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MONTHLY REPORT OF THE OPERATIONS & MAINTENANCE ACTIVITIES (FEBRUARY 2023)

**CLAREMONT POLYCHEMICAL
OPERABLE UNIT 5 GROUND
WATER TREATMENT
SYSTEM, OLD BETHPAGE, NY**

**MONTHLY REPORT OF THE OPERATIONS & MAINTENANCE
ACTIVITIES (FEBRUARY 2023)
CLAREMONT POLYCHEMICAL OPERABLE UNIT 5 GROUND
WATER TREATMENT SYSTEM, OLD BETHPAGE, NY**

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LIST OF ACRONYMS AND ABBREVIATIONS

AS	Air Stripper
A/V	Air and Vacuum
ASF	Air Stripper feed
BNA	Base Neutral & Acid Extractables
CPC	Claremont Polychemical
CSE	Confined Space Entry
DOSR	Daily Operations Summary Report
EE	Electrical Engineer
GES	Groundwater & Environmental Services, Inc.
GPM	Gallons Per Minute
GWTS	Groundwater extraction, treatment, and reinjection system
HDR	Henningson, Durham & Richardson Architecture and Engineering, P.C.
HMI	Human Machine Interface
HVAC	Heating, Ventilation, and Air Conditioning
MTBA	Tert-Butyl-Methyl ether
MW	Monitoring Well
NYSDEC	New York State Department of Environmental Conservation
O&M	Operation and Maintenance
OU4	Operable Unit 4
OU5	Operable Unit 5
PD	Plant Discharge
PDB	Passive Diffusion Bag
PFAS	Per- and polyfluoroalkyl substances
PFOS	Perfluorooctanesulfonic acid
PFOA	Perfluorooctanoic acid
PID	Photoionization Detector
PFF	Pressure Filter Feed
PLC	Programmable Logic Controller
ppm	parts per million
PW	Process Water
Ramboll	Ramboll Americas Engineering Solutions, Inc.
RW	Recovery Well, Process Well
SPEDES	State Pollutant Discharge Elimination System
SSHP	Site Safety and Health Plan
SU	Standard pH Units
SVOCs	Semi-Volatile Organic Compounds
TBA	Tert-butyl alcohol
TDS	Total Dissolved Solids
TKN	Total Kjeldahl Nitrogen
TOC	Total Organic Carbon
TSS	Total Suspended Solids
US Water	US Water Services Corporation
VOCs	Volatile Organic Compounds,

1. OPERATION AND MAINTENANCE ACTIVITIES

On behalf of Ramboll Americas Engineering Solutions, Inc. (Ramboll), Groundwater & Environmental Services, Inc. (GES) continued the daily operation and maintenance (O&M) of the Claremont Polychemical (CPC) Superfund Site Groundwater Treatment System (GWTS) Operable Unit 5 (OU5) during the month of February 2023. In addition, former Operable Unit (OU4) was inspected once per month to ensure security and building code compliance. For this report every time plant is mentioned it refers to OU5. OU4 will be referred to as such whenever discussed. This report covers the O&M activities for the system during the period defined as beginning at approximately 0830 hours, February 1, 2023, through approximately 0830 hours, March 1, 2023. O&M conducted during this reporting period was guided by the site O&M Manual.

The GWTS – treatment plant, grounds, and well systems - were maintained for the 28 days in this reporting period during which the treatment system experienced no downtime.

Readings of the key plant process parameters are normally recorded each workday. These readings and the Human Machine Interface (HMI) flow trend lines are used to monitor the system's performance and condition. Selected readings are recorded in the daily database which is an electronic file maintained in the monthly operating documents folder. If the plant is not occupied, the system is monitored remotely, however due to account transition from Henningson, Durham & Richardson Architecture and Engineering, P.C. (HDR) to the New York State Department of Environmental Conservation (NYSDEC), the internet service was disconnected on August 9, 2022. The system internet service was restored on February 28, 2023.

The treatment process control and alarm systems are functional. The recovery well pumps, process pumps, and air stripper blower are operated in the automatic mode and are normally remotely controlled and monitored. RW4 recovery pump shut down on August 17th, 2022 and could not be restarted due to a possible pump motor failure. RW5 recovery pump was replaced on October 10, 2022, but was started on January 5, 2023, following the replacement of a high-pressure switch on top of the wellhead. RW-5 shut down on January 26, 2023, due to pump motor short circuiting.

1.1 Daily Operations Summary Reports

The GWTS's daily operations and maintenance activities, project tasks, and observations during this period are briefly described in the Daily Operations Summary Report (DOSR). The DOSR is based in part on the treatment system's daily operating worksheets and logs which include:

- Daily Operating Log – flow readings and calculations (Form-01)
- Daily Site and Safety Inspection – plant condition checklist (Form-02)
- Daily Plant Activity Notes – plant manager's daily summary (Form-03)
- Sign-In Sheet – GES/Ramboll employee on-site hours (Form-15)
- Daily Process Data Sheet – point process readings (Form-30)
- Logbook CPC 5-8– plant operator's daily logbook
- Daily Database – daily process readings (February 22 Database.xlsx)
- NYSDEC Log-in Sheet – Entry/Exit Log with COVID-19 Acknowledgement

1.2 Summary of Maintenance Activities

The operation and maintenance of the treatment system, facility, and associated equipment is performed in accordance with the site O&M Manual. These tasks and inspections incorporate the equipment manufacturers' recommendations, operations experience, and good engineering and maintenance practices. A detailed accounting of the February activities is further provided in the plant operator's daily logbook.

Maintenance and project activities undertaken during the February period included:

- Routine and general maintenance tasks were conducted at the plant, on the grounds, and in the well fields.
- Single Air Stripper Feed (ASF) pumps were placed into hand mode and frequently switched to cycle their activity.
- The monthly process equipment tests were conducted.
- The Operable Unit 4 (OU4) comprehensive inspections were completed.
- The monthly Process/Recovery Well (RW) system inspection was completed.
- Basin 33 was inspected.
- The ASF pumps were lubricated, and the seals tightened.
- The OU5 comprehensive inspections were completed.
- The Pressure Filter Feed (PFF) pumps were lubricated, and the seals tightened.
- The fire alarm system components were inspected.
- The monthly electrical device survey was completed.
- The SUNY wellfield was inspected.

1.3 Maintenance Logs

The following operating logbooks are currently in use and maintained at OU5:

- CL-18 OU-4 Log (at OU4)
- CL-43 General Field Support Log (truck)
- CL-47 Misc. Projects Field Notebook (Pawel Mecinski)
- CPC 5-4 Project Support Logbook (site)
- CPC 5-8 Site Supervisor's Daily Logbook (Pawel Mecinski).

Except for log CPC 5-7, the completed logbooks associated with the project have been scanned, all are in storage at OU5, and are available for review.

2. TECHNICAL SUPPORT ACTIVITIES

2.1 GES/Ramboll Personnel

- GES maintained the system throughout the period.

2.2 NYSDEC Personnel, Sub - contractors, and Other Visitors

- On February 3, 2023, Joe Healey from Healey Electric was on-Site to troubleshoot 460V lines at recovery well RW-5.
- On February 28, 2023, Verizon technician restored internet service to the OU-5 building.

2.3 Deliveries

- On February 1 and 3, 2023, FedEx delivered sampling coolers for the upcoming remedial system sampling events scheduled for February 2023.
- On February 22, 2023, FedEx and UPS delivered sampling coolers for the Q1 2023 groundwater sampling event.
- On February 24 and 27, 2023, FedEx and UPS deliveries were made and sampling equipment and coolers were delivered for the upcoming system and groundwater sampling events.

3. HEALTH AND SAFETY

Work at the Claremont GWTS OU5 was conducted in accordance with the approved and Ramboll adopted Site Safety and Health Plan (SSHP). Safety related activities during this period included:

- The water remained off at OU4. Both potable and non-potable lines were drained. (No sanitary water)
- Daily site safety inspections were completed as part of the routine O&M activities.

4. PLANNED ACTIVITIES AND SCHEDULES

The evaluation of the plant operating system and equipment is ongoing by GES/Ramboll. A list in the form of corrective actions or maintenance tasks has been generated as a monthly system status report. These reports are updated as needed and reviewed at least monthly. Both are electronically filed. The corrective action list is included at the end of this report as **Table 1** – Claremont Corrective Action Summary.

Upcoming tasks include:

- OU4 remains without water to the fire sprinkler system due to no heat in the building.
- OU4 potable water line was shut off due to pipe ruptures from frozen pipes.
- RW5 requires removal and inspection of pump motor components due to motor windings shorting to ground.
- RW4 pump motor inspection and replacement due to recent failure.
- Air valve at MW-6 cluster in Bethpage State Park reinsertion.
- Investigate plant electric driven back-up heater failures.
- Close and exercise all globe valves at the non-operational recovery wells.

5. MONITORING WELL WATER ELEVATIONS

The monitoring well system's groundwater elevation data table was updated after the December quarterly GW elevation recording task. This database is available for review. The next set of synoptic water level measurements was conducted in February 2023 by Ramboll.

6. TREATMENT SYSTEM FLOWS

During the February period, the plant continued to operate in the auto control mode. The volume of treated water discharged by the treatment system to the selected recharge basin was calculated from the plant influent and effluent flow meter readings. These readings are taken at the HMI and recorded in the daily database.

RW5 pressure switch was replaced on January 5, 2023 and the well was successfully restarted on automatic run mode. RW-5 experienced electrical short across the motor windings on January 26, 2023 and has been confirmed inoperable until further inspection of the pump motor. RW3 continues to function normally. RW4 has been offline since August 17, 2022 with pump replacement pending.

During the month of February, the plant discharge was directed to Recharge Basin 1, due to Recharge Basin 33 being close to overfill condition.

The total volume of treated water discharged from ~0830 hours February 1 to ~0830 hours March 1 was approximately 9,465,000 gallons. The data in **Table 2** is a summary of plant discharge flows.

A graphic representation of the system's daily plant discharge output is provided in **Figure 1** and the daily plant totalizer readings for February are provided in **Table 3**, both following the text of this report.

Under current conditions, the PLC and the control system are functioning as designed. Flows from the individual recovery wells are remotely read, transmitted, and totalized.

The flow summary for the individual components of the system can be found in **Table 4** at the end of this report.

7. CHEMICAL CONSUMPTION

The hydrochloric acid feed system is currently off-line, and the system is void of acid. There are four drums of virgin acid on site. No acid was used for water treatment purposes in February of 2023.

The sodium hydroxide storage system is currently not in use and the system is empty of caustic. There is no bulk sodium hydroxide on site and no caustic was used in February of 2023.

The sodium hypochlorite storage system is currently not in use and the system is empty of bleach. No bulk sodium hypochlorite is stored on site. No sodium hypochlorite was used in February of 2023.

8. WASTE DISPOSALS

Routine accumulation of waste materials continued from plant clean-up and organizational tasks. Waste removal is being handled by National Waste Services, LLC. Waste container was emptied on December 30, 2022.

9. MONTHLY DISCHARGE MONITORING REPORT

The GWTS is operated under an equivalency permit from the NYSDEC. **Table 5** presents the Claremont OU5 O&M Sampling and Measurement requirements and their frequency. The analytical results for the plant discharge sampling conducted on February 10, 2023 indicate that the analyzed parameters were compliant with permit limits (**Table 6**). Monthly system sampling analytical results are provided in **Attachment 1**.

The OU5 GWTS plant's water discharge permit is in the process of being renewed by the NYSDEC.

10. PENDING ISSUES AND CONSIDERATIONS

Mechanical repairs have been made to the plant HVAC system at OU4. Upon testing, the gas supply appeared to be shut off. Ramboll is currently planning demolition of the OU4 building.

The sprinkler system at OU4 remains drained of water. The potable and non-potable water lines at OU4 have been drained.

The discrepancies/inaccuracies in the plant flow meter readings at OU5 may be due to the inappropriate configuration of the local piping. Future calibration or adjustment of pulse reading may be required.

Following PLC troubleshooting at RW5, a new replacement pressure switch has been ordered for the pump wellhead. A temporary used pressure switch was taken from RW2 and installed at RW5, which enabled successful operation of the pump in auto mode. RW5 experienced a line over-amperage and possible motor windings short on January 26, 2023 and could not be restarted. The pump requires inspection for motor winding and motor down-well conduit damage.

RW4 needs a motor replacement following failure on August 17, 2022.

The 2.5-inch drain valve on system effluent pipe was replaced on January 26, 2023.

All three electric plant back-up heaters do not operate. These units should be repaired as soon as possible. The plant HVAC heat is currently operational, however during the recent cold weather, the system struggled to produce heat in the plant area.

The OU4 plant is offline and its disposition including that of the injection well system, and vapor carbon beds is pending.

The status of key aspects of OU4 are as follows:

- The plant heat is currently off, and the system is out of service.
- The fire alarm panels are off-line.
- The fire sprinkler system is currently off-line. The water has been drained from the system. An alarm system for the sprinkler has been installed with central monitoring.
- The facility is secure, and its physical monitoring continues.
- The facility and grounds are not maintained except for the facility entrance and plant egress points.
- NYSDEC plans on decommissioning and demolishing OU4. A team from Ramboll is in the process of developing bid documents for this work.

11. PLANT DOCUMENTS

Procedures and standard forms are written, reviewed, and revised as needed. As-built drawings are generated and updated as necessary.

12. MONITORING RESULTS

The CPC GWTS is monitored through the analysis of off-site laboratory analytical data and on-site field data.

12.1 Off-site Analytical Data Results

Monthly Plant Discharge (PD) samples are taken for organic analysis in compliance with the NYSDEC discharge permit. Quarterly groundwater samples are taken for organic analysis, and quarterly process water (PW) samples are taken for organic, inorganic, and generic analysis. At the direction of the NYSDEC in an August 17, 2022 email, analysis of Per- and polyfluoroalkyl substances (PFAS) and 1,4-dioxane were added to monthly sampling for both influent and effluent for the foreseeable future. The February 2023 PFAS and 1,4-dioxane influent and effluent results can be found in **Table 7** following the text of this report. Monthly system sampling analytical results are provided in **Attachment 1**.

The February sampling activities included:

- The February PD data was processed and submitted.
- Monthly system sampling was completed on February 10, 2023.

12.2 Field Data

12.2.1 Plant Discharge pH and Temperature

The treatment plant effluent is monitored for pH and temperature on a weekly basis to obtain a monthly average in compliance with the NYSDEC discharge permit requirements. These measurements are taken from the plant effluent at a controlled point with a calibrated portable meter. The plant discharge readings for February 2023 can be found in **Table 8** following the text of this report.

The February 2023 average pH measurement was 7.36 standard units (su). The NYSDEC discharge permit requires the plant discharge to have an average monthly pH between 6.5 and 8.5 su. The results for this month meet this requirement. Data showing the plant discharge's monthly average pH trend over several months is provided in **Table 9** following the text of this report.

12.2.2 Air Stripper (AS) Tower Air Monitoring

Using a calibrated photoionization detector (PID), the vapor discharge from the air stripper tower was monitored weekly for volatile organic compounds (VOCs). The measurements were taken from the tower's effluent air stream through Port B when the treatment system is online. The February 2023 readings from the AS tower are provided in **Table 10**.

Other routine data collected in February included:

- The electric and water meter readings at OU5 were recorded weekly.
- The plant vaults and selected areas were monitored for VOCs weekly.
- The plant sound levels were recorded bi-weekly.
- The monthly electric and gas meter readings for OU4 were recorded.
- The recharge basins were inspected weekly.
- The differential pressure readings across the AS Tower were recorded bi-weekly.

13. PROCESS ANALYSIS AND SYSTEM STATUS

The treatment system is currently operated 24/7 in the automatic mode. It is remotely monitored as necessary.

13.1 Extraction (RW) Processes

- The monthly system inspection was completed.
- The vault space heating units are active.
- The recovery well pump system is remotely controlled and monitored, it operates in the auto mode. The pump at RW3 is online and fully functional. RW4 was fully functional until August 17, 2022 when it experienced a possible motor failure. RW5 experienced problems beginning on March 12, 2022, that left it inoperable through the end of October 2022. Pump replacement was conducted on October 10, 2022, however, due to signal issues, the pump could not be operated in automatic mode. A pressure switch was taken from RW2 and installed in RW5 on January 5, 2023. A new replacement pressure switch has been ordered and will be installed upon delivery. The pump was activated on January 5, 2023 and shut down on January 26, 2023 due to electrical short issues at the pump motor.
- Pump flow readouts are transmitted to the plant and the totalizers for pumps RW3, and RW4 are fully functional. The flow meter for RW5 occasionally stops transmitting.
- Air/Vacuum (A/V) valve at station 33+96 encountered a leak in May 2022 that required the vault to be pumped out and have its air/vacuum valve removed. Currently a stopper has been fitted to the pit that allows water to flow through the system.
- The Air/Vacuum (A/V) valve at station 16+57 and 17+10 remain isolated from the transmission line.
- RW1 and RW2 are offline and periodically run for preventative maintenance purposes. Their flow meters are not transmitting through the PLC. When repairs were made at RW1 in

November 2021, stones were removed from the flow meterhousing. There was a thick coating of iron salt deposits on the housing and impeller.

13.2 AS Process

- The three OU5 ASF pumps in the AS Process are fully functional.
- Motors and seals were lubricated on a bi-weekly schedule. Seals were tightened and the drains were cleared as necessary.
- The AS tower main drain valve's manual actuator is not functional (fail open).
- The tower media appears clean as the pressure differential between the top and bottom ports remains relatively constant. The lower section of media has been visually inspected.
- The discharge valves for ASF P1 and P2 appear to be frozen in the open position.

13.3 PD Process

- The plant discharge flow is currently directed to Recharge Basin 33. The flow was switched to Recharge Basin 1 on January 26, 2023 due to RB#33 being close to overflow.
- The valve influent to Recharge Basin 33 remains closed as of January 26, 2023.
- Pump 1 has been taken out of service due to excessive noise and vibration. A full evaluation is required. Pumps 2 and 3 are fully functional.
- The motors and seals were lubricated as necessary.
- The discharge valve for PFF P3 has failed open.

13.4 Other

- The plant's first bank of lights is wired to the emergency-light recharging system. The circuit is kept on 24/7. The lamps appear burnt out. The second bank of lights provides sufficient lighting for general tasks. Additional work lights were installed around the plant area to further illuminate work areas.
- The potential for leaks in the water supply line running through the plant will continue to be monitored.
- The fire alarm and central monitoring systems are fully functional.

14. GROUNDS

14.1 Plant Perimeter

- General outdoor clean-up tasks are on-going.
- The fencing is clear and secure.

14.2 Well Field

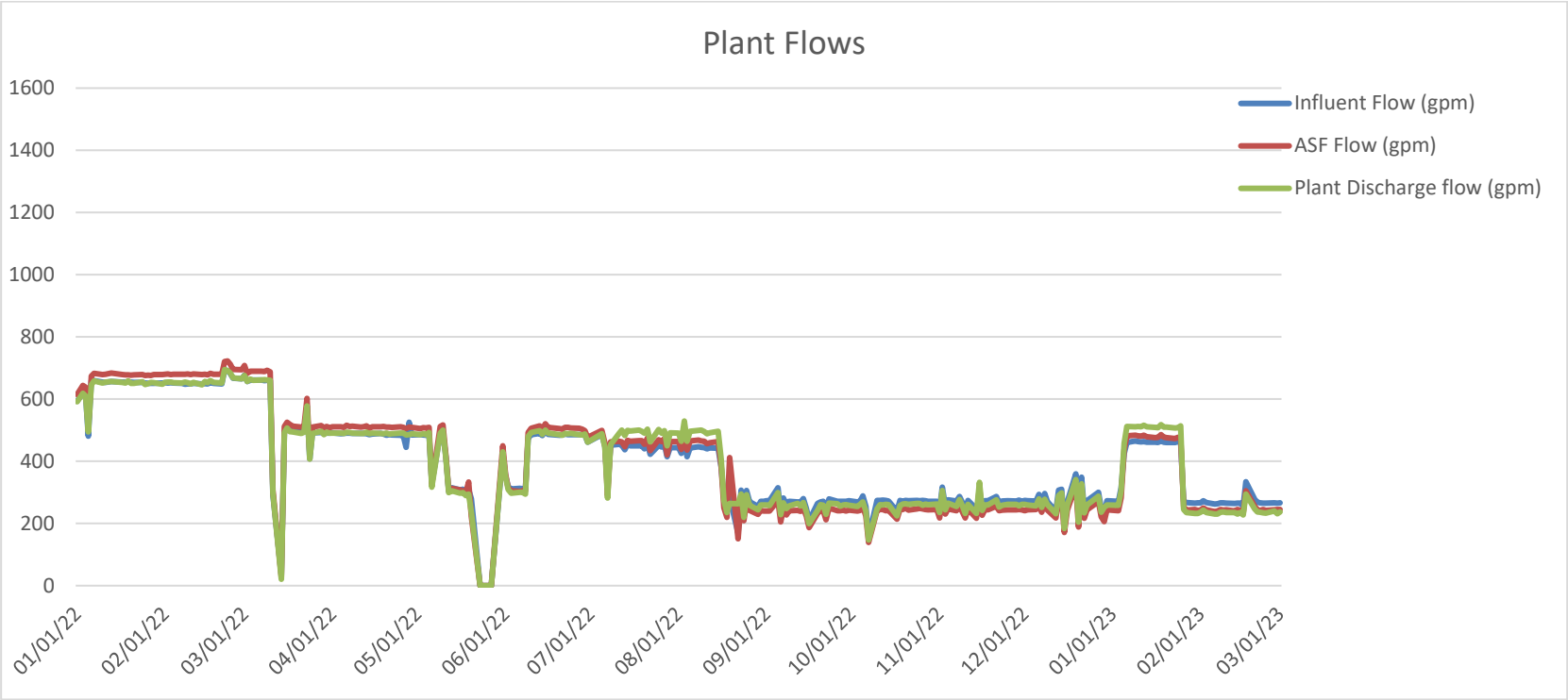
- Well field, and recharge basin inspections continue.

14.3 Other

- The CPC GWTF OU4 is secure.
- The property at and around the OU4 site continues to be inspected. While the grounds are not maintained, the treatment plant's entrance and egress points are kept clear and functional.

FIGURE

Figure 1
Plant Discharge Daily Flow



TABLES

Table 1
Claremont Corrective Actions Summary

Condition to be Corrected	Status and Actions	Resources	Plant Ops Impact	Health & Safety Impacts
The RW Discharge Manifold integrity is suspect	The condition of the various devices on the RW discharge manifold are suspect. The Air Vent valve in the vault on the N-side of the 6th fairway is leaking from the influent nipple. The shut-off valve was closed and the device isolated. The air-vent valve in the vault to the east of the 6th green is leaking. The shut-off valve was closed and the device isolated. The manifold employs isolation, venting, and drain valves as well as other devices. Along the path of the manifold are vaults which house some of these devices. These vaults need to be accessed, pumped out, and the devices tested. Two isolation valves were closed between RW1 and RW3. These valves seemed to hold.	Plant staff and outside contractors	Possible shutdown	May require a Confined Space Entry (CSE)
AS Tower main drain valve is not controlled	The valve does not respond to manipulation of its actuator. <i>This valve should be replaced.</i> <i>No further action is planned at this time.</i>	Operator	Plant will need to be shut down to change out the valve	None

Condition to be Corrected	Status and Actions	Resources	Plant Ops Impact	Health & Safety Impacts
OU4 fire alarm system is not functioning Central monitoring of the fire alarm system or fire suppression system does not exist OU4 electrical system has been unstable	The Nassau County Fire Code indicates that the sprinkler system must have central monitoring for flow and valve tampering. The fire alarm system needs to be replaced and centrally monitored. Several contractors have been at the site to propose options for the system. BK Fire installed central monitoring on the sprinkler system. Both are offline as the sprinkler system will remain drained until the HVAC system is repaired. Certain OU4 lights currently create a large amount of noise in the fan box within the control room. The southern lights flicker and then die including the emergency system. OU4 is currently being planned for demolition.	Plant operator, Electrical Engineer (EE) and outside vender	None at this time	Fire code violations. High altitude tasks, safety code violations
Several leaks were observed in the plant overhead water supply line	Adjacent to the north door a clam-shell type clamp was applied. The second leak observed above the AS Blower is not readily accessible. It is not problematic. <i>Repair work may require evaluation and outside resources. Currently the situation is controlled.</i>	Outside plumbing contractor	None	Sanitary water may be shut off during repairs

Condition to be Corrected	Status and Actions	Resources	Plant Ops Impact	Health & Safety Impacts
The float controls for the PFF pump system have intermittently shorted out causing the system to not properly control the pumping operation	The wiring of the pump control system is connected below grade. The junction box in the wet well is thought to be filled with water creating a problem with the float switches to control relay wiring. The box cannot be opened without damage to it and the conduit. This appears to have been a longstanding problem, as when switches have been replaced in the past, they were spliced outside the box. The float switches have been replaced and spliced above the sump but there remains a problem with the L2 circuit. The output from the W-2 relay was moved to the output for the W-1 relay. This has stopped the short cycling. <i>The control wiring should be changed and moved above grade. Currently the second splices to the floats are above ground outside the vault.</i>	Plant operator and GES resources	Plant shut down is required	Possible Confined Space Entry work
PFF P1 has failed	The pump when activated immediately makes a lot of noise, and the pump drop pipe shakes. Smoke/fumes emanated at the Motor-shaft connection. The motor appears to be good. The pump was removed from service, February 24, 2020. <i>It is recommended that the motor be disconnected, lifted, and the mechanical connection checked.</i>	Outside contractors	None anticipated	To be determined

Condition to be Corrected	Status and Actions	Resources	Plant Ops Impact	Health & Safety Impacts
As the ASF pumps cycle off/on, the check valves have started to slam closed. When reactivating, the motor starter contact is rather violent. Both actions tend to rattle the piping and fixtures	There is no available literature regarding the check valves, so the exact description of their functioning parts is to be determined. A softer start/stop control may fix this issue. <i>This will need further investigation. Soft-start equipment and variable frequency controls were discussed.</i>	Plant operator and EE support	If replacement or repairs are necessary, a plant shutdown will be required as the units can- not be isolated	To be determined
The flowmeters for system flow, ASF flow and plant discharge are out of sync with the flow meters on the recovery wells	While the ASF flow meter is the most out of line, it is plumbed correctly. The influent system flow meter and the plant discharge flow meters are piped incorrectly. The same style of relay is used to count pulses, but the meters have not been calibrated. The system needs further investigation to determine if any changes are warranted.	EE support	To be determined	none
EF-4 is not operatable	The fan is controlled through the mezzanine thermostat, but it does not appear to be operating. The fan requires electrical testing. The system was checked, it appears that the fan is not functioning. The fan should be replaced.	EE support	Only in an emergency	Only in an emergency
Wiring nests in main control console	The wiring in the main control console needs to be cleaned up and labeled, to facilitate problem troubleshooting and process improvements.	EE support	A shut down may be necessary	Electrical work

Condition to be Corrected	Status and Actions	Resources	Plant Ops Impact	Health & Safety Impacts
Pressure Filter Feed pump controls	With P1 out of service, the sequencing of pumps allows for the PFF vault to reach HHL conditions in certain circumstances. Reprogram the sequencing to eliminate the position of P1.	EE support	To be determined	To be determined
RW5 has failed	RW5 pump was replaced on October 10, 2022, however due to PLC signal loss, it cannot be operated in automatic mode. GES conducted troubleshooting and parts replacement without success. System controls were examined by a PLC certified technician mid-December and determined pressure switch failure. Used device has been installed while a new one has been ordered. The pump ran on auto mode from January 5, 2023 to January 26, 2023 until an electrical short at the motor disabled the safe operation of the pump.	Plant Operator and Ramboll.	Less water is treated	To be determined
RW4 has failed	RW4 started to experience possible motor thermal overload shutdowns on multiple occasions during August monitoring period. The pump motor fully shut down on August 17, 2022 and all troubleshooting/restarting attempts were unsuccessful. The motor will need to be removed and replaced to restore functions.	Plant Operator and US Water	Less water is treated	To be determined
Air vacuum valve removal	On May 22, 2022 RW4 was shut down due to a leak detected in the field near an air/vacuum valve pit. On May 24, 2022 through May 25, 2022 water was pumped out of the vault and on May 31, 2022 a confined space entry was made to attempt to tighten the valve in an effort to stop the leak. This tightening was unsuccessful, and the valve was removed entirely and replaced with a blank flange until further notice.	GES Mechanical Support	Less water is treated	Confined space entry required to do work in vault

Condition to be Corrected	Status and Actions	Resources	Plant Ops Impact	Health & Safety Impacts
Small leaks at PFF discharge pipe drain line	Small leaks observed at the 2.5-inch diameter PVC drain piping and ball valve. Valve has been replaced with a new brass valve on January 26, 2023.	Plant Operator	Failure of glue points, may cause catastrophic failure in the future.	Slip hazards
Plant Electric Heater UH-3 failure and HVAC system performance	During sub-20 deg.F weather, the emergency electric heater failed. The HVAC system struggled to produce heat and the plant temperatures dipped to around mid-30's during that time.	Outside contractor	Water lines freezing	Equipment damage

Other Plant Conditions of Note (no action required at this time)

- The methane detection system is offline. **To function, it will need a technical inspection and maintenance.** However, methane does not currently appear to be a hazard.
- It has been determined that intrinsically safe components are no longer required in the plant.
- There has been no need for acid washing of the AS Tower media, the hydrochloric acid feed and storage system have not been operated. The tanks have not been filled and the level monitoring system has not been operated.

As previously noted, there are pieces of equipment that are out of service and require repairs. Currently there are no plans for addressing these conditions as the operation of this equipment is not necessary or needed for the operation of the treatment system.

Equipment	Fault	Status
Plant electric heater UH-1	Needs transformer	Heater is not needed
Plant electric heater UH-2	Needs relay timer and wiring repairs	Heater is not needed
Recovery well pump pressure switch assembly	Units are unwieldy and subject to vibration, corrosion, and leaks	Each unit requires assessment and disposition
NaOH sump pump	Pump is not operating	No water or chemicals stored in vault. Portable submersible pump in sump should suffice
Plant lights are wired to the emergency light charging system	Un-segregated light cannot be shut off. Several of the lamps may have burnt out	The bank of lights appears to have failed/burnt out. The second bank of lights are sufficient
Plant exhaust fans are part of methane system	Fans cannot be manually operated	Once the methane monitoring system is online, the fans can be operated

Equipment	Fault	Status
Plant discharge drain	Leak in Victaulic fitting	Drain line on plant discharge intermittently leaks. Parts are in-house. Not pressing
ASF pump isolation valve	Valve P1 has failed open	Not needed at this time
PFF pump isolation valve	Valve P3 has failed open	Not needed at this time
RW1 flow meter	The meter is not operating	Pump is offline. Rocks were pulled from the housing and iron sediment was encrusting the flow meter impeller and housing
RW2 flow meter	The meter is not transmitting	Pump is offline
Air stripper flow meter	Non-functional and removed	
AH-1 condenser	Air conditioner is non-functional	Two window AC units in place
Plant outdoor lights	9 of 12 lights not functioning	Not a security issue

Table 2
Plant Discharge Average Flow & Volume

Period	Average Flow (gpm)	Average Daily volume (gal)	Total Period Flow (gal)	Min off	Min on
Q4 2016	517	745,000	68,540,000	7,309	125,171
Q1 2017	520	748,244	67,342,000	655	128,945
Q2 2017	576	829,130	76,280,000	6,165	126,315
Q3 2017	634	913,576	84,049,000	1,110	131,370
Q4 2017	256	368,762	33,926,110	69,165	63,315
Q1 2018	53	75,989	6,839,000	118,180	11,420
Q2 2018	179	258,284	23,762,103	102,929	29,551
Q3 2018	504	725,280	66,725,717	57,416	75,064
Q4 2018	726	1,045,065	96,145,984	23,734	108,746
Q1 2019	527	758,467	68,262,000	735	128,865
Q2 2019	662	953,877	87,756,724	405	132,075
Q3 2019	685	985,802	90,693,740	108	132,372
Q4 2019	655	943,871	82,116,780	5,039	129,326
Q1 2020	480	682,527	62,110,000	1,824	129,326
Q2 2020	698	996,998	88,732,846	3,838	127,185
Q3 2020	669	955,928	87,945,333	1,099	131,401
Q4 2020	695	1,001,365	92,125,539	52	132,497
Q1 2021	708	1,019,733	91,776,000	0	129,603
Q2 2021	709	1,021,317	92,939,850	0	131,040
Q3 2021	615	884,934	81,413,897	0	132,475
Q4 2021	677	928,370	85,410,047	6,317	126,185
Q1 2022	633	1,291,661	80,082,987	5,280	124,320
Q2 2022	434	624,605	53,716,000	12,200	123,840
Q3 2022	365	514,501	46,283,000	3,004	124,994

Period	Average Flow (gpm)	Average Daily volume (gal)	Total Period Flow (gal)	Min off	Min on
Q4 2022	257	369,307	34,007,000	491	132,154
Jan 2023	436	623,931	18,094,000	60	41,460
Feb 2023	240	338,036	9,465,000	0	39,420

Acronyms: gal - gallons gpm – gallons per minute

Table 3
Plant Daily Totalizer Readings

February 2023 Flows						
Plant Influent			Plant Discharge		RW Discharge	
Date	Volume	Avg. Flow	Volume	Avg. Flow	Volume	Avg. Flow
02/01/23	-	242	-	233	-	267
02/02/23	350,000	243	340,000	236	383,000	266
02/03/23	359,000	243	350,000	236	393,000	266
02/06/23	1,044,000	244	1,006,000	235	1,142,000	267
02/07/23	352,000	244	341,000	237	388,000	269
02/08/23	346,000	240	331,000	230	379,000	263
02/09/23	352,000	244	340,000	236	383,000	266
02/10/23	350,000	243	341,000	237	384,000	267
02/13/23	1,055,000	244	1,014,000	235	1,148,000	266
02/14/23	346,000	240	339,000	235	380,000	264
02/15/23	352,000	244	331,000	230	382,000	265
02/16/23	348,000	242	338,000	235	382,000	265
02/17/23	335,000	243	328,000	238	368,000	267
02/20/23	1,063,000	305	1,023,000	294	1,163,000	334
02/21/23	353,000	245	341,000	237	383,000	266
02/22/23	351,000	244	341,000	237	386,000	268
02/23/23	348,000	242	340,000	236	383,000	266
02/24/23	352,000	244	337,000	234	382,000	265
02/27/23	1,047,000	242	1,006,000	233	1,148,000	266
02/28/23	351,000	244	345,000	240	384,000	267
03/01/23	352,000	244	333,000	231	382,000	265
February Total Plant Influent (Gal)			9,806,000			
February Total Plant Effluent (Gal)			9,465,000			
February Total RW Discharge (Gal)			10,723,000			

Acronyms: gal - gallons gpm – gallons per minute

Table 4
Pump System Flow Readings

February	On-Time Minutes (actual)	Avg. Flow (gpm)	Avg. Flow (gpd)	Total Flow (gal)
RW1*	5	0	0	600
RW2*	0	0	0	0
RW3	39,420	258	363,786	10,186,000
RW4	0	0	0	0
RW5	0	0	0	0
RW Totals	39,420	272	382,964	10,723,000
Plant Influent	39,420	249	350,214	9,806,000
Plant Effluent	39,420	240	338,036	9,465,000

Acronyms: gal - gallons gpm – gallons per minute gpd – gallons per day

The treatment process was online 28 days during this period with 0 minutes of downtime. Flows are taken from the HMI meter readings.

* Offline aside from monthly process equipment test to check their functionality. There are no average gallons per day.
RW2 could not be tested due to removed pressure switch, which disables hand operations.

Table 5
Claremont OU5 O&M Sampling/Measurement Program and Frequency

Measurement / Analyte	Sampling Location			
	System Influent	Plant Discharge	Recovery Wells	Monitoring Wells
Flow	Daily	Daily	Daily	NA
pH	Quarterly	Weekly	Quarterly	Quarterly
VOCs (+Tert-Butyl-Methyl ether (MTBA) & Tert-butyl alcohol (TBA))	Quarterly	Monthly	Quarterly	Quarterly
Semi-Volatile Organic Compound (SVOC) Base Neutral & Acid Extractables (BNA)	Quarterly	Monthly	NS	NS
Per- and polyfluoroalkyl substances (PFAS)	Monthly	Monthly	NS	Quarterly ⁽¹⁾
1,4-Dioxane	Monthly	Monthly	NS	Quarterly ⁽¹⁾
Total Kjeldahl Nitrogen→ (TKN)	NS	Quarterly	NS	NS
Total Suspended Solids (TSS)	Quarterly	NS	Quarterly	NS
Total Organic Carbon (TOC)	Quarterly	NS	NS	NS
Total Dissolved Solids (TDS)	NS	Quarterly	NS	NS
Cyanide	NS	Quarterly	NS	NS
Hexavalent Chromium	NS	Quarterly	NS	NS
Mercury	NS	Quarterly	NS	NS
Metals	Quarterly	Quarterly	Quarterly	NS
Anions	NS	Quarterly	NS	NS

Notes: NA – Not applicable; NS – Not sampled. ⁽¹⁾ – CPC wells only

Table 6
Plant Discharge Analytical Results
February 10, 2023

Parameters	Discharge Limitations (SPDES)	Units	Results
<i>pH (range)</i>	6.5 – 8.5	<i>su</i>	7.36
1,1,1-Trichloroethane	5	ug/l	U
1,1-Dichloroethane	5	ug/l	U
1,1-Dichloroethylene	5	ug/l	U
1,2- Dichloroethane	0.6	ug/l	U
Benzene	0.7	ug/l	U
Chlorobenzene	5	ug/l	U
Chloroform	7	ug/l	U
CIS 1,2-Dichloroethylene	5	ug/l	U
Ethylbenzene	5	ug/l	U
Methylene Chloride	5	ug/l	U
Tert-butyl alcohol (TBA)	Not indicated	ug/l	U
Tert-Butyl-Methyl ether (MTBA)	5	ug/l	U
Tetrachloroethylene (PCE)	5	ug/l	U
Toluene	5	ug/l	U
Trans 1,2-Dichloroethylene	5	ug/l	U
Trichloroethylene (TCE)	5	ug/l	U
Bis(2-ethylhexyl) phthalate	5	ug/l	U
Di-n-butyl phthalate	50	ug/l	U
Nitro Benzene	0.4	ug/l	U
Antimony, Total recoverable	3	ug/l	NS
Arsenic, Total recoverable	50	ug/l	NS
Barium, Total recoverable	2000	ug/l	NS
Chromium, Hexavalent	100	ug/l	NS
Lead, Total recoverable	50	ug/l	NS
Iron, Total recoverable	600	ug/l	NS
Manganese, Total recoverable	600	ug/l	NS
Mercury	Not indicated	ug/l	NS
Zinc	Not indicated	mg/l	NS
Nitrogen, Total (as N)	10	mg/l	NS
Selenium, Total recoverable	40	ug/l	NS
Solids, Total Dissolved	1000	mg/l	NS
Chloride Ion	NL	mg/l	NS
Cyanide	Not indicated	ug/l	NS
Fluoride Ion	NL	mg/l	NS

Parameters	Discharge Limitations (SPDES)	Units	Results
Sulfate Ion	NL	mg/l	NS
J – Estimated value U – Analyzed but not detected NL – Monitor only NS– Not sampled SPDES – State Pollutant Discharge Elimination System ug/l – micrograms per liter ng/l – nanograms per liter mg/l – milligrams per liter Discharge limitations updates as per the water discharge permit. Note: Parameters shaded in gray are analyzed quarterly with results generally being provided March, June, October, and December.			

Table 7
Emerging Contaminant Influent & Effluent Analytical Results
February 10, 2023

Parameters	Guidance Values	Units	Influent Results	Effluent Results
Perfluorooctanoic acid (PFOA)	10 ¹	ng/l	46 / 46	46 / 47
Perfluorooctanesulfonic acid (PFOS)	10 ¹	ng/l	16 / 16	15 / 17
1,4-Dioxane	1 ²	ug/l	31 / 30	32 / 32
J – Estimated value U – Analyzed but not detected ug/l – micrograms per liter ng/l – nanograms per liter x / x – indicates primary/duplicate results				
¹ New York State Department of Environmental Conservation, Sampling, Analysis and Assessment of Per- and Polyfluoroalkyl Substances (PFAS), November 2022. ² New York State, Department of Health, Subpart 5, Table 3, May 2018.				

Table 8
Effluent pH and Temperature Readings

Date	pH (su)	Temp (° C)
02/01/2023	7.44	14.2
02/08/2023	7.53	11.4
02/14/2023	7.57	14.9
02/20/2023	7.16	14.5
02/27/2023	7.11	12.5
February Average	7.36 su	13.5 °C

Table 9
Plant Discharge Monthly Average pH

Month	pH(su)
Aug '19	6.56
Sept '19	7.45
Oct '19	6.86
Nov '19	6.88
Dec '19	6.84
Jan '20	6.63
Feb '20	6.75
Mar '20	6.74
Apr '20	6.65
May '20	6.8
June '20	6.8
July '20	6.9
Aug '20	6.8
Sept '20	6.8
Oct. '20	6.95
Nov '20	6.8
Dec '20	6.64
Jan '21	6.8
Feb '21	6.75
Mar '21	6.76
Apr '21	7.28
May '21	7.53
June '21	7.44
July '21	7.41
Aug '21	7.42
Sept '21	7.13
Oct '21	7.10
Nov '21	7.09
Dec '21	7.01
Jan '22	6.90
Feb '22	6.90
Mar '22	6.80
Apr '22	6.78
May '22	6.79
June '22	6.79
July '22	7.01
Aug '22	6.99
Sept '22	7.19
Oct '22	7.62
Nov '22	7.68
Dec '22	7.52

Month	pH(su)
Jan '23	7.24
Feb '23	7.36

Plant Discharge Monthly Average pH Readings

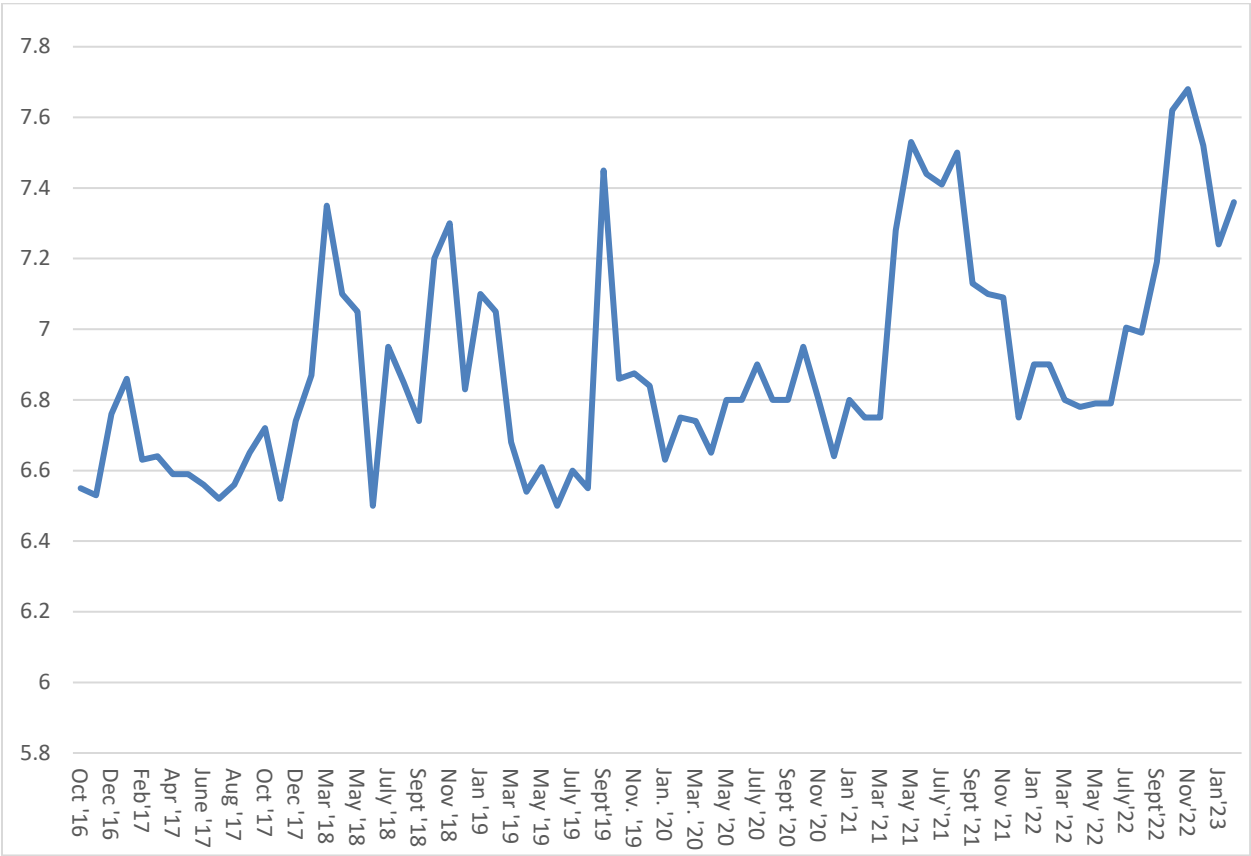


Table 10
AS Tower Air Monitoring Readings

Recorded Date	Port B (ppm)
02/02/2023	0.1
02/08/2023	0.0
02/15/2023	0.0
02/20/2023	0.0
02/27/2023	0.0

ATTACHMENT 1
MONTHLY O&M SAMPLING ANALYTICAL RESULTS – FEBRUARY 10, 2023

March 31, 2023

Payson Long
NYDEC_Ramboll US Consulting, Inc. - Syracuse
333 West Washington Street, PO Box 4873
Syracuse, NY 13221

Project Location: Old Bethpage, New York
Client Job Number:
Project Number: 130015
Laboratory Work Order Number: 23B1340

Enclosed are results of analyses for samples as received by the laboratory on February 11, 2023. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kyle A. Murray
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332NYDEC_Ramboll US Consulting, Inc. - Syracuse
333 West Washington Street, PO Box 4873
Syracuse, NY 13221
ATTN: Payson Long

REPORT DATE: 3/31/2023

PURCHASE ORDER NUMBER: 144165

PROJECT NUMBER: 130015

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23B1340

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Old Bethpage, New York

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
PD-CP-00-021023	23B1340-01	Water		Draft Method 1633 SW-846 8260D SW-846 8270E	
PD-CP-01-021023	23B1340-02	Water		Draft Method 1633 SW-846 8260D SW-846 8270E	
ASF-CP-00-021023	23B1340-03	Water		Draft Method 1633 SW-846 8270E	
ASF-CP-01-021023	23B1340-04	Water		Draft Method 1633 SW-846 8270E	
TB-021023	23B1340-05	Water		SW-846 8260D	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Draft Method 1633**Qualifications:****PF-18**

Duplicate analysis confirmed Extracted Internal Standard failure due to matrix effects.

Analyte & Samples(s) Qualified:**13C2-4:2FTS**

23B1340-01[PD-CP-00-021023], 23B1340-02[PD-CP-01-021023]

1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)

23B1340-01[PD-CP-00-021023], 23B1340-02[PD-CP-01-021023]

S-29

Extracted Internal Standard is outside of control limits.

Analyte & Samples(s) Qualified:**13C2-PFTeDA**

S084652-CCV2

Perfluorotetradecanoic acid (PFTeDA)

S084652-CCV2

SW-846 8260D**Qualifications:****MS-23**

Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is outside of the method specified criteria. Reduced precision anticipated for any reported result for this compound.

Analyte & Samples(s) Qualified:**Chloromethane**

B331563-MS1

R-06

Matrix spike duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result for this compound in this sample.

Analyte & Samples(s) Qualified:**Chloromethane**

23B1340-01[PD-CP-00-021023], B331563-MS1, B331563-MSD1

SW-846 8270E**Qualifications:****L-07**

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:**N-Nitrosodimethylamine**

B331882-BSD1

R-05

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:**Benzidine**

23B1340-02[PD-CP-01-021023], B331882-BLK1, B331882-BS1, B331882-BSD1

V-04

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.

Analyte & Samples(s) Qualified:**2,4-Dinitrophenol**

B331882-BLK1, B331882-BS1, B331882-BSD1, S083643-CCV1

Benzidine

23B1340-02[PD-CP-01-021023], B331882-BLK1, B331882-BS1, B331882-BSD1, S083643-CCV1, S083771-CCV1

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

V-05

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

Analyte & Samples(s) Qualified:**Aniline**

23B1340-02[PD-CP-01-021023], B331882-BS1, B331882-BSD1, S083771-CCV1

Benzidine

23B1340-02[PD-CP-01-021023], B331882-BLK1, B331882-BS1, B331882-BSD1, S083643-CCV1, S083771-CCV1

V-06

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.

Analyte & Samples(s) Qualified:**2,4-Dinitrophenol**

B331882-BLK1, S083643-CCV1

2,4-Dinitrotoluene

B331882-BLK1, S083643-CCV1

2-Nitrophenol

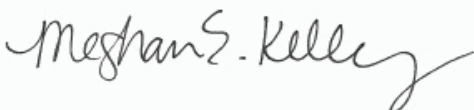
B331882-BLK1, S083643-CCV1

Benzidine

B331882-BLK1, S083643-CCV1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Old Bethpage, New York

Sample Description:

Work Order: 23B1340

Date Received: 2/11/2023

Field Sample #: PD-CP-00-021023

Sampled: 2/10/2023 09:15

Sample ID: 23B1340-01

Sample Matrix: Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Bromoform	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Bromomethane	ND	2.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Carbon Disulfide	ND	5.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Chloromethane	ND	2.0	µg/L	1	R-06	SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Cyclohexane	ND	5.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
1,4-Dioxane	ND	50	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Methyl Acetate	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Methyl Cyclohexane	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH

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Project Location: Old Bethpage, New York

Sample Description:

Work Order: 23B1340

Date Received: 2/11/2023

Field Sample #: PD-CP-00-021023

Sampled: 2/10/2023 09:15

Sample ID: 23B1340-01

Sample Matrix: Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Xylenes (total)	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:12	EEH
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1,2-Dichloroethane-d4	108		70-130				2/15/23 17:12		
Toluene-d8	102		70-130				2/15/23 17:12		
4-Bromofluorobenzene	101		70-130				2/15/23 17:12		

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Project Location: Old Bethpage, New York

Sample Description:

Work Order: 23B1340

Date Received: 2/11/2023

Field Sample #: PD-CP-00-021023

Sampled: 2/10/2023 09:15

Sample ID: 23B1340-01

Sample Matrix: Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	31	0.20	µg/L	1		SW-846 8270E	2/15/23	2/21/23 16:04	SPF
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
1,4-Dioxane-d8	21.3	15-110						2/21/23 16:04	

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Project Location: Old Bethpage, New York

Sample Description:

Work Order: 23B1340

Date Received: 2/11/2023

Field Sample #: PD-CP-00-021023

Sampled: 2/10/2023 09:15

Sample ID: 23B1340-01

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	42	3.6	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
Perfluoropentanoic acid (PFPeA)	22	1.8	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
Perfluorohexanoic acid (PFHxA)	33	0.90	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
Perfluoroheptanoic acid (PFHpA)	14	0.90	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
Perfluorooctanoic acid (PFOA)	46	0.90	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
Perfluorononanoic acid (PFNA)	10	0.90	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
Perfluorodecanoic acid (PFDA)	ND	0.90	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
Perfluoroundecanoic acid (PFUnA)	ND	0.90	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
Perfluorododecanoic acid (PFDoA)	ND	0.90	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
Perfluorotridecanoic acid (PFTrDA)	ND	0.90	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
Perfluorotetradecanoic acid (PFTeDA)	ND	0.90	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
Perfluorobutanesulfonic acid (PFBS)	5.8	0.90	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
Perfluoropetanesulfonic acid (PFPeS)	4.4	0.90	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
Perfluorohexanesulfonic acid (PFHxS)	9.8	0.90	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
Perfluoroheptanesulfonic acid (PFHpS)	0.92	0.90	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
Perfluorooctanesulfonic acid (PFOS)	16	0.90	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
Perfluorononanesulfonic acid (PFNS)	ND	0.90	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
Perfluorodecanesulfonic acid (PFDS)	ND	0.90	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
Perfluorododecanesulfonic acid (PFDoS)	ND	0.90	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.6	ng/L	1	PF-18	Draft Method 1633	2/22/23	3/15/23 22:59	DRL
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.6	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.6	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
Perfluorooctanesulfonamide (PFOSA)	ND	0.90	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
N-methyl perfluorooctanesulfonamide (NMeFOSA)	ND	0.90	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.90	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
N-MeFOSAA (NMeFOSAA)	ND	0.90	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
N-EtFOSAA (NEtFOSAA)	4.0	0.90	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	ND	9.0	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.0	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.6	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.6	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
9Cl-PF3ONS (F53B Minor)	ND	3.6	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
11Cl-PF3OUDS (F53B Major)	ND	3.6	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.0	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
2H,2H,3H,3H-Perfluorooctanoic acid (FPePA)(5:3FTCA)	ND	45	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	45	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.8	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Old Bethpage, New York

Sample Description:

Work Order: 23B1340

Date Received: 2/11/2023

Field Sample #: PD-CP-00-021023

Sampled: 2/10/2023 09:15

Sample ID: 23B1340-01

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.8	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8	ng/L	1		Draft Method 1633	2/22/23	3/15/23 22:59	DRL
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
13C4-PFBA	32.2		20-150					3/15/23 22:59	
13C5-PFPeA	79.4		20-150					3/15/23 22:59	
13C5-PFHxA	88.0		20-150					3/15/23 22:59	
13C4-PFHpA	87.6		20-150					3/15/23 22:59	
13C8-PFOA	89.2		20-150					3/15/23 22:59	
13C9-PFNA	84.3		20-150					3/15/23 22:59	
13C6-PFDA	83.3		20-150					3/15/23 22:59	
13C7-PFUnA	78.9		20-150					3/15/23 22:59	
13C2-PFDoA	72.6		20-150					3/15/23 22:59	
13C2-PFTeDA	73.0		20-150					3/15/23 22:59	
13C3-PFBS	87.4		20-150					3/15/23 22:59	
13C3-PFHxS	87.8		20-150					3/15/23 22:59	
13C8-PFOS	86.7		20-150					3/15/23 22:59	
13C2-4:2FTS	168	*	20-150		PF-18			3/15/23 22:59	
13C2-6:2FTS	122		20-150					3/15/23 22:59	
13C2-8:2FTS	90.0		20-150					3/15/23 22:59	
13C8-PFOSA	77.6		20-150					3/15/23 22:59	
D3-NMeFOSA	68.4		20-150					3/15/23 22:59	
D5-NEtFOSA	71.3		20-150					3/15/23 22:59	
D3-NMeFOSAA	81.7		20-150					3/15/23 22:59	
D5-NEtFOSAA	83.4		20-150					3/15/23 22:59	
D7-NMeFOSE	72.2		20-150					3/15/23 22:59	
D9-NEtFOSE	71.3		20-150					3/15/23 22:59	
13C3-HFPO-DA	80.7		20-150					3/15/23 22:59	

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Project Location: Old Bethpage, New York

Sample Description:

Work Order: 23B1340

Date Received: 2/11/2023

Field Sample #: PD-CP-01-021023

Sampled: 2/10/2023 09:15

Sample ID: 23B1340-02

Sample Matrix: Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Bromoform	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Bromomethane	ND	2.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Carbon Disulfide	ND	5.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Chloromethane	ND	2.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Cyclohexane	ND	5.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
1,4-Dioxane	ND	50	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Methyl Acetate	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Methyl Cyclohexane	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Old Bethpage, New York

Sample Description:

Work Order: 23B1340

Date Received: 2/11/2023

Field Sample #: PD-CP-01-021023

Sampled: 2/10/2023 09:15

Sample ID: 23B1340-02

Sample Matrix: Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Xylenes (total)	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 17:39	EEH
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1,2-Dichloroethane-d4	109		70-130				2/15/23 17:39		
Toluene-d8	99.9		70-130				2/15/23 17:39		
4-Bromofluorobenzene	101		70-130				2/15/23 17:39		

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Old Bethpage, New York

Sample Description:

Work Order: 23B1340

Date Received: 2/11/2023

Field Sample #: PD-CP-01-021023

Sampled: 2/10/2023 09:15

Sample ID: 23B1340-02

Sample Matrix: Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	4.9	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Acenaphthylene	ND	4.9	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Acetophenone	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Aniline	ND	4.9	µg/L	1	V-05	SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Anthracene	ND	4.9	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Benzidine	ND	20	µg/L	1	R-05, V-04, V-05	SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Benzo(a)anthracene	ND	4.9	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Benzo(a)pyrene	ND	4.9	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Benzo(b)fluoranthene	ND	4.9	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Benzo(g,h,i)perylene	ND	4.9	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Benzo(k)fluoranthene	ND	4.9	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Benzoic Acid	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Bis(2-chloroethoxy)methane	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Bis(2-chloroethyl)ether	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Bis(2-chloroisopropyl)ether	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Bis(2-Ethylhexyl)phthalate	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
4-Bromophenylphenylether	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Butylbenzylphthalate	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Carbazole	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
4-Chloroaniline	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
4-Chloro-3-methylphenol	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
2-Chloronaphthalene	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
2-Chlorophenol	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
4-Chlorophenylphenylether	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Chrysene	ND	4.9	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Dibenz(a,h)anthracene	ND	4.9	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Dibenzofuran	ND	4.9	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Di-n-butylphthalate	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
1,2-Dichlorobenzene	ND	4.9	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
1,3-Dichlorobenzene	ND	4.9	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
1,4-Dichlorobenzene	ND	4.9	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
3,3-Dichlorobenzidine	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
2,4-Dichlorophenol	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Diethylphthalate	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
2,4-Dimethylphenol	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Dimethylphthalate	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
4,6-Dinitro-2-methylphenol	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
2,4-Dinitrophenol	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
2,4-Dinitrotoluene	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
2,6-Dinitrotoluene	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Di-n-octylphthalate	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
1,2-Diphenylhydrazine/Azobenzene	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Fluoranthene	ND	4.9	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Fluorene	ND	4.9	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Old Bethpage, New York

Sample Description:

Work Order: 23B1340

Date Received: 2/11/2023

Field Sample #: PD-CP-01-021023

Sampled: 2/10/2023 09:15

Sample ID: 23B1340-02

Sample Matrix: Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Hexachlorobutadiene	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Hexachlorocyclopentadiene	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Hexachloroethane	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Indeno(1,2,3-cd)pyrene	ND	4.9	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Isophorone	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
1-Methylnaphthalene	ND	4.9	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
2-Methylnaphthalene	ND	4.9	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
2-Methylphenol	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
3/4-Methylphenol	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Naphthalene	ND	4.9	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
2-Nitroaniline	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
3-Nitroaniline	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
4-Nitroaniline	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Nitrobenzene	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
2-Nitrophenol	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
4-Nitrophenol	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
N-Nitrosodimethylamine	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
N-Nitrosodiphenylamine/Diphenylamine	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
N-Nitrosodi-n-propylamine	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Pentachloronitrobenzene	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Pentachlorophenol	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Phenanthrene	ND	4.9	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Phenol	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Pyrene	ND	4.9	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Pyridine	ND	4.9	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
1,2,4,5-Tetrachlorobenzene	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
1,2,4-Trichlorobenzene	ND	4.9	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
2,4,5-Trichlorophenol	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
2,4,6-Trichlorophenol	ND	9.8	µg/L	1		SW-846 8270E	2/17/23	2/22/23 19:59	AR2
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	29.3	15-110							
Phenol-d6	21.3	15-110							
Nitrobenzene-d5	57.2	30-130							
2-Fluorobiphenyl	58.8	30-130							
2,4,6-Tribromophenol	61.8	15-110							
p-Terphenyl-d14	72.8	30-130							

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Old Bethpage, New York

Sample Description:

Work Order: 23B1340

Date Received: 2/11/2023

Field Sample #: PD-CP-01-021023

Sampled: 2/10/2023 09:15

Sample ID: 23B1340-02

Sample Matrix: Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	30	0.21	µg/L	1		SW-846 8270E	2/15/23	2/21/23 16:24	SPF
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1,4-Dioxane-d8	22.5		15-110					2/21/23 16:24	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Old Bethpage, New York

Sample Description:

Work Order: 23B1340

Date Received: 2/11/2023

Field Sample #: PD-CP-01-021023

Sampled: 2/10/2023 09:15

Sample ID: 23B1340-02

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	45	3.6	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
Perfluoropentanoic acid (PFPeA)	22	1.8	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
Perfluorohexanoic acid (PFHxA)	34	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
Perfluoroheptanoic acid (PFHpA)	15	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
Perfluorooctanoic acid (PFOA)	46	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
Perfluorononanoic acid (PFNA)	10	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
Perfluorodecanoic acid (PFDA)	ND	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
Perfluoroundecanoic acid (PFUnA)	ND	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
Perfluorododecanoic acid (PFDoA)	ND	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
Perfluorotridecanoic acid (PFTrDA)	ND	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
Perfluorotetradecanoic acid (PFTeDA)	ND	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
Perfluorobutanesulfonic acid (PFBS)	6.2	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
Perfluoropetanesulfonic acid (PFPeS)	3.8	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
Perfluorohexanesulfonic acid (PFHxS)	9.4	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
Perfluorooctanesulfonic acid (PFOS)	16	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
Perfluorononanesulfonic acid (PFNS)	ND	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
Perfluorodecanesulfonic acid (PFDS)	ND	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
Perfluorododecanesulfonic acid (PFDoS)	ND	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.6	ng/L	1	PF-18	Draft Method 1633	2/22/23	3/15/23 23:14	DRL
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.6	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.6	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
Perfluorooctanesulfonamide (PFOSA)	ND	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
N-methyl perfluorooctanesulfonamide (NMeFOSA)	ND	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
N-MeFOSAA (NMeFOSAA)	ND	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
N-EtFOSAA (NEtFOSAA)	4.0	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	ND	9.1	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.1	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.6	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.6	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
9Cl-PF3ONS (F53B Minor)	ND	3.6	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
11Cl-PF3OUDS (F53B Major)	ND	3.6	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.1	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	45	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	45	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.8	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Old Bethpage, New York

Sample Description:

Work Order: 23B1340

Date Received: 2/11/2023

Field Sample #: PD-CP-01-021023

Sampled: 2/10/2023 09:15

Sample ID: 23B1340-02

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.8	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:14	DRL
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
13C4-PFBA	33.3	20-150						3/15/23 23:14	
13C5-PFPeA	73.1	20-150						3/15/23 23:14	
13C5-PFHxA	79.8	20-150						3/15/23 23:14	
13C4-PFHpA	81.7	20-150						3/15/23 23:14	
13C8-PFOA	81.3	20-150						3/15/23 23:14	
13C9-PFNA	81.3	20-150						3/15/23 23:14	
13C6-PFDA	81.4	20-150						3/15/23 23:14	
13C7-PFUnA	77.2	20-150						3/15/23 23:14	
13C2-PFDoA	69.7	20-150						3/15/23 23:14	
13C2-PFTeDA	72.5	20-150						3/15/23 23:14	
13C3-PFBS	78.5	20-150						3/15/23 23:14	
13C3-PFHxS	82.0	20-150						3/15/23 23:14	
13C8-PFOS	83.4	20-150						3/15/23 23:14	
13C2-4:2FTS	155 *	20-150			PF-18			3/15/23 23:14	
13C2-6:2FTS	115	20-150						3/15/23 23:14	
13C2-8:2FTS	91.9	20-150						3/15/23 23:14	
13C8-PFOSA	73.3	20-150						3/15/23 23:14	
D3-NMeFOSA	65.4	20-150						3/15/23 23:14	
D5-NEtFOSA	65.7	20-150						3/15/23 23:14	
D3-NMeFOSAA	77.8	20-150						3/15/23 23:14	
D5-NEtFOSAA	84.0	20-150						3/15/23 23:14	
D7-NMeFOSE	70.7	20-150						3/15/23 23:14	
D9-NEtFOSE	70.9	20-150						3/15/23 23:14	
13C3-HFPO-DA	70.1	20-150						3/15/23 23:14	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Old Bethpage, New York

Sample Description:

Work Order: 23B1340

Date Received: 2/11/2023

Field Sample #: ASF-CP-00-021023

Sampled: 2/10/2023 10:15

Sample ID: 23B1340-03

Sample Matrix: Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	32	0.20	µg/L	1		SW-846 8270E	2/15/23	2/21/23 18:27	SPF
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
1,4-Dioxane-d8	25.1	15-110						2/21/23 18:27	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Old Bethpage, New York

Sample Description:

Work Order: 23B1340

Date Received: 2/11/2023

Field Sample #: ASF-CP-00-021023

Sampled: 2/10/2023 10:15

Sample ID: 23B1340-03

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	38	3.8	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
Perfluoropentanoic acid (PFPeA)	22	1.9	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
Perfluorohexanoic acid (PFHxA)	33	0.96	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
Perfluoroheptanoic acid (PFHpA)	14	0.96	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
Perfluorooctanoic acid (PFOA)	46	0.96	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
Perfluorononanoic acid (PFNA)	9.7	0.96	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
Perfluorodecanoic acid (PFDA)	ND	0.96	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
Perfluoroundecanoic acid (PFUnA)	ND	0.96	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
Perfluorododecanoic acid (PFDoA)	ND	0.96	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
Perfluorotridecanoic acid (PFTrDA)	ND	0.96	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
Perfluorotetradecanoic acid (PFTeDA)	ND	0.96	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
Perfluorobutanesulfonic acid (PFBS)	5.7	0.96	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
Perfluoropentanesulfonic acid (PFPeS)	4.2	0.96	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
Perfluorohexanesulfonic acid (PFHxS)	9.8	0.96	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
Perfluoroheptanesulfonic acid (PFHpS)	1.2	0.96	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
Perfluorooctanesulfonic acid (PFOS)	15	0.96	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
Perfluorononanesulfonic acid (PFNS)	ND	0.96	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
Perfluorodecanesulfonic acid (PFDS)	ND	0.96	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
Perfluorododecanesulfonic acid (PFDoS)	ND	0.96	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.8	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.8	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.8	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
Perfluorooctanesulfonamide (PFOSA)	ND	0.96	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
N-methyl perfluorooctanesulfonamide (NMeFOSA)	ND	0.96	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.96	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
N-MeFOSAA (NMeFOSAA)	ND	0.96	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
N-EtFOSAA (NEtFOSAA)	4.4	0.96	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	ND	9.6	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.6	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.8	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	ND	3.8	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
9Cl-PF3ONS (F53B Minor)	ND	3.8	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
11Cl-PF3OUDS (F53B Major)	ND	3.8	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.6	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
2H,2H,3H,3H-Perfluorooctanoic acid (FPePA) (5:3FTCA)	ND	48	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	48	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	ND	1.9	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.9	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Old Bethpage, New York

Sample Description:

Work Order: 23B1340

Date Received: 2/11/2023

Field Sample #: ASF-CP-00-021023

Sampled: 2/10/2023 10:15

Sample ID: 23B1340-03

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.9	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:30	DRL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
13C4-PFBA	83.2	20-150						3/15/23 23:30	
13C5-PFPeA	73.7	20-150						3/15/23 23:30	
13C5-PFHxA	79.5	20-150						3/15/23 23:30	
13C4-PFHpA	81.7	20-150						3/15/23 23:30	
13C8-PFOA	83.4	20-150						3/15/23 23:30	
13C9-PFNA	81.3	20-150						3/15/23 23:30	
13C6-PFDA	81.5	20-150						3/15/23 23:30	
13C7-PFUnA	74.7	20-150						3/15/23 23:30	
13C2-PFDoA	67.9	20-150						3/15/23 23:30	
13C2-PFTeDA	66.0	20-150						3/15/23 23:30	
13C3-PFBS	80.1	20-150						3/15/23 23:30	
13C3-PFHxS	80.4	20-150						3/15/23 23:30	
13C8-PFOS	81.8	20-150						3/15/23 23:30	
13C2-4:2FTS	150	20-150						3/15/23 23:30	
13C2-6:2FTS	102	20-150						3/15/23 23:30	
13C2-8:2FTS	79.1	20-150						3/15/23 23:30	
13C8-PFOSA	69.6	20-150						3/15/23 23:30	
D3-NMeFOSA	61.9	20-150						3/15/23 23:30	
D5-NEtFOSA	63.5	20-150						3/15/23 23:30	
D3-NMeFOSAA	76.6	20-150						3/15/23 23:30	
D5-NEtFOSAA	78.4	20-150						3/15/23 23:30	
D7-NMeFOSE	64.6	20-150						3/15/23 23:30	
D9-NEtFOSE	64.8	20-150						3/15/23 23:30	
13C3-HFPO-DA	75.7	20-150						3/15/23 23:30	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Old Bethpage, New York

Sample Description:

Work Order: 23B1340

Date Received: 2/11/2023

Field Sample #: ASF-CP-01-021023

Sampled: 2/10/2023 10:15

Sample ID: 23B1340-04

Sample Matrix: Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	32	0.20	µg/L	1		SW-846 8270E	2/15/23	2/21/23 18:48	SPF
Surrogates	% Recovery	Recovery Limits			Flag/Qual				
1,4-Dioxane-d8	22.0	15-110						2/21/23 18:48	

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Project Location: Old Bethpage, New York

Sample Description:

Work Order: 23B1340

Date Received: 2/11/2023

Field Sample #: ASF-CP-01-021023

Sampled: 2/10/2023 10:15

Sample ID: 23B1340-04

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	38	3.6	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
Perfluoropentanoic acid (PFPeA)	22	1.8	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
Perfluorohexanoic acid (PFHxA)	34	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
Perfluoroheptanoic acid (PFHpA)	15	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
Perfluorooctanoic acid (PFOA)	47	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
Perfluorononanoic acid (PFNA)	10	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
Perfluorodecanoic acid (PFDA)	ND	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
Perfluoroundecanoic acid (PFUnA)	ND	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
Perfluorododecanoic acid (PFDoA)	ND	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
Perfluorotridecanoic acid (PFTrDA)	ND	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
Perfluorotetradecanoic acid (PFTeDA)	ND	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
Perfluorobutanesulfonic acid (PFBS)	5.9	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
Perfluoropentanesulfonic acid (PFPeS)	3.9	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
Perfluorohexanesulfonic acid (PFHxS)	10	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
Perfluoroheptanesulfonic acid (PFHpS)	1.1	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
Perfluorooctanesulfonic acid (PFOS)	17	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
Perfluorononanesulfonic acid (PFNS)	ND	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
Perfluorodecanesulfonic acid (PFDS)	ND	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
Perfluorododecanesulfonic acid (PFDoS)	ND	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.6	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.6	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.6	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
Perfluorooctanesulfonamide (PFOSA)	ND	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
N-methyl perfluorooctanesulfonamide (NMeFOSA)	ND	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
N-MeFOSAA (NMeFOSAA)	ND	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
N-EtFOSAA (NEtFOSAA)	4.8	0.91	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	ND	9.1	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.1	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.6	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	ND	3.6	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
9Cl-PF3ONS (F53B Minor)	ND	3.6	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
11Cl-PF3OUDS (F53B Major)	ND	3.6	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.1	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	45	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	45	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.8	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Old Bethpage, New York

Sample Description:

Work Order: 23B1340

Date Received: 2/11/2023

Field Sample #: ASF-CP-01-021023

Sampled: 2/10/2023 10:15

Sample ID: 23B1340-04

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.8	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8	ng/L	1		Draft Method 1633	2/22/23	3/15/23 23:46	DRL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
13C4-PFBA	76.4	20-150						3/15/23 23:46	
13C5-PFPeA	70.3	20-150						3/15/23 23:46	
13C5-PFHxA	76.6	20-150						3/15/23 23:46	
13C4-PFHpA	77.7	20-150						3/15/23 23:46	
13C8-PFOA	77.6	20-150						3/15/23 23:46	
13C9-PFNA	75.9	20-150						3/15/23 23:46	
13C6-PFDA	75.5	20-150						3/15/23 23:46	
13C7-PFUnA	71.4	20-150						3/15/23 23:46	
13C2-PFDoA	63.8	20-150						3/15/23 23:46	
13C2-PFTeDA	63.3	20-150						3/15/23 23:46	
13C3-PFBS	76.1	20-150						3/15/23 23:46	
13C3-PFHxS	79.0	20-150						3/15/23 23:46	
13C8-PFOS	73.6	20-150						3/15/23 23:46	
13C2-4:2FTS	142	20-150						3/15/23 23:46	
13C2-6:2FTS	105	20-150						3/15/23 23:46	
13C2-8:2FTS	81.5	20-150						3/15/23 23:46	
13C8-PFOSA	63.5	20-150						3/15/23 23:46	
D3-NMeFOSA	57.3	20-150						3/15/23 23:46	
D5-NEtFOSA	59.3	20-150						3/15/23 23:46	
D3-NMeFOSAA	69.6	20-150						3/15/23 23:46	
D5-NEtFOSAA	74.1	20-150						3/15/23 23:46	
D7-NMeFOSE	62.4	20-150						3/15/23 23:46	
D9-NEtFOSE	62.2	20-150						3/15/23 23:46	
13C3-HFPO-DA	75.7	20-150						3/15/23 23:46	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Old Bethpage, New York

Sample Description:

Work Order: 23B1340

Date Received: 2/11/2023

Field Sample #: TB-021023

Sampled: 2/10/2023 10:20

Sample ID: 23B1340-05

Sample Matrix: Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Bromoform	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Bromomethane	ND	2.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Carbon Disulfide	ND	5.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Chloromethane	ND	2.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Cyclohexane	ND	5.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
1,4-Dioxane	ND	50	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Methyl Acetate	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Methyl Cyclohexane	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
1,1,1,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH

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Project Location: Old Bethpage, New York

Sample Description:

Work Order: 23B1340

Date Received: 2/11/2023

Field Sample #: TB-021023

Sampled: 2/10/2023 10:20

Sample ID: 23B1340-05

Sample Matrix: Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Xylenes (total)	ND	1.0	µg/L	1		SW-846 8260D	2/15/23	2/15/23 12:08	EEH
Surrogates	% Recovery		Recovery Limits		Flag/Qual				
1,2-Dichloroethane-d4	107		70-130				2/15/23 12:08		
Toluene-d8	101		70-130				2/15/23 12:08		
4-Bromofluorobenzene	101		70-130				2/15/23 12:08		

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Sample Extraction Data**Prep Method: Draft Method 1633 Analytical Method: Draft Method 1633**
Metabolites were extracted on 2/14/2023 per NO PREP in Batch B331424

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23B1340-01 [PD-CP-00-021023]	B331794	555	5.00	02/22/23
23B1340-02 [PD-CP-01-021023]	B331794	550	5.00	02/22/23
23B1340-03 [ASF-CP-00-021023]	B331794	522	5.00	02/22/23
23B1340-04 [ASF-CP-01-021023]	B331794	552	5.00	02/22/23

Prep Method: SW-846 5030B Analytical Method: SW-846 8260D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23B1340-01 [PD-CP-00-021023]	B331563	5	5.00	02/15/23
23B1340-02 [PD-CP-01-021023]	B331563	5	5.00	02/15/23
23B1340-05 [TB-021023]	B331563	5	5.00	02/15/23

Prep Method: SW-846 3510C Analytical Method: SW-846 8270E

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23B1340-01 [PD-CP-00-021023]	B331566	1020	1.00	02/15/23
23B1340-02 [PD-CP-01-021023]	B331566	960	1.00	02/15/23
23B1340-03 [ASF-CP-00-021023]	B331566	1020	1.00	02/15/23
23B1340-04 [ASF-CP-01-021023]	B331566	1020	1.00	02/15/23

Prep Method: SW-846 3510C Analytical Method: SW-846 8270E

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23B1340-02 [PD-CP-01-021023]	B331882	1020	1.00	02/17/23

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B331563 - SW-846 5030B
Blank (B331563-BLK1)

Prepared & Analyzed: 02/15/23

Acetone	ND	50	µg/L
Acrylonitrile	ND	5.0	µg/L
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L
Benzene	ND	1.0	µg/L
Bromobenzene	ND	1.0	µg/L
Bromochloromethane	ND	1.0	µg/L
Bromodichloromethane	ND	0.50	µg/L
Bromoform	ND	1.0	µg/L
Bromomethane	ND	2.0	µg/L
2-Butanone (MEK)	ND	20	µg/L
tert-Butyl Alcohol (TBA)	ND	20	µg/L
n-Butylbenzene	ND	1.0	µg/L
sec-Butylbenzene	ND	1.0	µg/L
tert-Butylbenzene	ND	1.0	µg/L
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L
Carbon Disulfide	ND	5.0	µg/L
Carbon Tetrachloride	ND	5.0	µg/L
Chlorobenzene	ND	1.0	µg/L
Chlorodibromomethane	ND	0.50	µg/L
Chloroethane	ND	2.0	µg/L
Chloroform	ND	2.0	µg/L
Chloromethane	ND	2.0	µg/L
2-Chlorotoluene	ND	1.0	µg/L
4-Chlorotoluene	ND	1.0	µg/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L
1,2-Dibromoethane (EDB)	ND	0.50	µg/L
Dibromomethane	ND	1.0	µg/L
1,2-Dichlorobenzene	ND	1.0	µg/L
1,3-Dichlorobenzene	ND	1.0	µg/L
1,4-Dichlorobenzene	ND	1.0	µg/L
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L
1,1-Dichloroethane	ND	1.0	µg/L
1,2-Dichloroethane	ND	1.0	µg/L
1,1-Dichloroethylene	ND	1.0	µg/L
cis-1,2-Dichloroethylene	ND	1.0	µg/L
trans-1,2-Dichloroethylene	ND	1.0	µg/L
1,2-Dichloropropane	ND	1.0	µg/L
1,3-Dichloropropane	ND	0.50	µg/L
2,2-Dichloropropane	ND	1.0	µg/L
1,1-Dichloropropene	ND	2.0	µg/L
cis-1,3-Dichloropropene	ND	0.50	µg/L
trans-1,3-Dichloropropene	ND	0.50	µg/L
Diethyl Ether	ND	2.0	µg/L
Diisopropyl Ether (DIPE)	ND	0.50	µg/L
1,4-Dioxane	ND	50	µg/L
Ethylbenzene	ND	1.0	µg/L
Hexachlorobutadiene	ND	0.60	µg/L
2-Hexanone (MBK)	ND	10	µg/L
Isopropylbenzene (Cumene)	ND	1.0	µg/L
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L
Methyl Acetate	ND	1.0	µg/L

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B331563 - SW-846 5030B
Blank (B331563-BLK1)

Prepared & Analyzed: 02/15/23

Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
Methyl Cyclohexane	ND	1.0	µg/L							
Methylene Chloride	ND	5.0	µg/L							
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L							
Naphthalene	ND	2.0	µg/L							
n-Propylbenzene	ND	1.0	µg/L							
Styrene	ND	1.0	µg/L							
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L							
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L							
Tetrachloroethylene	ND	1.0	µg/L							
Tetrahydrofuran	ND	10	µg/L							
Toluene	ND	1.0	µg/L							
1,2,3-Trichlorobenzene	ND	5.0	µg/L							
1,2,4-Trichlorobenzene	ND	1.0	µg/L							
1,3,5-Trichlorobenzene	ND	1.0	µg/L							
1,1,1-Trichloroethane	ND	1.0	µg/L							
1,1,2-Trichloroethane	ND	1.0	µg/L							
Trichloroethylene	ND	1.0	µg/L							
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L							
1,2,3-Trichloropropane	ND	2.0	µg/L							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L							
1,2,4-Trimethylbenzene	ND	1.0	µg/L							
1,3,5-Trimethylbenzene	ND	1.0	µg/L							
Vinyl Chloride	ND	2.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	27.2		µg/L	25.0		109	70-130			
Surrogate: Toluene-d8	25.3		µg/L	25.0		101	70-130			
Surrogate: 4-Bromofluorobenzene	25.4		µg/L	25.0		101	70-130			

LCS (B331563-BS1)

Prepared & Analyzed: 02/15/23

Acetone	99.4	50	µg/L	100		99.4	70-160			†
Acrylonitrile	10.5	5.0	µg/L	10.0		105	70-130			
tert-Amyl Methyl Ether (TAME)	9.72	0.50	µg/L	10.0		97.2	70-130			
Benzene	9.94	1.0	µg/L	10.0		99.4	70-130			
Bromobenzene	10.2	1.0	µg/L	10.0		102	70-130			
Bromochloromethane	10.7	1.0	µg/L	10.0		107	70-130			
Bromodichloromethane	9.94	0.50	µg/L	10.0		99.4	70-130			
Bromoform	10.4	1.0	µg/L	10.0		104	70-130			
Bromomethane	10.6	2.0	µg/L	10.0		106	40-160			†
2-Butanone (MEK)	102	20	µg/L	100		102	40-160			†
tert-Butyl Alcohol (TBA)	103	20	µg/L	100		103	40-160			†
n-Butylbenzene	10.4	1.0	µg/L	10.0		104	70-130			
sec-Butylbenzene	10.1	1.0	µg/L	10.0		101	70-130			
tert-Butylbenzene	10.1	1.0	µg/L	10.0		101	70-130			
tert-Butyl Ethyl Ether (TBEE)	10.0	0.50	µg/L	10.0		100	70-130			
Carbon Disulfide	116	5.0	µg/L	100		116	70-130			
Carbon Tetrachloride	11.0	5.0	µg/L	10.0		110	70-130			
Chlorobenzene	10.3	1.0	µg/L	10.0		103	70-130			
Chlorodibromomethane	10.6	0.50	µg/L	10.0		106	70-130			
Chloroethane	12.2	2.0	µg/L	10.0		122	70-130			
Chloroform	10.2	2.0	µg/L	10.0		102	70-130			

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B331563 - SW-846 5030B										
LCS (B331563-BS1)										
Prepared & Analyzed: 02/15/23										
Chloromethane	9.14	2.0	µg/L	10.0		91.4	40-160			†
2-Chlorotoluene	9.29	1.0	µg/L	10.0		92.9	70-130			
4-Chlorotoluene	10.3	1.0	µg/L	10.0		103	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	9.98	5.0	µg/L	10.0		99.8	70-130			
1,2-Dibromoethane (EDB)	10.6	0.50	µg/L	10.0		106	70-130			
Dibromomethane	10.5	1.0	µg/L	10.0		105	70-130			
1,2-Dichlorobenzene	10.2	1.0	µg/L	10.0		102	70-130			
1,3-Dichlorobenzene	10.2	1.0	µg/L	10.0		102	70-130			
1,4-Dichlorobenzene	9.80	1.0	µg/L	10.0		98.0	70-130			
trans-1,4-Dichloro-2-butene	10.3	2.0	µg/L	10.0		103	70-130			
Dichlorodifluoromethane (Freon 12)	11.3	2.0	µg/L	10.0		113	40-160			†
1,1-Dichloroethane	10.1	1.0	µg/L	10.0		101	70-130			
1,2-Dichloroethane	10.2	1.0	µg/L	10.0		102	70-130			
1,1-Dichloroethylene	11.2	1.0	µg/L	10.0		112	70-130			
cis-1,2-Dichloroethylene	10.3	1.0	µg/L	10.0		103	70-130			
trans-1,2-Dichloroethylene	10.3	1.0	µg/L	10.0		103	70-130			
1,2-Dichloropropane	9.26	1.0	µg/L	10.0		92.6	70-130			
1,3-Dichloropropane	10.1	0.50	µg/L	10.0		101	70-130			
2,2-Dichloropropane	11.0	1.0	µg/L	10.0		110	40-130			†
1,1-Dichloropropene	10.1	2.0	µg/L	10.0		101	70-130			
cis-1,3-Dichloropropene	10.3	0.50	µg/L	10.0		103	70-130			
trans-1,3-Dichloropropene	10.2	0.50	µg/L	10.0		102	70-130			
Diethyl Ether	10.6	2.0	µg/L	10.0		106	70-130			
Diisopropyl Ether (DIPE)	9.78	0.50	µg/L	10.0		97.8	70-130			
1,4-Dioxane	93.3	50	µg/L	100		93.3	40-130			†
Ethylbenzene	10.5	1.0	µg/L	10.0		105	70-130			
Hexachlorobutadiene	10.8	0.60	µg/L	10.0		108	70-130			
2-Hexanone (MBK)	101	10	µg/L	100		101	70-160			†
Isopropylbenzene (Cumene)	10.3	1.0	µg/L	10.0		103	70-130			
p-Isopropyltoluene (p-Cymene)	10.1	1.0	µg/L	10.0		101	70-130			
Methyl Acetate	9.93	1.0	µg/L	10.0		99.3	70-130			
Methyl tert-Butyl Ether (MTBE)	10.2	1.0	µg/L	10.0		102	70-130			
Methyl Cyclohexane	10.1	1.0	µg/L	10.0		101	70-130			
Methylene Chloride	11.0	5.0	µg/L	10.0		110	70-130			
4-Methyl-2-pentanone (MIBK)	102	10	µg/L	100		102	70-160			†
Naphthalene	9.85	2.0	µg/L	10.0		98.5	40-130			†
n-Propylbenzene	10.4	1.0	µg/L	10.0		104	70-130			
Styrene	10.3	1.0	µg/L	10.0		103	70-130			
1,1,1,2-Tetrachloroethane	10.2	1.0	µg/L	10.0		102	70-130			
1,1,2,2-Tetrachloroethane	10.4	0.50	µg/L	10.0		104	70-130			
Tetrachloroethylene	10.4	1.0	µg/L	10.0		104	70-130			
Tetrahydrofuran	9.72	10	µg/L	10.0		97.2	70-130			
Toluene	10.4	1.0	µg/L	10.0		104	70-130			
1,2,3-Trichlorobenzene	10.3	5.0	µg/L	10.0		103	70-130			
1,2,4-Trichlorobenzene	10.2	1.0	µg/L	10.0		102	70-130			
1,3,5-Trichlorobenzene	10.1	1.0	µg/L	10.0		101	70-130			
1,1,1-Trichloroethane	10.7	1.0	µg/L	10.0		107	70-130			
1,1,2-Trichloroethane	10.3	1.0	µg/L	10.0		103	70-130			
Trichloroethylene	10.5	1.0	µg/L	10.0		105	70-130			
Trichlorofluoromethane (Freon 11)	11.7	2.0	µg/L	10.0		117	70-130			
1,2,3-Trichloropropane	10.4	2.0	µg/L	10.0		104	70-130			

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B331563 - SW-846 5030B										
LCS (B331563-BS1)										
Prepared & Analyzed: 02/15/23										
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	11.6	1.0	µg/L	10.0		116	70-130			
1,2,4-Trimethylbenzene	10.3	1.0	µg/L	10.0		103	70-130			
1,3,5-Trimethylbenzene	10.5	1.0	µg/L	10.0		105	70-130			
Vinyl Chloride	9.52	2.0	µg/L	10.0		95.2	40-160			†
m+p Xylene	21.7	2.0	µg/L	20.0		108	70-130			
o-Xylene	10.8	1.0	µg/L	10.0		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	26.8		µg/L	25.0		107	70-130			
Surrogate: Toluene-d8	25.6		µg/L	25.0		102	70-130			
Surrogate: 4-Bromofluorobenzene	26.0		µg/L	25.0		104	70-130			
LCS Dup (B331563-BSD1)										
Prepared & Analyzed: 02/15/23										
Acetone	104	50	µg/L	100		104	70-160	4.13	25	†
Acrylonitrile	10.4	5.0	µg/L	10.0		104	70-130	1.34	25	
tert-Amyl Methyl Ether (TAME)	9.61	0.50	µg/L	10.0		96.1	70-130	1.14	25	
Benzene	9.76	1.0	µg/L	10.0		97.6	70-130	1.83	25	
Bromobenzene	10.3	1.0	µg/L	10.0		103	70-130	1.46	25	
Bromochloromethane	10.8	1.0	µg/L	10.0		108	70-130	0.744	25	
Bromodichloromethane	11.0	0.50	µg/L	10.0		110	70-130	10.0	25	
Bromoform	11.0	1.0	µg/L	10.0		110	70-130	5.68	25	
Bromomethane	12.2	2.0	µg/L	10.0		122	40-160	13.6	25	†
2-Butanone (MEK)	101	20	µg/L	100		101	40-160	0.560	25	†
tert-Butyl Alcohol (TBA)	107	20	µg/L	100		107	40-160	4.10	25	†
n-Butylbenzene	10.4	1.0	µg/L	10.0		104	70-130	0.00	25	
sec-Butylbenzene	10.2	1.0	µg/L	10.0		102	70-130	1.08	25	
tert-Butylbenzene	10.2	1.0	µg/L	10.0		102	70-130	0.591	25	
tert-Butyl Ethyl Ether (TBEE)	10.1	0.50	µg/L	10.0		101	70-130	0.498	25	
Carbon Disulfide	121	5.0	µg/L	100		121	70-130	4.12	25	
Carbon Tetrachloride	11.4	5.0	µg/L	10.0		114	70-130	3.48	25	
Chlorobenzene	10.5	1.0	µg/L	10.0		105	70-130	1.64	25	
Chlorodibromomethane	10.9	0.50	µg/L	10.0		109	70-130	2.99	25	
Chloroethane	12.4	2.0	µg/L	10.0		124	70-130	1.55	25	
Chloroform	10.4	2.0	µg/L	10.0		104	70-130	1.84	25	
Chloromethane	7.60	2.0	µg/L	10.0		76.0	40-160	18.4	25	†
2-Chlorotoluene	9.61	1.0	µg/L	10.0		96.1	70-130	3.39	25	
4-Chlorotoluene	10.6	1.0	µg/L	10.0		106	70-130	2.49	25	
1,2-Dibromo-3-chloropropane (DBCP)	10.5	5.0	µg/L	10.0		105	70-130	4.89	25	
1,2-Dibromoethane (EDB)	10.4	0.50	µg/L	10.0		104	70-130	1.33	25	
Dibromomethane	10.4	1.0	µg/L	10.0		104	70-130	1.15	25	
1,2-Dichlorobenzene	9.89	1.0	µg/L	10.0		98.9	70-130	2.59	25	
1,3-Dichlorobenzene	10.2	1.0	µg/L	10.0		102	70-130	0.687	25	
1,4-Dichlorobenzene	9.99	1.0	µg/L	10.0		99.9	70-130	1.92	25	
trans-1,4-Dichloro-2-butene	10.5	2.0	µg/L	10.0		105	70-130	1.92	25	
Dichlorodifluoromethane (Freon 12)	11.6	2.0	µg/L	10.0		116	40-160	2.36	25	†
1,1-Dichloroethane	10.2	1.0	µg/L	10.0		102	70-130	1.38	25	
1,2-Dichloroethane	10.1	1.0	µg/L	10.0		101	70-130	1.18	25	
1,1-Dichloroethylene	11.6	1.0	µg/L	10.0		116	70-130	3.24	25	
cis-1,2-Dichloroethylene	10.5	1.0	µg/L	10.0		105	70-130	1.92	25	
trans-1,2-Dichloroethylene	10.4	1.0	µg/L	10.0		104	70-130	1.45	25	
1,2-Dichloropropane	9.38	1.0	µg/L	10.0		93.8	70-130	1.29	25	
1,3-Dichloropropane	9.91	0.50	µg/L	10.0		99.1	70-130	1.90	25	
2,2-Dichloropropane	11.6	1.0	µg/L	10.0		116	40-130	5.85	25	†
1,1-Dichloropropene	10.5	2.0	µg/L	10.0		105	70-130	3.69	25	

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B331563 - SW-846 5030B
LCS Dup (B331563-BSD1)

Prepared & Analyzed: 02/15/23

cis-1,3-Dichloropropene	10.6	0.50	µg/L	10.0		106	70-130	2.78	25	
trans-1,3-Dichloropropene	10.3	0.50	µg/L	10.0		103	70-130	1.07	25	
Diethyl Ether	11.1	2.0	µg/L	10.0		111	70-130	4.62	25	
Diisopropyl Ether (DIPE)	9.96	0.50	µg/L	10.0		99.6	70-130	1.82	25	
1,4-Dioxane	88.1	50	µg/L	100		88.1	40-130	5.71	50	† ‡
Ethylbenzene	10.5	1.0	µg/L	10.0		105	70-130	0.476	25	
Hexachlorobutadiene	10.6	0.60	µg/L	10.0		106	70-130	2.15	25	
2-Hexanone (MBK)	102	10	µg/L	100		102	70-160	1.36	25	†
Isopropylbenzene (Cumene)	10.5	1.0	µg/L	10.0		105	70-130	1.63	25	
p-Isopropyltoluene (p-Cymene)	10.1	1.0	µg/L	10.0		101	70-130	0.198	25	
Methyl Acetate	10.6	1.0	µg/L	10.0		106	70-130	7.00	25	
Methyl tert-Butyl Ether (MTBE)	10.2	1.0	µg/L	10.0		102	70-130	0.197	25	
Methyl Cyclohexane	10.1	1.0	µg/L	10.0		101	70-130	0.0990	25	
Methylene Chloride	11.2	5.0	µg/L	10.0		112	70-130	2.61	25	
4-Methyl-2-pentanone (MIBK)	99.5	10	µg/L	100		99.5	70-160	2.58	25	†
Naphthalene	10.2	2.0	µg/L	10.0		102	40-130	3.39	25	†
n-Propylbenzene	10.4	1.0	µg/L	10.0		104	70-130	0.192	25	
Styrene	10.5	1.0	µg/L	10.0		105	70-130	2.21	25	
1,1,1,2-Tetrachloroethane	10.7	1.0	µg/L	10.0		107	70-130	4.67	25	
1,1,2,2-Tetrachloroethane	10.3	0.50	µg/L	10.0		103	70-130	0.484	25	
Tetrachloroethylene	10.5	1.0	µg/L	10.0		105	70-130	0.573	25	
Tetrahydrofuran	9.47	10	µg/L	10.0		94.7	70-130	2.61	25	
Toluene	10.0	1.0	µg/L	10.0		100	70-130	4.00	25	
1,2,3-Trichlorobenzene	10.3	5.0	µg/L	10.0		103	70-130	0.194	25	
1,2,4-Trichlorobenzene	10.1	1.0	µg/L	10.0		101	70-130	1.47	25	
1,3,5-Trichlorobenzene	10.0	1.0	µg/L	10.0		100	70-130	0.695	25	
1,1,1-Trichloroethane	11.0	1.0	µg/L	10.0		110	70-130	2.58	25	
1,1,2-Trichloroethane	10.2	1.0	µg/L	10.0		102	70-130	0.293	25	
Trichloroethylene	10.4	1.0	µg/L	10.0		104	70-130	0.858	25	
Trichlorofluoromethane (Freon 11)	12.0	2.0	µg/L	10.0		120	70-130	2.36	25	
1,2,3-Trichloropropane	10.3	2.0	µg/L	10.0		103	70-130	0.868	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	11.7	1.0	µg/L	10.0		117	70-130	0.687	25	
1,2,4-Trimethylbenzene	10.2	1.0	µg/L	10.0		102	70-130	0.975	25	
1,3,5-Trimethylbenzene	10.6	1.0	µg/L	10.0		106	70-130	0.663	25	
Vinyl Chloride	10.5	2.0	µg/L	10.0		105	40-160	9.70	25	†
m+p Xylene	21.4	2.0	µg/L	20.0		107	70-130	1.58	25	
o-Xylene	10.6	1.0	µg/L	10.0		106	70-130	1.77	25	
Surrogate: 1,2-Dichloroethane-d4	27.1		µg/L	25.0		109	70-130			
Surrogate: Toluene-d8	25.2		µg/L	25.0		101	70-130			
Surrogate: 4-Bromofluorobenzene	26.3		µg/L	25.0		105	70-130			

Matrix Spike (B331563-MS1)

Source: 23B1340-01

Prepared & Analyzed: 02/15/23

Acetone	91.4	50	µg/L	100	2.76	88.7	70-130			
Acrylonitrile	8.83	5.0	µg/L	10.0	ND	88.3	70-130			
tert-Amyl Methyl Ether (TAME)	8.67	0.50	µg/L	10.0	ND	86.7	70-130			
Benzene	9.35	1.0	µg/L	10.0	ND	93.5	70-130			
Bromobenzene	9.40	1.0	µg/L	10.0	ND	94.0	70-130			
Bromochloromethane	10.5	1.0	µg/L	10.0	ND	105	70-130			
Bromodichloromethane	9.73	0.50	µg/L	10.0	ND	97.3	70-130			
Bromoform	9.38	1.0	µg/L	10.0	ND	93.8	70-130			
Bromomethane	9.91	2.0	µg/L	10.0	ND	99.1	70-130			
2-Butanone (MEK)	87.9	20	µg/L	100	ND	87.9	70-130			

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B331563 - SW-846 5030B										
Matrix Spike (B331563-MS1)	Source: 23B1340-01			Prepared & Analyzed: 02/15/23						
tert-Butyl Alcohol (TBA)	99.4	20	µg/L	100	ND	99.4	70-130			
n-Butylbenzene	9.53	1.0	µg/L	10.0	ND	95.3	70-130			
sec-Butylbenzene	9.60	1.0	µg/L	10.0	ND	96.0	70-130			
tert-Butylbenzene	9.56	1.0	µg/L	10.0	ND	95.6	70-130			
tert-Butyl Ethyl Ether (TBEE)	9.20	0.50	µg/L	10.0	ND	92.0	70-130			
Carbon Disulfide	114	5.0	µg/L	100	ND	114	70-130			
Carbon Tetrachloride	10.9	5.0	µg/L	10.0	ND	109	70-130			
Chlorobenzene	9.89	1.0	µg/L	10.0	ND	98.9	70-130			
Chlorodibromomethane	9.85	0.50	µg/L	10.0	ND	98.5	70-130			
Chloroethane	11.7	2.0	µg/L	10.0	ND	117	70-130			
Chloroform	9.83	2.0	µg/L	10.0	ND	98.3	70-130			
Chloromethane	6.59	2.0	µg/L	10.0	ND	65.9	* 70-130			MS-23, R-06
2-Chlorotoluene	8.75	1.0	µg/L	10.0	ND	87.5	70-130			
4-Chlorotoluene	9.63	1.0	µg/L	10.0	ND	96.3	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	8.29	5.0	µg/L	10.0	ND	82.9	70-130			
1,2-Dibromoethane (EDB)	9.88	0.50	µg/L	10.0	ND	98.8	70-130			
Dibromomethane	10.1	1.0	µg/L	10.0	ND	101	70-130			
1,2-Dichlorobenzene	9.40	1.0	µg/L	10.0	ND	94.0	70-130			
1,3-Dichlorobenzene	9.47	1.0	µg/L	10.0	ND	94.7	70-130			
1,4-Dichlorobenzene	9.39	1.0	µg/L	10.0	ND	93.9	70-130			
trans-1,4-Dichloro-2-butene	8.71	2.0	µg/L	10.0	ND	87.1	70-130			
Dichlorodifluoromethane (Freon 12)	11.2	2.0	µg/L	10.0	ND	112	70-130			
1,1-Dichloroethane	9.72	1.0	µg/L	10.0	ND	97.2	70-130			
1,2-Dichloroethane	9.78	1.0	µg/L	10.0	ND	97.8	70-130			
1,1-Dichloroethylene	11.3	1.0	µg/L	10.0	ND	113	70-130			
cis-1,2-Dichloroethylene	10.0	1.0	µg/L	10.0	ND	100	70-130			
trans-1,2-Dichloroethylene	9.75	1.0	µg/L	10.0	ND	97.5	70-130			
1,2-Dichloropropane	8.92	1.0	µg/L	10.0	ND	89.2	70-130			
1,3-Dichloropropane	9.50	0.50	µg/L	10.0	ND	95.0	70-130			
2,2-Dichloropropane	8.95	1.0	µg/L	10.0	ND	89.5	70-130			
1,1-Dichloropropene	10.0	2.0	µg/L	10.0	ND	100	70-130			
cis-1,3-Dichloropropene	9.10	0.50	µg/L	10.0	ND	91.0	70-130			
trans-1,3-Dichloropropene	9.19	0.50	µg/L	10.0	ND	91.9	70-130			
Diethyl Ether	10.0	2.0	µg/L	10.0	ND	100	70-130			
Diisopropyl Ether (DIPE)	9.31	0.50	µg/L	10.0	ND	93.1	70-130			
1,4-Dioxane	111	50	µg/L	100	ND	111	70-130			
Ethylbenzene	9.78	1.0	µg/L	10.0	ND	97.8	70-130			
Hexachlorobutadiene	9.23	0.60	µg/L	10.0	ND	92.3	70-130			
2-Hexanone (MBK)	93.3	10	µg/L	100	ND	93.3	70-130			
Isopropylbenzene (Cumene)	9.96	1.0	µg/L	10.0	ND	99.6	70-130			
p-Isopropyltoluene (p-Cymene)	9.44	1.0	µg/L	10.0	ND	94.4	70-130			
Methyl Acetate	8.06	1.0	µg/L	10.0	ND	80.6	70-130			
Methyl tert-Butyl Ether (MTBE)	9.02	1.0	µg/L	10.0	ND	90.2	70-130			
Methyl Cyclohexane	9.74	1.0	µg/L	10.0	ND	97.4	70-130			
Methylene Chloride	10.8	5.0	µg/L	10.0	ND	108	70-130			
4-Methyl-2-pentanone (MIBK)	92.9	10	µg/L	100	ND	92.9	70-130			
Naphthalene	7.79	2.0	µg/L	10.0	ND	77.9	70-130			
n-Propylbenzene	9.96	1.0	µg/L	10.0	ND	99.6	70-130			
Styrene	9.72	1.0	µg/L	10.0	ND	97.2	70-130			
1,1,1,2-Tetrachloroethane	9.91	1.0	µg/L	10.0	ND	99.1	70-130			
1,1,2,2-Tetrachloroethane	9.53	0.50	µg/L	10.0	ND	95.3	70-130			
Tetrachloroethylene	10.3	1.0	µg/L	10.0	ND	103	70-130			

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QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B331563 - SW-846 5030B

Matrix Spike (B331563-MS1)		Source: 23B1340-01		Prepared & Analyzed: 02/15/23						
Tetrahydrofuran	10.8	10	µg/L	10.0	1.57	92.0	70-130			
Toluene	9.77	1.0	µg/L	10.0	ND	97.7	70-130			
1,2,3-Trichlorobenzene	8.31	5.0	µg/L	10.0	ND	83.1	70-130			
1,2,4-Trichlorobenzene	8.63	1.0	µg/L	10.0	ND	86.3	70-130			
1,3,5-Trichlorobenzene	8.98	1.0	µg/L	10.0	ND	89.8	70-130			
1,1,1-Trichloroethane	10.5	1.0	µg/L	10.0	ND	105	70-130			
1,1,2-Trichloroethane	9.51	1.0	µg/L	10.0	ND	95.1	70-130			
Trichloroethylene	9.84	1.0	µg/L	10.0	ND	98.4	70-130			
Trichlorofluoromethane (Freon 11)	11.9	2.0	µg/L	10.0	ND	119	70-130			
1,2,3-Trichloropropane	9.35	2.0	µg/L	10.0	ND	93.5	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	11.3	1.0	µg/L	10.0	ND	113	70-130			
1,2,4-Trimethylbenzene	9.37	1.0	µg/L	10.0	ND	93.7	70-130			
1,3,5-Trimethylbenzene	9.89	1.0	µg/L	10.0	ND	98.9	70-130			
Vinyl Chloride	9.51	2.0	µg/L	10.0	ND	95.1	70-130			
m+p Xylene	20.1	2.0	µg/L	20.0	ND	100	70-130			
o-Xylene	9.99	1.0	µg/L	10.0	ND	99.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	27.5		µg/L	25.0		110	70-130			
Surrogate: Toluene-d8	25.6		µg/L	25.0		102	70-130			
Surrogate: 4-Bromofluorobenzene	25.9		µg/L	25.0		104	70-130			

Matrix Spike Dup (B331563-MSD1)		Source: 23B1340-01		Prepared & Analyzed: 02/15/23						
Acetone	89.3	50	µg/L	100	2.76	86.5	70-130	2.36	30	
Acrylonitrile	8.72	5.0	µg/L	10.0	ND	87.2	70-130	1.25	30	
tert-Amyl Methyl Ether (TAME)	8.45	0.50	µg/L	10.0	ND	84.5	70-130	2.57	30	
Benzene	8.96	1.0	µg/L	10.0	ND	89.6	70-130	4.26	30	
Bromobenzene	9.17	1.0	µg/L	10.0	ND	91.7	70-130	2.48	30	
Bromochloromethane	9.71	1.0	µg/L	10.0	ND	97.1	70-130	7.72	30	
Bromodichloromethane	9.94	0.50	µg/L	10.0	ND	99.4	70-130	2.14	30	
Bromoform	9.19	1.0	µg/L	10.0	ND	91.9	70-130	2.05	30	
Bromomethane	10.0	2.0	µg/L	10.0	ND	100	70-130	1.10	30	
2-Butanone (MEK)	84.3	20	µg/L	100	ND	84.3	70-130	4.22	30	
tert-Butyl Alcohol (TBA)	93.2	20	µg/L	100	ND	93.2	70-130	6.48	30	
n-Butylbenzene	8.59	1.0	µg/L	10.0	ND	85.9	70-130	10.4	30	
sec-Butylbenzene	8.85	1.0	µg/L	10.0	ND	88.5	70-130	8.13	30	
tert-Butylbenzene	8.85	1.0	µg/L	10.0	ND	88.5	70-130	7.71	30	
tert-Butyl Ethyl Ether (TBEE)	8.93	0.50	µg/L	10.0	ND	89.3	70-130	2.98	30	
Carbon Disulfide	103	5.0	µg/L	100	ND	103	70-130	10.4	30	
Carbon Tetrachloride	10.5	5.0	µg/L	10.0	ND	105	70-130	4.39	30	
Chlorobenzene	9.32	1.0	µg/L	10.0	ND	93.2	70-130	5.93	30	
Chlorodibromomethane	9.44	0.50	µg/L	10.0	ND	94.4	70-130	4.25	30	
Chloroethane	11.7	2.0	µg/L	10.0	ND	117	70-130	0.428	30	
Chloroform	9.40	2.0	µg/L	10.0	ND	94.0	70-130	4.47	30	
Chloromethane	9.22	2.0	µg/L	10.0	ND	92.2	70-130	33.3	*	30
2-Chlorotoluene	8.46	1.0	µg/L	10.0	ND	84.6	70-130	3.37	30	
4-Chlorotoluene	9.11	1.0	µg/L	10.0	ND	91.1	70-130	5.55	30	
1,2-Dibromo-3-chloropropane (DBCP)	8.18	5.0	µg/L	10.0	ND	81.8	70-130	1.34	30	
1,2-Dibromoethane (EDB)	9.41	0.50	µg/L	10.0	ND	94.1	70-130	4.87	30	
Dibromomethane	9.38	1.0	µg/L	10.0	ND	93.8	70-130	7.39	30	
1,2-Dichlorobenzene	8.76	1.0	µg/L	10.0	ND	87.6	70-130	7.05	30	
1,3-Dichlorobenzene	8.76	1.0	µg/L	10.0	ND	87.6	70-130	7.79	30	
1,4-Dichlorobenzene	8.50	1.0	µg/L	10.0	ND	85.0	70-130	9.95	30	
trans-1,4-Dichloro-2-butene	8.13	2.0	µg/L	10.0	ND	81.3	70-130	6.89	30	

R-06

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B331563 - SW-846 5030B										
Matrix Spike Dup (B331563-MSD1)		Source: 23B1340-01			Prepared & Analyzed: 02/15/23					
Dichlorodifluoromethane (Freon 12)	10.5	2.0	µg/L	10.0	ND	105	70-130	7.18	30	
1,1-Dichloroethane	9.50	1.0	µg/L	10.0	ND	95.0	70-130	2.29	30	
1,2-Dichloroethane	9.29	1.0	µg/L	10.0	ND	92.9	70-130	5.14	30	
1,1-Dichloroethylene	10.5	1.0	µg/L	10.0	ND	105	70-130	6.96	30	
cis-1,2-Dichloroethylene	9.52	1.0	µg/L	10.0	ND	95.2	70-130	5.42	30	
trans-1,2-Dichloroethylene	9.19	1.0	µg/L	10.0	ND	91.9	70-130	5.91	30	
1,2-Dichloropropane	8.58	1.0	µg/L	10.0	ND	85.8	70-130	3.89	30	
1,3-Dichloropropane	9.00	0.50	µg/L	10.0	ND	90.0	70-130	5.41	30	
2,2-Dichloropropane	8.64	1.0	µg/L	10.0	ND	86.4	70-130	3.52	30	
1,1-Dichloropropene	9.41	2.0	µg/L	10.0	ND	94.1	70-130	6.18	30	
cis-1,3-Dichloropropene	8.77	0.50	µg/L	10.0	ND	87.7	70-130	3.69	30	
trans-1,3-Dichloropropene	8.62	0.50	µg/L	10.0	ND	86.2	70-130	6.40	30	
Diethyl Ether	9.54	2.0	µg/L	10.0	ND	95.4	70-130	5.11	30	
Diisopropyl Ether (DIPE)	8.98	0.50	µg/L	10.0	ND	89.8	70-130	3.61	30	
1,4-Dioxane	110	50	µg/L	100	ND	110	70-130	0.705	30	
Ethylbenzene	9.24	1.0	µg/L	10.0	ND	92.4	70-130	5.68	30	
Hexachlorobutadiene	8.45	0.60	µg/L	10.0	ND	84.5	70-130	8.82	30	
2-Hexanone (MBK)	89.1	10	µg/L	100	ND	89.1	70-130	4.57	30	
Isopropylbenzene (Cumene)	9.24	1.0	µg/L	10.0	ND	92.4	70-130	7.50	30	
p-Isopropyltoluene (p-Cymene)	8.60	1.0	µg/L	10.0	ND	86.0	70-130	9.31	30	
Methyl Acetate	7.37	1.0	µg/L	10.0	ND	73.7	70-130	8.94	30	
Methyl tert-Butyl Ether (MTBE)	8.85	1.0	µg/L	10.0	ND	88.5	70-130	1.90	30	
Methyl Cyclohexane	8.76	1.0	µg/L	10.0	ND	87.6	70-130	10.6	30	
Methylene Chloride	10.0	5.0	µg/L	10.0	ND	100	70-130	7.19	30	
4-Methyl-2-pentanone (MIBK)	89.2	10	µg/L	100	ND	89.2	70-130	3.99	30	
Naphthalene	7.90	2.0	µg/L	10.0	ND	79.0	70-130	1.40	30	
n-Propylbenzene	9.27	1.0	µg/L	10.0	ND	92.7	70-130	7.18	30	
Styrene	9.26	1.0	µg/L	10.0	ND	92.6	70-130	4.85	30	
1,1,1,2-Tetrachloroethane	9.28	1.0	µg/L	10.0	ND	92.8	70-130	6.57	30	
1,1,2,2-Tetrachloroethane	9.18	0.50	µg/L	10.0	ND	91.8	70-130	3.74	30	
Tetrachloroethylene	9.60	1.0	µg/L	10.0	ND	96.0	70-130	7.42	30	
Tetrahydrofuran	10.5	10	µg/L	10.0	1.57	89.5	70-130	2.35	30	
Toluene	9.14	1.0	µg/L	10.0	ND	91.4	70-130	6.66	30	
1,2,3-Trichlorobenzene	8.34	5.0	µg/L	10.0	ND	83.4	70-130	0.360	30	
1,2,4-Trichlorobenzene	8.20	1.0	µg/L	10.0	ND	82.0	70-130	5.11	30	
1,3,5-Trichlorobenzene	8.37	1.0	µg/L	10.0	ND	83.7	70-130	7.03	30	
1,1,1-Trichloroethane	10.2	1.0	µg/L	10.0	ND	102	70-130	2.51	30	
1,1,2-Trichloroethane	9.07	1.0	µg/L	10.0	ND	90.7	70-130	4.74	30	
Trichloroethylene	9.57	1.0	µg/L	10.0	ND	95.7	70-130	2.78	30	
Trichlorofluoromethane (Freon 11)	11.0	2.0	µg/L	10.0	ND	110	70-130	8.57	30	
1,2,3-Trichloropropane	9.06	2.0	µg/L	10.0	ND	90.6	70-130	3.15	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10.1	1.0	µg/L	10.0	ND	101	70-130	11.4	30	
1,2,4-Trimethylbenzene	8.70	1.0	µg/L	10.0	ND	87.0	70-130	7.42	30	
1,3,5-Trimethylbenzene	9.26	1.0	µg/L	10.0	ND	92.6	70-130	6.58	30	
Vinyl Chloride	9.58	2.0	µg/L	10.0	ND	95.8	70-130	0.733	30	
m+p Xylene	18.8	2.0	µg/L	20.0	ND	94.2	70-130	6.42	20	
o-Xylene	9.35	1.0	µg/L	10.0	ND	93.5	70-130	6.62	30	
Surrogate: 1,2-Dichloroethane-d4	27.4		µg/L	25.0		110	70-130			
Surrogate: Toluene-d8	25.5		µg/L	25.0		102	70-130			
Surrogate: 4-Bromofluorobenzene	26.0		µg/L	25.0		104	70-130			

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QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B331882 - SW-846 3510C
Blank (B331882-BLK1)

Prepared: 02/17/23 Analyzed: 02/21/23

Acenaphthene	ND	5.0	µg/L							
Acenaphthylene	ND	5.0	µg/L							
Acetophenone	ND	10	µg/L							
Aniline	ND	5.0	µg/L							
Anthracene	ND	5.0	µg/L							
Benzidine	ND	20	µg/L							R-05, V-04, V-05, V-06
Benzo(a)anthracene	ND	5.0	µg/L							
Benzo(a)pyrene	ND	5.0	µg/L							
Benzo(b)fluoranthene	ND	5.0	µg/L							
Benzo(g,h,i)perylene	ND	5.0	µg/L							
Benzo(k)fluoranthene	ND	5.0	µg/L							
Benzoic Acid	ND	10	µg/L							
Bis(2-chloroethoxy)methane	ND	10	µg/L							
Bis(2-chloroethyl)ether	ND	10	µg/L							
Bis(2-chloroisopropyl)ether	ND	10	µg/L							
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L							
4-Bromophenylphenylether	ND	10	µg/L							
Butylbenzylphthalate	ND	10	µg/L							
Carbazole	ND	10	µg/L							
4-Chloroaniline	ND	10	µg/L							
4-Chloro-3-methylphenol	ND	10	µg/L							
2-Chloronaphthalene	ND	10	µg/L							
2-Chlorophenol	ND	10	µg/L							
4-Chlorophenylphenylether	ND	10	µg/L							
Chrysene	ND	5.0	µg/L							
Dibenz(a,h)anthracene	ND	5.0	µg/L							
Dibenzofuran	ND	5.0	µg/L							
Di-n-butylphthalate	ND	10	µg/L							
1,2-Dichlorobenzene	ND	5.0	µg/L							
1,3-Dichlorobenzene	ND	5.0	µg/L							
1,4-Dichlorobenzene	ND	5.0	µg/L							
3,3-Dichlorobenzidine	ND	10	µg/L							
2,4-Dichlorophenol	ND	10	µg/L							
Diethylphthalate	ND	10	µg/L							
2,4-Dimethylphenol	ND	10	µg/L							
Dimethylphthalate	ND	10	µg/L							
4,6-Dinitro-2-methylphenol	ND	10	µg/L							
2,4-Dinitrophenol	ND	10	µg/L							V-04, V-06
2,4-Dinitrotoluene	ND	10	µg/L							V-06
2,6-Dinitrotoluene	ND	10	µg/L							
Di-n-octylphthalate	ND	10	µg/L							
1,2-Diphenylhydrazine/Azobenzene	ND	10	µg/L							
Fluoranthene	ND	5.0	µg/L							
Fluorene	ND	5.0	µg/L							
Hexachlorobenzene	ND	10	µg/L							
Hexachlorobutadiene	ND	10	µg/L							
Hexachlorocyclopentadiene	ND	10	µg/L							
Hexachloroethane	ND	10	µg/L							
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L							
Isophorone	ND	10	µg/L							
1-Methylnaphthalene	ND	5.0	µg/L							
2-Methylnaphthalene	ND	5.0	µg/L							

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QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B331882 - SW-846 3510C
Blank (B331882-BLK1)

Prepared: 02/17/23 Analyzed: 02/21/23

2-Methylphenol	ND	10	µg/L							
3/4-Methylphenol	ND	10	µg/L							
Naphthalene	ND	5.0	µg/L							
2-Nitroaniline	ND	10	µg/L							
3-Nitroaniline	ND	10	µg/L							
4-Nitroaniline	ND	10	µg/L							
Nitrobenzene	ND	10	µg/L							
2-Nitrophenol	ND	10	µg/L							V-06
4-Nitrophenol	ND	10	µg/L							
N-Nitrosodimethylamine	ND	10	µg/L							
N-Nitrosodiphenylamine/Diphenylamine	ND	10	µg/L							
N-Nitrosodi-n-propylamine	ND	10	µg/L							
Pentachloronitrobenzene	ND	10	µg/L							
Pentachlorophenol	ND	10	µg/L							
Phenanthrene	ND	5.0	µg/L							
Phenol	ND	10	µg/L							
Pyrene	ND	5.0	µg/L							
Pyridine	ND	5.0	µg/L							
1,2,4,5-Tetrachlorobenzene	ND	10	µg/L							
1,2,4-Trichlorobenzene	ND	5.0	µg/L							
2,4,5-Trichlorophenol	ND	10	µg/L							
2,4,6-Trichlorophenol	ND	10	µg/L							
Surrogate: 2-Fluorophenol	75.2		µg/L	200		37.6	15-110			
Surrogate: Phenol-d6	53.9		µg/L	200		26.9	15-110			
Surrogate: Nitrobenzene-d5	68.4		µg/L	100		68.4	30-130			
Surrogate: 2-Fluorobiphenyl	67.7		µg/L	100		67.7	30-130			
Surrogate: 2,4,6-Tribromophenol	142		µg/L	200		70.8	15-110			
Surrogate: p-Terphenyl-d14	79.8		µg/L	100		79.8	30-130			

LCS (B331882-BS1)

Prepared: 02/17/23 Analyzed: 02/22/23

Acenaphthene	33.3	5.0	µg/L	50.0		66.7	40-140			
Acenaphthylene	31.9	5.0	µg/L	50.0		63.8	40-140			
Acetophenone	30.7	10	µg/L	50.0		61.4	40-140			
Aniline	27.9	5.0	µg/L	50.0		55.7	40-140			V-05
Anthracene	34.0	5.0	µg/L	50.0		67.9	40-140			
Benzidine	32.2	20	µg/L	50.0		64.3	40-140			R-05, V-04, V-05
Benzo(a)anthracene	32.5	5.0	µg/L	50.0		64.9	40-140			
Benzo(a)pyrene	31.6	5.0	µg/L	50.0		63.2	40-140			
Benzo(b)fluoranthene	33.0	5.0	µg/L	50.0		65.9	40-140			
Benzo(g,h,i)perylene	38.6	5.0	µg/L	50.0		77.3	40-140			
Benzo(k)fluoranthene	35.3	5.0	µg/L	50.0		70.6	40-140			
Benzoic Acid	11.6	10	µg/L	50.0		23.3	10-130			†
Bis(2-chloroethoxy)methane	30.4	10	µg/L	50.0		60.7	40-140			
Bis(2-chloroethyl)ether	28.8	10	µg/L	50.0		57.6	40-140			
Bis(2-chloroisopropyl)ether	32.2	10	µg/L	50.0		64.5	40-140			
Bis(2-Ethylhexyl)phthalate	31.2	10	µg/L	50.0		62.4	40-140			
4-Bromophenylphenylether	29.7	10	µg/L	50.0		59.4	40-140			
Butylbenzylphthalate	31.2	10	µg/L	50.0		62.3	40-140			
Carbazole	34.3	10	µg/L	50.0		68.6	40-140			
4-Chloroaniline	27.6	10	µg/L	50.0		55.2	40-140			
4-Chloro-3-methylphenol	30.2	10	µg/L	50.0		60.5	30-130			
2-Chloronaphthalene	28.4	10	µg/L	50.0		56.8	40-140			

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QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch B331882 - SW-846 3510C									
LCS (B331882-BS1)									
Prepared: 02/17/23 Analyzed: 02/22/23									
2-Chlorophenol	26.6	10	µg/L	50.0		53.3	30-130		
4-Chlorophenylphenylether	31.2	10	µg/L	50.0		62.4	40-140		
Chrysene	32.3	5.0	µg/L	50.0		64.6	40-140		
Dibenz(a,h)anthracene	35.1	5.0	µg/L	50.0		70.3	40-140		
Dibenzofuran	32.2	5.0	µg/L	50.0		64.4	40-140		
Di-n-butylphthalate	31.9	10	µg/L	50.0		63.8	40-140		
1,2-Dichlorobenzene	24.1	5.0	µg/L	50.0		48.3	40-140		
1,3-Dichlorobenzene	22.0	5.0	µg/L	50.0		44.0	40-140		
1,4-Dichlorobenzene	22.6	5.0	µg/L	50.0		45.3	40-140		
3,3-Dichlorobenzidine	36.6	10	µg/L	50.0		73.1	40-140		
2,4-Dichlorophenol	28.6	10	µg/L	50.0		57.3	30-130		
Diethylphthalate	32.0	10	µg/L	50.0		64.0	40-140		
2,4-Dimethylphenol	29.6	10	µg/L	50.0		59.1	30-130		
Dimethylphthalate	30.9	10	µg/L	50.0		61.8	40-140		
4,6-Dinitro-2-methylphenol	36.4	10	µg/L	50.0		72.8	30-130		
2,4-Dinitrophenol	32.0	10	µg/L	50.0		64.0	30-130		V-04
2,4-Dinitrotoluene	37.4	10	µg/L	50.0		74.7	40-140		
2,6-Dinitrotoluene	37.1	10	µg/L	50.0		74.3	40-140		
Di-n-octylphthalate	30.0	10	µg/L	50.0		60.0	40-140		
1,2-Diphenylhydrazine/Azobenzene	32.6	10	µg/L	50.0		65.2	40-140		
Fluoranthene	35.2	5.0	µg/L	50.0		70.4	40-140		
Fluorene	33.2	5.0	µg/L	50.0		66.3	40-140		
Hexachlorobenzene	32.6	10	µg/L	50.0		65.2	40-140		
Hexachlorobutadiene	25.6	10	µg/L	50.0		51.2	40-140		
Hexachlorocyclopentadiene	28.8	10	µg/L	50.0		57.5	30-140		†
Hexachloroethane	22.0	10	µg/L	50.0		44.0	40-140		
Indeno(1,2,3-cd)pyrene	36.0	5.0	µg/L	50.0		72.1	40-140		
Isophorone	34.5	10	µg/L	50.0		69.0	40-140		
1-Methylnaphthalene	30.5	5.0	µg/L	50.0		61.0	40-140		
2-Methylnaphthalene	28.7	5.0	µg/L	50.0		57.5	40-140		
2-Methylphenol	28.7	10	µg/L	50.0		57.3	30-130		
3/4-Methylphenol	27.4	10	µg/L	50.0		54.7	30-130		
Naphthalene	29.4	5.0	µg/L	50.0		58.7	40-140		
2-Nitroaniline	39.7	10	µg/L	50.0		79.4	40-140		
3-Nitroaniline	33.4	10	µg/L	50.0		66.7	40-140		
4-Nitroaniline	35.5	10	µg/L	50.0		71.0	40-140		
Nitrobenzene	30.9	10	µg/L	50.0		61.8	40-140		
2-Nitrophenol	29.6	10	µg/L	50.0		59.1	30-130		
4-Nitrophenol	19.0	10	µg/L	50.0		38.0	10-130		†
N-Nitrosodimethylamine	20.5	10	µg/L	50.0		41.0	40-140		
N-Nitrosodiphenylamine/Diphenylamine	32.6	10	µg/L	50.0		65.1	40-140		
N-Nitrosodi-n-propylamine	31.2	10	µg/L	50.0		62.4	40-140		
Pentachloronitrobenzene	33.8	10	µg/L	50.0		67.6	40-140		
Pentachlorophenol	30.7	10	µg/L	50.0		61.3	30-130		
Phenanthrene	33.4	5.0	µg/L	50.0		66.9	40-140		
Phenol	14.1	10	µg/L	50.0		28.1	20-130		†
Pyrene	33.4	5.0	µg/L	50.0		66.8	40-140		
Pyridine	15.4	5.0	µg/L	50.0		30.7	10-140		†
1,2,4,5-Tetrachlorobenzene	29.9	10	µg/L	50.0		59.8	40-140		
1,2,4-Trichlorobenzene	27.4	5.0	µg/L	50.0		54.7	40-140		
2,4,5-Trichlorophenol	32.2	10	µg/L	50.0		64.4	30-130		
2,4,6-Trichlorophenol	31.3	10	µg/L	50.0		62.7	30-130		

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QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B331882 - SW-846 3510C
LCS (B331882-BS1)

Prepared: 02/17/23 Analyzed: 02/22/23

Surrogate: 2-Fluorophenol	71.7		µg/L	200		35.8	15-110			
Surrogate: Phenol-d6	54.8		µg/L	200		27.4	15-110			
Surrogate: Nitrobenzene-d5	67.6		µg/L	100		67.6	30-130			
Surrogate: 2-Fluorobiphenyl	68.7		µg/L	100		68.7	30-130			
Surrogate: 2,4,6-Tribromophenol	134		µg/L	200		67.2	15-110			
Surrogate: p-Terphenyl-d14	73.5		µg/L	100		73.5	30-130			

LCS Dup (B331882-BSD1)

Prepared: 02/17/23 Analyzed: 02/22/23

Acenaphthene	30.8	5.0	µg/L	50.0		61.6	40-140	7.86	20	
Acenaphthylene	29.3	5.0	µg/L	50.0		58.6	40-140	8.59	20	
Acetophenone	28.1	10	µg/L	50.0		56.2	40-140	8.78	20	
Aniline	28.7	5.0	µg/L	50.0		57.3	40-140	2.83	50	V-05 ‡
Anthracene	32.3	5.0	µg/L	50.0		64.6	40-140	5.10	20	
Benzidine	40.6	20	µg/L	50.0		81.1	40-140	23.1 *	20	R-05, V-04, V-05
Benzo(a)anthracene	31.0	5.0	µg/L	50.0		62.0	40-140	4.57	20	
Benzo(a)pyrene	29.8	5.0	µg/L	50.0		59.6	40-140	5.80	20	
Benzo(b)fluoranthene	31.4	5.0	µg/L	50.0		62.8	40-140	4.88	20	
Benzo(g,h,i)perylene	37.3	5.0	µg/L	50.0		74.7	40-140	3.42	20	
Benzo(k)fluoranthene	33.5	5.0	µg/L	50.0		67.0	40-140	5.26	20	
Benzoic Acid	10.4	10	µg/L	50.0		20.8	10-130	11.2	50	† ‡
Bis(2-chloroethoxy)methane	28.0	10	µg/L	50.0		55.9	40-140	8.27	20	
Bis(2-chloroethyl)ether	26.7	10	µg/L	50.0		53.4	40-140	7.64	20	
Bis(2-chloroisopropyl)ether	30.2	10	µg/L	50.0		60.3	40-140	6.60	20	
Bis(2-Ethylhexyl)phthalate	29.8	10	µg/L	50.0		59.7	40-140	4.55	20	
4-Bromophenylphenylether	28.5	10	µg/L	50.0		56.9	40-140	4.20	20	
Butylbenzylphthalate	29.8	10	µg/L	50.0		59.5	40-140	4.56	20	
Carbazole	32.4	10	µg/L	50.0		64.9	40-140	5.48	20	
4-Chloroaniline	29.4	10	µg/L	50.0		58.8	40-140	6.21	20	
4-Chloro-3-methylphenol	28.2	10	µg/L	50.0		56.4	30-130	7.01	20	
2-Chloronaphthalene	26.6	10	µg/L	50.0		53.1	40-140	6.73	20	
2-Chlorophenol	25.0	10	µg/L	50.0		50.0	30-130	6.39	20	
4-Chlorophenylphenylether	29.2	10	µg/L	50.0		58.4	40-140	6.69	20	
Chrysene	30.5	5.0	µg/L	50.0		61.1	40-140	5.67	20	
Dibenz(a,h)anthracene	34.7	5.0	µg/L	50.0		69.5	40-140	1.17	20	
Dibenzofuran	29.6	5.0	µg/L	50.0		59.2	40-140	8.54	20	
Di-n-butylphthalate	30.2	10	µg/L	50.0		60.5	40-140	5.31	20	
1,2-Dichlorobenzene	22.3	5.0	µg/L	50.0		44.7	40-140	7.75	20	
1,3-Dichlorobenzene	20.6	5.0	µg/L	50.0		41.2	40-140	6.67	20	
1,4-Dichlorobenzene	21.0	5.0	µg/L	50.0		42.1	40-140	7.28	20	
3,3-Dichlorobenzidine	34.4	10	µg/L	50.0		68.9	40-140	5.94	20	
2,4-Dichlorophenol	27.0	10	µg/L	50.0		54.1	30-130	5.71	20	
Diethylphthalate	29.8	10	µg/L	50.0		59.6	40-140	7.02	20	
2,4-Dimethylphenol	34.0	10	µg/L	50.0		67.9	30-130	13.8	20	
Dimethylphthalate	29.2	10	µg/L	50.0		58.3	40-140	5.79	50	‡
4,6-Dinitro-2-methylphenol	35.5	10	µg/L	50.0		70.9	30-130	2.62	50	‡
2,4-Dinitrophenol	31.3	10	µg/L	50.0		62.7	30-130	2.05	50	V-04 ‡
2,4-Dinitrotoluene	35.2	10	µg/L	50.0		70.5	40-140	5.90	20	
2,6-Dinitrotoluene	35.1	10	µg/L	50.0		70.1	40-140	5.73	20	
Di-n-octylphthalate	28.3	10	µg/L	50.0		56.6	40-140	5.76	20	
1,2-Diphenylhydrazine/Azobenzene	30.8	10	µg/L	50.0		61.5	40-140	5.78	20	
Fluoranthene	33.2	5.0	µg/L	50.0		66.5	40-140	5.67	20	
Fluorene	31.0	5.0	µg/L	50.0		61.9	40-140	6.83	20	

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QUALITY CONTROL
Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B331882 - SW-846 3510C										
LCS Dup (B331882-BSD1)										
Prepared: 02/17/23 Analyzed: 02/22/23										
Hexachlorobenzene	31.4	10	µg/L	50.0		62.9	40-140	3.62	20	
Hexachlorobutadiene	24.5	10	µg/L	50.0		48.9	40-140	4.59	20	
Hexachlorocyclopentadiene	26.7	10	µg/L	50.0		53.5	30-140	7.32	50	† ‡
Hexachloroethane	20.8	10	µg/L	50.0		41.6	40-140	5.56	50	‡
Indeno(1,2,3-cd)pyrene	34.6	5.0	µg/L	50.0		69.1	40-140	4.22	50	‡
Isophorone	31.9	10	µg/L	50.0		63.8	40-140	7.80	20	
1-Methylnaphthalene	27.8	5.0	µg/L	50.0		55.5	40-140	9.30	20	
2-Methylnaphthalene	26.2	5.0	µg/L	50.0		52.5	40-140	9.06	20	
2-Methylphenol	26.3	10	µg/L	50.0		52.6	30-130	8.51	20	
3/4-Methylphenol	24.7	10	µg/L	50.0		49.3	30-130	10.4	20	
Naphthalene	27.3	5.0	µg/L	50.0		54.5	40-140	7.42	20	
2-Nitroaniline	37.1	10	µg/L	50.0		74.2	40-140	6.82	20	
3-Nitroaniline	33.5	10	µg/L	50.0		67.0	40-140	0.419	20	
4-Nitroaniline	33.6	10	µg/L	50.0		67.3	40-140	5.35	20	
Nitrobenzene	28.5	10	µg/L	50.0		57.0	40-140	8.12	20	
2-Nitrophenol	27.2	10	µg/L	50.0		54.4	30-130	8.36	20	
4-Nitrophenol	18.0	10	µg/L	50.0		35.9	10-130	5.62	50	† ‡
N-Nitrosodimethylamine	19.5	10	µg/L	50.0		39.1	* 40-140	4.89	20	L-07
N-Nitrosodiphenylamine/Diphenylamine	31.0	10	µg/L	50.0		61.9	40-140	4.97	20	
N-Nitrosodi-n-propylamine	28.4	10	µg/L	50.0		56.9	40-140	9.22	20	
Pentachloronitrobenzene	32.2	10	µg/L	50.0		64.4	40-140	4.88	20	
Pentachlorophenol	28.7	10	µg/L	50.0		57.3	30-130	6.74	50	‡
Phenanthrene	31.8	5.0	µg/L	50.0		63.6	40-140	4.96	20	
Phenol	12.9	10	µg/L	50.0		25.8	20-130	8.83	20	†
Pyrene	32.0	5.0	µg/L	50.0		63.9	40-140	4.41	20	
Pyridine	14.9	5.0	µg/L	50.0		29.9	10-140	2.84	50	† ‡
1,2,4,5-Tetrachlorobenzene	27.6	10	µg/L	50.0		55.2	40-140	8.07	20	
1,2,4-Trichlorobenzene	25.3	5.0	µg/L	50.0		50.7	40-140	7.71	20	
2,4,5-Trichlorophenol	30.0	10	µg/L	50.0		60.1	30-130	6.94	20	
2,4,6-Trichlorophenol	29.4	10	µg/L	50.0		58.8	30-130	6.29	50	‡
Surrogate: 2-Fluorophenol	64.0		µg/L	200		32.0	15-110			
Surrogate: Phenol-d6	49.2		µg/L	200		24.6	15-110			
Surrogate: Nitrobenzene-d5	60.9		µg/L	100		60.9	30-130			
Surrogate: 2-Fluorobiphenyl	60.5		µg/L	100		60.5	30-130			
Surrogate: 2,4,6-Tribromophenol	124		µg/L	200		62.2	15-110			
Surrogate: p-Terphenyl-d14	70.2		µg/L	100		70.2	30-130			

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QUALITY CONTROL
1,4-Dioxane by isotope dilution GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B331566 - SW-846 3510C										
Blank (B331566-BLK1)				Prepared: 02/15/23 Analyzed: 02/17/23						
1,4-Dioxane	ND	0.20	µg/L							
Surrogate: 1,4-Dioxane-d8	2.54		µg/L	10.0		25.4	15-110			
LCS (B331566-BS1)				Prepared: 02/15/23 Analyzed: 02/17/23						
1,4-Dioxane	11.9	0.20	µg/L	10.0		119	40-140			
Surrogate: 1,4-Dioxane-d8	2.50		µg/L	10.0		25.0	15-110			
LCS Dup (B331566-BSD1)				Prepared: 02/15/23 Analyzed: 02/17/23						
1,4-Dioxane	11.7	0.20	µg/L	10.0		117	40-140	2.01	30	
Surrogate: 1,4-Dioxane-d8	2.65		µg/L	10.0		26.5	15-110			
Matrix Spike (B331566-MS1)				Source: 23B1340-01		Prepared: 02/15/23 Analyzed: 02/21/23				
1,4-Dioxane	41.5	0.19	µg/L	9.71	30.6	112	40-140			
Surrogate: 1,4-Dioxane-d8	2.09		µg/L	9.71		21.5	15-110			
Matrix Spike Dup (B331566-MSD1)				Source: 23B1340-01		Prepared: 02/15/23 Analyzed: 02/21/23				
1,4-Dioxane	41.8	0.20	µg/L	9.76	30.6	114	40-140	0.650	20	
Surrogate: 1,4-Dioxane-d8	2.03		µg/L	9.76		20.8	15-110			

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QUALITY CONTROL
Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B331794 - Draft Method 1633										
Blank (B331794-BLK1)										
				Prepared: 02/22/23 Analyzed: 03/15/23						
Perfluorobutanoic acid (PFBA)	ND	3.6	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	1.8	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	0.89	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	0.89	ng/L							
Perfluorooctanoic acid (PFOA)	ND	0.89	ng/L							
Perfluorononanoic acid (PFNA)	ND	0.89	ng/L							
Perfluorodecanoic acid (PFDA)	ND	0.89	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	0.89	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	0.89	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	0.89	ng/L							
Perfluorotetradecanoic acid (PFTeDA)	ND	0.89	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	0.89	ng/L							
Perfluoropetanesulfonic acid (PFPeS)	ND	0.89	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.89	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.89	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	0.89	ng/L							
Perfluorononanesulfonic acid (PFNS)	ND	0.89	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	0.89	ng/L							
Perfluorododecanesulfonic acid (PFDoS)	ND	0.89	ng/L							
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.6	ng/L							
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.6	ng/L							
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.6	ng/L							
Perfluorooctanesulfonamide (PFOSA)	ND	0.89	ng/L							
N-methyl perfluorooctanesulfonamide (NMeFOSA)	ND	0.89	ng/L							
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.89	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	0.89	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	0.89	ng/L							
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	ND	8.9	ng/L							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	8.9	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.6	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.6	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	3.6	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	3.6	ng/L							
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	8.9	ng/L							
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	44	ng/L							
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	44	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEA)	ND	1.8	ng/L							
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.8	ng/L							
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.8	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8	ng/L							
Surrogate: 13C4-PFBA	76.8		ng/L	88.8		86.6	20-150			

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QUALITY CONTROL
Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B331794 - Draft Method 1633
Blank (B331794-BLK1)

Prepared: 02/22/23 Analyzed: 03/15/23

Surrogate: 13C5-PFPeA	40.4		ng/L	44.4		90.9	20-150			
Surrogate: 13C5-PFHxA	19.2		ng/L	22.2		86.5	20-150			
Surrogate: 13C4-PFHpA	19.6		ng/L	22.2		88.3	20-150			
Surrogate: 13C8-PFOA	19.4		ng/L	22.2		87.5	20-150			
Surrogate: 13C9-PFNA	9.70		ng/L	11.1		87.4	20-150			
Surrogate: 13C6-PFDA	9.55		ng/L	11.1		86.1	20-150			
Surrogate: 13C7-PFUnA	9.31		ng/L	11.1		83.9	20-150			
Surrogate: 13C2-PFDoA	8.73		ng/L	11.1		78.7	20-150			
Surrogate: 13C2-PFTeDA	9.84		ng/L	11.1		88.7	20-150			
Surrogate: 13C3-PFBS	19.6		ng/L	22.2		88.1	20-150			
Surrogate: 13C3-PFHxS	19.4		ng/L	22.2		87.5	20-150			
Surrogate: 13C8-PFOS	17.7		ng/L	22.2		79.6	20-150			
Surrogate: 13C2-4:2FTS	40.9		ng/L	44.4		92.2	20-150			
Surrogate: 13C2-6:2FTS	34.8		ng/L	44.4		78.5	20-150			
Surrogate: 13C2-8:2FTS	33.2		ng/L	44.4		74.8	20-150			
Surrogate: 13C8-PFOA	17.6		ng/L	22.2		79.3	20-150			
Surrogate: D3-NMeFOSA	15.4		ng/L	22.2		69.3	20-150			
Surrogate: D5-NEtFOSA	16.2		ng/L	22.2		73.0	20-150			
Surrogate: D3-NMeFOSAA	36.1		ng/L	44.4		81.4	20-150			
Surrogate: D5-NEtFOSAA	39.6		ng/L	44.4		89.1	20-150			
Surrogate: D7-NMeFOSE	200		ng/L	222		90.2	20-150			
Surrogate: D9-NEtFOSE	201		ng/L	222		90.7	20-150			
Surrogate: 13C3-HFPO-DA	81.3		ng/L	88.8		91.6	20-150			

LCS (B331794-BS1)

Prepared: 02/22/23 Analyzed: 03/15/23

Perfluorobutanoic acid (PFBA)	7.53	3.6	ng/L	7.18		105	40-150			
Perfluoropentanoic acid (PFPeA)	3.64	1.8	ng/L	3.59		101	40-150			
Perfluorohexanoic acid (PFHxA)	1.85	0.90	ng/L	1.79		103	40-150			
Perfluoroheptanoic acid (PFHpA)	1.78	0.90	ng/L	1.79		98.9	40-150			
Perfluorooctanoic acid (PFOA)	1.73	0.90	ng/L	1.79		96.3	40-150			
Perfluorononanoic acid (PFNA)	1.84	0.90	ng/L	1.79		103	40-150			
Perfluorodecanoic acid (PFDA)	1.80	0.90	ng/L	1.79		100	40-150			
Perfluoroundecanoic acid (PFUnA)	1.77	0.90	ng/L	1.79		98.4	40-150			
Perfluorododecanoic acid (PFDoA)	1.78	0.90	ng/L	1.79		99.4	40-150			
Perfluorotridecanoic acid (PFTTrDA)	1.87	0.90	ng/L	1.79		104	40-150			
Perfluorotetradecanoic acid (PFTeDA)	1.81	0.90	ng/L	1.79		101	40-150			
Perfluorobutanesulfonic acid (PFBS)	1.67	0.90	ng/L	1.59		105	40-150			
Perfluoropentanesulfonic acid (PFPeS)	1.69	0.90	ng/L	1.69		100	40-150			
Perfluorohexanesulfonic acid (PFHxS)	1.65	0.90	ng/L	1.64		100	40-150			
Perfluoroheptanesulfonic acid (PFHpS)	1.69	0.90	ng/L	1.71		98.8	40-150			
Perfluorooctanesulfonic acid (PFOS)	1.94	0.90	ng/L	1.66		116	40-150			
Perfluorononanesulfonic acid (PFNS)	1.96	0.90	ng/L	1.73		113	40-150			
Perfluorodecanesulfonic acid (PFDS)	1.99	0.90	ng/L	1.73		115	40-150			
Perfluorododecanesulfonic acid (PFDoS)	2.00	0.90	ng/L	1.74		115	40-150			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	7.97	3.6	ng/L	6.73		118	40-150			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	8.34	3.6	ng/L	6.82		122	40-150			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	7.58	3.6	ng/L	6.91		110	40-150			
Perfluorooctanesulfonamide (PFOSA)	1.79	0.90	ng/L	1.79		99.5	40-150			
N-methyl perfluorooctanesulfonamide (NMeFOSA)	1.81	0.90	ng/L	1.79		101	40-150			

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QUALITY CONTROL
Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B331794 - Draft Method 1633
LCS (B331794-BS1)

Prepared: 02/22/23 Analyzed: 03/15/23

N-ethyl perfluorooctanesulfonamide (NEtFOSA)	1.80	0.90	ng/L	1.79		100	40-150			
N-MeFOSAA (NMeFOSAA)	1.74	0.90	ng/L	1.79		96.8	40-150			
N-EtFOSAA (NEtFOSAA)	1.66	0.90	ng/L	1.79		92.7	40-150			
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	18.6	9.0	ng/L	17.9		104	40-150			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	19.0	9.0	ng/L	17.9		106	40-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	7.27	3.6	ng/L	7.14		102	40-150			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	6.51	3.6	ng/L	6.78		96.1	40-150			
9Cl-PF3ONS (F53B Minor)	6.84	3.6	ng/L	6.69		102	40-150			
11Cl-PF3OUDS (F53B Major)	6.52	3.6	ng/L	6.78		96.2	40-150			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	16.0	9.0	ng/L	17.9		88.9	40-150			
2H,2H,3H,3H-Perfluorooctanoic acid (FPePA) (5:3FTCA)	79.8	45	ng/L	89.7		88.9	40-150			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	78.7	45	ng/L	89.7		87.7	40-150			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEA)	2.90	1.8	ng/L	3.20		90.8	40-150			
Perfluoro-3-methoxypropanoic acid (PFMPA)	3.35	1.8	ng/L	3.59		93.4	40-150			
Perfluoro-4-methoxybutanoic acid (PFMBA)	3.25	1.8	ng/L	3.59		90.6	40-150			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.36	1.8	ng/L	3.59		121	40-150			
Surrogate: 13C4-PFBA	69.9		ng/L	89.7		77.9	20-150			
Surrogate: 13C5-PFPeA	37.3		ng/L	44.9		83.1	20-150			
Surrogate: 13C5-PFHxA	18.2		ng/L	22.4		81.1	20-150			
Surrogate: 13C4-PFHpA	18.2		ng/L	22.4		80.9	20-150			
Surrogate: 13C8-PFOA	17.9		ng/L	22.4		80.0	20-150			
Surrogate: 13C9-PFNA	8.99		ng/L	11.2		80.1	20-150			
Surrogate: 13C6-PFDA	9.17		ng/L	11.2		81.7	20-150			
Surrogate: 13C7-PFUnA	9.05		ng/L	11.2		80.6	20-150			
Surrogate: 13C2-PFDoA	8.43		ng/L	11.2		75.2	20-150			
Surrogate: 13C2-PFTeDA	8.89		ng/L	11.2		79.3	20-150			
Surrogate: 13C3-PFBS	18.5		ng/L	22.4		82.4	20-150			
Surrogate: 13C3-PFHxS	18.0		ng/L	22.4		80.1	20-150			
Surrogate: 13C8-PFOS	18.2		ng/L	22.4		81.3	20-150			
Surrogate: 13C2-4:2FTS	39.6		ng/L	44.9		88.1	20-150			
Surrogate: 13C2-6:2FTS	33.5		ng/L	44.9		74.7	20-150			
Surrogate: 13C2-8:2FTS	34.1		ng/L	44.9		76.1	20-150			
Surrogate: 13C8-PFOSA	17.8		ng/L	22.4		79.2	20-150			
Surrogate: D3-NMeFOSA	14.8		ng/L	22.4		66.1	20-150			
Surrogate: D5-NEtFOSA	15.5		ng/L	22.4		69.2	20-150			
Surrogate: D3-NMeFOSAA	34.8		ng/L	44.9		77.5	20-150			
Surrogate: D5-NEtFOSAA	35.5		ng/L	44.9		79.0	20-150			
Surrogate: D7-NMeFOSE	185		ng/L	224		82.2	20-150			
Surrogate: D9-NEtFOSE	192		ng/L	224		85.5	20-150			
Surrogate: 13C3-HFPO-DA	79.1		ng/L	89.7		88.1	20-150			

LCS (B331794-BS2)

Prepared: 02/22/23 Analyzed: 03/15/23

Perfluorobutanoic acid (PFBA)	95.3	3.8	ng/L	91.6		104	40-150			
Perfluoropentanoic acid (PFPeA)	47.6	1.9	ng/L	45.8		104	40-150			

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QUALITY CONTROL
Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B331794 - Draft Method 1633										
LCS (B331794-BS2)				Prepared: 02/22/23 Analyzed: 03/15/23						
Perfluorohexanoic acid (PFHxA)	23.8	0.95	ng/L	22.9		104	40-150			
Perfluoroheptanoic acid (PFHpA)	23.3	0.95	ng/L	22.9		102	40-150			
Perfluorooctanoic acid (PFOA)	23.3	0.95	ng/L	22.9		102	40-150			
Perfluorononanoic acid (PFNA)	24.2	0.95	ng/L	22.9		106	40-150			
Perfluorodecanoic acid (PFDA)	24.0	0.95	ng/L	22.9		105	40-150			
Perfluoroundecanoic acid (PFUnA)	24.1	0.95	ng/L	22.9		105	40-150			
Perfluorododecanoic acid (PFDoA)	23.8	0.95	ng/L	22.9		104	40-150			
Perfluorotridecanoic acid (PFTrDA)	24.5	0.95	ng/L	22.9		107	40-150			
Perfluorotetradecanoic acid (PFTeDA)	24.3	0.95	ng/L	22.9		106	40-150			
Perfluorobutanesulfonic acid (PFBS)	21.7	0.95	ng/L	20.3		107	40-150			
Perfluoropentanesulfonic acid (PFPeS)	22.5	0.95	ng/L	21.5		105	40-150			
Perfluorohexanesulfonic acid (PFHxS)	21.7	0.95	ng/L	20.9		103	40-150			
Perfluoroheptanesulfonic acid (PFHpS)	22.5	0.95	ng/L	21.8		103	40-150			
Perfluorooctanesulfonic acid (PFOS)	22.1	0.95	ng/L	21.2		104	40-150			
Perfluorononanesulfonic acid (PFNS)	23.0	0.95	ng/L	22.0		104	40-150			
Perfluorodecanesulfonic acid (PFDS)	23.6	0.95	ng/L	22.1		107	40-150			
Perfluorododecanesulfonic acid (PFDoS)	24.1	0.95	ng/L	22.2		109	40-150			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	92.0	3.8	ng/L	85.8		107	40-150			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	87.9	3.8	ng/L	87.0		101	40-150			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	96.6	3.8	ng/L	88.1		110	40-150			
Perfluorooctanesulfonamide (PFOSA)	23.2	0.95	ng/L	22.9		101	40-150			
N-methyl perfluorooctanesulfonamide (NMeFOSA)	24.4	0.95	ng/L	22.9		107	40-150			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	23.7	0.95	ng/L	22.9		104	40-150			
N-MeFOSAA (NMeFOSAA)	23.2	0.95	ng/L	22.9		101	40-150			
N-EtFOSAA (NEtFOSAA)	23.0	0.95	ng/L	22.9		100	40-150			
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	250	9.5	ng/L	229		109	40-150			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	257	9.5	ng/L	229		112	40-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	99.4	3.8	ng/L	91.6		109	40-150			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	90.5	3.8	ng/L	86.4		105	40-150			
9Cl-PF3ONS (F53B Minor)	89.6	3.8	ng/L	85.8		104	40-150			
11Cl-PF3OUDS (F53B Major)	90.1	3.8	ng/L	86.4		104	40-150			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	217	9.5	ng/L	229		94.7	40-150			
2H,2H,3H,3H-Perfluorooctanoic acid (FPePA)(5:3FTCA)	1110	48	ng/L	1140		96.6	40-150			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1120	48	ng/L	1140		98.1	40-150			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	42.9	1.9	ng/L	40.7		105	40-150			
Perfluoro-3-methoxypropanoic acid (PFMPA)	49.8	1.9	ng/L	45.8		109	40-150			
Perfluoro-4-methoxybutanoic acid (PFMBA)	49.0	1.9	ng/L	45.8		107	40-150			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	55.8	1.9	ng/L	45.8		122	40-150			
Surrogate: 13C4-PFBA	77.1		ng/L	95.4		80.8	20-150			
Surrogate: 13C5-PFPeA	40.8		ng/L	47.7		85.5	20-150			
Surrogate: 13C5-PFHxA	20.0		ng/L	23.8		83.7	20-150			

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QUALITY CONTROL
Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B331794 - Draft Method 1633
LCS (B331794-BS2)

Prepared: 02/22/23 Analyzed: 03/15/23

Surrogate: 13C4-PFHpA	20.6		ng/L	23.8		86.6	20-150			
Surrogate: 13C8-PFOA	20.2		ng/L	23.8		84.7	20-150			
Surrogate: 13C9-PFNA	10.0		ng/L	11.9		83.9	20-150			
Surrogate: 13C6-PFDA	10.3		ng/L	11.9		86.5	20-150			
Surrogate: 13C7-PFUnA	9.62		ng/L	11.9		80.7	20-150			
Surrogate: 13C2-PFDoA	9.21		ng/L	11.9		77.3	20-150			
Surrogate: 13C2-PFTeDA	9.97		ng/L	11.9		83.6	20-150			
Surrogate: 13C3-PFBS	21.0		ng/L	23.8		88.0	20-150			
Surrogate: 13C3-PFHxS	20.2		ng/L	23.8		84.8	20-150			
Surrogate: 13C8-PFOS	19.7		ng/L	23.8		82.4	20-150			
Surrogate: 13C2-4:2FTS	50.2		ng/L	47.7		105	20-150			
Surrogate: 13C2-6:2FTS	41.2		ng/L	47.7		86.4	20-150			
Surrogate: 13C2-8:2FTS	39.3		ng/L	47.7		82.3	20-150			
Surrogate: 13C8-PFOSA	19.1		ng/L	23.8		79.9	20-150			
Surrogate: D3-NMeFOSA	15.9		ng/L	23.8		66.8	20-150			
Surrogate: D5-NEtFOSA	16.5		ng/L	23.8		69.4	20-150			
Surrogate: D3-NMeFOSAA	39.2		ng/L	47.7		82.2	20-150			
Surrogate: D5-NEtFOSAA	39.0		ng/L	47.7		81.9	20-150			
Surrogate: D7-NMeFOSE	197		ng/L	238		82.6	20-150			
Surrogate: D9-NEtFOSE	198		ng/L	238		83.2	20-150			
Surrogate: 13C3-HFPO-DA	87.8		ng/L	95.4		92.1	20-150			

Batch B334428 - Draft Method 1633
Blank (B334428-BLK1)

Prepared: 03/24/23 Analyzed: 03/28/23

Perfluorobutanoic acid (PFBA)	ND	3.9	ng/L
Perfluoropentanoic acid (PFPeA)	ND	2.0	ng/L
Perfluorohexanoic acid (PFHxA)	ND	0.98	ng/L
Perfluoroheptanoic acid (PFHpA)	ND	0.98	ng/L
Perfluorooctanoic acid (PFOA)	ND	0.98	ng/L
Perfluorononanoic acid (PFNA)	ND	0.98	ng/L
Perfluorodecanoic acid (PFDA)	ND	0.98	ng/L
Perfluoroundecanoic acid (PFUnA)	ND	0.98	ng/L
Perfluorododecanoic acid (PFDoA)	ND	0.98	ng/L
Perfluorotridecanoic acid (PFTrDA)	ND	0.98	ng/L
Perfluorotetradecanoic acid (PFTeDA)	ND	0.98	ng/L
Perfluorobutanesulfonic acid (PFBS)	ND	0.98	ng/L
Perfluoropetanesulfonic acid (PFPeS)	ND	0.98	ng/L
Perfluorohexanesulfonic acid (PFHxS)	ND	0.98	ng/L
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.98	ng/L
Perfluorooctanesulfonic acid (PFOS)	ND	0.98	ng/L
Perfluorononanesulfonic acid (PFNS)	ND	0.98	ng/L
Perfluorodecanesulfonic acid (PFDS)	ND	0.98	ng/L
Perfluorododecanesulfonic acid (PFDoS)	ND	0.98	ng/L
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.9	ng/L
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.9	ng/L
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.9	ng/L
Perfluorooctanesulfonamide (PFOSA)	ND	0.98	ng/L
N-methyl perfluorooctanesulfonamide (NMeFOSA)	ND	0.98	ng/L

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QUALITY CONTROL
Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B334428 - Draft Method 1633
Blank (B334428-BLK1)

Prepared: 03/24/23 Analyzed: 03/28/23

N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.98	ng/L
N-MeFOSAA (NMeFOSAA)	ND	0.98	ng/L
N-EtFOSAA (NEtFOSAA)	ND	0.98	ng/L
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	ND	9.8	ng/L
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.8	ng/L
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.9	ng/L
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.9	ng/L
9Cl-PF3ONS (F53B Minor)	ND	3.9	ng/L
11Cl-PF3OUdS (F53B Major)	ND	3.9	ng/L
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.8	ng/L
2H,2H,3H,3H-Perfluorooctanoic acid (FPePA) (5:3FTCA)	ND	49	ng/L
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	49	ng/L
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEA)	ND	2.0	ng/L
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	2.0	ng/L
Perfluoro-4-methoxybutanoic acid (PFMBPA)	ND	2.0	ng/L
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L

Surrogate: 13C4-PFBA	90.1		ng/L	98.4		91.6	20-150
Surrogate: 13C5-PFPeA	48.8		ng/L	49.2		99.1	20-150
Surrogate: 13C5-PFHxA	24.1		ng/L	24.6		97.9	20-150
Surrogate: 13C4-PFHpA	24.6		ng/L	24.6		99.8	20-150
Surrogate: 13C8-PFOA	24.2		ng/L	24.6		98.3	20-150
Surrogate: 13C9-PFNA	11.9		ng/L	12.3		96.6	20-150
Surrogate: 13C6-PFDA	12.2		ng/L	12.3		98.8	20-150
Surrogate: 13C7-PFUnA	12.0		ng/L	12.3		97.6	20-150
Surrogate: 13C2-PFDoA	11.1		ng/L	12.3		90.2	20-150
Surrogate: 13C2-PFTeDA	11.2		ng/L	12.3		90.9	20-150
Surrogate: 13C3-PFBS	24.4		ng/L	24.6		99.2	20-150
Surrogate: 13C3-PFHxS	24.4		ng/L	24.6		99.3	20-150
Surrogate: 13C8-PFOS	24.9		ng/L	24.6		101	20-150
Surrogate: 13C2-4:2FTS	53.9		ng/L	49.2		110	20-150
Surrogate: 13C2-6:2FTS	42.5		ng/L	49.2		86.4	20-150
Surrogate: 13C2-8:2FTS	38.8		ng/L	49.2		78.9	20-150
Surrogate: 13C8-PFOSA	23.7		ng/L	24.6		96.4	20-150
Surrogate: D3-NMeFOSA	19.6		ng/L	24.6		79.7	20-150
Surrogate: D5-NEtFOSA	20.9		ng/L	24.6		84.8	20-150
Surrogate: D3-NMeFOSAA	44.2		ng/L	49.2		89.7	20-150
Surrogate: D5-NEtFOSAA	45.0		ng/L	49.2		91.4	20-150
Surrogate: D7-NMeFOSE	220		ng/L	246		89.5	20-150
Surrogate: D9-NEtFOSE	218		ng/L	246		88.7	20-150
Surrogate: 13C3-HFPO-DA	103		ng/L	98.4		105	20-150

LCS (B334428-BS1)

Prepared: 03/24/23 Analyzed: 03/28/23

Perfluorobutanoic acid (PFBA)	8.76	3.9	ng/L	7.83		112	40-150
Perfluoropentanoic acid (PFPeA)	3.99	2.0	ng/L	3.91		102	40-150

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QUALITY CONTROL
Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B334428 - Draft Method 1633
LCS (B334428-BS1)

Prepared: 03/24/23 Analyzed: 03/28/23

Perfluorohexanoic acid (PFHxA)	1.98	0.98	ng/L	1.96		101	40-150			
Perfluoroheptanoic acid (PFHpA)	1.99	0.98	ng/L	1.96		102	40-150			
Perfluorooctanoic acid (PFOA)	2.05	0.98	ng/L	1.96		105	40-150			
Perfluorononanoic acid (PFNA)	1.86	0.98	ng/L	1.96		95.3	40-150			
Perfluorodecanoic acid (PFDA)	2.01	0.98	ng/L	1.96		103	40-150			
Perfluoroundecanoic acid (PFUnA)	1.96	0.98	ng/L	1.96		99.9	40-150			
Perfluorododecanoic acid (PFDoA)	2.08	0.98	ng/L	1.96		106	40-150			
Perfluorotridecanoic acid (PFTrDA)	1.82	0.98	ng/L	1.96		92.8	40-150			
Perfluorotetradecanoic acid (PFTeDA)	1.97	0.98	ng/L	1.96		100	40-150			
Perfluorobutanesulfonic acid (PFBS)	1.88	0.98	ng/L	1.74		108	40-150			
Perfluoropentanesulfonic acid (PFPeS)	1.87	0.98	ng/L	1.84		102	40-150			
Perfluorohexanesulfonic acid (PFHxS)	1.84	0.98	ng/L	1.79		103	40-150			
Perfluoroheptanesulfonic acid (PFHpS)	2.10	0.98	ng/L	1.86		113	40-150			
Perfluorooctanesulfonic acid (PFOS)	1.77	0.98	ng/L	1.81		97.4	40-150			
Perfluorononanesulfonic acid (PFNS)	1.98	0.98	ng/L	1.88		105	40-150			
Perfluorodecanesulfonic acid (PFDS)	1.86	0.98	ng/L	1.89		98.6	40-150			
Perfluorododecanesulfonic acid (PFDoS)	1.84	0.98	ng/L	1.90		96.8	40-150			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	8.20	3.9	ng/L	7.34		112	40-150			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	7.62	3.9	ng/L	7.43		103	40-150			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	8.93	3.9	ng/L	7.53		118	40-150			
Perfluorooctanesulfonamide (PFOSA)	1.90	0.98	ng/L	1.96		97.2	40-150			
N-methyl perfluorooctanesulfonamide (NMeFOSA)	1.87	0.98	ng/L	1.96		95.6	40-150			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	1.87	0.98	ng/L	1.96		95.6	40-150			
N-MeFOSAA (NMeFOSAA)	2.53	0.98	ng/L	1.96		129	40-150			
N-EtFOSAA (NEtFOSAA)	1.82	0.98	ng/L	1.96		92.9	40-150			
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	20.6	9.8	ng/L	19.6		105	40-150			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	20.2	9.8	ng/L	19.6		103	40-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	7.81	3.9	ng/L	7.83		99.8	40-150			
4,8-Dioxo-3H-perfluorononanoic acid (ADONA)	7.37	3.9	ng/L	7.39		99.7	40-150			
9Cl-PF3ONS (F53B Minor)	7.43	3.9	ng/L	7.34		101	40-150			
11Cl-PF3OUDS (F53B Major)	6.81	3.9	ng/L	7.39		92.2	40-150			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	17.6	9.8	ng/L	19.6		90.1	40-150			
2H,2H,3H,3H-Perfluorooctanoic acid (FPePA)(5:3FTCA)	89.7	49	ng/L	97.8		91.7	40-150			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	83.9	49	ng/L	97.8		85.8	40-150			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEEESA)	3.54	2.0	ng/L	3.48		102	40-150			
Perfluoro-3-methoxypropanoic acid (PFMPA)	3.88	2.0	ng/L	3.91		99.3	40-150			
Perfluoro-4-methoxybutanoic acid (PFMBA)	3.82	2.0	ng/L	3.91		97.5	40-150			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	5.02	2.0	ng/L	3.91		128	40-150			
Surrogate: 13C4-PFBA	81.0		ng/L	97.8		82.8	20-150			
Surrogate: 13C5-PFPeA	42.2		ng/L	48.9		86.3	20-150			
Surrogate: 13C5-PFHxA	21.1		ng/L	24.5		86.1	20-150			

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QUALITY CONTROL
Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B334428 - Draft Method 1633
LCS (B334428-BS1)

Prepared: 03/24/23 Analyzed: 03/28/23

Surrogate: 13C4-PFHpA	20.8		ng/L	24.5		85.1	20-150			
Surrogate: 13C8-PFOA	21.6		ng/L	24.5		88.1	20-150			
Surrogate: 13C9-PFNA	11.0		ng/L	12.2		90.4	20-150			
Surrogate: 13C6-PFDA	10.8		ng/L	12.2		88.1	20-150			
Surrogate: 13C7-PFUnA	10.5		ng/L	12.2		85.8	20-150			
Surrogate: 13C2-PFDoA	10.1		ng/L	12.2		82.7	20-150			
Surrogate: 13C2-PFTeDA	10.0		ng/L	12.2		82.0	20-150			
Surrogate: 13C3-PFBS	21.2		ng/L	24.5		86.7	20-150			
Surrogate: 13C3-PFHxS	21.0		ng/L	24.5		85.8	20-150			
Surrogate: 13C8-PFOS	21.6		ng/L	24.5		88.2	20-150			
Surrogate: 13C2-4:2FTS	47.4		ng/L	48.9		96.9	20-150			
Surrogate: 13C2-6:2FTS	37.9		ng/L	48.9		77.4	20-150			
Surrogate: 13C2-8:2FTS	36.7		ng/L	48.9		74.9	20-150			
Surrogate: 13C8-PFOSA	20.5		ng/L	24.5		84.0	20-150			
Surrogate: D3-NMeFOSA	17.0		ng/L	24.5		69.6	20-150			
Surrogate: D5-NEtFOSA	17.7		ng/L	24.5		72.4	20-150			
Surrogate: D3-NMeFOSAA	38.8		ng/L	48.9		79.3	20-150			
Surrogate: D5-NEtFOSAA	40.5		ng/L	48.9		82.9	20-150			
Surrogate: D7-NMeFOSE	194		ng/L	245		79.3	20-150			
Surrogate: D9-NEtFOSE	187		ng/L	245		76.5	20-150			
Surrogate: 13C3-HFPO-DA	93.0		ng/L	97.8		95.1	20-150			

LCS (B334428-BS2)

Prepared: 03/24/23 Analyzed: 03/28/23

Perfluorobutanoic acid (PFBA)	105	3.9	ng/L	93.7		112	40-150			
Perfluoropentanoic acid (PFPeA)	50.9	2.0	ng/L	46.9		109	40-150			
Perfluorohexanoic acid (PFHxA)	25.7	0.98	ng/L	23.4		110	40-150			
Perfluoroheptanoic acid (PFHpA)	25.3	0.98	ng/L	23.4		108	40-150			
Perfluorooctanoic acid (PFOA)	24.9	0.98	ng/L	23.4		106	40-150			
Perfluorononanoic acid (PFNA)	24.4	0.98	ng/L	23.4		104	40-150			
Perfluorodecanoic acid (PFDA)	26.0	0.98	ng/L	23.4		111	40-150			
Perfluoroundecanoic acid (PFUnA)	26.1	0.98	ng/L	23.4		111	40-150			
Perfluorododecanoic acid (PFDoA)	26.7	0.98	ng/L	23.4		114	40-150			
Perfluorotridecanoic acid (PFTrDA)	24.1	0.98	ng/L	23.4		103	40-150			
Perfluorotetradecanoic acid (PFTeDA)	25.9	0.98	ng/L	23.4		111	40-150			
Perfluorobutanesulfonic acid (PFBS)	23.8	0.98	ng/L	20.8		115	40-150			
Perfluoropentanesulfonic acid (PFPeS)	23.2	0.98	ng/L	22.0		105	40-150			
Perfluorohexanesulfonic acid (PFHxS)	21.6	0.98	ng/L	21.4		101	40-150			
Perfluoroheptanesulfonic acid (PFHpS)	23.6	0.98	ng/L	22.3		106	40-150			
Perfluorooctanesulfonic acid (PFOS)	22.3	0.98	ng/L	21.7		103	40-150			
Perfluorononanesulfonic acid (PFNS)	24.6	0.98	ng/L	22.5		109	40-150			
Perfluorodecanesulfonic acid (PFDS)	26.5	0.98	ng/L	22.6		117	40-150			
Perfluorododecanesulfonic acid (PFDoS)	24.8	0.98	ng/L	22.7		109	40-150			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	99.4	3.9	ng/L	87.9		113	40-150			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	94.0	3.9	ng/L	89.0		106	40-150			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	102	3.9	ng/L	90.2		113	40-150			
Perfluorooctanesulfonamide (PFOSA)	24.8	0.98	ng/L	23.4		106	40-150			
N-methyl perfluorooctanesulfonamide (NMeFOSA)	26.1	0.98	ng/L	23.4		111	40-150			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	25.9	0.98	ng/L	23.4		111	40-150			
N-MeFOSAA (NMeFOSAA)	25.9	0.98	ng/L	23.4		110	40-150			

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QUALITY CONTROL
Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B334428 - Draft Method 1633
LCS (B334428-BS2)

Prepared: 03/24/23 Analyzed: 03/28/23

N-EtFOSAA (NEtFOSAA)	26.2	0.98	ng/L	23.4		112	40-150			
N-methylperfluorooctanesulfonamidoethanol (NMeFOSE)	266	9.8	ng/L	234		114	40-150			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	271	9.8	ng/L	234		116	40-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	98.0	3.9	ng/L	93.7		105	40-150			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	94.2	3.9	ng/L	88.4		106	40-150			
9Cl-PF3ONS (F53B Minor)	91.8	3.9	ng/L	87.9		104	40-150			
11Cl-PF3OUdS (F53B Major)	91.0	3.9	ng/L	88.4		103	40-150			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	229	9.8	ng/L	234		97.9	40-150			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	1170	49	ng/L	1170		99.8	40-150			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	1120	49	ng/L	1170		95.6	40-150			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	45.0	2.0	ng/L	41.7		108	40-150			
Perfluoro-3-methoxypropanoic acid (PFMPA)	47.8	2.0	ng/L	46.9		102	40-150			
Perfluoro-4-methoxybutanoic acid (PFMBA)	49.7	2.0	ng/L	46.9		106	40-150			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	55.3	2.0	ng/L	46.9		118	40-150			
Surrogate: 13C4-PFBA	83.2		ng/L	97.6		85.3	20-150			
Surrogate: 13C5-PFPeA	45.2		ng/L	48.8		92.5	20-150			
Surrogate: 13C5-PFHxA	22.3		ng/L	24.4		91.3	20-150			
Surrogate: 13C4-PFHpA	22.6		ng/L	24.4		92.8	20-150			
Surrogate: 13C8-PFOA	21.5		ng/L	24.4		88.1	20-150			
Surrogate: 13C9-PFNA	11.1		ng/L	12.2		91.0	20-150			
Surrogate: 13C6-PFDA	10.6		ng/L	12.2		86.9	20-150			
Surrogate: 13C7-PFUnA	10.5		ng/L	12.2		85.7	20-150			
Surrogate: 13C2-PFDoA	9.87		ng/L	12.2		80.9	20-150			
Surrogate: 13C2-PFTeDA	10.5		ng/L	12.2		85.9	20-150			
Surrogate: 13C3-PFBS	21.5		ng/L	24.4		88.2	20-150			
Surrogate: 13C3-PFHxS	22.0		ng/L	24.4		90.2	20-150			
Surrogate: 13C8-PFOS	21.3		ng/L	24.4		87.2	20-150			
Surrogate: 13C2-4:2FTS	52.5		ng/L	48.8		107	20-150			
Surrogate: 13C2-6:2FTS	40.5		ng/L	48.8		82.9	20-150			
Surrogate: 13C2-8:2FTS	40.9		ng/L	48.8		83.7	20-150			
Surrogate: 13C8-PFOA	19.7		ng/L	24.4		80.7	20-150			
Surrogate: D3-NMeFOSA	16.7		ng/L	24.4		68.3	20-150			
Surrogate: D5-NEtFOSA	17.4		ng/L	24.4		71.4	20-150			
Surrogate: D3-NMeFOSAA	39.2		ng/L	48.8		80.3	20-150			
Surrogate: D5-NEtFOSAA	39.1		ng/L	48.8		80.0	20-150			
Surrogate: D7-NMeFOSE	192		ng/L	244		78.6	20-150			
Surrogate: D9-NEtFOSE	191		ng/L	244		78.2	20-150			
Surrogate: 13C3-HFPO-DA	99.0		ng/L	97.6		101	20-150			

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
MS-23	Either matrix spike or MS duplicate is outside of control limits, but the other is within limits. RPD between the two MS/MSD results is outside of the method specified criteria. Reduced precision anticipated for any reported result for this compound.
PF-18	Duplicate analysis confirmed Extracted Internal Standard failure due to matrix effects.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
R-06	Matrix spike duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result for this compound in this sample.
S-29	Extracted Internal Standard is outside of control limits.
V-04	Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-06	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.

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CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>Draft Method 1633 in Water</i>	
Perfluorobutanoic acid (PFBA)	NY
Perfluoropentanoic acid (PFPeA)	NY
Perfluorohexanoic acid (PFHxA)	NY
Perfluoroheptanoic acid (PFHpA)	NY
Perfluorooctanoic acid (PFOA)	NY
Perfluorononanoic acid (PFNA)	NY
Perfluorodecanoic acid (PFDA)	NY
Perfluoroundecanoic acid (PFUnA)	NY
Perfluorododecanoic acid (PFDoA)	NY
Perfluorotridecanoic acid (PFTrDA)	NY
Perfluorotetradecanoic acid (PFTeDA)	NY
Perfluorobutanesulfonic acid (PFBS)	NY
Perfluoropetanesulfonic acid (PFPeS)	NY
Perfluorohexanesulfonic acid (PFHxS)	NY
Perfluoroheptanesulfonic acid (PFHpS)	NY
Perfluorooctanesulfonic acid (PFOS)	NY
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	NY
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	NY
N-MeFOSAA (NMeFOSAA)	NY
N-EtFOSAA (NEtFOSAA)	NY
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NY
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NY
9Cl-PF3ONS (F53B Minor)	NY
11Cl-PF3OUdS (F53B Major)	NY
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NY
Perfluoro-3-methoxypropanoic acid (PFMPA)	NY
<i>SW-846 8260D in Water</i>	
Acetone	CT,ME,NH,VA,NY
Benzene	CT,ME,NH,VA,NY
Bromochloromethane	ME,NH,VA,NY
Bromodichloromethane	CT,ME,NH,VA,NY
Bromoform	CT,ME,NH,VA,NY
Bromomethane	CT,ME,NH,VA,NY
2-Butanone (MEK)	CT,ME,NH,VA,NY
tert-Butyl Alcohol (TBA)	ME,NH,VA,NY
Carbon Disulfide	CT,ME,NH,VA,NY
Carbon Tetrachloride	CT,ME,NH,VA,NY
Chlorobenzene	CT,ME,NH,VA,NY
Chlorodibromomethane	CT,ME,NH,VA,NY
Chloroethane	CT,ME,NH,VA,NY
Chloroform	CT,ME,NH,VA,NY
Chloromethane	CT,ME,NH,VA,NY
Cyclohexane	ME,NY
1,2-Dibromo-3-chloropropane (DBCP)	ME,NY
1,2-Dibromoethane (EDB)	ME,NY
1,2-Dichlorobenzene	CT,ME,NH,VA,NY

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CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260D in Water</i>	
1,3-Dichlorobenzene	CT,ME,NH,VA,NY
1,4-Dichlorobenzene	CT,ME,NH,VA,NY
trans-1,4-Dichloro-2-butene	ME,NH,VA,NY
Dichlorodifluoromethane (Freon 12)	ME,NH,VA,NY
1,1-Dichloroethane	CT,ME,NH,VA,NY
1,2-Dichloroethane	CT,ME,NH,VA,NY
1,1-Dichloroethylene	CT,ME,NH,VA,NY
cis-1,2-Dichloroethylene	ME,NY
trans-1,2-Dichloroethylene	CT,ME,NH,VA,NY
1,2-Dichloropropane	CT,ME,NH,VA,NY
cis-1,3-Dichloropropene	CT,ME,NH,VA,NY
trans-1,3-Dichloropropene	CT,ME,NH,VA,NY
1,4-Dioxane	ME,NY
Ethylbenzene	CT,ME,NH,VA,NY
Hexachlorobutadiene	CT,ME,NH,VA,NY
2-Hexanone (MBK)	CT,ME,NH,VA,NY
Isopropylbenzene (Cumene)	ME,VA,NY
Methyl Acetate	ME,NY
Methyl tert-Butyl Ether (MTBE)	CT,ME,NH,VA,NY
Methyl Cyclohexane	NY
Methylene Chloride	CT,ME,NH,VA,NY
4-Methyl-2-pentanone (MIBK)	CT,ME,NH,VA,NY
Naphthalene	ME,NH,VA,NY
Styrene	CT,ME,NH,VA,NY
1,1,2,2-Tetrachloroethane	CT,ME,NH,VA,NY
Tetrachloroethylene	CT,ME,NH,VA,NY
Toluene	CT,ME,NH,VA,NY
1,2,3-Trichlorobenzene	ME,NH,VA,NY
1,2,4-Trichlorobenzene	CT,ME,NH,VA,NY
1,1,1-Trichloroethane	CT,ME,NH,VA,NY
1,1,2-Trichloroethane	CT,ME,NH,VA,NY
Trichloroethylene	CT,ME,NH,VA,NY
Trichlorofluoromethane (Freon 11)	CT,ME,NH,VA,NY
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	VA,NY
Vinyl Chloride	CT,ME,NH,VA,NY
Xylenes (total)	ME,NY
<i>SW-846 8270E in Water</i>	
1,4-Dioxane	NY,NH
Acenaphthene	CT,NY,NC,ME,NH,VA
Acenaphthylene	CT,NY,NC,ME,NH,VA
Acetophenone	NY,NC
Aniline	CT,NY,NC,ME,VA
Anthracene	CT,NY,NC,ME,NH,VA
Benidine	CT,NY,NC,ME,NH,VA
Benzo(a)anthracene	CT,NY,NC,ME,NH,VA
Benzo(a)pyrene	CT,NY,NC,ME,NH,VA

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CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270E in Water</i>	
Benzo(b)fluoranthene	CT,NY,NC,ME,NH,VA
Benzo(g,h,i)perylene	CT,NY,NC,ME,NH,VA
Benzo(k)fluoranthene	CT,NY,NC,ME,NH,VA
Benzoic Acid	NY,NC,ME,NH,VA
Bis(2-chloroethoxy)methane	CT,NY,NC,ME,NH,VA
Bis(2-chloroethyl)ether	CT,NY,NC,ME,NH,VA
Bis(2-chloroisopropyl)ether	CT,NY,NC,ME,NH,VA
Bis(2-Ethylhexyl)phthalate	CT,NY,NC,ME,NH,VA
4-Bromophenylphenylether	CT,NY,NC,ME,NH,VA
Butylbenzylphthalate	CT,NY,NC,ME,NH,VA
Carbazole	NC
4-Chloroaniline	CT,NY,NC,ME,NH,VA
4-Chloro-3-methylphenol	CT,NY,NC,ME,NH,VA
2-Chloronaphthalene	CT,NY,NC,ME,NH,VA
2-Chlorophenol	CT,NY,NC,ME,NH,VA
4-Chlorophenylphenylether	CT,NY,NC,ME,NH,VA
Chrysene	CT,NY,NC,ME,NH,VA
Dibenz(a,h)anthracene	CT,NY,NC,ME,NH,VA
Dibenzofuran	CT,NY,NC,ME,NH,VA
Di-n-butylphthalate	CT,NY,NC,ME,NH,VA
1,2-Dichlorobenzene	CT,NY,NC,ME,NH,VA
1,3-Dichlorobenzene	CT,NY,NC,ME,NH,VA
1,4-Dichlorobenzene	CT,NY,NC,ME,NH,VA
3,3-Dichlorobenzidine	CT,NY,NC,ME,NH,VA
2,4-Dichlorophenol	CT,NY,NC,ME,NH,VA
Diethylphthalate	CT,NY,NC,ME,NH,VA
2,4-Dimethylphenol	CT,NY,NC,ME,NH,VA
Dimethylphthalate	CT,NY,NC,ME,NH,VA
4,6-Dinitro-2-methylphenol	CT,NY,NC,ME,NH,VA
2,4-Dinitrophenol	CT,NY,NC,ME,NH,VA
2,4-Dinitrotoluene	CT,NY,NC,ME,NH,VA
2,6-Dinitrotoluene	CT,NY,NC,ME,NH,VA
Di-n-octylphthalate	CT,NY,NC,ME,NH,VA
1,2-Diphenylhydrazine/Azobenzene	NY,NC
Fluoranthene	CT,NY,NC,ME,NH,VA
Fluorene	NY,NC,ME,NH,VA
Hexachlorobenzene	CT,NY,NC,ME,NH,VA
Hexachlorobutadiene	CT,NY,NC,ME,NH,VA
Hexachlorocyclopentadiene	CT,NY,NC,ME,NH,VA
Hexachloroethane	CT,NY,NC,ME,NH,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NC,ME,NH,VA
Isophorone	CT,NY,NC,ME,NH,VA
1-Methylnaphthalene	NC
2-Methylnaphthalene	CT,NY,NC,ME,NH,VA
2-Methylphenol	CT,NY,NC,NH,VA
3/4-Methylphenol	CT,NY,NC,NH,VA
Naphthalene	CT,NY,NC,ME,NH,VA

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CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270E in Water</i>	
2-Nitroaniline	CT,NY,NC,ME,NH,VA
3-Nitroaniline	CT,NY,NC,ME,NH,VA
4-Nitroaniline	CT,NY,NC,ME,NH,VA
Nitrobenzene	CT,NY,NC,ME,NH,VA
2-Nitrophenol	CT,NY,NC,ME,NH,VA
4-Nitrophenol	CT,NY,NC,ME,NH,VA
N-Nitrosodimethylamine	CT,NY,NC,ME,NH,VA
N-Nitrosodi-n-propylamine	CT,NY,NC,ME,NH,VA
Pentachloronitrobenzene	NC
Pentachlorophenol	CT,NY,NC,ME,NH,VA
Phenanthrene	CT,NY,NC,ME,NH,VA
Phenol	CT,NY,NC,ME,NH,VA
Pyrene	CT,NY,NC,ME,NH,VA
Pyridine	CT,NY,NC,ME,NH,VA
1,2,4,5-Tetrachlorobenzene	NY,NC
1,2,4-Trichlorobenzene	CT,NY,NC,ME,NH,VA
2,4,5-Trichlorophenol	CT,NY,NC,ME,NH,VA
2,4,6-Trichlorophenol	CT,NY,NC,ME,NH,VA
2-Fluorophenol	NC

Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2024
RI	Rhode Island Department of Health	LAO00373	12/30/2023
NC	North Carolina Div. of Water Quality	652	12/31/2023
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2023

Sampler(s): Pawel Mecinski
(Signature)

Contract: Michael Grifasi
Address: 333 West Washington Street
Syracuse, New York 13221-4873
Phone: (315) 956-6100
Email: michael.grifasi@ramboll.com
Project: NYSDEC Claremont Polychemical Site Q1 Sys Samples
Location: Old Bethpage, New York

Laboratory: Pace Analytical Services
39 Spruce St., East
Longmeadow, MA 01028
Attn: RJ McCarthy
Phone: 413-525-2332

Holding Time:
Package Requirement:
Level 2 and Level 3
EDD Format:
EQUIS 4-file

Number of Containers
Grab (G) or Composite (C)
Field Filtered? (Y / N)

Analysis Required																	
Preservatives: (see key at bottom)																	
1	0	2		0	0	0	3	8	0	4		0	0				
8620C: VOCs - TBA	8270B: SVOCs	6010D TAL Metals + Mercury (7470A)		2570D: TDS	2540D: TSS	7196A: hexavalent chromium	351.2: TKN	9060A: TOC	300.0: Anions Cl, F, SO4, CN	9012B: Cyanide	533.1-1: PFAS	PFAS 1633	8270D SIM: 1,4-dioxane				

Laboratory Use Only
Project Number:
Job Number:
Laboratory ID:
Lab Sample ID:

Sample Identification		Date	Time	Sample Type (See Key)	Sample Matrix (See Key)	Number of Containers	Grab (G) or Composite (C)	Field Filtered?	3820C: VOCs	8270D: SVOCs	6010D TAL: Metals	2570D: TDS	2540D: TS	7196A: hexavalent chromium	351.2: TKN	9060A: TOC	300.0: Anions	9012B: Cyanide	537.1: Phos	8270D SIM: 1					
Unique Field Sample ID (sys_sample_code)	Sample Location																								
PD-CP-00-021023	PD	1/5/2023	0915	N	WG	10	G	N	X	X										X	X				
PD-CP-01-021023	PD	1/5/2023	0915	FD	WG	10	G	N	X	X										X	X				
PD-CP-MS-021023	PD	1/5/2023	0915	MS	WG	3	G	N	X																
PD-CP-MSD-021023	PD	1/5/2023	0915	MSD	WG	3	G	N	X																
ASF-CP-00-021023	N	1/5/2023	1015	N	WG	5	G	N												X	X				
ASF-CP-01-021023	FD	1/5/2023	1015	FD	WG	5	G	N												X	X				
TB-021023		1/5/2023	1020	TB	WQ	3		N	X																
3 TMR BLANK						3																			
		2/10/2023																							
0																									
1																									
2																									
3																									
4																									

Special Instructions: 3 TMR COOLERS SATURDAY DELIVERY Per client - PFAS method 1633, not 537.1 & sample collection date revised to 2/10/23. KAM 2/13/23

Release the top boxes if the samples are to be shipped via courier (e.g., FedEx)		Condition:		Other comments or notes regarding condition of samples as received:
Relinquished by:	Date: 2/10/23 Time: 1050	Courier Name: FedEx	Date: 2/10/23 Time: 1050	
If: GES, Inc.	Tracking #:	Date:	Time:	
Relinquished by:	Date: 2/11/23 Time: 10:10	Courier Name:	Date:	
If: Donald A.	Tracking #:	Date:	Time:	
Courier Name: FedEx	Date: 2/9 Time:	Received By:	Date:	Time:
Cooling #:	Date:	Time:	Cooler Temperature:	

Sample Type: N = Normal env. sample, FD = field duplicate, EB = Equipment Blank, TB = Trip Blank, MS = Lab Matrix Spike, Other (Specify): FRB = Field Reagent Blank
Sample Matrix: SE = Sediment, SO = Soil, WG = Groundwater, WQ = Water Quality, WS = Surface Water, WW = Waste Water, WP = Potable Water, AA = Ambient Air, Other (Specify):
Preservative Code: 0 = none, 1 = HCL, 2 = HNO3, 3 = H2SO4, 4 = NaOH, 5 = Zn Acetate, 6 = MeOH, 7 = NaHSO4, 8 = Na3PO4, 9 = BenzalkoniumCl, 10 = other

(https://www.fedex.com/en-us/home.html)

FedEx® Tracking



DELIVERED

Saturday

2/11/2023 at 9:46 am

Signed for by: D.LETENDER

↓ Obtain Proof of delivery

How was your delivery?



DELIVERY STATUS

Delivered

TRACKING ID

631748590262

FROM
MELVILLE, NY US
Label Created
2/10/2023 10:42 AM

PACKAGE RECEIVED BY FEDEX
MELVILLE, NY
2/10/2023 5:49 PM

IN TRANSIT
WINDSOR LOCKS, CT
2/11/2023 9:09 AM

OUT FOR DELIVERY
WINDSOR LOCKS, CT
2/11/2023 9:09 AM

DELIVERED
EAST LONGMEADOW, MA US
Delivered
2/11/2023 at 9:46 AM

↓ View travel history

Want updates on this shipment? Enter your email and we will do the rest!

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Manage Delivery



SUBMIT

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.pacelabs.com

Log In Back-Sheet

Login Sample Receipt Checklist – (Rejection Criteria Listing
– Using Acceptance Policy) Any False statement will be
brought to the attention of the Client – True or False



Client Rumbell
Project Glennville Point Chemical Site Q15V5 Samples
MCP/RCP Required N/A
Deliverable Package Req. N/A
Location 212 Bethpage, NY
PWSID# (When Applicable) N/A

Arrival Method:

Courier ☐ Fed Ex ☒ Walk In ☐ Other ☐

Received By / Date / Time Pro 2/11/23 9:46

Back-Sheet By / Date / Time 1A 2/13/23 10:14

Temperature Method Gun #5

Temp ☒ < 6° C Actual Temperature 40/34/5.0

Rush Samples: Yes ☒ No ☐ Notify

Short Hold: Yes ☒ No ☐ Notify

Notes regarding Samples/COC outside of SOP:

	True	False
Received on Ice	☒	☐
Received in Cooler	☒	☐
Custody Seal: DATE TIME	☐	☒
COC Relinquished	☒	☐
COC/Samples Labels Agree	☒	☐
All Samples in Good Condition	☒	☐
Samples Received within Holding Time	☒	☐
Is there enough Volume	☒	☐
Proper Media/Container Used	☒	☐
Splitting Samples Required	☐	☒
MS/MSD	☒	☐
Trip Blanks	☐	☒
Lab to Filters	☐	☒
COC Legible	☒	☐

COC Included: (Check all included)

Client ☒ Analysis ☒ Sampler Name ☐
Project ☒ IDs ☒ Collection Date/Time ☒

All Samples Proper pH: N/A ☐ ☐

Container (Circle when applicable)			UnP	HCl	HNO3	H2SO4	NaOH	Trizma	NaS2O3	Other Preservative
1L	Amber	Plastic	12							
500 mL	Amber	Plastic	8							
250 mL	Amber	Plastic								
Other	Amber Clear	Plastic	4							
16oz	Amber	Clear								
8oz	Amber	Clear								
4oz	Amber	Clear								
2oz	Amber	Clear								
Col/Bacteria										
Flashpoint										
Plastic Bag										
SOC Kit										
Perchlorate										
Encore										
Frozen										
	Proper Headspace	UnP	HCl	MeOH	Bisulfate	DI	Thiosulfate	Sulfuric	Other	
Vials	N/A		12							