895	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Dibenzofuran	5905	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Diethyl phthalate	6070	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Dimethoate	7475	NELAP	PA	05/02/2006
EPA 8270	D	10186002	Dimethyl phthalate	6135	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Diphenylamine	6205	NELAP	PA	05/02/2006
EPA 8270	D	10186002	Disulfoton	8625	NELAP	PA	07/01/2007
EPA 8270	D	10186002	Ethyl methanesulfonate	6260	NELAP	PA	01/19/2005

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	Famphur	7580	NELAP	PA	05/02/2006
EPA 8270	D	10186002	Fluoranthene	6265	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Fluorene	6270	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Hexachlorobenzene	6275	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	4835	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Hexachlorocyclopentadiene	6285	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Hexachloroethane	4840	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Hexachloropropene	6295	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Indene	6312	NELAP	PA	12/04/2007
EPA 8270	D	10186002	Indeno(1,2,3-cd)pyrene	6315	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Isodrin	7725	NELAP	PA	05/02/2006
EPA 8270	D	10186002	Isophorone	6320	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Isosafrole	6325	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Kepone	7740	NELAP	PA	05/02/2006
EPA 8270	D	10186002	Malononitrile	4920	NELAP	PA	05/23/2013
EPA 8270	D	10186002	Methapyrilene	6345	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Methyl methanesulfonate	6375	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Methyl parathion (Parathion, methyl)	7825	NELAP	PA	05/25/2007
EPA 8270	D	10186002	N,N-Dimethylacetamide	6443	NELAP	PA	12/04/2007
EPA 8270	D	10186002	N,N-Dimethylformamide	5010	NELAP	PA	12/04/2007
EPA 8270	D	10186002	N-Nitrosodi-n-butylamine	5025	NELAP	PA	01/19/2005
EPA 8270	D	10186002	N-Nitrosodi-n-propylamine	6545	NELAP	PA	01/19/2005

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	N-Nitrosodiethylamine	6525	NELAP	PA	01/19/2005
EPA 8270	D	10186002	N-Nitrosodimethylamine	6530	NELAP	PA	01/19/2005
EPA 8270	D	10186002	N-Nitrosodiphenylamine	6535	NELAP	PA	01/19/2005
EPA 8270	D	10186002	N-Nitrosomethylethylamine	6550	NELAP	PA	01/19/2005
EPA 8270	D	10186002	N-Nitrosomorpholine	6555	NELAP	PA	01/19/2005
EPA 8270	D	10186002	N-Nitrosopiperidine	6560	NELAP	PA	01/19/2005
EPA 8270	D	10186002	N-Nitrosopyrrolidine	6565	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Naphthalene	5005	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Nitrobenzene	5015	NELAP	PA	01/04/2006
EPA 8270	D	10186002	O,O,O-Triethyl phosphorothioate	8290	NELAP	PA	05/02/2006
EPA 8270	D	10186002	Parathion, ethyl (Ethyl parathion, Parathion)	7955	NELAP	PA	05/25/2007
EPA 8270	D	10186002	Pentachlorobenzene	6590	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Pentachloronitrobenzene (PCNB)	6600	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Pentachlorophenol (PCP)	6605	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Phenacetin	6610	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Phenanthrene	6615	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Phenol	6625	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Phorate (Thimet)	7985	NELAP	PA	05/02/2006
EPA 8270	D	10186002	Phthalic anhydride	6640	NELAP	PA	01/21/2009
EPA 8270	D	10186002	Pronamide (Kerb)	6650	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Pyrene	6665	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Pyridine	5095	NELAP	PA	04/04/2005

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	D	10186002	Quinoline	6670	NELAP	PA	12/04/2007
EPA 8270	D	10186002	Safrole	6685	NELAP	PA	01/19/2005
EPA 8270	D	10186002	Sulfotepp (Tetraethyl dithiopyrophosphate)	8155	NELAP	PA	12/04/2007
EPA 8270	D	10186002	Tetraethyl lead	1211	NELAP	PA	03/07/2012
EPA 8270	D	10186002	Thionazine (Thionazin, Zinophos)	8235	NELAP	PA	05/02/2006
EPA 8270	D	10186002	a,a-Dimethylphenethylamine (Phentermine)	6125	NELAP	PA	05/02/2006
EPA 8270	D	10186002	bis(2-Chloroethoxy)methane	5760	NELAP	PA	01/19/2005
EPA 8270	D	10186002	bis(2-Chloroethyl) ether	5765	NELAP	PA	01/19/2005
EPA 8270	D	10186002	bis(2-Chloromethyl) ether		NELAP	PA	01/21/2009
EPA 8270	D	10186002	bis(2-Ethylhexyl) adipate (di(2-Ethylhexyl) adipate)	6062	NELAP	PA	01/21/2009
EPA 8270	D	10186002	bis(2-Ethylhexyl) phthalate (DEHP)	6065	NELAP	PA	01/19/2005
EPA 8270	D	10186002	o-Toluidine (2-Toluidine, 2-Methylaniline)	5145	NELAP	PA	01/19/2005
EPA 8270	D	10186002	p-(Dimethylamino)azobenzene	6105	NELAP	PA	05/02/2006
EPA 8270	D	10186002	p-Chloronitrobenzene	9330	NELAP	PA	01/21/2009
EPA 8270	D	10186002	tris-(2,3-Dibromopropyl) phosphate (tris-BP)	8310	NELAP	PA	12/04/2007
EPA 8270	E	10242543	1,1'-Biphenyl (Biphenyl, Lemonene)	6703	NELAP	PA	12/04/2007
EPA 8270	E	10242543	1,2,4,5-Tetrachlorobenzene	6715	NELAP	PA	04/04/2005
EPA 8270	E	10242543	1,2,4-Trichlorobenzene	5155	NELAP	PA	01/19/2005
EPA 8270	E	10242543	1,2-Dichlorobenzene (o-Dichlorobenzene)	4610	NELAP	PA	01/19/2005
EPA 8270	E	10242543	1,2-Diphenylhydrazine	6220	NELAP	PA	05/02/2006
EPA 8270	E	10242543	1,3,5-Trinitrobenzene (1,3,5-TNB)	6885	NELAP	PA	12/15/2022
EPA 8270	E	10242543	1,3-Dichlorobenzene (m-Dichlorobenzene)	4615	NELAP	PA	01/19/2005

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	1,3-Dinitrobenzene (1,3-DNB)	6160	NELAP	PA	01/19/2005
EPA 8270	E	10242543	1,4-Dichlorobenzene (p-Dichlorobenzene)	4620	NELAP	PA	01/19/2005
EPA 8270	E	10242543	1,4-Dinitrobenzene (1,4-DNB)	6165	NELAP	PA	05/02/2006
EPA 8270	E	10242543	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	12/04/2007
EPA 8270	E	10242543	1,4-Naphthoquinone	6420	NELAP	PA	01/19/2005
EPA 8270	E	10242543	1-Chloronaphthalene	5790	NELAP	PA	01/04/2006
EPA 8270	E	10242543	1-Methylnaphthalene	6380	NELAP	PA	12/04/2007
EPA 8270	E	10242543	1-Naphthylamine (alpha-Naphthylamine)	6425	NELAP	PA	04/04/2005
EPA 8270	E	10242543	2,2'-Oxybis(1-chloropropane) (bis(2-Chloro-1-methylethyl) ether)	4659	NELAP	PA	10/30/2014
EPA 8270	E	10242543	2,3,4,6-Tetrachlorophenol	6735	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2,4,5-Trichlorophenol	6835	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2,4,6-Trichlorophenol	6840	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2,4-Dichlorophenol	6000	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2,4-Dimethylphenol	6130	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2,4-Dinitrophenol	6175	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2,4-Dinitrotoluene (2,4-DNT)	6185	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2,6-Dichlorophenol	6005	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2,6-Dinitrotoluene (2,6-DNT)	6190	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2-Acetylaminofluorene	5515	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2-Chloronaphthalene	5795	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2-Chlorophenol	5800	NELAP	PA	01/19/2005

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	6360	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2-Methylnaphthalene	6385	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2-Methylphenol (o-Cresol)	6400	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2-Naphthylamine (beta-Naphthylamine)	6430	NELAP	PA	05/17/2005
EPA 8270	E	10242543	2-Nitroaniline	6460	NELAP	PA	04/04/2005
EPA 8270	E	10242543	2-Nitrophenol	6490	NELAP	PA	01/19/2005
EPA 8270	E	10242543	2-Picoline (2-Methylpyridine)	5050	NELAP	PA	01/19/2005
EPA 8270	E	10242543	3+4-Methylphenol (m+p-Cresol)	6412	NELAP	PA	01/19/2005
EPA 8270	E	10242543	3,3'-Dichlorobenzidine	5945	NELAP	PA	01/19/2005
EPA 8270	E	10242543	3,3'-Dimethylbenzidine	6120	NELAP	PA	01/19/2005
EPA 8270	E	10242543	3-Methylcholanthrene	6355	NELAP	PA	01/19/2005
EPA 8270	E	10242543	3-Nitroaniline	6465	NELAP	PA	01/19/2005
EPA 8270	E	10242543	4,4'-Methylenebis(2-chloroaniline)	6365	NELAP	PA	01/19/2005
EPA 8270	E	10242543	4-Aminobiphenyl	5540	NELAP	PA	01/19/2005
EPA 8270	E	10242543	4-Bromophenyl phenyl ether	5660	NELAP	PA	01/19/2005
EPA 8270	E	10242543	4-Chloro-3-methylphenol	5700	NELAP	PA	01/19/2005
EPA 8270	E	10242543	4-Chloroaniline	5745	NELAP	PA	01/19/2005
EPA 8270	E	10242543	4-Chlorophenyl phenyl ether	5825	NELAP	PA	01/19/2005
EPA 8270	E	10242543	4-Nitroaniline	6470	NELAP	PA	04/04/2005
EPA 8270	E	10242543	4-Nitrophenol	6500	NELAP	PA	01/19/2005
EPA 8270	E	10242543	4-Nitroquinoline-1-oxide	6510	NELAP	PA	07/03/2007
EPA 8270	E	10242543	5-Nitro-o-toluidine	6570	NELAP	PA	04/04/2005

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	6-Methylchrysene	6112	NELAP	PA	12/04/2007
EPA 8270	E	10242543	7,12-Dimethylbenz(a)anthracene	6115	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Acenaphthene	5500	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Acenaphthylene	5505	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Acetophenone	5510	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Aniline	5545	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Anthracene	5555	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Atrazine	7065	NELAP	PA	01/12/2007
EPA 8270	E	10242543	Benzaldehyde	5570	NELAP	PA	12/04/2007
EPA 8270	E	10242543	Benzenethiol	5567	NELAP	PA	12/15/2022
EPA 8270	E	10242543	Benzidine	5595	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Benzo[a]anthracene	5575	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Benzo[a]pyrene	5580	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Benzo[b]fluoranthene	5585	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Benzo[ghi]perylene	5590	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Benzo[k]fluoranthene	5600	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Benzoic acid	5610	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Benzyl alcohol	5630	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Butyl benzyl phthalate (Benzyl butyl phthalate)	5670	NELAP	PA	05/17/2005
EPA 8270	E	10242543	Caprolactam	7180	NELAP	PA	12/04/2007
EPA 8270	E	10242543	Carbazole	5680	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Chlorobenzilate	7260	NELAP	PA	05/02/2006

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Laboratory Scope of Accreditation

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	Chrysene (Benzo[a]phenanthrene)	5855	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Di-n-butyl phthalate	5925	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Di-n-octyl phthalate	6200	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Diallate (cis or trans)	7405	NELAP	PA	05/02/2006
EPA 8270	E	10242543	Dibenz[a,h]acridine	9354	NELAP	PA	12/04/2007
EPA 8270	E	10242543	Dibenz[a,j]acridine	5900	NELAP	PA	05/17/2005
EPA 8270	E	10242543	Dibenzo[a,h]anthracene	5895	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Dibenzofuran	5905	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Diethyl phthalate	6070	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Dimethoate	7475	NELAP	PA	05/02/2006
EPA 8270	E	10242543	Dimethyl phthalate	6135	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Dinoseb (2-sec-Butyl-4,6-dinitrophenol, DNBP)	8620	NELAP	PA	12/15/2022
EPA 8270	E	10242543	Diphenyl ether	6210	NELAP	PA	12/15/2022
EPA 8270	E	10242543	Diphenylamine	6205	NELAP	PA	05/02/2006
EPA 8270	E	10242543	Ethyl methanesulfonate	6260	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Fluoranthene	6265	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Fluorene	6270	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Hexachlorobenzene	6275	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Hexachlorobutadiene (1,3-Hexachlorobutadiene)	4835	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Hexachlorocyclopentadiene	6285	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Hexachloroethane	4840	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Hexachloropropene	6295	NELAP	PA	01/19/2005

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Laboratory Scope of Accreditation

NELAP RECOGNIZED TNI ACCREDITATION BODY

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	Indene	6312	NELAP	PA	12/04/2007
EPA 8270	E	10242543	Indeno(1,2,3-cd)pyrene	6315	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Isodrin	7725	NELAP	PA	05/02/2006
EPA 8270	E	10242543	Isophorone	6320	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Isosafrole	6325	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Methapyrilene	6345	NELAP	PA	12/15/2022
EPA 8270	E	10242543	Methyl methanesulfonate	6375	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Methyl parathion (Parathion, methyl)	7825	NELAP	PA	05/25/2007
EPA 8270	E	10242543	N-Nitrosodi-n-butylamine	5025	NELAP	PA	01/19/2005
EPA 8270	E	10242543	N-Nitrosodi-n-propylamine	6545	NELAP	PA	01/19/2005
EPA 8270	E	10242543	N-Nitrosodiethylamine	6525	NELAP	PA	01/19/2005
EPA 8270	E	10242543	N-Nitrosodimethylamine	6530	NELAP	PA	01/19/2005
EPA 8270	E	10242543	N-Nitrosodiphenylamine	6535	NELAP	PA	01/19/2005
EPA 8270	E	10242543	N-Nitrosomethylethylamine	6550	NELAP	PA	01/19/2005
EPA 8270	E	10242543	N-Nitrosomorpholine	6555	NELAP	PA	01/19/2005
EPA 8270	E	10242543	N-Nitrosopiperidine	6560	NELAP	PA	01/19/2005
EPA 8270	E	10242543	N-Nitrosopyrrolidine	6565	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Naphthalene	5005	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Nitrobenzene	5015	NELAP	PA	01/04/2006
EPA 8270	E	10242543	O,O,O-Triethyl phosphorothioate	8290	NELAP	PA	05/02/2006
EPA 8270	E	10242543	Parathion, ethyl (Ethyl parathion, Parathion)	7955	NELAP	PA	05/25/2007
EPA 8270	E	10242543	Pentachlorobenzene	6590	NELAP	PA	01/19/2005

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Laboratory Scope of Accreditation

Attached to Certificate of Accreditation 023-003 expiration date 01/31/2024. This listing of accredited analytes should be used only when associated with a valid certificate of accreditation.

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270	E	10242543	Pentachloronitrobenzene (PCNB)	6600	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Pentachlorophenol (PCP)	6605	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Phenacetin	6610	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Phenanthrene	6615	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Phenol	6625	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Phorate (Thimet)	7985	NELAP	PA	05/02/2006
EPA 8270	E	10242543	Pronamide (Kerb)	6650	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Pyrene	6665	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Pyridine	5095	NELAP	PA	04/04/2005
EPA 8270	E	10242543	Quinoline	6670	NELAP	PA	12/04/2007
EPA 8270	E	10242543	Safrole	6685	NELAP	PA	01/19/2005
EPA 8270	E	10242543	Sulfotepp (Tetraethyl dithiopyrophosphate)	8155	NELAP	PA	12/04/2007
EPA 8270	E	10242543	Thionazine (Thionazin, Zinophos)	8235	NELAP	PA	05/02/2006
EPA 8270	E	10242543	bis(2-Chloroethoxy)methane	5760	NELAP	PA	01/19/2005
EPA 8270	E	10242543	bis(2-Chloroethyl) ether	5765	NELAP	PA	01/19/2005
EPA 8270	E	10242543	bis(2-Ethylhexyl) phthalate (DEHP)	6065	NELAP	PA	01/19/2005
EPA 8270	E	10242543	o-Toluidine (2-Toluidine, 2-Methylaniline)	5145	NELAP	PA	01/19/2005
EPA 8270	E	10242543	p-(Dimethylamino)azobenzene	6105	NELAP	PA	05/02/2006
EPA 8270 SIM	E	10242565	SOCs by GC/MS	6687	NELAP	PA	09/29/2020
EPA 8270 SIM	C	10242407	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	05/14/2018
EPA 8270 SIM	C	10242407	1-Methylnaphthalene	6380	NELAP	PA	07/25/2011
EPA 8270 SIM	C	10242407	2-Methylnaphthalene	6385	NELAP	PA	05/23/2012

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270 SIM	C	10242407	Acenaphthene	5500	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Acenaphthylene	5505	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Anthracene	5555	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Benzo[a]anthracene	5575	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Benzo[a]pyrene	5580	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Benzo[b]fluoranthene	5585	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Benzo[ghi]perylene	5590	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Benzo[k]fluoranthene	5600	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Chrysene (Benzo[a]phenanthrene)	5855	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Dibenzo[a,h]anthracene	5895	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Fluoranthene	6265	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Fluorene	6270	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Indeno(1,2,3-cd)pyrene	6315	NELAP	PA	11/04/2021
EPA 8270 SIM	C	10242407	Naphthalene	5005	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Phenanthrene	6615	NELAP	PA	12/04/2007
EPA 8270 SIM	C	10242407	Pyrene	6665	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	05/14/2018
EPA 8270 SIM	D	10242509	1-Methylnaphthalene	6380	NELAP	PA	07/25/2011
EPA 8270 SIM	D	10242509	2-Methylnaphthalene	6385	NELAP	PA	05/23/2012
EPA 8270 SIM	D	10242509	Acenaphthene	5500	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Acenaphthylene	5505	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Anthracene	5555	NELAP	PA	12/04/2007

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270 SIM	D	10242509	Benzo[a]anthracene	5575	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Benzo[a]pyrene	5580	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Benzo[b]fluoranthene	5585	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Benzo[ghi]perylene	5590	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Benzo[k]fluoranthene	5600	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Chrysene (Benzo[a]phenanthrene)	5855	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Dibenzo[a,h]anthracene	5895	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Fluoranthene	6265	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Fluorene	6270	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Indeno(1,2,3-cd)pyrene	6315	NELAP	PA	11/04/2021
EPA 8270 SIM	D	10242509	Naphthalene	5005	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Phenanthrene	6615	NELAP	PA	12/04/2007
EPA 8270 SIM	D	10242509	Pyrene	6665	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	1,4-Dioxane (1,4-Diethyleneoxide)	4735	NELAP	PA	05/14/2018
EPA 8270 SIM	E	10242565	1-Methylnaphthalene	6380	NELAP	PA	07/25/2011
EPA 8270 SIM	E	10242565	2-Methylnaphthalene	6385	NELAP	PA	05/23/2012
EPA 8270 SIM	E	10242565	Acenaphthene	5500	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Acenaphthylene	5505	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Anthracene	5555	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Benzo[a]anthracene	5575	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Benzo[a]pyrene	5580	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Benzo[b]fluoranthene	5585	NELAP	PA	12/04/2007

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Laboratory Scope of Accreditation

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Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8270 SIM	E	10242565	Benzo[ghi]perylene	5590	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Benzo[k]fluoranthene	5600	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Chrysene (Benzo[a]phenanthrene)	5855	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Dibenzo[a,h]anthracene	5895	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Fluoranthene	6265	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Fluorene	6270	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Indeno(1,2,3-cd)pyrene	6315	NELAP	PA	11/04/2021
EPA 8270 SIM	E	10242565	Naphthalene	5005	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Phenanthrene	6615	NELAP	PA	12/04/2007
EPA 8270 SIM	E	10242565	Pyrene	6665	NELAP	PA	12/04/2007
EPA 8290	A	10187403	PCDDs and PCDFs by HRGC-HRMS	6126	NELAP	PA	03/04/2015
EPA 8290	A	10187403	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	9519	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	9516	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	9426	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	9420	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	9423	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	9453	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	9471	NELAP	PA	08/06/2010
EPA 8290	A	10187403	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	9456	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	9474	NELAP	PA	06/30/2010

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8290	A	10187403	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	9459	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	9477	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	9540	NELAP	PA	06/30/2010
EPA 8290	A	10187403	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	9543	NELAP	PA	06/30/2010
EPA 8290	A	10187403	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	9480	NELAP	PA	06/30/2010
EPA 8290	A	10187403	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	9549	NELAP	PA	08/06/2010
EPA 8290	A	10187403	2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)(Dioxin)	9618	NELAP	PA	06/30/2010
EPA 8290	A	10187403	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	9612	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total TCDD	9609	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total TCDF	9615	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total heptachlorodibenzo-p-dioxin (HpCDD)	9438	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total heptachlorodibenzofuran (HpCDF)	9444	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total hexachlorodibenzo-p-dioxin (HxCDD)	9468	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total hexachlorodibenzofuran (HxCDF)	9483	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total pentachlorodibenzo-p-dioxin (PeCDD)	9555	NELAP	PA	06/30/2010
EPA 8290	A	10187403	Total pentachlorodibenzofuran (PeCDF)	9552	NELAP	PA	06/30/2010
EPA 8315	A	10188008	Carbonyl compounds by HPLC	6658	NELAP	PA	03/26/2012
EPA 8315	A	10188008	Acetaldehyde	4300	NELAP	PA	01/21/2009
EPA 8315	A	10188008	Formaldehyde	4815	NELAP	PA	01/19/2005
EPA 8318	A	10188600	3-Hydroxycarbofuran	7710	NELAP	PA	04/04/2005
EPA 8318	A	10188600	Aldicarb (Temik)	7010	NELAP	PA	04/04/2005

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DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8318	A	10188600	Aldicarb sulfone	7015	NELAP	PA	04/04/2005
EPA 8318	A	10188600	Aldicarb sulfoxide	7020	NELAP	PA	12/12/2005
EPA 8318	A	10188600	Carbaryl (Sevin)	7195	NELAP	PA	04/04/2005
EPA 8318	A	10188600	Carbofuran (Furaden)	7205	NELAP	PA	04/04/2005
EPA 8318	A	10188600	Methiocarb (Mesurol)	7800	NELAP	PA	04/04/2005
EPA 8318	A	10188600	Methomyl (Lannate)	7805	NELAP	PA	04/04/2005
EPA 8318	A	10188600	N-Methylcarbamates by HPLC	7930	NELAP	PA	10/15/2012
EPA 8318	A	10188600	Oxamyl (Vydate)	7940	NELAP	PA	12/12/2005
EPA 8318	A	10188600	Propoxur (Baygon)	8080	NELAP	PA	04/04/2005
EPA 8318		10307605	3-Hydroxycarbofuran	7710	NELAP	PA	04/05/2005
EPA 8318		10307605	Aldicarb (Temik)	7010	NELAP	PA	04/05/2005
EPA 8318		10307605	Aldicarb sulfone	7015	NELAP	PA	04/05/2005
EPA 8318		10307605	Aldicarb sulfoxide	7020	NELAP	PA	12/13/2005
EPA 8318		10307605	Carbaryl (Sevin)	7195	NELAP	PA	04/05/2005
EPA 8318		10307605	Carbofuran (Furaden)	7205	NELAP	PA	04/05/2005
EPA 8318		10307605	Methiocarb (Mesurol)	7800	NELAP	PA	04/05/2005
EPA 8318		10307605	Methomyl (Lannate)	7805	NELAP	PA	04/05/2005
EPA 8318		10307605	N-Methylcarbamates by HPLC	7930	NELAP	PA	04/05/2005
EPA 8318		10307605	Oxamyl (Vydate)	7940	NELAP	PA	12/13/2005
EPA 8318		10307605	Propoxur (Baygon)	8080	NELAP	PA	04/05/2005
EPA 8330	B	10308006	Nitroaromatics and nitramines by HPLC/UV	9355	NELAP	PA	07/29/2015
EPA 8330	B	10308006	1,3,5-Trinitrobenzene (1,3,5-TNB)	6885	NELAP	PA	01/19/2005

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(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 8330	B	10308006	1,3-Dinitrobenzene (1,3-DNB)	6160	NELAP	PA	01/19/2005
EPA 8330	B	10308006	2,4,6-Trinitrotoluene (2,4,6-TNT)	9651	NELAP	PA	01/19/2005
EPA 8330	B	10308006	2,4-Diamino-6-nitrotoluene	5882	NELAP	PA	07/29/2015
EPA 8330	B	10308006	2,4-Dinitrotoluene (2,4-DNT)	6185	NELAP	PA	01/19/2005
EPA 8330	B	10308006	2,6-Diamino-4-nitrotoluene	6181	NELAP	PA	07/29/2015
EPA 8330	B	10308006	2,6-Dinitrotoluene (2,6-DNT)	6190	NELAP	PA	01/19/2005
EPA 8330	B	10308006	2-Amino-4,6-dinitrotoluene (2-Am-DNT)	9303	NELAP	PA	01/19/2005
EPA 8330	B	10308006	2-Nitrotoluene	9507	NELAP	PA	01/19/2005
EPA 8330	B	10308006	3,5-Dinitroaniline	6150	NELAP	PA	07/29/2015
EPA 8330	B	10308006	3-Nitrotoluene	9510	NELAP	PA	01/19/2005
EPA 8330	B	10308006	4-Amino-2,6-dinitrotoluene (4-Am-DNT)	9306	NELAP	PA	01/19/2005
EPA 8330	B	10308006	4-Nitrotoluene	9513	NELAP	PA	01/19/2005
EPA 8330	B	10308006	Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	6415	NELAP	PA	01/19/2005
EPA 8330	B	10308006	Nitrobenzene	5015	NELAP	PA	01/19/2005
EPA 8330	B	10308006	Nitroglycerin	6485	NELAP	PA	10/09/2013
EPA 8330	B	10308006	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	9522	NELAP	PA	01/24/2006
EPA 8330	B	10308006	Pentaerythritol tetranitrate (PETN)	9558	NELAP	PA	11/21/2005
EPA 8330	B	10308006	RDX (Hexahydro-1,3,5-trinitro-1,3,5-triazine)	9432	NELAP	PA	01/19/2005
EPA 9012	A	10193405	Total cyanide	1645	NELAP	PA	05/24/2011
EPA 9012	B	10243206	Total cyanide	1645	NELAP	PA	05/24/2011
EPA 9034		10196006	Reactive sulfide	1925	NELAP	PA	01/11/2022
EPA 9045	C	10198400	pH	1900	NELAP	PA	11/19/2008

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

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2425 New Holland Pike
Lancaster, PA 17601-5994
(717) 656-2300

DEP Laboratory ID: 36-00037
EPA Lab Code: PA00009
TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
EPA 9045	D	10198455	pH	1900	NELAP	PA	11/19/2008
EPA 9050	A	10198808	Conductivity	1610	NELAP	PA	01/27/2014
EPA 9050		10198604	Conductivity	1610	NELAP	PA	05/17/2005
EPA 9056	A	10199607	Anions by IC	1522	NELAP	PA	07/05/2018
EPA 9056	A	10199607	Chloride	1575	NELAP	PA	11/27/2019
EPA 9056	A	10199607	Fluoride	1730	NELAP	PA	07/05/2018
EPA 9056	A	10199607	Nitrate as N	1810	NELAP	PA	11/27/2019
EPA 9056	A	10199607	Nitrite as N	1840	NELAP	PA	07/05/2018
EPA 9056	A	10199607	Sulfate	2000	NELAP	PA	07/05/2018
EPA 9071	B	10201806	Oil and grease	1803	NELAP	PA	01/19/2005
EPA 9071	B	10201806	Total petroleum hydrocarbons (TPH)	2050	NELAP	PA	11/19/2015
EPA 9095	A	10204203	Paint filter liquids test	1434	NELAP	PA	01/24/2007
EPA 9095	B	10245600	Paint filter liquids test	1434	NELAP	PA	11/19/2015
EPA Lloyd Kahn Method		60041001	Total organic carbon (TOC)	2040	NELAP	PA	10/09/2013
MA DEP EPH	1.1	90017202	C11-C22 Aromatics	6232	NELAP	PA	07/15/2013
MA DEP EPH	1.1	90017202	C19-C36 Aliphatics	6218	NELAP	PA	07/15/2013
MA DEP EPH	1.1	90017202	C9-C18 Aliphatics	6222	NELAP	PA	07/15/2013
MA DEP VPH	1.1	90017406	C5-C8 Aliphatics	6237	NELAP	PA	07/15/2013
MA DEP VPH	1.1	90017406	C9-C10 Aromatics	6238	NELAP	PA	07/15/2013
MA DEP VPH	1.1	90017406	C9-C12 Aliphatics	9670	NELAP	PA	07/15/2013
MA DEP VPH	2.1	90017451	C5-C8 Aliphatics	6237	NELAP	PA	07/16/2018
MA DEP VPH	2.1	90017451	C9-C10 Aromatics	6238	NELAP	PA	07/16/2018

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PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
MA DEP VPH	2.1	90017451	C9-C12 Aliphatics	9670	NELAP	PA	07/16/2018
NWTPH-Dx		90018409	Diesel-range organics (DRO)	9369	NELAP	PA	12/12/2005
NWTPH-Gx		90018603	Gasoline-range organics (GRO)	9408	NELAP	PA	12/12/2005
SM 2540E - 1997	20th ed.	20051654	Fixed suspended solids	1948	NELAP	PA	01/19/2016
SM 2540E - 1997	20th ed.	20051654	Residue, volatile	1970	NELAP	PA	01/19/2016
SM 2540E - 1997	20th ed.	20051654	Volatile dissolved solids	2056	NELAP	PA	01/19/2016
SM 2540E - 1997	20th ed.	20051654	Volatile suspended solids	2070	NELAP	PA	01/19/2016
SM 2540E - 2011	22nd ed.	20051665	Fixed suspended solids	1948	NELAP	PA	01/19/2016
SM 2540E - 2011	22nd ed.	20051665	Residue, volatile	1970	NELAP	PA	01/19/2016
SM 2540E - 2011	22nd ed.	20051665	Volatile dissolved solids	2056	NELAP	PA	01/19/2016
SM 2540E - 2011	22nd ed.	20051665	Volatile suspended solids	2070	NELAP	PA	01/19/2016
SM 2540G - 1991	19th ed.	20005236	Percent moisture in soil	8641	NELAP	PA	11/19/2015
SM 2540G - 1991	19th ed.	20005236	Residue, total	1950	NELAP	PA	02/25/2014
SM 2540G - 1991	19th ed.	20005236	Residue, volatile	1970	NELAP	PA	11/19/2015
SM 2540G - 1991	19th ed.	20005236	Total, fixed, and volatile residue	1725	NELAP	PA	03/19/2015
SM 2540G - 1997	Online ed.	20005269	Percent moisture in soil	8641	NELAP	PA	11/19/2015
SM 2540G - 1997	Online ed.	20005269	Residue, total	1950	NELAP	PA	02/25/2014
SM 2540G - 1997	Online ed.	20005269	Residue, volatile	1970	NELAP	PA	11/19/2015
SM 2540G - 1997	Online ed.	20005269	Total, fixed, and volatile residue	1725	NELAP	PA	03/19/2015
SM 2540G - 2011	Online ed.	20005270	Percent moisture in soil	8641	NELAP	PA	11/19/2015
SM 2540G - 2011	Online ed.	20005270	Residue, total	1950	NELAP	PA	02/25/2014
SM 2540G - 2011	Online ed.	20005270	Residue, volatile	1970	NELAP	PA	11/19/2015

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DEP Laboratory ID: 36-00037
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TNI Code: TNI02128
PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SM 2540G - 2011	Online ed.	20005270	Total, fixed, and volatile residue	1725	NELAP	PA	03/19/2015
SM 2540G - 2015	Online ed.	20005281	Percent moisture in soil	8641	NELAP	PA	11/19/2015
SM 2540G - 2015	Online ed.	20005281	Residue, total	1950	NELAP	PA	02/25/2014
SM 2540G - 2015	Online ed.	20005281	Residue, volatile	1970	NELAP	PA	11/19/2015
SM 2540G - 2015	Online ed.	20005281	Total, fixed, and volatile residue	1725	NELAP	PA	03/19/2015
SM 4500-NH3 B - 2011	Online ed.	20106018	Ammonia distillation	1404	NELAP	PA	08/30/2019
SM 4500-NH3 C - 2011	Online ed.	20108412	Ammonia as N	1515	NELAP	PA	08/30/2019
SOP (00037) T-PFAS-WI12031	10	60002890	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	9490	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2-FTS)	6948	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	1H, 1H, 2H, 2H-Perfluorododecane sulfonic acid (10:2-FTS)	9616	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2-FTS)	6946	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2-FTS)	6947	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	4,8-Dioxa-3H-perfluorononanoic acid (DONA)	6951	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	6952	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Hexafluoropropylene oxide dimer acid (HFPO-DA)	9460	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	N-Ethylperfluorooctanesulfonamide (EtFOSA)	9395	NELAP	PA	11/03/2020

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PADWIS ID: 36037

Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (00037) T-PFAS-WI12031	10	60002890	N-Methylperfluorooctanesulfonamide (MeFOSA)	9433	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	N-ethylperfluoro-1-octanesulfonamido ethanol (N-EtFOSE)	9431	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	N-methylperfluoro-1-octanesulfonamido ethanol (N-MeFOSE)	6949	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorobutanesulfonic acid (PFBS)	6918	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorobutanoic acid (PFBA)	6915	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorodecane sulfonic acid (PFDS)	6920	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorodecanoic acid (PFDA)	6905	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorododecane sulfonic acid (PFDoS)	6923	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorododecanoic acid (PFDoA)	6903	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluoroheptanesulfonic acid (PFHpS)	9470	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluoroheptanoic acid (PFHpA)	6908	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorohexadecanoic acid (PFHxDA)	6901	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorohexanesulfonic acid (PFHxS)	6927	NELAP	PA	11/03/2020

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Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorohexanoic acid (PFHxA)	6913	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorononane sulfonic acid (PFNS)	6929	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorononanoic acid (PFNA)	6906	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorooctadecanoic acid (PFODA)	6916	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorooctane sulfonamide (PFOSA)	6917	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorooctanesulfonic acid (PFOS)	6931	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorooctanoic acid (PFOA)	6912	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluoropentane sulfonic acid (PFPeS)	6934	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluoropentanoic acid (PFPeA)	6914	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorotetradecanoic acid (PFTA)	6902	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluorotridecanoic acid (PFTrDA)	9563	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	Perfluoroundecanoic acid (PFUnA)	6904	NELAP	PA	11/03/2020
SOP (00037) T-PFAS-WI12031	10	60002890	n-Ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4846	NELAP	PA	11/03/2020

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Matrix: Solid and Chemical Materials

Method	Revision	TNI Method Code	Analyte	TNI Analyte Code	Accreditation Type	Primary State	Effective Date
SOP (00037) T-PFAS-WI12031	10	60002890	n-Methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	4847	NELAP	PA	11/03/2020
TX1005 (TNRCC)	3	90019208	Total petroleum hydrocarbons (TPH)	2050	NELAP	PA	12/12/2005
TX1006 (TNRCC)		90019220	Total petroleum hydrocarbons (TPH)	2050	NELAP	PA	12/12/2005

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APPENDIX G
EPA RSL CALCULATOR BACKUP FILE

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Site-specific Recreator Sediment Inputs

Variable	Recreator Soil Default Value	Site-Specific Value
A (PEF Dispersion Constant)	16.2302	16.2302
A (VF Dispersion Constant)	11.911	11.911
A (VF Dispersion Constant - mass limit)	11.911	11.911
B (PEF Dispersion Constant)	18.7762	18.7762
B (VF Dispersion Constant)	18.4385	18.4385
B (VF Dispersion Constant - mass limit)	18.4385	18.4385
City (PEF Climate Zone) Selection	Default	Default
City (VF Climate Zone) Selection	Default	Default
C (PEF Dispersion Constant)	216.108	216.108
C (VF Dispersion Constant)	209.7845	209.7845
C (VF Dispersion Constant - mass limit)	209.7845	209.7845
foc (fraction organic carbon in soil) g/g	0.006	0.006
F(x) (function dependent on U_m/U_t) unitless	0.194	0.194
n (total soil porosity) L_{pore}/L_{soil}	0.43396	0.43396
p_h (dry soil bulk density) g/cm ^{3}	1.5	1.5
p_h (dry soil bulk density - mass limit) g/cm ^{3}	1.5	1.5
PEF (particulate emission factor) m ^{3}/kg	1359344438	1359344438
p_s (soil particle density) g/cm ^{3}	2.65	2.65
Q/C_{wind} (g/m^2-s per kg/m^3)	93.77	93.77
Q/C_{vol} (g/m^2-s per kg/m^3)	68.18	68.18
Q/C_{vol} (g/m^2-s per kg/m^3 - mass limit)	68.18	68.18
A_s (PEF acres)	0.5	0.5
A_s (VF acres)	0.5	0.5
A_s (VF mass-limit acres)	0.5	0.5
AF_{0-2} (skin adherence factor) mg/cm ^{2}	.	0.2
AF_{2-6} (skin adherence factor) mg/cm ^{2}	.	0.2
AF_{6-16} (skin adherence factor) mg/cm ^{2}	.	0.07
AF_{16-26} (skin adherence factor) mg/cm ^{2}	.	0.07
AF_{rec-a} (skin adherence factor - adult) mg/cm ^{2}	.	0.07

Output generated 26MAR2024:15:03:59

Site-specific Recreator Sediment Inputs

Variable	Recreator Soil Default Value	Site-Specific Value
AF_{rec-c} (skin adherence factor - child) mg/cm ^{2}	.	0.2
AT_{rec} (averaging time)	365	365
BW_{0-2} (body weight) kg	15	15
BW_{2-6} (body weight) kg	15	15
BW_{6-16} (body weight) kg	80	80
BW_{16-26} (body weight) kg	80	80
BW_{rec-a} (body weight - adult) kg	80	80
BW_{rec-c} (body weight - child) kg	15	15
$DFS_{rec-adj}$ (age-adjusted soil dermal factor) mg/kg	.	15360.8
$DFSM_{rec-adj}$ (mutagenic age-adjusted soil dermal factor) mg/kg	.	63627.2
ED_{rec} (exposure duration - recreator) years	26	26
ED_{0-2} (exposure duration) year	2	2
ED_{2-6} (exposure duration) year	4	4
ED_{6-16} (exposure duration) year	10	10
ED_{16-26} (exposure duration) year	10	10
ED_{rec-c} (exposure duration - child) years	6	6
EF_{rec} (exposure frequency) days/year	.	52
EF_{0-2} (exposure frequency) days/year	.	52
EF_{2-6} (exposure frequency) days/year	.	52
EF_{6-16} (exposure frequency) days/year	.	52
EF_{16-26} (exposure frequency) days/year	.	52
EF_{rec-a} (exposure frequency - adult) days/year	.	52
EF_{rec-c} (exposure frequency - child) days/year	.	52
ET_{rec} (exposure time - recreator) hours/day	.	3
ET_{0-2} (exposure time) hours/day	.	3
ET_{2-6} (exposure time) hours/day	.	3
ET_{6-16} (exposure time) hours/day	.	3
ET_{16-26} (exposure time) hours/day	.	3
ET_{rec-a} (adult exposure time) hours/day	.	3

Output generated 26MAR2024:15:03:59

Site-specific Recreator Sediment Inputs

Variable	Recreator Soil Default Value	Site-Specific Value
ET_{rec-c} (child exposure time) hours/day	.	3
THQ (target hazard quotient) unitless	0.1	0.1
$IFS_{rec-adj}$ (age-adjusted soil ingestion factor) mg/kg	.	5460
$IFSM_{rec-adj}$ (mutagenic age-adjusted soil ingestion factor) mg/kg	.	24786.667
IRS_{0-2} (soil intake rate) mg/day	.	200
IRS_{2-6} (soil intake rate) mg/day	.	200
IRS_{6-16} (soil intake rate) mg/day	.	100
IRS_{16-26} (soil intake rate) mg/day	.	100
IRS_{rec-a} (soil intake rate - adult) mg/day	.	100
IRS_{rec-c} (soil intake rate - child) mg/day	.	200
LT (lifetime - recreator) years	70	70
SA_{0-2} (skin surface area) cm^2/day	.	2373
SA_{2-6} (skin surface area) cm^2/day	.	2373
SA_{6-16} (skin surface area) cm^2/day	.	6032
SA_{16-26} (skin surface area) cm^2/day	.	6032
SA_{rec-a} (skin surface area - adult) cm^2/day	.	6032
SA_{rec-c} (skin surface area - child) cm^2/day	.	2373
TR (target risk) unitless	1.0E-06	1.0E-06
T_w (groundwater temperature) Celsius	25	25
$Theta_a$ (air-filled soil porosity) L_{air}/L_{soil}	0.28396	0.28396
$Theta_w$ (water-filled soil porosity) L_{water}/L_{soil}	0.15	0.15
T (exposure interval) s	819936000	819936000
T (exposure interval) yr	26	26
U_m (mean annual wind speed) m/s	4.69	4.69
U_t (equivalent threshold value)	11.32	11.32
V (fraction of vegetative cover) unitless	0.5	0.5

Site-specific

Recreator Risk-Based Regional Screening Levels (RSL) for Sediment

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = OW; R = ORD; N = WI; W = TEF applied; E = RPF applied; G = see user guide; U = user provided; ca = cancer; nc = noncancer; * = where: nc SL < 100X ca SL; ** = where nc SL < 10X ca SL; SSL values are based on DAF=1; max = ceiling limit exceeded; sat = Csat exceeded.

Chemical	CAS Number	Mutagen?	Volatile?	Chemical Type	SF_o (mg/kg-day)$^{-1}$	SF_o Ref	IUR (ug/m^3)$^{-1}$	IUR Ref	RfD (mg/kg-day)	RfD Ref	RfC (mg/m^3)	RfC Ref
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	No	Yes	Organics	-		-		3.00E-06	D	-	
Perfluorobutanesulfonic acid (PFBS)	375-73-5	No	No	Organics	-		-		3.00E-04	P	-	
Perfluorobutanoic acid (PFBA)	375-22-4	No	Yes	Organics	-		-		1.00E-03	I	-	
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	No	No	Organics	-		-		2.00E-05	A	-	
Perfluorohexanoic acid (PFHxA)	307-24-4	No	No	Organics	-		-		5.00E-04	I	-	
Perfluorononanoic acid (PFNA)	375-95-1	No	No	Organics	-		-		3.00E-06	A	-	
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	No	No	Organics	-		-		2.00E-06	A	-	
Perfluorooctanoic acid (PFOA)	335-67-1	No	No	Organics	7.00E-02	D	-		3.00E-06	A	-	

Site-specific

Recreator Risk-Based Regional Screening Levels (RSL) for Sediment

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = OW; R = ORD; N = WI; W = TEF applied; E = RPF applied; G = see user guide; U = user provided; ca = cancer; nc = noncancer; * = where: nc SL < 100X ca SL; ** = where nc SL < 10X ca SL; SSL values are based on DAF=1; max = ceiling limit exceeded; sat = Csat exceeded.

GIABS	ABS	RBA	Soil Saturation Concentration (mg/kg)	S (mg/L)	K_{oc} \ (cm^3/g)	K_d \ (cm^3/g)	HLC (atm-m^3/mole)	Henry's Law Constant Used in Calcs (unitless)	H` and HLC Ref	Normal Boiling Point BP (K)	BP Ref	Critical Temperature T_c \ (K)	T_c \ Ref
1	-	1	1.92E+06	7.56E+05	4.07E+02	2.44E+00	2.50E-04	1.02E-02	EPA OW	402.15	EPA OW	-	
1	0.1	1	-	2.57E+05	6.17E+01	3.00E-01	-	-		471.15	3M	-	
1	-	1	2.57E+03	4.61E+03	7.59E+01	4.55E-01	1.19E-04	4.87E-03	PHYSPROP	394.95	3M	-	
1	0.1	1	-	2.43E+02	1.12E+02	-	-	-		511.65	3M	-	
1	0.1	1	-	2.50E+05	2.04E+01	-	2.35E-10	9.61E-09	CompTox	430.15	3M	-	
1	0.1	1	-	1.30E+03	2.46E+02	4.00E+00	-	-		491.15	3M	-	
1	0.1	1	-	6.80E+02	3.72E+02	7.42E+00	4.34E-07	1.77E-05	3M	522.15	3M	-	
1	0.1	1	-	9.50E+03	1.15E+02	1.50E+01	3.57E-06	1.46E-04	ATSDR Profile	462.15	3M	-	

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Chemical Type	D_{ia} \ (cm^2/s)	D_{iw} \ (cm^2/s)	D_A \ (cm^2/s)	Particulate Emission Factor (m^3/kg)	Volatilization Factor Unlimited Reservoir (m^3/kg)	Volatilization Factor Mass Limit (m^3/kg)	Volatilization Factor Selected (m^3/kg)	Ingestion SL TR=1E-06 (mg/kg)	Dermal SL TR=1E-06 (mg/kg)	Inhalation SL TR=1E-06 (mg/kg)
PFAS	2.50E-02	6.54E-06	5.38E-06	1.36E+09	4.97E+04	-	4.97E+04	-	-	-
PFAS	2.68E-02	7.10E-06	-	1.36E+09	-	-	-	-	-	-
PFAS	1.95E-02	4.65E-06	9.12E-06	1.36E+09	3.82E+04	-	3.82E+04	-	-	-
PFAS	2.33E-02	6.01E-06	-	1.36E+09	-	-	-	-	-	-
PFAS	2.58E-02	6.77E-06	-	1.36E+09	-	-	-	-	-	-
PFAS	2.13E-02	5.43E-06	-	1.36E+09	-	-	-	-	-	-
PFAS	2.08E-02	5.27E-06	-	1.36E+09	-	-	-	-	-	-
PFAS	2.26E-02	5.79E-06	-	1.36E+09	-	-	-	6.68E+01	2.38E+02	-

Site-specific

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Carcinogenic SL TR=1E-06 (mg/kg)	Ingestion SL Child THQ=0.1 (mg/kg)	Dermal SL Child THQ=0.1 (mg/kg)	Inhalation SL Child THQ=0.1 (mg/kg)	Noncarcinogenic SL Child THI=0.1 (mg/kg)	Ingestion SL Adult THQ=0.1 (mg/kg)	Dermal SL Adult THQ=0.1 (mg/kg)	Inhalation SL Adult THQ=0.1 (mg/kg)	Noncarcinogenic SL Adult THI=0.1 (mg/kg)	Screening Level (mg/kg)
-	1.58E-01	-	-	1.58E-01	1.68E+00	-	-	1.68E+00	1.58E-01 nc
-	1.58E+01	6.66E+01	-	1.28E+01	1.68E+02	3.99E+02	-	1.18E+02	1.28E+01 nc
-	5.26E+01	-	-	5.26E+01	5.62E+02	-	-	5.62E+02	5.26E+01 nc
-	1.05E+00	4.44E+00	-	8.51E-01	1.12E+01	2.66E+01	-	7.90E+00	8.51E-01 nc
-	2.63E+01	1.11E+02	-	2.13E+01	2.81E+02	6.65E+02	-	1.97E+02	2.13E+01 nc
-	1.58E-01	6.66E-01	-	1.28E-01	1.68E+00	3.99E+00	-	1.18E+00	1.28E-01 nc
-	1.05E-01	4.44E-01	-	8.51E-02	1.12E+00	2.66E+00	-	7.90E-01	8.51E-02 nc
5.22E+01	1.58E-01	6.66E-01	-	1.28E-01	1.68E+00	3.99E+00	-	1.18E+00	1.28E-01 nc

Site-specific
Recreator Surface Water Inputs

Variable	Recreator Surface Water Default Value	Site-Specific Value
BW_{0-2} (body weight) kg	15	15
BW_{2-6} (body weight) kg	15	15
BW_{6-16} (body weight) kg	80	80
BW_{16-26} (body weight) kg	80	80
BW_{a} (body weight - adult) kg	80	80
BW_{rec-a} (body weight - adult) kg	80	80
$DFW_{rec-adj}$ (age-adjusted dermal factor) cm^2-event/kg	.	387868
$DFWM_{rec-adj}$ (mutagenic age-adjusted dermal factor) cm^2-event/kg	.	1217042.66
ED_{rec} (exposure duration - recreator) years	26	26
ED_{0-2} (exposure duration) years	2	2
ED_{2-6} (exposure duration) years	4	4
ED_{6-16} (exposure duration) years	10	10
ED_{16-26} (exposure duration) years	10	10
ED_{rec-a} (exposure duration - adult) years	20	20
EF_{rec-w} (exposure frequency) days/year	.	52
EF_{2-6} (exposure frequency) days/year	.	52
EF_{6-16} (exposure frequency) days/year	.	52
EF_{16-26} (exposure frequency) days/year	.	52
EF_{rec-a} (adult exposure frequency) days/year	.	52
ET_{0-2} (exposure time) hours/event	.	3
ET_{2-6} (exposure time) hours/event	.	3
ET_{6-16} (exposure time) hours/event	.	3
ET_{16-26} (exposure time) hours/event	.	3
ET_{rec-a} (adult exposure time) hours/event	.	3
EV_{0-2} (events) events/day	.	1
EV_{2-6} (events) events/day	.	1
EV_{6-16} (events) events/day	.	1
EV_{16-26} (events) events/day	.	1

Site-specific
Recreator Surface Water Inputs

Variable	Recreator Surface Water Default Value	Site-Specific Value
EV_{rec-a} (adult) events/day	.	1
THQ (target hazard quotient) unitless	0.1	0.1
$IFW_{rec-adj}$ (age-adjusted water intake rate) L/kg	.	5.07
$IFWM_{rec-adj}$ (mutagenic age-adjusted water intake rate) L/kg	.	20.54
IRW_{0-2} (water intake rate) L/hour	0.12	0.05
IRW_{2-6} (water intake rate) L/hour	0.12	0.05
IRW_{6-16} (water intake rate) L/hour	0.124	0.05
IRW_{16-26} (water intake rate) L/hour	0.0985	0.05
IRW_{rec} (water intake rate - adult) L/day	0.11	0.05
IRW_{rec-a} (water intake rate - adult) L/hr	0.11	0.05
LT (lifetime - recreator) years	70	70
SA_{0-2} (skin surface area) cm^2	6365	6365
SA_{2-6} (skin surface area) cm^2	6365	6365
SA_{6-16} (skin surface area) cm^2	19652	19652
SA_{16-26} (skin surface area) cm^2	19652	19652
SA_{rec} (skin surface area - adult) cm^2	19652	19652
SA_{rec-a} (skin surface area - adult) cm^2	19652	19652
Apparent thickness of stratum corneum (cm)	0.001	0.001
TR (target risk) unitless	1.0E-06	1.0E-06

Site-specific

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Chemical	CAS Number	Mutagen?	Volatile?	Chemical Type	Chemical Type	SF_o $(mg/kg\text{-}day)^{-1}$	SF_o Ref	RfD (mg/kg-day)	RfD Ref
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13252-13-6	No	Yes	Organics	Organics	-		3.00E-06	D
Perfluorobutanesulfonic acid (PFBS)	375-73-5	No	No	Organics	Organics	-		3.00E-04	P
Perfluorobutanoic acid (PFBA)	375-22-4	No	Yes	Organics	Organics	-		1.00E-03	I
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	No	No	Organics	Organics	-		2.00E-05	A
Perfluorohexanoic acid (PFHxA)	307-24-4	No	No	Organics	Organics	-		5.00E-04	I
Perfluorononanoic acid (PFNA)	375-95-1	No	No	Organics	Organics	-		3.00E-06	A
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	No	No	Organics	Organics	-		2.00E-06	A
Perfluorooctanoic acid (PFOA)	335-67-1	No	No	Organics	Organics	7.00E-02	D	3.00E-06	A

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RfC (mg/m^3)	RfC Ref	RAGSe GIABS (unitless)	K_p (cm/hr)	MW	FA (unitless)	In EPD?	$DA_{event\ (ca)}$	DA_{event} (nc child)	DA_{event} (nc adult)	Ingestion SL TR=1E-06 (ug/L)	Dermal SL TR=1E-06 (ug/L)
-		1	0.0866752	330.1	0.8	Yes	-	4.9625E-6	8.5722E-6	-	-
-		1	0.0000193	300.1	1	Yes	-	0.0004963	0.0008572	-	-
-		1	0.0040619	214	1	Yes	-	0.0016542	0.0028574	-	-
-		1	0.0002581	400.1	1	Yes	-	0.0000331	0.0000571	-	-
-		1	0.0002686	314.1	1	Yes	-	0.0008271	0.0014287	-	-
-		1	0.0001988	464.1	1	Yes	-	4.9625E-6	8.5722E-6	-	-
-		1	4.6851E-7	500.1	1	No	-	-	-	-	-
-		1	0.0000216	414.4	1	Yes	0.000941	4.9625E-6	8.5722E-6	7.20E+01	1.94E+03

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Carcinogenic SL TR=1E-06 (ug/L)	Ingestion SL (Child) THQ=0.1 (ug/L)	Dermal SL (Child) THQ=0.1 (ug/L)	Noncarcinogenic SL (Child) THQ=0.1 (ug/L)	Ingestion SL (Adult) THQ=0.1 (ug/L)	Dermal SL (Adult) THQ=0.1 (ug/L)	Noncarcinogenic SL (Adult) THQ=0.1 (ug/L)	Screening Level (ug/L)
-	2.11E-01	5.49E-03	5.35E-03	1.12E+00	9.48E-03	9.40E-03	5.35E-03 nc
-	2.11E+01	2.40E+03	2.09E+01	1.12E+02	4.14E+03	1.09E+02	2.09E+01 nc
-	7.02E+01	6.60E+01	3.40E+01	3.74E+02	1.14E+02	8.74E+01	3.40E+01 nc
-	1.40E+00	6.26E+00	1.15E+00	7.49E+00	1.08E+01	4.42E+00	1.15E+00 nc
-	3.51E+01	2.62E+02	3.09E+01	1.87E+02	4.52E+02	1.32E+02	3.09E+01 nc
-	2.11E-01	8.07E-01	1.67E-01	1.12E+00	1.39E+00	6.22E-01	1.67E-01 nc
-	1.40E-01	-	1.40E-01	7.49E-01	-	7.49E-01	1.40E-01 nc
6.94E+01	2.11E-01	1.02E+01	2.06E-01	1.12E+00	1.77E+01	1.06E+00	2.06E-01 nc

APPENDIX H
DoD MAY 1, 2024 MEMORANDUM

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ASSISTANT SECRETARY OF DEFENSE
3400 DEFENSE PENTAGON
WASHINGTON, DC 20301-3400

ENERGY, INSTALLATIONS,
AND ENVIRONMENT

May 1, 2024

MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY (INSTALLATIONS, ENERGY AND ENVIRONMENT)
ASSISTANT SECRETARY OF THE NAVY (ENERGY, INSTALLATIONS AND ENVIRONMENT)
ASSISTANT SECRETARY OF THE AIR FORCE (INSTALLATIONS, ENVIRONMENT AND ENERGY)
DIRECTOR, NATIONAL GUARD BUREAU (JOINT STAFF, J8)
DIRECTOR, DEFENSE LOGISTICS AGENCY (INSTALLATION MANAGEMENT)

SUBJECT: Establishing a Consistent Methodology for the Analysis of Per- and Polyfluoroalkyl Substances in Matrices Other than Drinking Water

This policy identifies requirements for sampling of Per- and Polyfluoroalkyl Substances (PFAS) in environmental matrices other than drinking water. This memorandum supersedes and cancels the Assistant Secretary of Defense for Sustainment memorandum, *Update for Establishing a Consistent Methodology for the Analysis of Per- and Polyfluoroalkyl Substances in Media Other than Drinking Water*, August 7, 2023.

For definitive analysis of PFAS in matrices other than drinking water, the DoD Components will use U.S. Environmental Protection Agency (EPA) Method 1633, *Analysis of Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous, Solid, Biosolids, and Tissue Samples by LC-MS/MS*.[1] The DoD Environmental Data Quality Workgroup (EDQW) has determined that all versions of EPA Method 1633 (i.e., draft and final versions) meet the precision, accuracy, and limits of quantitation needed to support definitive decision-making.

Project-specific analyte lists shall include all PFAS in EPA Method 1633, unless the project conceptual site model eliminates a PFAS as a contaminant of concern. Additional PFAS may be added to the analyte list as necessary.[2] DoD Components will only use a laboratory accredited by the DoD Environmental Laboratory Accreditation Program (ELAP) for all PFAS analyzed in each matrix. Laboratories capable of meeting the DoD ELAP requirements applicable to EPA Method 1633 can be found at www.denix.osd.mil/edqw/accreditation/accreditedlabs, under “Draft EPA Method 1633” or “EPA 1633” in the Method dropdown box.

[1] The DoD Components may still use a method compliant with Table B-15 of the *DoD/DOE Quality Systems Manual for Environmental Laboratories* for definitive analysis of PFAS in matrices other than drinking water if required by contracts awarded before January 2022.
[2] The laboratory must validate performance, and establish quality control criteria for any additional PFAS, as required by DoD ELAP. This information must be documented in the laboratory’s procedure.

Other methods for analysis may be considered for screening samples to determine the presence or magnitude of PFAS concentration, but not to confirm absence. The use of alternative screening methods for a location must be approved by a project representative from the DoD (e.g., chemist). Methods other than EPA Method 1633 shall not be used to analyze samples for regulatory compliance, risk assessment, or comparison to a project screening or action level. Although laboratory accreditation under the DoD ELAP is not required for a screening method, it is highly recommended that an accredited laboratory is used to help ensure a minimum level of quality assurance and quality control.

Project planning documents developed after the signature date of this memorandum should incorporate the quality control measures and acceptance criteria from the final version of EPA Method 1633 and the requirements of Table B-24 of the DoD/DOE Quality Systems Manual for Environmental Laboratories (QSM) Version 6.0, regardless of the version of the method on the laboratory's scope of accreditation. Projects may include additional quality control measures and/or stricter acceptance criteria as needed to meet project data quality objectives.

The point of contact for this matter is Mr. Brian Jordan at 703-409-8657 or brian.d.jordan6.civ@mail.mil.

Sincerely,

OWENS.BRENDAN.M.1030451844

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Brendan M. Owens