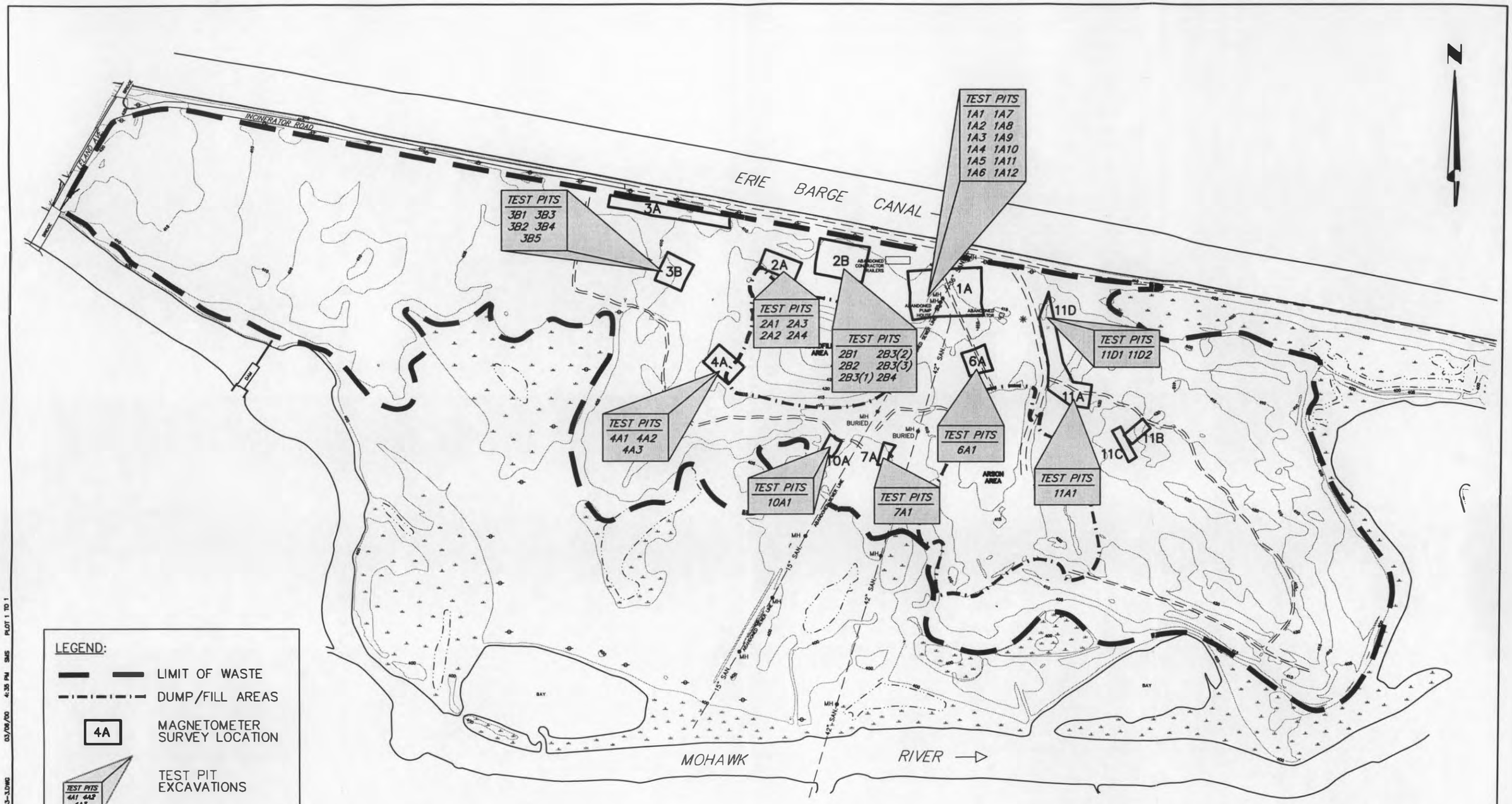
Appendix 1
Remedial Investigation/Feasibility Study Figures



LEGEND:

- LIMIT OF WASTE
- DUMP/FILL AREAS
- 4A — MAGNETOMETER SURVEY LOCATION
- TEST PITS 4A1 4A2 4A3 — TEST PIT EXCAVATIONS

GRAPHIC SCALE

200 0 100 200 400 600

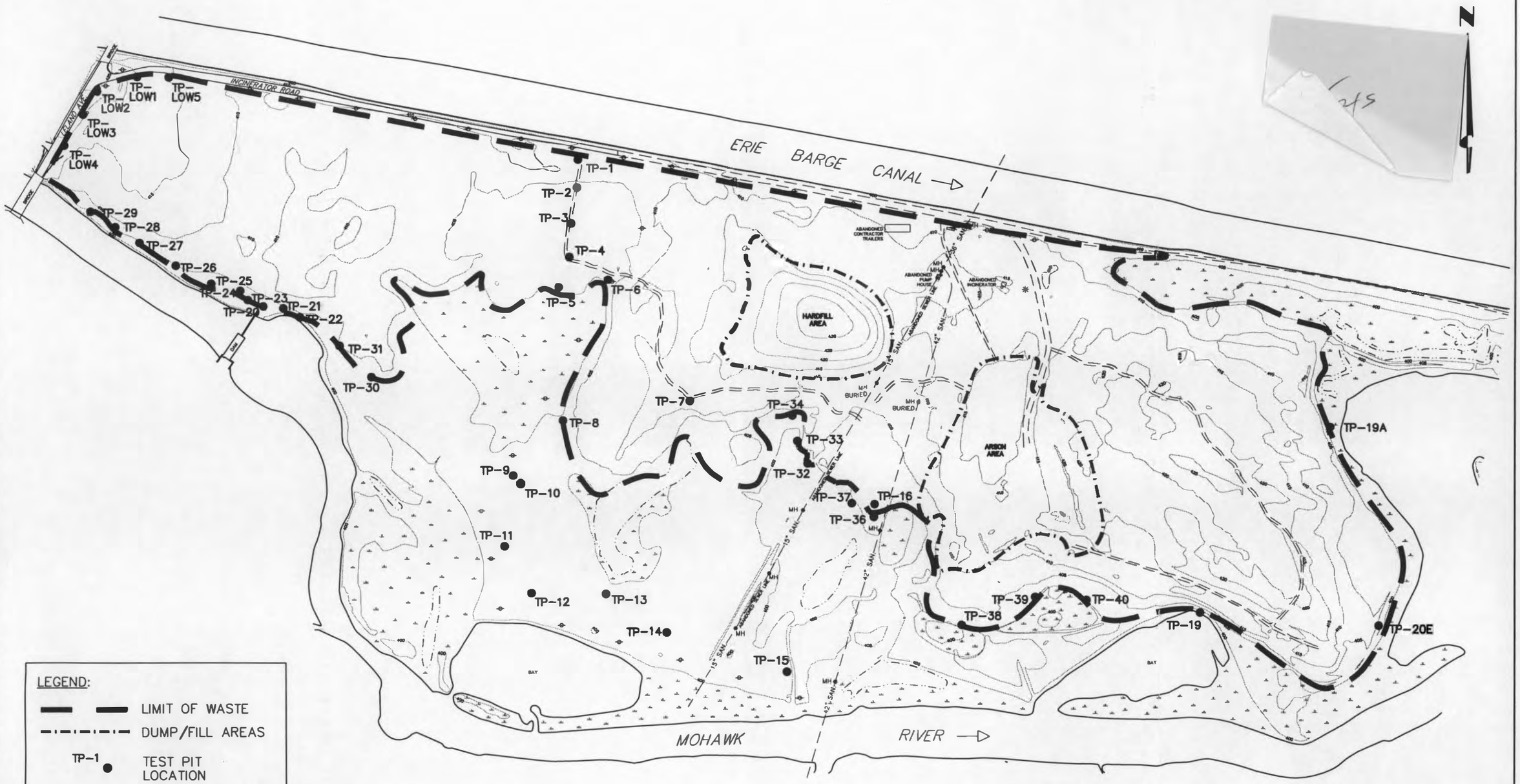
(IN FEET)
1 inch = 400 ft.

Lawler, Matusky & Skelly Engineers, LLP
Environmental Science & Engineering Consultants

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FIGURE 3-3
TEST PIT EXCAVATIONS IN MAGNETOMETER SURVEY LOCATIONS
UTICA CITY DUMP RI/FS

I:\9832\DRAWINGS\REMEDIAL INVESTIGATION\ FIG3-3.DWG 03/08/00 4:35 PM SMS PLOT 1 TO 1

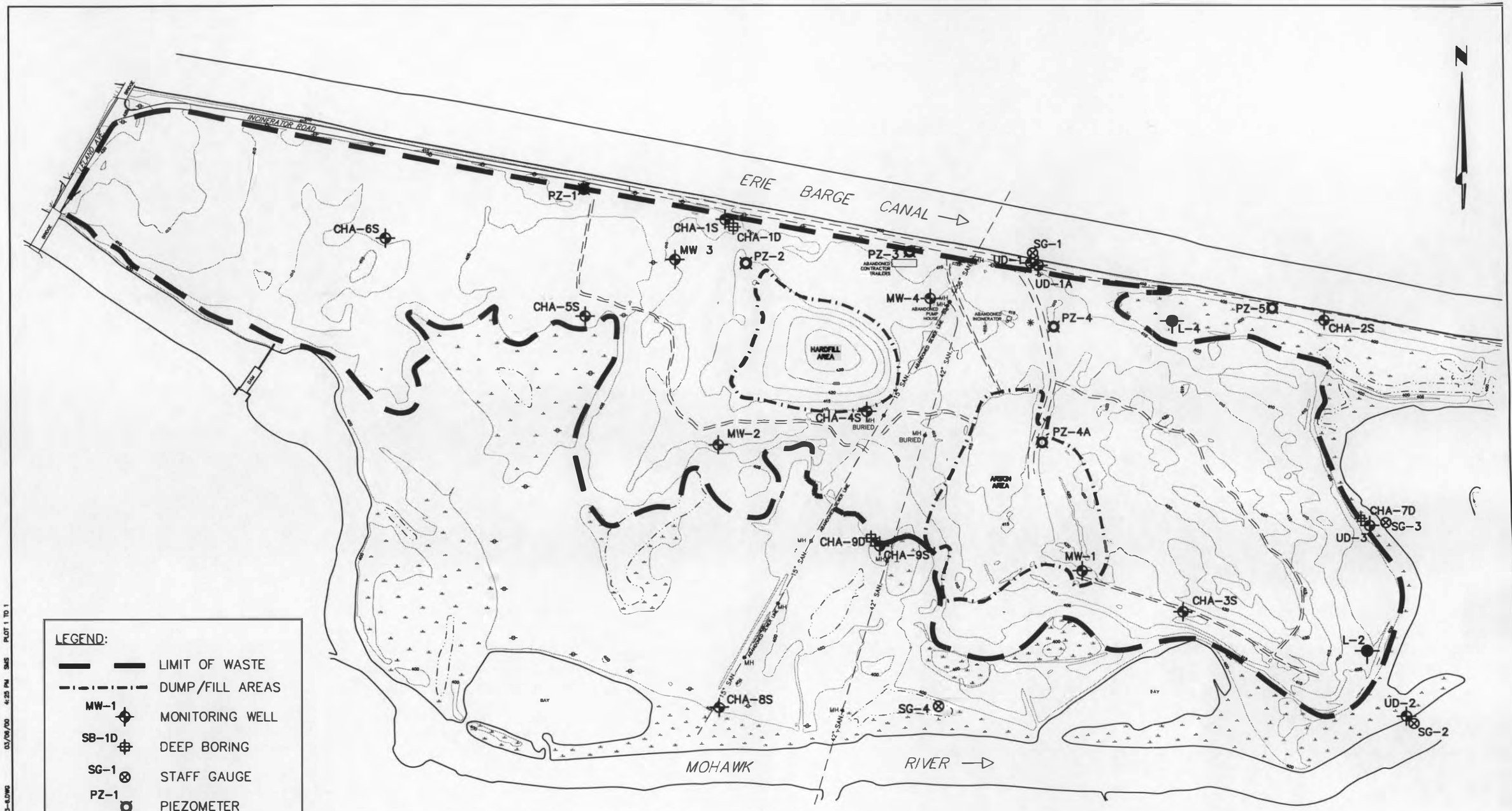


L:\8632\DRAWINGS\REMEDIAL INVESTIGATION\ FIG3-4.DWG 03/01/00 4:15 PM SMS PLOT 1 TO 1

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FIGURE 3-4
TEST PIT LOCATIONS
UTICA CITY DUMP RI/FS



LEGEND:

- LIMIT OF WASTE
- DUMP/FILL AREAS
- MW-1 MONITORING WELL
- SB-1D DEEP BORING
- SG-1 STAFF GAUGE
- PZ-1 PIEZOMETER

GRAPHIC SCALE

200 0 100 200 400 800

(IN FEET)
1 inch = 400 ft.

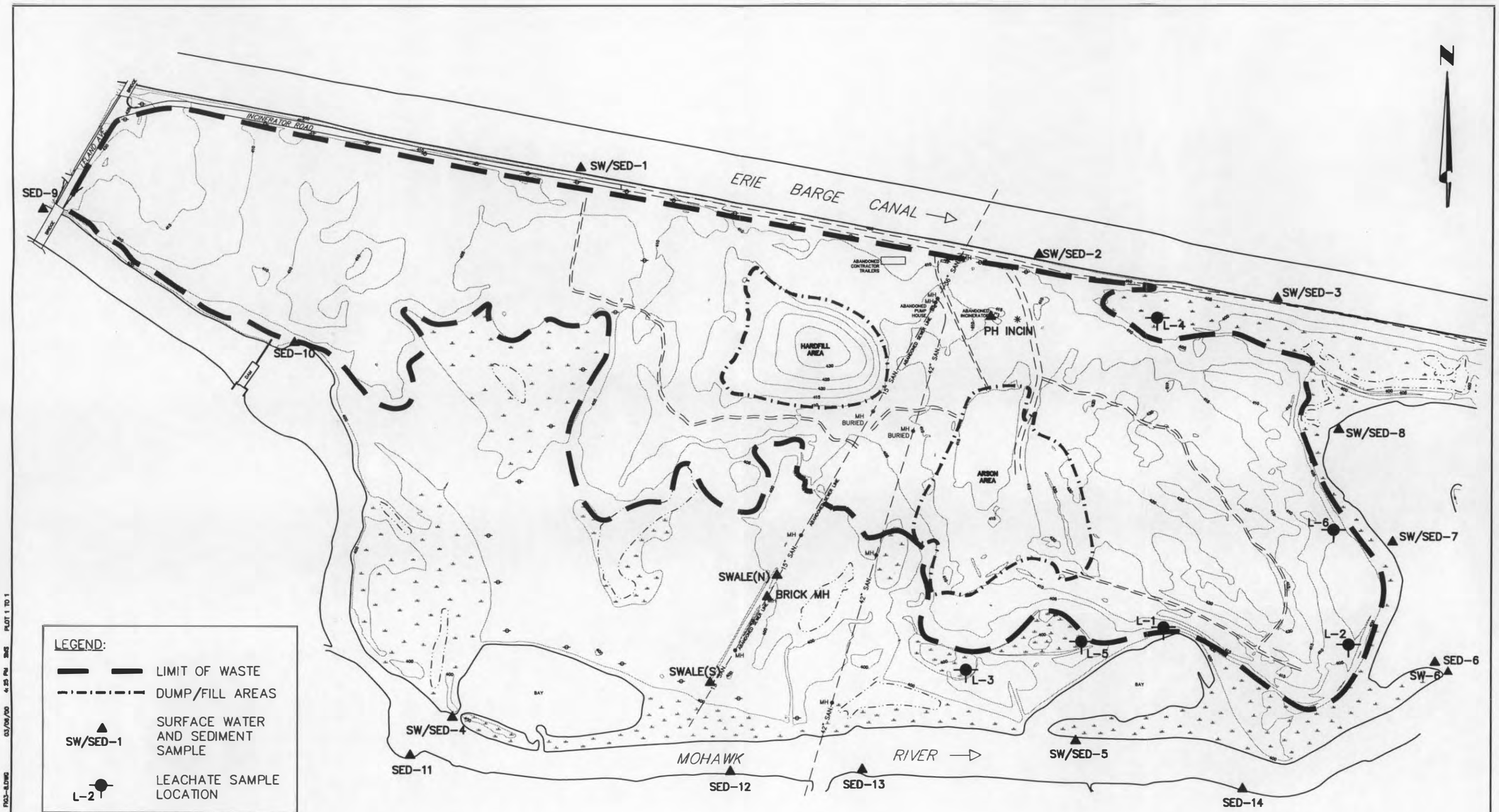
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FIGURE 3-6
MONITORING WELL, PIEZOMETER, AND STAFF GAUGE LOCATIONS
UTICA CITY DUMP



NOTE:
SAMPLE LOCATIONS APPROXIMATE.

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FIGURE 3-8
SURFACE WATER, SEDIMENT AND LEACHATE SAMPLE LOCATIONS
UTICA CITY DUMP RI/FS

L:\UA521\DRAWINGS\REMEDIAL INVESTIGATION\FIG3-8.DWG 03/08/00 4:25 PM BAS PLOT 1 TO 1

Appendix 2

Subsurface Investigation Memorandum

RAMBOLL

ENVIRONMENT
& HEALTH

Subsurface Investigation Summary – Former Utica City Dump
Appendix

Project name	**Former Utica City Dump Remedial Design**
Project no.	**1940101207**
Recipient	**NYS DEC**
Document type	**Appendix**
Version	**01**
Date	**June 18, 2025**
Prepared by	**Chris Norton**
Checked by	**Victor Warner**
Approved by	**Dave Farber**
Description	**Subsurface Investigation Summary – 100% BOD**

1. Introduction

The former Utica City Dump (Site #6-33-015) is located in the City of Utica, Oneida County, New York. The Site is defined in the New York State Department of Environmental Conservation (NYSDEC) Record of Decision (ROD) as the portion of the dump that reportedly received hazardous waste and is approximately 74 acres in size. The NYSDEC, in consultation with Ramboll Americas Engineering Solutions, Inc. (Ramboll), has issued an Explanation of Significant Differences (ESD) to include the closure of the entire dump site which is approximately 126 acres.

Based on public tax maps, of the 126 acre dump site, approximately 113.4 acres of the dump is owned by the City of Utica (City) and approximately 12.6 acres is privately owned. The Site is located east of Leland Ave. along Incinerator Road, between the Erie Canal to the north and the Mohawk River to the east and south. The total amount of land bordered by the road and the two water bodies is about 200 acres.

In accordance with the ESD, the footprint of the waste will be consolidated to approximately 103 acres and the Site will be closed through the implementation of an evapotranspiration (ET) cover system to prevent the exposure of surface soils and to reduce the generation of leachate. This report summarizes the findings of the subsurface investigations performed in association with the proposed cover system.

2. Statement of scope

The purpose of the subsurface investigation was to evaluate the site for the following features:

- The horizontal limits of waste.
- The approximate depth of waste for consolidation efforts.
- Characterize existing site material that may be encountered during excavation and consolidation efforts.
- The depth water table that may be encountered during excavation and consolidation efforts.

As part of this effort, three separate subsurface investigations were performed, one on the eastern parcel of the site and two on the western portion of the site. In total, a combined 107 test pits were excavated, and 10 soil borings were drilled at the site as part of this design.

3. Subsurface Investigation

3.1 Eastern Parcel Investigation

The subsurface investigation for the approximate 74 acre eastern parcel of the former Utica City Dump was performed in two investigations, the first taking place from April 25, 2022, to May 10, 2022, and the second from August 15, 2022, to August 18, 2022. Each of the investigations were performed by Parratt Wolff, Inc. In total, 10 soil boring were drilled, and 72 Test pits were excavated. The locations for the test pits and soil borings can be found on Figure A2.1 attached in Appendix 1 of this report.

The borings were drilled utilizing 3¼ - in-inside diameter hollow stem augers in accordance with ASTM D1452 *Standard Practice for Soil Investigation and Sampling by Auger Borings*. Split spoon sampling was conducted using a safety hammer in accordance with ASTM D1586 *Standard Method for Penetration test and Split Barrel Sampling of Soils*. Private utility clearing was performed prior to drilling at all borings location with exception of RSB-3, RSB-4, and RSB-5 by Blood Hound LLC. The borings were sampled continuously from grade to a depth of approximately 16 ft below ground surface (bgs). Soil samples were collected on a standard basis (every 5 ft) from approximately 16 ft bgs until the termination of the borings. Borings RSB-3 and RSB-4 were terminated at 27 ft and 22 ft respectively, the other 8 borings were terminated at 42 ft. Borings RSB-3 to RSB-5 were hand augered from grade to 5 feet below grade to avoid potential utilities.

The 72 test pits were excavated utilizing a Takeuchi TB290 excavator. 43 test pits were perimeter test pits, started outside of the estimated physical limits of the dump and excavated towards the dump. After visual waste was encountered, the boundary was marked with a surveyor's stake to be surveyed later. 29 Interior test pits were excavated from grade until native soils were observed. The final dimensions of the test pits varied based on the encountering of waste, ranging from approximately 12 ft to 73 ft in length, 2.5ft to 4.5 ft in width, and 3.5 ft to 10 ft in depth below grade. Upon completion, the trenches were backfilled with the excavated materials and compacted with the excavator. The soil boring and test pit logs are provided Appendix 2.

3.2 Western Parcel Investigation

The subsurface investigation for the approximate 52-acre western parcel of the former Utica City Dump was performed in two investigations, the first taking place on March 16 and 17 2023, and the second from November 28, 2023, to December 11, 2023. Each investigation was performed by LaBella Associates and a total of 64 pits were excavated. The locations for the test pits can be found on Figure A2.2 attached in Appendix 1 of this report.

The 64 test pits were excavated utilizing 3 different excavators including a Deere 210G LC, a Cat 304E, and a Kobelco SK210h excavator. 38 perimeter test pits were started outside of the estimated physical limits of the dump and excavated towards the dump. After visual waste was encountered, the boundary was marked with a surveyor's stake to be surveyed later. 26 interior test pits were excavated from grade

until native soils were observed. Dimensions of the test pits varied based on the encountering of the limits of waste, ranging from approximately 5 ft to 51 ft in length, 2.5 ft to 4 ft in width, and 3 ft to 17 ft in depth below grade. Upon completion, the trenches were filled with the excavated materials and compacted with the excavator. Test pits WTP-1 through WTP-8 were excavated as part of the first subsurface investigation and included the installation of Piezometer observation wells at the completion of each Test pit. The test pit logs are provided as Appendix 2.

4. Subsurface Conditions

The subsurface conditions encountered for both the eastern and western parcels of the former Utica City Dump were generally similar. From grade, solid waste was observed intermingled with a miscellaneous brown silty sand fill. The waste consisted of glass, rubber, ash, brick, concrete, plastic bags, automobile parts, and other municipal solid waste. In the test pits, the waste was encountered from grade to depths between 3 ft to 15 ft below grade. In the borings, the fill and waste were encountered from grade to depths between 5 ft to 25 ft below grade. The fill and waste in each boring had SPT blow counts ranging from 2 blows per ft (bpf) to 50 blows/2″ with an average of 11 bpf. Underlying the fill and waste were soft to stiff native gray clays and grey silts with some pockets of sand and dense fine gravel. The native gray clays and silts in each boring had SPT blow counts ranging from 1 bpf to 42 bpf with an average of 8 bpf.

Groundwater was observed in 9 of the 10 borings drilled for the eastern parcel investigation. The depths of the groundwater can be found in Table 1. Throughout the test pit investigations, groundwater was encountered in 64 of the 136 test pits excavated. When groundwater was encountered, it varied in depth from grade to 14 ft below grade depending on the location of the test pit. In general, shallow groundwater depths were encountered at test pits located near the Mohawk River. Deeper depths of groundwater were generally encountered further inland from the river at or just above the transition from the fill and waste to the native grey clays and silts. Generally, groundwater was not observed in the test pits located adjacent to the access road for the site.

Table 1: Water Table Depth

Boring Number	Approximate Depth to Water Table (FT)
RSB-1	8.0
RSB-2	12.0
RSB-3	6.0
RSB-4	N/E
RSB-5	10.0
RSB-6	20.0
RSB-7	4.0
RSB-8	15.0
RSB-9	4.0
RSB-10	14.0

N/e = Not encountered

5. Laboratory Testing

A laboratory testing program was developed by Ramboll to analyze select soil samples obtained from the 10 soil borings drilled on the eastern parcel to assess the specific geotechnical properties of the soils. The laboratory testing program for the soil samples, performed by TPW Laboratories., included the following:

- 3 Particle Size Analysis with Hydrometer in accordance with ASTM D422
- 3 Liquid Limit, Plastic Limit, and Plasticity Index in accordance with ASTM D4318
- 3 Hydraulic Conductivity in accordance with ASTM D5084

The laboratory testing reports are provided in Appendix 3

5.1 Particle Size Analysis with Hydrometer

Particle Size Analysis was performed on four soil samples obtained from the site, two including hydrometer analysis. The analysis was performed in accordance with ASTM D422 *Standard Test Method for Particle-Size Analysis of Soils*. The results are summarized below in Table 2.

Table 2: Particle Size Analysis with Hydrometer Results

Boring	Approximate Depth BGS (ft)	Percent Gravel (%)	Percent Sand (%)	Percent Fines (%)	Percent Silt (%)	Percent Clay (%)
RSB-2	8-10	0.0	9.9	90.1	60.1	15.0
RSB-4	16-18	0.0	4.0	96.0	47.5	48.5
RSB-8	10-12	0.1	2.4	97.5	67.5	30.0

5.2 Atterberg Limits

Atterberg limit testing was conducted on two soil samples obtained from the site. Atterberg limits were determined in accordance with ASTM D4318 Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils. The results of the testing are summarized below in Table 3.

Table 3: Atterberg Limits Results

Boring	Approximate Depth BGS (ft)	Plastic Limit	Liquid Limit	Plasticity Index
RSB-2	8-10	23	28	5
RSB-4	16-18	26	36	10
RSB-8	10-12	24	38	14

5.4 Hydraulic Conductivity

Hydraulic conductivity testing was conducted on three soil samples obtained from the site. The coefficients of Permeability (k) were determined in accordance with ASTM D5084 *Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter.* The results of the testing are summarized below in Table 4.

Table 4: Hydraulic Conductivity Results

Boring	Approximate Depth BGS (ft)	Coefficient of Permeability k (cm/sec)
RSB-2	8-10	$3.55x10^{-8}$
RSB-4	16-18	$5.21x10^{-8}$
RSB-8	10-12	$4.97x10^{-8}$

6. Conclusion

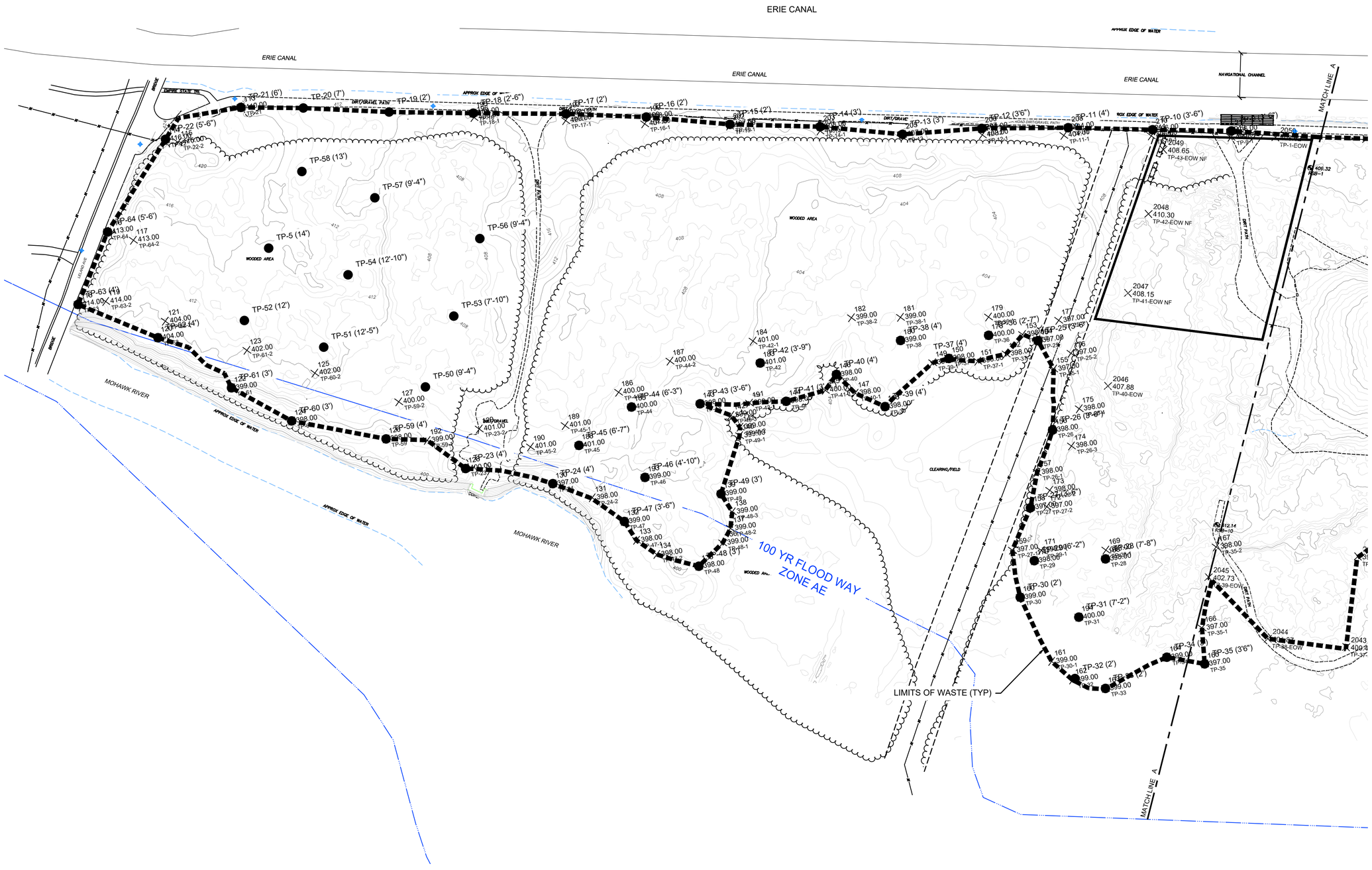
This subsurface investigation summary report has been prepared by Ramboll for use in the 100% design of the former Utica City Dump located in Utica, New York. The data and site observations will be utilized to evaluate the following:

- The horizontal limits of waste.
- The approximate depth of waste for consolidation efforts.
- To characterize existing site material that may be encountered during excavation and consolidation efforts.
- The depth water table that may be encountered during excavation and consolidation efforts.

The statements made in this report are based on the information obtained from the subsurface investigations and results of the laboratory testing. Changes to the final design may be warranted if actual subsurface conditions vary from those anticipated based on the soil borings and test pits. In addition, construction operations at or adjacent to the site and natural events such as floods, earthquakes, or groundwater fluctuations may also affect subsurface conditions.

APPENDIX 1
RAMBOLL SUBSURFACE INVESTIGATION LOCATION PLANS

SAVED: 6/18/25 11:09 AM



PARTIAL INVESTIGATION PLAN - SHEET 1 OF 2

120 0 120

SCALE: 1"=120'

LEGEND

● TEST PIT LOCATION

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER, TO ALTER THIS DOCUMENT.

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR TO DETERMINE THE ACTUAL SIZE. DRAWING IS NOT SCALABLE IF NO SCALE BAR IS PRESENT.

CLIENT: NEW YORK STATE Department of Environmental Conservation

NO.	DATE	REVISION	INT.

DESIGNER / PROFESSIONAL ENGINEER RESPONSIBLE: DAVID T. FARBER

DESIGNED BY: MWH
CHECKED BY: VJW
DRAWN BY: MWH
PROJECT NO.: 1087815:1940101207
DATE: FEBRUARY 2024

CERTIFICATE OF AUTHORIZATION: RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.
SYRACUSE, NEW YORK

RAMBOLL

PROJECT: CONSOLIDATION & ET COVER

ADDRESS: CITY OF UTICA, ONEIDA COUNTY, NEW YORK

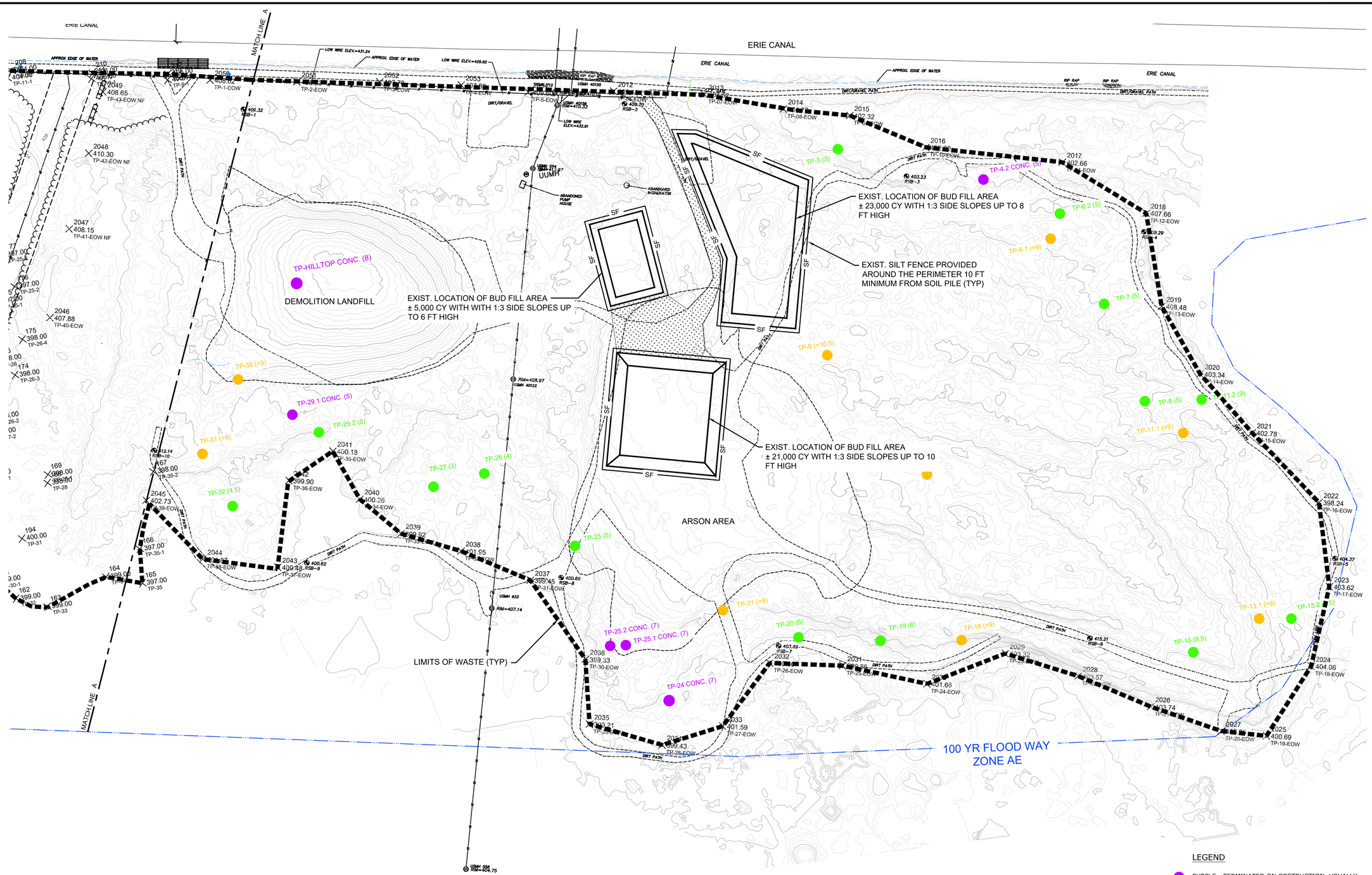
SHEET DESCRIPTION: PARTIAL INVESTIGATION - SHEET 1 OF 2

DRAWING LOCATION: FORMER UTICA CITY DUMP

FIG A2.1

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SAVED: 6/18/25 11:09 AM



PARTIAL INVESTIGATION PLAN -SHEET 2 OF 2

120 0 120

SCALE: 1"=120'

LEGEND

- PURPLE - TERMINATED ON OBSTRUCTION, USUALLY CONCRETE
- ORANGE - PIT DID NOT REACH NATIVE SOIL/BOTTOM OF WASTE
- GREEN - PIT REACHED NATIVE SOIL

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER, TO ALTER THIS DOCUMENT.

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CLIENT: NEW YORK STATE Department of Environmental Conservation

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DESIGNER / PROFESSIONAL ENGINEER RESPONSIBLE: DAVID T. FARBER

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CHECKED BY: VJW
DRAWN BY: MWH
PROJECT NO.: 1087815:1940101207
DATE: FEBRUARY 2024

CERTIFICATE OF AUTHORIZATION: RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.
SYRACUSE, NEW YORK

RAMBOLL

PROJECT: CONSOLIDATION & ET COVER

ADDRESS: CITY OF UTICA, ONEIDA COUNTY, NEW YORK

SHEET DESCRIPTION: PARTIAL INVESTIGATION - SHEET 2 OF 2

DRAWING LOCATION: FORMER UTICA CITY DUMP

FIG A2.2

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APPENDIX 2
RAMBOLL BORING AND TEST PIT LOGS

parratt wolff inc

TEST BORING LOG

5879 Fisher Road
East Syracuse, NY 13057

PROJECT **Utica City Dump** HOLE NO. **RSB-1**

LOCATION **Utica, New York** JOB NUMBER: **22042A**

SURF. EL.

GROUNDWATER DEPTH DATE STARTED: **05/05/22**

WHILE DRILLING **8.0'** DATE COMPLETED: **05/05/22**

BEFORE CASING REMOVED — N - NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" - ASTM D-1586 STANDARD PENETRATION TEST

AFTER CASING REMOVED — C - NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING "/ OR PERCENT CORE RECOVERY

CASING TYPE **HOLLOW STEM AUGER** **SHEET 1 OF 2**

DEPTH	SAMPLE DEPTH	SAMPLE NO.	Rec	SAMPLE DRIVE RECORD PER 6"		N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	0.0'-	S-1	1.3'	4	10		Brown moist very stiff SILT, little fine to	
	2.0'			17	19	27	coarse sand, trace fine gravel	2.0'
	2.0'-	S-2	1.2'	8	19		Brown moist stiff to hard SILT, little clay,	
	4.0'			22	21	41	trash waste, trace ash, trace brick	
5.0	4.0'-	S-3	0.8'	8	6			
	6.0'			5	5	11		6.0'
	6.0'-	S-4	0.7'	9	7		Brown moist stiff CLAY and WASTE	
WL ▼	8.0'			6	4	13		8.0'
	8.0'-	S-5	0.5'	6	5		Brown wet soft to medium stiff SILT,	
10.0	10.0'			3	3	8	trace clay, trace brick, trace glass	
	10.0'-	S-6	0.3'	2	2			
	12.0'			2	3	4		
	12.0'-	S-7	0.3'	2	2			13.0'
	14.0'			1	1	3	Gray wet loose ASH	14.0'
15.0	14.0'-	S-8	0.7'	2	1		Gray moist soft SILT and CLAY	
	16.0'			1	2	2		
20.0								
	20.0'-	S-9	1.9'	1	1			
	22.0'			1	1	2		
25.0								
	25.0'-	S-10	1.9'	1	4			
	27.0'			4	6	8		
30.0								
	30.0'-	S-11	1.9'	2	2			
	32.0'			6	5	8		
35.0								35.0'
	35.0'-	S-12	1.8'	20	11		Gray moist very stiff CLAY, little silt,	
	37.0'			10	10	21	trace fine gravel	
40.0								

parratt wolff inc

TEST BORING LOG

5879 Fisher Road
East Syracuse, NY 13057

PROJECT **Utica City Dump** — **HOLE NO. RSB-1**

LOCATION **Utica, New York** — JOB NUMBER: **22042A**

SURF. EL.

GROUNDWATER DEPTH — DATE STARTED: **05/05/22**

WHILE DRILLING **8.0'** — DATE COMPLETED: **05/05/22**

BEFORE CASING REMOVED — N - NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" - ASTM D-1586 STANDARD PENETRATION TEST

AFTER CASING REMOVED — C - NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING "/ OR PERCENT CORE RECOVERY

CASING TYPE **HOLLOW STEM AUGER** — **SHEET 2 OF 2**

DEPTH	SAMPLE DEPTH	SAMPLE NO.	Rec	SAMPLE DRIVE RECORD PER 6"		N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	40.0'-	**S-13**	**2.0'**	**3**	**3**		**Gray wet medium stiff SILT and CLAY**	
	42.0'			**3**	**3**	**6**		
							Bottom of Boring	**42.0'**
45.0								
50.0								
55.0								
60.0								
65.0								
70.0								
75.0								
80.0								

parratt wolff inc

TEST BORING LOG

5879 Fisher Road
East Syracuse, NY 13057

PROJECT **Utica City Dump** — **HOLE NO. RSB-2**

LOCATION **Utica, New York** — JOB NUMBER: **22042A**

SURF. EL.

GROUNDWATER DEPTH — DATE STARTED: **05/04/22**

WHILE DRILLING **12.0'** — DATE COMPLETED: **05/05/22**

BEFORE CASING REMOVED — N - NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" - ASTM D-1586 STANDARD PENETRATION TEST

AFTER CASING REMOVED — C - NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING "/ OR PERCENT CORE RECOVERY

CASING TYPE **HOLLOW STEM AUGER** — **SHEET 1 OF 2**

DEPTH	SAMPLE DEPTH	SAMPLE NO.	Rec	SAMPLE DRIVE RECORD PER 6"		N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	0.0'-	S-1	0.5'	2	50/0.2'		Brown moist fine to medium, some fine	
	0.7'						to coarse sand, little silt	2.0'
	2.0'-	S-2	1.7'	9	7		WASTE	
	4.0'			8	8	15		4.0'
5.0	4.0'-	S-3	1.5'	1	2		Gray moist stiff SILT and CLAY	
	6.0'			3	5	5		
	6.0'-	S-4	2.0'	5	7			
	8.0'			8	8	15		
	8.0'-	T-1	1.5'	SHELBY				
10.0	10.0'			TUBE				10.0'
	10.0'-	S-5	0.7'	2	2		Gray wet loose fine SAND and ASH	
WL ▼	12.0'			2	2	4		
	12.0'-	S-6	0.7'	2	2			
	14.0'			3	3	5		
15.0	14.0'-	S-7	0.8'	2	2			
	16.0'			3	4	5		
20.0								20.0'
	20.0'-	S-8	0.8'	5	7		Gray moist soft to stiff SILT and CLAY	
	22.0'			6	5	13		
25.0								
	25.0'-	S-9	1.0'	1	1			
	27.0'			2	2	3		
30.0								30.0'
	30.0'-	S-10	1.7'	3	3		Gray wet medium stiff SILT, little clay	
	32.0'			2	2	5		
35.0								
	35.0'-	S-11	2.0'	2	3			
	37.0'			5	7	8		
40.0								

parratt wolff inc

TEST BORING LOG

5879 Fisher Road
East Syracuse, NY 13057

PROJECT **Utica City Dump** HOLE NO. **RSB-2**

LOCATION **Utica, New York** JOB NUMBER: **22042A**

SURF. EL.

GROUNDWATER DEPTH DATE STARTED: **05/04/22**

WHILE DRILLING **12.0'** DATE COMPLETED: **05/05/22**

BEFORE CASING REMOVED — N - NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" - ASTM D-1586 STANDARD PENETRATION TEST

AFTER CASING REMOVED — C - NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING "/ OR PERCENT CORE RECOVERY

CASING TYPE **HOLLOW STEM AUGER** **SHEET 2 OF 2**

DEPTH	SAMPLE DEPTH	SAMPLE NO.	Rec	SAMPLE DRIVE RECORD PER 6"		N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	40.0'-	**S-12**		**6**	**8**		**Gray moist very stiff CLAY, some silt**	
	42.0'			**9**	**11**	**17**		
							Bottom of Boring	**42.0'**
45.0								
50.0								
55.0								
60.0								
65.0								
70.0								
75.0								
80.0								

parratt wolff inc

TEST BORING LOG

5879 Fisher Road
East Syracuse, NY 13057

PROJECT **Utica City Dump** HOLE NO. **RSB-3**

LOCATION **Utica, New York** JOB NUMBER: **22042A**

SURF. EL.

GROUNDWATER DEPTH DATE STARTED: **04/25/22**

WHILE DRILLING **6.0'** DATE COMPLETED: **04/25/22**

BEFORE CASING REMOVED — N - NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" - ASTM D-1586 STANDARD PENETRATION TEST

AFTER CASING REMOVED — C - NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING "/ OR PERCENT CORE RECOVERY

CASING TYPE **HOLLOW STEM AUGER** **SHEET 1 OF 1**

DEPTH	SAMPLE DEPTH	SAMPLE NO.	Rec	SAMPLE DRIVE RECORD PER 6"		N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
							WASTE	
							(Hand augered 0 to 5 feet)	
5.0	**4.0'-**	**S-1**		**3**	**3**			**5.0'**
WL ▼	**6.0'**			**3**	**3**	**6**	**Gray moist to wet medium stiff to stiff**	
	6.0'-	**S-2**	**1.5'**	**4**	**4**		**CLAY, little silt**	
	8.0'			**5**	**7**	**9**		
	8.0'-	**S-3**	**1.3'**	**3**	**5**			
10.0	**10.0'**			**6**	**6**	**11**		**10.5'**
	10.0'-	**S-4**	**1.3'**	**2**	**2**		**Gray wet loose fine SAND, little silt**	**11.0'**
	12.0'			**3**	**3**	**5**	**Gray moist to wet soft to medium stiff SILT**	
	12.0'-	**S-5**	**1.5'**	**5**	**5**		**and CLAY**	
	14.0'			**5**	**4**	**10**		
15.0	**14.0'-**	**S-6**	**1.8'**	**1**	**2**			
	16.0'			**2**	**2**	**4**		
20.0								
	20.0'-	**S-7**	**2.0'**	**1**	**1**			
	22.0'			**1**	**1**	**2**		
25.0								
	25.0'-	**S-8**	**1.0'**	**1**	**1**			
	27.0'			**2**	**2**	**3**		
							Bottom of Boring	**27.0'**
30.0								
35.0								
40.0								

parratt wolff inc

TEST BORING LOG

5879 Fisher Road
East Syracuse, NY 13057

PROJECT **Utica City Dump** — **HOLE NO. RSB-4**

LOCATION **Utica, New York** — JOB NUMBER: **22042A**

SURF. EL.

GROUNDWATER DEPTH WHILE DRILLING — DATE STARTED: **04/26/22**

DATE COMPLETED: **04/26/22**

BEFORE CASING REMOVED — N - NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" - ASTM D-1586 STANDARD PENETRATION TEST

AFTER CASING REMOVED — C - NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING "/ OR PERCENT CORE RECOVERY

CASING TYPE **HOLLOW STEM AUGER** — **SHEET 1 OF 1**

DEPTH	SAMPLE DEPTH	SAMPLE NO.	Rec	SAMPLE DRIVE RECORD PER 6"		N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
							(Hand augered 0 to 5 feet)	
							WASTE	
5.0	**4.0'-**	**S-1**	**0.8'**	**4**	**26**			
	6.0'			**6**	**5**	**32**		
	6.0'-	**S-2**	**No**	**5**	**6**			
	8.0'		**Rec**	**4**	**6**	**10**		
	8.0'-	**S-3**	**0.3'**	**15**	**12**			
10.0	**10.0'**			**14**	**15**	**26**		
	10.0'-	**S-4**	**0.3'**	**1**	**1**			
	11.5'			**1**	**50/0.0'**	**2**		**12.0'**
	12.0'-	**S-5**	**1.2'**	**2**	**6**		**Gray moist medium stiff to stiff CLAY,**	
	14.0'			**9**	**12**	**15**	**little silt**	
15.0	**14.0'-**	**S-6**	**1.3'**	**3**	**3**			
	16.0'			**5**	**7**	**8**		
	14.0'-	**T-1**	**2.0'**	**SHELBY**				
	16.0'			**TUBE**				
20.0								**20.0'**
	20.0'-	**S-7**	**2.0'**	**3**	**3**		**Gray moist medium stiff SILT and CLAY**	
	22.0'			**3**	**3**	**6**		
							Bottom of Boring	**22.0'**
25.0								
30.0								
35.0								
40.0								

parratt wolff inc

TEST BORING LOG

5879 Fisher Road
East Syracuse, NY 13057

PROJECT **Utica City Dump** — **HOLE NO. RSB-5**

LOCATION **Utica, New York** — JOB NUMBER: **22042A**

SURF. EL.

GROUNDWATER DEPTH — DATE STARTED: **04/26/22**

WHILE DRILLING **10.0'** — DATE COMPLETED: **04/26/22**

BEFORE CASING REMOVED — N - NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" - ASTM D-1586 STANDARD PENETRATION TEST

AFTER CASING REMOVED — C - NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING "/ OR PERCENT CORE RECOVERY

CASING TYPE **HOLLOW STEM AUGER** — **SHEET 1 OF 2**

DEPTH	SAMPLE DEPTH	SAMPLE NO.	Rec	SAMPLE DRIVE RECORD PER 6"		N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
							WOOD CHIPS	
							(Hand augered 0 to 5 feet)	
5.0	**4.0'-**	**S-1**	**No**	**3**	**3**			
	6.0'		**Rec**	**3**	**3**	**6**		**6.0'**
	6.0'-	**S-2**	**0.5'**	**4**	**4**		**Brown moist medium stiff SILT, little to**	
	8.0'			**4**	**5**	**8**	**some clay**	
	8.0'-	**S-3**	**1.5'**	**3**	**3**			
WL▼ 10.0	**10.0'**			**4**	**5**	**7**		
	10.0'-	**S-4**	**1.8'**	**1**	**1**			
	12.0'			**1**	**1**	**2**		
	12.0'-	**S-5**	**2.0'**	**1**	**1**			
	14.0'			**1**	**1**	**2**		
15.0	**14.0'-**	**S-6**	**1.8'**	**WH**	**1**			
	16.0'			**1**	**1**	**2**		
20.0								
	20.0'-	**S-7**	**2.0'**	**1**	**1**			**21.0'**
	22.0'			**2**	**2**	**3**	**Gray wet very loose fine to medium SAND,**	
							little silt	
25.0								
	25.0'-	**S-8**	**2.0'**	**2**	**2**			
	27.0'			**2**	**2**	**4**		
30.0								
	30.0'-	**S-9**	**2.0'**	**5**	**8**			**31.5'**
	32.0'			**5**	**16**	**13**	**Gray moist stiff CLAY, little silt**	
35.0								
	35.0'-	**S-10**	**1.0'**	**4**	**4**			
	37.0'			**5**	**7**	**9**		
40.0								

parratt wolff inc

TEST BORING LOG

5879 Fisher Road
East Syracuse, NY 13057

PROJECT **Utica City Dump** — **HOLE NO. RSB-5**

LOCATION **Utica, New York** — JOB NUMBER: **22042A**

SURF. EL.

GROUNDWATER DEPTH — DATE STARTED: **04/26/22**

WHILE DRILLING **10.0'** — DATE COMPLETED: **04/26/22**

BEFORE CASING REMOVED — N - NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" - ASTM D-1586 STANDARD PENETRATION TEST

AFTER CASING REMOVED — C - NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING "/ OR PERCENT CORE RECOVERY

CASING TYPE **HOLLOW STEM AUGER** — **SHEET 2 OF 2**

DEPTH	SAMPLE DEPTH	SAMPLE NO.	Rec	SAMPLE DRIVE RECORD PER 6"		N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	40.0'-	**S-11**	**1.8'**	**4**	**4**		**Gray moist stiff CLAY, little silt**	
	42.0'			**5**	**6**	**9**		
							Bottom of Boring	**42.0'**
45.0								
50.0								
55.0								
60.0								
65.0								
70.0								
75.0								
80.0								

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TEST BORING LOG

5879 Fisher Road
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PROJECT **Utica City Dump** — **HOLE NO. RSB-6**

LOCATION **Utica, New York** — JOB NUMBER: **22042A**

SURF. EL.

GROUNDWATER DEPTH WHILE DRILLING — DATE STARTED: **04/27/22**

DATE COMPLETED: **04/27/22**

BEFORE CASING REMOVED — N - NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" - ASTM D-1586 STANDARD PENETRATION TEST

AFTER CASING REMOVED — C - NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING "/ OR PERCENT CORE RECOVERY

CASING TYPE **HOLLOW STEM AUGER** — **SHEET 1 OF 2**

DEPTH	SAMPLE DEPTH	SAMPLE NO.	Rec	SAMPLE DRIVE RECORD PER 6"		N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	0.0'-	S-1	0.5'	2	17		Brown moist SILT, little fine sand	1.2'
	1.2'			50/0.2'			CONCRETE	2.0'
	2.0'-	S-2	0.2'	5	4		WOOD	
	4.0'			3	3	7		4.0'
5.0	4.0'-	S-3	0.1'	1	2		Brown moist medium stiff CLAY and	
	6.0'			2	3	4	WASTE, little silt	
	6.0'-	S-4	0.3'	1	2			
	8.0'			6	40	8		
	8.0'-	S-5	0.5'	8	7			
10.0	10.0'			36	8	42		
	10.0'-	S-6	No	1	5			
	12.0'		Rec	6	7	11		
	12.0'-	S-7	0.2'	6	15			
	14.0'			4	1	19		
15.0	14.0'-	S-8	No				*(no sample, rods dropped in void space)*	
	16.0'		Rec					
20.0								20.0'
	20.0'-	S-9	1.0'	36	50		Black wet hard SILT and WASTE, trace	
	22.0'			28	19	78	fine gravel	
25.0								25.0'
	25.0'-	S-10	1.0'	7	3		Gray moist medium stiff SILT, little clay	
	27.0'			2	3	5		
30.0								30.0'
	30.0'-	S-11	2.0'	13	12		Gray wet very stiff SILT	
	32.0'			8	10	20	*(bouncing on wood at top of sample, soil*	
							is wet mush)	
35.0								
	35.0'-	S-12	No	19	18			
	37.0'		Rec	21	22	39		37.0'
	37.0'-	S-13	1.5'	4	4		Gray wet loose fine to medium SAND	
	39.0'			4	4	8		
40.0								

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TEST BORING LOG

5879 Fisher Road
East Syracuse, NY 13057

PROJECT **Utica City Dump** — **HOLE NO. RSB-6**

LOCATION **Utica, New York** — JOB NUMBER: **22042A**

SURF. EL.

GROUNDWATER DEPTH WHILE DRILLING — DATE STARTED: **04/27/22**

DATE COMPLETED: **04/27/22**

BEFORE CASING REMOVED — N - NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" - ASTM D-1586 STANDARD PENETRATION TEST

AFTER CASING REMOVED — C - NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING "/ OR PERCENT CORE RECOVERY

CASING TYPE **HOLLOW STEM AUGER** — **SHEET 2 OF 2**

DEPTH	SAMPLE DEPTH	SAMPLE NO.	Rec	SAMPLE DRIVE RECORD PER 6"		N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	40.0'-	**S-14**	**0.5'**	**3**	**2**		**Gray wet loose fine SAND and SILT**	
	42.0'			**2**	**2**	**4**		
							Bottom of Boring	**42.0'**
45.0								
50.0								
55.0								
60.0								
65.0								
70.0								
75.0								
80.0								

parratt wolff inc

TEST BORING LOG

5879 Fisher Road
East Syracuse, NY 13057

PROJECT **Utica City Dump**

HOLE NO. RSB-7

LOCATION **Utica, New York**

JOB NUMBER: **22042A**
SURF. EL.

GROUNDWATER DEPTH
WHILE DRILLING **4.0'**

DATE STARTED: **04/28/22**
DATE COMPLETED: **04/28/22**

BEFORE CASING REMOVED

N - NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" - ASTM D-1586 STANDARD PENETRATION TEST

AFTER CASING REMOVED

C - NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING "/ OR PERCENT CORE RECOVERY

CASING TYPE **HOLLOW STEM AUGER**

SHEET 1 OF 2

DEPTH	SAMPLE DEPTH	SAMPLE NO.	Rec	SAMPLE DRIVE RECORD PER 6"		N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
							WOOD CHIPS	
								3.0'
WL ▼								
5.0	**4.0'-**	**S-1**	**0.2'**	**4**	**16**		***(wood in spoon nose)***	
	6.0'			**2**	**3**	**18**		
	6.0'-	**S-2**	**0.3'**	**2**	**3**		**WASTE**	
	8.0'			**4**	**4**	**7**		
	8.0'-	**S-3**	**0.3'**	**4**	**5**			
10.0	**10.0'**			**4**	**5**	**9**		**10.0'**
	10.0'-	**S-4**	**0.5'**	**2**	**2**		**Gray moist medium stiff CLAY, some silt**	
	12.0'			**3**	**4**	**5**		
	12.0'-	**S-5**	**1.5'**	**3**	**4**			
	14.0'			**4**	**4**	**8**		
15.0	**14.0'-**	**T-1**	**No**	**SHELBY**				
	16.0'		**Rec**	**TUBE**				**16.0'**
	16.0'-	**S-6**	**2.0'**	**1**	**1**		**Gray wet soft SILT, trace clay**	
	18.0'			**1**	**1**	**2**		
20.0								**20.0'**
	20.0'-	**S-7**	**1.7'**	**WH - 1.0'**			**Gray wet very loose fine SAND, little silt**	
	22.0'			**1**	**1**	**1**		
25.0								
	25.0'-	**S-8**	**2.0'**	**2**	**2**			**26.0'**
	27.0'			**2**	**3**	**4**	**Gray moist medium stiff to very stiff SILT, little to some clay**	
30.0								
	30.0'-	**S-9**	**2.0'**	**5**	**6**			
	32.0'			**10**	**8**	**16**		
35.0								**35.0'**
	35.0'-	**S-10**	**2.0'**	**2**	**23**		**Gray wet dense fine to medium GRAVEL and fine to coarse SAND, little silt**	
	37.0'			**19**	**10**	**42**		
40.0								

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TEST BORING LOG

5879 Fisher Road
East Syracuse, NY 13057

PROJECT **Utica City Dump** — **HOLE NO. RSB-7**

LOCATION **Utica, New York** — JOB NUMBER: **22042A**

SURF. EL.

GROUNDWATER DEPTH — DATE STARTED: **04/28/22**

WHILE DRILLING **4.0'** — DATE COMPLETED: **04/28/22**

BEFORE CASING REMOVED — N - NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" - ASTM D-1586 STANDARD PENETRATION TEST

AFTER CASING REMOVED — C - NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING "/ OR PERCENT CORE RECOVERY

CASING TYPE **HOLLOW STEM AUGER** — **SHEET 2 OF 2**

DEPTH	SAMPLE DEPTH	SAMPLE NO.	Rec	SAMPLE DRIVE RECORD PER 6"		N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	40.0'-	**S-11**	**2.0'**	**6**	**8**		**Brown wet stiff SILT, little fine sand,**	
	42.0'			**7**	**7**	**15**	**little clay**	
							Bottom of Boring	**42.0'**
45.0								
50.0								
55.0								
60.0								
65.0								
70.0								
75.0								
80.0								

parratt wolff inc

TEST BORING LOG

5879 Fisher Road
East Syracuse, NY 13057

PROJECT **Utica City Dump** — **HOLE NO. RSB-8**

LOCATION **Utica, New York** — JOB NUMBER: **22042A**

SURF. EL.

GROUNDWATER DEPTH — DATE STARTED: **04/28/22**

WHILE DRILLING **4.0'** — DATE COMPLETED: **04/29/22**

BEFORE CASING REMOVED — N - NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" - ASTM D-1586 STANDARD PENETRATION TEST

AFTER CASING REMOVED — C - NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING "/ OR PERCENT CORE RECOVERY

CASING TYPE **HOLLOW STEM AUGER** — **SHEET 1 OF 2**

DEPTH	SAMPLE DEPTH	SAMPLE NO.	Rec	SAMPLE DRIVE RECORD PER 6"		N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
							(Hand augered 0 to 5 feet)	
5.0	**4.0'-**	**S-1**	**0.3'**	**5**	**6**		**Brown moist medium stiff to very stiff**	
	6.0'			**8**	**7**	**14**	**CLAY, little silt**	
	6.0'-	**S-2**	**1.2'**	**5**	**7**			
	8.0'			**9**	**11**	**16**		
	8.0'-	**S-3**	**1.3'**	**1**	**2**			
10.0	**10.0'**			**3**	**3**	**5**		
	10.0'-	**T-1**	**1.5'**	**SHELBY**				
	12.0'			**TUBE**				
	12.0'-	**S-4**	**2.0'**	**3**	**3**			
	14.0'			**3**	**3**	**6**		
WL▼ 15.0	**14.0'-**	**S-5**	**2.0'**	**1**	**1**			**15.0'**
	16.0'			**WH**	**1**	**1**	**Gray wet very loose fine SAND, little silt**	
20.0								
	20.0'-	**S-6**	**0.8'**	**1**	**1**			**21.0'**
	22.0'			**2**	**2**	**3**	**Gray moist soft SILT, some clay**	
25.0								
	25.0'-	**S-7**	**2.0'**	**4**	**21**			**26.0'**
	27.0'			**20**	**19**	**41**	**Gray-Red-Brown wet dense fine to medium GRAVEL, little fine to coarse sand, trace silt**	
30.0								
	30.0'-	**S-8**	**2.0'**	**3**	**3**			**31.0'**
	32.0'			**3**	**3**	**6**	**Gray moist medium stiff to stiff CLAY, little silt**	
35.0								**35.0'**
	35.0'-	**S-9**	**2.0'**	**3**	**4**		**Interbedded gray wet fine to medium SAND and SILT, graded to gray moist CLAY, little silt**	
	37.0'			**6**	**7**	**10**		
40.0								

parratt wolff inc

TEST BORING LOG

5879 Fisher Road
East Syracuse, NY 13057

PROJECT **Utica City Dump** — **HOLE NO. RSB-8**

LOCATION **Utica, New York** — JOB NUMBER: **22042A**

SURF. EL.

GROUNDWATER DEPTH WHILE DRILLING — DATE STARTED: **04/28/22**

DATE COMPLETED: **04/29/22**

BEFORE CASING REMOVED — N - NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" - ASTM D-1586 STANDARD PENETRATION TEST

AFTER CASING REMOVED — C - NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING "/ OR PERCENT CORE RECOVERY

CASING TYPE **HOLLOW STEM AUGER** — **SHEET 2 OF 2**

DEPTH	SAMPLE DEPTH	SAMPLE NO.	Rec	SAMPLE DRIVE RECORD PER 6"		N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	40.0'-	**S-10**	**2.0'**	**4**	**5**		**Gray wet stiff CLAY, some silt**	
	42.0'			**5**	**3**	**10**		
							Bottom of Boring	**42.0'**
45.0								
50.0								
55.0								
60.0								
65.0								
70.0								
75.0								
80.0								

parratt wolff inc

TEST BORING LOG

5879 Fisher Road
East Syracuse, NY 13057

PROJECT **Utica City Dump** — **HOLE NO. RSB-9**

LOCATION **Utica, New York** — JOB NUMBER: **22042A**

SURF. EL.

GROUNDWATER DEPTH — DATE STARTED: **05/03/22**

WHILE DRILLING **4.0'** — DATE COMPLETED: **05/04/22**

BEFORE CASING REMOVED — N - NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" - ASTM D-1586 STANDARD PENETRATION TEST

AFTER CASING REMOVED — C - NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING "/ OR PERCENT CORE RECOVERY

CASING TYPE **HOLLOW STEM AUGER** — **SHEET 1 OF 2**

DEPTH	SAMPLE DEPTH	SAMPLE NO.	Rec	SAMPLE DRIVE RECORD PER 6"		N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
							WOOD CHIPS	
								3.0'
WL ▼								
5.0	**4.0'-**	**S-1**	**No**	**4**	**2**			
	6.0'		**Rec**	**3**	**2**	**5**		
	6.0'-	**S-2**	**0.5'**	**2**	**2**		**Brown moist to wet medium stiff SILT,**	
	8.0'			**2**	**2**	**4**	**some clay**	
	8.0'-	**S-3**	**1.5'**	**2**	**1**			
10.0	**10.0'**			**1**	**1**	**2**		**10.0'**
	10.0'-	**S-4**	**1.3'**	**2**	**1**		**Gray wet soft SILT and CLAY**	
	12.0'			**1**	**1**	**2**		
	12.0'-	**S-5**	**1.5'**	**WH**	**1**			
	14.0'			**1**	**2**	**2**		**14.0'**
15.0	**14.0'-**	**S-6**	**1.2'**	**2**	**1**		**Gray wet very loose fine SAND, little**	
	16.0'			**1**	**2**	**2**	**silt**	
20.0								
	20.0'-	**S-7**	**0.8'**	**2**	**1**			
	22.0'			**1**	**2**	**2**		
25.0								**25.0'**
	25.0'-	**S-8**	**2.0'**	**2**	**2**		**Gray moist soft SILT and CLAY**	
	27.0'			**2**	**4**	**4**		
30.0								**30.0'**
	30.0'-	**S-9**	**2.0'**	**6**	**6**		**Gray moist stiff CLAY and SILT**	
	32.0'			**6**	**6**	**12**		
	32.0'-	**T-1**	**No**	**SHELBY**				
	34.0'		**Rec**	**TUBE**				**34.0'**
35.0	**34.0'-**	**S-10**	**2.0'**	**6**	**5**		**Gray moist stiff SILT and CLAY**	
	36.0'			**5**	**6**	**10**		
40.0								

parratt wolff inc

TEST BORING LOG

5879 Fisher Road
East Syracuse, NY 13057

PROJECT **Utica City Dump** HOLE NO. **RSB-9**

LOCATION **Utica, New York** JOB NUMBER: **22042A**

SURF. EL.

GROUNDWATER DEPTH DATE STARTED: **05/03/22**

WHILE DRILLING **4.0'** DATE COMPLETED: **05/04/22**

BEFORE CASING REMOVED — N - NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" - ASTM D-1586 STANDARD PENETRATION TEST

AFTER CASING REMOVED — C - NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING "/ OR PERCENT CORE RECOVERY

CASING TYPE **HOLLOW STEM AUGER** **SHEET 2 OF 2**

DEPTH	SAMPLE DEPTH	SAMPLE NO.	Rec	SAMPLE DRIVE RECORD PER 6"		N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	40.0'-	**S-11**	**2.0'**	**6**	**5**		**Gray moist stiff SILT and CLAY**	
	42.0'			**5**	**6**	**10**		
							Bottom of Boring	**42.0'**
45.0								
50.0								
55.0								
60.0								
65.0								
70.0								
75.0								
80.0								

parratt wolff inc

TEST BORING LOG

5879 Fisher Road
East Syracuse, NY 13057

PROJECT **Utica City Dump** — **HOLE NO. RSB-10**

LOCATION **Utica, New York** — JOB NUMBER: **22042A**

SURF. EL.

GROUNDWATER DEPTH WHILE DRILLING — DATE STARTED: **04/29/22**

DATE COMPLETED: **04/29/22**

BEFORE CASING REMOVED — N - NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" - ASTM D-1586 STANDARD PENETRATION TEST

AFTER CASING REMOVED — C - NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING "/ OR PERCENT CORE RECOVERY

CASING TYPE **HOLLOW STEM AUGER** — **SHEET 1 OF 2**

DEPTH	SAMPLE DEPTH	SAMPLE NO.	Rec	SAMPLE DRIVE RECORD PER 6"		N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
							WOOD CHIPS	
								3.0'
5.0	**4.0'-**	**S-1**	**0.1'**	**4**	**3**		**Gray moist medium stiff to stiff WASTE,**	
	6.0'			**2**	**4**	**5**	**BRICK, and GLASS fragments**	
	6.0'-	**S-2**	**1.0'**	**4**	**4**			
	8.0'			**8**	**10**	**12**		
	8.0'-	**S-3**	**0.4'**	**4**	**4**			
10.0	**10.0'**			**11**	**4**	**15**		
	10.0'-	**S-4**	**0.5'**	**1**	**1**			
	12.0'			**1**	**1**	**2**		**12.0'**
	12.0'-	**S-5**	**0.8'**	**3**	**2**		**Brown to gray moist medium stiff SILT**	
	14.0'			**2**	**2**	**4**	**and WASTE**	**14.0'**
15.0	**14.0'-**	**S-6**	**1.0'**	**1**	**2**		**Gray moist to wet medium stiff CLAY**	
	16.0'			**2**	**2**	**4**	**and SILT**	
20.0								
	20.0'-	**S-7**	**2.0'**	**WH - 1.0'**				
	22.0'			**1**	**1**	**1**		**22.0'**
	22.0'-	**S-8**	**2.0'**	**2**	**1**		**Gray moist to wet soft SILT, little clay,**	
	24.0'			**1**	**1**	**2**	**trace fine sand**	
25.0								
	25.0'-	**S-9**	**2.0'**	**1**	**1**			
	27.0'			**1**	**3**	**2**		
30.0								**30.0'**
	30.0'-	**S-10**	**2.0'**	**1**	**2**		**Gray wet loose fine SAND, little silt,**	
	32.0'			**4**	**3**	**6**	**trace medium to coarse sand**	
35.0								**35.0'**
	35.0'-	**S-11**	**2.0'**	**4**	**5**		**Gray moist stiff SILT and CLAY**	
	37.0'			**3**	**4**	**8**		
40.0								

parratt wolff inc

TEST BORING LOG

5879 Fisher Road
East Syracuse, NY 13057

PROJECT **Utica City Dump** — **HOLE NO. RSB-10**

LOCATION **Utica, New York** — JOB NUMBER: **22042A**

SURF. EL.

GROUNDWATER DEPTH WHILE DRILLING — DATE STARTED: **04/29/22**

DATE COMPLETED: **04/29/22**

BEFORE CASING REMOVED — N - NO. OF BLOWS TO DRIVE SAMPLER 12" W/140# HAMMER FALLING 30" - ASTM D-1586 STANDARD PENETRATION TEST

AFTER CASING REMOVED — C - NO. OF BLOWS TO DRIVE CASING 12" W/ # HAMMER FALLING "/ OR PERCENT CORE RECOVERY

CASING TYPE **HOLLOW STEM AUGER** — **SHEET 2 OF 2**

DEPTH	SAMPLE DEPTH	SAMPLE NO.	Rec	SAMPLE DRIVE RECORD PER 6"		N	DESCRIPTION OF MATERIAL	STRATA CHANGE DEPTH
	40.0'-	**S-12**	**1.7'**	**2**	**7**		**Gray moist very stiff CLAY, little silt**	
	42.0'			**9**	**6**	**16**		
							Bottom of Boring	**42.0'**
45.0								
50.0								
55.0								
60.0								
65.0								
70.0								
75.0								
80.0								

RAMBOLL

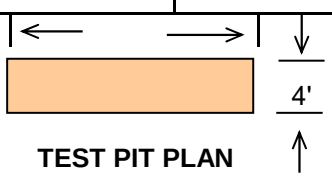
TEST PIT LOG

TEST PIT WTP-1

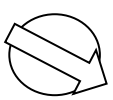
PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Deere 210G LC			GROUND WATER DEPTH: 15 ft bgs
OPERATOR: John Stutzke	TIME STARTED:	7:45	DATE STARTED: 3/16/23
INSPECTOR:	TIME FINISHED:	9:30	DATE FINISHED: 3/16/23

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Brown Sandy Fill and Brick, Concrete and Wood debris	
2				
3				
4			Brown Sandy Fill and Waste (Bottles, glass, tires, petroleum odor)	
5				
6				
7				
8				
9				
10				
11				
12				
13			Wet Gray Clay	
14				
15				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 15 ft bgs. Groundwater encountered at 13 ft bgs.
Well installed to 15 ft bgs.



TEST PIT PLAN



NORTH

RAMBOLL

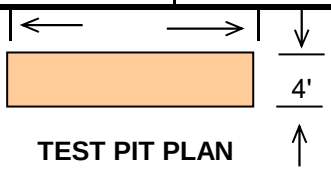
TEST PIT LOG

TEST PIT WTP-2

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Deere 210G LC		GROUND WATER DEPTH:	NE
OPERATOR: John Stutzke	TIME STARTED: 9:30	DATE STARTED:	3/20/23
INSPECTOR: Russell Graziano	TIME FINISHED: 11:00	DATE FINISHED:	3/20/23

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Brown sandy fill and waste (glass bottles, plastic, bags, cloth)	
2				
3				
4				
5				
6				
7				
8				
9				
10			Gray native clay, wet	
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 12 ft bgs. Groundwater encountered at 9 ft bgs at top of native clay. Well installed to 12 ft bgs



TEST PIT PLAN **NORTH**

RAMBOLL

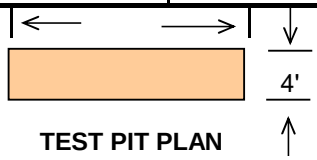
TEST PIT LOG

TEST PIT WTP-3

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Deere 210G LC			GROUND WATER DEPTH: NE
OPERATOR: John Stutzke	TIME STARTED:	9:50	DATE STARTED: 3/16/23
INSPECTOR: Russell Graziano	TIME FINISHED:	10:30	DATE FINISHED: 3/16/23

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Brown Sandy Fill and Waste (MSW, Bottles, cloth, bags)	
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17			Same as above, wet	
18			Gray Native Clay, wet	

TEST PIT LOCATION AND NOTES:
Test pit terminated at 17 ft bgs. Groundwater encountered at 16 ft bgs. Well installed to 17 ft bgs.



TEST PIT PLAN **NORTH**

RAMBOLL

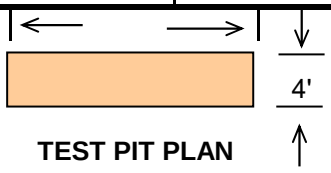
TEST PIT LOG

TEST PIT WTP-4

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Deere 210G LC			GROUND WATER DEPTH: 13ft bgs
OPERATOR: John Stutzke	TIME STARTED:	10:50	DATE STARTED: 3/16/23
INSPECTOR: Russell Graziano	TIME FINISHED:	12:15	DATE FINISHED: 3/16/23

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Brown Sandy Fill and Waste (MSW, Bottles, cloth, bags)	
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13			Gray Clay, wet	
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 13' bgs. Groundwater encountered at 12 ft bgs. Well installed to 13 ft bgs.



TEST PIT PLAN



NORTH

RAMBOLL

TEST PIT LOG

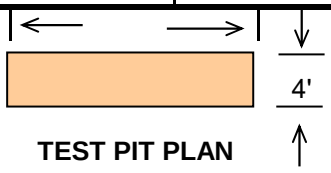
TEST PIT WTP-5

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Deere 210G LC			GROUND WATER DEPTH: 4 ft bgs
OPERATOR: John Stutzke	TIME STARTED:	14:00	DATE STARTED: 3/16/23
INSPECTOR: Russell Graziano	TIME FINISHED:	15:15	DATE FINISHED: 3/16/23

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Brown Sand and Gravel and Waste (MSW, esepecially broken glass and plastic), moist	
2				
3				
4				
5			Gray Clay, wet	
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:

Test pit terminated at 9 ft bgs. Groundwater encountered at 4 ft bgs. Well installed to 9 ft bgs.



TEST PIT PLAN

NORTH

RAMBOLL

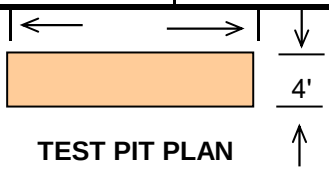
TEST PIT LOG

TEST PIT WTP-6

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Deere 210G LC			GROUND WATER DEPTH: 8 ft bgs
OPERATOR: John Stutzke	TIME STARTED:	8:30	DATE STARTED: 3/17/23
INSPECTOR: Russell Graziano	TIME FINISHED:	9:50	DATE FINISHED: 3/17/23

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Brown fill with wood and glass debris	
2				
3				
4				
5				
6				
7				
8				
9			Intermixed wet gray native clay and debris	
10				
11				
12			Clean native gray clay	
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 13 ft. well installed to 13 ft bgs. Pit backfilled with excavated material. Samples collected from 8:45 to 8:50



TEST PIT PLAN **NORTH**

RAMBOLL

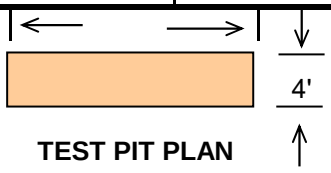
TEST PIT LOG

TEST PIT WTP-7

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Deere 210G LC		GROUND WATER DEPTH:	5 ft bts
OPERATOR: John Stutzke	TIME STARTED: 10:30	DATE STARTED:	3/17/23
INSPECTOR: Russell Graziano	TIME FINISHED: 11:45	DATE FINISHED:	3/17/23

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Brown sand with some waste (plastic, wood, glass, tire)	
2				
3				
4			Gray/white waste, sand, and gravel, same waste as above, possible ash	
5				
6			Wet intermixed gray clay and waste, wet	
7			Gray Clay, wet	
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 10'. Well installed. Samples at 10:45-10:50



TEST PIT PLAN **NORTH**

RAMBOLL

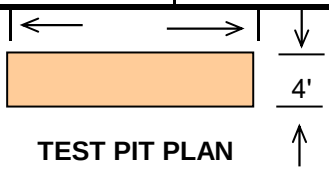
TEST PIT LOG

TEST PIT WTP-8

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Deere 210G LC			GROUND WATER DEPTH: 6 ft bgs
OPERATOR: John Stutzke	TIME STARTED:	13:40	DATE STARTED: 3/17/23
INSPECTOR: Russell Graziano	TIME FINISHED:	15:10	DATE FINISHED: 3/17/23

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Brown Sandy Fill and Waste (Glass, plastic, bags, cloth, wood)	
2				
3				
4				
5				
6				
7			Same as above, wet	
8				
9			Gray Clay, wet	
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 10 ft bgs. Groundwater encountered at 6 ft bgs. Well installed to 10 ft bgs.



TEST PIT PLAN

NORTH

RAMBOLL

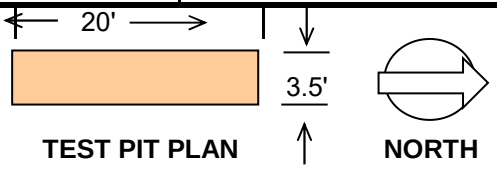
TEST PIT LOG

TEST PIT WTP-9

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Cat 304E			GROUND WATER DEPTH: NE
OPERATOR: Lewis Gelinas	TIME STARTED:	9:00	DATE STARTED: 11/28/2023
INSPECTOR: Chris Norton	TIME FINISHED:	9:36	DATE FINISHED: 11/28/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown Sandy Fill and Solid Waste (Glass, plastic, bags, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at access road. Waste up to roadway. Some perched water from recent rainfall.



RAMBOLL

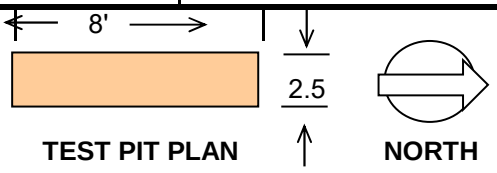
TEST PIT LOG

TEST PIT WTP-10

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Cat 304E			GROUND WATER DEPTH: NE
OPERATOR: Lewis Gelinas,	TIME STARTED:	9:45	DATE STARTED: 11/28/2023
INSPECTOR: Chris Norton	TIME FINISHED:	10:05	DATE FINISHED: 11/28/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown Sandy Fill and Solid Waste (Glass, plastic, brick, wood, concrete)	
2		Fill		
3		Fill		
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Heavy amount of bricks leading to solid waste.



RAMBOLL

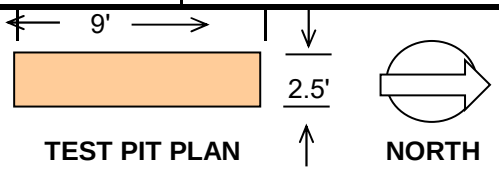
TEST PIT LOG

TEST PIT WTP-11

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Cat 304E			GROUND WATER DEPTH: NE
OPERATOR: Lewis Gelinas	TIME STARTED: 10:10		DATE STARTED: 11/28/2023
INSPECTOR: Chris Norton	TIME FINISHED: 10:25		DATE FINISHED: 11/28/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown Sandy Fill and Solid Waste (Glass, plastic, bags, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Fill		
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:



RAMBOLL

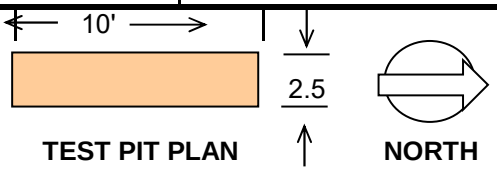
TEST PIT LOG

TEST PIT WTP-12

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Cat 304E			GROUND WATER DEPTH: NE
OPERATOR: Lewis Gelinas	TIME STARTED: 10:10		DATE STARTED: 11/28/2023
INSPECTOR: Chris Norton	TIME FINISHED: 10:46		DATE FINISHED: 11/28/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown Sandy Fill and Solid Waste (Glass, plastic, bags, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Clay	Native grey clay	
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:



RAMBOLL

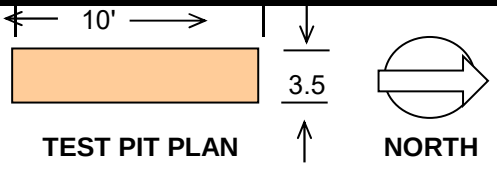
TEST PIT LOG

TEST PIT WTP-13

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Cat 304E			GROUND WATER DEPTH: NE
OPERATOR: Lewis Gelinas	TIME STARTED: 10:53		DATE STARTED: 11/28/2023
INSPECTOR: Chris Norton	TIME FINISHED: 11:07		DATE FINISHED: 11/28/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown Sandy Fill and Solid Waste (Glass, plastic, bags, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Clay	Native grey clay	
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Large rock, refusal, sloping upward toward roadway.



RAMBOLL

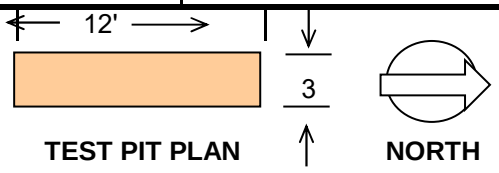
TEST PIT LOG

TEST PIT WTP-14

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Cat 304E		GROUND WATER DEPTH:	NE
OPERATOR: Lewis Gelinas	TIME STARTED: 11:12	DATE STARTED:	11/28/2023
INSPECTOR: Chris Norton	TIME FINISHED: 11:30	DATE FINISHED:	11/28/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown Sandy Fill and Solid Waste (Glass, plastic, bags, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Large rock/concrete refusal, sloping upward toward roadway.



RAMBOLL

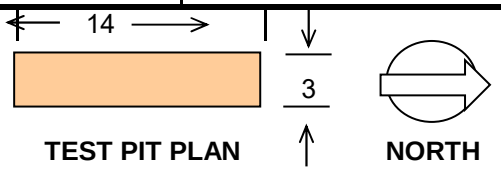
TEST PIT LOG

TEST PIT WTP-15

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Cat 304E			GROUND WATER DEPTH: NE
OPERATOR: Lewis Gelinas	TIME STARTED: 11:35		DATE STARTED: 11/28/2023
INSPECTOR: Chris Norton	TIME FINISHED: 11:53		DATE FINISHED: 11/28/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown Sandy Fill and Solid Waste (Glass, plastic, bags, cloth, wood, rubber, concrete)	
2		Fill		
3		Clay	Native Grey Clay	
4				
5				
6				
7				
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12				
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14				

TEST PIT LOCATION AND NOTES:
Brick within fill up to access road.



RAMBOLL

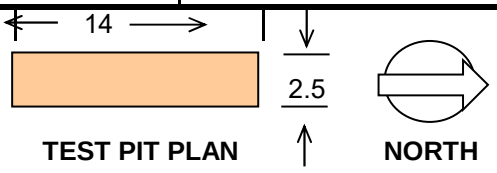
TEST PIT LOG

TEST PIT WTP-16

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Cat 304E			GROUND WATER DEPTH: NE
OPERATOR: Lewis Gelinas	TIME STARTED:	12:15	DATE STARTED: 11/28/2023
INSPECTOR: Chris Norton	TIME FINISHED:	12:33	DATE FINISHED: 11/28/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown Sandy Fill and Solid Waste (Glass, plastic, bags, cloth, wood, rubber, concrete)	
2		Fill		
3		Clay	Native Grey Clay	
4				
5				
6				
7				
8				
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12				
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14				

TEST PIT LOCATION AND NOTES:
Brick within fill up to access road.



RAMBOLL

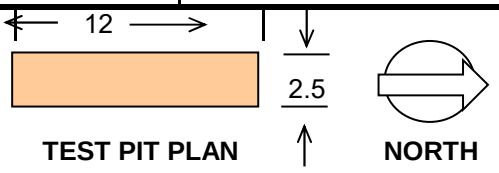
TEST PIT LOG

TEST PIT WTP-17

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Cat 304E			GROUND WATER DEPTH: NE
OPERATOR: Lewis Gelinas	TIME STARTED: 12:35		DATE STARTED: 11/28/2023
INSPECTOR: Chris Norton	TIME FINISHED: 12:48		DATE FINISHED: 11/28/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown Sandy Fill and Solid Waste (Glass, plastic, bags, cloth, wood, rubber, concrete)	
2		Fill		
3		Clay	Native Grey Clay	
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Brick within fill up to access road.



RAMBOLL

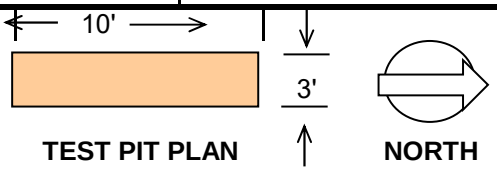
TEST PIT LOG

TEST PIT WTP-18

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Cat 304E		GROUND WATER DEPTH:	NE
OPERATOR: Lewis Gelinas	TIME STARTED: 12:50	DATE STARTED:	11/28/2023
INSPECTOR: Chris Norton	TIME FINISHED: 13:05	DATE FINISHED:	11/28/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown Sandy Fill and Solid Waste (Glass, plastic, bags, cloth, wood, rubber, concrete)	
2		Fill		
3		Clay	Native Grey Clay	
4				
5				
6				
7				
8				
9				
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11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Concrete foundation for telephone pole tie off at northern pit extents.



RAMBOLL

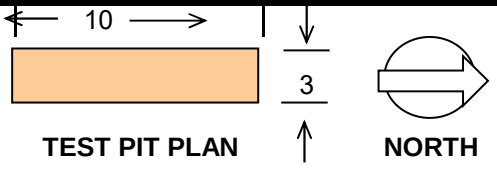
TEST PIT LOG

TEST PIT WTP-19

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Cat 304E			GROUND WATER DEPTH: NE
OPERATOR: Lewis Gelinas	TIME STARTED: 13:10		DATE STARTED: 11/28/2023
INSPECTOR: Chris Norton	TIME FINISHED: 13:22		DATE FINISHED: 11/28/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown Sandy Fill, Ash and Brick	
2		Fill		
3		Clay	Native Grey Clay	
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Ash within fill up to access road. Off set west due to telephone pole.



RAMBOLL

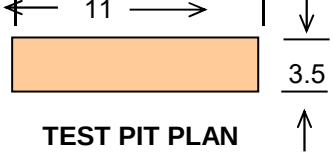
TEST PIT LOG

TEST PIT WTP-20

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Cat 304E		GROUND WATER DEPTH:	6'
OPERATOR: Lewis Gelinas	TIME STARTED: 13:33	DATE STARTED:	11/28/2023
INSPECTOR: Chris Norton	TIME FINISHED: 13:48	DATE FINISHED:	11/28/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown Sandy Fill, Ash, and Solid Waste (Glass, plastic, bags, cloth, wood, rubber, concrete)	
2		Fill		
3		Sand	Black stained Clayey Sand soil, saturated below 6 feet, odor to the material excavated	
4		Sand		
5		Sand		
6		Sand		
7		Sand		
8		Sand		
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Ash within fill up to access road. Off set west due to telephone pole.



TEST PIT PLAN **NORTH**

RAMBOLL

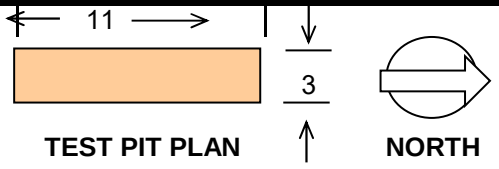
TEST PIT LOG

TEST PIT WTP-21

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Cat 304E			GROUND WATER DEPTH: NE
OPERATOR: Lewis Gelinas	TIME STARTED: 14:00		DATE STARTED: 11/28/2023
INSPECTOR: Chris Norton	TIME FINISHED: 14:20		DATE FINISHED: 11/28/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown/ black Sandy Fill and Solid Waste (Glass, plastic, bags, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Fill		
5		Fill		
6				
7				
8				
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12				
13				
14				

TEST PIT LOCATION AND NOTES:
3 feet out from access road was clean dark grey fill at the northern extent of the test pit. The souther extent had black stained soils similar to WTP-20 at the southern extent of the test pit. Test pit terminated at northern extent due to possible wood retaining wall for access road.



RAMBOLL

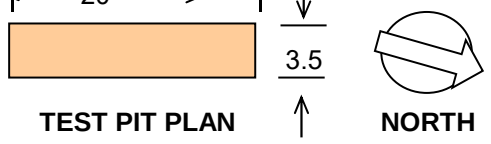
TEST PIT LOG

TEST PIT WTP-22

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Cat 304E			GROUND WATER DEPTH: NE
OPERATOR: Lewis Gelinas	TIME STARTED:	8:20	DATE STARTED: 11/29/2023
INSPECTOR: Chris Norton	TIME FINISHED:	9:05	DATE FINISHED: 11/29/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown Sandy Fill and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete	
2		Fill		
3		Fill		
4		Fill		
5		Fill		
6		Fill		
7		Clay	Native Grey Clay	
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Waste was found at various depths and up to acces roadway within embankment leading to the road way. Native clay was encountered in some areas 6' below fill. Depths of test pit varied due to embankment slope. Test pi was backfilled as being dug toward roadway.



RAMBOLL

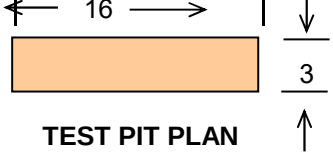
TEST PIT LOG

TEST PIT WTP-23

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Cat 304E		GROUND WATER DEPTH:	NE
OPERATOR: Lewis Gelinas	TIME STARTED: 9:43	DATE STARTED:	11/29/2023
INSPECTOR: Chris Norton	TIME FINISHED: 10:15	DATE FINISHED:	11/29/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Clean brown Sand and Gravel fill above geofabric	
2		Fill		
3		Fill	Brown Sandy Fill and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete), some clay	
4		Fill		
5			Native Grey Clay	
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Clean fill above and below fabric until edge of waste was found traveling north from the river.



TEST PIT PLAN

NORTH

RAMBOLL

TEST PIT LOG

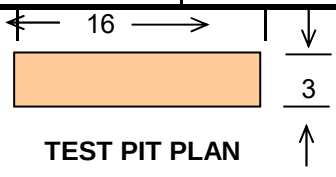
TEST PIT WTP-24

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Cat 304E			GROUND WATER DEPTH: NE
OPERATOR: Lewis Gelinas	TIME STARTED: 10:30		DATE STARTED: 11/29/2023
INSPECTOR: Chris Norton	TIME FINISHED: 10:50		DATE FINISHED: 11/29/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:

Clean fill above and below fabric until edge of waste was found traveling north from the river.



TEST PIT PLAN

NORTH

RAMBOLL

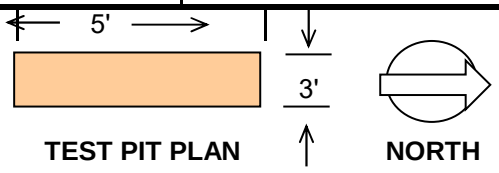
TEST PIT LOG

TEST PIT WTP-25

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Cat 304E			GROUND WATER DEPTH: 0'
OPERATOR: Lewis Gelinas	TIME STARTED:	11:45	DATE STARTED: 11/29/2023
INSPECTOR: Chris Norton	TIME FINISHED:	12:05	DATE FINISHED: 11/29/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete),	
2		Fill		
3		Fill		
4		Fill		
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Solid waste continues up to the edge to 2' past the edge of the cat tail vegetation.



RAMBOLL

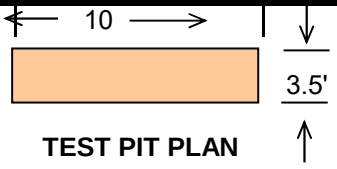
TEST PIT LOG

TEST PIT WTP-26

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	0'/grade
OPERATOR: Lewis Gelinas	TIME STARTED: 11:15	DATE STARTED:	12/4/2023
INSPECTOR: Chris Norton	TIME FINISHED: 11:30	DATE FINISHED:	12/4/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete),	
2		Fill		
3		Fill		
4		Fill		
5		Clay	Native Grey Clay	
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Solid waste continues up to the edge to 2' past the edge of the cat tail vegetation. Groundwater was at the edge of the swamp and cattails, and filled in the test pit as it was done. Native clay was under the film and debris below waterline.



TEST PIT PLAN

NORTH

RAMBOLL

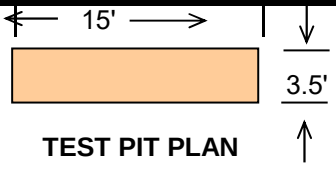
TEST PIT LOG

TEST PIT WTP-27

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	0'/grade
OPERATOR: Lewis Gelinas	TIME STARTED: 12:30	DATE STARTED:	12/4/2023
INSPECTOR: Chris Norton	TIME FINISHED: 12:45	DATE FINISHED:	12/4/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Fill		
5		Clay	Native Grey Clay	
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Solid waste continues up to the edge to 2' past the edge of the cattail vegetation. Groundwater was at the edge of the swamp and cattails, and filled in the test pit as it was done. Native clay was under the fill and debris below waterline. Based on location on slope fill and waste was 2.5'-4.5' thick.



TEST PIT PLAN

NORTH

RAMBOLL

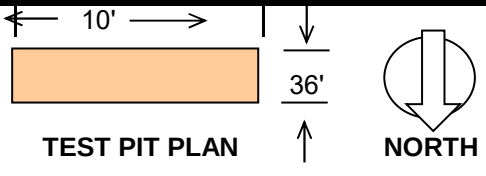
TEST PIT LOG

TEST PIT WTP-28

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	7'8"
OPERATOR: Lewis Gelinas	TIME STARTED: 13:25	DATE STARTED:	12/4/2023
INSPECTOR: Chris Norton	TIME FINISHED: 13:45	DATE FINISHED:	12/4/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Fill		
5		Fill		
6		Fill		
7		Fill		
8		Clay		
9		Clay	Native Grey Clay	
10		Clay		
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Solid waste was found to a death of 7'8". The water table was also found at 7'8". The fill was filled with municipal solid waste.



RAMBOLL

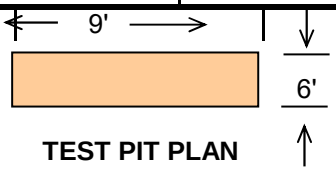
TEST PIT LOG

TEST PIT WTP-29

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	6'2"
OPERATOR: Lewis Gelinas	TIME STARTED: 14:20	DATE STARTED:	12/4/2023
INSPECTOR: Chris Norton	TIME FINISHED: 14:40	DATE FINISHED:	12/4/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Fill		
5		Fill		
6		Fill		
7		Fill		
8		Clay	Native Grey Clay at 6'2"	
9		Clay		
10		Clay		
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Solid waste was found to a death of 6'2". The water table was also found at 6'2". The fill was filled with municipal solid waste. Groundwater quickly filled the test pit as it was being excavated.



TEST PIT PLAN

NORTH

RAMBOLL

TEST PIT LOG

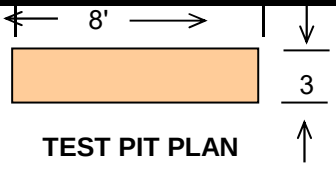
TEST PIT WTP-30

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	0.5'
OPERATOR: Lewis Gelinas	TIME STARTED: 15:05	DATE STARTED:	12/4/2023
INSPECTOR: Chris Norton	TIME FINISHED: 15:20	DATE FINISHED:	12/4/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Clay	Native Grey Clay	
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:

Solid waste continues up to the edge to 2' past the edge of the cattail vegetation. Groundwater was at the edge of the swamp and cattails, and filled in the test pit as it was done. Native clay was under the fill and debris below waterline. Based on location on slope fill and waste was 2.0'



TEST PIT PLAN

NORTH

RAMBOLL

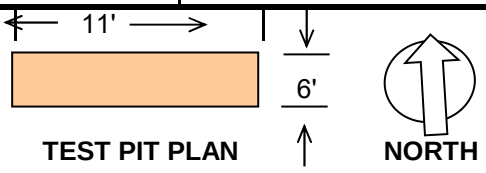
TEST PIT LOG

TEST PIT WTP-31

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	6'2"
OPERATOR: Lewis Gelinas	TIME STARTED: 9:00	DATE STARTED:	12/5/2023
INSPECTOR: Chris Norton	TIME FINISHED: 9:20	DATE FINISHED:	12/5/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Fill		
5		Fill		
6		Fill		
7		Fill		
8		Fill		
9		Clay	Native Grey Clay at 7'2"	
10		Clay		
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Solid waste was found to a death of 7'2". The water table was also found at 7'2". The fill was filled with municipal solid waste.



RAMBOLL

TEST PIT LOG

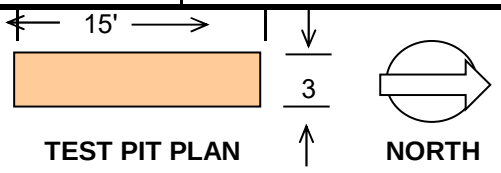
TEST PIT WTP-32

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	0.5'
OPERATOR: Lewis Gelinas	TIME STARTED: 9:35	DATE STARTED:	12/5/2023
INSPECTOR: Chris Norton	TIME FINISHED: 9:50	DATE FINISHED:	12/5/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Clay	Native Grey Clay	
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:

Solid waste continues up to the edge to 2' past the edge of the cattail vegetation. Groundwater was at the edge of the swamp and cattails, and filled in the test pit as it was dug. Native clay was under the fill and debris below waterline. Based on location on slope fill and waste was 2.0'.



RAMBOLL

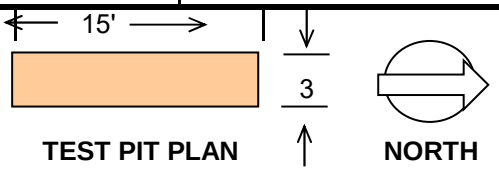
TEST PIT LOG

TEST PIT WTP-33

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	0'/ grade
OPERATOR: Lewis Gelinas	TIME STARTED: 10:05	DATE STARTED:	12/5/2023
INSPECTOR: Chris Norton	TIME FINISHED: 10:20	DATE FINISHED:	12/5/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Clay	Native Grey Clay	
4				
5				
6				
7				
8				
9				
10				
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12				
13				
14				

TEST PIT LOCATION AND NOTES:
Solid waste is within the first 2 feet of depth going out into the pond, past the cat tails, approximately 10 feet. The native clay material was only a foot and a hal to f 2 feet below the waste and fill. This location was offset to its position due to the original position being within the pond.



RAMBOLL

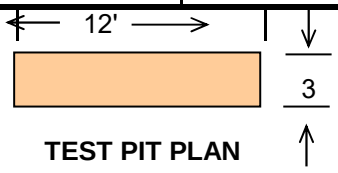
TEST PIT LOG

TEST PIT WTP-34

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	0.5'
OPERATOR: Lewis Gelinas	TIME STARTED: 10:38	DATE STARTED:	12/5/2023
INSPECTOR: Chris Norton	TIME FINISHED: 10:50	DATE FINISHED:	12/5/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Clay	Native Grey Clay	
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Solid waste at the surface of the soil, and within the top foot to 2 feet of fill. The solid waste extends out into the swamp area. However, we were limited by accessibility. The edge of the pond is further than what was shown on the map.



TEST PIT PLAN

NORTH

RAMBOLL

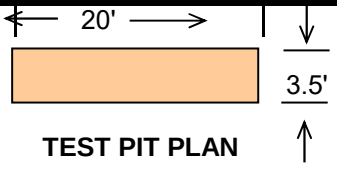
TEST PIT LOG

TEST PIT WTP-35

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	0.5'
OPERATOR: Lewis Gelinas	TIME STARTED: 11:30	DATE STARTED:	12/5/2023
INSPECTOR: Chris Norton	TIME FINISHED: 11:52	DATE FINISHED:	12/5/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Fill		
5		Fill		
6		Fill		
7		Clay	Native Gray Clay	
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Solid waste was found to adapt the 5+ in depth feet within the pond, and extending 10 feet from the shoreline into the pond. Full extent of waste was hard to determine due to water, filling the test fit, and extending past our reach into the pond.



TEST PIT PLAN

NORTH

RAMBOLL

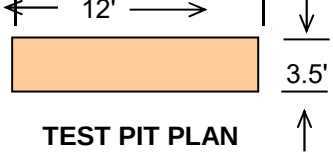
TEST PIT LOG

TEST PIT WTP-36

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Kobelco SK210h			GROUND WATER DEPTH: 2'7"
OPERATOR: Lewis Gelinas	TIME STARTED: 13:05		DATE STARTED: 12/5/2023
INSPECTOR: Chris Norton	TIME FINISHED: 13:20		DATE FINISHED: 12/5/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Clay	Native Gray Clay at 2'7".	
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Solid waste in this location was to a depth of 2'7". The native gray clay was encountered at the depth, as well as the water table. Water quickly filled the excavation as it was being dug.



TEST PIT PLAN

NORTH

RAMBOLL

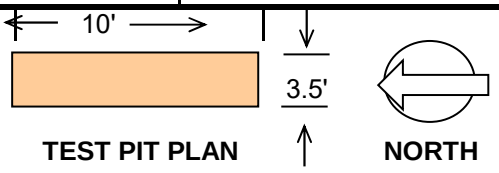
TEST PIT LOG

TEST PIT WTP-37

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	1.0'
OPERATOR: Lewis Gelinas	TIME STARTED: 13:30	DATE STARTED:	12/5/2023
INSPECTOR: Chris Norton	TIME FINISHED: 13:40	DATE FINISHED:	12/5/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Clay	Native Gray Clay encountered between 2 to 4 feet depending on orientation in test	
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Solid waste was encountered between depths from the surface to 2 1/2 feet depending on the location of the test pit. Solid waste, was found up until 2 feet past from the wetland vegetation and cattails.



RAMBOLL

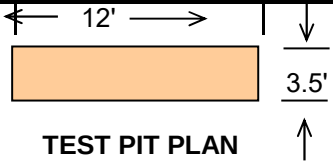
TEST PIT LOG

TEST PIT WTP-38

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	4'6"
OPERATOR: Lewis Gelinas	TIME STARTED: 14:10	DATE STARTED:	12/5/2023
INSPECTOR: Chris Norton	TIME FINISHED: 14:25	DATE FINISHED:	12/5/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Clay		
5			Native Gray Clay at 4'6"	
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Solid waste in this location was to a depth of 4'7". The native gray clay was encountered at the depth, as well as the water table. Water quickly filled the excavation as it was being dug.



TEST PIT PLAN

NORTH

RAMBOLL

TEST PIT LOG

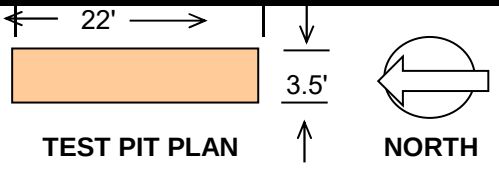
TEST PIT WTP-39

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	0.5'/4.5
OPERATOR: Lewis Gelinas	TIME STARTED: 15:00	DATE STARTED:	12/5/2023
INSPECTOR: Chris Norton	TIME FINISHED: 15:15	DATE FINISHED:	12/5/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Clay		
5			Native Gray Clay encountered between 1 to 4 feet depending on orientation in test pit	
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:

Solid waste was was encounted from grade to between 1-3 feet below grade, depending on which part of the slope, the test pit orientation was. At 1-3 feet the native gray clay was encountered as well as the water table most areas of the testpit. At the edge of the swamp, the waist was only 1 foot deep. Superficial solid waste can be seen at the surface of the water within the swamp, however, was not observed within the sediment material.



RAMBOLL

TEST PIT LOG

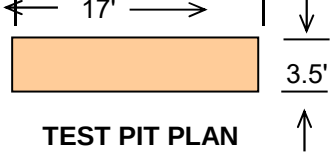
TEST PIT WTP-40

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	0.5'
OPERATOR: Lewis Gelinas	TIME STARTED: 8:25	DATE STARTED:	12/6/2023
INSPECTOR: Chris Norton	TIME FINISHED: 8:35	DATE FINISHED:	12/6/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Fill		
5		Clay	Native Gray Clay encountered between 1 to 4 feet depending on orientation in test pit	
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:

Solid waste was was encounted from grade to between 1-3 feet below grade, depending on which part of the slope, the test pit orientation was. At 1-3 feet the native gray clay was encountered as well as the water table most areas of the test pit. At the edge of the swamp, the waste was only 1 foot deep. Superficial solid waste can be seen at the surface of the water within the swamp, however, was not observed within the sediment material.



TEST PIT PLAN

NORTH

RAMBOLL

TEST PIT LOG

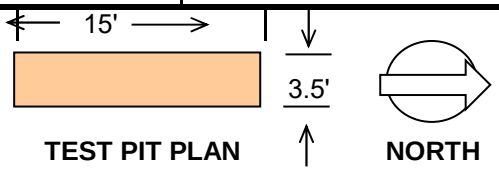
TEST PIT WTP-41

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	0.5'/3.5'
OPERATOR: Lewis Gelinas	TIME STARTED: 9:48	DATE STARTED:	12/6/2023
INSPECTOR: Chris Norton	TIME FINISHED: 10:05	DATE FINISHED:	12/6/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)k	
2		Fill		
3		Fill		
4		Fill		
5		Clay	Native Gray Clay encountered between 1 to 3.5 feet depending on orientation in test pit	
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:

Solid waste was encountered between depths of 1 foot to 3 1/2 feet depending on where on the test pit orientation on the slope you are located. water was also encountered when the native gray clay below the fill and solid waste was encountered.



RAMBOLL

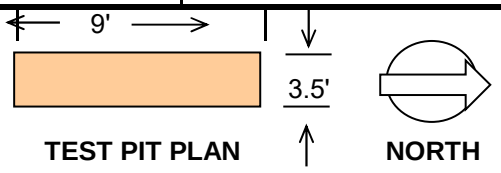
TEST PIT LOG

TEST PIT WTP-42

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	3'9"
OPERATOR: Lewis Gelinas	TIME STARTED: 10:25	DATE STARTED:	12/6/2023
INSPECTOR: Chris Norton	TIME FINISHED: 10:40	DATE FINISHED:	12/6/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Clay	Native Gray Clay at 3'9"	
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Solid waste in this location was to a depth of 3'9" The native gray clay was encountered at the depth, as well as the water table. Water quickly filled the excavation as it was being dug.



RAMBOLL

TEST PIT LOG

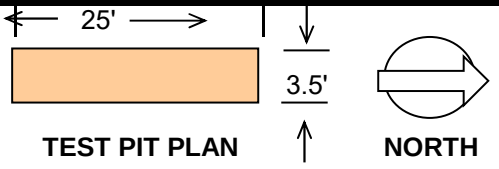
TEST PIT WTP-43

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	0.5'/2.0'
OPERATOR: Lewis Gelinas	TIME STARTED: 12:05	DATE STARTED:	12/6/2023
INSPECTOR: Chris Norton	TIME FINISHED: 12:35	DATE FINISHED:	12/6/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Clay	Native Gray Clay encountered between 1 to 3.5 feet depending on orientation in test pit	
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:

Solid waste was encountered up until the edge of swap. The solid waste was encountered from grade to 3 feet below grade in some areas and was 1 foot thick in other areas. The native gray clay was encountered underneath the solid waste and fill. There was some solid waste within the 1st foot of depth of clay toward the swamp. the water was encountered when the clay was encountered.



TEST PIT PLAN

RAMBOLL

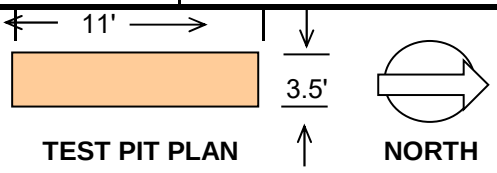
TEST PIT LOG

TEST PIT WTP-44

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	6'3"
OPERATOR: Lewis Gelinas	TIME STARTED: 13:00	DATE STARTED:	12/6/2023
INSPECTOR: Chris Norton	TIME FINISHED: 13:29	DATE FINISHED:	12/6/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Fill		
5		Fill		
6		Fill		
7		Clay	Native Gray Clay at 6'3"	
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Solid waste in this location was to a depth of 6'3". The native gray clay was encountered at the depth, as well as the water table. Water quickly filled the excavation as it was being dug.



RAMBOLL

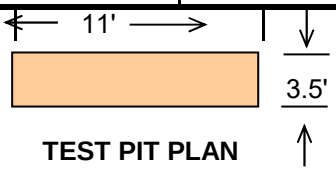
TEST PIT LOG

TEST PIT WTP-45

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Kobelco SK210h			GROUND WATER DEPTH: 6'3"
OPERATOR: Lewis Gelinas	TIME STARTED: 14:00		DATE STARTED: 12/6/2023
INSPECTOR: Chris Norton	TIME FINISHED: 14:20		DATE FINISHED: 12/6/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Fill		
5		Fill		
6		Fill		
7		Clay	Native Gray Clay at 6'7"	
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Solid waste in this location was to a depth of 6'7". The native gray clay was encountered at the depth. There was some perched water, but not the groundwater table..



TEST PIT PLAN

NORTH

RAMBOLL

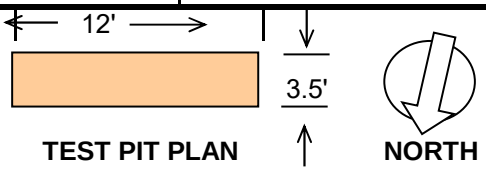
TEST PIT LOG

TEST PIT WTP-46

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	4'10"
OPERATOR: Lewis Gelinas	TIME STARTED: 7:50	DATE STARTED:	12/7/2023
INSPECTOR: Chris Norton	TIME FINISHED: 8:15	DATE FINISHED:	12/7/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Fill		
5		Fill		
6		Clay	Native Gray Clay at 4'10"	
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Solid waste in this location was to a depth of 4'10". The native gray clay was encountered at the depth. There was some perched water, but not the groundwater table..



RAMBOLL

TEST PIT LOG

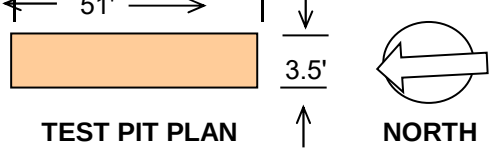
TEST PIT WTP-47

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Kobelco SK210h			GROUND WATER DEPTH: NE
OPERATOR: Lewis Gelinas	TIME STARTED: 8:45		DATE STARTED: 12/7/2023
INSPECTOR: Chris Norton	TIME FINISHED: 9:10		DATE FINISHED: 12/7/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Clean brown fill was encountered to depth of 3.5' until reaching the extents of the solid waste. Then brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Clay	Native Grey Clay	
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:

Clean brown topsoil and fill, was encountered from the beginning of the test pit approximately 15 feet from the river and continuing 51 feet until the edge of the solid waste. the extent of the waist was marked with a stake and flagging.



RAMBOLL

TEST PIT LOG

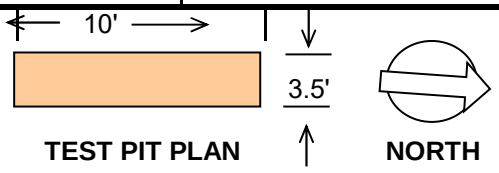
TEST PIT WTP-48

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Kobelco SK210h			GROUND WATER DEPTH: NE
OPERATOR: Lewis Gelinas	TIME STARTED: 9:40		DATE STARTED: 12/7/2023
INSPECTOR: Chris Norton	TIME FINISHED: 10:00		DATE FINISHED: 12/7/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Clean brown fill was encountered to depth of 3.0' until reaching the extents of the solid waste. Then brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Clay	Native Brown Clay	
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:

Clean brown fill was encountered until the extent of the solid waste.



RAMBOLL

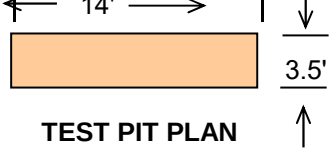
TEST PIT LOG

TEST PIT WTP-49

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Kobelco SK210h			GROUND WATER DEPTH: NE
OPERATOR: Lewis Gelinas	TIME STARTED: 10:35		DATE STARTED: 12/7/2023
INSPECTOR: Chris Norton	TIME FINISHED: 10:59		DATE FINISHED: 12/7/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Clean brown clay encountered to depth of 3.0' until reaching the extents of the solid waste. Then brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Clay	Native brown clay	
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Solid waste was found at Depths of 1 to 3 feet above native brown clay. Extents of solid waste was marked with a stake. However, superficial solid waste could be seen around the area, but not within the sediment.



TEST PIT PLAN **NORTH**

RAMBOLL

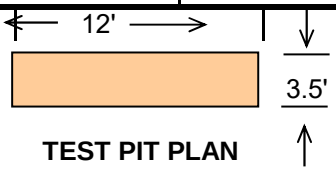
TEST PIT LOG

TEST PIT WTP-50

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	9'4"
OPERATOR: Lewis Gelinas	TIME STARTED: 11:55	DATE STARTED:	12/7/2023
INSPECTOR: Chris Norton	TIME FINISHED: 12:16	DATE FINISHED:	12/7/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Fill		
5		Fill		
6		Fill		
7		Fill		
8		Fill		
9		Fill		
10		Clay	Native Gray Clay at 9'4"	
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Solid waste in this location was to a depth of 9'4". The native gray clay was encountered at the depth. Groundwater was also encountered at this depth, and filled the hole quickly.



TEST PIT PLAN

NORTH

RAMBOLL

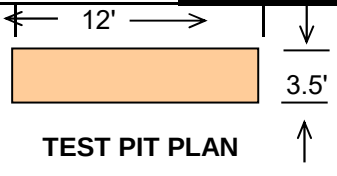
TEST PIT LOG

TEST PIT WTP-51

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	12'5"
OPERATOR: Lewis Gelinas	TIME STARTED: 12:55	DATE STARTED:	12/7/2023
INSPECTOR: Chris Norton	TIME FINISHED: 13:10	DATE FINISHED:	12/7/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Fill		
5		Fill		
6		Fill		
7		Fill		
8		Fill		
9		Fill		
10		Fill		
11		Fill		
12		Fill		
13		Clay	Native Gray Clay at 12'5"	
14				

TEST PIT LOCATION AND NOTES:
Solid waste in this location was to a depth of 12'5". The native gray clay was encountered at the depth. Groundwater was also encountered at this depth, and filled the hole quickly.



TEST PIT PLAN

NORTH

RAMBOLL

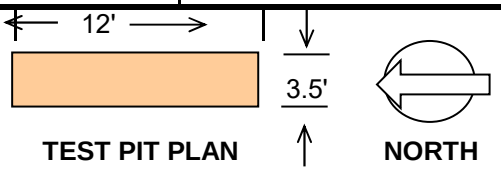
TEST PIT LOG

TEST PIT WTP-52

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	12'
OPERATOR: Lewis Gelinas	TIME STARTED: 13:55	DATE STARTED:	12/7/2023
INSPECTOR: Chris Norton	TIME FINISHED: 14:12	DATE FINISHED:	12/7/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Fill		
5		Fill		
6		Fill		
7		Fill		
8		Fill		
9		Fill		
10		Fill		
11		Fill		
12		Fill		
13		Clay	Native Gray Clay at 12'	
14				

TEST PIT LOCATION AND NOTES:
Solid waste in this location was to a depth of 12'0". The native gray clay was encountered at the depth. Groundwater was also encountered at this depth, and filled the hole quickly.



RAMBOLL

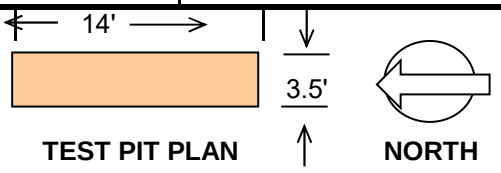
TEST PIT LOG

TEST PIT WTP-53

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	7'10"
OPERATOR: Lewis Gelinas	TIME STARTED: 15:00	DATE STARTED:	12/7/2023
INSPECTOR: Chris Norton	TIME FINISHED: 14:12	DATE FINISHED:	12/7/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Fill		
5		Fill		
6		Fill		
7		Fill		
8		Fill		
9		Clay	Native Gray Clay at 7'10"	
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Solid waste in this location was to a depth of 7'10". The native gray clay was encountered at the depth. Groundwater was also encountered at this depth, and filled the hole quickly.



RAMBOLL

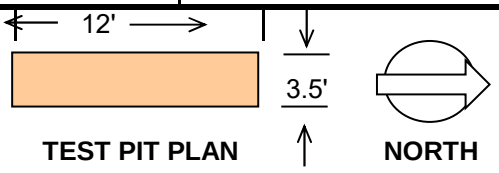
TEST PIT LOG

TEST PIT WTP-54

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	12'10"
OPERATOR: Lewis Gelinas	TIME STARTED: 8:55	DATE STARTED:	12/8/2023
INSPECTOR: Chris Norton	TIME FINISHED: 9:20	DATE FINISHED:	12/8/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Fill		
5		Fill		
6		Fill		
7		Fill		
8		Fill		
9		Fill		
10		Fill		
11		Fill		
12		Fill		
13		Fill		
14		Clay	Native Gray Clay at 12'5"	

TEST PIT LOCATION AND NOTES:
Solid waste in this location was to a depth of 12'10". The native gray clay was encountered at the depth. Groundwater was also encountered at this depth, and filled the hole quickly.



RAMBOLL

TEST PIT LOG

TEST PIT WTP-55

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	14'
OPERATOR: Lewis Gelinas	TIME STARTED: 10:15	DATE STARTED:	12/8/2023
INSPECTOR: Chris Norton	TIME FINISHED: 10:35	DATE FINISHED:	12/8/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Fill		
5		Fill		
6		Fill		
7		Fill		
8		Fill		
9		Fill		
10		Fill		
11		Fill		
12		Fill		
13		Fill		
14		Clay	Native Gray Clay at 14', bottom of test pit 14' 6".	

TEST PIT LOCATION AND NOTES:
Solid waste in this location was to a depth of 14'0". The native gray clay was encountered at the depth. Groundwater was also encountered at this depth, and filled the hole quickly.



TEST PIT PLAN

RAMBOLL

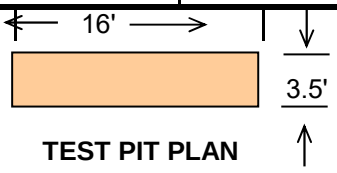
TEST PIT LOG

TEST PIT WTP-56

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	9'0"
OPERATOR: Lewis Gelinas	TIME STARTED: 11:15	DATE STARTED:	12/8/2023
INSPECTOR: Chris Norton	TIME FINISHED: 11:40	DATE FINISHED:	12/8/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Fill		
5		Fill		
6		Fill		
7		Fill		
8		Fill		
9		Fill		
10		Fill		
11		Clay	Native Gray Clay at 9'4"	
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Solid waste in this location was to a depth of 9'4". The native gray clay was encountered at the depth. Groundwater was also encountered at 9'0", and filled the hole quickly.



TEST PIT PLAN



NORTH

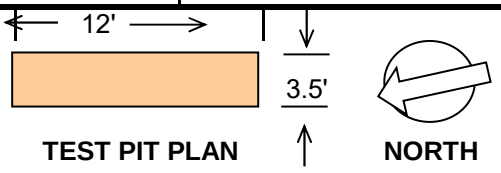
TEST PIT LOG

TEST PIT WTP-57

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	9'0"
OPERATOR: Lewis Gelinas	TIME STARTED: 12:25	DATE STARTED:	12/8/2023
INSPECTOR: Chris Norton	TIME FINISHED: 12:45	DATE FINISHED:	12/8/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Fill		
5		Fill		
6		Fill		
7		Fill		
8		Fill		
9		Fill		
10		Clay	Native gray Clay at 9'4"	
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Solid waste in this location was to a depth of 9'4". The native gray clay was encountered at the depth. Groundwater was also encountered at depth and filled the hole quickly.



RAMBOLL

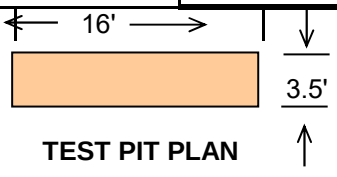
TEST PIT LOG

TEST PIT WTP-58

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Kobelco SK210h			GROUND WATER DEPTH: 13'
OPERATOR: Lewis Gelinas	TIME STARTED: 13:20		DATE STARTED: 12/8/2023
INSPECTOR: Chris Norton	TIME FINISHED: 13:35		DATE FINISHED: 12/8/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Fill		
5		Fill		
6		Fill		
7		Fill		
8		Fill		
9		Fill		
10		Fill		
11		Fill		
12		Fill		
13		Fill		
14		Clay	Native Gray Clay at 13'0" bottom of test pit 13'6"	

TEST PIT LOCATION AND NOTES:
Solid waste in this location was to a depth of 13'0". The native gray clay was encountered at the depth. Groundwater was also encountered at this depth, and filled the hole quickly.



TEST PIT PLAN

NORTH

RAMBOLL

TEST PIT LOG

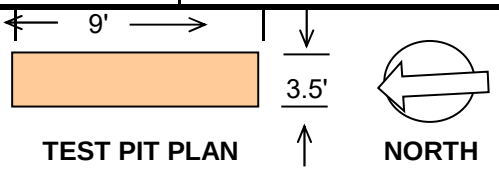
TEST PIT WTP-59

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Kobelco SK210h			GROUND WATER DEPTH: 4'
OPERATOR: Lewis Gelinas	TIME STARTED: 14:15		DATE STARTED: 12/8/2023
INSPECTOR: Chris Norton	TIME FINISHED: 14:35		DATE FINISHED: 12/8/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Clean brown fill was encountered to depth of 3.5' until reaching the extents of the solid waste. Then brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete)	
2		Fill		
3		Fill		
4		Fill		
5		Clay	Native Grey Clay	
6		Clay		
7		Clay		
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:

Clean brown, and gray fill was encountered from the beginning of the test pit approximately 40 feet away from the the riverbank until reaching the extent of the solid waste. the solid waste was found mixed in with clean, brown, fill, and clay to a depth of 4'. The water table was also encountered here.



RAMBOLL

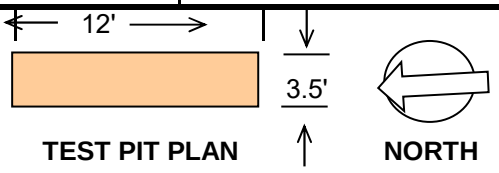
TEST PIT LOG

TEST PIT WTP-60

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Kobelco SK210h			GROUND WATER DEPTH: 4'
OPERATOR: Lewis Gelinas	TIME STARTED: 8:00		DATE STARTED: 12/11/2023
INSPECTOR: Chris Norton	TIME FINISHED: 8:20		DATE FINISHED: 12/11/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Clean Brown Fill was encountered to depth of " until reaching the extents of the solid waste. Then brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete) to a depth of 3'.	
2		Fill		
3		Fill		
4		Clay	Native Grey Clay	
5		Clay		
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Clean brown fill, was encountered from approximately 15 feet away from the riverbank, until reaching the extents of the solid waste, marked with a stake.



RAMBOLL

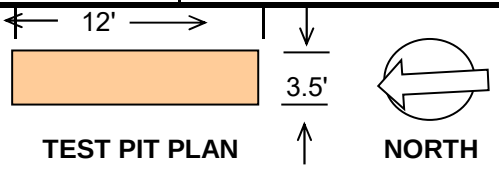
TEST PIT LOG

TEST PIT WTP-61

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Kobelco SK210h			GROUND WATER DEPTH: NE
OPERATOR: Lewis Gelinas	TIME STARTED: 8:45		DATE STARTED: 12/11/2023
INSPECTOR: Chris Norton	TIME FINISHED: 9:05		DATE FINISHED: 12/11/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Clean brown fill was encountered to depth of 3' until reaching the extents of the solid waste. Then brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete) to a depth of 3'.	
2		Fill		
3		Fill		
4		Clay	Native grey clay 3' below waste	
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Clean brown fill, was encountered from approximately 15 feet away from the riverbank, until reaching the extents of the solid waste, marked with a stake.



RAMBOLL

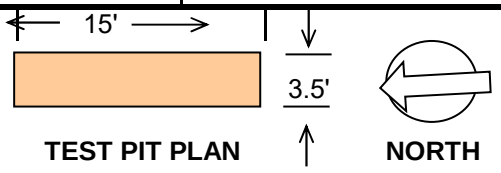
TEST PIT LOG

TEST PIT WTP-62

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	NE
OPERATOR: Lewis Gelinas	TIME STARTED: 9:30	DATE STARTED:	12/11/2023
INSPECTOR: Chris Norton	TIME FINISHED: 9:50	DATE FINISHED:	12/11/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Clean brown fill was encountered to depth of 3' until reaching the extents of the solid waste. Then brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete) to a depth of 3'.	
2		Fill		
3		Fill		
4		Fill		
5		Clay	Native Grey Clay 4' below waste	
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Clean Brown Fill, was encountered from approximately 10 feet away from the riverbank, until reaching the extents of the solid waste, marked with a stake.



RAMBOLL

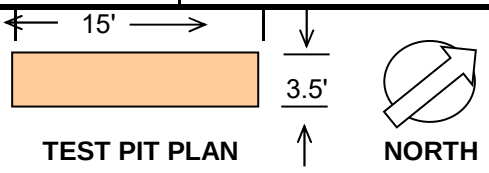
TEST PIT LOG

TEST PIT WTP-63

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: LaBella		DATUM:	
EQUIPMENT: Kobelco SK210h		GROUND WATER DEPTH:	NE
OPERATOR: Lewis Gelinas	TIME STARTED: 10:15	DATE STARTED:	12/11/2023
INSPECTOR: Chris Norton	TIME FINISHED: 10:30	DATE FINISHED:	12/11/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete) to a depth of 3'.5'	
2		Fill		
3		Fill		
4		Clay	Native Grey Clay	
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Brown fill, and clay was found within the test pit with municipal solid waste, mixed in . the extent of the waste was hard to determine, as we did not want to go closer to the bridge then where the stake was placed.



RAMBOLL

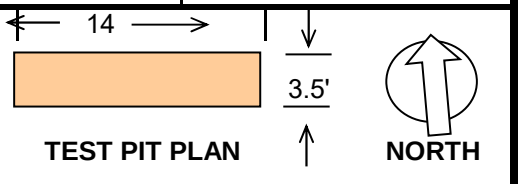
TEST PIT LOG

TEST PIT WTP-64

PROJECT: Utica City Dump			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: LaBella			DATUM:
EQUIPMENT: Kobelco SK210h			GROUND WATER DEPTH: NE
OPERATOR: Lewis Gelinas	TIME STARTED: 10:45		DATE STARTED: 12/11/2023
INSPECTOR: Chris Norton	TIME FINISHED: 11:05		DATE FINISHED: 12/11/2023

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1		Fill	Brown moist Sandy Fill some clay and Solid Waste (Glass, plastic, bags, bricks, cloth, wood, rubber, concrete) to a depth of 5'	
2		Fill		
3		Fill		
4		Fill		
5		Fill		
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:



RAMBOLL

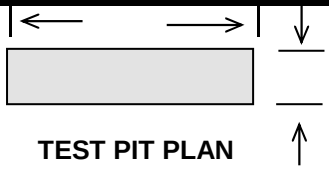
TEST PIT LOG

TEST PIT NO. TP-01 EOW

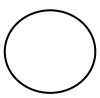
PROJECT: Utica City Dump Site		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parrott-Wolf		DATUM:	
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:	
OPERATOR: Nic Confir	TIME STARTED: 14:35	DATE STARTED:	5-3-22
INSPECTOR: Chris Norton	TIME FINISHED: 15:45	DATE FINISHED:	5-3-22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed. Soils were approximately 1 foot of brown sand cover fill overlaying 3 feet of miscellaneous ash, brick, MSW, and sand fill. No water. Test pit approximately 4 feet in depth by 2 feet in width and 73' long. Test pit terminated at the edge of the roadway.,	
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TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



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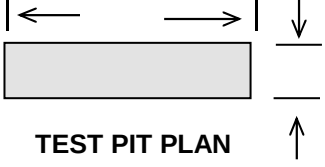
TEST PIT LOG

TEST PIT TP-02 EOW

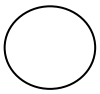
PROJECT: Utica City Dump Site			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: Parrott-Wolf			DATUM:
EQUIPMENT: Takeuchi TB290			GROUND WATER DEPTH: Na
OPERATOR: Nic Confir	TIME STARTED:	15:55	DATE STARTED: 5-3-22
INSPECTOR: Chris Norton	TIME FINISHED:	16:30	DATE FINISHED: 5-3-22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed. Brick right up to the roadway. Fill cover dark brown sand/topsoil. Overlaying ash and miscellaneous fill with MSW. Pit was 4.5' deep by 2' wide, by 13' long.	
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TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



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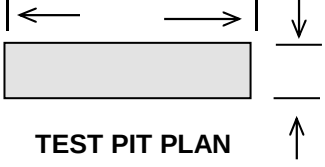
TEST PIT LOG

TEST PIT TP-03 EOW

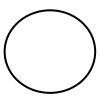
PROJECT: Utica City Dump Site			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: Parrott-Wolf			DATUM:
EQUIPMENT: Takeuchi TB290			GROUND WATER DEPTH: Na
OPERATOR: Nic Confir	TIME STARTED:	16:40	DATE STARTED: 5-3-22
INSPECTOR: Chris Norton	TIME FINISHED:	16:55	DATE FINISHED: 5-3-22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed. Possible foundation and Brick right up to the roadway. Stained black fill 2 feet into Test pit 5 feet off roadway. Fill cover dark brown sand/ top soil. Overlaying ash and miscellaneous fill with MSW. Pit was 4.5' deep by 2' wide, by 13' wide.	
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TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



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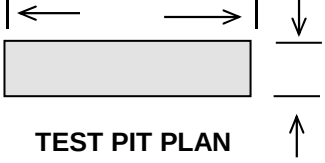
TEST PIT LOG

TEST PIT TP-04 EOW

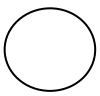
PROJECT: Utica City Dump Site			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: Parrott-Wolf			DATUM:
EQUIPMENT: Takeuchi TB290			GROUND WATER DEPTH: Na
OPERATOR: Nic Confir	TIME STARTED:	17:00	DATE STARTED:
INSPECTOR: Chris Norton	TIME FINISHED:	17:20	DATE FINISHED:

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed. Brick right up to the roadway. 1' Fill cover dark brown sand/topsoil. Overlaying ash and miscellaneous fill with MSW. Pit was 5' deep by 2' wide, by 12' long.	
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TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



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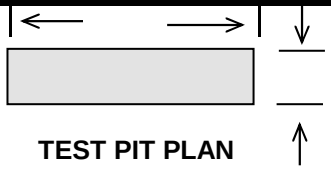
TEST PIT LOG

TEST PIT TP-05 EOW

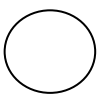
PROJECT: Utica City Dump Site			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: Parrott-Wolf			DATUM:
EQUIPMENT: Takeuchi TB290			GROUND WATER DEPTH:
OPERATOR: Nic Confir	TIME STARTED:	7:20	DATE STARTED: 5-4-22
INSPECTOR: Chris Norton	TIME FINISHED:	7:35	DATE FINISHED: 5-4-22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed. Waste up to the roadway. 1-foot cover fill, then ash and waste. The pit was approximately 4' deep by 2' wide by 12' long.	
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TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



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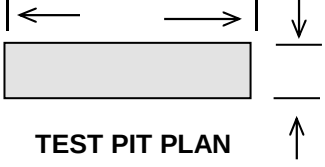
TEST PIT LOG

TEST PIT TP-06 EOW

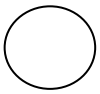
PROJECT: Utica City Dump Site			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: Parrott-Wolf			DATUM:
EQUIPMENT: Takeuchi TB290			GROUND WATER DEPTH:
OPERATOR: Nic Confir	TIME STARTED:	8:00	DATE STARTED: 5-4-22
INSPECTOR: Chris Norton	TIME FINISHED:	9:10	DATE FINISHED: 5-4-22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed. 1 foot cover fill, overlaying ash, MSW . Test pit contained black stained soils with petroleum odor, many red bricks and ash/cinder fill. Demolition waste continued to gravel road. Pit dimensions were approximately 2' wide by 4-5' deep by 41'.	
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TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



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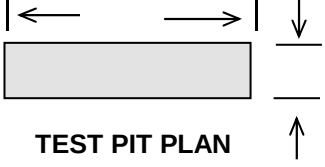
TEST PIT LOG

TEST PIT TP-07 EOW

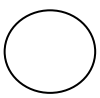
PROJECT: Utica City Dump Site		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parrott-Wolf		DATUM:	
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:	
OPERATOR: Nic Confir	TIME STARTED: 9:05	DATE STARTED:	5-4-22
INSPECTOR: Chris Norton	TIME FINISHED: 9:23	DATE FINISHED:	5-4-22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed. 1 foot cover fill, overlaying ash, MSW . Test pit contained black stained soils with petroleum odor, many red bricks and ash/cinder fill. Demolition waste continued to gravel road. Pit dimensions were approximately 2' wide by 4-5' deep by 13'.	
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TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



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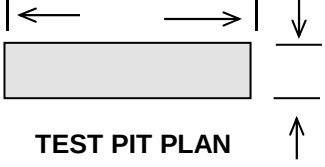
TEST PIT LOG

TEST PIT TP-08 EOW

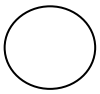
PROJECT: Utica City Dump Site			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: Parrott-Wolf			DATUM:
EQUIPMENT: Takeuchi TB290			GROUND WATER DEPTH: 4'
OPERATOR: Nic Confir	TIME STARTED:	9:30	DATE STARTED: 5-4-22
INSPECTOR: Chris Norton	TIME FINISHED:	10:35	DATE FINISHED: 5-4-22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed.1 foot of black miscellaneous fill overlaying 4 feet of brown sand fill. Test pit started at the edge of the roadway and went south towards the landfill. Waste was discovered 30' feet south of roadway. Edge of waste was staked. Water recharged into ditch for approximately 4' in depth. Total dimensions of test pit, depth 4-5' width 2-2.5', length 33'.	
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TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



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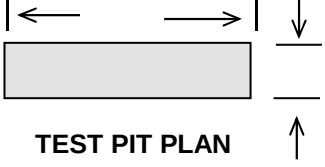
TEST PIT LOG

TEST PIT TP-09 EOW

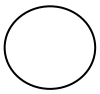
PROJECT: Utica City Dump Site		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parrott-Wolf		DATUM:	
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:	
OPERATOR: Nic Confir	TIME STARTED: 10:45	DATE STARTED:	5-4-22
INSPECTOR: Chris Norton	TIME FINISHED: 11:25	DATE FINISHED:	5-4-22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed. 1-2 feet of topsoil and brown fill overlaying native grey clay until the extent of waste was encountered. Water was encountered at approximately 19' into test pit. Total dimensions of test pit were approximately 22' long by 2' wide and varied from 7' to 4.5' in depth.	
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TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



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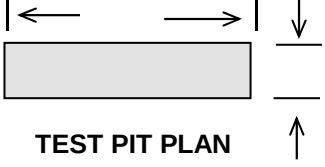
TEST PIT LOG

TEST PIT TP-10 EOW

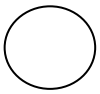
PROJECT: Utica City Dump Site			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: Parrott-Wolf			DATUM:
EQUIPMENT: Takeuchi TB290			GROUND WATER DEPTH: 0'
OPERATOR: Nic Confir	TIME STARTED:	11:30	DATE STARTED: 5-4-22
INSPECTOR: Chris Norton	TIME FINISHED:	12:15	DATE FINISHED: 5-4-22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed. Native Clay soil from under 6" topsoil. The pit filled with leachate each scoop of bucket concrete block at beginning of waster at 20' into the pit, dimesions of pit 22, in length, 4-5 feet in depth, 2-3 feet in width.	
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TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



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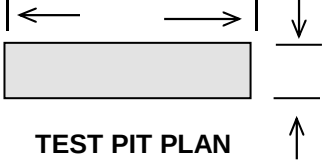
TEST PIT LOG

TEST PIT TP-11 EOW

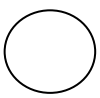
PROJECT: Utica City Dump Site		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parrott-Wolf		DATUM:	
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:	4"
OPERATOR: Nic Confir	TIME STARTED: 12:30	DATE STARTED:	5-4-22
INSPECTOR: Chris Norton	TIME FINISHED: 1:40	DATE FINISHED:	5-4-22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed. Test pit was moved for accessibility, approximately 300 feet east of test pit TP-10 EOW. 1-2' of topsoil overlaid the native Grey clay until encountering the waste mixed in with brown fill. Test pit dimensions were approximately 20' in length. By 2.5' wide by 1-3.5' deep. Edge of waste was staked at the edge of the test pit. Leachate ground water recharged pit after each bucket, 3-4'.	
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TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



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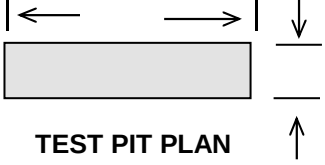
TEST PIT LOG

TEST PIT TP-12 EOW

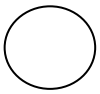
PROJECT: Utica City Dump Site			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: Parrott-Wolf			DATUM:
EQUIPMENT: Takeuchi TB290			GROUND WATER DEPTH: NA
OPERATOR: Nic Confir	TIME STARTED:	1:45	DATE STARTED: 5-4-22
INSPECTOR: Chris Norton	TIME FINISHED:	2:50	DATE FINISHED: 5-4-22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed. Test pit was started as close to the base of the berm as the excavator had accessibility. 1-2 feet of brown fill/clay grading to the grey native clay used to construct the berm. Test pit varied in depth and slope grade. Depth of excavation varied from 2:5-5 feet was approximately 25' in length and 2.5 ' in width. Extent of waste was found as the top of the berm and marked with a stake. No water in test pit. Miscellaneous surficial waste was encountered along slope.	
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TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



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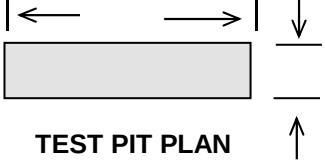
TEST PIT LOG

TEST PIT TP-13 EOW

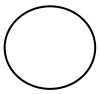
PROJECT: Utica City Dump Site			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: Parrott-Wolf			DATUM:
EQUIPMENT: Takeuchi TB290			GROUND WATER DEPTH: NA
OPERATOR: Nic Confir	TIME STARTED:	3:00	DATE STARTED: 5-4-22
INSPECTOR: Chris Norton	TIME FINISHED:	3:55	DATE FINISHED: 5-4-2

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed. Test pit was started as close to the base of the berm as the excavator had accessibility. 1-2 feet of brown fill/clay grading to the grey native clay used to construct the berm. Test pit varied in depth and slope grade. Depth of excavation varied from 2:5-5 feet was approximately 32' in length and 2.5 ' in width. Extent of waste was found at the top of the berm and marked with a stake. No water in test pit. Miscellaneous surficial waste was encountered along slope.	
2				
3				
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6				

TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



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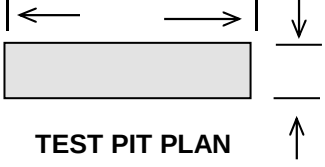
TEST PIT LOG

TEST PIT TP-14 EOW

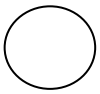
PROJECT: Utica City Dump Site			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: Parrott-Wolf			DATUM:
EQUIPMENT: Takeuchi TB290			GROUND WATER DEPTH:
OPERATOR: Nic Confir	TIME STARTED:	4:05	DATE STARTED: 5-4-22
INSPECTOR: Chris Norton	TIME FINISHED:	4:45	DATE FINISHED: 5-4-22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed. Test pit started at the base of the berm on the south extent of the berm, slightly adjacent to the berm. Test pit had brown sandy fill and topsoil for 1-2' overlaying native gray clay. Waste extent is further east than the previous two test pits, most likely due to the ending of the man-made berm. Miscellaneous surficial waste was encountered in the vicinity of the test pit. Some water was collected at the bottom of the slope of the test pit, 1-2". Test pit dimensions were approximately 2.5' in width, varying 4-5' in depth, and 22' in length.	
2				
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TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



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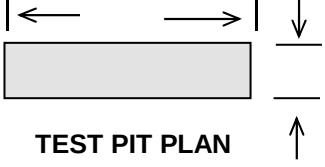
TEST PIT LOG

TEST PIT TP - 15 EOW

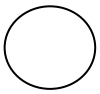
PROJECT: Utica City Dump Site			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: Parrott-Wolf			DATUM:
EQUIPMENT: Takeuchi TB290			GROUND WATER DEPTH: NA
OPERATOR: Nic Confir	TIME STARTED:	7:35	DATE STARTED: 5-5-22
INSPECTOR: Chris Norton	TIME FINISHED:	8:18	DATE FINISHED: 5-5-22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1 2 3 4 5 6			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed. Test pit started at bottom of man-made berm and continued to the top/ middle of the berm where waste was encountered and marked by a stake. The pit consisted of 1-2.5' of topsoil and brown sandy clay fill overlaying native grey clay. The test pit varied from approximately 3-5' in depth, 2-2.5' in width, and 25' in length. No water was encountered in the test pit and some miscellaneous surficial roll off waste was encountered.	

TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



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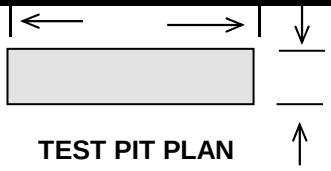
TEST PIT LOG

TEST PIT TP- 16 EOW

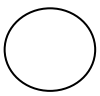
PROJECT: Utica City Dump Site		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parrott-Wolf		DATUM:	
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:	
OPERATOR: Nic Confir	TIME STARTED: 8:23	DATE STARTED:	5-5-22
INSPECTOR: Chris Norton	TIME FINISHED: 8:45	DATE FINISHED:	5-5-22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed. Test pit started at the west base of the man-made berm adjacent to the wood whip berm road. Test pit continued to base of blood chip berm road where waste was encountered. Rain runoff pools filled the test pit through the duration of digging. Soils brought up in buckets included brown sandy clay fill and native grey clay fill at deeper depths. Test pit dimensions were approximately 13' in length, 2.5' in width and varied from 3.5-4'. Extents of waste was marked by a stake.	
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TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



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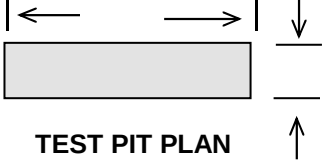
TEST PIT LOG

TEST PIT TP -17 EOW

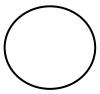
PROJECT: Utica City Dump Site			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: Parrott-Wolf			DATUM:
EQUIPMENT: Takeuchi TB290			GROUND WATER DEPTH: NA
OPERATOR: Nic Confir	TIME STARTED:	8:50	DATE STARTED: 5-5-22
INSPECTOR: Chris Norton	TIME FINISHED:	9:30	DATE FINISHED: 5-5-22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed. Test pit was started at the bottom of the man-made berm digging up to the top of the wood chip berm road. Brown sandy clay fill was encountered for 1-4' overlaying native grey clay. Test pit was terminated at extents of waste and marked with a stake. Test pit dimensions were approximately 25' long by 2.5' wide and varied in depth from 4- 5.5'. Miscellaneous surficial blow/roll off waste was encountered through digging. 1" of water collected in bottom of test pit at base of berm.	
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TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



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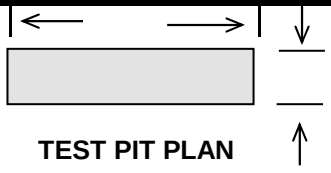
TEST PIT LOG

TEST PIT TP-18 EOW

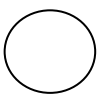
PROJECT: Utica City Dump Site		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parrott-Wolf		DATUM:	
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:	NA
OPERATOR: Nic Confir	TIME STARTED: 9:35	DATE STARTED:	5-5-22
INSPECTOR: Chris Norton	TIME FINISHED: 10:15	DATE FINISHED:	5-5-22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed. Test pit was started at the bottom of the man made berm digging up to the top of the wood chip berm road. Brown sandy clay fill was encountered for 1-4' overlaying native grey clay. Test pit was terminated at the extent of waste and marked with a stake. Test pit dimensions were approximately 36' long by 2.5' wide and varied in depth from 3-4.5'. Miscellaneous surficial blow/roll off waste was encountered through digging. 1" of water collected in bottom of test pit at base of berm.	
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TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



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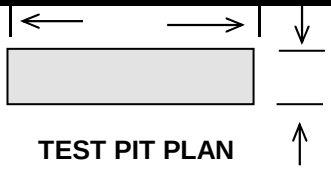
TEST PIT LOG

TEST PIT TP-19 EOW

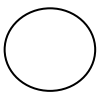
PROJECT: Utica City Dump Site		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parrott-Wolf		DATUM:	
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:	NA
OPERATOR: Nic Confir	TIME STARTED: 10:25	DATE STARTED:	5-5-22
INSPECTOR: Chris Norton	TIME FINISHED: 11:30	DATE FINISHED:	5-5-22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed. Test pit began at the bottom of man-made berm and continued through two berms of waste. Waste berms we're 2-3' in depth overlaying brown sandy clay fil for 2-4' that overlain the native grey clay. There is a large amount of surficial waste around the test pit and the extents of waste have been marked accordingly with a stake. Due to the multiple berms of waste and varying heights, the depth of the test pit varies from 3-9', is 2-2.5' wide and approximately 32' in length. 1" of perched water collected at the bottom of the test pit approximately 14' from the start of the pit. Waste mounds were cleared in order to access location of test pit.	
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TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



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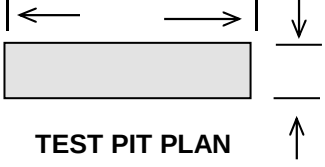
TEST PIT LOG

TEST PIT TP-20 EOW

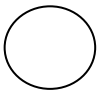
PROJECT: Utica City Dump Site		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parrott-Wolf		DATUM:	
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:	
OPERATOR: Nic Confir	TIME STARTED: 11:40	DATE STARTED:	5-5-22
INSPECTOR: Chris Norton	TIME FINISHED: 1:31	DATE FINISHED:	5-5-22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed. Test pit was located 100' west of TP 19 EOW due to visual pocket of waste leading further past limits extent. Test pit started at the extent of visual surficial waste at the toe of the back side of the man-made berm. Test pit was dug for approximately 40, at 2-2.5' wide with depths varying from5-8'. Top 3 feet was a mix of waste mounds and miscellaneous fill underlain by brown sandy clay fill for 2-3 feet then native grey clay to the bottom of the test pit. No extent of the buried waste was determined so a new test pit begginning at the extent of the wood chip berm road was started. This test pit went approximately 42' in length, 35' being in the buried waster with depth varying between 5-8' and 2' in width. When the extent of the waste was determined it was staked. The mounds of waste past this stake will need to be pushed into the cap.	
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TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



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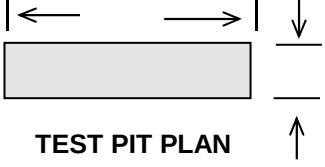
TEST PIT LOG

TEST PIT TP-21 EOW

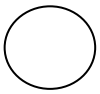
PROJECT: Utica City Dump Site		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parrott-Wolf		DATUM:	
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:	NA
OPERATOR: Nic Confir	TIME STARTED: 1:50	DATE STARTED:	5-5-22
INSPECTOR: Chris Norton	TIME FINISHED: 3:15	DATE FINISHED:	5-5-22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed. For this test pit earth was scratched past the original limits of the land fill and pockets of waste were fount buried there. Waster was encountered to depths of approximately 4 feet into the berm. The final test pit dimensions were approximately 7' long by 8' wide by 4.5-8' deep. An original test pit was dug further down the slope but was clean fill and clay with no waste. Soil layering here was brown sandy clay fill for 3-5' above native grey clay. This pit was approximately 25' long by 2' by 4-5.5' deep. This may be an isolated deeper pocket of waste outside the anticipated limits. No water was encountered in either pit.	
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TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



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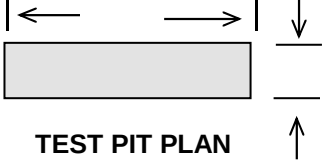
TEST PIT LOG

TEST PIT TP-22 EOW

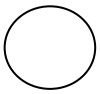
PROJECT: Utica City Dump Site		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parrott-Wolf		DATUM:	
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:	
OPERATOR: Nic Confir	TIME STARTED: 3:35	DATE STARTED:	5-5-22
INSPECTOR: Chris Norton	TIME FINISHED:	DATE FINISHED:	5-5-22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed. Test pit here was started at the top of the slope and dug down the slope following the waste encountered. The extents of the waste was found at the base of the slope. The clean soil past the waste consisted of sandy brown clay fill and top soil for 2-3' overlaying native grey clay until the bottom of the test pit. The final dimensions of the test pit were approximately 18' in length, 5-7.5' in depth and 2.5' wide. The test pit was filled as the excavator traveled down slope for stability. No water was encountered in the pit. Extents of waste was staked at toe of slope.	
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TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



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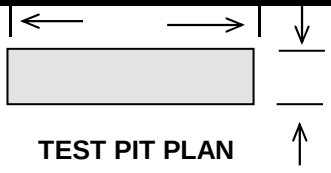
TEST PIT LOG

TEST PIT TP-23 EOW

PROJECT: Utica City Dump Site		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parrott-Wolf		DATUM:	
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:	NA
OPERATOR: Nic Confir	TIME STARTED: **10:00**	DATE STARTED:	5-6-22
INSPECTOR: Chris Norton	TIME FINISHED: 11:05	DATE FINISHED:	5-6-22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed. Test pit was stated at base of slope. Limits of waste continue to the water's edge of the pond. The cap will need to extend to the limits of the water. Edge of waste was staked. Soil in test pit consisted of brown sandy clay fill and top soil overlaying native grey clay. Berm at base of slope was native grey clay. Test pit dimensions were approximately 3' wide by 13 ' long by 2-3.5' in depth. No water was encountered.	
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TEST PIT LOCATION AND NOTES:



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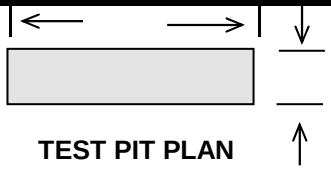
TEST PIT LOG

TEST PIT TP-24 EOW

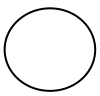
PROJECT: Utica City Dump Site			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: Parrott-Wolf			DATUM:
EQUIPMENT: Takeuchi TB290			GROUND WATER DEPTH:
OPERATOR: Nic Confir	TIME STARTED: 11:15		DATE STARTED: 5-6-22
INSPECTOR: Chris Norton	TIME FINISHED: 12:30		DATE FINISHED: 5-6-22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed. Test pit was started approximately 10' from the water's edge and continued toward the center of the landfill. Small pockets of waste were seen through out test pit, and mounds of surficial waste, but the extents of the buried waste began approximately 37' into test pit and the extent is marked by a stake. The soils here were 2-3' of waste overlaying 2' of brown sandy clay fill overlaying native grey clay. Test pit dimensions was approximately 55' long by 2-3' wide and varied in depth 4-5.5'. An inch of water was encountered in bottom of test pit.	
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TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



NORTH

RAMBOLL

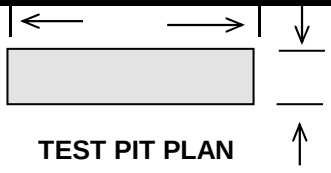
TEST PIT LOG

TEST PIT TP-25 EOW

PROJECT: Utica City Dump Site		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parrott-Wolf		DATUM:	
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:	0'
OPERATOR: Nic Confir	TIME STARTED: 12:40	DATE STARTED:	5-6-22
INSPECTOR: Chris Norton	TIME FINISHED: 1:10	DATE FINISHED:	5-6-22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed. Test pit was started in the swamp and continued back towards the landfill. Test pit was mostly native grey clay until approximately 15, past wood chip berm road where brown sandy clay fill and waste ovelayed the grey clay for 2-3'. Extents of waste was marked with a stake. Perched surficial lechate fille the test pit as it was dug. Dimensions of test pit were approximately 35' long by 2.5' wide by 3.5-5' in depth.	
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TEST PIT LOCATION AND NOTES:



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RAMBOLL

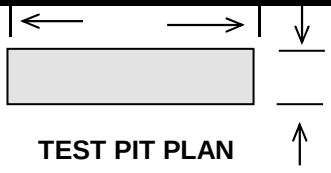
TEST PIT LOG

TEST PIT TP-26 EOW

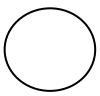
PROJECT: Utica City Dump Site			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: Parrott-Wolf			DATUM:
EQUIPMENT: Takeuchi TB290			GROUND WATER DEPTH: 0,
OPERATOR: Nic Confir	TIME STARTED: 1:15	1:45	DATE STARTED: 5-6-22
INSPECTOR: Chris Norton	TIME FINISHED:		DATE FINISHED: 5-6-22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed. Test pit was started in the swamp and continued back towards the landfill. Test pit was mostly native grey clay until approximately 10', past wood chip berm road where brown sandy clay fill and waste ovelayed the grey clay for 1-2.5. Extents of waste was marked with a stake approximately 6' off of wood chip berm road. Perched surficial lechate fille the test pit as it was dug. Dimensions of test pit were approximately 22' long by 2.5' wide by 3.5-5' in depth.	
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TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



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RAMBOLL

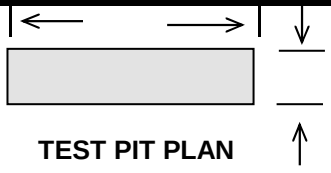
TEST PIT LOG

TEST PIT TP-27 EOW

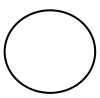
PROJECT: Utica City Dump Site			JOB NO.: 1940101207
CLIENT: NYSDEC			GROUND ELEV.:
CONTRACTOR: Parrott-Wolf			DATUM:
EQUIPMENT: Takeuchi TB290			GROUND WATER DEPTH:
OPERATOR: Nic Confir	TIME STARTED:	1:50	DATE STARTED: 5-6-22
INSPECTOR: Chris Norton	TIME FINISHED:	2:45	DATE FINISHED:

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pits at this site are to determine the edge of waste. When the edge of waste is found the test out will be terminated and a boring stake will be placed. Test pit started in the swamp area adjacent to the wood chip berm road and dug back in toward the landfill. At the beginning of the pit soils were all grey clay until approximately 25 feet into the test pit where topsoil and brown sandy clay overlaid the grey clay. The waste a this pit had approximately 3' of cover overlaying it. Some of the fill was stained black with what smelled like petroleum. The extent of the waste began at a large buried concrete slab adjacent to the landfill edge of the woodchip berm road approximately 25' into the pit from the swap area. Surficial leachate recharged in the pit as it was being dug from the swap at the end of the pit. The extents of the waste were marked with a stake.	
2				
3				
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6				

TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



NORTH

Confidential

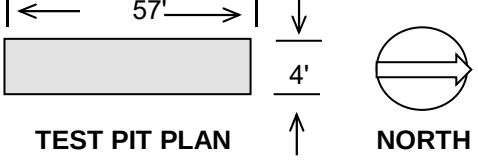
TEST PIT LOG

TEST PIT TP-28 EOW

PROJECT: Utica City Dump Site		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parrott-Wolf		DATUM:	
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:	
OPERATOR: Nic Confir	TIME STARTED:	DATE STARTED:	5-9-22
INSPECTOR: Victor Warner	TIME FINISHED:	DATE FINISHED:	5/9/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Dug on both sides of the road. Clean south of the road. Waste was observed primarily on the side of the road. The area was completely submerged. There is a perimeter berm approximately 20 ft wide that is likely the EoW. Moved the excavator to the berm side, waste was generally found at the toe of the berm/edge of the water. The stake was relocated. The depth of the test pit was approximately 8'.	
2				
3				
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6				

TEST PIT LOCATION AND NOTES:



TEST PIT PLAN **NORTH**

Confidential

RAMBOLL

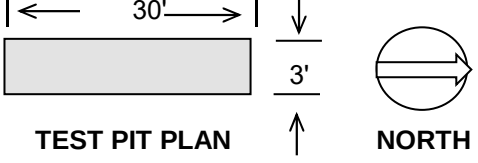
TEST PIT LOG

TEST PIT TP-29 EOW

PROJECT: Utica City Dump Site		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parrott-Wolf		DATUM:	
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:	
OPERATOR: Nic Confir	TIME STARTED:	DATE STARTED:	5-9-22
INSPECTOR: Victor Warner	TIME FINISHED:	DATE FINISHED:	5/9/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Similar to TP-28. The Test Pit was located in an area completely submerged by water. Soils were clean. Tires and other waste debris were visible approximately 15' north of the test pit. The excavator was moved to the top of the berm, and waste was found at the edge of the water. Stake marking waste was placed. Test pit was approximately 6' deep.	
2				
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TEST PIT LOCATION AND NOTES:



Confidential

RAMBOLL

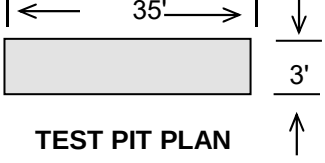
TEST PIT LOG

TEST PIT TP-30 EOW

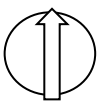
PROJECT: Utica City Dump Site		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parrott-Wolf		DATUM:	
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:	
OPERATOR: Nic Confir	TIME STARTED:	DATE STARTED:	5-9-22
INSPECTOR: Victor Warner	TIME FINISHED:	DATE FINISHED:	5/9/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			The test pit was still located in an area completely submerged in water. No waste was observed. The berm had visible tires and waste debris approximately 10' east of the test pit. The excavator was moved to the top of the berm and waste was encountered to the edge of the water approximately 4' in depth. The stake was placed at the observed EOW. Test pit depth was approximately 6'.	
2				
3				
4				
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6				

TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



NORTH

RAMBOLL

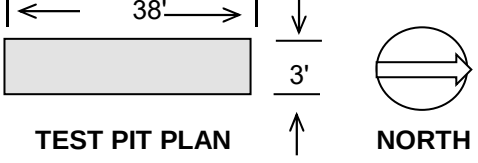
TEST PIT LOG

TEST PIT TP-31 EOW

PROJECT: Utica City Dump Site		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parrott-Wolf		DATUM:	
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:	
OPERATOR: Nic Confir	TIME STARTED:	DATE STARTED:	5-9-22
INSPECTOR: Victor Warner	TIME FINISHED:	DATE FINISHED:	5/9/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			The test pit was dug on both sides of the wood chip berm and watse was encountered. Waste primarily consisted of wood with some bricks and concrete. The excavator was moved 15' west and began digging south f the road due to trees. Waste debris was still observed approximately 12' out. Test pit could not be dug past this point. Test pit depth was approximately 6'.	
2				
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6				

TEST PIT LOCATION AND NOTES:



Confidential

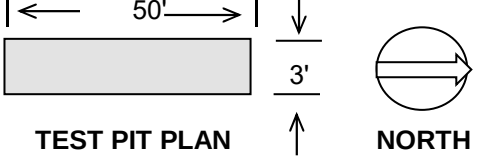
TEST PIT LOG

TEST PIT TP-32 EOW

PROJECT: Utica City Dump Site		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parrott-Wolf		DATUM:	
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:	
OPERATOR: Nic Confir	TIME STARTED:	DATE STARTED:	5-9-22
INSPECTOR: Victor Warner	TIME FINISHED:	DATE FINISHED:	5/9/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Little waste was observed in the top 1' south of the wood chip berm. Water was encountered at approximately 8' bgs. Waste was encountered at the north end of the test pit. EOW stake was placed and the pit was filled with excavated material. Test pit depth was approximately 10'.	
2				
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TEST PIT LOCATION AND NOTES:



Confidential

RAMBOLL

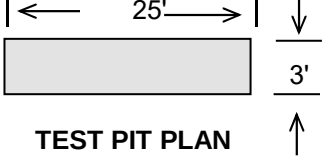
TEST PIT LOG

TEST PIT TP-33 EOW

PROJECT: Utica City Dump Site		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parrott-Wolf		DATUM:	
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:	
OPERATOR: Nic Confir	TIME STARTED:	DATE STARTED:	5-9-22
INSPECTOR: Victor Warner	TIME FINISHED:	DATE FINISHED:	5/9/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Minimal waste noted on the surface from the edge of the wood chip berm to approximately 10' north. Began seeing more waste debris approximately 10' in. Stake was placed at the limit.	
2				
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TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



NORTH

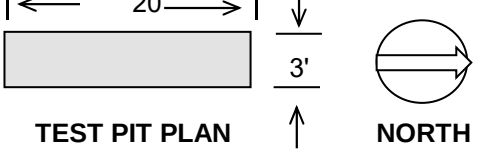
TEST PIT LOG

TEST PIT TP-34 EOW

PROJECT: Utica City Dump Site		JOB NO.: 1940101207
CLIENT: NYSDEC		GROUND ELEV.:
CONTRACTOR: Parrott-Wolf		DATUM:
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:
OPERATOR: Nic Confir	TIME STARTED:	DATE STARTED: 5-9-22
INSPECTOR: Victor Warner	TIME FINISHED:	DATE FINISHED: 5/9/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Test pit depth was approximately 8'.Test pit was dug from our edge of the clearing line per field maps app. Some surface waste debris from start to approximately 20' in. Began seeing more waste debris at deeper depths. Stake was placed at this point marking EOW. Test pit depth was approximately 10'.	
2				
3				
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6				

TEST PIT LOCATION AND NOTES:



Confidential

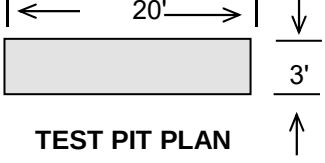
TEST PIT LOG

TEST PIT TP-35 EOW

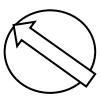
PROJECT: Utica City Dump Site		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parrott-Wolf		DATUM:	
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:	
OPERATOR: Nic Confir	TIME STARTED:	DATE STARTED:	5-9-22
INSPECTOR: Victor Warner	TIME FINISHED:	DATE FINISHED:	5/9/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Started excavating north from clearing limits per the field maps app. Waste/fill was observed 2-3' bgs before encountering grey clay. Watse/fill appeared to be getting thicker, so began excavating further. Excavated approximately 10' south before waste/fill pinched out. Stake was placed marking EOW. Test pit depth was approximately 6'.	
2				
3				
4				
5				
6				

TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



NORTH

Confidential

RAMBOLL

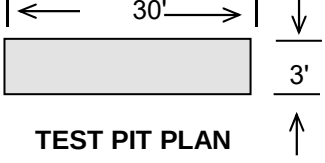
TEST PIT LOG

TEST PIT TP-36 EOW

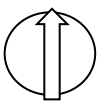
PROJECT: Utica City Dump Site		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parrott-Wolf		DATUM:	
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:	
OPERATOR: Nic Confir	TIME STARTED:	DATE STARTED:	5-9-22
INSPECTOR: Victor Warner	TIME FINISHED:	DATE FINISHED:	5/9/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Started approximately 20' east of the limits per field maps app. Soil consisted of Grey/Brown moist silt and clay to approximately 25' west. Started observing waste debris (glass and bricks) 2-3' bgs. Stake was placed at waste limit. Test pit depth was approximately 10'.	
2				
3				
4				
5				
6				

TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



NORTH

RAMBOLL

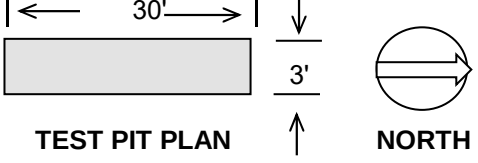
TEST PIT LOG

TEST PIT TP-37 EOW

PROJECT: Utica City Dump Site		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parrott-Wolf		DATUM:	
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:	
OPERATOR: Nic Confir	TIME STARTED:	DATE STARTED:	5-10-22
INSPECTOR: Victor Warner	TIME FINISHED:	DATE FINISHED:	5/10/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Began excavating from the north side of the wood chip berm. Visible waste debris on the surface. Waste debris at the continued surface to approximately 1' bgs. Waste debris noted deeper 2-3' bgs approximately 20' north. Water was seeping into the excavation at approximately 5' ngs. Cover soils generally, varying in sand/silt/clay. Grey silty clay was observed in the bottom 3' of the excavation. Test pit depth was approximately 8'.	
2				
3				
4				
5				
6				

TEST PIT LOCATION AND NOTES:



Confidential

RAMBOLL

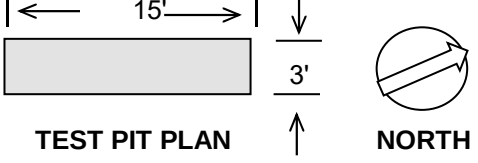
TEST PIT LOG

TEST PIT TP-38 EOW

PROJECT: Utica City Dump Site		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parrott-Wolf		DATUM:	
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:	
OPERATOR: Nic Confir	TIME STARTED:	DATE STARTED:	5-10-22
INSPECTOR: Victor Warner	TIME FINISHED:	DATE FINISHED:	5/10/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Began excavating at the edge of the wood chip berm. Immediately observed waste debris 2-5' bgs. Extended the excavation through the berm until no waste debris was observed. Soils were generally fill consisting primarily of silt and clay with varying amounts of sand. foll was observed to approximately 3' bgs, where soils transitioned to a grey silty clay. Test pit depth was approximately 6'.	
2				
3				
4				
5				
6				

TEST PIT LOCATION AND NOTES:



TEST PIT PLAN **NORTH**

Confidential

RAMBOLL

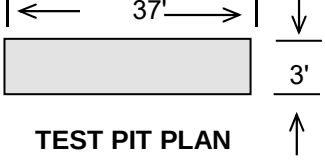
TEST PIT LOG

TEST PIT TP-39 EOW

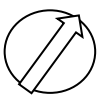
PROJECT: Utica City Dump Site		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parrott-Wolf		DATUM:	
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:	
OPERATOR: Nic Confir	TIME STARTED:	DATE STARTED:	5-10-22
INSPECTOR: Victor Warner	TIME FINISHED:	DATE FINISHED:	5/10/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Started excavating on the east side of the berm. Found wast to 3' bgs. Began digging across the berm and continued to observe waste 2-3 ft bgs. Backfilled and moved the excavator to the west side of the berm. Started the second excavation on the west side of the wood chip berm on the edge of the clearing. Watse was observed at approximately 3' bgs. cleared into the brush approximately 15' and encountered waste/debris. The stake was placed at the edge, noting that we did not find EOW.	
2				
3				
4				
5				
6				

TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



NORTH

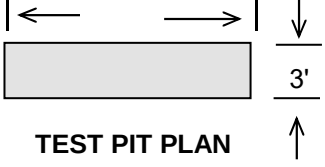
TEST PIT LOG

TEST PIT TP-40 EOW

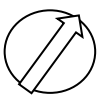
PROJECT: Utica City Dump Site		JOB NO.: 1940101207
CLIENT: NYSDEC		GROUND ELEV.:
CONTRACTOR: Parrott-Wolf		DATUM:
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:
OPERATOR: Nic Confir	TIME STARTED:	DATE STARTED: 5-10-22
INSPECTOR: Victor Warner	TIME FINISHED:	DATE FINISHED: 5/10/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Dug gravel pits heading west. Continued to encounter waste and debris in each. Staked final pit approximately 150' from the power lines.	
2				
3				
4				
5				
6				

TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



NORTH

RAMBOLL

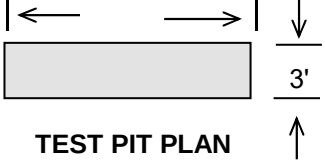
TEST PIT LOG

TEST PIT TP-41 EOW

PROJECT: Utica City Dump Site		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parrott-Wolf		DATUM:	
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:	
OPERATOR: Nic Confir	TIME STARTED:	DATE STARTED:	5-10-22
INSPECTOR: Victor Warner	TIME FINISHED:	DATE FINISHED:	5/10/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Moved to approximately 100' from national grid ROW. Dug and hit waste. Staked noting the EOW was not found.	
2				
3				
4				
5				
6				

TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



NORTH

RAMBOLL

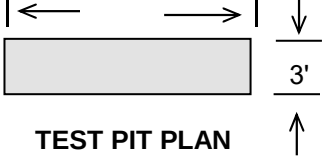
TEST PIT LOG

TEST PIT TP-42 EOW

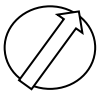
PROJECT: Utica City Dump Site		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parrott-Wolf		DATUM:	
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:	
OPERATOR: Nic Confir	TIME STARTED:	DATE STARTED:	5-10-22
INSPECTOR: Victor Warner	TIME FINISHED:	DATE FINISHED:	5/10/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Relocated TP to approximately 100' from the power lines. The pit was dug and waste was encountered. The location was staked noting the EOW was no found. Test pit depth was approximately 4'.	
2				
3				
4				
5				
6				

TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



NORTH

Confidential

RAMBOLL

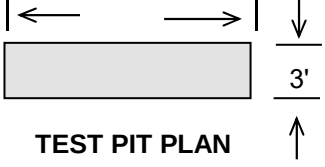
TEST PIT LOG

TEST PIT TP-43 EOW

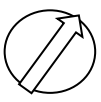
PROJECT: Utica City Dump Site		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parrott-Wolf		DATUM:	
EQUIPMENT: Takeuchi TB290		GROUND WATER DEPTH:	
OPERATOR: Nic Confir	TIME STARTED:	DATE STARTED:	5-10-22
INSPECTOR: Victor Warner	TIME FINISHED:	DATE FINISHED:	5/10/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Relocated to approximately 100' east of the powerlines. Dug and encountered waste and debris. The location was staked noting the EOW was not found.	
2				
3				
4				
5				
6				

TEST PIT LOCATION AND NOTES:



TEST PIT PLAN



NORTH

RAMBOLL

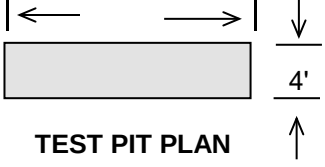
TEST PIT LOG

TEST PIT TP-3

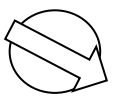
PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	0
OPERATOR: Jolaan	TIME STARTED: 11:00	DATE STARTED:	8/16/22
INSPECTOR: Russell Graziano	TIME FINISHED: 11:15	DATE FINISHED:	8/16/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Wet dark brown sand and silt with waste throughout, very strong odor	
2				
3				
4			Clean native clay at 3 feet bgs	
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 3 ft bgs. Water encountered at ground surface.



TEST PIT PLAN



NORTH

RAMBOLL

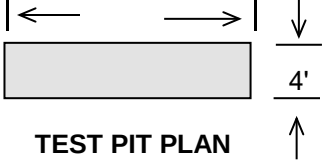
TEST PIT LOG

TEST PIT TP-4.1

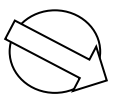
PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	1
OPERATOR: Matt Partis	TIME STARTED: 13:35	DATE STARTED:	8/17/22
INSPECTOR: Russell Graziano	TIME FINISHED: 14:10	DATE FINISHED:	8/17/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Brown sand and waste	
2			Wet black waste and fill, petroleum odor, sheen.	
3				
4				
5			Pit terminated on concrete obstruction at 5 feet bgs.	
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 5' in wet black waste on concrete obstruction. Water table encountered at 1 foot bgs.



TEST PIT PLAN



NORTH

RAMBOLL

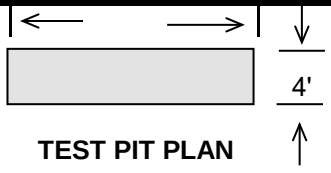
TEST PIT LOG

TEST PIT TP-4.2

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	1
OPERATOR: Matt Partis	TIME STARTED: 14:30	DATE STARTED:	8/17/22
INSPECTOR: Russell Graziano	TIME FINISHED: 15:00	DATE FINISHED:	8/17/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Brown sand and waste	
2			Wet black waste and fill, petroleum odor, sheen.	
3				
4				
5			Pit terminated on concrete obstruction at 5 feet bgs.	
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 5' in wet black waste on concrete obstruction. Water table encountered at 1 foot bgs.



TEST PIT PLAN **NORTH**

RAMBOLL

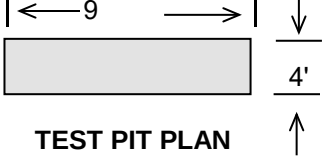
TEST PIT LOG

TEST PIT TP-6.1

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	6
OPERATOR: Jolaan	TIME STARTED: 11:40	DATE STARTED:	8/16/22
INSPECTOR: Russell Graziano	TIME FINISHED: 11:55	DATE FINISHED:	8/16/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Wet dark brown sand and silt with waste throughout	
2				
3				
4				
5				
6				
7			Beginning at 6 ft bts, wet gray clayey waste with petroleum odor	
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 9' bgs at limit of excavator. Water table encountered at 6 feet bs. Clean native material never encountered.



TEST PIT PLAN

NORTH

RAMBOLL

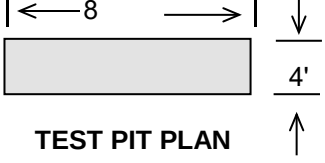
TEST PIT LOG

TEST PIT TP-6.2

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	NE
OPERATOR: Jolaan	TIME STARTED: 12:00	DATE STARTED:	8/16/22
INSPECTOR: Russell Graziano	TIME FINISHED: 12:20	DATE FINISHED:	8/16/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Waste and brown sand,	
2				
3				
4				
5				
6			Gray native clay at 5 ft bgs	
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 5'. No water table encountered



TEST PIT PLAN



NORTH

RAMBOLL

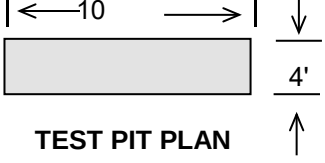
TEST PIT LOG

TEST PIT TP-7

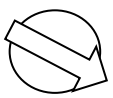
PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	NE
OPERATOR: Jolaan	TIME STARTED: 13:30	DATE STARTED:	8/16/22
INSPECTOR: Russell Graziano	TIME FINISHED: 13:40	DATE FINISHED:	8/16/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Waste and brown sand	Lots of glass and plastic
2				
3				
4				
5				
6			Gray native clay at 5 ft bgs	
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 5'. No water table encountered.



TEST PIT PLAN



NORTH

RAMBOLL

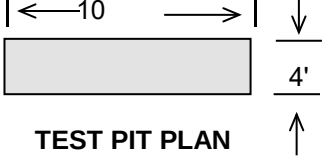
TEST PIT LOG

TEST PIT TP-8

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	NE
OPERATOR: Jolaan	TIME STARTED: 13:45	DATE STARTED:	8/16/22
INSPECTOR: Russell Graziano	TIME FINISHED: 14:00	DATE FINISHED:	8/16/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Waste and brown sand,	
2				
3				
4				
5				
6			Gray native clay at 5 ft bgs	
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 5'. No water table encountered



TEST PIT PLAN



NORTH

RAMBOLL

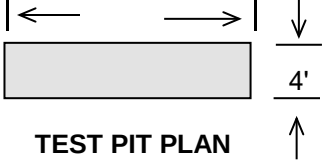
TEST PIT LOG

TEST PIT TP-9

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	NE
OPERATOR: Matt Partis	TIME STARTED: 11:45	DATE STARTED:	8/17/22
INSPECTOR: Russell Graziano	TIME FINISHED: 12:05	DATE FINISHED:	8/17/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Brown sandy fill and waste, strong trash odor, pulpy	
2				
3				
4				
5				Increasing black color in fill and waste
6				
7				
8				
9				
10				
11			Black color continues to depth at 10.5', likely ash, not clean native soil.	
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 10.5 ft bgs.



TEST PIT PLAN **NORTH**

RAMBOLL

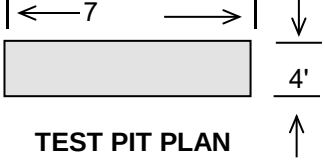
TEST PIT LOG

TEST PIT TP-10

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	NE
OPERATOR: Matt Partis	TIME STARTED: 10:25	DATE STARTED:	8/17/22
INSPECTOR: Russell Graziano	TIME FINISHED: 11:00	DATE FINISHED:	8/17/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Brown sandy fill and waste	
2				
3				
4				
5				Increasing black color in fill, odor increased
6				
7				
8				
9			Black color continues to depth at 9', likely ash, not clean native soil.	
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 9' bgs at limits of excavator. No water table encountered. No clean native soil encountered.



TEST PIT PLAN

NORTH

RAMBOLL

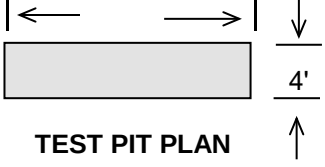
TEST PIT LOG

TEST PIT TP-11.1

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	4.5
OPERATOR: Matt Partis	TIME STARTED: 15:15	DATE STARTED:	8/17/22
INSPECTOR: Russell Graziano	TIME FINISHED: 15:45	DATE FINISHED:	8/17/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Brown sand and waste	Moved to base of hill slope
2				
3				
4				
5			Gray wet waste and fill mixture	Wet at 4.5 ft bgs
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 9' at limits of excavator. Water at 4.5 ft bgs. No clean native soil encountered



TEST PIT PLAN **NORTH**

RAMBOLL

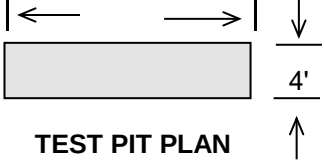
TEST PIT LOG

TEST PIT TP-11.2

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	9
OPERATOR: Matt Partis	TIME STARTED: 12:00	DATE STARTED:	8/18/22
INSPECTOR: Russell Graziano	TIME FINISHED:	DATE FINISHED:	8/18/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Brown sand and waste	
2				
3				
4				
5			Black waste and fill mixture with petroleum odor	
6				
7				
8				
9			Beginning at 9 ft bgs, gray native clay	Water sitting on clay layer
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 9' bgs. Native clay encountered at 9' bgs. Water on top of Native Clay at 9 ft bgs



TEST PIT PLAN

NORTH

RAMBOLL

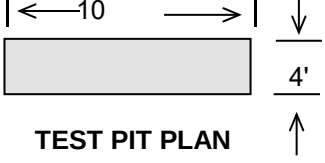
TEST PIT LOG

TEST PIT TP-13.1

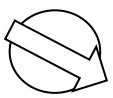
PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	6.5
OPERATOR: Jolaan	TIME STARTED: 14:20	DATE STARTED:	8/16/22
INSPECTOR: Russell Graziano	TIME FINISHED: 14:43	DATE FINISHED:	8/16/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Wet dark brown sand and silt with waste throughout	
2				
3				
4				
5				
6				
7			Beginning at 6.5 ft bgs, wet gray clayey waste with regular trash odor	
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 9' bgs at limit of excavator. Water table encountered at 6.5 feet bgs. Clean native material never encountered.



TEST PIT PLAN



NORTH

RAMBOLL

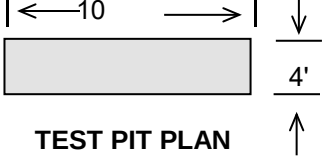
TEST PIT LOG

TEST PIT TP-13.2

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	6.5
OPERATOR: Jolaan	TIME STARTED: 14:20	DATE STARTED:	8/16/22
INSPECTOR: Russell Graziano	TIME FINISHED: 14:43	DATE FINISHED:	8/16/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Wet dark brown sand and silt with waste throughout	
2				
3				
4				
5				
6				
7			Beginning at 6.5 ft bgs, wet gray native clay	
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 9' bgs at limit of excavator. Water table encountered at 6.5 feet bgs. Clean native material encountered immediately below the water table.



TEST PIT PLAN



NORTH

RAMBOLL

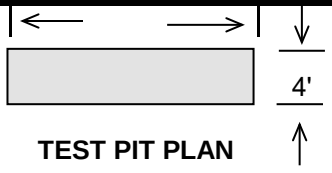
TEST PIT LOG

TEST PIT TP-15

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	NE
OPERATOR: Matt Partis	TIME STARTED: 13:00	DATE STARTED:	8/18/22
INSPECTOR: Russell Graziano	TIME FINISHED: 13:30	DATE FINISHED:	8/18/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Brown sand and silt and waste	
2				
3				
4				
5				
6				
7				
8				
9			Grey native clay at 8.5 ft bgs	
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 9.5 ft bgs in native clay. No water table encountered



TEST PIT PLAN **NORTH**

RAMBOLL

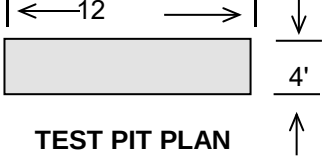
TEST PIT LOG

TEST PIT TP-18

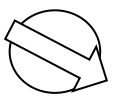
PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	NE
OPERATOR: Jolaan	TIME STARTED: 9:19am	DATE STARTED:	8/15/22
INSPECTOR: Russell Graziano	TIME FINISHED: 10:05am	DATE FINISHED:	8/15/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Sand and Gravel fill, extensive waste throughout.	
2				
3				
4				
5				
6				
7				odor in waste
8				
9			End of test pit at excavator limit. Waste continues.	
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 9'. No water table encountered.



TEST PIT PLAN



NORTH

RAMBOLL

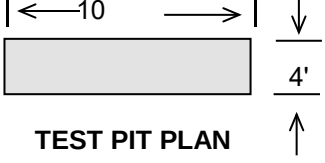
TEST PIT LOG

TEST PIT TP-19

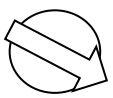
PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	5 ft bgs
OPERATOR: Jolaan	TIME STARTED: 10:10	DATE STARTED:	8/15/22
INSPECTOR: Russell Graziano	TIME FINISHED: 10:35	DATE FINISHED:	8/15/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1				
2			Sand and gravel fill, tires and concrete throughout	
3				
4			Black sheen in waste, little odor	
5			Logs and broken wood in waste	Wet
6			Wet gry miscellaneous waste	
7			Beginning at 6 ft bgs, Clean grey clay, no waste.	
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 7' bgs below waste. Water encountered at 5' bgs.



TEST PIT PLAN



NORTH

RAMBOLL

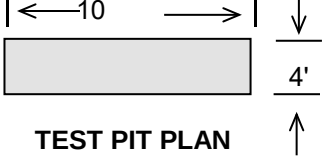
TEST PIT LOG

TEST PIT TP-20

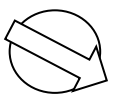
PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	4 ft bs
OPERATOR: Jolaan	TIME STARTED: 10:40	DATE STARTED:	8/15/22
INSPECTOR: Russell Graziano	TIME FINISHED: 11:00	DATE FINISHED:	8/15/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Sand and gravel fill, miscellaneous trash and glass throughout	
2				
3				
4				
5			Wet fill and waste	
6			Beginning at 5 ft bgs, Clean grey native clay	
7			Terminated at 6.5 feet bgs	
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 6.5 ft bgs. Water encountered at 4 ft bgs.



TEST PIT PLAN



NORTH

RAMBOLL

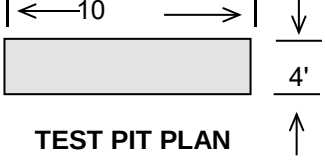
TEST PIT LOG

TEST PIT TP-21

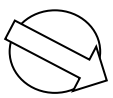
PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	NE
OPERATOR: Jolaan	TIME STARTED: 11:15	DATE STARTED:	8/15/22
INSPECTOR: Russell Graziano	TIME FINISHED: 11:50	DATE FINISHED:	8/15/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Brown sand and gravel and waste thoughout	trash odor
2				
3				
4				
5			Brown and grey sand and gravel and waste thoughout	trash odor
6				Wet at 6 feet
7			Gray wet miscellaneous waste	trash odor, waste increasing with depth
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 9' bgs at limit of excavator. Water encountered at 6 ft bgs. Native soil not encountered.



TEST PIT PLAN



NORTH

RAMBOLL

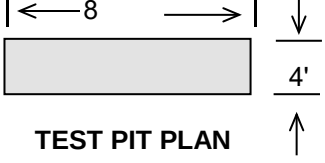
TEST PIT LOG

TEST PIT TP-23

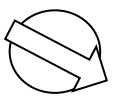
PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	NE
OPERATOR: Jolaan	TIME STARTED: 12:05	DATE STARTED:	8/15/22
INSPECTOR: Russell Graziano	TIME FINISHED: 12:25	DATE FINISHED:	8/15/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Brown sand and gravel fill, some brick and concrete waste throughout	
2				
3				
4				
5				GW at 5
6			Gray native clay, little waste, wet	
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 7 ft bgs. Water encountered at 5 ft bgs. Native soil encountered at 5 ft bgs.



TEST PIT PLAN



NORTH

RAMBOLL

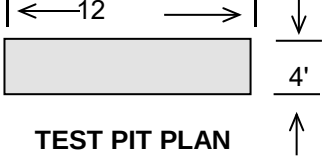
TEST PIT LOG

TEST PIT TP-24

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	6 ft bgs
OPERATOR: Matt Partis	TIME STARTED: 16:10	DATE STARTED:	8/18/22
INSPECTOR: Russell Graziano	TIME FINISHED: 16:30	DATE FINISHED:	8/18/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Brown sand and silt and waste throughout	
2				
3				
4				
5				
6				
7			Wet dark brown/black sand and waste, slight petroleum odor	
8			Concrete slab at 7' bgs	
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 7 ft bgs n top of concrete slab. Water table encountered at 6 ft bgs. No clean native soil encountered



TEST PIT PLAN



NORTH

RAMBOLL

TEST PIT LOG

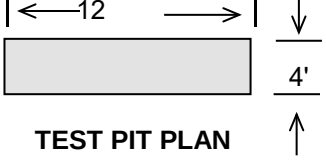
TEST PIT TP-25

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	NE
OPERATOR: Matt Partis	TIME STARTED: 16:40	DATE STARTED:	8/18/22
INSPECTOR: Russell Graziano	TIME FINISHED: 5:20 PM	DATE FINISHED:	8/18/22

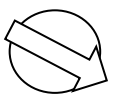
Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Brown sand and waste	
2				
3				
4				
5				
6				
7				
8			apparent concrete slab	
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:

Test pit terminated at 7' on top of apparent concrete, then offset 10 feet and more concrete was encountered. No water was encountered in euther pit.



TEST PIT PLAN



NORTH

RAMBOLL

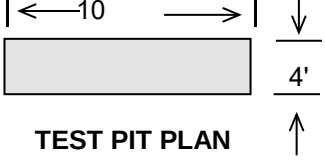
TEST PIT LOG

TEST PIT TP-26

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	NE
OPERATOR: Jolaan	TIME STARTED:	DATE STARTED:	8/15/22
INSPECTOR: Russell Graziano	TIME FINISHED:	DATE FINISHED:	8/15/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Brown sand and gravel and waste thoughout	trash odor
2				
3				
4			Brown sand and gravel and waste thoughout, native grey clay encountered at 4 ft bgs.	trash odor
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 4' In native clay. No water table encountered.



TEST PIT PLAN

NORTH

RAMBOLL

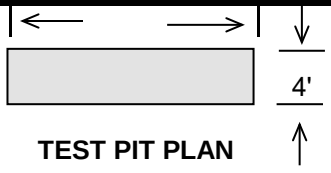
TEST PIT LOG

TEST PIT TP-27

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	NE
OPERATOR: Matt Partis	TIME STARTED: 14:45	DATE STARTED:	8/18/22
INSPECTOR: Russell Graziano	TIME FINISHED: 15:00	DATE FINISHED:	8/18/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Brown sand and silt, some waste, glass bottle, trace brick	
2				
3				
4			Clean gray native clay beginning at 3 ft bgs.	
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 4.5 ft bgs in clean grey native clay. No water table encountered



TEST PIT PLAN **NORTH**

RAMBOLL

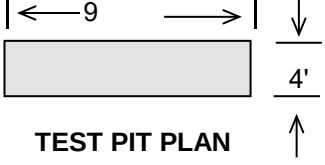
TEST PIT LOG

TEST PIT TP-29.1

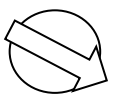
PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	NE
OPERATOR: Jolaan	TIME STARTED: 9:00	DATE STARTED:	8/16/22
INSPECTOR: Russell Graziano	TIME FINISHED: 9:20	DATE FINISHED:	8/16/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Brown sand and gravel and waste thoughout	
2				
3				
4				
5				
6			Terminated at 5 on apparent concrete	
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test terminated at 5 ft bgs on top of apparent concrete. Moved 50 feet to test pit 29.2



TEST PIT PLAN



NORTH

RAMBOLL

TEST PIT LOG

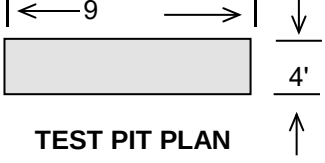
TEST PIT TP-29.2

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	NE
OPERATOR: Jolaan	TIME STARTED: 9:35	DATE STARTED:	8/16/22
INSPECTOR: Russell Graziano	TIME FINISHED:	DATE FINISHED:	8/16/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Brown sand and gravel and waste thoughout	
2				
3				
4				
5				
6			Terminated at 5 on top of native clay	
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:

Test terminated at 5 ft bgs on top of native clay. Moved 50 feet to test pit 29.2



TEST PIT PLAN

NORTH

RAMBOLL

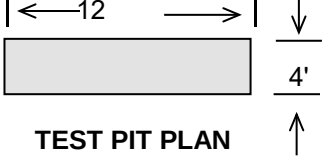
TEST PIT LOG

TEST PIT TP-30

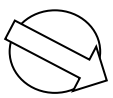
PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	NE
OPERATOR: Jolaan	TIME STARTED: 8:15	DATE STARTED:	8/16/22
INSPECTOR: Russell Graziano	TIME FINISHED: 8:45	DATE FINISHED:	8/16/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Brown sand and gravel and waste thoughout	
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 9' bgs at limit of excavator. No water table encountered and no native clay encountered.



TEST PIT PLAN



NORTH

RAMBOLL

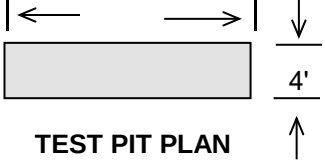
TEST PIT LOG

TEST PIT TP-31

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	8.5 ft bgs
OPERATOR: Jolaan	TIME STARTED: 2:05 PM	DATE STARTED:	8/15/22
INSPECTOR: Russell Graziano	TIME FINISHED: 2:30 PM	DATE FINISHED:	8/15/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Dark brown sand, some silt, some gravel, waste throughout	
2				
3				
4				
5				
6				
7				
8				
9				Water in bottom at 8.5 ft bgs
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 9' bgs in waste. Water found at 8.5 f bgs. No native soil encountered.



TEST PIT PLAN **NORTH**

RAMBOLL

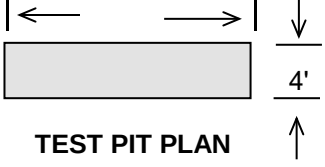
TEST PIT LOG

TEST PIT TP-32

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	NE
OPERATOR: Matt Partis	TIME STARTED: 14:00	DATE STARTED:	8/18/22
INSPECTOR: Russell Graziano	TIME FINISHED: 14:30	DATE FINISHED:	8/18/22

Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			Brown sand and silt and waste throughout	
2				
3				
4				
5			Beginning at 4.5 ft bgs, clean grey native clay	
6				
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:
Test pit terminated at 5.5 ft bgs in native clay. No water table encountered.



TEST PIT PLAN

NORTH

RAMBOLL

TEST PIT LOG

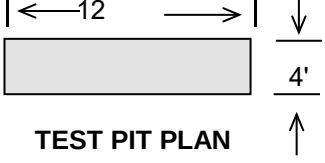
TEST PIT TP-HILL

PROJECT: Utica City Dump		JOB NO.:	1940101207
CLIENT: NYSDEC		GROUND ELEV.:	
CONTRACTOR: Parratt-Wolff		DATUM:	
EQUIPMENT: TB290		GROUND WATER DEPTH:	NE
OPERATOR: Matt Partis	TIME STARTED: 5:45	DATE STARTED:	8/18/22
INSPECTOR: Russell Graziano	TIME FINISHED: 6:15	DATE FINISHED:	8/18/22

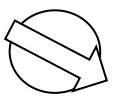
Depth Ft.	Sample #	Unified Classification	GEOLOGIC DESCRIPTION	REMARKS
1			2 feet of topsoil	
2				
3			Brown sand fill and debris, brick, wood, and concrete rubble	
4				
5				
6			Gray intermixed rubble and concrete	
7				
8				
9				
10				
11				
12				
13				
14				

TEST PIT LOCATION AND NOTES:

Test pit terminated at 7.5 ft bgs on concrete rubble. No water table encountered



TEST PIT PLAN



NORTH

APPENDIX 3
LABORATORY TESTING REPORTS

PW Laboratories, Inc.
6544 Fremont Road - East Syracuse, New York 13057
Office 315.437.1420 ~ Fax 315.503-3058 ~ pwlabsinc@hotmail.com

June 9, 2022

Mr. Sean Pepling
Parratt-Wolff, Inc.
5879 Fisher Road
P.O. Box 5879
East Syracuse, New York 13057

Re: L-22014
Laboratory Testing
Utica City Dump
Project #SP22042A

Dear Mr. Pepling [SPepling@PWInc.com]:

Enclosed are the results of laboratory testing performed at your request on **three (3) Shelby Tube** samples delivered to *PW Laboratories, Inc.* on **5/18/2022**, for the above referenced project. Results include:

1) Sieve Analysis (ASTM D422 & D1140)
Laboratory I.D. #42651, 42652, 42653 — 3 Each

2) Hydrometer Analysis (ASTM D422)
Laboratory I.D. #42651, 42652, 42653 — 3 Each

3) Atterberg Limits (ASTM D4318)
Laboratory I.D. #42651, 42652, 42653 — 3 Each

4) Hydraulic Conductivity - Flexible Wall (ASTM D5084)
Laboratory I.D. #42651, 42652, 42653 — 3 Each

All requested tests have been completed on the previously received sample(s) for the above project. All sample remains are scheduled to be disposed of on **7/9/2022.** Please notify PW Laboratories, Inc. by letter or telephone prior to **7/9/2022** if you would prefer to pick up the sample(s) or that the sample(s) be retained by PW Laboratories, Inc. for an additional period.

Thank you for this opportunity to work with you.

PW Laboratories, Inc.

Patrick J. Edmiston
Laboratory Manager
PJE/BLL

PW Laboratories, Inc.
6544 Fremont Road – East Syracuse, New York 13057
Office 315.437.1420 - Fax 315.503.3058 - pwlabsinc@hotmail.com

Sieve Analysis of Soil/Aggregate

Project Title: Laboratory Testing
Utica City Dump
Parratt-Wolff Project #SP22042A

Project #: L-22014
Test Method: ASTM D422 & D1140

Report #: 1
Report Date: June 9, 2022

			Sieve Size - Percent Passing Sieve													
Lab I.D. #	**Sample I.D.**	**Depth (Feet)**	**3/8"**	**1/4"**	**#4**	**#10**	**#30**	**#40**	**#60**	**#100**	**#200**					
42651	RSB-4 (T-1)	16 - 18	-	-	-	-	100	99.6	98.7	97.6	96.0					
42652	RSB-8 (T-1)	10 - 12	100	99.9	99.9	99.9	99.9	99.8	99.6	99.0	97.5					
42653	RSB-2 (T-1)	8 - 10	-	-	100	99.8	99.1	97.9	96.8	95.4	90.1					

Sample mass, as received, meets minimum mass requirements of test method: **Yes** X **No**

Performed By: Ed Schley **Checked By:** Patrick Edmiston

Remarks:

Prewashed
Entire Sample **X**
Mass Retained on #200 Only
Not Prewashed:

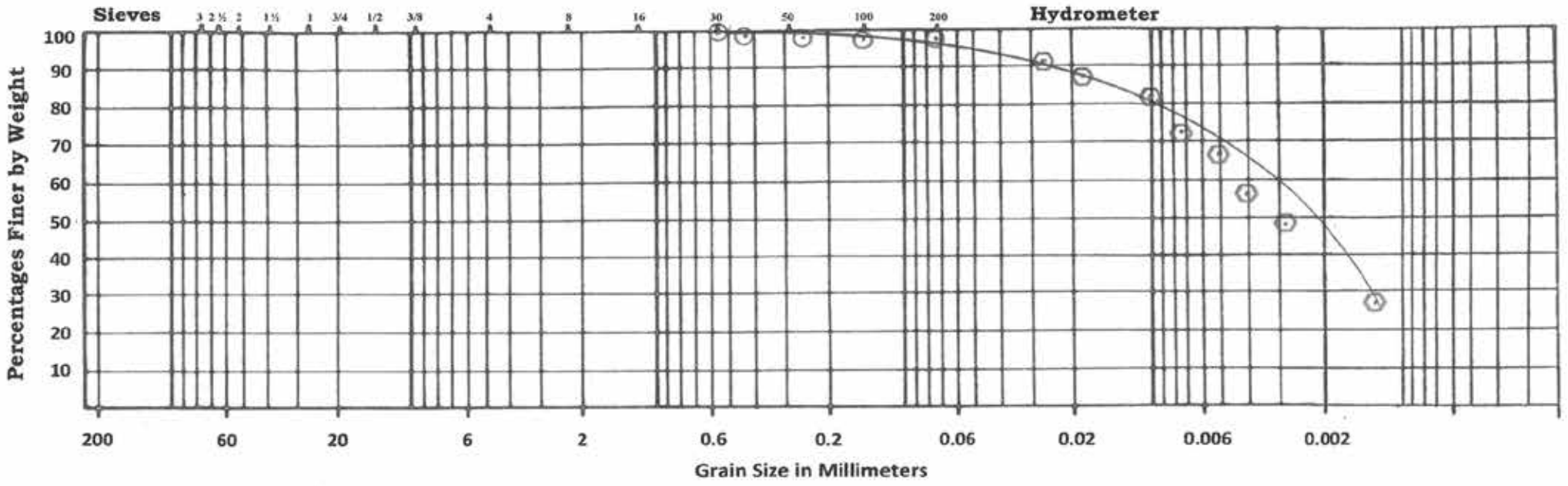
PW Laboratories, Inc.
6544 Fremont Road - East Syracuse, New York 13057
Office 315.437.1420 ~ Fax 315.503-3058~ pwlabsinc@hotmail.com

Project #: L-22014

Report #: 1

Date: June 9, 2022

Grain Size Analysis



Boulders / Cobbles	Coarse Gravel	Medium Gravel	Fine Gravel	Coarse Sand	Medium Sand	Fine Sand	Silt	Clay
228	76.2	25.4	9.52	2.0	0.59	0.25	0.074	0.002 mm
9 in.	3 in.	1 in.	3/8 in.	No. 10	No. 30	No. 60	No. 200	

Project #:	L-22014
Project Title:	Laboratory Testing - Utica City Dump - Parratt-Wolff Project #SP22042A
Laboratory I.D. #:	42651
Sample I.D.:	RSB-4 (T-1)
Depth (Feet):	16 - 18

ASTM Test Method
Sieve Analysis (ASTM D422 & D1140)
Hydrometer Analysis (ASTM D422)

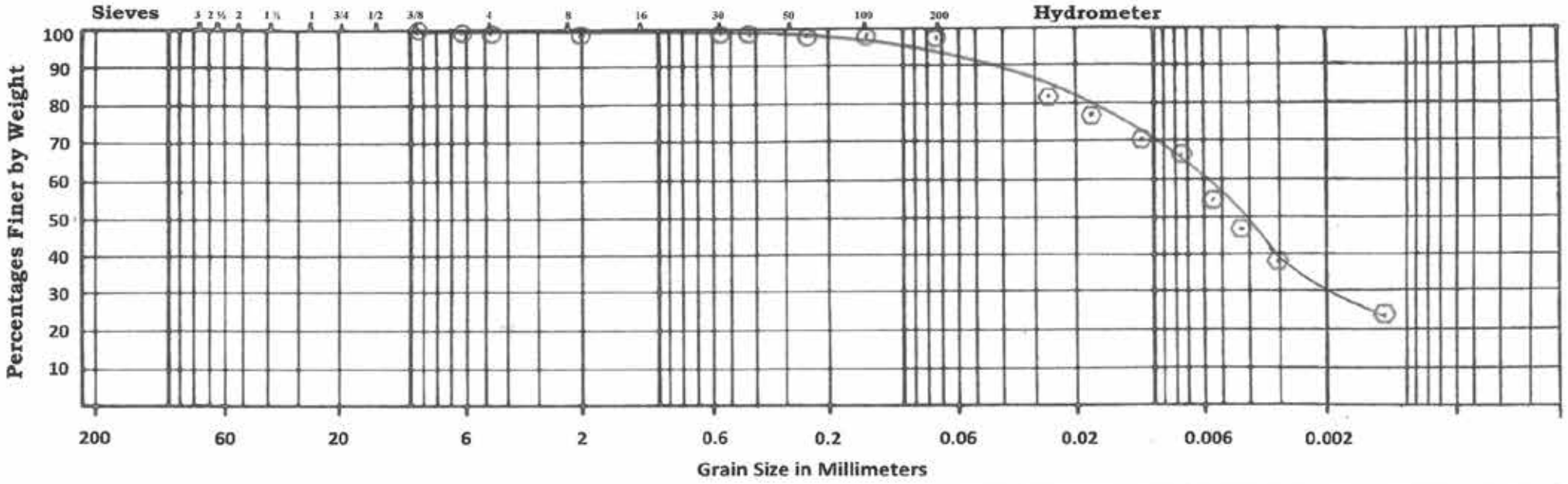
PW Laboratories, Inc.
6544 Fremont Road - East Syracuse, New York 13057
Office 315.437.1420 ~ Fax 315.503-3058~ pwlabsinc@hotmail.com

Project #: L-22014

Report #: 2

Date: June 9, 2022

Grain Size Analysis



Boulders / Cobbles	Coarse Gravel	Medium Gravel	Fine Gravel	Coarse Sand	Medium Sand	Fine Sand	Silt	Clay
228	76.2	25.4	9.52	2.0	0.59	0.25	0.074	0.002 mm
9 in.	3 in.	1 in.	3/8 in.	No. 10	No. 30	No. 60	No. 200	

Project #:	L-22014
Project Title:	Laboratory Testing - Utica City Dump - Parratt-Wolff Project #SP22042A
Laboratory I.D. #:	42652
Sample I.D.:	RSB-8 (T-1)
Depth (Feet);	10 - 12

ASTM Test Method
Sieve Analysis (ASTM D422 & D1140)
Hydrometer Analysis (ASTM D422)

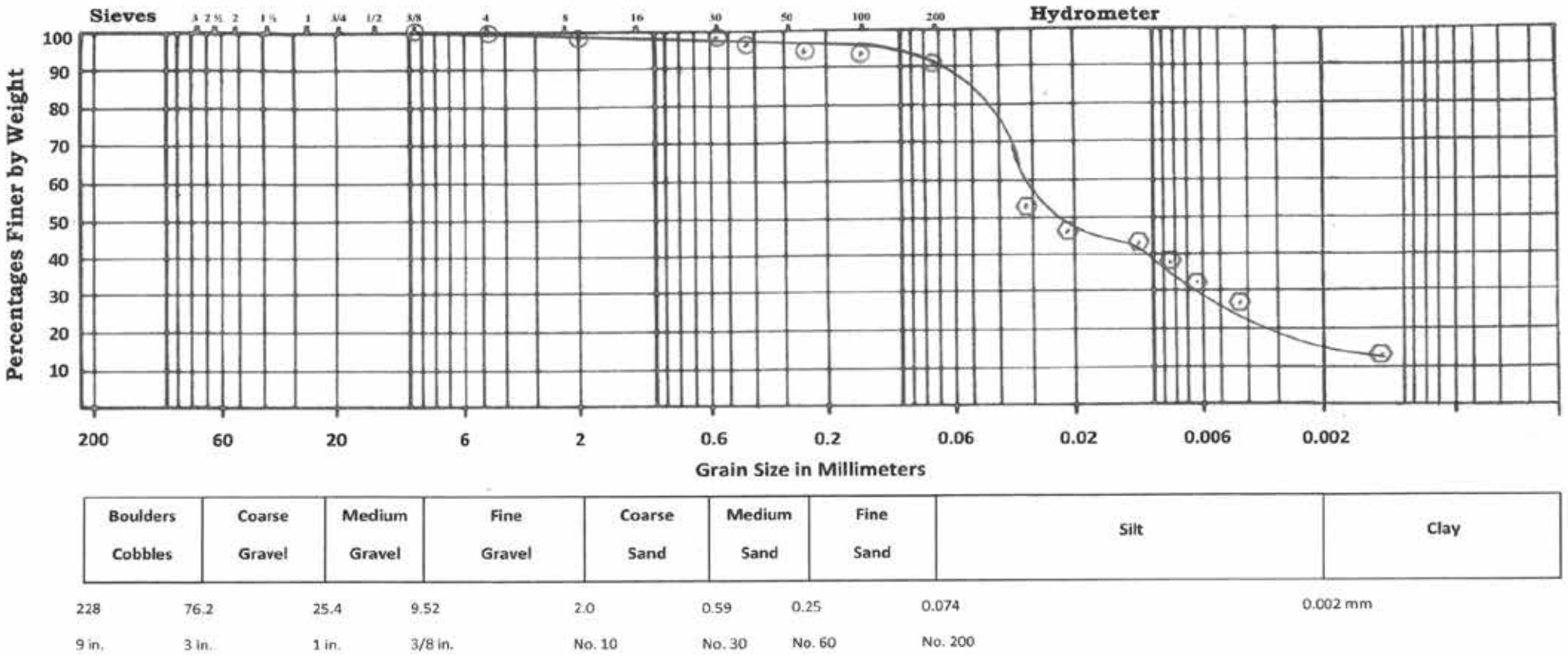
PW Laboratories, Inc.
6544 Fremont Road - East Syracuse, New York 13057
Office 315.437.1420 ~ Fax 315.503-3058~ pwlabsinc@hotmail.com

Project #: L-22014

Report #: 3

Date: June 9, 2022

Grain Size Analysis



Project #:	L-22014
Project Title:	Laboratory Testing - Utica City Dump - Parratt-Wolff Project #SP22042A
Laboratory I.D. #:	42653
Sample I.D.:	RSB-2 (T-1)
Depth (Feet):	8 - 10

ASTM Test Method
Sieve Analysis (ASTM D422 & D1140)
Hydrometer Analysis (ASTM D422)

PW Laboratories, Inc.
6544 Fremont Road - East Syracuse, New York 13057
Office 315.437.1420 ~ Fax 315.503-3058~ pwlabsinc@hotmail.com

June 9, 2022

L-22014
Laboratory Testing
Utica City Dump
Parratt-Wolff Project #SP22042A

Atterberg Limits (ASTM D4318)

Lab I.D. #	Sample I.D.	Depth (Feet)	Plastic Limit	Liquid Limit	Plasticicity Index
42651	RSB-4 (T-1)	16 - 18	26	36	10
42652	RSB-8 (T-1)	10 - 12	24	38	14
42653	RSB-2 (T-1)	8 - 10	23	28	5

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	April 6, 2022	**Test Start Date:**	June 6, 2022
Project #:	L-22014	**Date Cast:**	-
Lab I.D. #:	42651	**Depth (Feet):**	16 - 18
Project Title	Laboratory Testing - Utica City Dump	**ASTM Method:**	D5084
Sample I.D.:	RSB-4 (T-1)		

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--	**Moisture Content (% of Dry Weight)**			
Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	28.1
Final Degree of Saturation (B Value) (%):	100.0	**Dry Unit Weight (PCF)**			
Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	94.1
Final Moisture Content (% of Dry Weight):	34.9			**Final Dry Unit Weight (PCF):**	98.6

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	23.8	**Initial Height (cm):**	8.87	**Initial Diameter (cm):**	7.28
Final Gradient:	24.3	**Final Height (cm):**	8.70	**Final Diameter (cm):**	7.18

Final Four Determinations k (cm/sec)

5.20×10^{-8}	5.21×10^{-8}
5.21×10^{-8}	5.22×10^{-8}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 5.21×10^{-8}

Remarks:

PW Laboratories, Inc.
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Office 315.437.1420 ~ Fax 315.503-3058~ pwlabsinc@hotmail.com

Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	April 6, 2022	**Test Start Date:**	June 6, 2022
Project #:	L-22014	**Date Cast:**	-
Lab I.D. #:	42652	**Depth (Feet):**	10 - 12
Project Title	Laboratory Testing - Utica City Dump	**ASTM Method:**	D5084
Sample I.D.:	RSB-8 (T-1)		

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--	**Moisture Content (% of Dry Weight)**			
Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	25.8
Final Degree of Saturation (B Value) (%):	100.0	**Dry Unit Weight (PCF)**			
Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	96.8
Final Moisture Content (% of Dry Weight):	32.7			**Final Dry Unit Weight (PCF):**	100.1

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	25.6	**Initial Height (cm):**	8.23	**Initial Diameter (cm):**	7.30
Final Gradient:	25.8	**Final Height (cm):**	8.18	**Final Diameter (cm):**	7.20

Final Four Determinations k (cm/sec)

4.96×10^{-8}	4.97×10^{-8}
4.97×10^{-8}	4.97×10^{-8}

Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 4.97×10^{-8}

Remarks:

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Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

Report Date:	April 6, 2022	**Test Start Date:**	June 6, 2022
Project #:	L-22014	**Date Cast:**	-
Lab I.D. #:	42653	**Depth (Feet):**	8 - 10
Project Title	Laboratory Testing - Utica City Dump	**ASTM Method:**	D5084
Sample I.D.:	RSB-2 (T-1)		

Type of Sample

Method of Compaction:	--	**Undisturbed:**	--	**Remolded:**	X
Percent Compaction:	--	**Moisture Content (% of Dry Weight)**			
Initial Degree of Saturation (B Value) (%):	--	**Optimum:**	--	**Initial:**	24.4
Final Degree of Saturation (B Value) (%):	100.0	**Dry Unit Weight (PCF)**			
Permeant Liquid Used:	Deaired Deionized H_2O	**Maximum:**	--	**Initial:**	95.9
Final Moisture Content (% of Dry Weight):	26.6			**Final Dry Unit Weight (PCF):**	98.8

Confining Pressure (PSI):	71.0	**Test (head) Pressure (PSI):**	68.0	**Tail (back) Pressure (PSI):**	65.0

Initial Gradient:	20.9	**Initial Height (cm):**	10.10	**Initial Diameter (cm):**	7.30
Final Gradient:	21.2	**Final Height (cm):**	9.94	**Final Diameter (cm):**	7.25

Final Four Determinations k (cm/sec)

3.53×10^{-7}	3.55×10^{-7}
3.54×10^{-7}	3.56×10^{-7}

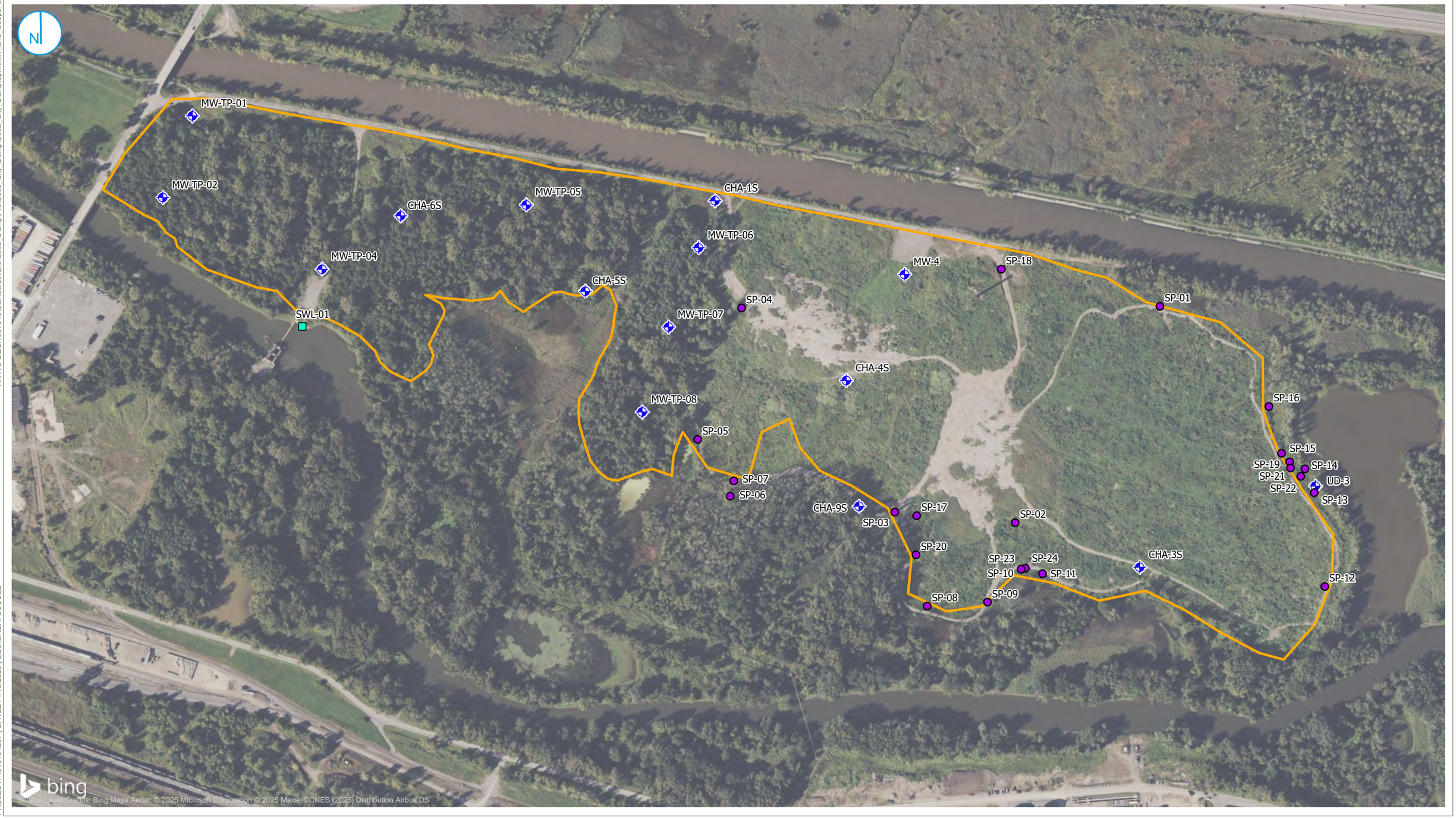
Mean Value of Final Four Consecutive Determinations - Coefficient of Permeability k (cm/sec): 3.55×10^{-7}

Remarks:

Appendix 3
Ramboll Groundwater and Seep Evaluation Report

K:\NYS-DEC.1087815\Standards\GIS\Utica_Dump\Pro\Utica_City_Dump\Utica_City_Dump.aprx\MW_and_Seeps_alt

PROJECT: 1940101207 | DATED: 4/15/2025 | DESIGNER: SSOULE



MONITORING WELL

SEEP

MOHAWK RIVER MEASUREMENT LOCATION

APPROXIMATE LIMITS OF LANDFILL

0 200 400 Feet

MONITORING WELLS AND SEEPS

NYSDEC UTICA CITY DUMP
UTICA, NEW YORK
ONEIDA COUNTY

FIGURE A3-1

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL

Table 2-1
Detected Constituents in Groundwater
Utica City Dump
Utica, NY

Analyte	Units	SGV	MW-TP-6-033023	CHA-5S-033023	MW-TP-5-033023	MW-TP-4-033023	CHA-6S-033023	FD-033023	MW-TP-8-032923	MW-TP-7-032923	MW-TP-1-033123	MW-TP-2-033123	UD-3-032823	CHA-3S-032823	CHA-9S-032823	CHA-4S-032823	MW-4-032923	CHA-1S-032923
Acetone	µg/L	50	13	<10	23	11	<4.0	11	7.5	34	92	31						
2-Butanone (MEK)	µg/L	50	<3.4	<8.4	3.3	<3.4	<3.4	<3.4	<1.7	3.4	19	<1.7						
Chlorobenzene	µg/L	5	<0.24	1.4	0.8	1.4	2	<0.24	4.1	<0.12	10	12						
Naphthalene	µg/L	10*	130	<1.9	<0.38	<0.76	<0.76	120	<0.38	<0.38	9.9	2						
Toluene	µg/L	5	<0.45	<1.1	<0.22	1.8	<0.45	<0.45	<0.22	<0.22	0.46	<0.22						
									<0.53	<0.51	<0.53	<0.53						
Acenaphthylene	µg/L	NC	<0.54	<0.56	<0.54	<0.54	<0.55	<0.55	<0.50	<0.48	1.5	<0.49						
Benzo(k)fluoranthene	µg/L	0.002	<0.61	<0.63	<0.61	<0.61	<0.62	<0.62	<8.3	9.6	<8.2	<8.2						
Bis(2-chloroisopropyl)ether	µg/L	NC	<0.62	<0.64	<0.62	<0.62	<0.63	<0.63	<0.83	<0.80	1.5	2.2						
1,3-Dichlorobenzene	µg/L	3	<0.62	<0.64	<0.62	<0.62	<0.63	<0.63	<0.62	<0.59	0.9	1						
2,4-Dichlorophenol	µg/L	5	<0.48	<0.49	<0.48	<0.48	<0.48	<0.48	0.5	<0.40	0.43	5.5						
Isophorone	µg/L	50*	<0.50	<0.52	<0.50	<0.50	<0.51	<0.51	<0.57	<0.55	5	1.3						
1-Methylnaphthalene	µg/L	NC	<0.56	<0.58	<0.56	<0.56	<0.57	<0.57	<0.67	<0.64	6	<0.66						
2-Methylphenol	µg/L	NC	<0.47	<0.49	<0.47	<0.47	<0.48	<0.48	0.73	<0.41	<0.43	0.98						
3/4-Methylphenol	µg/L	NC	0.97	<0.43	15	<0.42	<0.43	1	<0.59	<0.57	3.8	<0.59						
Naphthalene	µg/L	10	64	<0.60	0.6	<0.58	<0.59	66	<0.71	<0.69	<0.71	<0.71						
Phenol	µg/L	1	<0.19	<0.19	1.9	<0.19	<0.19	<0.19	<0.65	<0.62	<0.64	<0.64						
1,4-Dioxane	µg/L	0.35	<0.032	1.7	0.58	0.18	<0.032	<0.032	<0.032	0.18	<0.032	<0.032	2.7	38	0.81	<0.032	5.8	<0.033
Perfluorobutanoic acid (PFBA)	ng/L		32	41	97	16	11	34	25	84	33	54	52	76	4.1	8.7	45	6
Perfluorobutanesulfonic acid (PFBS)	ng/L		2.3	<7.4	6.4	12	13	3.2	28	4.9	12	15	66	39	4.6	5.2	<3.9	2.9
Perfluoropentanoic acid (PFPeA)	ng/L		10	<8.0	41	16	12	12	10	45	7.8	45	63	54	34	18	18	3.9
Perfluorohexanoic acid (PFHxA)	ng/L		7.8	12	34	11	11	8.3	15	41	16	17	91	68	5.6	4.4	12	2.7
Hexafluoropropylene oxide dimer acid (HFPO	ng/L		<0.55	<5.9	<1.2	<1.2	<0.54	0.87	<1.3	<0.56	<0.64	<1.6	<1.2	<1.2	<1.2	<0.52	<3.1	<1.2
Perfluoroheptanesulfonic acid (PFHpS)	ng/L		2.3	<8.2	9	16	16	1.7	28	5.4	3.8	10	39	13	7.1	1.8	<4.4	2.8
N-EtFOSAA (NEtFOSAA)	ng/L		0.85	<8.0	2.6	6	<0.73	0.81	16	0.9	9.7	12	7.2	22	<1.7	<0.70	<4.3	<1.7
Perfluoro-1-hexanesulfonamide (FHxSA)	ng/L		<0.98	<11	<2.2	<2.1	<0.96	<0.95	3	<1.0	<1.2	<2.9	8.5	<2.2	<2.2	<0.92	<5.6	<2.2
Perfluoro-1-butanesulfonamide (FBSA)	ng/L		<0.73	<7.8	1.8	2.1	2.7	<0.70	5.8	<0.74	<0.85	2.5	17	6.8	<1.6	<0.68	<4.2	<1.6
Perfluorohexanesulfonic acid (PFHxS)	ng/L		5.4	20	31	67	46	5.2	110	7	13	43	150	74	20	6.7	<3.8	2.1
Perfluoro-4-oxapentanoic acid (PFMPA)	ng/L		<0.66	<7.1	<1.5	<1.5	<0.65	<0.64	<1.5	0.86	1	<2.0	<1.5	<1.5	<1.5	<0.62	<3.8	<1.5
Perfluoropetanesulfonic acid (PFPeS)	ng/L		0.79	<7.6	7.8	22	17	0.92	38	1.8	5	12	64	24	4.6	0.89	<4.1	<1.6
Perfluoroheptanoic acid (PFHpA)	ng/L		6.2	12	35	15	10	8.3	24	31	11	11	96	60	14	7.5	<4.5	3.7
Perfluorooctanoic acid (PFOA)	ng/L	6.7	34	75	120	120	110	38	240	160	34	94	540	270	41	30	16	57
Perfluorooctanesulfonic acid (PFOS)	ng/L	2.7	54	110	220	260	240	65	620	200	76	250	430	180	140	45	<4.5	510
Perfluorononanoic acid (PFNA)	ng/L		2	<9.2	6.5	<1.9	2.5	1.9	8.6	9.5	1.1	<2.6	14	4.9	<1.9	1.3	<4.9	3.1
Aroclor-1016	µg/L		<0.056	<0.056	<0.056	<0.057	<0.056	<0.056	<0.057	<0.056	<0.056	<0.057	<0.058	<0.056	<0.059	<0.056	<0.056	<0.056
Aroclor-1221	µg/L		<0.078	<0.078	<0.078	<0.079	<0.078	<0.078	<0.079	<0.078	<0.078	<0.079	<0.080	<0.078	<0.081	<0.078	<0.078	<0.077
Aroclor-1232	µg/L		<0.070	<0.070	<0.070	<0.072	<0.070	<0.070	<0.072	<0.070	<0.070	<0.072	<0.072	<0.070	<0.073	<0.070	<0.070	<0.070
Aroclor-1242	µg/L		<0.075	<0.075	<0.075	<0.077	<0.075	<0.075	<0.077	<0.075	<0.075	<0.077	<0.077	<0.075	<0.078	<0.075	<0.075	<0.074
Aroclor-1248	µg/L		<0.079	<0.079	0.097	<0.087	<0.079	<0.079	<0.081	<0.079	<0.079	<0.087	<0.082	<0.079	<0.082	<0.079	<0.079	<0.078
Aroclor-1254	µg/L		<0.078	<0.078	0.11	<0.092	<0.078	<0.078	<0.079	<0.078	<0.091	<0.092	<0.080	<0.078	<0.081	<0.078	<0.078	<0.077
Aroclor-1260	µg/L		<0.058	<0.058	<0.058	<0.059	<0.058	<0.058	<0.059	<0.058	<0.071	<0.059	<0.060	<0.058	<0.060	<0.058	<0.058	<0.057
Aroclor-1262	µg/L		<0.090	<0.090	<0.090	<0.092	<0.090	<0.090	<0.092	<0.090	<0.090	<0.092	<0.093	<0.090	<0.094	<0.090	<0.090	<0.089
Aroclor-1268	µg/L		<0.072	<0.072	<0.072	<0.073	<0.072	<0.072	<0.073	<0.072	<0.072	<0.073	<0.074	<0.072	<0.075	<0.072	<0.072	<0.071
Total PCBs	µg/L	0.09	ND	ND	0.11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
													Min					
Aluminum	mg/L	0.025	0.23	0.073	0.074	<0.045	<0.045	0.2	<0.045	0.051	<0.045	0.11						
Barium	mg/L	1	0.19	0.21	0.33	0.14	0.12	0.19	0.13	0.19	0.28	0.22						
Calcium	mg/L	NC	400	140	180	240	210	390	230	270	100	230						
Cobalt	mg/L	NC	0.012	<0.0021	0.0057	0.0038	<0.0021	0.012	0.018	0.0075	0.004	0.0066						
Copper	mg/L	0.2	0.0059	<0.0036	0.033	0.0077	<0.0036	0.006	0.0058	0.0085	<0.0036	0.016						
Iron	mg/L	0.3	4.5	65	6.4	7.9	2.8	4.6	19	1.5	13	38						
Lead	mg/L	0.025	0.033	<0.0068	0.011	<0.0068	<0.0068	0.03	<0.0068	<0.0068	<0.0068	0.0071						
Magnesium	mg/L	35	32	26	30	40	18	32	22	17	12	37						
Manganese	mg/L	0.3	5.2	2.5	2.9	1.1	0.13	5.2	2	2.7	1.2	2.4						
Mercury	mg/L	0.0007	<0.00014	<0.00014	0.00017	<0.00014	<0.00014	<0.00014	<0.000040	<0.000040	<0.00014	0.00015						
Nickel	mg/L	0.1	0.011	<0.0098	<0.0098	0.017	<0.0098	0.011	0.021	0.014	0.0099	0.01						
Potassium	mg/L	NC	16	13	13	12	11	16	7.1	12	10	22						
Sodium	mg/L	20	8	48	18	41	68	8.1	4.6	7.8	320	14						
Vanadium	mg/L	NC	0.04	0.036	0.039	0.041	0.03	0.04	<0.0038	<0.0038	0.023	0.041						
Zinc	mg/L	2	0.2	<0.0042	0.063	0.11	0.22	0.19	0.079	0.34	0.048	0.11						
Boron	mg/L	1000	0.18	0.23	0.16	0.29	0.2	0.17	0.2	0.11	0.21	0.44						
Hardness	mg/L		1100	450	580	770	610	1100	670	750	310	730						
Ammonia as N	mg/L		0.7	22	7.7	3.8	3.8	0.7	3.2	0.84	16	38						
Bromide	mg/L	2000*	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15						
Chemical Oxygen Demand	mg/L		24	<13	<13	<13	<13	<13	39	60	75	63						
Chloride	mg/L	250000	6.7	31	19	30	69	6.7	4.9	6.7	320	7.3						
Sulfate	mg/L	250000	510	<0.32	19	100	110	510	100	220	61	50						
Total Organic Carbon	mg/L		28	87	32	75	32	34	34	22	60	130						
Alkalinity to pH 4.5	mg/L		600	570	570	680	550	600	580	560	550	790						
Total Dissolved Solids	mg/L		1300	520	600	840	770	1300	720	870	1000	650						

Notes:
SGV - Class GA Groundwater Standards and Gudiance Values as compiled in TOGS 1.1.1 Ambient Water Quality Standards and Guidance Valuesand Groundwater Effluent Limitations, NYSDEC Div. of Water, June 1998 and associated adenda
* Guidance Value
Shaded valued greater than groundwater SGV.

Table 2-2
DETECTED CONSTITUENTS IN SEEP SAMPLES

Utica City Dump
Utica, NY

CLIENT ID		Class C Surface Water Standard	SP-01-051922	SP-14-051922	SP-10-051922	SP-05-051922	SP-01 DUP
DATE SAMPLED			19-May-22	19-May-22	19-May-22	19-May-22	19-May-22
VOCs							
Chlorobenzene	µg/L	5	0.48	<0.21	9	0.76	0.52
1,4-Dichlorobenzene	µg/L	5	<0.52	<0.26	2	0.3	<0.52
Toluene	µg/L	100^	<0.90	<0.45	<0.90	3.4	<0.90
SVOCs							
Caprolactam	µg/L	NC	<0.29	1.8	<0.27	<0.29	<0.28
3/4-Methylphenol	µg/L	5*	3.2	<0.46	<0.44	<0.47	<0.46
Phenol	µg/L	5*	0.26	<0.23	<0.22	<0.23	<0.23
1,4-Dioxane	µg/L	18,000	13	1.6	2.9	0.34	13
PFAS							
Perfluorobutanoic acid (PFBA)	ng/L	NC	26	33	<7.4	6.4	25
Perfluorobutanesulfonic acid (PFBS)	ng/L	NC	12	16	9.7	4.1	11
Perfluoropentanoic acid (PFPeA)	ng/L	NC	25	41	13	6	24
Perfluorohexanoic acid (PFHxA)	ng/L	NC	41	66	24	9.7	39
Perfluoroheptanesulfonic acid (PFHpS)	ng/L	NC	13	24	10	3.2	11
N-EtFOSAA	ng/L	NC	9.4	<6.3	63	1.6	8.3
Perfluorooctanesulfonamide (FOSA)	ng/L	NC	1.8	<4.2	6.4	<0.84	2
Perfluoro-1-hexanesulfonamide (FHxSA)	ng/L	NC	1.1	7	<3.1	<0.62	1
Perfluoro-1-butanesulfonamide (FBSA)	ng/L	NC	3.4	12	5.2	0.85	3
Perfluorohexanesulfonic acid (PFHxS)	ng/L	NC	43	100	69	17	44
Perfluoropetanesulfonic acid (PFPeS)	ng/L	NC	11	28	12	3.6	12
Perfluoroheptanoic acid (PFHpA)	ng/L	NC	25	95	28	8.7	25
Perfluorooctanoic acid (PFOA)	ng/L	NC	210	410	170	82	200
Perfluorooctanesulfonic acid (PFOS)	ng/L	160,000	260	540	350	64	250
Perfluorononanoic acid (PFNA)	ng/L	NC	3.8	8.2	<3.5	1.2	3.2
PCBs							
					None Detected		
INORGANICS		ppm					
Aluminum	mg/L	0.1	0.17	1.1	<0.015	0.42	0.32
Antimony	mg/L	NC	<0.0089	<0.0089	<0.0089	<0.0089	<0.0089
Arsenic	mg/L	0.15	<0.0047	<0.0047	<0.0047	0.012	<0.0047
Barium	mg/L	NA	1.2	0.35	0.4	1.3	1.1
Beryllium	mg/L	1.1	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cadmium	mg/L	0.0113	<0.00080	0.0035	<0.00080	0.0036	<0.00080
Calcium	mg/L	NC	210	200	290	330	220
Chromium	mg/L	0.4319	0.0029	0.0039	<0.0025	0.0074	0.0033
Cobalt	mg/L	0.005	0.0024	0.0071	0.0024	0.0044	0.0022
Copper	mg/L	0.0563	0.0071	0.018	0.0052	0.041	0.018
Iron	mg/L	0.3	50	3.5	35	54	48
Lead	mg/L	0.0354	<0.0030	<0.0030	<0.0030	0.064	0.028
Magnesium	mg/L	NC	42	92	47	30	44
Manganese	mg/L	NC	0.57	6.5	0.7	0.75	0.59
Mercury	mg/L	0.00077	0.000058	0.000046	<0.000040	0.000049	<0.000040
Nickel	mg/L	0.3212	<0.0088	0.026	<0.0088	0.023	0.0091
Potassium	mg/L	NC	23	21	19	29	24
Selenium	mg/L	0.0046	<0.011	<0.011	<0.011	<0.011	<0.011
Silver	mg/L	0.0001	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032
Sodium	mg/L	NC	27	16	16	44	29
Thallium	mg/L	0.008	<0.019	<0.019	<0.019	<0.019	<0.019
Vanadium	mg/L	0.014	0.013	<0.0031	0.012	0.011	0.014
Zinc	mg/L	0.5147	0.028	0.044	0.0085	0.49	0.14
Hardness	mg/L	--	670	910	860	910	720
OTHER CONSTITUENTS							
Alkalinity	mg/L	NC	870	1000	960	910	780
Ammonia as N	mg/L	NC	20	14	28	7.4	20
Chemical Oxygen Demand	mg/L	NC	200	64	80	360	160
Cyanide	mg/L	5.2	0.0088	0.0094	0.01	0.011	0.0081
Phenol	mg/L	5*	0.081	0.088	0.095	0.095	<0.048
Total Kjeldahl Nitrogen	mg/L	NC	30	17	33	17	22
Total Dissolved Solids	mg/L	NC	710	840	830	880	700
B.O.D./5 day	mg/L	NC	3.8	8.7	<3.7	12	4.4
pH (field measured)			7.16	7.08	6.89	7.34	7.16

Notes:
Class C Surface water standard or guidance as compiled in Standards and Gudiance Values as compiled in TOGS 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, NYSDEC Div. of Water, June 1998 and associated adenda
* - total unchlorinated phenols aesthetic criterion
^ - Guidance value
Concentration above Class C Surface Water Standard or Guidance

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July 18, 2022

Deborah Y. Wright
NYDEC_Ramboll US Consulting, Inc. - Syracuse
333 West Washington Street, PO Box 4873
Syracuse, NY 13221

Project Location: Incinerator Rd, Utica, NY
Client Job Number:
Project Number: 633015
Laboratory Work Order Number: 22E1360

Enclosed are results of analyses for samples as received by the laboratory on May 20, 2022. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Raymond J. McCarthy
Project Manager

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NYDEC_Ramboll US Consulting, Inc. - Syracuse
333 West Washington Street, PO Box 4873
Syracuse, NY 13221
ATTN: Deborah Y. Wright

REPORT DATE: 7/18/2022

PURCHASE ORDER NUMBER: 144354

PROJECT NUMBER: 633015

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 22E1360

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

PROJECT LOCATION: Incinerator Rd, Utica, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SP-01-051922	22E1360-01	Surface Water		EPA 410.4	
				EPA 420.1	
				SM 21-23 5210B	MA M-CT007/CT PH-0618/NY11301
				SM19-23 4500 NH3 C	
				SM19-23 4500-N Org B,C-NH3 C	
				SM21-23 2320B	
				SM21-23 2540C	
				SM21-23 4500 CN E	
				SOP-454 PFAS	
				SW-846 6010	
				SW-846 6010D	
				SW-846 7470A	
				SW-846 8082A	
				SW-846 8260D	
				SW-846 8270E	
SP-14-051922	22E1360-02	Surface Water		EPA 410.4	
				EPA 420.1	
				SM 21-23 5210B	MA M-CT007/CT PH-0618/NY11301
				SM19-23 4500 NH3 C	
				SM19-23 4500-N Org B,C-NH3 C	
				SM21-23 2320B	
				SM21-23 2540C	
				SM21-23 4500 CN E	
				SOP-454 PFAS	
				SW-846 6010	
				SW-846 6010D	
				SW-846 7470A	
				SW-846 8082A	
				SW-846 8260D	
				SW-846 8270E	

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REPORT DATE: 7/18/2022

PURCHASE ORDER NUMBER: 144354

PROJECT NUMBER: 633015

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 22E1360

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

PROJECT LOCATION: Incinerator Rd, Utica, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SP-10-051922	22E1360-03	Surface Water		EPA 410.4	
				EPA 420.1	
				SM 21-23 5210B	MA M-CT007/CT PH-0618/NY11301
				SM19-23 4500 NH3 C	
				SM19-23 4500-N Org B,C-NH3 C	
				SM21-23 2320B	
				SM21-23 2540C	
				SM21-23 4500 CN E	
				SOP-454 PFAS	
				SW-846 6010	
				SW-846 6010D	
				SW-846 7470A	
				SW-846 8082A	
				SW-846 8260D	
				SW-846 8270E	
SP-05-051922	22E1360-04	Surface Water		EPA 410.4	
				EPA 420.1	
				SM 21-23 5210B	MA M-CT007/CT PH-0618/NY11301
				SM19-23 4500 NH3 C	
				SM19-23 4500-N Org B,C-NH3 C	
				SM21-23 2320B	
				SM21-23 2540C	
				SM21-23 4500 CN E	
				SOP-454 PFAS	
				SW-846 6010	
				SW-846 6010D	
				SW-846 7470A	
				SW-846 8082A	
				SW-846 8260D	
				SW-846 8270E	

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333 West Washington Street, PO Box 4873
Syracuse, NY 13221
ATTN: Deborah Y. Wright

REPORT DATE: 7/18/2022

PURCHASE ORDER NUMBER: 144354

PROJECT NUMBER: 633015

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 22E1360

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

PROJECT LOCATION: Incinerator Rd, Utica, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
FD-051922	22E1360-05	Surface Water		EPA 410.4	
				EPA 420.1	
				SM 21-23 5210B	MA M-CT007/CT PH-0618/NY11301
				SM19-23 4500 NH3 C	
				SM19-23 4500-N Org B,C-NH3 C	
				SM21-23 2320B	
				SM21-23 2540C	
				SM21-23 4500 CN E	
				SOP-454 PFAS	
				SW-846 6010	
				SW-846 6010D	
				SW-846 7470A	
				SW-846 8082A	
				SW-846 8260D	
				SW-846 8270E	
TB-051922	22E1360-06	Surface Water		SW-846 8260D	

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CASE NARRATIVE SUMMARY

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

For PFAS Isotope: Samples required centrifugation and dilution prior to extraction due to sample matrix.

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EPA 410.4

Qualifications:

Z-01a

Test EPA 410.4 had a calibration point outside acceptable limits. Reanalysis yielded similar non-conformance.

Analyte & Samples(s) Qualified:

Chemical Oxygen Demand

22E1360-01[SP-01-051922], 22E1360-02[SP-14-051922], 22E1360-03[SP-10-051922], 22E1360-04[SP-05-051922], 22E1360-05[FD-051922], B309781-MS1, B309781-MSD1

SM21-23 2320B

Qualifications:

PR-18

Headspace present in sample container.

Analyte & Samples(s) Qualified:

Alkalinity

22E1360-01[SP-01-051922], 22E1360-02[SP-14-051922], B309331-MS1, B309331-MSD1

SM21-23 4500 CN E

Qualifications:

E

Reported result is estimated. Value reported over verified calibration range.

Analyte & Samples(s) Qualified:

Cyanide

B309611-BSD1

MS-07

Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery.Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

Analyte & Samples(s) Qualified:

Cyanide

22E1360-02[SP-14-051922], B309611-MS1, B309611-MSD1

SOP-454 PFAS

Qualifications:

MS-12

Matrix spike recovery and matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

Analyte & Samples(s) Qualified:

Perfluorooctanesulfonic acid (PFO

B309532-MS1, B309532-MSD1

MS-22

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 within method specified criteria.

Analyte & Samples(s) Qualified:

Perfluoroheptanoic acid (PFHpA)

B308947-MSD1

Perfluorooctanesulfonic acid (PFO

B308947-MS1

Perfluorooctanoic acid (PFOA)

B308947-MS1

PF-17

Extracted Internal Standard recovery is outside of control limits. Data is not significantly affected since associated analyte is not detected and bias is on the high side.

Analyte & Samples(s) Qualified:

M2-4:2FTS

22E1360-01[SP-01-051922], 22E1360-04[SP-05-051922], 22E1360-05[FD-051922]

M2-6:2FTS

22E1360-01[SP-01-051922], 22E1360-04[SP-05-051922], 22E1360-05[FD-051922]

M2-8:2FTS

22E1360-01[SP-01-051922], 22E1360-04[SP-05-051922], 22E1360-05[FD-051922]

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PF-18

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

Analyte & Samples(s) Qualified:

M2-4:2FTS
B308947-MS1, B308947-MSD1

M2-6:2FTS
B308947-MS1, B308947-MSD1

M2-8:2FTS
B308947-MS1, B308947-MSD1

MPFBA
B308947-MS1, B308947-MSD1

PF-19

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

Analyte & Samples(s) Qualified:

M2PFTA
22E1360-04[SP-05-051922]

M3HFPO-DA
22E1360-01[SP-01-051922], 22E1360-04[SP-05-051922], 22E1360-05[FD-051922]

MPFBA
22E1360-01[SP-01-051922], 22E1360-04[SP-05-051922], 22E1360-05[FD-051922]

PF-20

Sample extracted at a dilution. Elevated reporting limits due to adjusted sample volume during preparation.

Analyte & Samples(s) Qualified:

22E1360-01[SP-01-051922], 22E1360-02RE1[SP-14-051922], 22E1360-03RE1[SP-10-051922], 22E1360-04[SP-05-051922], 22E1360-05[FD-051922]

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:

Perfluoro(2-ethoxyethane)sulfonic
S072522-CCV1

Z-01

Analyte qualifier ion ratio is >150%. Analyte detection suspect.

Analyte & Samples(s) Qualified:

Perfluorononanoic acid (PFNA)
22E1360-01[SP-01-051922], 22E1360-04[SP-05-051922], 22E1360-05[FD-051922]

SW-846 6010

Qualifications:

MS-19

Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.

Analyte & Samples(s) Qualified:

Hardness
22E1360-02[SP-14-051922], B309124-MS1, B309124-MSD1

SW-846 6010D

Qualifications:

MS-12

Matrix spike recovery and matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

Analyte & Samples(s) Qualified:

Aluminum
22E1360-02[SP-14-051922], B309124-MS1, B309124-MSD1

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MS-19

Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.

Analyte & Samples(s) Qualified:

Calcium
22E1360-02[SP-14-051922], B309124-MS1, B309124-MSD1

Magnesium
22E1360-02[SP-14-051922], B309124-MS1, B309124-MSD1

Manganese
22E1360-02[SP-14-051922], B309124-MS1, B309124-MSD1

Potassium
22E1360-02[SP-14-051922], B309124-MS1, B309124-MSD1

SW-846 8260D

Qualifications:

DL-01

Elevated reporting limits for all volatile compounds due to foaming sample matrix.

Analyte & Samples(s) Qualified:

22E1360-01[SP-01-051922], 22E1360-02[SP-14-051922], 22E1360-03[SP-10-051922], 22E1360-04[SP-05-051922], 22E1360-05[FD-051922]

L-02

Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.

Analyte & Samples(s) Qualified:

Bromoform
B309329-BS1, B309329-BSD1, B309329-MS1, B309329-MSD1

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:

Bromomethane
B309329-BSD1

MS-07A

Matrix spike and spike duplicate recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of matrix effects that lead to low bias or non-homogeneous sample aliquot cannot be eliminated.

Analyte & Samples(s) Qualified:

Ethylbenzene
B309329-MS1

m+p Xylene
B309329-MS1

o-Xylene
B309329-MS1

MS-15

Matrix spike and matrix spike duplicate recoveries are outside of control limits. Data validation is not affected since results for this compound in this sample are "not detected", and recovery bias is on the high side.

Analyte & Samples(s) Qualified:

Bromoform
B309329-MS1, B309329-MSD1

Bromomethane
B309329-MS1, B309329-MSD1

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:

2-Butanone (MEK)
22E1360-01[SP-01-051922], 22E1360-02[SP-14-051922], 22E1360-03[SP-10-051922], 22E1360-04[SP-05-051922], 22E1360-05[FD-051922], 22E1360-06[TB-051922], B309329-BLK1, B309329-BS1, B309329-BSD1, B309329-MS1, B309329-MSD1

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V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Bromoform

B309329-BS1, B309329-BSD1, B309329-MS1, B309329-MSD1, S072092-CCV1

Bromomethane

B309329-BS1, B309329-BSD1, B309329-MS1, B309329-MSD1, S072092-CCV1

SW-846 8270E

Qualifications:

B

Analyte is found in the associated laboratory blank as well as in the sample.

Analyte & Samples(s) Qualified:

Phosphine imide, P,P,P-trip...

22E1360-01[SP-01-051922], 22E1360-03[SP-10-051922], 22E1360-03RE1[SP-10-051922], 22E1360-04[SP-05-051922], B309306-BLK1, B310070-BLK1

H-06

Sample was extracted past the recommended holding time.

Analyte & Samples(s) Qualified:

22E1360-03RE1[SP-10-051922]

L-04

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Caprolactam

22E1360-01[SP-01-051922], 22E1360-02[SP-14-051922], 22E1360-03[SP-10-051922], 22E1360-03RE1[SP-10-051922], 22E1360-04[SP-05-051922], 22E1360-05[FD-051922], B309306-BLK1, B309306-BS1, B309306-BSD1, B310070-BLK1, B310070-BS1, B310070-BSD1

Hexachlorocyclopentadiene

22E1360-01[SP-01-051922], 22E1360-02[SP-14-051922], 22E1360-03[SP-10-051922], 22E1360-03RE1[SP-10-051922], 22E1360-04[SP-05-051922], 22E1360-05[FD-051922], B309306-BLK1, B309306-BS1, B309306-BSD1, B310070-BLK1, B310070-BS1, B310070-BSD1

Hexachloroethane

22E1360-03RE1[SP-10-051922], B310070-BLK1, B310070-BS1, B310070-BSD1

MS-09

Matrix spike recovery and/or matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a low bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

Analyte & Samples(s) Qualified:

3,3-Dichlorobenzidine

22E1360-02[SP-14-051922], B309306-MS1, B309306-MSD1

Caprolactam

22E1360-02[SP-14-051922], B309306-MS1, B309306-MSD1

Hexachlorocyclopentadiene

22E1360-02[SP-14-051922], B309306-MS1, B309306-MSD1

MS-22

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 within method specified criteria.

Analyte & Samples(s) Qualified:

Phenol

B309306-MS1

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S-10

Sample was re-extracted outside of holding time since surrogate standard recovery was outside of control limits. Data from analysis performed outside of holding time is also reported since surrogate recovery is acceptable.

Analyte & Samples(s) Qualified:

2,4,6-Tribromophenol
22E1360-03[SP-10-051922]

2-Fluorobiphenyl
22E1360-03[SP-10-051922]

2-Fluorophenol
22E1360-03[SP-10-051922]

Nitrobenzene-d5
22E1360-03[SP-10-051922]

Phenol-d6
22E1360-03[SP-10-051922]

p-Terphenyl-d14
22E1360-03[SP-10-051922]

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
S072939-CCV1

4,6-Dinitro-2-methylphenol
S072939-CCV1

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:

2,4-Dinitrophenol
22E1360-01[SP-01-051922], 22E1360-02[SP-14-051922], 22E1360-03[SP-10-051922], 22E1360-03RE1[SP-10-051922], 22E1360-04[SP-05-051922], 22E1360-05[FD-051922], B309306-BLK1, B309306-BS1, B309306-BSD1, B309306-MS1, B309306-MSD1, B310070-BLK1, B310070-BS1, B310070-BSD1, S072260-CCV1, S072339-CCV1, S072357-CCV1, S072504-CCV1

4,6-Dinitro-2-methylphenol
22E1360-02[SP-14-051922], 22E1360-05[FD-051922], B309306-BLK1, B309306-BS1, B309306-BSD1, B309306-MS1, B309306-MSD1, S072260-CCV1, S072357-CCV1

Bis(2-chloroethyl)ether
B309306-BLK1, B309306-BS1, B309306-BSD1, S072260-CCV1

Bis(2-chloroisopropyl)ether
B309306-BLK1, B309306-BS1, B309306-BSD1, S072260-CCV1

Bis(2-Ethylhexyl)phthalate
22E1360-02[SP-14-051922], 22E1360-05[FD-051922], B309306-MS1, B309306-MSD1, S072357-CCV1

Butylbenzylphthalate
22E1360-02[SP-14-051922], 22E1360-05[FD-051922], B309306-MS1, B309306-MSD1, S072357-CCV1

Di-n-octylphthalate
22E1360-02[SP-14-051922], 22E1360-05[FD-051922], B309306-MS1, B309306-MSD1, S072357-CCV1

Hexachlorocyclopentadiene
22E1360-01[SP-01-051922], 22E1360-02[SP-14-051922], 22E1360-03[SP-10-051922], 22E1360-03RE1[SP-10-051922], 22E1360-04[SP-05-051922], 22E1360-05[FD-051922], B309306-BLK1, B309306-BS1, B309306-BSD1, B309306-MS1, B309306-MSD1, B310070-BLK1, B310070-BS1, B310070-BSD1, S072260-CCV1, S072339-CCV1, S072357-CCV1, S072504-CCV1

Pentachlorophenol
22E1360-01[SP-01-051922], 22E1360-02[SP-14-051922], 22E1360-03[SP-10-051922], 22E1360-03RE1[SP-10-051922], 22E1360-04[SP-05-051922], 22E1360-05[FD-051922], B309306-BLK1, B309306-BS1, B309306-BSD1, B309306-MS1, B309306-MSD1, B310070-BLK1, B310070-BS1, B310070-BSD1, S072260-CCV1, S072339-CCV1, S072357-CCV1, S072504-CCV1

V-34

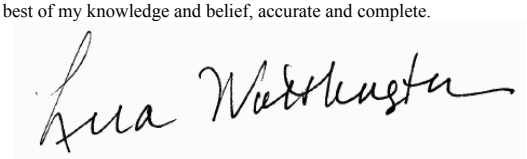
Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:

4-Chloroaniline
22E1360-01[SP-01-051922], 22E1360-02[SP-14-051922], 22E1360-03[SP-10-051922], 22E1360-03RE1[SP-10-051922], 22E1360-04[SP-05-051922], 22E1360-05[FD-051922], B309306-BLK1, B309306-BS1, B309306-BSD1, B309306-MS1, B309306-MSD1, B310070-BLK1, B310070-BS1, B310070-BSD1, S070338-ICV1, S072260-CCV1, S072339-CCV1, S072357-CCV1, S072504-CCV1, S072939-CCV1

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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.



Lisa A. Worthington
Technical Representative

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-01-051922 | Sampled: 5/19/2022 09:45

Sample ID: 22E1360-01

Sample Matrix: Surface Water

Sample Flags: DL-01

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	200	8.1	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Benzene	ND	4.0	0.80	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Bromochloromethane	ND	4.0	1.2	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Bromodichloromethane	ND	2.0	0.72	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Bromoform	ND	4.0	1.5	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Bromomethane	ND	8.0	6.2	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
2-Butanone (MEK)	ND	80	6.5	µg/L	4	R-05	SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Carbon Disulfide	ND	20	5.8	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Carbon Tetrachloride	ND	20	0.66	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Chlorobenzene	0.48	4.0	0.42	µg/L	4	J	SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Chlorodibromomethane	ND	2.0	0.89	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Chloroethane	ND	8.0	1.3	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Chloroform	ND	8.0	0.67	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Chloromethane	ND	8.0	2.1	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Cyclohexane	ND	20	7.0	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	20	3.2	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
1,2-Dibromoethane (EDB)	ND	2.0	0.68	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
1,2-Dichlorobenzene	ND	4.0	0.49	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
1,3-Dichlorobenzene	ND	4.0	0.47	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
1,4-Dichlorobenzene	ND	4.0	0.52	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Dichlorodifluoromethane (Freon 12)	ND	8.0	0.77	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
1,1-Dichloroethane	ND	4.0	0.57	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
1,2-Dichloroethane	ND	4.0	1.2	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
1,1-Dichloroethylene	ND	4.0	0.57	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
cis-1,2-Dichloroethylene	ND	4.0	0.59	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
trans-1,2-Dichloroethylene	ND	4.0	0.67	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
1,2-Dichloropropane	ND	4.0	0.72	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
cis-1,3-Dichloropropene	ND	2.0	0.63	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
trans-1,3-Dichloropropene	ND	2.0	0.67	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
1,4-Dioxane	ND	200	82	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Ethylbenzene	ND	4.0	0.86	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
2-Hexanone (MBK)	ND	40	4.5	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Isopropylbenzene (Cumene)	ND	4.0	0.43	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Methyl Acetate	ND	4.0	1.8	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Methyl tert-Butyl Ether (MTBE)	ND	4.0	0.69	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Methyl Cyclohexane	ND	4.0	0.98	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Methylene Chloride	ND	20	0.94	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
4-Methyl-2-pentanone (MIBK)	ND	40	5.1	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Styrene	ND	4.0	0.42	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
1,1,2,2-Tetrachloroethane	ND	2.0	0.51	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Tetrachloroethylene	ND	4.0	0.75	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Toluene	ND	4.0	0.90	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
1,2,3-Trichlorobenzene	ND	20	1.2	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
1,2,4-Trichlorobenzene	ND	4.0	0.99	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-01-051922 | Sampled: 5/19/2022 09:45

Sample ID: 22E1360-01

Sample Matrix: Surface Water

Sample Flags: DL-01

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	4.0	0.68	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
1,1,2-Trichloroethane	ND	4.0	0.73	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Trichloroethylene	ND	4.0	0.76	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Trichlorofluoromethane (Freon 11)	ND	8.0	0.70	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	4.0	0.91	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Vinyl Chloride	ND	8.0	0.83	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH
Xylenes (total)	ND	4.0	4.0	µg/L	4		SW-846 8260D	5/26/22	5/26/22 13:24	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	99.5	70-130		5/26/22 13:24
Toluene-d8	100	70-130		5/26/22 13:24
4-Bromofluorobenzene	102	70-130		5/26/22 13:24

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

Project Location: Incinerator Rd, Utica, NY
Sample Description:
Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-01-051922
Sampled: 5/19/2022 09:45

Sample ID: 22E1360-01

Sample Matrix: Surface Water

Tentatively Identified Compounds - Volatile Compounds (ESTIMATED VALUES REPORTED)

Analyte	Results	Units	Response	RT	DF	CAS #	Q#	Method	Date Prepared	Date/Time Analyzed	Analyst
No TICs Found	0.0	µg/L			4			SW-846 8260D	5/26/22	5/26/22 13:24	EEH

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-01-051922 | Sampled: 5/19/2022 09:45

Sample ID: 22E1360-01

Sample Matrix: Surface Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Atrazine	ND	21	0.57	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Benzaldehyde	ND	10	0.47	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Biphenyl	ND	21	0.43	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Caprolactam	ND	10	0.29	µg/L	1	L-04	SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Acenaphthene	ND	5.2	0.54	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Acenaphthylene	ND	5.2	0.50	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Acetophenone	ND	10	0.55	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Anthracene	ND	5.2	0.48	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Benzo(a)anthracene	ND	5.2	0.42	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Benzo(a)pyrene	ND	5.2	0.59	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Benzo(b)fluoranthene	ND	5.2	0.49	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Benzo(g,h,i)perylene	ND	5.2	0.64	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Benzo(k)fluoranthene	ND	5.2	0.51	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Bis(2-chloroethoxy)methane	ND	10	0.48	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Bis(2-chloroethyl)ether	ND	10	0.59	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Bis(2-chloroisopropyl)ether	ND	10	0.72	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Bis(2-Ethylhexyl)phthalate	ND	10	0.88	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
4-Bromophenylphenylether	ND	10	0.49	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Butylbenzylphthalate	ND	10	0.70	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Carbazole	ND	10	0.44	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
4-Chloroaniline	ND	10	0.60	µg/L	1	V-34	SW-846 8270E	5/26/22	6/3/22 18:44	IMR
4-Chloro-3-methylphenol	ND	10	0.58	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
2-Chloronaphthalene	ND	10	0.51	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
2-Chlorophenol	ND	10	0.49	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
4-Chlorophenylphenylether	ND	10	0.50	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Chrysene	ND	5.2	0.41	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Dibenz(a,h)anthracene	ND	5.2	0.72	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Dibenzofuran	ND	5.2	0.51	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Di-n-butylphthalate	ND	10	0.48	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
3,3-Dichlorobenzidine	ND	10	0.74	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
2,4-Dichlorophenol	ND	10	0.50	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Diethylphthalate	ND	10	0.44	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
2,4-Dimethylphenol	ND	10	0.73	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Dimethylphthalate	ND	10	0.39	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
4,6-Dinitro-2-methylphenol	ND	10	7.3	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
2,4-Dinitrophenol	ND	10	8.4	µg/L	1	V-05	SW-846 8270E	5/26/22	6/3/22 18:44	IMR
2,4-Dinitrotoluene	ND	10	0.64	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
2,6-Dinitrotoluene	ND	10	0.54	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Di-n-octylphthalate	ND	10	4.1	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Fluoranthene	ND	5.2	0.45	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Fluorene	ND	5.2	0.54	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Hexachlorobenzene	ND	10	0.53	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Hexachlorobutadiene	ND	10	0.81	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Hexachlorocyclopentadiene	ND	10	3.8	µg/L	1	V-05, L-04	SW-846 8270E	5/26/22	6/3/22 18:44	IMR

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-01-051922 | Sampled: 5/19/2022 09:45

Sample ID: 22E1360-01

Sample Matrix: Surface Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachloroethane	ND	10	0.77	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Indeno(1,2,3-cd)pyrene	ND	5.2	0.77	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Isophorone	ND	10	0.57	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
2-Methylnaphthalene	ND	5.2	0.72	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
2-Methylphenol	ND	10	0.49	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
3/4-Methylphenol	3.2	10	0.48	µg/L	1	J	SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Naphthalene	ND	5.2	0.64	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
2-Nitroaniline	ND	10	0.72	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
3-Nitroaniline	ND	10	0.61	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
4-Nitroaniline	ND	10	0.62	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Nitrobenzene	ND	10	0.65	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
2-Nitrophenol	ND	10	0.53	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
4-Nitrophenol	ND	10	2.2	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	10	0.40	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
N-Nitrosodi-n-propylamine	ND	10	0.64	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Pentachlorophenol	ND	10	3.7	µg/L	1	V-05	SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Phenanthrene	ND	5.2	0.50	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Phenol	0.26	10	0.24	µg/L	1	J	SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Pyrene	ND	5.2	0.64	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
1,2,4,5-Tetrachlorobenzene	ND	10	0.68	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
2,4,5-Trichlorophenol	ND	10	0.54	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR
2,4,6-Trichlorophenol	ND	10	0.47	µg/L	1		SW-846 8270E	5/26/22	6/3/22 18:44	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	48.2	15-110		6/3/22 18:44
Phenol-d6	34.9	15-110		6/3/22 18:44
Nitrobenzene-d5	79.8	30-130		6/3/22 18:44
2-Fluorobiphenyl	79.9	30-130		6/3/22 18:44
2,4,6-Tribromophenol	92.8	15-110		6/3/22 18:44
p-Terphenyl-d14	89.2	30-130		6/3/22 18:44

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-01-051922 | Sampled: 5/19/2022 09:45

Sample ID: 22E1360-01

Sample Matrix: Surface Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	13	0.21	0.034	µg/L	1		SW-846 8270E	5/26/22	6/2/22 7:56	CLA

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
1,4-Dioxane-d8	30.5	15-110		6/2/22 7:56	

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-01-051922 | Sampled: 5/19/2022 09:45

Sample ID: 22E1360-01

Sample Matrix: Surface Water

Sample Flags: PF-20

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	26	4.0	1.5	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
Perfluorobutanesulfonic acid (PFBS)	12	4.0	0.56	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
Perfluoropentanoic acid (PFPeA)	25	4.0	0.79	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
Perfluorohexanoic acid (PFHxA)	41	4.0	0.77	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
11Cl-PF3OUdS (F53B Minor)	ND	4.0	1.3	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
9Cl-PF3ONS (F53B Major)	ND	4.0	0.78	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.0	0.70	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.0	0.48	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	4.0	1.2	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
Perfluorodecanoic acid (PFDA)	ND	4.0	0.98	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
Perfluorododecanoic acid (PFDoA)	ND	4.0	0.88	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	4.0	0.46	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
Perfluoroheptanesulfonic acid (PFHpS)	13	4.0	1.9	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
N-EtFOSAA	9.4	4.0	1.3	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
N-MeFOSAA	ND	4.0	1.5	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
Perfluorotetradecanoic acid (PFTA)	ND	4.0	0.73	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	4.0	0.55	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	4.0	0.56	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	4.0	0.65	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
Perfluorooctanesulfonamide (FOSA)	1.8	4.0	0.84	ng/L	1	J	SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
Perfluorononanesulfonic acid (PFNS)	ND	4.0	0.34	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	1.1	4.0	0.62	ng/L	1	J	SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
Perfluoro-1-butanesulfonamide (FBSA)	3.4	4.0	0.38	ng/L	1	J	SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
Perfluorohexanesulfonic acid (PFHxS)	43	4.0	0.68	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	4.0	0.83	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	4.0	0.68	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	4.0	0.73	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
Perfluoropetanesulfonic acid (PFPeS)	11	4.0	0.52	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
Perfluoroundecanoic acid (PFUnA)	ND	4.0	0.74	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	4.0	0.55	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
Perfluoroheptanoic acid (PFHpA)	25	4.0	0.69	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
Perfluorooctanoic acid (PFOA)	210	4.0	1.4	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
Perfluorooctanesulfonic acid (PFOS)	260	4.0	1.2	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH
Perfluorononanoic acid (PFNA)	3.8	4.0	0.69	ng/L	1	Z-01, J	SOP-454 PFAS	5/23/22	5/25/22 9:48	BLH

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-01-051922 | Sampled: 5/19/2022 09:45

Sample ID: 22E1360-01

Sample Matrix: Surface Water

Tentatively Identified Compounds - SV Compounds (ESTIMATED VALUES REPORTED)

Analyte	Results	Units	Response	RT	DF	CAS #	Q#	Method	Date Prepared	Date/Time Analyzed	Analyst
n-Hexadecanoic acid	15	µg/L	421562	6.284	1	000057-10-3	99	SW-846 8270E	5/26/22	6/3/22 18:44	IMR
Phosphine imide, P,P,P-trip...	17	µg/L	408833	8.503	1	002240-47-3	97	SW-846 8270E	5/26/22	6/3/22 18:44	IMR

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Date Received: 5/20/2022

Field Sample #: SP-01-051922 | Sampled: 5/19/2022 09:45

Sample ID: 22E1360-01

Sample Matrix: Surface Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	0.053	µg/L	1		SW-846 8082A	5/26/22	6/4/22 13:30	SFM
Aroclor-1221 [1]	ND	0.20	0.079	µg/L	1		SW-846 8082A	5/26/22	6/4/22 13:30	SFM
Aroclor-1232 [1]	ND	0.20	0.073	µg/L	1		SW-846 8082A	5/26/22	6/4/22 13:30	SFM
Aroclor-1242 [1]	ND	0.20	0.076	µg/L	1		SW-846 8082A	5/26/22	6/4/22 13:30	SFM
Aroclor-1248 [1]	ND	0.20	0.088	µg/L	1		SW-846 8082A	5/26/22	6/4/22 13:30	SFM
Aroclor-1254 [1]	ND	0.20	0.078	µg/L	1		SW-846 8082A	5/26/22	6/4/22 13:30	SFM
Aroclor-1260 [1]	ND	0.20	0.062	µg/L	1		SW-846 8082A	5/26/22	6/4/22 13:30	SFM
Aroclor-1262 [1]	ND	0.20	0.064	µg/L	1		SW-846 8082A	5/26/22	6/4/22 13:30	SFM
Aroclor-1268 [1]	ND	0.20	0.077	µg/L	1		SW-846 8082A	5/26/22	6/4/22 13:30	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	38.8	30-150		6/4/22 13:30
Decachlorobiphenyl [2]	34.6	30-150		6/4/22 13:30
Tetrachloro-m-xylene [1]	44.4	30-150		6/4/22 13:30
Tetrachloro-m-xylene [2]	37.4	30-150		6/4/22 13:30

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-01-051922 | Sampled: 5/19/2022 09:45

Sample ID: 22E1360-01

Sample Matrix: Surface Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	0.17	0.050	0.015	mg/L	1		SW-846 6010D	5/23/22	5/29/22 23:07	MJH
Antimony	ND	0.050	0.0089	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:34	MJH
Arsenic	ND	0.010	0.0047	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:34	MJH
Barium	1.2	0.050	0.0056	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:34	MJH
Beryllium	ND	0.0040	0.0010	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:34	MJH
Cadmium	ND	0.0040	0.00080	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:34	MJH
Calcium	210	0.50	0.11	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:34	MJH
Chromium	0.0029	0.010	0.0025	mg/L	1	J	SW-846 6010D	5/23/22	5/28/22 16:34	MJH
Cobalt	0.0024	0.010	0.0014	mg/L	1	J	SW-846 6010D	5/23/22	5/28/22 16:34	MJH
Copper	0.0071	0.010	0.0036	mg/L	1	J	SW-846 6010D	5/23/22	5/28/22 16:34	MJH
Iron	50	0.050	0.019	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:34	MJH
Lead	ND	0.010	0.0030	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:34	MJH
Magnesium	42	0.050	0.0095	mg/L	1		SW-846 6010D	5/23/22	5/29/22 23:07	MJH
Manganese	0.57	0.010	0.0017	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:34	MJH
Mercury	0.000058	0.00010	0.000040	mg/L	1	J	SW-846 7470A	5/21/22	5/24/22 11:51	TDK
Nickel	ND	0.010	0.0088	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:34	MJH
Potassium	23	2.0	0.30	mg/L	1		SW-846 6010D	5/23/22	5/29/22 23:07	MJH
Selenium	ND	0.050	0.011	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:34	MJH
Silver	ND	0.010	0.0032	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:34	MJH
Sodium	27	2.0	0.53	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:34	MJH
Thallium	ND	0.050	0.019	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:34	MJH
Vanadium	0.013	0.010	0.0031	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:34	MJH
Zinc	0.028	0.010	0.0042	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:34	MJH
Hardness	670	1.4		mg/L	1		SW-846 6010	5/23/22	5/29/22 23:07	MJH

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-01-051922 | Sampled: 5/19/2022 09:45

Sample ID: 22E1360-01

Sample Matrix: Surface Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alkalinity	870	1.0	0.65	mg/L	1	PR-18	SM21-23 2320B	5/26/22	5/26/22 16:06	DET
Ammonia as N	20	0.30	0.18	mg/L	1		SM19-23 4500 NH3 C	5/27/22	6/1/22 12:03	EC
Chemical Oxygen Demand	200	15	5.6	mg/L	1	Z-01a	EPA 410.4	6/2/22	6/2/22 13:24	LL
Cyanide	0.0088	0.010	0.0035	mg/L	1	J	SM21-23 4500 CN E	5/31/22	6/1/22 13:30	DRA
Phenol	0.081	0.050	0.048	mg/L	1		EPA 420.1	5/23/22	5/24/22 12:05	LL
Total Kjeldahl Nitrogen	30	1.0	0.070	mg/L	1		SM19-23 4500-N Org B,C-NH3 C	5/27/22	5/31/22 8:55	DET

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-01-051922 | Sampled: 5/19/2022 09:45

Sample ID: 22E1360-01

Sample Matrix: Surface Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Dissolved)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Dissolved Solids	710	10	4.6	mg/L	1		SM21-23 2540C	5/24/22	5/24/22 11:38	LL

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-01-051922 | Sampled: 5/19/2022 09:45

Sample ID: 22E1360-01

Sample Matrix: Surface Water

SM 5210B-16

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
B.O.D./5 day	3.8	3.7	mg/L	3		SM 5210B-16	5/20/22	5/20/22 15:48	PEL

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-14-051922 | Sampled: 5/19/2022 10:45

Sample ID: 22E1360-02

Sample Matrix: Surface Water

Sample Flags: DL-01

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	100	4.1	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Benzene	ND	2.0	0.40	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Bromochloromethane	ND	2.0	0.61	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Bromodichloromethane	ND	1.0	0.36	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Bromoform	ND	2.0	0.77	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Bromomethane	ND	4.0	3.1	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
2-Butanone (MEK)	ND	40	3.2	µg/L	2	R-05	SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Carbon Disulfide	ND	10	2.9	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Carbon Tetrachloride	ND	10	0.33	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Chlorobenzene	ND	2.0	0.21	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Chlorodibromomethane	ND	1.0	0.44	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Chloroethane	ND	4.0	0.64	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Chloroform	ND	4.0	0.34	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Chloromethane	ND	4.0	1.0	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Cyclohexane	ND	10	3.5	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	10	1.6	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
1,2-Dibromoethane (EDB)	ND	1.0	0.34	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
1,2-Dichlorobenzene	ND	2.0	0.24	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
1,3-Dichlorobenzene	ND	2.0	0.24	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
1,4-Dichlorobenzene	ND	2.0	0.26	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Dichlorodifluoromethane (Freon 12)	ND	4.0	0.38	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
1,1-Dichloroethane	ND	2.0	0.28	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
1,2-Dichloroethane	ND	2.0	0.62	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
1,1-Dichloroethylene	ND	2.0	0.28	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
cis-1,2-Dichloroethylene	ND	2.0	0.29	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
trans-1,2-Dichloroethylene	ND	2.0	0.34	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
1,2-Dichloropropane	ND	2.0	0.36	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
cis-1,3-Dichloropropene	ND	1.0	0.32	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
trans-1,3-Dichloropropene	ND	1.0	0.34	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
1,4-Dioxane	ND	100	41	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Ethylbenzene	ND	2.0	0.43	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
2-Hexanone (MBK)	ND	20	2.2	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Isopropylbenzene (Cumene)	ND	2.0	0.22	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Methyl Acetate	ND	2.0	0.91	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Methyl tert-Butyl Ether (MTBE)	ND	2.0	0.34	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Methyl Cyclohexane	ND	2.0	0.49	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Methylene Chloride	ND	10	0.47	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
4-Methyl-2-pentanone (MIBK)	ND	20	2.6	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Styrene	ND	2.0	0.21	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
1,1,2,2-Tetrachloroethane	ND	1.0	0.25	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Tetrachloroethylene	ND	2.0	0.37	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Toluene	ND	2.0	0.45	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
1,2,3-Trichlorobenzene	ND	10	0.61	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
1,2,4-Trichlorobenzene	ND	2.0	0.50	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-14-051922 | Sampled: 5/19/2022 10:45

Sample ID: 22E1360-02

Sample Matrix: Surface Water

Sample Flags: DL-01

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	2.0	0.34	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
1,1,2-Trichloroethane	ND	2.0	0.37	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Trichloroethylene	ND	2.0	0.38	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Trichlorofluoromethane (Freon 11)	ND	4.0	0.35	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	2.0	0.45	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Vinyl Chloride	ND	4.0	0.42	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH
Xylenes (total)	ND	2.0	2.0	µg/L	2		SW-846 8260D	5/26/22	5/26/22 13:51	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	98.7	70-130		5/26/22 13:51
Toluene-d8	100	70-130		5/26/22 13:51
4-Bromofluorobenzene	102	70-130		5/26/22 13:51

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

Project Location: Incinerator Rd, Utica, NY
Sample Description:
Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-14-051922
Sampled: 5/19/2022 10:45

Sample ID: 22E1360-02

Sample Matrix: Surface Water

Tentatively Identified Compounds - Volatile Compounds (ESTIMATED VALUES REPORTED)

Analyte	Results	Units	Response	RT	DF	CAS #	Q#	Method	Date Prepared	Date/Time Analyzed	Analyst
No TICs Found	0.0	µg/L			2			SW-846 8260D	5/26/22	5/26/22 13:51	EEH

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-14-051922 | Sampled: 5/19/2022 10:45

Sample ID: 22E1360-02

Sample Matrix: Surface Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Atrazine	ND	20	0.55	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Benzaldehyde	ND	10	0.45	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Biphenyl	ND	20	0.41	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Caprolactam	1.8	10	0.28	µg/L	1	L-04, MS-09, J	SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Acenaphthene	ND	5.0	0.52	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Acenaphthylene	ND	5.0	0.48	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Acetophenone	ND	10	0.53	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Anthracene	ND	5.0	0.46	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Benzo(a)anthracene	ND	5.0	0.41	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Benzo(a)pyrene	ND	5.0	0.57	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Benzo(b)fluoranthene	ND	5.0	0.47	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Benzo(g,h,i)perylene	ND	5.0	0.61	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Benzo(k)fluoranthene	ND	5.0	0.49	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Bis(2-chloroethoxy)methane	ND	10	0.46	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Bis(2-chloroethyl)ether	ND	10	0.57	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Bis(2-chloroisopropyl)ether	ND	10	0.69	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Bis(2-Ethylhexyl)phthalate	ND	10	0.84	µg/L	1	V-05	SW-846 8270E	5/26/22	6/4/22 17:26	IMR
4-Bromophenylphenylether	ND	10	0.47	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Butylbenzylphthalate	ND	10	0.67	µg/L	1	V-05	SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Carbazole	ND	10	0.43	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
4-Chloroaniline	ND	10	0.58	µg/L	1	V-34	SW-846 8270E	5/26/22	6/4/22 17:26	IMR
4-Chloro-3-methylphenol	ND	10	0.56	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
2-Chloronaphthalene	ND	10	0.49	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
2-Chlorophenol	ND	10	0.47	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
4-Chlorophenylphenylether	ND	10	0.48	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Chrysene	ND	5.0	0.40	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Dibenz(a,h)anthracene	ND	5.0	0.69	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Dibenzofuran	ND	5.0	0.49	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Di-n-butylphthalate	ND	10	0.46	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
3,3-Dichlorobenzidine	ND	10	0.71	µg/L	1	MS-09	SW-846 8270E	5/26/22	6/4/22 17:26	IMR
2,4-Dichlorophenol	ND	10	0.48	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Diethylphthalate	ND	10	0.42	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
2,4-Dimethylphenol	ND	10	0.70	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Dimethylphthalate	ND	10	0.38	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
4,6-Dinitro-2-methylphenol	ND	10	7.0	µg/L	1	V-05	SW-846 8270E	5/26/22	6/4/22 17:26	IMR
2,4-Dinitrophenol	ND	10	8.1	µg/L	1	V-05	SW-846 8270E	5/26/22	6/4/22 17:26	IMR
2,4-Dinitrotoluene	ND	10	0.61	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
2,6-Dinitrotoluene	ND	10	0.52	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Di-n-octylphthalate	ND	10	3.9	µg/L	1	V-05	SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Fluoranthene	ND	5.0	0.43	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Fluorene	ND	5.0	0.52	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Hexachlorobenzene	ND	10	0.51	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Hexachlorobutadiene	ND	10	0.77	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Hexachlorocyclopentadiene	ND	10	3.7	µg/L	1	L-04, MS-09, V-05	SW-846 8270E	5/26/22	6/4/22 17:26	IMR

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-14-051922 | Sampled: 5/19/2022 10:45

Sample ID: 22E1360-02

Sample Matrix: Surface Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachloroethane	ND	10	0.74	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Indeno(1,2,3-cd)pyrene	ND	5.0	0.74	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Isophorone	ND	10	0.55	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
2-Methylnaphthalene	ND	5.0	0.69	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
2-Methylphenol	ND	10	0.47	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
3/4-Methylphenol	ND	10	0.46	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Naphthalene	ND	5.0	0.61	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
2-Nitroaniline	ND	10	0.69	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
3-Nitroaniline	ND	10	0.59	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
4-Nitroaniline	ND	10	0.60	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Nitrobenzene	ND	10	0.63	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
2-Nitrophenol	ND	10	0.51	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
4-Nitrophenol	ND	10	2.1	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	10	0.38	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
N-Nitrosodi-n-propylamine	ND	10	0.61	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Pentachlorophenol	ND	10	3.5	µg/L	1	V-05	SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Phenanthrene	ND	5.0	0.48	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Phenol	ND	10	0.23	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
Pyrene	ND	5.0	0.61	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
1,2,4,5-Tetrachlorobenzene	ND	10	0.65	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
2,4,5-Trichlorophenol	ND	10	0.51	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR
2,4,6-Trichlorophenol	ND	10	0.45	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:26	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	32.5	15-110		6/4/22 17:26
Phenol-d6	23.6	15-110		6/4/22 17:26
Nitrobenzene-d5	72.1	30-130		6/4/22 17:26
2-Fluorobiphenyl	73.2	30-130		6/4/22 17:26
2,4,6-Tribromophenol	77.1	15-110		6/4/22 17:26
p-Terphenyl-d14	77.8	30-130		6/4/22 17:26

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-14-051922 | Sampled: 5/19/2022 10:45

Sample ID: 22E1360-02

Sample Matrix: Surface Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	1.6	0.20	0.033	µg/L	1		SW-846 8270E	5/26/22	6/2/22 3:03	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
1,4-Dioxane-d8	28.7	15-110		6/2/22 3:03	

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-14-051922 | Sampled: 5/19/2022 10:45

Sample ID: 22E1360-02

Sample Matrix: Surface Water

Sample Flags: PF-20

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	33	20	7.4	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
Perfluorobutanesulfonic acid (PFBS)	16	20	2.8	ng/L	1	J	SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
Perfluoropentanoic acid (PFPeA)	41	20	3.9	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
Perfluorohexanoic acid (PFHxA)	66	20	3.9	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
11Cl-PF3OUdS (F53B Minor)	ND	20	6.4	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
9Cl-PF3ONS (F53B Major)	ND	20	3.9	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	20	3.5	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	20	2.4	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	20	6.1	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
Perfluorodecanoic acid (PFDA)	ND	20	4.9	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
Perfluorododecanoic acid (PFDoA)	ND	20	4.4	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	20	2.3	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
Perfluoroheptanesulfonic acid (PFHpS)	24	20	9.4	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
N-EtFOSAA	ND	20	6.3	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
N-MeFOSAA	ND	20	7.6	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
Perfluorotetradecanoic acid (PFTA)	ND	20	3.7	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	20	2.8	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	20	2.8	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	20	3.3	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
Perfluorooctanesulfonamide (FOSA)	ND	20	4.2	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
Perfluorononanesulfonic acid (PFNS)	ND	20	1.7	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	7.0	20	3.1	ng/L	1	J	SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
Perfluoro-1-butanesulfonamide (FBSA)	12	20	1.9	ng/L	1	J	SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
Perfluorohexanesulfonic acid (PFHxS)	100	20	3.4	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	20	4.2	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	20	3.4	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	20	3.7	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
Perfluoropetanesulfonic acid (PFPeS)	28	20	2.6	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
Perfluoroundecanoic acid (PFUnA)	ND	20	3.7	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	20	2.8	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
Perfluoroheptanoic acid (PFHpA)	95	20	3.4	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
Perfluorooctanoic acid (PFOA)	410	20	6.8	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
Perfluorooctanesulfonic acid (PFOS)	540	20	6.0	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH
Perfluorononanoic acid (PFNA)	8.2	20	3.5	ng/L	1	J	SOP-454 PFAS	6/1/22	6/7/22 0:42	BLH

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-14-051922 | Sampled: 5/19/2022 10:45

Sample ID: 22E1360-02

Sample Matrix: Surface Water

Tentatively Identified Compounds - SV Compounds (ESTIMATED VALUES REPORTED)

Analyte	Results	Units	Response	RT	DF	CAS #	Q#	Method	Date Prepared	Date/Time Analyzed	Analyst
Triphenylphosphine oxide	11	µg/L	302469	8.485	1	000791-28-6	98	SW-846 8270E	5/26/22	6/4/22 17:26	IMR

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-14-051922 | Sampled: 5/19/2022 10:45

Sample ID: 22E1360-02

Sample Matrix: Surface Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	0.052	µg/L	1		SW-846 8082A	5/26/22	6/4/22 13:47	SFM
Aroclor-1221 [1]	ND	0.20	0.079	µg/L	1		SW-846 8082A	5/26/22	6/4/22 13:47	SFM
Aroclor-1232 [1]	ND	0.20	0.072	µg/L	1		SW-846 8082A	5/26/22	6/4/22 13:47	SFM
Aroclor-1242 [1]	ND	0.20	0.076	µg/L	1		SW-846 8082A	5/26/22	6/4/22 13:47	SFM
Aroclor-1248 [1]	ND	0.20	0.088	µg/L	1		SW-846 8082A	5/26/22	6/4/22 13:47	SFM
Aroclor-1254 [1]	ND	0.20	0.078	µg/L	1		SW-846 8082A	5/26/22	6/4/22 13:47	SFM
Aroclor-1260 [1]	ND	0.20	0.062	µg/L	1		SW-846 8082A	5/26/22	6/4/22 13:47	SFM
Aroclor-1262 [1]	ND	0.20	0.063	µg/L	1		SW-846 8082A	5/26/22	6/4/22 13:47	SFM
Aroclor-1268 [1]	ND	0.20	0.077	µg/L	1		SW-846 8082A	5/26/22	6/4/22 13:47	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	77.7	30-150		6/4/22 13:47
Decachlorobiphenyl [2]	70.1	30-150		6/4/22 13:47
Tetrachloro-m-xylene [1]	63.7	30-150		6/4/22 13:47
Tetrachloro-m-xylene [2]	54.6	30-150		6/4/22 13:47

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-14-051922 | Sampled: 5/19/2022 10:45

Sample ID: 22E1360-02

Sample Matrix: Surface Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	1.1	0.050	0.015	mg/L	1	MS-12	SW-846 6010D	5/24/22	5/27/22 14:13	ATP
Antimony	ND	0.050	0.0089	mg/L	1		SW-846 6010D	5/24/22	5/25/22 15:03	MJH
Arsenic	ND	0.010	0.0047	mg/L	1		SW-846 6010D	5/24/22	5/25/22 15:03	MJH
Barium	0.35	0.050	0.0056	mg/L	1		SW-846 6010D	5/24/22	5/25/22 15:03	MJH
Beryllium	ND	0.0040	0.0010	mg/L	1		SW-846 6010D	5/24/22	5/25/22 15:03	MJH
Cadmium	0.0035	0.0040	0.00080	mg/L	1	J	SW-846 6010D	5/24/22	5/25/22 15:03	MJH
Calcium	200	0.50	0.11	mg/L	1	MS-19	SW-846 6010D	5/24/22	5/25/22 15:03	MJH
Chromium	0.0039	0.010	0.0025	mg/L	1	J	SW-846 6010D	5/24/22	5/25/22 15:03	MJH
Cobalt	0.0071	0.010	0.0014	mg/L	1	J	SW-846 6010D	5/24/22	5/25/22 15:03	MJH
Copper	0.018	0.010	0.0036	mg/L	1		SW-846 6010D	5/24/22	5/25/22 15:03	MJH
Iron	3.5	0.050	0.019	mg/L	1		SW-846 6010D	5/24/22	5/25/22 15:03	MJH
Lead	ND	0.010	0.0030	mg/L	1		SW-846 6010D	5/24/22	5/25/22 15:03	MJH
Magnesium	92	0.25	0.048	mg/L	5	MS-19	SW-846 6010D	5/24/22	5/27/22 14:08	ATP
Manganese	6.5	0.010	0.0017	mg/L	1	MS-19	SW-846 6010D	5/24/22	5/25/22 15:03	MJH
Mercury	0.000046	0.00010	0.000040	mg/L	1	J	SW-846 7470A	5/21/22	5/24/22 11:53	TDK
Nickel	0.026	0.010	0.0088	mg/L	1		SW-846 6010D	5/24/22	5/25/22 15:03	MJH
Potassium	21	2.0	0.30	mg/L	1	MS-19	SW-846 6010D	5/24/22	5/25/22 15:03	MJH
Selenium	ND	0.050	0.011	mg/L	1		SW-846 6010D	5/24/22	5/25/22 15:03	MJH
Silver	ND	0.010	0.0032	mg/L	1		SW-846 6010D	5/24/22	5/25/22 15:03	MJH
Sodium	16	2.0	0.53	mg/L	1		SW-846 6010D	5/24/22	5/25/22 15:03	MJH
Thallium	ND	0.050	0.019	mg/L	1		SW-846 6010D	5/24/22	5/25/22 15:03	MJH
Vanadium	ND	0.010	0.0031	mg/L	1		SW-846 6010D	5/24/22	5/25/22 15:03	MJH
Zinc	0.044	0.010	0.0042	mg/L	1		SW-846 6010D	5/24/22	5/25/22 15:03	MJH
Hardness	910	7.2		mg/L	5	MS-19	SW-846 6010	5/24/22	5/27/22 14:08	ATP

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-14-051922 | Sampled: 5/19/2022 10:45

Sample ID: 22E1360-02

Sample Matrix: Surface Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alkalinity	1000	1.0	0.65	mg/L	1	PR-18	SM21-23 2320B	5/26/22	5/26/22 16:07	DET
Ammonia as N	14	0.30	0.18	mg/L	1		SM19-23 4500 NH3 C	5/27/22	6/1/22 12:14	EC
Chemical Oxygen Demand	64	15	5.6	mg/L	1	Z-01a	EPA 410.4	6/2/22	6/2/22 13:24	LL
Cyanide	0.0094	0.010	0.0035	mg/L	1	MS-07, J	SM21-23 4500 CN E	5/31/22	6/1/22 13:30	DRA
Phenol	0.088	0.050	0.048	mg/L	1		EPA 420.1	5/23/22	5/24/22 12:05	LL
Total Kjeldahl Nitrogen	17	1.0	0.070	mg/L	1		SM19-23 4500-N Org B,C-NH3 C	5/27/22	5/31/22 8:55	DET

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-14-051922 | Sampled: 5/19/2022 10:45

Sample ID: 22E1360-02

Sample Matrix: Surface Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Dissolved)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Dissolved Solids	840	10	4.6	mg/L	1		SM21-23 2540C	5/24/22	5/24/22 11:38	LL

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-14-051922 | Sampled: 5/19/2022 10:45

Sample ID: 22E1360-02

Sample Matrix: Surface Water

SM 5210B-16

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
B.O.D./5 day	8.7	4.0	mg/L	2		SM 5210B-16	5/20/22	5/20/22 15:48	PEL

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-10-051922 | Sampled: 5/19/2022 12:30

Sample ID: 22E1360-03

Sample Matrix: Surface Water

Sample Flags: DL-01

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	200	8.1	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Benzene	ND	4.0	0.80	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Bromochloromethane	ND	4.0	1.2	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Bromodichloromethane	ND	2.0	0.72	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Bromoform	ND	4.0	1.5	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Bromomethane	ND	8.0	6.2	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
2-Butanone (MEK)	ND	80	6.5	µg/L	4	R-05	SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Carbon Disulfide	ND	20	5.8	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Carbon Tetrachloride	ND	20	0.66	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Chlorobenzene	9.0	4.0	0.42	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Chlorodibromomethane	ND	2.0	0.89	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Chloroethane	ND	8.0	1.3	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Chloroform	ND	8.0	0.67	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Chloromethane	ND	8.0	2.1	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Cyclohexane	ND	20	7.0	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	20	3.2	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
1,2-Dibromoethane (EDB)	ND	2.0	0.68	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
1,2-Dichlorobenzene	ND	4.0	0.49	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
1,3-Dichlorobenzene	ND	4.0	0.47	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
1,4-Dichlorobenzene	2.0	4.0	0.52	µg/L	4	J	SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Dichlorodifluoromethane (Freon 12)	ND	8.0	0.77	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
1,1-Dichloroethane	ND	4.0	0.57	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
1,2-Dichloroethane	ND	4.0	1.2	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
1,1-Dichloroethylene	ND	4.0	0.57	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
cis-1,2-Dichloroethylene	ND	4.0	0.59	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
trans-1,2-Dichloroethylene	ND	4.0	0.67	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
1,2-Dichloropropane	ND	4.0	0.72	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
cis-1,3-Dichloropropene	ND	2.0	0.63	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
trans-1,3-Dichloropropene	ND	2.0	0.67	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
1,4-Dioxane	ND	200	82	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Ethylbenzene	ND	4.0	0.86	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
2-Hexanone (MBK)	ND	40	4.5	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Isopropylbenzene (Cumene)	ND	4.0	0.43	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Methyl Acetate	ND	4.0	1.8	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Methyl tert-Butyl Ether (MTBE)	ND	4.0	0.69	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Methyl Cyclohexane	ND	4.0	0.98	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Methylene Chloride	ND	20	0.94	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
4-Methyl-2-pentanone (MIBK)	ND	40	5.1	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Styrene	ND	4.0	0.42	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
1,1,2,2-Tetrachloroethane	ND	2.0	0.51	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Tetrachloroethylene	ND	4.0	0.75	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Toluene	ND	4.0	0.90	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
1,2,3-Trichlorobenzene	ND	20	1.2	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
1,2,4-Trichlorobenzene	ND	4.0	0.99	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-10-051922 | Sampled: 5/19/2022 12:30

Sample ID: 22E1360-03

Sample Matrix: Surface Water

Sample Flags: DL-01

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	4.0	0.68	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
1,1,2-Trichloroethane	ND	4.0	0.73	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Trichloroethylene	ND	4.0	0.76	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Trichlorofluoromethane (Freon 11)	ND	8.0	0.70	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	4.0	0.91	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Vinyl Chloride	ND	8.0	0.83	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH
Xylenes (total)	ND	4.0	4.0	µg/L	4		SW-846 8260D	5/26/22	5/26/22 14:18	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	98.9	70-130		5/26/22 14:18
Toluene-d8	100	70-130		5/26/22 14:18
4-Bromofluorobenzene	102	70-130		5/26/22 14:18

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-10-051922 | Sampled: 5/19/2022 12:30

Sample ID: 22E1360-03

Sample Matrix: Surface Water

Tentatively Identified Compounds - Volatile Compounds (ESTIMATED VALUES REPORTED)

Analyte	Results	Units	Response	RT	DF	CAS #	Q#	Method	Date Prepared	Date/Time Analyzed	Analyst
No TICs Found	0.0	µg/L			4			SW-846 8260D	5/26/22	5/26/22 14:18	EEH

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-10-051922 | Sampled: 5/19/2022 12:30

Sample ID: 22E1360-03

Sample Matrix: Surface Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Atrazine	ND	19	0.53	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Atrazine	ND	19	0.53	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Benzaldehyde	ND	9.7	0.44	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Benzaldehyde	ND	9.6	0.43	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Biphenyl	ND	19	0.40	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Biphenyl	ND	19	0.40	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Caprolactam	ND	9.7	0.27	µg/L	1	L-04	SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Caprolactam	ND	9.6	0.27	µg/L	1	L-04	SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Acenaphthene	ND	4.9	0.50	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Acenaphthene	0.62	4.8	0.50	µg/L	1	J	SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Acenaphthylene	ND	4.9	0.47	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Acenaphthylene	ND	4.8	0.47	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Acetophenone	ND	9.7	0.52	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Acetophenone	ND	9.6	0.51	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Anthracene	ND	4.9	0.45	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Anthracene	ND	4.8	0.44	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Benzo(a)anthracene	ND	4.9	0.40	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Benzo(a)anthracene	ND	4.8	0.39	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Benzo(a)pyrene	ND	4.9	0.55	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Benzo(a)pyrene	ND	4.8	0.55	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Benzo(b)fluoranthene	ND	4.9	0.46	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Benzo(b)fluoranthene	ND	4.8	0.45	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Benzo(g,h,i)perylene	ND	4.9	0.59	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Benzo(g,h,i)perylene	ND	4.8	0.59	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Benzo(k)fluoranthene	ND	4.9	0.47	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Benzo(k)fluoranthene	ND	4.8	0.47	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Bis(2-chloroethoxy)methane	ND	9.7	0.44	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Bis(2-chloroethoxy)methane	ND	9.6	0.44	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Bis(2-chloroethyl)ether	ND	9.7	0.55	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Bis(2-chloroethyl)ether	ND	9.6	0.55	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Bis(2-chloroisopropyl)ether	ND	9.7	0.67	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Bis(2-chloroisopropyl)ether	ND	9.6	0.66	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Bis(2-Ethylhexyl)phthalate	ND	9.7	0.82	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Bis(2-Ethylhexyl)phthalate	ND	9.6	0.81	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
4-Bromophenylphenylether	ND	9.7	0.46	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
4-Bromophenylphenylether	ND	9.6	0.45	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Butylbenzylphthalate	ND	9.7	0.65	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Butylbenzylphthalate	ND	9.6	0.65	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Carbazole	ND	9.7	0.41	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Carbazole	ND	9.6	0.41	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
4-Chloroaniline	ND	9.7	0.56	µg/L	1	V-34	SW-846 8270E	5/26/22	6/3/22 19:08	IMR
4-Chloroaniline	ND	9.6	0.55	µg/L	1	V-34	SW-846 8270E	6/7/22	6/8/22 21:37	IMR
4-Chloro-3-methylphenol	ND	9.7	0.54	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
4-Chloro-3-methylphenol	ND	9.6	0.54	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-10-051922 | Sampled: 5/19/2022 12:30

Sample ID: 22E1360-03

Sample Matrix: Surface Water

Sample Flags: H-06

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Chloronaphthalene	ND	9.7	0.47	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
2-Chloronaphthalene	ND	9.6	0.47	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
2-Chlorophenol	ND	9.7	0.46	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
2-Chlorophenol	ND	9.6	0.46	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
4-Chlorophenylphenylether	ND	9.7	0.47	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
4-Chlorophenylphenylether	ND	9.6	0.46	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Chrysene	ND	4.9	0.38	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Chrysene	ND	4.8	0.38	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Dibenz(a,h)anthracene	ND	4.9	0.67	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Dibenz(a,h)anthracene	ND	4.8	0.66	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Dibenzofuran	ND	4.9	0.47	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Dibenzofuran	ND	4.8	0.47	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Di-n-butylphthalate	ND	9.7	0.45	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Di-n-butylphthalate	ND	9.6	0.44	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
3,3-Dichlorobenzidine	ND	9.7	0.69	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
3,3-Dichlorobenzidine	ND	9.6	0.68	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
2,4-Dichlorophenol	ND	9.7	0.46	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
2,4-Dichlorophenol	ND	9.6	0.46	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Diethylphthalate	ND	9.7	0.41	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Diethylphthalate	ND	9.6	0.40	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
2,4-Dimethylphenol	ND	9.7	0.68	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
2,4-Dimethylphenol	ND	9.6	0.67	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Dimethylphthalate	ND	9.7	0.37	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Dimethylphthalate	ND	9.6	0.36	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
4,6-Dinitro-2-methylphenol	ND	9.7	6.8	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
4,6-Dinitro-2-methylphenol	ND	9.6	6.8	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
2,4-Dinitrophenol	ND	9.7	7.8	µg/L	1	V-05	SW-846 8270E	5/26/22	6/3/22 19:08	IMR
2,4-Dinitrophenol	ND	9.6	7.8	µg/L	1	V-05	SW-846 8270E	6/7/22	6/8/22 21:37	IMR
2,4-Dinitrotoluene	ND	9.7	0.60	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
2,4-Dinitrotoluene	ND	9.6	0.59	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
2,6-Dinitrotoluene	ND	9.7	0.50	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
2,6-Dinitrotoluene	ND	9.6	0.50	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Di-n-octylphthalate	ND	9.7	3.8	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Di-n-octylphthalate	ND	9.6	3.8	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Fluoranthene	ND	4.9	0.42	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Fluoranthene	ND	4.8	0.41	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Fluorene	ND	4.9	0.50	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Fluorene	0.58	4.8	0.50	µg/L	1	J	SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Hexachlorobenzene	ND	9.7	0.49	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Hexachlorobenzene	ND	9.6	0.49	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Hexachlorobutadiene	ND	9.7	0.75	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Hexachlorobutadiene	ND	9.6	0.74	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Hexachlorocyclopentadiene	ND	9.7	3.6	µg/L	1	L-04, V-05	SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Hexachlorocyclopentadiene	ND	9.6	3.5	µg/L	1	L-04, V-05	SW-846 8270E	6/7/22	6/8/22 21:37	IMR

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-10-051922 | Sampled: 5/19/2022 12:30

Sample ID: 22E1360-03

Sample Matrix: Surface Water

Sample Flags: H-06

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachloroethane	ND	9.7	0.72	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Hexachloroethane	ND	9.6	0.71	µg/L	1	L-04	SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Indeno(1,2,3-cd)pyrene	ND	4.9	0.72	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Indeno(1,2,3-cd)pyrene	ND	4.8	0.71	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Isophorone	ND	9.7	0.54	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Isophorone	ND	9.6	0.53	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
2-Methylnaphthalene	ND	4.9	0.67	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
2-Methylnaphthalene	ND	4.8	0.66	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
2-Methylphenol	ND	9.7	0.46	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
2-Methylphenol	ND	9.6	0.46	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
3/4-Methylphenol	ND	9.7	0.44	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
3/4-Methylphenol	0.58	9.6	0.44	µg/L	1	J	SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Naphthalene	ND	4.9	0.60	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Naphthalene	ND	4.8	0.59	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
2-Nitroaniline	ND	9.7	0.67	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
2-Nitroaniline	ND	9.6	0.67	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
3-Nitroaniline	ND	9.7	0.57	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
3-Nitroaniline	ND	9.6	0.56	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
4-Nitroaniline	ND	9.7	0.58	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
4-Nitroaniline	ND	9.6	0.58	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Nitrobenzene	ND	9.7	0.61	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Nitrobenzene	ND	9.6	0.60	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
2-Nitrophenol	ND	9.7	0.50	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
2-Nitrophenol	ND	9.6	0.49	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
4-Nitrophenol	ND	9.7	2.0	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
4-Nitrophenol	ND	9.6	2.0	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	9.7	0.37	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	9.6	0.37	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
N-Nitrosodi-n-propylamine	ND	9.7	0.60	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
N-Nitrosodi-n-propylamine	ND	9.6	0.59	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Pentachlorophenol	ND	9.7	3.4	µg/L	1	V-05	SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Pentachlorophenol	ND	9.6	3.4	µg/L	1	V-05	SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Phenanthrene	ND	4.9	0.46	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Phenanthrene	ND	4.8	0.46	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Phenol	ND	9.7	0.22	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
Phenol	ND	9.6	0.22	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Pyrene	ND	4.8	0.59	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Pyrene	ND	4.9	0.59	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
1,2,4,5-Tetrachlorobenzene	ND	9.7	0.63	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
1,2,4,5-Tetrachlorobenzene	ND	9.6	0.63	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
2,4,5-Trichlorophenol	ND	9.7	0.50	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR
2,4,5-Trichlorophenol	ND	9.6	0.49	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR
2,4,6-Trichlorophenol	ND	9.7	0.44	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:08	IMR

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-10-051922 | Sampled: 5/19/2022 12:30

Sample ID: 22E1360-03

Sample Matrix: Surface Water

Sample Flags: H-06

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4,6-Trichlorophenol	ND	9.6	0.43	µg/L	1		SW-846 8270E	6/7/22	6/8/22 21:37	IMR

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
2-Fluorophenol	**1.55**	*	15-110	S-10	6/3/22 19:08
2-Fluorophenol	32.7		15-110		6/8/22 21:37
Phenol-d6	24.4		15-110		6/8/22 21:37
Phenol-d6	**1.96**	*	15-110	S-10	6/3/22 19:08
Nitrobenzene-d5	**3.22**	*	30-130	S-10	6/3/22 19:08
Nitrobenzene-d5	65.4		30-130		6/8/22 21:37
2-Fluorobiphenyl	**6.15**	*	30-130	S-10	6/3/22 19:08
2-Fluorobiphenyl	52.4		30-130		6/8/22 21:37
2,4,6-Tribromophenol	**8.94**	*	15-110	S-10	6/3/22 19:08
2,4,6-Tribromophenol	72.8		15-110		6/8/22 21:37
p-Terphenyl-d14	64.7		30-130		6/8/22 21:37
p-Terphenyl-d14	**8.36**	*	30-130	S-10	6/3/22 19:08

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-10-051922 | Sampled: 5/19/2022 12:30

Sample ID: 22E1360-03

Sample Matrix: Surface Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	2.9	0.19	0.031	µg/L	1		SW-846 8270E	5/26/22	6/2/22 8:15	CLA

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
1,4-Dioxane-d8	26.8	15-110		6/2/22 8:15	

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-10-051922 | Sampled: 5/19/2022 12:30

Sample ID: 22E1360-03

Sample Matrix: Surface Water

Sample Flags: PF-20

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	20	7.4	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
Perfluorobutanesulfonic acid (PFBS)	9.7	20	2.8	ng/L	1	J	SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
Perfluoropentanoic acid (PFPeA)	13	20	3.9	ng/L	1	J	SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
Perfluorohexanoic acid (PFHxA)	24	20	3.9	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
11Cl-PF3OUdS (F53B Minor)	ND	20	6.4	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
9Cl-PF3ONS (F53B Major)	ND	20	3.9	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	20	3.5	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	20	2.4	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	20	6.1	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
Perfluorodecanoic acid (PFDA)	ND	20	4.9	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
Perfluorododecanoic acid (PFDoA)	ND	20	4.4	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	20	2.3	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
Perfluoroheptanesulfonic acid (PFHpS)	10	20	9.4	ng/L	1	J	SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
N-EtFOSAA	63	20	6.3	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
N-MeFOSAA	ND	20	7.6	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
Perfluorotetradecanoic acid (PFTA)	ND	20	3.7	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	20	2.8	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	20	2.8	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	20	3.3	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
Perfluorooctanesulfonamide (FOSA)	6.4	20	4.2	ng/L	1	J	SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
Perfluorononanesulfonic acid (PFNS)	ND	20	1.7	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	20	3.1	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
Perfluoro-1-butanesulfonamide (FBSA)	5.2	20	1.9	ng/L	1	J	SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
Perfluorohexanesulfonic acid (PFHxS)	69	20	3.4	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	20	4.2	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	20	3.4	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	20	3.7	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
Perfluoropetanesulfonic acid (PFPeS)	12	20	2.6	ng/L	1	J	SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
Perfluoroundecanoic acid (PFUnA)	5.0	20	3.7	ng/L	1	J	SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	20	2.8	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
Perfluoroheptanoic acid (PFHpA)	28	20	3.4	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
Perfluorooctanoic acid (PFOA)	170	20	6.8	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
Perfluorooctanesulfonic acid (PFOS)	350	20	6.0	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH
Perfluorononanoic acid (PFNA)	ND	20	3.5	ng/L	1		SOP-454 PFAS	6/1/22	6/7/22 0:49	BLH

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-10-051922 | Sampled: 5/19/2022 12:30

Sample ID: 22E1360-03

Sample Matrix: Surface Water

Tentatively Identified Compounds - SV Compounds (ESTIMATED VALUES REPORTED)

Analyte	Results	Units	Response	RT	DF	CAS #	Q#	Method	Date Prepared	Date/Time Analyzed	Analyst
2(3H)-Benzothiazolone	14	µg/L	464796	5.589	1	000934-34-9	96	SW-846 8270E	6/7/22	6/8/22 21:37	IMR
n-Hexadecanoic acid	11	µg/L	364001	6.266	1	000057-10-3	95	SW-846 8270E	6/7/22	6/8/22 21:37	IMR
Phosphine imide, P,P,P-trip...	15	µg/L	448476	8.473	1	002240-47-3	98	SW-846 8270E	6/7/22	6/8/22 21:37	IMR

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-10-051922 | Sampled: 5/19/2022 12:30

Sample ID: 22E1360-03

Sample Matrix: Surface Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.19	0.051	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:05	SFM
Aroclor-1221 [1]	ND	0.19	0.077	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:05	SFM
Aroclor-1232 [1]	ND	0.19	0.070	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:05	SFM
Aroclor-1242 [1]	ND	0.19	0.074	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:05	SFM
Aroclor-1248 [1]	ND	0.19	0.086	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:05	SFM
Aroclor-1254 [1]	ND	0.19	0.076	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:05	SFM
Aroclor-1260 [1]	ND	0.19	0.060	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:05	SFM
Aroclor-1262 [1]	ND	0.19	0.062	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:05	SFM
Aroclor-1268 [1]	ND	0.19	0.075	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:05	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	54.8	30-150		6/4/22 14:05
Decachlorobiphenyl [2]	48.5	30-150		6/4/22 14:05
Tetrachloro-m-xylene [1]	57.8	30-150		6/4/22 14:05
Tetrachloro-m-xylene [2]	48.4	30-150		6/4/22 14:05

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-10-051922 | Sampled: 5/19/2022 12:30

Sample ID: 22E1360-03

Sample Matrix: Surface Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	ND	0.050	0.015	mg/L	1		SW-846 6010D	5/23/22	5/29/22 23:13	MJH
Antimony	ND	0.050	0.0089	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:41	MJH
Arsenic	ND	0.010	0.0047	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:41	MJH
Barium	0.40	0.050	0.0056	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:41	MJH
Beryllium	ND	0.0040	0.0010	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:41	MJH
Cadmium	ND	0.0040	0.00080	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:41	MJH
Calcium	290	0.50	0.11	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:41	MJH
Chromium	ND	0.010	0.0025	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:41	MJH
Cobalt	0.0024	0.010	0.0014	mg/L	1	J	SW-846 6010D	5/23/22	5/28/22 16:41	MJH
Copper	0.0052	0.010	0.0036	mg/L	1	J	SW-846 6010D	5/23/22	5/28/22 16:41	MJH
Iron	35	0.050	0.019	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:41	MJH
Lead	ND	0.010	0.0030	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:41	MJH
Magnesium	47	0.050	0.0095	mg/L	1		SW-846 6010D	5/23/22	5/29/22 23:13	MJH
Manganese	0.70	0.010	0.0017	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:41	MJH
Mercury	ND	0.00010	0.000040	mg/L	1		SW-846 7470A	5/21/22	5/24/22 11:55	TDK
Nickel	ND	0.010	0.0088	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:41	MJH
Potassium	19	2.0	0.30	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:41	MJH
Selenium	ND	0.050	0.011	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:41	MJH
Silver	ND	0.010	0.0032	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:41	MJH
Sodium	16	2.0	0.53	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:41	MJH
Thallium	ND	0.050	0.019	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:41	MJH
Vanadium	0.012	0.010	0.0031	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:41	MJH
Zinc	0.0085	0.010	0.0042	mg/L	1	J	SW-846 6010D	5/23/22	5/28/22 16:41	MJH
Hardness	860	1.4		mg/L	1		SW-846 6010	5/23/22	5/29/22 23:13	MJH

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-10-051922 | Sampled: 5/19/2022 12:30

Sample ID: 22E1360-03

Sample Matrix: Surface Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alkalinity	960	10	6.5	mg/L	10		SM21-23 2320B	5/30/22	5/30/22 7:34	IS
Ammonia as N	28	0.30	0.18	mg/L	1		SM19-23 4500 NH3 C	5/27/22	6/1/22 13:57	EC
Chemical Oxygen Demand	80	15	5.6	mg/L	1	Z-01a	EPA 410.4	6/2/22	6/2/22 13:24	LL
Cyanide	0.010	0.010	0.0035	mg/L	1		SM21-23 4500 CN E	5/31/22	6/1/22 13:30	DRA
Phenol	0.095	0.050	0.048	mg/L	1		EPA 420.1	5/23/22	5/24/22 12:05	LL
Total Kjeldahl Nitrogen	33	1.0	0.070	mg/L	1		SM19-23 4500-N Org B,C-NH3 C	5/27/22	5/31/22 8:55	DET

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-10-051922 | Sampled: 5/19/2022 12:30

Sample ID: 22E1360-03

Sample Matrix: Surface Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Dissolved)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Dissolved Solids	830	10	4.6	mg/L	1		SM21-23 2540C	5/24/22	5/24/22 11:38	LL

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Project Location: Incinerator Rd, Utica, NY
Sample Description:
Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-10-051922
Sampled: 5/19/2022 12:30

Sample ID: 22E1360-03

Sample Matrix: Surface Water

SM 5210B-16

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
B.O.D./5 day	ND	3.7	mg/L	3		SM 5210B-16	5/20/22	5/20/22 15:48	PEL

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-05-051922 | Sampled: 5/19/2022 13:00

Sample ID: 22E1360-04

Sample Matrix: Surface Water

Sample Flags: DL-01

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	100	4.1	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Benzene	ND	2.0	0.40	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Bromochloromethane	ND	2.0	0.61	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Bromodichloromethane	ND	1.0	0.36	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Bromoform	ND	2.0	0.77	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Bromomethane	ND	4.0	3.1	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
2-Butanone (MEK)	ND	40	3.2	µg/L	2	R-05	SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Carbon Disulfide	ND	10	2.9	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Carbon Tetrachloride	ND	10	0.33	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Chlorobenzene	0.76	2.0	0.21	µg/L	2	J	SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Chlorodibromomethane	ND	1.0	0.44	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Chloroethane	ND	4.0	0.64	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Chloroform	ND	4.0	0.34	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Chloromethane	ND	4.0	1.0	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Cyclohexane	ND	10	3.5	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	10	1.6	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
1,2-Dibromoethane (EDB)	ND	1.0	0.34	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
1,2-Dichlorobenzene	ND	2.0	0.24	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
1,3-Dichlorobenzene	ND	2.0	0.24	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
1,4-Dichlorobenzene	0.30	2.0	0.26	µg/L	2	J	SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Dichlorodifluoromethane (Freon 12)	ND	4.0	0.38	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
1,1-Dichloroethane	ND	2.0	0.28	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
1,2-Dichloroethane	ND	2.0	0.62	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
1,1-Dichloroethylene	ND	2.0	0.28	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
cis-1,2-Dichloroethylene	ND	2.0	0.29	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
trans-1,2-Dichloroethylene	ND	2.0	0.34	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
1,2-Dichloropropane	ND	2.0	0.36	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
cis-1,3-Dichloropropene	ND	1.0	0.32	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
trans-1,3-Dichloropropene	ND	1.0	0.34	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
1,4-Dioxane	ND	100	41	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Ethylbenzene	ND	2.0	0.43	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
2-Hexanone (MBK)	ND	20	2.2	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Isopropylbenzene (Cumene)	ND	2.0	0.22	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Methyl Acetate	ND	2.0	0.91	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Methyl tert-Butyl Ether (MTBE)	ND	2.0	0.34	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Methyl Cyclohexane	ND	2.0	0.49	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Methylene Chloride	ND	10	0.47	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
4-Methyl-2-pentanone (MIBK)	ND	20	2.6	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Styrene	ND	2.0	0.21	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
1,1,2,2-Tetrachloroethane	ND	1.0	0.25	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Tetrachloroethylene	ND	2.0	0.37	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Toluene	3.4	2.0	0.45	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
1,2,3-Trichlorobenzene	ND	10	0.61	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
1,2,4-Trichlorobenzene	ND	2.0	0.50	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-05-051922 | Sampled: 5/19/2022 13:00

Sample ID: 22E1360-04

Sample Matrix: Surface Water

Sample Flags: DL-01

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	2.0	0.34	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
1,1,2-Trichloroethane	ND	2.0	0.37	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Trichloroethylene	ND	2.0	0.38	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Trichlorofluoromethane (Freon 11)	ND	4.0	0.35	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	2.0	0.45	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Vinyl Chloride	ND	4.0	0.42	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH
Xylenes (total)	ND	2.0	2.0	µg/L	2		SW-846 8260D	5/26/22	5/26/22 14:45	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	98.6	70-130		5/26/22 14:45
Toluene-d8	99.4	70-130		5/26/22 14:45
4-Bromofluorobenzene	103	70-130		5/26/22 14:45

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-05-051922 | Sampled: 5/19/2022 13:00

Sample ID: 22E1360-04

Sample Matrix: Surface Water

Tentatively Identified Compounds - Volatile Compounds (ESTIMATED VALUES REPORTED)

Analyte	Results	Units	Response	RT	DF	CAS #	Q#	Method	Date Prepared	Date/Time Analyzed	Analyst
No TICs Found	0.0	µg/L			2			SW-846 8260D	5/26/22	5/26/22 14:45	EEH

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-05-051922 | Sampled: 5/19/2022 13:00

Sample ID: 22E1360-04

Sample Matrix: Surface Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Atrazine	ND	21	0.57	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Benzaldehyde	ND	10	0.46	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Biphenyl	ND	21	0.42	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Caprolactam	ND	10	0.29	µg/L	1	L-04	SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Acenaphthene	ND	5.2	0.53	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Acenaphthylene	ND	5.2	0.50	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Acetophenone	ND	10	0.55	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Anthracene	ND	5.2	0.47	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Benzo(a)anthracene	ND	5.2	0.42	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Benzo(a)pyrene	ND	5.2	0.59	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Benzo(b)fluoranthene	ND	5.2	0.49	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Benzo(g,h,i)perylene	ND	5.2	0.63	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Benzo(k)fluoranthene	ND	5.2	0.50	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Bis(2-chloroethoxy)methane	ND	10	0.47	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Bis(2-chloroethyl)ether	ND	10	0.59	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Bis(2-chloroisopropyl)ether	ND	10	0.71	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Bis(2-Ethylhexyl)phthalate	ND	10	0.87	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
4-Bromophenylphenylether	ND	10	0.48	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Butylbenzylphthalate	ND	10	0.70	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Carbazole	ND	10	0.44	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
4-Chloroaniline	ND	10	0.59	µg/L	1	V-34	SW-846 8270E	5/26/22	6/3/22 19:34	IMR
4-Chloro-3-methylphenol	ND	10	0.57	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
2-Chloronaphthalene	ND	10	0.50	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
2-Chlorophenol	ND	10	0.49	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
4-Chlorophenylphenylether	ND	10	0.49	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Chrysene	ND	5.2	0.41	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Dibenz(a,h)anthracene	ND	5.2	0.71	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Dibenzofuran	ND	5.2	0.50	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Di-n-butylphthalate	ND	10	0.47	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
3,3-Dichlorobenzidine	ND	10	0.73	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
2,4-Dichlorophenol	ND	10	0.49	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Diethylphthalate	ND	10	0.43	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
2,4-Dimethylphenol	ND	10	0.72	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Dimethylphthalate	ND	10	0.39	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
4,6-Dinitro-2-methylphenol	ND	10	7.3	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
2,4-Dinitrophenol	ND	10	8.3	µg/L	1	V-05	SW-846 8270E	5/26/22	6/3/22 19:34	IMR
2,4-Dinitrotoluene	ND	10	0.63	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
2,6-Dinitrotoluene	ND	10	0.53	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Di-n-octylphthalate	ND	10	4.1	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Fluoranthene	ND	5.2	0.44	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Fluorene	ND	5.2	0.54	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Hexachlorobenzene	ND	10	0.52	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Hexachlorobutadiene	ND	10	0.80	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Hexachlorocyclopentadiene	ND	10	3.8	µg/L	1	L-04, V-05	SW-846 8270E	5/26/22	6/3/22 19:34	IMR

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-05-051922 | Sampled: 5/19/2022 13:00

Sample ID: 22E1360-04

Sample Matrix: Surface Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachloroethane	ND	10	0.76	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Indeno(1,2,3-cd)pyrene	ND	5.2	0.77	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Isophorone	ND	10	0.57	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
2-Methylnaphthalene	ND	5.2	0.71	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
2-Methylphenol	ND	10	0.49	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
3/4-Methylphenol	ND	10	0.47	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Naphthalene	ND	5.2	0.63	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
2-Nitroaniline	ND	10	0.71	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
3-Nitroaniline	ND	10	0.61	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
4-Nitroaniline	ND	10	0.62	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Nitrobenzene	ND	10	0.65	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
2-Nitrophenol	ND	10	0.53	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
4-Nitrophenol	ND	10	2.2	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
N-Nitrosodiphenylamine/Diphenylamine	ND	10	0.39	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
N-Nitrosodi-n-propylamine	ND	10	0.63	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Pentachlorophenol	ND	10	3.6	µg/L	1	V-05	SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Phenanthrene	ND	5.2	0.49	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Phenol	ND	10	0.23	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
Pyrene	ND	5.2	0.63	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
1,2,4,5-Tetrachlorobenzene	ND	10	0.67	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
2,4,5-Trichlorophenol	ND	10	0.53	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR
2,4,6-Trichlorophenol	ND	10	0.46	µg/L	1		SW-846 8270E	5/26/22	6/3/22 19:34	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	42.0	15-110		6/3/22 19:34
Phenol-d6	32.6	15-110		6/3/22 19:34
Nitrobenzene-d5	72.6	30-130		6/3/22 19:34
2-Fluorobiphenyl	69.7	30-130		6/3/22 19:34
2,4,6-Tribromophenol	81.1	15-110		6/3/22 19:34
p-Terphenyl-d14	72.1	30-130		6/3/22 19:34

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-05-051922 | Sampled: 5/19/2022 13:00

Sample ID: 22E1360-04

Sample Matrix: Surface Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	0.34	0.22	0.035	µg/L	1		SW-846 8270E	5/26/22	6/2/22 8:35	CLA

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
1,4-Dioxane-d8	29.5	15-110		6/2/22 8:35	

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-05-051922 | Sampled: 5/19/2022 13:00

Sample ID: 22E1360-04

Sample Matrix: Surface Water

Sample Flags: PF-20

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	6.4	4.0	1.5	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
Perfluorobutanesulfonic acid (PFBS)	4.1	4.0	0.57	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
Perfluoropentanoic acid (PFPeA)	6.0	4.0	0.79	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
Perfluorohexanoic acid (PFHxA)	9.7	4.0	0.77	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
11Cl-PF3OUdS (F53B Minor)	ND	4.0	1.3	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
9Cl-PF3ONS (F53B Major)	ND	4.0	0.78	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.0	0.70	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.0	0.48	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	4.0	1.2	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
Perfluorodecanoic acid (PFDA)	ND	4.0	0.98	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
Perfluorododecanoic acid (PFDoA)	ND	4.0	0.89	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	4.0	0.47	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
Perfluoroheptanesulfonic acid (PFHpS)	3.2	4.0	1.9	ng/L	1	J	SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
N-EtFOSAA	1.6	4.0	1.3	ng/L	1	J	SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
N-MeFOSAA	ND	4.0	1.5	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
Perfluorotetradecanoic acid (PFTA)	ND	4.0	0.74	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	4.0	0.56	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	4.0	0.57	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	4.0	0.65	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
Perfluorooctanesulfonamide (FOSA)	ND	4.0	0.84	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
Perfluorononanesulfonic acid (PFNS)	ND	4.0	0.34	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	4.0	0.62	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
Perfluoro-1-butanesulfonamide (FBSA)	0.85	4.0	0.38	ng/L	1	J	SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
Perfluorohexanesulfonic acid (PFHxS)	17	4.0	0.68	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	4.0	0.83	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	4.0	0.69	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	4.0	0.73	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
Perfluoropetanesulfonic acid (PFPeS)	3.6	4.0	0.52	ng/L	1	J	SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
Perfluoroundecanoic acid (PFUnA)	ND	4.0	0.74	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	4.0	0.55	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
Perfluoroheptanoic acid (PFHpA)	8.7	4.0	0.69	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
Perfluorooctanoic acid (PFOA)	82	4.0	1.4	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
Perfluorooctanesulfonic acid (PFOS)	64	4.0	1.2	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH
Perfluorononanoic acid (PFNA)	1.2	4.0	0.69	ng/L	1	Z-01, J	SOP-454 PFAS	5/23/22	5/25/22 10:10	BLH

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-05-051922 | Sampled: 5/19/2022 13:00

Sample ID: 22E1360-04

Sample Matrix: Surface Water

Tentatively Identified Compounds - SV Compounds (ESTIMATED VALUES REPORTED)

Analyte	Results	Units	Response	RT	DF	CAS #	Q#	Method	Date Prepared	Date/Time Analyzed	Analyst
Phosphine imide, P,P,P-trip...	17	µg/L	398424	8.506	1	002240-47-3	99	SW-846 8270E	5/26/22	6/3/22 19:34	IMR

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-05-051922 | Sampled: 5/19/2022 13:00

Sample ID: 22E1360-04

Sample Matrix: Surface Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	0.054	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:22	SFM
Aroclor-1221 [1]	ND	0.20	0.081	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:22	SFM
Aroclor-1232 [1]	ND	0.20	0.074	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:22	SFM
Aroclor-1242 [1]	ND	0.20	0.078	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:22	SFM
Aroclor-1248 [1]	ND	0.20	0.090	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:22	SFM
Aroclor-1254 [1]	ND	0.20	0.080	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:22	SFM
Aroclor-1260 [1]	ND	0.20	0.063	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:22	SFM
Aroclor-1262 [1]	ND	0.20	0.065	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:22	SFM
Aroclor-1268 [1]	ND	0.20	0.079	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:22	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	43.3	30-150		6/4/22 14:22
Decachlorobiphenyl [2]	36.8	30-150		6/4/22 14:22
Tetrachloro-m-xylene [1]	56.4	30-150		6/4/22 14:22
Tetrachloro-m-xylene [2]	47.4	30-150		6/4/22 14:22

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-05-051922 | Sampled: 5/19/2022 13:00

Sample ID: 22E1360-04

Sample Matrix: Surface Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	0.42	0.050	0.015	mg/L	1		SW-846 6010D	5/23/22	5/29/22 23:19	MJH
Antimony	ND	0.050	0.0089	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:48	MJH
Arsenic	0.012	0.010	0.0047	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:48	MJH
Barium	1.3	0.050	0.0056	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:48	MJH
Beryllium	ND	0.0040	0.0010	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:48	MJH
Cadmium	0.0036	0.0040	0.00080	mg/L	1	J	SW-846 6010D	5/23/22	5/28/22 16:48	MJH
Calcium	330	0.50	0.11	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:48	MJH
Chromium	0.0074	0.010	0.0025	mg/L	1	J	SW-846 6010D	5/23/22	5/28/22 16:48	MJH
Cobalt	0.0044	0.010	0.0014	mg/L	1	J	SW-846 6010D	5/23/22	5/28/22 16:48	MJH
Copper	0.041	0.010	0.0036	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:48	MJH
Iron	54	0.050	0.019	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:48	MJH
Lead	0.064	0.010	0.0030	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:48	MJH
Magnesium	30	0.050	0.0095	mg/L	1		SW-846 6010D	5/23/22	5/29/22 23:19	MJH
Manganese	0.75	0.010	0.0017	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:48	MJH
Mercury	0.000049	0.00010	0.000040	mg/L	1	J	SW-846 7470A	5/21/22	5/24/22 11:56	TDK
Nickel	0.023	0.010	0.0088	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:48	MJH
Potassium	29	2.0	0.30	mg/L	1		SW-846 6010D	5/23/22	5/29/22 23:19	MJH
Selenium	ND	0.050	0.011	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:48	MJH
Silver	ND	0.010	0.0032	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:48	MJH
Sodium	44	2.0	0.53	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:48	MJH
Thallium	ND	0.050	0.019	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:48	MJH
Vanadium	0.011	0.010	0.0031	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:48	MJH
Zinc	0.49	0.010	0.0042	mg/L	1		SW-846 6010D	5/23/22	5/28/22 16:48	MJH
Hardness	910	1.4		mg/L	1		SW-846 6010	5/23/22	5/29/22 23:19	MJH

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-05-051922 | Sampled: 5/19/2022 13:00

Sample ID: 22E1360-04

Sample Matrix: Surface Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alkalinity	910	10	6.5	mg/L	10		SM21-23 2320B	5/30/22	5/30/22 7:51	IS
Ammonia as N	7.4	0.30	0.18	mg/L	1		SM19-23 4500 NH3 C	5/27/22	6/1/22 13:59	EC
Chemical Oxygen Demand	360	15	5.6	mg/L	1	Z-01a	EPA 410.4	6/2/22	6/2/22 13:24	LL
Cyanide	0.011	0.010	0.0035	mg/L	1		SM21-23 4500 CN E	5/31/22	6/1/22 13:30	DRA
Phenol	0.095	0.050	0.048	mg/L	1		EPA 420.1	5/23/22	5/24/22 12:05	LL
Total Kjeldahl Nitrogen	17	1.0	0.070	mg/L	1		SM19-23 4500-N Org B,C-NH3 C	5/27/22	5/31/22 8:55	DET

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-05-051922 | Sampled: 5/19/2022 13:00

Sample ID: 22E1360-04

Sample Matrix: Surface Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Dissolved)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Dissolved Solids	880	10	4.6	mg/L	1		SM21-23 2540C	5/24/22	5/24/22 11:38	LL

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: SP-05-051922 | Sampled: 5/19/2022 13:00

Sample ID: 22E1360-04

Sample Matrix: Surface Water

SM 5210B-16

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
B.O.D./5 day	12	3.7	mg/L	3		SM 5210B-16	5/20/22	5/20/22 15:48	PEL

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: FD-051922 | Sampled: 5/19/2022 00:00

Sample ID: 22E1360-05

Sample Matrix: Surface Water

Sample Flags: DL-01

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	200	8.1	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Benzene	ND	4.0	0.80	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Bromochloromethane	ND	4.0	1.2	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Bromodichloromethane	ND	2.0	0.72	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Bromoform	ND	4.0	1.5	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Bromomethane	ND	8.0	6.2	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
2-Butanone (MEK)	ND	80	6.5	µg/L	4	R-05	SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Carbon Disulfide	ND	20	5.8	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Carbon Tetrachloride	ND	20	0.66	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Chlorobenzene	0.52	4.0	0.42	µg/L	4	J	SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Chlorodibromomethane	ND	2.0	0.89	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Chloroethane	ND	8.0	1.3	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Chloroform	ND	8.0	0.67	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Chloromethane	ND	8.0	2.1	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Cyclohexane	ND	20	7.0	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	20	3.2	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
1,2-Dibromoethane (EDB)	ND	2.0	0.68	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
1,2-Dichlorobenzene	ND	4.0	0.49	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
1,3-Dichlorobenzene	ND	4.0	0.47	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
1,4-Dichlorobenzene	ND	4.0	0.52	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Dichlorodifluoromethane (Freon 12)	ND	8.0	0.77	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
1,1-Dichloroethane	ND	4.0	0.57	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
1,2-Dichloroethane	ND	4.0	1.2	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
1,1-Dichloroethylene	ND	4.0	0.57	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
cis-1,2-Dichloroethylene	ND	4.0	0.59	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
trans-1,2-Dichloroethylene	ND	4.0	0.67	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
1,2-Dichloropropane	ND	4.0	0.72	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
cis-1,3-Dichloropropene	ND	2.0	0.63	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
trans-1,3-Dichloropropene	ND	2.0	0.67	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
1,4-Dioxane	ND	200	82	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Ethylbenzene	ND	4.0	0.86	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
2-Hexanone (MBK)	ND	40	4.5	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Isopropylbenzene (Cumene)	ND	4.0	0.43	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Methyl Acetate	ND	4.0	1.8	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Methyl tert-Butyl Ether (MTBE)	ND	4.0	0.69	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Methyl Cyclohexane	ND	4.0	0.98	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Methylene Chloride	ND	20	0.94	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
4-Methyl-2-pentanone (MIBK)	ND	40	5.1	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Styrene	ND	4.0	0.42	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
1,1,2,2-Tetrachloroethane	ND	2.0	0.51	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Tetrachloroethylene	ND	4.0	0.75	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Toluene	ND	4.0	0.90	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
1,2,3-Trichlorobenzene	ND	20	1.2	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
1,2,4-Trichlorobenzene	ND	4.0	0.99	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: FD-051922 | Sampled: 5/19/2022 00:00

Sample ID: 22E1360-05

Sample Matrix: Surface Water

Sample Flags: DL-01

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	4.0	0.68	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
1,1,2-Trichloroethane	ND	4.0	0.73	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Trichloroethylene	ND	4.0	0.76	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Trichlorofluoromethane (Freon 11)	ND	8.0	0.70	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	4.0	0.91	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Vinyl Chloride	ND	8.0	0.83	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH
Xylenes (total)	ND	4.0	4.0	µg/L	4		SW-846 8260D	5/26/22	5/26/22 15:12	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	99.7	70-130		5/26/22 15:12
Toluene-d8	99.6	70-130		5/26/22 15:12
4-Bromofluorobenzene	102	70-130		5/26/22 15:12

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

Project Location: Incinerator Rd, Utica, NY
Sample Description:
Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: FD-051922
Sampled: 5/19/2022 00:00

Sample ID: 22E1360-05

Sample Matrix: Surface Water

Tentatively Identified Compounds - Volatile Compounds (ESTIMATED VALUES REPORTED)

Analyte	Results	Units	Response	RT	DF	CAS #	Q#	Method	Date Prepared	Date/Time Analyzed	Analyst
No TICs Found	0.0	µg/L			4			SW-846 8260D	5/26/22	5/26/22 15:12	EEH

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: FD-051922 | Sampled: 5/19/2022 00:00

Sample ID: 22E1360-05

Sample Matrix: Surface Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Atrazine	ND	20	0.55	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Benzaldehyde	ND	10	0.45	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Biphenyl	ND	20	0.41	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Caprolactam	ND	10	0.28	µg/L	1	L-04	SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Acenaphthene	ND	5.0	0.52	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Acenaphthylene	ND	5.0	0.48	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Acetophenone	ND	10	0.53	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Anthracene	ND	5.0	0.46	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Benzo(a)anthracene	ND	5.0	0.41	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Benzo(a)pyrene	ND	5.0	0.57	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Benzo(b)fluoranthene	ND	5.0	0.47	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Benzo(g,h,i)perylene	ND	5.0	0.61	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Benzo(k)fluoranthene	ND	5.0	0.49	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Bis(2-chloroethoxy)methane	ND	10	0.46	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Bis(2-chloroethyl)ether	ND	10	0.57	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Bis(2-chloroisopropyl)ether	ND	10	0.69	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Bis(2-Ethylhexyl)phthalate	ND	10	0.84	µg/L	1	V-05	SW-846 8270E	5/26/22	6/4/22 17:51	IMR
4-Bromophenylphenylether	ND	10	0.47	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Butylbenzylphthalate	ND	10	0.67	µg/L	1	V-05	SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Carbazole	ND	10	0.43	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
4-Chloroaniline	ND	10	0.58	µg/L	1	V-34	SW-846 8270E	5/26/22	6/4/22 17:51	IMR
4-Chloro-3-methylphenol	ND	10	0.56	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
2-Chloronaphthalene	ND	10	0.49	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
2-Chlorophenol	ND	10	0.47	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
4-Chlorophenylphenylether	ND	10	0.48	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Chrysene	ND	5.0	0.40	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Dibenz(a,h)anthracene	ND	5.0	0.69	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Dibenzofuran	ND	5.0	0.49	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Di-n-butylphthalate	ND	10	0.46	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
3,3-Dichlorobenzidine	ND	10	0.71	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
2,4-Dichlorophenol	ND	10	0.48	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Diethylphthalate	ND	10	0.42	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
2,4-Dimethylphenol	ND	10	0.70	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Dimethylphthalate	ND	10	0.38	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
4,6-Dinitro-2-methylphenol	ND	10	7.0	µg/L	1	V-05	SW-846 8270E	5/26/22	6/4/22 17:51	IMR
2,4-Dinitrophenol	ND	10	8.1	µg/L	1	V-05	SW-846 8270E	5/26/22	6/4/22 17:51	IMR
2,4-Dinitrotoluene	ND	10	0.61	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
2,6-Dinitrotoluene	ND	10	0.52	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Di-n-octylphthalate	ND	10	3.9	µg/L	1	V-05	SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Fluoranthene	ND	5.0	0.43	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Fluorene	ND	5.0	0.52	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Hexachlorobenzene	ND	10	0.51	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Hexachlorobutadiene	ND	10	0.77	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Hexachlorocyclopentadiene	ND	10	3.7	µg/L	1	L-04, V-05	SW-846 8270E	5/26/22	6/4/22 17:51	IMR

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: FD-051922 | Sampled: 5/19/2022 00:00

Sample ID: 22E1360-05

Sample Matrix: Surface Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachloroethane	ND	10	0.74	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Indeno(1,2,3-cd)pyrene	ND	5.0	0.74	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Isophorone	ND	10	0.55	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
2-Methylnaphthalene	ND	5.0	0.69	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
2-Methylphenol	ND	10	0.47	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
3/4-Methylphenol	ND	10	0.46	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Naphthalene	ND	5.0	0.61	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
2-Nitroaniline	ND	10	0.69	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
3-Nitroaniline	ND	10	0.59	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
4-Nitroaniline	ND	10	0.60	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Nitrobenzene	ND	10	0.63	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
2-Nitrophenol	ND	10	0.51	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
4-Nitrophenol	ND	10	2.1	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
N-Nitrosodiphenylamine/Diphenylamine	0.65	10	0.38	µg/L	1	J	SW-846 8270E	5/26/22	6/4/22 17:51	IMR
N-Nitrosodi-n-propylamine	ND	10	0.61	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Pentachlorophenol	ND	10	3.5	µg/L	1	V-05	SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Phenanthrene	ND	5.0	0.48	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Phenol	ND	10	0.23	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
Pyrene	ND	5.0	0.61	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
1,2,4,5-Tetrachlorobenzene	ND	10	0.65	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
2,4,5-Trichlorophenol	ND	10	0.51	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR
2,4,6-Trichlorophenol	ND	10	0.45	µg/L	1		SW-846 8270E	5/26/22	6/4/22 17:51	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	50.0	15-110		6/4/22 17:51
Phenol-d6	38.5	15-110		6/4/22 17:51
Nitrobenzene-d5	86.7	30-130		6/4/22 17:51
2-Fluorobiphenyl	85.5	30-130		6/4/22 17:51
2,4,6-Tribromophenol	95.0	15-110		6/4/22 17:51
p-Terphenyl-d14	89.6	30-130		6/4/22 17:51

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: FD-051922 | Sampled: 5/19/2022 00:00

Sample ID: 22E1360-05

Sample Matrix: Surface Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	13	0.20	0.033	µg/L	1		SW-846 8270E	5/26/22	6/2/22 8:54	CLA

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,4-Dioxane-d8	30.0	15-110		6/2/22 8:54

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: FD-051922 | Sampled: 5/19/2022 00:00

Sample ID: 22E1360-05

Sample Matrix: Surface Water

Sample Flags: PF-20

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	25	4.0	1.5	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
Perfluorobutanesulfonic acid (PFBS)	11	4.0	0.56	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
Perfluoropentanoic acid (PFPeA)	24	4.0	0.78	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
Perfluorohexanoic acid (PFHxA)	39	4.0	0.77	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
11Cl-PF3OUdS (F53B Minor)	ND	4.0	1.3	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
9Cl-PF3ONS (F53B Major)	ND	4.0	0.78	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.0	0.70	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.0	0.48	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	4.0	1.2	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
Perfluorodecanoic acid (PFDA)	ND	4.0	0.98	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
Perfluorododecanoic acid (PFDoA)	ND	4.0	0.88	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	4.0	0.46	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
Perfluoroheptanesulfonic acid (PFHpS)	11	4.0	1.9	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
N-EtFOSAA	8.3	4.0	1.3	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
N-MeFOSAA	ND	4.0	1.5	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
Perfluorotetradecanoic acid (PFTA)	ND	4.0	0.73	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
Perfluorotridecanoic acid (PFTrDA)	ND	4.0	0.55	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	4.0	0.56	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
Perfluorodecanesulfonic acid (PFDS)	ND	4.0	0.65	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
Perfluorooctanesulfonamide (FOSA)	2.0	4.0	0.84	ng/L	1	J	SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
Perfluorononanesulfonic acid (PFNS)	ND	4.0	0.34	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
Perfluoro-1-hexanesulfonamide (FHxSA)	1.0	4.0	0.62	ng/L	1	J	SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
Perfluoro-1-butanesulfonamide (FBSA)	3.0	4.0	0.38	ng/L	1	J	SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
Perfluorohexanesulfonic acid (PFHxS)	44	4.0	0.68	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	4.0	0.83	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	4.0	0.68	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	4.0	0.73	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
Perfluoropetanesulfonic acid (PFPeS)	12	4.0	0.52	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
Perfluoroundecanoic acid (PFUnA)	ND	4.0	0.74	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	4.0	0.55	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
Perfluoroheptanoic acid (PFHpA)	25	4.0	0.69	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
Perfluorooctanoic acid (PFOA)	200	4.0	1.4	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
Perfluorooctanesulfonic acid (PFOS)	250	4.0	1.2	ng/L	1		SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH
Perfluorononanoic acid (PFNA)	3.2	4.0	0.69	ng/L	1	Z-01, J	SOP-454 PFAS	5/23/22	5/25/22 10:17	BLH

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

Project Location: Incinerator Rd, Utica, NY
Sample Description:
Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: FD-051922
Sampled: 5/19/2022 00:00

Sample ID: 22E1360-05

Sample Matrix: Surface Water

Tentatively Identified Compounds - SV Compounds (ESTIMATED VALUES REPORTED)

Analyte	Results	Units	Response	RT	DF	CAS #	Q#	Method	Date Prepared	Date/Time Analyzed	Analyst
No TICs Found	0.0	µg/L			1			SW-846 8270E	5/26/22	6/4/22 17:51	IMR

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: FD-051922 | Sampled: 5/19/2022 00:00

Sample ID: 22E1360-05

Sample Matrix: Surface Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	0.053	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:40	SFM
Aroclor-1221 [1]	ND	0.20	0.079	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:40	SFM
Aroclor-1232 [1]	ND	0.20	0.073	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:40	SFM
Aroclor-1242 [1]	ND	0.20	0.076	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:40	SFM
Aroclor-1248 [1]	ND	0.20	0.088	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:40	SFM
Aroclor-1254 [1]	ND	0.20	0.078	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:40	SFM
Aroclor-1260 [1]	ND	0.20	0.062	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:40	SFM
Aroclor-1262 [1]	ND	0.20	0.064	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:40	SFM
Aroclor-1268 [1]	ND	0.20	0.077	µg/L	1		SW-846 8082A	5/26/22	6/4/22 14:40	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	58.7	30-150		6/4/22 14:40
Decachlorobiphenyl [2]	52.0	30-150		6/4/22 14:40
Tetrachloro-m-xylene [1]	58.7	30-150		6/4/22 14:40
Tetrachloro-m-xylene [2]	49.3	30-150		6/4/22 14:40

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: FD-051922 | Sampled: 5/19/2022 00:00

Sample ID: 22E1360-05

Sample Matrix: Surface Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	0.32	0.050	0.015	mg/L	1		SW-846 6010D	5/23/22	5/29/22 23:27	MJH
Antimony	ND	0.050	0.0089	mg/L	1		SW-846 6010D	5/23/22	5/28/22 17:33	MJH
Arsenic	ND	0.010	0.0047	mg/L	1		SW-846 6010D	5/23/22	5/28/22 17:33	MJH
Barium	1.1	0.050	0.0056	mg/L	1		SW-846 6010D	5/23/22	5/28/22 17:33	MJH
Beryllium	ND	0.0040	0.0010	mg/L	1		SW-846 6010D	5/23/22	5/28/22 17:33	MJH
Cadmium	ND	0.0040	0.00080	mg/L	1		SW-846 6010D	5/23/22	5/28/22 17:33	MJH
Calcium	220	0.50	0.11	mg/L	1		SW-846 6010D	5/23/22	5/28/22 17:33	MJH
Chromium	0.0033	0.010	0.0025	mg/L	1	J	SW-846 6010D	5/23/22	5/28/22 17:33	MJH
Cobalt	0.0022	0.010	0.0014	mg/L	1	J	SW-846 6010D	5/23/22	5/28/22 17:33	MJH
Copper	0.018	0.010	0.0036	mg/L	1		SW-846 6010D	5/23/22	5/28/22 17:33	MJH
Iron	48	0.050	0.019	mg/L	1		SW-846 6010D	5/23/22	5/28/22 17:33	MJH
Lead	0.028	0.010	0.0030	mg/L	1		SW-846 6010D	5/23/22	5/28/22 17:33	MJH
Magnesium	44	0.050	0.0095	mg/L	1		SW-846 6010D	5/23/22	5/29/22 23:27	MJH
Manganese	0.59	0.010	0.0017	mg/L	1		SW-846 6010D	5/23/22	5/28/22 17:33	MJH
Mercury	ND	0.00010	0.000040	mg/L	1		SW-846 7470A	5/21/22	5/24/22 11:58	TDK
Nickel	0.0091	0.010	0.0088	mg/L	1	J	SW-846 6010D	5/23/22	5/28/22 17:33	MJH
Potassium	24	2.0	0.30	mg/L	1		SW-846 6010D	5/23/22	5/29/22 23:27	MJH
Selenium	ND	0.050	0.011	mg/L	1		SW-846 6010D	5/23/22	5/28/22 17:33	MJH
Silver	ND	0.010	0.0032	mg/L	1		SW-846 6010D	5/23/22	5/28/22 17:33	MJH
Sodium	29	2.0	0.53	mg/L	1		SW-846 6010D	5/23/22	5/28/22 17:33	MJH
Thallium	ND	0.050	0.019	mg/L	1		SW-846 6010D	5/23/22	5/28/22 17:33	MJH
Vanadium	0.014	0.010	0.0031	mg/L	1		SW-846 6010D	5/23/22	5/28/22 17:33	MJH
Zinc	0.14	0.010	0.0042	mg/L	1		SW-846 6010D	5/23/22	5/28/22 17:33	MJH
Hardness	720	1.4		mg/L	1		SW-846 6010	5/23/22	5/29/22 23:27	MJH

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: FD-051922 | Sampled: 5/19/2022 00:00

Sample ID: 22E1360-05

Sample Matrix: Surface Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alkalinity	780	10	6.5	mg/L	10		SM21-23 2320B	5/30/22	5/30/22 7:56	IS
Ammonia as N	20	0.30	0.18	mg/L	1		SM19-23 4500 NH3 C	5/27/22	6/1/22 14:04	EC
Chemical Oxygen Demand	160	15	5.6	mg/L	1	Z-01a	EPA 410.4	6/2/22	6/2/22 13:24	LL
Cyanide	0.0081	0.010	0.0035	mg/L	1	J	SM21-23 4500 CN E	5/31/22	6/1/22 13:30	DRA
Phenol	ND	0.050	0.048	mg/L	1		EPA 420.1	5/23/22	5/24/22 12:05	LL
Total Kjeldahl Nitrogen	22	1.0	0.070	mg/L	1		SM19-23 4500-N Org B,C-NH3 C	5/29/22	5/31/22 14:56	DET

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: FD-051922 | Sampled: 5/19/2022 00:00

Sample ID: 22E1360-05

Sample Matrix: Surface Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Dissolved)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Dissolved Solids	700	10	4.6	mg/L	1		SM21-23 2540C	5/24/22	5/24/22 11:38	LL

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: FD-051922 | Sampled: 5/19/2022 00:00

Sample ID: 22E1360-05

Sample Matrix: Surface Water

SM 5210B-16

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
B.O.D./5 day	4.4	3.7	mg/L	3		SM 5210B-16	5/20/22	5/20/22 15:48	PEL

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: TB-051922 | Sampled: 5/19/2022 00:00

Sample ID: 22E1360-06

Sample Matrix: Surface Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	2.0	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Benzene	ND	1.0	0.20	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Bromochloromethane	ND	1.0	0.31	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Bromodichloromethane	ND	0.50	0.18	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Bromoform	ND	1.0	0.38	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Bromomethane	ND	2.0	1.5	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
2-Butanone (MEK)	ND	20	1.6	µg/L	1	R-05	SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Carbon Disulfide	ND	5.0	1.4	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Chlorobenzene	ND	1.0	0.11	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Chlorodibromomethane	ND	0.50	0.22	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Chloroethane	ND	2.0	0.32	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Chloroform	ND	2.0	0.17	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Chloromethane	ND	2.0	0.52	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Cyclohexane	ND	5.0	1.8	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.80	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.17	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
1,2-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
1,3-Dichlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.19	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
1,1-Dichloroethane	ND	1.0	0.14	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
1,2-Dichloroethane	ND	1.0	0.31	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
1,1-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.15	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
1,2-Dichloropropane	ND	1.0	0.18	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
trans-1,3-Dichloropropene	ND	0.50	0.17	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
1,4-Dioxane	ND	50	21	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Ethylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
2-Hexanone (MBK)	ND	10	1.1	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.11	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Methyl Acetate	ND	1.0	0.45	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Methyl Cyclohexane	ND	1.0	0.24	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Methylene Chloride	ND	5.0	0.23	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.3	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Styrene	ND	1.0	0.11	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.13	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Tetrachloroethylene	ND	1.0	0.19	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Toluene	ND	1.0	0.22	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.30	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.25	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: TB-051922 | Sampled: 5/19/2022 00:00

Sample ID: 22E1360-06

Sample Matrix: Surface Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	1.0	0.17	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
1,1,2-Trichloroethane	ND	1.0	0.18	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Trichloroethylene	ND	1.0	0.19	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.18	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.23	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Vinyl Chloride	ND	2.0	0.21	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH
Xylenes (total)	ND	1.0	1.0	µg/L	1		SW-846 8260D	5/26/22	5/26/22 12:56	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	98.0	70-130		5/26/22 12:56
Toluene-d8	100	70-130		5/26/22 12:56
4-Bromofluorobenzene	103	70-130		5/26/22 12:56

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 22E1360

Date Received: 5/20/2022

Field Sample #: TB-051922 | Sampled: 5/19/2022 00:00

Sample ID: 22E1360-06

Sample Matrix: Surface Water

Tentatively Identified Compounds - Volatile Compounds (ESTIMATED VALUES REPORTED)

Analyte	Results	Units	Response	RT	DF	CAS #	Q#	Method	Date Prepared	Date/Time Analyzed	Analyst
No TICs Found	0.0	µg/L			1			SW-846 8260D	5/26/22	5/26/22 12:56	EEH

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Sample Extraction Data

EPA 410.4

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22E1360-01 [SP-01-051922]	B309781	2.00	2.00	06/02/22
22E1360-02 [SP-14-051922]	B309781	2.00	2.00	06/02/22
22E1360-03 [SP-10-051922]	B309781	2.00	2.00	06/02/22
22E1360-04 [SP-05-051922]	B309781	2.00	2.00	06/02/22
22E1360-05 [FD-051922]	B309781	2.00	2.00	06/02/22

EPA 420.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22E1360-01 [SP-01-051922]	B309012	50.0	50.0	05/23/22
22E1360-02 [SP-14-051922]	B309012	50.0	50.0	05/23/22
22E1360-03 [SP-10-051922]	B309012	50.0	50.0	05/23/22
22E1360-04 [SP-05-051922]	B309012	50.0	50.0	05/23/22
22E1360-05 [FD-051922]	B309012	50.0	50.0	05/23/22

SM19-23 4500 NH3 C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22E1360-01 [SP-01-051922]	B309410	100	100	05/27/22
22E1360-02 [SP-14-051922]	B309410	100	100	05/27/22
22E1360-03 [SP-10-051922]	B309410	100	100	05/27/22
22E1360-04 [SP-05-051922]	B309410	100	100	05/27/22
22E1360-05 [FD-051922]	B309410	100	100	05/27/22

Prep Method: SM4500 N Org B C Analytical Method: SM19-23 4500-N Org B,C-NH3 C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22E1360-01 [SP-01-051922]	B309414	25.0	25.0	05/27/22
22E1360-02 [SP-14-051922]	B309414	25.0	25.0	05/27/22
22E1360-03 [SP-10-051922]	B309414	25.0	25.0	05/27/22
22E1360-04 [SP-05-051922]	B309414	25.0	25.0	05/27/22

Prep Method: SM4500 N Org B C Analytical Method: SM19-23 4500-N Org B,C-NH3 C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22E1360-05 [FD-051922]	B309529	25.0	25.0	05/29/22

SM21-23 2320B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22E1360-01 [SP-01-051922]	B309331	100	100	05/26/22
22E1360-02 [SP-14-051922]	B309331	100	100	05/26/22

SM21-23 2320B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22E1360-03 [SP-10-051922]	B309537	100	100	05/30/22

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Sample Extraction Data

SM21-23 2320B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22E1360-04 [SP-05-051922]	B309537	100	100	05/30/22
22E1360-05 [FD-051922]	B309537	100	100	05/30/22

SM21-23 2540C

Lab Number [Field ID]	Batch	Initial [mL]	Date
22E1360-01 [SP-01-051922]	B309095	50.0	05/24/22
22E1360-02 [SP-14-051922]	B309095	50.0	05/24/22
22E1360-03 [SP-10-051922]	B309095	50.0	05/24/22
22E1360-04 [SP-05-051922]	B309095	50.0	05/24/22
22E1360-05 [FD-051922]	B309095	50.0	05/24/22

Prep Method: SM4500 CN C **Analytical Method: SM21-23 4500 CN E**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22E1360-01 [SP-01-051922]	B309611	50.0	50.0	05/31/22
22E1360-02 [SP-14-051922]	B309611	50.0	50.0	05/31/22
22E1360-03 [SP-10-051922]	B309611	50.0	50.0	05/31/22
22E1360-04 [SP-05-051922]	B309611	50.0	50.0	05/31/22
22E1360-05 [FD-051922]	B309611	50.0	50.0	05/31/22

Prep Method: SOP 454-PFAAS **Analytical Method: SOP-454 PFAS**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22E1360-01 [SP-01-051922]	B308947	125	1.00	05/23/22
22E1360-04 [SP-05-051922]	B308947	125	1.00	05/23/22
22E1360-05 [FD-051922]	B308947	125	1.00	05/23/22

Prep Method: SOP 454-PFAAS **Analytical Method: SOP-454 PFAS**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22E1360-02RE1 [SP-14-051922]	B309532	25.0	1.00	06/01/22
22E1360-03RE1 [SP-10-051922]	B309532	25.0	1.00	06/01/22

Prep Method: SW-846 3005A **Analytical Method: SW-846 6010**

Lab Number [Field ID]	Batch	Initial [mL]	Date
22E1360-01 [SP-01-051922]	B309042	50.0	05/23/22
22E1360-03 [SP-10-051922]	B309042	50.0	05/23/22
22E1360-04 [SP-05-051922]	B309042	50.0	05/23/22
22E1360-05 [FD-051922]	B309042	50.0	05/23/22

Prep Method: SW-846 3005A **Analytical Method: SW-846 6010**

Lab Number [Field ID]	Batch	Initial [mL]	Date
22E1360-02 [SP-14-051922]	B309124	50.0	05/24/22

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Sample Extraction Data

Prep Method: SW-846 3005A **Analytical Method: SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22E1360-01 [SP-01-051922]	B309042	50.0	50.0	05/23/22
22E1360-03 [SP-10-051922]	B309042	50.0	50.0	05/23/22
22E1360-04 [SP-05-051922]	B309042	50.0	50.0	05/23/22
22E1360-05 [FD-051922]	B309042	50.0	50.0	05/23/22

Prep Method: SW-846 3005A **Analytical Method: SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22E1360-02 [SP-14-051922]	B309124	50.0	50.0	05/24/22

Prep Method: SW-846 7470A Prep **Analytical Method: SW-846 7470A**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22E1360-01 [SP-01-051922]	B308993	10.0	10.0	05/21/22
22E1360-02 [SP-14-051922]	B308993	10.0	10.0	05/21/22
22E1360-03 [SP-10-051922]	B308993	10.0	10.0	05/21/22
22E1360-04 [SP-05-051922]	B308993	10.0	10.0	05/21/22
22E1360-05 [FD-051922]	B308993	10.0	10.0	05/21/22

Prep Method: SW-846 3510C **Analytical Method: SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22E1360-01 [SP-01-051922]	B309302	1000	10.0	05/26/22
22E1360-02 [SP-14-051922]	B309302	1000	10.0	05/26/22
22E1360-03 [SP-10-051922]	B309302	1030	10.0	05/26/22
22E1360-04 [SP-05-051922]	B309302	980	10.0	05/26/22
22E1360-05 [FD-051922]	B309302	1000	10.0	05/26/22

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22E1360-01 [SP-01-051922]	B309329	1.25	5.00	05/26/22
22E1360-02 [SP-14-051922]	B309329	2.5	5.00	05/26/22
22E1360-03 [SP-10-051922]	B309329	1.25	5.00	05/26/22
22E1360-04 [SP-05-051922]	B309329	2.5	5.00	05/26/22
22E1360-05 [FD-051922]	B309329	1.25	5.00	05/26/22
22E1360-06 [TB-051922]	B309329	5	5.00	05/26/22

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22E1360-01 [SP-01-051922]	B309306	960	1.00	05/26/22
22E1360-02 [SP-14-051922]	B309306	1000	1.00	05/26/22
22E1360-03 [SP-10-051922]	B309306	1030	1.00	05/26/22
22E1360-04 [SP-05-051922]	B309306	970	1.00	05/26/22
22E1360-05 [FD-051922]	B309306	1000	1.00	05/26/22

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Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22E1360-01 [SP-01-051922]	B309307	970	1.00	05/26/22
22E1360-02 [SP-14-051922]	B309307	1000	1.00	05/26/22
22E1360-03 [SP-10-051922]	B309307	1050	1.00	05/26/22
22E1360-04 [SP-05-051922]	B309307	930	1.00	05/26/22
22E1360-05 [FD-051922]	B309307	980	1.00	05/26/22

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
22E1360-03RE1 [SP-10-051922]	B310070	1040	1.00	06/07/22

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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 B309329 - SW-846 5030B										
Blank (B309329-BLK1)				Prepared & Analyzed: 05/26/22						
Acetone	ND	50	µg/L							
Benzene	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							R-05
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							
Cyclohexane	ND	5.0	µg/L							
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L							
1,2-Dibromoethane (EDB)	ND	0.50	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							
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							
cis-1,3-Dichloropropene	ND	0.50	µg/L							
trans-1,3-Dichloropropene	ND	0.50	µg/L							
1,4-Dioxane	ND	50	µg/L							
Ethylbenzene	ND	1.0	µg/L							
2-Hexanone (MBK)	ND	10	µg/L							
Isopropylbenzene (Cumene)	ND	1.0	µg/L							
Methyl Acetate	ND	1.0	µg/L							
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							
Styrene	ND	1.0	µg/L							
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L							
Tetrachloroethylene	ND	1.0	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							
1,1,1-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							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L							
Vinyl Chloride	ND	2.0	µg/L							
m+p Xylene	ND	2.0	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	
Batch B309329 - SW-846 5030B												
Blank (B309329-BLK1)				Prepared & Analyzed: 05/26/22								
o-Xylene	ND	1.0	µg/L									
Xylenes (total)	ND	1.0	µg/L									
Surrogate: 1,2-Dichloroethane-d4	*24.9*		µg/L	25.0		99.6		70-130				
Surrogate: Toluene-d8	*24.7*		µg/L	25.0		98.6		70-130				
Surrogate: 4-Bromofluorobenzene	*25.5*		µg/L	25.0		102		70-130				
LCS (B309329-BS1)				Prepared & Analyzed: 05/26/22								
Acetone	99.1	50	µg/L	100		99.1		70-160				†
Benzene	9.42	1.0	µg/L	10.0		94.2		70-130				
Bromochloromethane	9.92	1.0	µg/L	10.0		99.2		70-130				
Bromodichloromethane	10.5	0.50	µg/L	10.0		105		70-130				
Bromoform	13.4	1.0	µg/L	10.0		**134**	*	70-130			L-02, V-20	
Bromomethane	16.0	2.0	µg/L	10.0		160		40-160			V-20	†
2-Butanone (MEK)	120	20	µg/L	100		120		40-160			R-05	†
Carbon Disulfide	114	5.0	µg/L	100		114		70-130				
Carbon Tetrachloride	11.3	5.0	µg/L	10.0		113		70-130				
Chlorobenzene	11.4	1.0	µg/L	10.0		114		70-130				
Chlorodibromomethane	11.2	0.50	µg/L	10.0		112		70-130				
Chloroethane	12.5	2.0	µg/L	10.0		125		70-130				
Chloroform	10.5	2.0	µg/L	10.0		105		70-130				
Chloromethane	9.26	2.0	µg/L	10.0		92.6		40-160				†
Cyclohexane	9.30	5.0	µg/L	10.0		93.0		70-130				
1,2-Dibromo-3-chloropropane (DBCP)	10.2	5.0	µg/L	10.0		102		70-130				
1,2-Dibromoethane (EDB)	12.0	0.50	µg/L	10.0		120		70-130				
1,2-Dichlorobenzene	10.5	1.0	µg/L	10.0		105		70-130				
1,3-Dichlorobenzene	10.8	1.0	µg/L	10.0		108		70-130				
1,4-Dichlorobenzene	10.5	1.0	µg/L	10.0		105		70-130				
Dichlorodifluoromethane (Freon 12)	9.72	2.0	µg/L	10.0		97.2		40-160				†
1,1-Dichloroethane	9.84	1.0	µg/L	10.0		98.4		70-130				
1,2-Dichloroethane	10.1	1.0	µg/L	10.0		101		70-130				
1,1-Dichloroethylene	10.5	1.0	µg/L	10.0		105		70-130				
cis-1,2-Dichloroethylene	9.69	1.0	µg/L	10.0		96.9		70-130				
trans-1,2-Dichloroethylene	9.71	1.0	µg/L	10.0		97.1		70-130				
1,2-Dichloropropane	10.0	1.0	µg/L	10.0		100		70-130				
cis-1,3-Dichloropropene	9.63	0.50	µg/L	10.0		96.3		70-130				
trans-1,3-Dichloropropene	9.89	0.50	µg/L	10.0		98.9		70-130				
1,4-Dioxane	103	50	µg/L	100		103		40-130				†
Ethylbenzene	10.9	1.0	µg/L	10.0		109		70-130				
2-Hexanone (MBK)	97.8	10	µg/L	100		97.8		70-160				†
Isopropylbenzene (Cumene)	11.2	1.0	µg/L	10.0		112		70-130				
Methyl Acetate	10.4	1.0	µg/L	10.0		104		70-130				
Methyl tert-Butyl Ether (MTBE)	10.1	1.0	µg/L	10.0		101		70-130				
Methyl Cyclohexane	10.3	1.0	µg/L	10.0		103		70-130				
Methylene Chloride	10.3	5.0	µg/L	10.0		103		70-130				
4-Methyl-2-pentanone (MIBK)	97.4	10	µg/L	100		97.4		70-160				†
Styrene	11.1	1.0	µg/L	10.0		111		70-130				
1,1,2,2-Tetrachloroethane	11.9	0.50	µg/L	10.0		119		70-130				
Tetrachloroethylene	11.6	1.0	µg/L	10.0		116		70-130				
Toluene	10.5	1.0	µg/L	10.0		105		70-130				
1,2,3-Trichlorobenzene	10.3	5.0	µg/L	10.0		103		70-130				
1,2,4-Trichlorobenzene	9.97	1.0	µg/L	10.0		99.7		70-130				
1,1,1-Trichloroethane	11.3	1.0	µg/L	10.0		113		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 B309329 - SW-846 5030B													
LCS (B309329-BS1)				Prepared & Analyzed: 05/26/22									
1,1,2-Trichloroethane	11.5	1.0	µg/L	10.0		115		70-130					
Trichloroethylene	11.1	1.0	µg/L	10.0		111		70-130					
Trichlorofluoromethane (Freon 11)	11.4	2.0	µg/L	10.0		114		70-130					
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	11.8	1.0	µg/L	10.0		118		70-130					
Vinyl Chloride	9.90	2.0	µg/L	10.0		99.0		40-160					†
m+p Xylene	22.0	2.0	µg/L	20.0		110		70-130					
o-Xylene	10.9	1.0	µg/L	10.0		109		70-130					
Xylenes (total)	32.8	1.0	µg/L	30.0		109		0-200					
Surrogate: 1,2-Dichloroethane-d4	*25.0*		µg/L	25.0		100		70-130					
Surrogate: Toluene-d8	*24.6*		µg/L	25.0		98.3		70-130					
Surrogate: 4-Bromofluorobenzene	*26.2*		µg/L	25.0		105		70-130					
LCS Dup (B309329-BSD1)				Prepared & Analyzed: 05/26/22									
Acetone	94.2	50	µg/L	100		94.2		70-160	5.06		25		†
Benzene	9.15	1.0	µg/L	10.0		91.5		70-130	2.91		25		
Bromochloromethane	9.91	1.0	µg/L	10.0		99.1		70-130	0.101		25		
Bromodichloromethane	10.4	0.50	µg/L	10.0		104		70-130	1.05		25		
Bromoform	13.4	1.0	µg/L	10.0		**134**	*	70-130	0.373		25	L-02, V-20	
Bromomethane	16.5	2.0	µg/L	10.0		**165**	*	40-160	2.65		25	L-07, V-20	†
2-Butanone (MEK)	91.5	20	µg/L	100		91.5		40-160	**27.0**	*	25	R-05	†
Carbon Disulfide	110	5.0	µg/L	100		110		70-130	3.06		25		
Carbon Tetrachloride	11.3	5.0	µg/L	10.0		113		70-130	0.177		25		
Chlorobenzene	11.2	1.0	µg/L	10.0		112		70-130	2.04		25		
Chlorodibromomethane	11.0	0.50	µg/L	10.0		110		70-130	1.35		25		
Chloroethane	12.2	2.0	µg/L	10.0		122		70-130	2.11		25		
Chloroform	10.5	2.0	µg/L	10.0		105		70-130	0.00		25		
Chloromethane	8.94	2.0	µg/L	10.0		89.4		40-160	3.52		25		†
Cyclohexane	9.05	5.0	µg/L	10.0		90.5		70-130	2.72		25		
1,2-Dibromo-3-chloropropane (DBCP)	9.36	5.0	µg/L	10.0		93.6		70-130	8.10		25		
1,2-Dibromoethane (EDB)	11.8	0.50	µg/L	10.0		118		70-130	1.60		25		
1,2-Dichlorobenzene	10.4	1.0	µg/L	10.0		104		70-130	1.15		25		
1,3-Dichlorobenzene	10.6	1.0	µg/L	10.0		106		70-130	1.87		25		
1,4-Dichlorobenzene	10.4	1.0	µg/L	10.0		104		70-130	0.574		25		
Dichlorodifluoromethane (Freon 12)	9.39	2.0	µg/L	10.0		93.9		40-160	3.45		25		†
1,1-Dichloroethane	9.72	1.0	µg/L	10.0		97.2		70-130	1.23		25		
1,2-Dichloroethane	9.98	1.0	µg/L	10.0		99.8		70-130	1.39		25		
1,1-Dichloroethylene	10.1	1.0	µg/L	10.0		101		70-130	4.07		25		
cis-1,2-Dichloroethylene	9.35	1.0	µg/L	10.0		93.5		70-130	3.57		25		
trans-1,2-Dichloroethylene	9.54	1.0	µg/L	10.0		95.4		70-130	1.77		25		
1,2-Dichloropropane	9.85	1.0	µg/L	10.0		98.5		70-130	1.61		25		
cis-1,3-Dichloropropene	9.55	0.50	µg/L	10.0		95.5		70-130	0.834		25		
trans-1,3-Dichloropropene	9.78	0.50	µg/L	10.0		97.8		70-130	1.12		25		
1,4-Dioxane	95.9	50	µg/L	100		95.9		40-130	7.37		50		† ‡
Ethylbenzene	10.7	1.0	µg/L	10.0		107		70-130	2.03		25		
2-Hexanone (MBK)	93.0	10	µg/L	100		93.0		70-160	5.00		25		†
Isopropylbenzene (Cumene)	11.0	1.0	µg/L	10.0		110		70-130	2.44		25		
Methyl Acetate	9.41	1.0	µg/L	10.0		94.1		70-130	10.1		25		
Methyl tert-Butyl Ether (MTBE)	9.91	1.0	µg/L	10.0		99.1		70-130	2.00		25		
Methyl Cyclohexane	9.98	1.0	µg/L	10.0		99.8		70-130	3.45		25		
Methylene Chloride	9.84	5.0	µg/L	10.0		98.4		70-130	4.47		25		
4-Methyl-2-pentanone (MIBK)	93.2	10	µg/L	100		93.2		70-160	4.38		25		†
Styrene	10.8	1.0	µg/L	10.0		108		70-130	2.38		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
Batch B309329 - SW-846 5030B											
LCS Dup (B309329-BSD1)				Prepared & Analyzed: 05/26/22							
1,1,2,2-Tetrachloroethane	11.8	0.50	µg/L	10.0		118		70-130	0.338	25	
Tetrachloroethylene	11.6	1.0	µg/L	10.0		116		70-130	0.172	25	
Toluene	10.3	1.0	µg/L	10.0		103		70-130	2.40	25	
1,2,3-Trichlorobenzene	9.82	5.0	µg/L	10.0		98.2		70-130	5.06	25	
1,2,4-Trichlorobenzene	9.78	1.0	µg/L	10.0		97.8		70-130	1.92	25	
1,1,1-Trichloroethane	11.2	1.0	µg/L	10.0		112		70-130	0.979	25	
1,1,2-Trichloroethane	11.3	1.0	µg/L	10.0		113		70-130	1.31	25	
Trichloroethylene	11.1	1.0	µg/L	10.0		111		70-130	0.180	25	
Trichlorofluoromethane (Freon 11)	11.1	2.0	µg/L	10.0		111		70-130	2.32	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	11.5	1.0	µg/L	10.0		115		70-130	2.41	25	
Vinyl Chloride	9.67	2.0	µg/L	10.0		96.7		40-160	2.35	25	†
m+p Xylene	21.6	2.0	µg/L	20.0		108		70-130	1.47	25	
o-Xylene	10.9	1.0	µg/L	10.0		109		70-130	0.459	25	
Xylenes (total)	32.6	1.0	µg/L	30.0		108		0-200	0.826		
Surrogate: 1,2-Dichloroethane-d4	*25.0*		µg/L	25.0		100		70-130			
Surrogate: Toluene-d8	*24.5*		µg/L	25.0		98.2		70-130			
Surrogate: 4-Bromofluorobenzene	*26.3*		µg/L	25.0		105		70-130			
Matrix Spike (B309329-MS1)	**Source: 22E1360-02**			Prepared & Analyzed: 05/26/22							
Acetone	183	100	µg/L	200	ND	91.5		70-130			
Benzene	19.5	2.0	µg/L	20.0	ND	97.4		70-130			
Bromochloromethane	22.1	2.0	µg/L	20.0	ND	111		70-130			
Bromodichloromethane	22.6	1.0	µg/L	20.0	ND	113		70-130			
Bromoform	26.6	2.0	µg/L	20.0	ND	**133**	*	70-130			L-02, MS-15, V-20
Bromomethane	29.1	4.0	µg/L	20.0	ND	**145**	*	70-130			MS-15, V-20
2-Butanone (MEK)	181	40	µg/L	200	ND	90.4		70-130			R-05
Carbon Disulfide	233	10	µg/L	200	ND	116		70-130			
Carbon Tetrachloride	24.0	10	µg/L	20.0	ND	120		70-130			
Chlorobenzene	24.1	2.0	µg/L	20.0	ND	121		70-130			
Chlorodibromomethane	22.7	1.0	µg/L	20.0	ND	114		70-130			
Chloroethane	25.7	4.0	µg/L	20.0	ND	128		70-130			
Chloroform	21.9	4.0	µg/L	20.0	ND	110		70-130			
Chloromethane	15.1	4.0	µg/L	20.0	ND	75.6		70-130			
Cyclohexane	19.6	10	µg/L	20.0	ND	98.1		70-130			
1,2-Dibromo-3-chloropropane (DBCP)	19.6	10	µg/L	20.0	ND	98.2		70-130			
1,2-Dibromoethane (EDB)	24.3	1.0	µg/L	20.0	ND	122		70-130			
1,2-Dichlorobenzene	21.6	2.0	µg/L	20.0	ND	108		70-130			
1,3-Dichlorobenzene	21.5	2.0	µg/L	20.0	ND	108		70-130			
1,4-Dichlorobenzene	21.3	2.0	µg/L	20.0	ND	106		70-130			
Dichlorodifluoromethane (Freon 12)	19.9	4.0	µg/L	20.0	ND	99.7		70-130			
1,1-Dichloroethane	20.6	2.0	µg/L	20.0	ND	103		70-130			
1,2-Dichloroethane	20.5	2.0	µg/L	20.0	ND	102		70-130			
1,1-Dichloroethylene	22.1	2.0	µg/L	20.0	ND	110		70-130			
cis-1,2-Dichloroethylene	20.3	2.0	µg/L	20.0	ND	101		70-130			
trans-1,2-Dichloroethylene	20.5	2.0	µg/L	20.0	ND	103		70-130			
1,2-Dichloropropane	20.6	2.0	µg/L	20.0	ND	103		70-130			
cis-1,3-Dichloropropene	19.4	1.0	µg/L	20.0	ND	96.8		70-130			
trans-1,3-Dichloropropene	19.2	1.0	µg/L	20.0	ND	96.0		70-130			
1,4-Dioxane	199	100	µg/L	200	ND	99.6		70-130			
Ethylbenzene	26.7	2.0	µg/L	20.0	ND	**134**	*	70-130			MS-07A
2-Hexanone (MBK)	194	20	µg/L	200	ND	97.1		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 B309329 - SW-846 5030B											
Matrix Spike (B309329-MS1)	**Source: 22E1360-02**			Prepared & Analyzed: 05/26/22							
Isopropylbenzene (Cumene)	24.1	2.0	µg/L	20.0	ND	121		70-130			
Methyl Acetate	17.4	2.0	µg/L	20.0	ND	87.0		70-130			
Methyl tert-Butyl Ether (MTBE)	21.1	2.0	µg/L	20.0	ND	106		70-130			
Methyl Cyclohexane	20.8	2.0	µg/L	20.0	ND	104		70-130			
Methylene Chloride	20.5	10	µg/L	20.0	ND	102		70-130			
4-Methyl-2-pentanone (MIBK)	194	20	µg/L	200	ND	96.8		70-130			
Styrene	23.0	2.0	µg/L	20.0	ND	115		70-130			
1,1,2,2-Tetrachloroethane	24.1	1.0	µg/L	20.0	ND	121		70-130			
Tetrachloroethylene	24.0	2.0	µg/L	20.0	ND	120		70-130			
Toluene	22.2	2.0	µg/L	20.0	ND	111		70-130			
1,2,3-Trichlorobenzene	17.1	10	µg/L	20.0	ND	85.3		70-130			
1,2,4-Trichlorobenzene	18.4	2.0	µg/L	20.0	ND	92.2		70-130			
1,1,1-Trichloroethane	23.7	2.0	µg/L	20.0	ND	118		70-130			
1,1,2-Trichloroethane	23.6	2.0	µg/L	20.0	ND	118		70-130			
Trichloroethylene	23.6	2.0	µg/L	20.0	ND	118		70-130			
Trichlorofluoromethane (Freon 11)	23.1	4.0	µg/L	20.0	ND	116		70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	23.5	2.0	µg/L	20.0	ND	117		70-130			
Vinyl Chloride	20.3	4.0	µg/L	20.0	ND	102		70-130			
m+p Xylene	56.1	4.0	µg/L	40.0	ND	**140**	*	70-130			MS-07A
o-Xylene	27.1	2.0	µg/L	20.0	ND	**135**	*	70-130			MS-07A
Xylenes (total)	83.2	2.0	µg/L	60.0	ND	139		0-200			
Surrogate: 1,2-Dichloroethane-d4	*24.3*		µg/L	25.0		97.3		70-130			
Surrogate: Toluene-d8	*24.8*		µg/L	25.0		99.0		70-130			
Surrogate: 4-Bromofluorobenzene	*26.2*		µg/L	25.0		105		70-130			
Matrix Spike Dup (B309329-MSD1)	**Source: 22E1360-02**			Prepared & Analyzed: 05/26/22							
Acetone	185	100	µg/L	200	ND	92.4		70-130	1.05	30	
Benzene	19.9	2.0	µg/L	20.0	ND	99.5		70-130	2.13	30	
Bromochloromethane	21.1	2.0	µg/L	20.0	ND	106		70-130	4.72	30	
Bromodichloromethane	22.1	1.0	µg/L	20.0	ND	110		70-130	2.42	30	
Bromoform	26.9	2.0	µg/L	20.0	ND	**134**	*	70-130	1.12	30	L-02, MS-15, V-20
Bromomethane	33.0	4.0	µg/L	20.0	ND	**165**	*	70-130	12.7	30	MS-15, V-20
2-Butanone (MEK)	182	40	µg/L	200	ND	91.2		70-130	0.947	30	R-05
Carbon Disulfide	237	10	µg/L	200	ND	119		70-130	1.93	30	
Carbon Tetrachloride	24.3	10	µg/L	20.0	ND	122		70-130	1.32	30	
Chlorobenzene	23.9	2.0	µg/L	20.0	ND	119		70-130	1.08	30	
Chlorodibromomethane	23.1	1.0	µg/L	20.0	ND	116		70-130	1.92	30	
Chloroethane	25.6	4.0	µg/L	20.0	ND	128		70-130	0.234	30	
Chloroform	21.7	4.0	µg/L	20.0	ND	108		70-130	0.917	30	
Chloromethane	16.9	4.0	µg/L	20.0	ND	84.7		70-130	11.4	30	
Cyclohexane	20.1	10	µg/L	20.0	ND	100		70-130	2.22	30	
1,2-Dibromo-3-chloropropane (DBCP)	19.5	10	µg/L	20.0	ND	97.3		70-130	0.921	30	
1,2-Dibromoethane (EDB)	24.7	1.0	µg/L	20.0	ND	123		70-130	1.47	30	
1,2-Dichlorobenzene	21.7	2.0	µg/L	20.0	ND	108		70-130	0.647	30	
1,3-Dichlorobenzene	22.0	2.0	µg/L	20.0	ND	110		70-130	2.39	30	
1,4-Dichlorobenzene	21.5	2.0	µg/L	20.0	ND	108		70-130	1.31	30	
Dichlorodifluoromethane (Freon 12)	20.4	4.0	µg/L	20.0	ND	102		70-130	2.38	30	
1,1-Dichloroethane	20.9	2.0	µg/L	20.0	ND	104		70-130	1.35	30	
1,2-Dichloroethane	20.9	2.0	µg/L	20.0	ND	105		70-130	2.32	30	
1,1-Dichloroethylene	22.1	2.0	µg/L	20.0	ND	110		70-130	0.181	30	
cis-1,2-Dichloroethylene	20.3	2.0	µg/L	20.0	ND	101		70-130	0.00	30	

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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 B309329 - SW-846 5030B										
Matrix Spike Dup (B309329-MSD1)	**Source: 22E1360-02**			Prepared & Analyzed: 05/26/22						
trans-1,2-Dichloroethylene	20.7	2.0	µg/L	20.0	ND	104	70-130	0.970	30	
1,2-Dichloropropane	21.3	2.0	µg/L	20.0	ND	106	70-130	3.25	30	
cis-1,3-Dichloropropene	19.6	1.0	µg/L	20.0	ND	97.8	70-130	1.03	30	
trans-1,3-Dichloropropene	19.8	1.0	µg/L	20.0	ND	99.2	70-130	3.28	30	
1,4-Dioxane	202	100	µg/L	200	ND	101	70-130	1.25	30	
Ethylbenzene	24.1	2.0	µg/L	20.0	ND	120	70-130	10.6	30	
2-Hexanone (MBK)	198	20	µg/L	200	ND	99.1	70-130	2.01	30	
Isopropylbenzene (Cumene)	23.6	2.0	µg/L	20.0	ND	118	70-130	2.09	30	
Methyl Acetate	17.8	2.0	µg/L	20.0	ND	89.2	70-130	2.50	30	
Methyl tert-Butyl Ether (MTBE)	20.8	2.0	µg/L	20.0	ND	104	70-130	1.24	30	
Methyl Cyclohexane	22.1	2.0	µg/L	20.0	ND	110	70-130	5.69	30	
Methylene Chloride	20.7	10	µg/L	20.0	ND	104	70-130	1.16	30	
4-Methyl-2-pentanone (MIBK)	197	20	µg/L	200	ND	98.6	70-130	1.83	30	
Styrene	23.1	2.0	µg/L	20.0	ND	116	70-130	0.433	30	
1,1,2,2-Tetrachloroethane	23.9	1.0	µg/L	20.0	ND	119	70-130	1.08	30	
Tetrachloroethylene	24.3	2.0	µg/L	20.0	ND	121	70-130	0.994	30	
Toluene	22.3	2.0	µg/L	20.0	ND	112	70-130	0.539	30	
1,2,3-Trichlorobenzene	20.3	10	µg/L	20.0	ND	101	70-130	17.1	30	
1,2,4-Trichlorobenzene	19.6	2.0	µg/L	20.0	ND	97.9	70-130	6.00	30	
1,1,1-Trichloroethane	24.3	2.0	µg/L	20.0	ND	122	70-130	2.58	30	
1,1,2-Trichloroethane	23.7	2.0	µg/L	20.0	ND	119	70-130	0.761	30	
Trichloroethylene	23.8	2.0	µg/L	20.0	ND	119	70-130	0.759	30	
Trichlorofluoromethane (Freon 11)	24.0	4.0	µg/L	20.0	ND	120	70-130	3.74	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	24.2	2.0	µg/L	20.0	ND	121	70-130	3.02	30	
Vinyl Chloride	21.5	4.0	µg/L	20.0	ND	108	70-130	5.93	30	
m+p Xylene	48.5	4.0	µg/L	40.0	ND	121	70-130	14.6	20	
o-Xylene	24.2	2.0	µg/L	20.0	ND	121	70-130	11.3	30	
Xylenes (total)	72.7	2.0	µg/L	60.0	ND	121	0-200	13.5		
Surrogate: 1,2-Dichloroethane-d4	*24.4*		µg/L	25.0		97.4	70-130			
Surrogate: Toluene-d8	*24.9*		µg/L	25.0		99.5	70-130			
Surrogate: 4-Bromofluorobenzene	*25.8*		µg/L	25.0		103	70-130			

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QUALITY CONTROL

Tentatively Identified Compounds - Volatile Compounds (ESTIMATED VALUES REPORTED) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B309329 - SW-846 5030B										
Blank (B309329-BLK1)				Prepared & Analyzed: 05/26/22						
No TICs Found	0.0		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
Batch B309306 - SW-846 3510C										
Blank (B309306-BLK1)				Prepared: 05/26/22 Analyzed: 06/01/22						
Atrazine	ND	20	µg/L							
Benzaldehyde	ND	10	µg/L							
Biphenyl	ND	20	µg/L							
Caprolactam	ND	10	µg/L							L-04
Acenaphthene	ND	5.0	µg/L							
Acenaphthylene	ND	5.0	µg/L							
Acetophenone	ND	10	µg/L							
Anthracene	ND	5.0	µg/L							
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							
Bis(2-chloroethoxy)methane	ND	10	µg/L							
Bis(2-chloroethyl)ether	ND	10	µg/L							V-05
Bis(2-chloroisopropyl)ether	ND	10	µg/L							V-05
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							V-34
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							
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							V-05
2,4-Dinitrophenol	ND	10	µg/L							V-05
2,4-Dinitrotoluene	ND	10	µg/L							
2,6-Dinitrotoluene	ND	10	µg/L							
Di-n-octylphthalate	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							L-04, V-05
Hexachloroethane	ND	10	µg/L							
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L							
Isophorone	ND	10	µg/L							
2-Methylnaphthalene	ND	5.0	µg/L							
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							

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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 B309306 - SW-846 3510C											
Blank (B309306-BLK1)				Prepared: 05/26/22 Analyzed: 06/01/22							
3-Nitroaniline	ND	10	µg/L								
4-Nitroaniline	ND	10	µg/L								
Nitrobenzene	ND	10	µg/L								
2-Nitrophenol	ND	10	µg/L								
4-Nitrophenol	ND	10	µg/L								
N-Nitrosodiphenylamine/Diphenylamine	ND	10	µg/L								
N-Nitrosodi-n-propylamine	ND	10	µg/L								
Pentachlorophenol	ND	10	µg/L								V-05
Phenanthrene	ND	5.0	µg/L								
Phenol	ND	10	µg/L								
Pyrene	ND	5.0	µg/L								
1,2,4,5-Tetrachlorobenzene	ND	10	µg/L								
2,4,5-Trichlorophenol	ND	10	µg/L								
2,4,6-Trichlorophenol	ND	10	µg/L								
Surrogate: 2-Fluorophenol	*83.4*		µg/L	200		41.7		15-110			
Surrogate: Phenol-d6	*57.6*		µg/L	200		28.8		15-110			
Surrogate: Nitrobenzene-d5	*63.4*		µg/L	100		63.4		30-130			
Surrogate: 2-Fluorobiphenyl	*69.7*		µg/L	100		69.7		30-130			
Surrogate: 2,4,6-Tribromophenol	*171*		µg/L	200		85.3		15-110			
Surrogate: p-Terphenyl-d14	*76.0*		µg/L	100		76.0		30-130			
LCS (B309306-BS1)				Prepared: 05/26/22 Analyzed: 06/01/22							
Atrazine	43.5	20	µg/L	50.0		86.9		40-140			
Benzaldehyde	30.7	10	µg/L	50.0		61.3		40-140			
Biphenyl	33.6	20	µg/L	50.0		67.3		40-140			
Caprolactam	12.6	10	µg/L	50.0		**25.3**	*	40-140			L-04
Acenaphthene	29.8	5.0	µg/L	50.0		59.7		40-140			
Acenaphthylene	30.9	5.0	µg/L	50.0		61.8		40-140			
Acetophenone	31.0	10	µg/L	50.0		61.9		40-140			
Anthracene	38.1	5.0	µg/L	50.0		76.3		40-140			
Benzo(a)anthracene	37.2	5.0	µg/L	50.0		74.4		40-140			
Benzo(a)pyrene	37.5	5.0	µg/L	50.0		75.0		40-140			
Benzo(b)fluoranthene	39.2	5.0	µg/L	50.0		78.5		40-140			
Benzo(g,h,i)perylene	32.0	5.0	µg/L	50.0		64.0		40-140			
Benzo(k)fluoranthene	42.0	5.0	µg/L	50.0		84.0		40-140			
Bis(2-chloroethoxy)methane	30.1	10	µg/L	50.0		60.1		40-140			
Bis(2-chloroethyl)ether	24.2	10	µg/L	50.0		48.4		40-140			V-05
Bis(2-chloroisopropyl)ether	27.2	10	µg/L	50.0		54.4		40-140			V-05
Bis(2-Ethylhexyl)phthalate	36.9	10	µg/L	50.0		73.8		40-140			
4-Bromophenylphenylether	36.8	10	µg/L	50.0		73.6		40-140			
Butylbenzylphthalate	32.8	10	µg/L	50.0		65.5		40-140			
Carbazole	38.2	10	µg/L	50.0		76.3		40-140			
4-Chloroaniline	38.3	10	µg/L	50.0		76.5		40-140			V-34
4-Chloro-3-methylphenol	32.3	10	µg/L	50.0		64.6		30-130			
2-Chloronaphthalene	29.2	10	µg/L	50.0		58.4		40-140			
2-Chlorophenol	27.6	10	µg/L	50.0		55.3		30-130			
4-Chlorophenylphenylether	34.7	10	µg/L	50.0		69.3		40-140			
Chrysene	36.5	5.0	µg/L	50.0		73.0		40-140			
Dibenz(a,h)anthracene	36.1	5.0	µg/L	50.0		72.3		40-140			
Dibenzofuran	36.2	5.0	µg/L	50.0		72.4		40-140			
Di-n-butylphthalate	37.6	10	µg/L	50.0		75.2		40-140			
3,3-Dichlorobenzidine	41.3	10	µg/L	50.0		82.5		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		%REC Limits	RPD	RPD Limit	Notes	
Batch B309306 - SW-846 3510C												
LCS (B309306-BS1)				Prepared: 05/26/22 Analyzed: 06/01/22								
2,4-Dichlorophenol	32.9	10	µg/L	50.0		65.9		30-130				
Diethylphthalate	34.2	10	µg/L	50.0		68.3		40-140				
2,4-Dimethylphenol	32.0	10	µg/L	50.0		64.1		30-130				
Dimethylphthalate	33.6	10	µg/L	50.0		67.3		40-140				
4,6-Dinitro-2-methylphenol	30.1	10	µg/L	50.0		60.3		30-130			V-05	
2,4-Dinitrophenol	18.3	10	µg/L	50.0		36.5		30-130			V-05	
2,4-Dinitrotoluene	37.9	10	µg/L	50.0		75.8		40-140				
2,6-Dinitrotoluene	37.2	10	µg/L	50.0		74.4		40-140				
Di-n-octylphthalate	35.3	10	µg/L	50.0		70.6		40-140				
Fluoranthene	40.9	5.0	µg/L	50.0		81.9		40-140				
Fluorene	35.7	5.0	µg/L	50.0		71.5		40-140				
Hexachlorobenzene	38.8	10	µg/L	50.0		77.6		40-140				
Hexachlorobutadiene	28.2	10	µg/L	50.0		56.3		40-140				
Hexachlorocyclopentadiene	9.33	10	µg/L	50.0		**18.7**	*	30-140			L-04, V-05, J	†
Hexachloroethane	21.0	10	µg/L	50.0		41.9		40-140				
Indeno(1,2,3-cd)pyrene	36.8	5.0	µg/L	50.0		73.7		40-140				
Isophorone	33.7	10	µg/L	50.0		67.4		40-140				
2-Methylnaphthalene	34.8	5.0	µg/L	50.0		69.7		40-140				
2-Methylphenol	27.8	10	µg/L	50.0		55.5		30-130				
3/4-Methylphenol	27.4	10	µg/L	50.0		54.8		30-130				
Naphthalene	28.9	5.0	µg/L	50.0		57.9		40-140				
2-Nitroaniline	31.0	10	µg/L	50.0		62.1		40-140				
3-Nitroaniline	36.0	10	µg/L	50.0		72.1		40-140				
4-Nitroaniline	37.4	10	µg/L	50.0		74.7		40-140				
Nitrobenzene	28.0	10	µg/L	50.0		56.0		40-140				
2-Nitrophenol	30.4	10	µg/L	50.0		60.8		30-130				
4-Nitrophenol	18.4	10	µg/L	50.0		36.7		10-130				†
N-Nitrosodiphenylamine/Diphenylamine	38.4	10	µg/L	50.0		76.9		40-140				
N-Nitrosodi-n-propylamine	29.5	10	µg/L	50.0		59.0		40-140				
Pentachlorophenol	24.6	10	µg/L	50.0		49.1		30-130			V-05	
Phenanthrene	37.3	5.0	µg/L	50.0		74.6		40-140				
Phenol	14.8	10	µg/L	50.0		29.6		20-130				†
Pyrene	35.2	5.0	µg/L	50.0		70.3		40-140				
1,2,4,5-Tetrachlorobenzene	31.8	10	µg/L	50.0		63.6		40-140				
2,4,5-Trichlorophenol	36.6	10	µg/L	50.0		73.2		30-130				
2,4,6-Trichlorophenol	33.8	10	µg/L	50.0		67.6		30-130				
Surrogate: 2-Fluorophenol	*84.7*		µg/L	200		42.4		15-110				
Surrogate: Phenol-d6	*58.8*		µg/L	200		29.4		15-110				
Surrogate: Nitrobenzene-d5	*61.8*		µg/L	100		61.8		30-130				
Surrogate: 2-Fluorobiphenyl	*70.6*		µg/L	100		70.6		30-130				
Surrogate: 2,4,6-Tribromophenol	*171*		µg/L	200		85.6		15-110				
Surrogate: p-Terphenyl-d14	*78.5*		µg/L	100		78.5		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	
Batch B309306 - SW-846 3510C												
LCS Dup (B309306-BSD1)				Prepared: 05/26/22 Analyzed: 06/01/22								
Atrazine	42.9	20	µg/L	50.0		85.8		40-140	1.27	20		
Benzaldehyde	32.5	10	µg/L	50.0		65.1		40-140	5.95	20		
Biphenyl	35.8	20	µg/L	50.0		71.7		40-140	6.30	20		
Caprolactam	12.6	10	µg/L	50.0		**25.3**	*	40-140	0.0791	20	L-04	
Acenaphthene	30.6	5.0	µg/L	50.0		61.3		40-140	2.65	20		
Acenaphthylene	32.1	5.0	µg/L	50.0		64.2		40-140	3.78	20		
Acetophenone	32.0	10	µg/L	50.0		63.9		40-140	3.18	20		
Anthracene	36.6	5.0	µg/L	50.0		73.1		40-140	4.23	20		
Benzo(a)anthracene	36.1	5.0	µg/L	50.0		72.2		40-140	3.00	20		
Benzo(a)pyrene	37.1	5.0	µg/L	50.0		74.1		40-140	1.15	20		
Benzo(b)fluoranthene	37.5	5.0	µg/L	50.0		75.1		40-140	4.43	20		
Benzo(g,h,i)perylene	31.3	5.0	µg/L	50.0		62.6		40-140	2.09	20		
Benzo(k)fluoranthene	39.8	5.0	µg/L	50.0		79.6		40-140	5.40	20		
Bis(2-chloroethoxy)methane	30.3	10	µg/L	50.0		60.6		40-140	0.729	20		
Bis(2-chloroethyl)ether	24.6	10	µg/L	50.0		49.1		40-140	1.56	20	V-05	
Bis(2-chloroisopropyl)ether	27.3	10	µg/L	50.0		54.6		40-140	0.367	20	V-05	
Bis(2-Ethylhexyl)phthalate	34.2	10	µg/L	50.0		68.5		40-140	7.48	20		
4-Bromophenylphenylether	33.6	10	µg/L	50.0		67.2		40-140	9.09	20		
Butylbenzylphthalate	31.1	10	µg/L	50.0		62.2		40-140	5.20	20		
Carbazole	35.0	10	µg/L	50.0		70.1		40-140	8.50	20		
4-Chloroaniline	38.4	10	µg/L	50.0		76.8		40-140	0.287	20	V-34	
4-Chloro-3-methylphenol	31.8	10	µg/L	50.0		63.6		30-130	1.50	20		
2-Chloronaphthalene	32.0	10	µg/L	50.0		63.9		40-140	8.96	20		
2-Chlorophenol	28.6	10	µg/L	50.0		57.2		30-130	3.34	20		
4-Chlorophenylphenylether	34.8	10	µg/L	50.0		69.7		40-140	0.547	20		
Chrysene	36.0	5.0	µg/L	50.0		71.9		40-140	1.46	20		
Dibenz(a,h)anthracene	34.5	5.0	µg/L	50.0		69.0		40-140	4.67	20		
Dibenzofuran	38.0	5.0	µg/L	50.0		76.0		40-140	4.82	20		
Di-n-butylphthalate	35.3	10	µg/L	50.0		70.6		40-140	6.34	20		
3,3-Dichlorobenzidine	38.6	10	µg/L	50.0		77.3		40-140	6.58	20		
2,4-Dichlorophenol	32.8	10	µg/L	50.0		65.6		30-130	0.365	20		
Diethylphthalate	33.6	10	µg/L	50.0		67.1		40-140	1.71	20		
2,4-Dimethylphenol	33.2	10	µg/L	50.0		66.4		30-130	3.56	20		
Dimethylphthalate	34.1	10	µg/L	50.0		68.2		40-140	1.33	50		‡
4,6-Dinitro-2-methylphenol	28.2	10	µg/L	50.0		56.4		30-130	6.69	50	V-05	‡
2,4-Dinitrophenol	17.5	10	µg/L	50.0		35.0		30-130	4.31	50	V-05	‡
2,4-Dinitrotoluene	39.1	10	µg/L	50.0		78.1		40-140	2.99	20		
2,6-Dinitrotoluene	37.3	10	µg/L	50.0		74.6		40-140	0.349	20		
Di-n-octylphthalate	33.0	10	µg/L	50.0		65.9		40-140	6.94	20		
Fluoranthene	38.6	5.0	µg/L	50.0		77.1		40-140	5.94	20		
Fluorene	36.7	5.0	µg/L	50.0		73.4		40-140	2.71	20		
Hexachlorobenzene	36.1	10	µg/L	50.0		72.2		40-140	7.26	20		
Hexachlorobutadiene	28.0	10	µg/L	50.0		55.9		40-140	0.713	20		
Hexachlorocyclopentadiene	9.29	10	µg/L	50.0		**18.6**	*	30-140	0.430	50	L-04, V-05, J	† ‡
Hexachloroethane	20.9	10	µg/L	50.0		41.8		40-140	0.287	50		‡
Indeno(1,2,3-cd)pyrene	35.1	5.0	µg/L	50.0		70.2		40-140	4.84	50		‡
Isophorone	34.0	10	µg/L	50.0		68.0		40-140	0.945	20		
2-Methylnaphthalene	35.0	5.0	µg/L	50.0		70.0		40-140	0.430	20		
2-Methylphenol	29.7	10	µg/L	50.0		59.4		30-130	6.79	20		
3/4-Methylphenol	28.5	10	µg/L	50.0		57.0		30-130	3.94	20		
Naphthalene	29.3	5.0	µg/L	50.0		58.6		40-140	1.24	20		
2-Nitroaniline	31.1	10	µg/L	50.0		62.2		40-140	0.225	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 B309306 - SW-846 3510C												
LCS Dup (B309306-BSD1)				Prepared: 05/26/22 Analyzed: 06/01/22								
3-Nitroaniline	36.0	10	µg/L	50.0		71.9		40-140	0.222	20		
4-Nitroaniline	39.9	10	µg/L	50.0		79.8		40-140	6.58	20		
Nitrobenzene	28.9	10	µg/L	50.0		57.8		40-140	3.20	20		
2-Nitrophenol	30.0	10	µg/L	50.0		60.1		30-130	1.19	20		
4-Nitrophenol	18.6	10	µg/L	50.0		37.1		10-130	1.08	50		† ‡
N-Nitrosodiphenylamine/Diphenylamine	35.5	10	µg/L	50.0		71.0		40-140	7.90	20		
N-Nitrosodi-n-propylamine	31.2	10	µg/L	50.0		62.4		40-140	5.50	20		
Pentachlorophenol	22.1	10	µg/L	50.0		44.3		30-130	10.4	50	V-05	‡
Phenanthrene	36.0	5.0	µg/L	50.0		72.0		40-140	3.55	20		
Phenol	15.8	10	µg/L	50.0		31.6		20-130	6.66	20		†
Pyrene	36.2	5.0	µg/L	50.0		72.4		40-140	3.00	20		
1,2,4,5-Tetrachlorobenzene	34.6	10	µg/L	50.0		69.1		40-140	8.35	20		
2,4,5-Trichlorophenol	39.5	10	µg/L	50.0		79.0		30-130	7.63	20		
2,4,6-Trichlorophenol	36.4	10	µg/L	50.0		72.8		30-130	7.35	50		‡
Surrogate: 2-Fluorophenol	*87.6*		µg/L	200		43.8		15-110				
Surrogate: Phenol-d6	*62.2*		µg/L	200		31.1		15-110				
Surrogate: Nitrobenzene-d5	*62.1*		µg/L	100		62.1		30-130				
Surrogate: 2-Fluorobiphenyl	*73.7*		µg/L	100		73.7		30-130				
Surrogate: 2,4,6-Tribromophenol	*170*		µg/L	200		85.2		15-110				
Surrogate: p-Terphenyl-d14	*79.2*		µg/L	100		79.2		30-130				
Matrix Spike (B309306-MS1)	**Source: 22E1360-02**			Prepared: 05/26/22 Analyzed: 06/04/22								
Atrazine	43.3	20	µg/L	50.0	ND	86.6		40-140				
Benzaldehyde	35.3	10	µg/L	50.0	ND	70.6		40-140				
Biphenyl	35.1	20	µg/L	50.0	ND	70.2		40-140				
Caprolactam	13.6	10	µg/L	50.0	1.80	**23.7**	*	40-140			MS-09	
Acenaphthene	30.8	5.0	µg/L	50.0	ND	61.5		40-140				
Acenaphthylene	32.3	5.0	µg/L	50.0	ND	64.6		40-140				
Acetophenone	36.7	10	µg/L	50.0	ND	73.5		40-140				
Anthracene	36.3	5.0	µg/L	50.0	ND	72.7		40-140				
Benzo(a)anthracene	36.1	5.0	µg/L	50.0	ND	72.2		40-140				
Benzo(a)pyrene	36.4	5.0	µg/L	50.0	ND	72.8		40-140				
Benzo(b)fluoranthene	38.2	5.0	µg/L	50.0	ND	76.5		40-140				
Benzo(g,h,i)perylene	32.8	5.0	µg/L	50.0	ND	65.6		40-140				
Benzo(k)fluoranthene	40.9	5.0	µg/L	50.0	ND	81.8		40-140				
Bis(2-chloroethoxy)methane	33.8	10	µg/L	50.0	ND	67.5		40-140				
Bis(2-chloroethyl)ether	32.8	10	µg/L	50.0	ND	65.6		40-140				
Bis(2-chloroisopropyl)ether	39.4	10	µg/L	50.0	ND	78.7		40-140				
Bis(2-Ethylhexyl)phthalate	33.0	10	µg/L	50.0	ND	65.9		40-140			V-05	
4-Bromophenylphenylether	34.3	10	µg/L	50.0	ND	68.7		40-140				
Butylbenzylphthalate	31.5	10	µg/L	50.0	ND	62.9		40-140			V-05	
Carbazole	36.8	10	µg/L	50.0	ND	73.7		40-140				
4-Chloroaniline	26.2	10	µg/L	50.0	ND	52.3		40-140			V-34	
4-Chloro-3-methylphenol	36.5	10	µg/L	50.0	ND	73.1		30-130				
2-Chloronaphthalene	29.9	10	µg/L	50.0	ND	59.9		40-140				
2-Chlorophenol	30.4	10	µg/L	50.0	ND	60.9		30-130				
4-Chlorophenylphenylether	35.2	10	µg/L	50.0	ND	70.4		40-140				
Chrysene	36.0	5.0	µg/L	50.0	ND	72.0		40-140				
Dibenz(a,h)anthracene	34.6	5.0	µg/L	50.0	ND	69.3		40-140				
Dibenzofuran	37.9	5.0	µg/L	50.0	ND	75.8		40-140				
Di-n-butylphthalate	35.2	10	µg/L	50.0	ND	70.4		40-140				
3,3-Dichlorobenzidine	2.97	10	µg/L	50.0	ND	**5.94**	*	40-140			MS-09, J	

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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 B309306 - SW-846 3510C											
Matrix Spike (B309306-MS1)	**Source: 22E1360-02**			Prepared: 05/26/22 Analyzed: 06/04/22							
2,4-Dichlorophenol	34.6	10	µg/L	50.0	ND	69.1		30-130			
Diethylphthalate	34.5	10	µg/L	50.0	ND	68.9		40-140			
2,4-Dimethylphenol	27.4	10	µg/L	50.0	ND	54.8		30-130			
Dimethylphthalate	34.7	10	µg/L	50.0	ND	69.4		40-140			
4,6-Dinitro-2-methylphenol	31.0	10	µg/L	50.0	ND	62.0		30-130			V-05
2,4-Dinitrophenol	21.4	10	µg/L	50.0	ND	42.8		30-130			V-05
2,4-Dinitrotoluene	39.0	10	µg/L	50.0	ND	77.9		40-140			
2,6-Dinitrotoluene	38.6	10	µg/L	50.0	ND	77.3		40-140			
Di-n-octylphthalate	31.9	10	µg/L	50.0	ND	63.7		40-140			V-05
Fluoranthene	38.2	5.0	µg/L	50.0	ND	76.4		40-140			
Fluorene	36.9	5.0	µg/L	50.0	ND	73.8		40-140			
Hexachlorobenzene	37.1	10	µg/L	50.0	ND	74.3		40-140			
Hexachlorobutadiene	33.0	10	µg/L	50.0	ND	65.9		40-140			
Hexachlorocyclopentadiene	10.9	10	µg/L	50.0	ND	**21.7**	*	30-130			MS-09, V-05
Hexachloroethane	26.4	10	µg/L	50.0	ND	52.8		40-140			
Indeno(1,2,3-cd)pyrene	36.5	5.0	µg/L	50.0	ND	72.9		40-140			
Isophorone	39.7	10	µg/L	50.0	ND	79.5		40-140			
2-Methylnaphthalene	39.6	5.0	µg/L	50.0	ND	79.3		40-140			
2-Methylphenol	27.5	10	µg/L	50.0	ND	55.0		30-130			
3/4-Methylphenol	27.4	10	µg/L	50.0	ND	54.8		30-130			
Naphthalene	33.5	5.0	µg/L	50.0	ND	66.9		40-140			
2-Nitroaniline	39.4	10	µg/L	50.0	ND	78.8		40-140			
3-Nitroaniline	32.6	10	µg/L	50.0	ND	65.2		40-140			
4-Nitroaniline	37.8	10	µg/L	50.0	ND	75.6		40-140			
Nitrobenzene	34.2	10	µg/L	50.0	ND	68.5		40-140			
2-Nitrophenol	34.1	10	µg/L	50.0	ND	68.1		30-130			
4-Nitrophenol	21.8	10	µg/L	50.0	ND	43.5		30-130			
N-Nitrosodiphenylamine/Diphenylamine	30.9	10	µg/L	50.0	ND	61.8		40-140			
N-Nitrosodi-n-propylamine	38.1	10	µg/L	50.0	ND	76.2		40-140			
Pentachlorophenol	24.6	10	µg/L	50.0	ND	49.3		30-130			V-05
Phenanthrene	36.6	5.0	µg/L	50.0	ND	73.1		40-140			
Phenol	14.2	10	µg/L	50.0	ND	**28.4**	*	30-130			MS-22
Pyrene	35.8	5.0	µg/L	50.0	ND	71.6		40-140			
1,2,4,5-Tetrachlorobenzene	32.6	10	µg/L	50.0	ND	65.2		40-140			
2,4,5-Trichlorophenol	37.4	10	µg/L	50.0	ND	74.8		30-130			
2,4,6-Trichlorophenol	34.3	10	µg/L	50.0	ND	68.6		30-130			
Surrogate: 2-Fluorophenol	*81.4*		µg/L	200		40.7		15-110			
Surrogate: Phenol-d6	*58.8*		µg/L	200		29.4		15-110			
Surrogate: Nitrobenzene-d5	*73.1*		µg/L	100		73.1		30-130			
Surrogate: 2-Fluorobiphenyl	*72.3*		µg/L	100		72.3		30-130			
Surrogate: 2,4,6-Tribromophenol	*157*		µg/L	200		78.3		15-110			
Surrogate: p-Terphenyl-d14	*76.8*		µg/L	100		76.8		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
Batch B309306 - SW-846 3510C											
Matrix Spike Dup (B309306-MSD1)	**Source: 22E1360-02**			Prepared: 05/26/22 Analyzed: 06/04/22							
Atrazine	43.1	20	µg/L	50.0	ND	86.2		40-140	0.509	30	
Benzaldehyde	36.6	10	µg/L	50.0	ND	73.3		40-140	3.78	30	
Biphenyl	36.4	20	µg/L	50.0	ND	72.7		40-140	3.53	30	
Caprolactam	15.4	10	µg/L	50.0	1.80	**27.1**	*	40-140	11.9	30	MS-09
Acenaphthene	31.7	5.0	µg/L	50.0	ND	63.4		40-140	2.98	30	
Acenaphthylene	33.4	5.0	µg/L	50.0	ND	66.8		40-140	3.35	30	
Acetophenone	38.9	10	µg/L	50.0	ND	77.8		40-140	5.71	30	
Anthracene	36.8	5.0	µg/L	50.0	ND	73.6		40-140	1.26	30	
Benzo(a)anthracene	36.3	5.0	µg/L	50.0	ND	72.6		40-140	0.525	30	
Benzo(a)pyrene	37.8	5.0	µg/L	50.0	ND	75.6		40-140	3.75	30	
Benzo(b)fluoranthene	40.0	5.0	µg/L	50.0	ND	80.1		40-140	4.60	30	
Benzo(g,h,i)perylene	31.2	5.0	µg/L	50.0	ND	62.4		40-140	5.09	30	
Benzo(k)fluoranthene	41.6	5.0	µg/L	50.0	ND	83.1		40-140	1.65	30	
Bis(2-chloroethoxy)methane	35.5	10	µg/L	50.0	ND	71.0		40-140	4.97	30	
Bis(2-chloroethyl)ether	31.0	10	µg/L	50.0	ND	62.1		40-140	5.58	30	
Bis(2-chloroisopropyl)ether	39.0	10	µg/L	50.0	ND	77.9		40-140	1.05	30	
Bis(2-Ethylhexyl)phthalate	32.3	10	µg/L	50.0	ND	64.6		40-140	2.05	30	V-05
4-Bromophenylphenylether	35.9	10	µg/L	50.0	ND	71.7		40-140	4.39	30	
Butylbenzylphthalate	31.2	10	µg/L	50.0	ND	62.3		40-140	1.02	30	V-05
Carbazole	36.8	10	µg/L	50.0	ND	73.7		40-140	0.00	30	
4-Chloroaniline	27.2	10	µg/L	50.0	ND	54.4		40-140	3.90	30	V-34
4-Chloro-3-methylphenol	36.6	10	µg/L	50.0	ND	73.2		30-130	0.191	30	
2-Chloronaphthalene	31.2	10	µg/L	50.0	ND	62.3		40-140	3.99	30	
2-Chlorophenol	31.7	10	µg/L	50.0	ND	63.4		30-130	4.09	30	
4-Chlorophenylphenylether	36.2	10	µg/L	50.0	ND	72.4		40-140	2.77	30	
Chrysene	35.7	5.0	µg/L	50.0	ND	71.4		40-140	0.837	30	
Dibenz(a,h)anthracene	33.2	5.0	µg/L	50.0	ND	66.4		40-140	4.31	30	
Dibenzofuran	38.5	5.0	µg/L	50.0	ND	77.0		40-140	1.68	30	
Di-n-butylphthalate	35.4	10	µg/L	50.0	ND	70.8		40-140	0.623	30	
3,3-Dichlorobenzidine	3.54	10	µg/L	50.0	ND	**7.08**	*	40-140	17.5	30	MS-09, J
2,4-Dichlorophenol	37.7	10	µg/L	50.0	ND	75.3		30-130	8.61	30	
Diethylphthalate	35.1	10	µg/L	50.0	ND	70.2		40-140	1.75	30	
2,4-Dimethylphenol	27.8	10	µg/L	50.0	ND	55.5		30-130	1.27	30	
Dimethylphthalate	35.0	10	µg/L	50.0	ND	70.0		40-140	0.918	30	
4,6-Dinitro-2-methylphenol	31.5	10	µg/L	50.0	ND	62.9		30-130	1.41	30	V-05
2,4-Dinitrophenol	21.6	10	µg/L	50.0	ND	43.3		30-130	1.11	30	V-05
2,4-Dinitrotoluene	38.4	10	µg/L	50.0	ND	76.8		40-140	1.42	30	
2,6-Dinitrotoluene	39.2	10	µg/L	50.0	ND	78.4		40-140	1.46	30	
Di-n-octylphthalate	31.9	10	µg/L	50.0	ND	63.7		40-140	0.00	30	V-05
Fluoranthene	38.8	5.0	µg/L	50.0	ND	77.7		40-140	1.61	30	
Fluorene	37.3	5.0	µg/L	50.0	ND	74.6		40-140	0.997	30	
Hexachlorobenzene	38.0	10	µg/L	50.0	ND	75.9		40-140	2.18	30	
Hexachlorobutadiene	37.1	10	µg/L	50.0	ND	74.2		40-140	11.8	30	
Hexachlorocyclopentadiene	13.1	10	µg/L	50.0	ND	**26.3**	*	30-130	18.9	30	MS-09, V-05
Hexachloroethane	28.0	10	µg/L	50.0	ND	56.1		40-140	6.06	30	
Indeno(1,2,3-cd)pyrene	33.8	5.0	µg/L	50.0	ND	67.6		40-140	7.63	30	
Isophorone	41.4	10	µg/L	50.0	ND	82.8		40-140	4.12	30	
2-Methylnaphthalene	42.4	5.0	µg/L	50.0	ND	84.7		40-140	6.63	30	
2-Methylphenol	28.1	10	µg/L	50.0	ND	56.3		30-130	2.19	30	
3/4-Methylphenol	28.0	10	µg/L	50.0	ND	56.1		30-130	2.35	30	
Naphthalene	35.9	5.0	µg/L	50.0	ND	71.9		40-140	7.12	30	
2-Nitroaniline	36.2	10	µg/L	50.0	ND	72.3		40-140	8.58	30	

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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 B309306 - SW-846 3510C										
Matrix Spike Dup (B309306-MSD1)	**Source: 22E1360-02**			Prepared: 05/26/22 Analyzed: 06/04/22						
3-Nitroaniline	33.0	10	µg/L	50.0	ND	66.0	40-140	1.31	30	
4-Nitroaniline	37.4	10	µg/L	50.0	ND	74.8	40-140	0.984	30	
Nitrobenzene	35.2	10	µg/L	50.0	ND	70.3	40-140	2.62	30	
2-Nitrophenol	36.9	10	µg/L	50.0	ND	73.9	30-130	8.11	30	
4-Nitrophenol	22.3	10	µg/L	50.0	ND	44.7	30-130	2.59	30	
N-Nitrosodiphenylamine/Diphenylamine	30.7	10	µg/L	50.0	ND	61.4	40-140	0.617	30	
N-Nitrosodi-n-propylamine	38.8	10	µg/L	50.0	ND	77.7	40-140	1.98	30	
Pentachlorophenol	25.8	10	µg/L	50.0	ND	51.6	30-130	4.60	30	V-05
Phenanthrene	37.0	5.0	µg/L	50.0	ND	74.0	40-140	1.17	30	
Phenol	15.1	10	µg/L	50.0	ND	30.3	30-130	6.48	30	
Pyrene	36.7	5.0	µg/L	50.0	ND	73.5	40-140	2.56	30	
1,2,4,5-Tetrachlorobenzene	35.2	10	µg/L	50.0	ND	70.5	40-140	7.84	30	
2,4,5-Trichlorophenol	38.6	10	µg/L	50.0	ND	77.2	30-130	3.21	30	
2,4,6-Trichlorophenol	35.2	10	µg/L	50.0	ND	70.4	30-130	2.59	30	
Surrogate: 2-Fluorophenol	*85.5*		µg/L	200		42.8	15-110			
Surrogate: Phenol-d6	*61.5*		µg/L	200		30.8	15-110			
Surrogate: Nitrobenzene-d5	*74.7*		µg/L	100		74.7	30-130			
Surrogate: 2-Fluorobiphenyl	*77.0*		µg/L	100		77.0	30-130			
Surrogate: 2,4,6-Tribromophenol	*165*		µg/L	200		82.4	15-110			
Surrogate: p-Terphenyl-d14	*78.6*		µg/L	100		78.6	30-130			
Batch B310070 - SW-846 3510C										
Blank (B310070-BLK1)				Prepared: 06/07/22 Analyzed: 06/08/22						
Atrazine	ND	20	µg/L							
Benzaldehyde	ND	10	µg/L							
Biphenyl	ND	20	µg/L							
Caprolactam	ND	10	µg/L							L-04
Acenaphthene	ND	5.0	µg/L							
Acenaphthylene	ND	5.0	µg/L							
Acetophenone	ND	10	µg/L							
Anthracene	ND	5.0	µg/L							
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							
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							V-34
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							

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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 B310070 - SW-846 3510C										
Blank (B310070-BLK1)				Prepared: 06/07/22 Analyzed: 06/08/22						
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-05
2,4-Dinitrotoluene	ND	10	µg/L							
2,6-Dinitrotoluene	ND	10	µg/L							
Di-n-octylphthalate	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							L-04, V-05
Hexachloroethane	ND	10	µg/L							L-04
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L							
Isophorone	ND	10	µg/L							
2-Methylnaphthalene	ND	5.0	µg/L							
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							
4-Nitrophenol	ND	10	µg/L							
N-Nitrosodiphenylamine/Diphenylamine	ND	10	µg/L							
N-Nitrosodi-n-propylamine	ND	10	µg/L							
Pentachlorophenol	ND	10	µg/L							V-05
Phenanthrene	ND	5.0	µg/L							
Phenol	ND	10	µg/L							
Pyrene	ND	5.0	µg/L							
1,2,4,5-Tetrachlorobenzene	ND	10	µg/L							
2,4,5-Trichlorophenol	ND	10	µg/L							
2,4,6-Trichlorophenol	ND	10	µg/L							
Surrogate: 2-Fluorophenol	*73.3*		µg/L	200		36.7	15-110			
Surrogate: Phenol-d6	*52.4*		µg/L	200		26.2	15-110			
Surrogate: Nitrobenzene-d5	*69.3*		µg/L	100		69.3	30-130			
Surrogate: 2-Fluorobiphenyl	*57.4*		µg/L	100		57.4	30-130			
Surrogate: 2,4,6-Tribromophenol	*149*		µg/L	200		74.5	15-110			
Surrogate: p-Terphenyl-d14	*73.6*		µg/L	100		73.6	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	
Batch B310070 - SW-846 3510C												
LCS (B310070-BS1)				Prepared: 06/07/22 Analyzed: 06/08/22								
Atrazine	44.0	20	µg/L	50.0		88.0		40-140				
Benzaldehyde	30.5	10	µg/L	50.0		60.9		40-140				
Biphenyl	33.4	20	µg/L	50.0		66.9		40-140				
Caprolactam	14.0	10	µg/L	50.0		**27.9**	*	40-140			L-04	
Acenaphthene	30.2	5.0	µg/L	50.0		60.4		40-140				
Acenaphthylene	31.6	5.0	µg/L	50.0		63.3		40-140				
Acetophenone	30.3	10	µg/L	50.0		60.7		40-140				
Anthracene	35.0	5.0	µg/L	50.0		70.1		40-140				
Benzo(a)anthracene	36.4	5.0	µg/L	50.0		72.8		40-140				
Benzo(a)pyrene	36.3	5.0	µg/L	50.0		72.6		40-140				
Benzo(b)fluoranthene	41.3	5.0	µg/L	50.0		82.5		40-140				
Benzo(g,h,i)perylene	30.1	5.0	µg/L	50.0		60.2		40-140				
Benzo(k)fluoranthene	43.0	5.0	µg/L	50.0		85.9		40-140				
Bis(2-chloroethoxy)methane	27.9	10	µg/L	50.0		55.8		40-140				
Bis(2-chloroethyl)ether	24.8	10	µg/L	50.0		49.6		40-140				
Bis(2-chloroisopropyl)ether	29.9	10	µg/L	50.0		59.9		40-140				
Bis(2-Ethylhexyl)phthalate	30.1	10	µg/L	50.0		60.2		40-140				
4-Bromophenylphenylether	31.2	10	µg/L	50.0		62.4		40-140				
Butylbenzylphthalate	30.4	10	µg/L	50.0		60.8		40-140				
Carbazole	36.4	10	µg/L	50.0		72.7		40-140				
4-Chloroaniline	37.3	10	µg/L	50.0		74.5		40-140			V-34	
4-Chloro-3-methylphenol	32.3	10	µg/L	50.0		64.6		30-130				
2-Chloronaphthalene	28.0	10	µg/L	50.0		56.1		40-140				
2-Chlorophenol	25.6	10	µg/L	50.0		51.3		30-130				
4-Chlorophenylphenylether	33.1	10	µg/L	50.0		66.1		40-140				
Chrysene	36.3	5.0	µg/L	50.0		72.7		40-140				
Dibenz(a,h)anthracene	29.9	5.0	µg/L	50.0		59.9		40-140				
Dibenzofuran	36.7	5.0	µg/L	50.0		73.4		40-140				
Di-n-butylphthalate	31.9	10	µg/L	50.0		63.8		40-140				
3,3-Dichlorobenzidine	39.2	10	µg/L	50.0		78.5		40-140				
2,4-Dichlorophenol	30.5	10	µg/L	50.0		61.0		30-130				
Diethylphthalate	32.5	10	µg/L	50.0		64.9		40-140				
2,4-Dimethylphenol	30.3	10	µg/L	50.0		60.5		30-130				
Dimethylphthalate	32.8	10	µg/L	50.0		65.6		40-140				
4,6-Dinitro-2-methylphenol	27.2	10	µg/L	50.0		54.5		30-130				
2,4-Dinitrophenol	17.1	10	µg/L	50.0		34.2		30-130			V-05	
2,4-Dinitrotoluene	39.1	10	µg/L	50.0		78.3		40-140				
2,6-Dinitrotoluene	36.8	10	µg/L	50.0		73.7		40-140				
Di-n-octylphthalate	32.3	10	µg/L	50.0		64.5		40-140				
Fluoranthene	37.5	5.0	µg/L	50.0		75.0		40-140				
Fluorene	36.4	5.0	µg/L	50.0		72.9		40-140				
Hexachlorobenzene	33.7	10	µg/L	50.0		67.4		40-140				
Hexachlorobutadiene	23.9	10	µg/L	50.0		47.9		40-140				
Hexachlorocyclopentadiene	7.34	10	µg/L	50.0		**14.7**	*	30-140			L-04, V-05, J	†
Hexachloroethane	19.7	10	µg/L	50.0		**39.3**	*	40-140			L-04	
Indeno(1,2,3-cd)pyrene	31.0	5.0	µg/L	50.0		61.9		40-140				
Isophorone	33.3	10	µg/L	50.0		66.5		40-140				
2-Methylnaphthalene	32.3	5.0	µg/L	50.0		64.6		40-140				
2-Methylphenol	27.6	10	µg/L	50.0		55.2		30-130				
3/4-Methylphenol	27.1	10	µg/L	50.0		54.2		30-130				
Naphthalene	26.9	5.0	µg/L	50.0		53.7		40-140				
2-Nitroaniline	36.2	10	µg/L	50.0		72.5		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		%REC Limits	RPD	RPD Limit	Notes	
Batch B310070 - SW-846 3510C												
LCS (B310070-BS1)				Prepared: 06/07/22 Analyzed: 06/08/22								
3-Nitroaniline	38.2	10	µg/L	50.0		76.4		40-140				
4-Nitroaniline	38.8	10	µg/L	50.0		77.5		40-140				
Nitrobenzene	29.2	10	µg/L	50.0		58.3		40-140				
2-Nitrophenol	28.5	10	µg/L	50.0		57.0		30-130				
4-Nitrophenol	22.2	10	µg/L	50.0		44.4		10-130				†
N-Nitrosodiphenylamine/Diphenylamine	33.9	10	µg/L	50.0		67.7		40-140				
N-Nitrosodi-n-propylamine	29.9	10	µg/L	50.0		59.8		40-140				
Pentachlorophenol	22.3	10	µg/L	50.0		44.7		30-130			V-05	
Phenanthrene	34.6	5.0	µg/L	50.0		69.2		40-140				
Phenol	14.7	10	µg/L	50.0		29.4		20-130				†
Pyrene	36.4	5.0	µg/L	50.0		72.7		40-140				
1,2,4,5-Tetrachlorobenzene	30.8	10	µg/L	50.0		61.6		40-140				
2,4,5-Trichlorophenol	36.6	10	µg/L	50.0		73.1		30-130				
2,4,6-Trichlorophenol	33.4	10	µg/L	50.0		66.8		30-130				
Surrogate: 2-Fluorophenol	*79.6*		µg/L	200		39.8		15-110				
Surrogate: Phenol-d6	*58.0*		µg/L	200		29.0		15-110				
Surrogate: Nitrobenzene-d5	*77.3*		µg/L	100		77.3		30-130				
Surrogate: 2-Fluorobiphenyl	*70.2*		µg/L	100		70.2		30-130				
Surrogate: 2,4,6-Tribromophenol	*168*		µg/L	200		84.1		15-110				
Surrogate: p-Terphenyl-d14	*73.9*		µg/L	100		73.9		30-130				
LCS Dup (B310070-BSD1)				Prepared: 06/07/22 Analyzed: 06/08/22								
Atrazine	40.1	20	µg/L	50.0		80.3		40-140	9.15	20		
Benzaldehyde	25.6	10	µg/L	50.0		51.2		40-140	17.3	20		
Biphenyl	29.2	20	µg/L	50.0		58.3		40-140	13.7	20		
Caprolactam	13.8	10	µg/L	50.0		**27.7**	*	40-140	0.864	20	L-04	
Acenaphthene	26.7	5.0	µg/L	50.0		53.3		40-140	12.5	20		
Acenaphthylene	28.3	5.0	µg/L	50.0		56.6		40-140	11.2	20		
Acetophenone	27.8	10	µg/L	50.0		55.5		40-140	8.81	20		
Anthracene	32.3	5.0	µg/L	50.0		64.6		40-140	8.14	20		
Benzo(a)anthracene	34.5	5.0	µg/L	50.0		69.1		40-140	5.25	20		
Benzo(a)pyrene	34.0	5.0	µg/L	50.0		68.0		40-140	6.60	20		
Benzo(b)fluoranthene	38.5	5.0	µg/L	50.0		77.0		40-140	6.95	20		
Benzo(g,h,i)perylene	30.5	5.0	µg/L	50.0		60.9		40-140	1.29	20		
Benzo(k)fluoranthene	39.6	5.0	µg/L	50.0		79.2		40-140	8.16	20		
Bis(2-chloroethoxy)methane	25.5	10	µg/L	50.0		51.0		40-140	8.98	20		
Bis(2-chloroethyl)ether	21.9	10	µg/L	50.0		43.8		40-140	12.3	20		
Bis(2-chloroisopropyl)ether	26.7	10	µg/L	50.0		53.4		40-140	11.4	20		
Bis(2-Ethylhexyl)phthalate	29.6	10	µg/L	50.0		59.2		40-140	1.71	20		
4-Bromophenylphenylether	29.3	10	µg/L	50.0		58.6		40-140	6.25	20		
Butylbenzylphthalate	29.2	10	µg/L	50.0		58.4		40-140	3.99	20		
Carbazole	33.6	10	µg/L	50.0		67.2		40-140	7.83	20		
4-Chloroaniline	37.6	10	µg/L	50.0		75.2		40-140	0.908	20	V-34	
4-Chloro-3-methylphenol	31.8	10	µg/L	50.0		63.6		30-130	1.53	20		
2-Chloronaphthalene	24.1	10	µg/L	50.0		48.1		40-140	15.3	20		
2-Chlorophenol	23.1	10	µg/L	50.0		46.3		30-130	10.3	20		
4-Chlorophenylphenylether	30.2	10	µg/L	50.0		60.4		40-140	9.04	20		
Chrysene	34.6	5.0	µg/L	50.0		69.2		40-140	4.96	20		
Dibenz(a,h)anthracene	30.0	5.0	µg/L	50.0		59.9		40-140	0.0668	20		
Dibenzofuran	32.4	5.0	µg/L	50.0		64.9		40-140	12.3	20		
Di-n-butylphthalate	30.3	10	µg/L	50.0		60.5		40-140	5.25	20		
3,3-Dichlorobenzidine	37.0	10	µg/L	50.0		74.0		40-140	5.90	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 B310070 - SW-846 3510C												
LCS Dup (B310070-BSD1)				Prepared: 06/07/22 Analyzed: 06/08/22								
2,4-Dichlorophenol	28.4	10	µg/L	50.0		56.8		30-130	7.16	20		
Diethylphthalate	30.5	10	µg/L	50.0		61.0		40-140	6.29	20		
2,4-Dimethylphenol	28.8	10	µg/L	50.0		57.6		30-130	4.91	20		
Dimethylphthalate	31.1	10	µg/L	50.0		62.3		40-140	5.19	50		‡
4,6-Dinitro-2-methylphenol	26.2	10	µg/L	50.0		52.5		30-130	3.78	50		‡
2,4-Dinitrophenol	13.9	10	µg/L	50.0		**27.9**	*	30-130	20.4	50	V-05	‡
2,4-Dinitrotoluene	35.2	10	µg/L	50.0		70.3		40-140	10.7	20		
2,6-Dinitrotoluene	34.0	10	µg/L	50.0		68.0		40-140	8.08	20		
Di-n-octylphthalate	31.6	10	µg/L	50.0		63.3		40-140	1.97	20		
Fluoranthene	34.3	5.0	µg/L	50.0		68.7		40-140	8.88	20		
Fluorene	32.0	5.0	µg/L	50.0		64.1		40-140	12.9	20		
Hexachlorobenzene	30.4	10	µg/L	50.0		60.7		40-140	10.4	20		
Hexachlorobutadiene	21.0	10	µg/L	50.0		42.1		40-140	12.9	20		
Hexachlorocyclopentadiene	6.07	10	µg/L	50.0		**12.1**	*	30-140	18.9	50	L-04, V-05, J	† ‡
Hexachloroethane	17.1	10	µg/L	50.0		**34.2**	*	40-140	13.9	50	L-04	‡
Indeno(1,2,3-cd)pyrene	29.1	5.0	µg/L	50.0		58.1		40-140	6.26	50		‡
Isophorone	30.0	10	µg/L	50.0		60.0		40-140	10.4	20		
2-Methylnaphthalene	29.3	5.0	µg/L	50.0		58.6		40-140	9.84	20		
2-Methylphenol	25.7	10	µg/L	50.0		51.4		30-130	7.09	20		
3/4-Methylphenol	25.5	10	µg/L	50.0		51.0		30-130	6.08	20		
Naphthalene	24.1	5.0	µg/L	50.0		48.2		40-140	10.8	20		
2-Nitroaniline	33.2	10	µg/L	50.0		66.4		40-140	8.73	20		
3-Nitroaniline	35.4	10	µg/L	50.0		70.8		40-140	7.61	20		
4-Nitroaniline	35.0	10	µg/L	50.0		70.0		40-140	10.2	20		
Nitrobenzene	25.8	10	µg/L	50.0		51.7		40-140	12.0	20		
2-Nitrophenol	25.2	10	µg/L	50.0		50.3		30-130	12.5	20		
4-Nitrophenol	18.8	10	µg/L	50.0		37.7		10-130	16.3	50		† ‡
N-Nitrosodiphenylamine/Diphenylamine	31.9	10	µg/L	50.0		63.8		40-140	6.05	20		
N-Nitrosodi-n-propylamine	28.0	10	µg/L	50.0		56.0		40-140	6.67	20		
Pentachlorophenol	20.3	10	µg/L	50.0		40.6		30-130	9.52	50	V-05	‡
Phenanthrene	31.9	5.0	µg/L	50.0		63.7		40-140	8.25	20		
Phenol	13.8	10	µg/L	50.0		27.6		20-130	6.32	20		†
Pyrene	34.3	5.0	µg/L	50.0		68.6		40-140	5.92	20		
1,2,4,5-Tetrachlorobenzene	26.2	10	µg/L	50.0		52.3		40-140	16.4	20		
2,4,5-Trichlorophenol	33.4	10	µg/L	50.0		66.9		30-130	8.89	20		
2,4,6-Trichlorophenol	30.7	10	µg/L	50.0		61.4		30-130	8.42	50		‡
Surrogate: 2-Fluorophenol	*71.0*		µg/L	200		35.5		15-110				
Surrogate: Phenol-d6	*53.6*		µg/L	200		26.8		15-110				
Surrogate: Nitrobenzene-d5	*67.6*		µg/L	100		67.6		30-130				
Surrogate: 2-Fluorobiphenyl	*61.4*		µg/L	100		61.4		30-130				
Surrogate: 2,4,6-Tribromophenol	*148*		µg/L	200		74.1		15-110				
Surrogate: p-Terphenyl-d14	*69.6*		µg/L	100		69.6		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 B309307 - SW-846 3510C										
Blank (B309307-BLK1)				Prepared: 05/26/22 Analyzed: 06/02/22						
1,4-Dioxane	ND	0.20	µg/L							
Surrogate: 1,4-Dioxane-d8	*3.05*		µg/L	10.0		30.5	15-110			
LCS (B309307-BS1)				Prepared: 05/26/22 Analyzed: 06/02/22						
1,4-Dioxane	9.67	0.20	µg/L	10.0		96.7	40-140			
Surrogate: 1,4-Dioxane-d8	*2.70*		µg/L	10.0		27.0	15-110			
LCS Dup (B309307-BSD1)				Prepared: 05/26/22 Analyzed: 06/02/22						
1,4-Dioxane	10.1	0.20	µg/L	10.0		101	40-140	3.92	30	
Surrogate: 1,4-Dioxane-d8	*2.57*		µg/L	10.0		25.7	15-110			
Matrix Spike (B309307-MS1)	**Source: 22E1360-02**			Prepared: 05/26/22 Analyzed: 06/02/22						
1,4-Dioxane	11.9	0.21	µg/L	10.4	1.58	99.1	40-140			
Surrogate: 1,4-Dioxane-d8	*3.08*		µg/L	10.4		29.5	15-110			
Matrix Spike Dup (B309307-MSD1)	**Source: 22E1360-02**			Prepared: 05/26/22 Analyzed: 06/02/22						
1,4-Dioxane	12.6	0.22	µg/L	10.9	1.58	102	40-140	5.93	20	
Surrogate: 1,4-Dioxane-d8	*3.10*		µg/L	10.9		28.5	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 B308947 - SOP 454-PFAAS										
Blank (B308947-BLK1)				Prepared: 05/23/22 Analyzed: 05/25/22						
Perfluorobutanoic acid (PFBA)	ND	1.8	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	1.8	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	1.8	ng/L							
11Cl-PF3OUdS (F53B Minor)	ND	1.8	ng/L							
9Cl-PF3ONS (F53B Major)	ND	1.8	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8	ng/L							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.8	ng/L							
Perfluorodecanoic acid (PFDA)	ND	1.8	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	1.8	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8	ng/L							
N-EtFOSAA	ND	1.8	ng/L							
N-MeFOSAA	ND	1.8	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	1.8	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	ng/L							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.8	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	1.8	ng/L							
Perfluorooctanesulfonamide (FOSA)	ND	1.8	ng/L							
Perfluorononanesulfonic acid (PFNS)	ND	1.8	ng/L							
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.8	ng/L							
Perfluoro-1-butanesulfonamide (FBSA)	ND	1.8	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	ng/L							
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.8	ng/L							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.8	ng/L							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.8	ng/L							
Perfluoropetanesulfonic acid (PFPeS)	ND	1.8	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	1.8	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	1.8	ng/L							
Perfluorooctanoic acid (PFOA)	ND	1.8	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	1.8	ng/L							
Perfluorononanoic acid (PFNA)	ND	1.8	ng/L							
LCS (B308947-BS1)				Prepared: 05/23/22 Analyzed: 05/25/22						
Perfluorobutanoic acid (PFBA)	8.72	1.8	ng/L	9.03		96.6	73-129			
Perfluorobutanesulfonic acid (PFBS)	7.66	1.8	ng/L	7.99		95.8	72-130			
Perfluoropentanoic acid (PFPeA)	8.70	1.8	ng/L	9.03		96.3	72-129			
Perfluorohexanoic acid (PFHxA)	8.58	1.8	ng/L	9.03		95.0	72-129			
11Cl-PF3OUdS (F53B Minor)	6.87	1.8	ng/L	8.51		80.8	50-150			
9Cl-PF3ONS (F53B Major)	7.86	1.8	ng/L	8.42		93.3	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	7.62	1.8	ng/L	8.51		89.6	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	7.32	1.8	ng/L	9.03		81.0	50-150			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	7.46	1.8	ng/L	8.67		86.0	67-138			
Perfluorodecanoic acid (PFDA)	7.89	1.8	ng/L	9.03		87.4	71-129			
Perfluorododecanoic acid (PFDoA)	8.86	1.8	ng/L	9.03		98.1	72-134			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	8.56	1.8	ng/L	8.04		106	50-150			

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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 B308947 - SOP 454-PFAAS										
LCS (B308947-BS1)				Prepared: 05/23/22 Analyzed: 05/25/22						
Perfluoroheptanesulfonic acid (PFHpS)	8.18	1.8	ng/L	8.63		94.8	69-134			
N-EtFOSAA	10.5	1.8	ng/L	9.03		116	61-135			
N-MeFOSAA	9.57	1.8	ng/L	9.03		106	65-136			
Perfluorotetradecanoic acid (PFTA)	8.05	1.8	ng/L	9.03		89.1	71-132			
Perfluorotridecanoic acid (PFTrDA)	8.06	1.8	ng/L	9.03		89.2	65-144			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	8.20	1.8	ng/L	8.44		97.1	63-143			
Perfluorodecanesulfonic acid (PFDS)	7.70	1.8	ng/L	8.72		88.3	53-142			
Perfluorooctanesulfonamide (FOSA)	9.14	1.8	ng/L	9.03		101	67-137			
Perfluorononanesulfonic acid (PFNS)	7.91	1.8	ng/L	8.67		91.2	69-127			
Perfluoro-1-hexanesulfonamide (FHxSA)	8.35	1.8	ng/L	9.03		92.4	50-150			
Perfluoro-1-butanesulfonamide (FBSA)	8.97	1.8	ng/L	9.03		99.4	50-150			
Perfluorohexanesulfonic acid (PFHxS)	7.49	1.8	ng/L	8.26		90.7	68-131			
Perfluoro-4-oxapentanoic acid (PFMPA)	9.08	1.8	ng/L	9.03		101	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	9.31	1.8	ng/L	9.03		103	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	8.77	1.8	ng/L	8.58		102	64-140			
Perfluoropetanesulfonic acid (PFPeS)	7.89	1.8	ng/L	8.49		92.9	71-127			
Perfluoroundecanoic acid (PFUnA)	7.92	1.8	ng/L	9.03		87.7	69-133			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	8.85	1.8	ng/L	9.03		98.0	50-150			
Perfluoroheptanoic acid (PFHpA)	8.53	1.8	ng/L	9.03		94.5	72-130			
Perfluorooctanoic acid (PFOA)	8.74	1.8	ng/L	9.03		96.7	71-133			
Perfluorooctanesulfonic acid (PFOS)	8.54	1.8	ng/L	8.35		102	65-140			
Perfluorononanoic acid (PFNA)	8.79	1.8	ng/L	9.03		97.3	69-130			
Matrix Spike (B308947-MS1)		**Source: 22E1360-02**		Prepared: 05/23/22 Analyzed: 05/25/22						
Perfluorobutanoic acid (PFBA)	66.1	4.0	ng/L	20.0	42.4	118	73-129			
Perfluorobutanesulfonic acid (PFBS)	39.8	4.0	ng/L	17.7	22.4	98.5	72-130			
Perfluoropentanoic acid (PFPeA)	77.8	4.0	ng/L	20.0	52.4	127	72-129			
Perfluorohexanoic acid (PFHxA)	101	4.0	ng/L	20.0	75.1	128	72-129			
11Cl-PF3OUdS (F53B Minor)	19.5	4.0	ng/L	18.8	ND	104	50-150			
9Cl-PF3ONS (F53B Major)	18.7	4.0	ng/L	18.6	ND	101	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	17.2	4.0	ng/L	18.8	ND	91.5	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	18.2	4.0	ng/L	20.0	ND	91.1	50-150			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	20.0	4.0	ng/L	19.2	ND	104	67-138			
Perfluorodecanoic acid (PFDA)	22.1	4.0	ng/L	20.0	1.37	104	71-129			
Perfluorododecanoic acid (PFDoA)	20.5	4.0	ng/L	20.0	ND	103	72-134			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	20.3	4.0	ng/L	17.8	ND	114	50-150			
Perfluoroheptanesulfonic acid (PFHpS)	57.6	4.0	ng/L	19.1	38.2	102	69-134			
N-EtFOSAA	22.2	4.0	ng/L	20.0	1.68	103	61-135			
N-MeFOSAA	23.9	4.0	ng/L	20.0	ND	120	65-136			
Perfluorotetradecanoic acid (PFTA)	19.1	4.0	ng/L	20.0	ND	95.7	71-132			
Perfluorotridecanoic acid (PFTrDA)	19.0	4.0	ng/L	20.0	ND	95.1	65-144			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	18.4	4.0	ng/L	18.7	ND	98.4	63-143			
Perfluorodecanesulfonic acid (PFDS)	23.6	4.0	ng/L	19.3	ND	122	53-142			
Perfluorooctanesulfonamide (FOSA)	20.9	4.0	ng/L	20.0	2.13	93.9	67-137			
Perfluorononanesulfonic acid (PFNS)	21.0	4.0	ng/L	19.2	ND	110	69-127			
Perfluoro-1-hexanesulfonamide (FHxSA)	26.1	4.0	ng/L	20.0	7.29	94.0	50-150			
Perfluoro-1-butanesulfonamide (FBSA)	32.6	4.0	ng/L	20.0	12.8	99.2	50-150			
Perfluorohexanesulfonic acid (PFHxS)	126	4.0	ng/L	18.3	106	114	68-131			
Perfluoro-4-oxapentanoic acid (PFMPA)	29.0	4.0	ng/L	20.0	ND	145	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	22.5	4.0	ng/L	20.0	ND	113	50-150			

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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 B308947 - SOP 454-PFAAS											
Matrix Spike (B308947-MS1)	**Source: 22E1360-02**			Prepared: 05/23/22 Analyzed: 05/25/22							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	22.8	4.0	ng/L	19.0	ND	120		64-140			
Perfluoropetanesulfonic acid (PFPeS)	50.0	4.0	ng/L	18.8	32.2	94.9		71-127			
Perfluoroundecanoic acid (PFUnA)	19.8	4.0	ng/L	20.0	2.24	88.0		69-133			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	22.4	4.0	ng/L	20.0	ND	112		50-150			
Perfluoroheptanoic acid (PFHpA)	80.5	4.0	ng/L	20.0	61.9	93.5		72-130			
Perfluorooctanoic acid (PFOA)	561	4.0	ng/L	20.0	505	**279**	*	71-133			MS-22
Perfluorooctanesulfonic acid (PFOS)	654	4.0	ng/L	18.5	663	**-49.7**	*	65-140			MS-22
Perfluorononanoic acid (PFNA)	32.8	4.0	ng/L	20.0	8.79	120		69-130			
Matrix Spike Dup (B308947-MSD1)	**Source: 22E1360-02**			Prepared: 05/23/22 Analyzed: 05/25/22							
Perfluorobutanoic acid (PFBA)	61.0	4.0	ng/L	20.0	42.4	93.3		73-129	7.88	30	
Perfluorobutanesulfonic acid (PFBS)	36.3	4.0	ng/L	17.7	22.4	78.7		72-130	9.15	30	
Perfluoropentanoic acid (PFPeA)	74.0	4.0	ng/L	20.0	52.4	108		72-129	4.92	30	
Perfluorohexanoic acid (PFHxA)	95.2	4.0	ng/L	20.0	75.1	101		72-129	5.58	30	
11Cl-PF3OUdS (F53B Minor)	20.9	4.0	ng/L	18.8	ND	111		50-150	6.67	30	
9Cl-PF3ONS (F53B Major)	20.0	4.0	ng/L	18.6	ND	108		50-150	6.74	30	
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	15.1	4.0	ng/L	18.8	ND	80.3		50-150	12.9	30	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	13.6	4.0	ng/L	20.0	ND	68.1		50-150	28.8	30	
8:2 Fluorotelomersulfonic acid (8:2FTS A)	19.5	4.0	ng/L	19.2	ND	102		67-138	2.66	30	
Perfluorodecanoic acid (PFDA)	20.4	4.0	ng/L	20.0	1.37	94.9		71-129	8.02	30	
Perfluorododecanoic acid (PFDoA)	19.9	4.0	ng/L	20.0	ND	99.5		72-134	3.19	30	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	18.9	4.0	ng/L	17.8	ND	106		50-150	7.30	30	
Perfluoroheptanesulfonic acid (PFHpS)	53.5	4.0	ng/L	19.1	38.2	80.3		69-134	7.29	30	
N-EtFOSAA	22.0	4.0	ng/L	20.0	1.68	102		61-135	0.626	30	
N-MeFOSAA	18.6	4.0	ng/L	20.0	ND	92.9		65-136	25.0	30	
Perfluorotetradecanoic acid (PFTA)	17.3	4.0	ng/L	20.0	ND	86.7		71-132	9.68	30	
Perfluorotridecanoic acid (PFTrDA)	18.5	4.0	ng/L	20.0	ND	92.7		65-144	2.48	30	
4:2 Fluorotelomersulfonic acid (4:2FTS A)	17.1	4.0	ng/L	18.7	ND	91.7		63-143	6.97	30	
Perfluorodecanesulfonic acid (PFDS)	21.8	4.0	ng/L	19.3	ND	113		53-142	7.82	30	
Perfluorooctanesulfonamide (FOSA)	21.1	4.0	ng/L	20.0	2.13	94.8		67-137	0.963	30	
Perfluorononanesulfonic acid (PFNS)	21.2	4.0	ng/L	19.2	ND	110		69-127	0.859	30	
Perfluoro-1-hexanesulfonamide (FHxSA)	26.5	4.0	ng/L	20.0	7.29	96.3		50-150	1.85	30	
Perfluoro-1-butanesulfonamide (FBSA)	31.6	4.0	ng/L	20.0	12.8	94.0		50-150	3.15	30	
Perfluorohexanesulfonic acid (PFHxS)	119	4.0	ng/L	18.3	106	72.5		68-131	6.23	30	
Perfluoro-4-oxapentanoic acid (PFMPA)	27.2	4.0	ng/L	20.0	ND	136		50-150	6.19	30	
Perfluoro-5-oxahexanoic acid (PFMBA)	21.5	4.0	ng/L	20.0	ND	108		50-150	4.69	30	
6:2 Fluorotelomersulfonic acid (6:2FTS A)	21.3	4.0	ng/L	19.0	ND	112		64-140	6.93	30	
Perfluoropetanesulfonic acid (PFPeS)	47.6	4.0	ng/L	18.8	32.2	82.1		71-127	4.89	30	
Perfluoroundecanoic acid (PFUnA)	21.0	4.0	ng/L	20.0	2.24	93.8		69-133	5.79	30	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	21.2	4.0	ng/L	20.0	ND	106		50-150	5.70	30	
Perfluoroheptanoic acid (PFHpA)	75.7	4.0	ng/L	20.0	61.9	**69.2**	*	72-130	6.18	30	MS-22
Perfluorooctanoic acid (PFOA)	528	4.0	ng/L	20.0	505	112		71-133	6.11	30	
Perfluorooctanesulfonic acid (PFOS)	682	4.0	ng/L	18.5	663	102		65-140	4.20	30	
Perfluorononanoic acid (PFNA)	29.9	4.0	ng/L	20.0	8.79	105		69-130	9.50	30	

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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 B309532 - SOP 454-PFAAS										
Blank (B309532-BLK1)				Prepared: 06/01/22 Analyzed: 06/07/22						
Perfluorobutanoic acid (PFBA)	ND	1.8	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	1.8	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	1.8	ng/L							
11Cl-PF3OUdS (F53B Minor)	ND	1.8	ng/L							
9Cl-PF3ONS (F53B Major)	ND	1.8	ng/L							
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8	ng/L							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.8	ng/L							
Perfluorodecanoic acid (PFDA)	ND	1.8	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	1.8	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8	ng/L							
N-EtFOSAA	ND	1.8	ng/L							
N-MeFOSAA	ND	1.8	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	1.8	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	ng/L							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.8	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	1.8	ng/L							
Perfluorooctanesulfonamide (FOSA)	ND	1.8	ng/L							
Perfluorononanesulfonic acid (PFNS)	ND	1.8	ng/L							
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.8	ng/L							
Perfluoro-1-butanesulfonamide (FBSA)	ND	1.8	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	ng/L							
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.8	ng/L							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.8	ng/L							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.8	ng/L							
Perfluoropetanesulfonic acid (PFPeS)	ND	1.8	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	1.8	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	1.8	ng/L							
Perfluorooctanoic acid (PFOA)	ND	1.8	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	1.8	ng/L							
Perfluorononanoic acid (PFNA)	ND	1.8	ng/L							
LCS (B309532-BS1)				Prepared: 06/01/22 Analyzed: 06/06/22						
Perfluorobutanoic acid (PFBA)	7.72	1.8	ng/L	9.16		84.3	73-129			
Perfluorobutanesulfonic acid (PFBS)	6.49	1.8	ng/L	8.11		80.1	72-130			
Perfluoropentanoic acid (PFPeA)	7.46	1.8	ng/L	9.16		81.4	72-129			
Perfluorohexanoic acid (PFHxA)	7.42	1.8	ng/L	9.16		81.0	72-129			
11Cl-PF3OUdS (F53B Minor)	6.43	1.8	ng/L	8.63		74.5	50-150			
9Cl-PF3ONS (F53B Major)	7.54	1.8	ng/L	8.54		88.3	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	6.77	1.8	ng/L	8.63		78.5	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.83	1.8	ng/L	9.16		96.4	50-150			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	6.81	1.8	ng/L	8.79		77.4	67-138			
Perfluorodecanoic acid (PFDA)	7.31	1.8	ng/L	9.16		79.8	71-129			
Perfluorododecanoic acid (PFDoA)	7.62	1.8	ng/L	9.16		83.2	72-134			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	7.42	1.8	ng/L	8.15		91.0	50-150			

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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 B309532 - SOP 454-PFAAS										
LCS (B309532-BS1)				Prepared: 06/01/22 Analyzed: 06/06/22						
Perfluoroheptanesulfonic acid (PFHpS)	7.45	1.8	ng/L	8.75		85.2	69-134			
N-EtFOSAA	9.28	1.8	ng/L	9.16		101	61-135			
N-MeFOSAA	7.84	1.8	ng/L	9.16		85.6	65-136			
Perfluorotetradecanoic acid (PFTA)	7.14	1.8	ng/L	9.16		77.9	71-132			
Perfluorotridecanoic acid (PFTrDA)	7.10	1.8	ng/L	9.16		77.5	65-144			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	7.18	1.8	ng/L	8.57		83.9	63-143			
Perfluorodecanesulfonic acid (PFDS)	6.91	1.8	ng/L	8.84		78.1	53-142			
Perfluorooctanesulfonamide (FOSA)	8.06	1.8	ng/L	9.16		87.9	67-137			
Perfluorononanesulfonic acid (PFNS)	8.12	1.8	ng/L	8.79		92.3	69-127			
Perfluoro-1-hexanesulfonamide (FHxSA)	6.84	1.8	ng/L	9.16		74.7	50-150			
Perfluoro-1-butanesulfonamide (FBSA)	8.01	1.8	ng/L	9.16		87.5	50-150			
Perfluorohexanesulfonic acid (PFHxS)	6.63	1.8	ng/L	8.38		79.1	68-131			
Perfluoro-4-oxapentanoic acid (PFMPA)	8.01	1.8	ng/L	9.16		87.4	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	7.95	1.8	ng/L	9.16		86.8	50-150			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	8.17	1.8	ng/L	8.70		93.8	64-140			
Perfluoropetanesulfonic acid (PFPeS)	6.81	1.8	ng/L	8.61		79.0	71-127			
Perfluoroundecanoic acid (PFUnA)	7.11	1.8	ng/L	9.16		77.6	69-133			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	8.29	1.8	ng/L	9.16		90.4	50-150			
Perfluoroheptanoic acid (PFHpA)	7.31	1.8	ng/L	9.16		79.8	72-130			
Perfluorooctanoic acid (PFOA)	7.13	1.8	ng/L	9.16		77.9	71-133			
Perfluorooctanesulfonic acid (PFOS)	6.98	1.8	ng/L	8.47		82.4	65-140			
Perfluorononanoic acid (PFNA)	7.37	1.8	ng/L	9.16		80.4	69-130			
Matrix Spike (B309532-MS1)		**Source: 22E1360-02RE1**		Prepared: 06/01/22 Analyzed: 06/07/22						
Perfluorobutanoic acid (PFBA)	121	20	ng/L	100	32.9	87.8	73-129			
Perfluorobutanesulfonic acid (PFBS)	100	20	ng/L	88.5	16.3	94.7	72-130			
Perfluoropentanoic acid (PFPeA)	125	20	ng/L	100	41.3	83.5	72-129			
Perfluorohexanoic acid (PFHxA)	149	20	ng/L	100	66.4	82.8	72-129			
11Cl-PF3OUdS (F53B Minor)	83.3	20	ng/L	94.2	ND	88.4	50-150			
9Cl-PF3ONS (F53B Major)	87.4	20	ng/L	93.2	ND	93.7	50-150			
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	75.2	20	ng/L	94.2	ND	79.8	50-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	83.6	20	ng/L	100	ND	83.6	50-150			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	80.8	20	ng/L	96.0	ND	84.2	67-138			
Perfluorodecanoic acid (PFDA)	86.1	20	ng/L	100	ND	86.1	71-129			
Perfluorododecanoic acid (PFDoA)	91.2	20	ng/L	100	ND	91.2	72-134			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	94.4	20	ng/L	89.0	ND	106	50-150			
Perfluoroheptanesulfonic acid (PFHpS)	126	20	ng/L	95.5	24.4	107	69-134			
N-EtFOSAA	104	20	ng/L	100	ND	104	61-135			
N-MeFOSAA	93.0	20	ng/L	100	ND	93.0	65-136			
Perfluorotetradecanoic acid (PFTA)	81.1	20	ng/L	100	ND	81.1	71-132			
Perfluorotridecanoic acid (PFTrDA)	82.7	20	ng/L	100	ND	82.7	65-144			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	81.7	20	ng/L	93.5	ND	87.3	63-143			
Perfluorodecanesulfonic acid (PFDS)	100	20	ng/L	96.5	ND	104	53-142			
Perfluorooctanesulfonamide (FOSA)	90.3	20	ng/L	100	ND	90.3	67-137			
Perfluorononanesulfonic acid (PFNS)	93.8	20	ng/L	96.0	ND	97.7	69-127			
Perfluoro-1-hexanesulfonamide (FHxSA)	96.6	20	ng/L	100	6.98	89.6	50-150			
Perfluoro-1-butanesulfonamide (FBSA)	106	20	ng/L	100	11.5	94.1	50-150			
Perfluorohexanesulfonic acid (PFHxS)	187	20	ng/L	91.5	99.5	95.3	68-131			
Perfluoro-4-oxapentanoic acid (PFMPA)	108	20	ng/L	100	ND	108	50-150			
Perfluoro-5-oxahexanoic acid (PFMBA)	93.7	20	ng/L	100	ND	93.7	50-150			

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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 B309532 - SOP 454-PFAAS											
Matrix Spike (B309532-MS1)	**Source: 22E1360-02RE1**			Prepared: 06/01/22 Analyzed: 06/07/22							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	94.6	20	ng/L	95.0	ND	99.6		64-140			
Perfluoropetanesulfonic acid (PFPeS)	108	20	ng/L	94.0	27.7	84.9		71-127			
Perfluoroundecanoic acid (PFUnA)	86.6	20	ng/L	100	ND	86.6		69-133			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	104	20	ng/L	100	ND	104		50-150			
Perfluoroheptanoic acid (PFHpA)	181	20	ng/L	100	94.5	86.3		72-130			
Perfluorooctanoic acid (PFOA)	541	20	ng/L	100	412	129		71-133			
Perfluorooctanesulfonic acid (PFOS)	838	20	ng/L	92.5	542	**320**	*	65-140			MS-12
Perfluorononanoic acid (PFNA)	97.1	20	ng/L	100	8.20	88.9		69-130			
Matrix Spike Dup (B309532-MSD1)	**Source: 22E1360-02RE1**			Prepared: 06/01/22 Analyzed: 06/07/22							
Perfluorobutanoic acid (PFBA)	130	20	ng/L	100	32.9	96.6		73-129	7.06	30	
Perfluorobutanesulfonic acid (PFBS)	103	20	ng/L	88.5	16.3	97.6		72-130	2.49	30	
Perfluoropentanoic acid (PFPeA)	139	20	ng/L	100	41.3	98.1		72-129	11.1	30	
Perfluorohexanoic acid (PFHxA)	175	20	ng/L	100	66.4	109		72-129	16.0	30	
11Cl-PF3OUdS (F53B Minor)	81.8	20	ng/L	94.2	ND	86.8		50-150	1.89	30	
9Cl-PF3ONS (F53B Major)	96.3	20	ng/L	93.2	ND	103		50-150	9.73	30	
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	84.8	20	ng/L	94.2	ND	90.0		50-150	12.0	30	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	97.3	20	ng/L	100	ND	97.3		50-150	15.2	30	
8:2 Fluorotelomersulfonic acid (8:2FTS A)	94.6	20	ng/L	96.0	ND	98.5		67-138	15.7	30	
Perfluorodecanoic acid (PFDA)	93.1	20	ng/L	100	ND	93.1		71-129	7.76	30	
Perfluorododecanoic acid (PFDoA)	92.6	20	ng/L	100	ND	92.6		72-134	1.60	30	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	99.0	20	ng/L	89.0	ND	111		50-150	4.71	30	
Perfluoroheptanesulfonic acid (PFHpS)	120	20	ng/L	95.5	24.4	100		69-134	5.01	30	
N-EtFOSAA	116	20	ng/L	100	ND	116		61-135	10.9	30	
N-MeFOSAA	102	20	ng/L	100	ND	102		65-136	9.47	30	
Perfluorotetradecanoic acid (PFTA)	86.2	20	ng/L	100	ND	86.2		71-132	6.06	30	
Perfluorotridecanoic acid (PFTrDA)	89.5	20	ng/L	100	ND	89.5		65-144	7.83	30	
4:2 Fluorotelomersulfonic acid (4:2FTS A)	89.1	20	ng/L	93.5	ND	95.3		63-143	8.70	30	
Perfluorodecanesulfonic acid (PFDS)	103	20	ng/L	96.5	ND	106		53-142	2.67	30	
Perfluorooctanesulfonamide (FOSA)	100	20	ng/L	100	ND	100		67-137	10.5	30	
Perfluorononanesulfonic acid (PFNS)	98.6	20	ng/L	96.0	ND	103		69-127	4.99	30	
Perfluoro-1-hexanesulfonamide (FHxSA)	101	20	ng/L	100	6.98	94.0		50-150	4.46	30	
Perfluoro-1-butanesulfonamide (FBSA)	112	20	ng/L	100	11.5	101		50-150	6.28	30	
Perfluorohexanesulfonic acid (PFHxS)	182	20	ng/L	91.5	99.5	90.3		68-131	2.45	30	
Perfluoro-4-oxapentanoic acid (PFMPA)	120	20	ng/L	100	ND	120		50-150	10.8	30	
Perfluoro-5-oxahexanoic acid (PFMBA)	102	20	ng/L	100	ND	102		50-150	8.91	30	
6:2 Fluorotelomersulfonic acid (6:2FTS A)	99.2	20	ng/L	95.0	ND	104		64-140	4.76	30	
Perfluoropetanesulfonic acid (PFPeS)	115	20	ng/L	94.0	27.7	93.2		71-127	7.01	30	
Perfluoroundecanoic acid (PFUnA)	93.3	20	ng/L	100	ND	93.3		69-133	7.37	30	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	115	20	ng/L	100	ND	115		50-150	10.3	30	
Perfluoroheptanoic acid (PFHpA)	198	20	ng/L	100	94.5	104		72-130	9.15	30	
Perfluorooctanoic acid (PFOA)	530	20	ng/L	100	412	118		71-133	2.11	30	
Perfluorooctanesulfonic acid (PFOS)	698	20	ng/L	92.5	542	**169**	*	65-140	18.2	30	MS-12
Perfluorononanoic acid (PFNA)	106	20	ng/L	100	8.20	97.9		69-130	8.78	30	

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QUALITY CONTROL

Tentatively Identified Compounds - SV Compounds (ESTIMATED VALUES REPORTED) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B309306 - SW-846 3510C										
Blank (B309306-BLK1)				Prepared: 05/26/22 Analyzed: 06/01/22						
Phosphine imide, P,P,P-trip...	12		µg/L							B
Batch B310070 - SW-846 3510C										
Blank (B310070-BLK1)				Prepared: 06/07/22 Analyzed: 06/08/22						
Phosphine imide, P,P,P-trip...	14		µg/L							B

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B309302 - SW-846 3510C										
Blank (B309302-BLK1)				Prepared: 05/26/22 Analyzed: 06/03/22						
Aroclor-1016	ND	0.20	µg/L							
Aroclor-1016 [2C]	ND	0.20	µg/L							
Aroclor-1221	ND	0.20	µg/L							
Aroclor-1221 [2C]	ND	0.20	µg/L							
Aroclor-1232	ND	0.20	µg/L							
Aroclor-1232 [2C]	ND	0.20	µg/L							
Aroclor-1242	ND	0.20	µg/L							
Aroclor-1242 [2C]	ND	0.20	µg/L							
Aroclor-1248	ND	0.20	µg/L							
Aroclor-1248 [2C]	ND	0.20	µg/L							
Aroclor-1254	ND	0.20	µg/L							
Aroclor-1254 [2C]	ND	0.20	µg/L							
Aroclor-1260	ND	0.20	µg/L							
Aroclor-1260 [2C]	ND	0.20	µg/L							
Aroclor-1262	ND	0.20	µg/L							
Aroclor-1262 [2C]	ND	0.20	µg/L							
Aroclor-1268	ND	0.20	µg/L							
Aroclor-1268 [2C]	ND	0.20	µg/L							
Surrogate: Decachlorobiphenyl	*1.61*		µg/L	2.00		80.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.83*		µg/L	2.00		91.6	30-150			
Surrogate: Tetrachloro-m-xylene	*1.23*		µg/L	2.00		61.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.27*		µg/L	2.00		63.3	30-150			
LCS (B309302-BS1)				Prepared: 05/26/22 Analyzed: 06/03/22						
Aroclor-1016	0.39	0.20	µg/L	0.500		77.1	40-140			
Aroclor-1016 [2C]	0.44	0.20	µg/L	0.500		87.5	40-140			
Aroclor-1260	0.41	0.20	µg/L	0.500		82.1	40-140			
Aroclor-1260 [2C]	0.46	0.20	µg/L	0.500		92.1	40-140			
Surrogate: Decachlorobiphenyl	*1.71*		µg/L	2.00		85.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.94*		µg/L	2.00		97.2	30-150			
Surrogate: Tetrachloro-m-xylene	*1.26*		µg/L	2.00		62.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.29*		µg/L	2.00		64.5	30-150			
LCS Dup (B309302-BSD1)				Prepared: 05/26/22 Analyzed: 06/03/22						
Aroclor-1016	0.41	0.20	µg/L	0.500		81.3	40-140	5.27	20	
Aroclor-1016 [2C]	0.44	0.20	µg/L	0.500		87.8	40-140	0.374	20	
Aroclor-1260	0.42	0.20	µg/L	0.500		83.3	40-140	1.49	20	
Aroclor-1260 [2C]	0.46	0.20	µg/L	0.500		92.3	40-140	0.148	20	
Surrogate: Decachlorobiphenyl	*1.74*		µg/L	2.00		87.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.95*		µg/L	2.00		97.6	30-150			
Surrogate: Tetrachloro-m-xylene	*1.24*		µg/L	2.00		61.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.25*		µg/L	2.00		62.6	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B309302 - SW-846 3510C										
Matrix Spike (B309302-MS1)		**Source: 22E1360-02**		Prepared: 05/26/22 Analyzed: 06/04/22						
Aroclor-1016	0.40	0.20	µg/L	0.500	ND	80.4	40-140			
Aroclor-1016 [2C]	0.34	0.20	µg/L	0.500	ND	68.5	40-140			
Aroclor-1260	0.39	0.20	µg/L	0.500	ND	78.1	40-140			
Aroclor-1260 [2C]	0.32	0.20	µg/L	0.500	ND	64.6	40-140			
Surrogate: Decachlorobiphenyl	*1.57*		µg/L	2.00		78.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.40*		µg/L	2.00		70.2	30-150			
Surrogate: Tetrachloro-m-xylene	*1.35*		µg/L	2.00		67.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.13*		µg/L	2.00		56.7	30-150			
Matrix Spike Dup (B309302-MSD1)		**Source: 22E1360-02**		Prepared: 05/26/22 Analyzed: 06/04/22						
Aroclor-1016	0.41	0.21	µg/L	0.521	ND	78.3	40-140	1.47	50	
Aroclor-1016 [2C]	0.39	0.21	µg/L	0.521	ND	74.3	40-140	12.2	50	
Aroclor-1260	0.41	0.21	µg/L	0.521	ND	78.3	40-140	4.21	50	
Aroclor-1260 [2C]	0.33	0.21	µg/L	0.521	ND	63.8	40-140	2.78	50	
Surrogate: Decachlorobiphenyl	*1.57*		µg/L	2.08		75.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.39*		µg/L	2.08		66.7	30-150			
Surrogate: Tetrachloro-m-xylene	*1.40*		µg/L	2.08		67.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.17*		µg/L	2.08		56.1	30-150			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B308993 - SW-846 7470A Prep										
Blank (B308993-BLK1)				Prepared: 05/21/22 Analyzed: 05/24/22						
Mercury	ND	0.00010	mg/L							
LCS (B308993-BS1)				Prepared: 05/21/22 Analyzed: 05/24/22						
Mercury	0.00391	0.00010	mg/L	0.00402		97.4	80-120			
LCS Dup (B308993-BSD1)				Prepared: 05/21/22 Analyzed: 05/24/22						
Mercury	0.00388	0.00010	mg/L	0.00402		96.5	80-120	0.858	20	
Matrix Spike (B308993-MS1)		**Source: 22E1360-02**		Prepared: 05/21/22 Analyzed: 05/24/22						
Mercury	0.00402	0.00010	mg/L	0.00402	0.0000462	98.9	75-125			
Matrix Spike Dup (B308993-MSD1)		**Source: 22E1360-02**		Prepared: 05/21/22 Analyzed: 05/24/22						
Mercury	0.00394	0.00010	mg/L	0.00402	0.0000462	97.0	75-125	1.92	20	
Batch B309042 - SW-846 3005A										
Blank (B309042-BLK1)				Prepared: 05/23/22 Analyzed: 05/28/22						
Aluminum	ND	0.050	mg/L							
Antimony	ND	0.050	mg/L							
Arsenic	ND	0.010	mg/L							
Barium	ND	0.050	mg/L							
Beryllium	ND	0.0040	mg/L							
Cadmium	ND	0.0040	mg/L							
Calcium	ND	0.50	mg/L							
Chromium	ND	0.010	mg/L							
Cobalt	ND	0.010	mg/L							
Copper	ND	0.010	mg/L							
Iron	0.024	0.050	mg/L							J
Lead	0.0058	0.010	mg/L							J
Magnesium	ND	0.050	mg/L							
Manganese	ND	0.010	mg/L							
Nickel	ND	0.010	mg/L							
Potassium	ND	2.0	mg/L							
Selenium	ND	0.050	mg/L							
Silver	ND	0.010	mg/L							
Sodium	ND	2.0	mg/L							
Thallium	ND	0.050	mg/L							
Vanadium	ND	0.010	mg/L							
Zinc	0.0070	0.010	mg/L							J
Hardness	ND	1.4	mg/L							
LCS (B309042-BS1)				Prepared: 05/23/22 Analyzed: 05/28/22						
Aluminum	0.506	0.050	mg/L	0.500		101	80-120			
Antimony	0.506	0.050	mg/L	0.500		101	80-120			
Arsenic	0.501	0.010	mg/L	0.500		100	80-120			
Barium	0.535	0.050	mg/L	0.500		107	80-120			
Beryllium	0.547	0.0040	mg/L	0.500		109	80-120			
Cadmium	0.520	0.0040	mg/L	0.500		104	80-120			
Calcium	4.22	0.50	mg/L	4.00		105	80-120			
Chromium	0.532	0.010	mg/L	0.500		106	80-120			
Cobalt	0.536	0.010	mg/L	0.500		107	80-120			
Copper	1.04	0.010	mg/L	1.00		104	80-120			
Iron	4.32	0.050	mg/L	4.00		108	80-120			
Lead	0.551	0.010	mg/L	0.500		110	80-120			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B309042 - SW-846 3005A										
LCS (B309042-BS1)				Prepared: 05/23/22 Analyzed: 05/28/22						
Magnesium	4.24	0.050	mg/L	4.00		106	80-120			
Manganese	0.529	0.010	mg/L	0.500		106	80-120			
Nickel	0.545	0.010	mg/L	0.500		109	80-120			
Potassium	4.22	2.0	mg/L	4.00		105	80-120			
Selenium	0.525	0.050	mg/L	0.500		105	80-120			
Silver	0.537	0.010	mg/L	0.500		107	80-120			
Sodium	4.13	2.0	mg/L	4.00		103	80-120			
Thallium	0.530	0.050	mg/L	0.500		106	80-120			
Vanadium	0.532	0.010	mg/L	0.500		106	80-120			
Zinc	1.08	0.010	mg/L	1.00		108	80-120			
Hardness	28	1.4	mg/L	26.4		106	80-120			
LCS Dup (B309042-BSD1)				Prepared: 05/23/22 Analyzed: 05/28/22						
Aluminum	0.505	0.050	mg/L	0.500		101	80-120	0.126	20	
Antimony	0.505	0.050	mg/L	0.500		101	80-120	0.141	20	
Arsenic	0.499	0.010	mg/L	0.500		99.8	80-120	0.459	20	
Barium	0.532	0.050	mg/L	0.500		106	80-120	0.491	20	
Beryllium	0.543	0.0040	mg/L	0.500		109	80-120	0.691	20	
Cadmium	0.517	0.0040	mg/L	0.500		103	80-120	0.645	20	
Calcium	4.27	0.50	mg/L	4.00		107	80-120	1.15	20	
Chromium	0.528	0.010	mg/L	0.500		106	80-120	0.714	20	
Cobalt	0.532	0.010	mg/L	0.500		106	80-120	0.762	20	
Copper	1.03	0.010	mg/L	1.00		103	80-120	0.908	20	
Iron	4.35	0.050	mg/L	4.00		109	80-120	0.674	20	
Lead	0.547	0.010	mg/L	0.500		109	80-120	0.662	20	
Magnesium	4.26	0.050	mg/L	4.00		106	80-120	0.297	20	
Manganese	0.532	0.010	mg/L	0.500		106	80-120	0.443	20	
Nickel	0.540	0.010	mg/L	0.500		108	80-120	0.971	30	
Potassium	4.25	2.0	mg/L	4.00		106	80-120	0.764	20	
Selenium	0.523	0.050	mg/L	0.500		105	80-120	0.406	20	
Silver	0.529	0.010	mg/L	0.500		106	80-120	1.41	20	
Sodium	4.14	2.0	mg/L	4.00		104	80-120	0.325	20	
Thallium	0.523	0.050	mg/L	0.500		105	80-120	1.26	20	
Vanadium	0.526	0.010	mg/L	0.500		105	80-120	1.13	20	
Zinc	1.07	0.010	mg/L	1.00		107	80-120	0.510	20	
Hardness	28	1.4	mg/L	26.4		107	80-120	0.619	20	
Batch B309124 - SW-846 3005A										
Blank (B309124-BLK1)				Prepared: 05/24/22 Analyzed: 05/25/22						
Aluminum	0.025	0.050	mg/L							J
Antimony	ND	0.050	mg/L							
Arsenic	ND	0.010	mg/L							
Barium	ND	0.050	mg/L							
Beryllium	ND	0.0040	mg/L							
Cadmium	0.0034	0.0040	mg/L							J
Calcium	ND	0.50	mg/L							
Chromium	ND	0.010	mg/L							
Cobalt	ND	0.010	mg/L							
Copper	ND	0.010	mg/L							
Iron	0.022	0.050	mg/L							J
Lead	ND	0.010	mg/L							
Magnesium	ND	0.050	mg/L							

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B309124 - SW-846 3005A										
Blank (B309124-BLK1)				Prepared: 05/24/22 Analyzed: 05/25/22						
Manganese	ND	0.010	mg/L							
Nickel	ND	0.010	mg/L							
Potassium	ND	2.0	mg/L							
Selenium	ND	0.050	mg/L							
Silver	ND	0.010	mg/L							
Sodium	ND	2.0	mg/L							
Thallium	ND	0.050	mg/L							
Vanadium	ND	0.010	mg/L							
Zinc	0.0061	0.010	mg/L							J
Hardness	ND	1.4	mg/L							
LCS (B309124-BS1)				Prepared: 05/24/22 Analyzed: 05/25/22						
Aluminum	0.467	0.050	mg/L	0.500		93.5	80-120			
Antimony	0.457	0.050	mg/L	0.500		91.5	80-120			
Arsenic	0.437	0.010	mg/L	0.500		87.4	80-120			
Barium	0.469	0.050	mg/L	0.500		93.7	80-120			
Beryllium	0.488	0.0040	mg/L	0.500		97.6	80-120			
Cadmium	0.441	0.0040	mg/L	0.500		88.1	80-120			
Calcium	3.62	0.50	mg/L	4.00		90.4	80-120			
Chromium	0.466	0.010	mg/L	0.500		93.2	80-120			
Cobalt	0.467	0.010	mg/L	0.500		93.5	80-120			
Copper	0.889	0.010	mg/L	1.00		88.9	80-120			
Iron	3.85	0.050	mg/L	4.00		96.4	80-120			
Lead	0.488	0.010	mg/L	0.500		97.5	80-120			
Magnesium	3.97	0.050	mg/L	4.00		99.3	80-120			
Manganese	0.477	0.010	mg/L	0.500		95.4	80-120			
Nickel	0.475	0.010	mg/L	0.500		95.0	80-120			
Potassium	3.62	2.0	mg/L	4.00		90.5	80-120			
Selenium	0.488	0.050	mg/L	0.500		97.7	80-120			
Silver	0.496	0.010	mg/L	0.500		99.2	80-120			
Sodium	3.67	2.0	mg/L	4.00		91.7	80-120			
Thallium	0.490	0.050	mg/L	0.500		98.1	80-120			
Vanadium	0.462	0.010	mg/L	0.500		92.4	80-120			
Zinc	0.876	0.010	mg/L	1.00		87.6	80-120			
Hardness	26	1.4	mg/L	26.4		99.8	80-120			
LCS Dup (B309124-BSD1)				Prepared: 05/24/22 Analyzed: 05/25/22						
Aluminum	0.469	0.050	mg/L	0.500		93.8	80-120	0.290	20	
Antimony	0.461	0.050	mg/L	0.500		92.1	80-120	0.690	20	
Arsenic	0.434	0.010	mg/L	0.500		86.8	80-120	0.774	20	
Barium	0.478	0.050	mg/L	0.500		95.5	80-120	1.89	20	
Beryllium	0.485	0.0040	mg/L	0.500		97.0	80-120	0.543	20	
Cadmium	0.452	0.0040	mg/L	0.500		90.3	80-120	2.47	20	
Calcium	3.60	0.50	mg/L	4.00		90.1	80-120	0.353	20	
Chromium	0.475	0.010	mg/L	0.500		95.0	80-120	1.95	20	
Cobalt	0.478	0.010	mg/L	0.500		95.5	80-120	2.17	20	
Copper	0.893	0.010	mg/L	1.00		89.3	80-120	0.365	20	
Iron	3.92	0.050	mg/L	4.00		97.9	80-120	1.57	20	
Lead	0.488	0.010	mg/L	0.500		97.6	80-120	0.0790	20	
Magnesium	3.86	0.050	mg/L	4.00		96.5	80-120	2.92	20	
Manganese	0.480	0.010	mg/L	0.500		95.9	80-120	0.567	20	
Nickel	0.482	0.010	mg/L	0.500		96.4	80-120	1.51	30	
Potassium	3.66	2.0	mg/L	4.00		91.4	80-120	1.03	20	

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B309124 - SW-846 3005A											
LCS Dup (B309124-BSD1)				Prepared: 05/24/22 Analyzed: 05/25/22							
Selenium	0.487	0.050	mg/L	0.500		97.5		80-120	0.237	20	
Silver	0.508	0.010	mg/L	0.500		102		80-120	2.43	20	
Sodium	3.64	2.0	mg/L	4.00		91.1		80-120	0.656	20	
Thallium	0.497	0.050	mg/L	0.500		99.4		80-120	1.33	20	
Vanadium	0.472	0.010	mg/L	0.500		94.4		80-120	2.09	20	
Zinc	0.898	0.010	mg/L	1.00		89.8		80-120	2.55	20	
Hardness	26	1.4	mg/L	26.4		97.0		80-120	2.79	20	
Matrix Spike (B309124-MS1)	**Source: 22E1360-02**			Prepared: 05/24/22 Analyzed: 05/27/22							
Aluminum	2.07	0.050	mg/L	0.500	1.10	**193**	*	75-125			MS-12
Antimony	0.507	0.050	mg/L	0.500	ND	101		75-125			
Arsenic	0.484	0.010	mg/L	0.500	ND	96.8		75-125			
Barium	0.848	0.050	mg/L	0.500	0.353	99.1		75-125			
Beryllium	0.523	0.0040	mg/L	0.500	ND	105		75-125			
Cadmium	0.495	0.0040	mg/L	0.500	0.00350	98.3		75-125			
Calcium	199	0.50	mg/L	4.00	196	78.8		75-125			MS-19
Chromium	0.505	0.010	mg/L	0.500	0.00393	100		75-125			
Cobalt	0.487	0.010	mg/L	0.500	0.00714	95.9		75-125			
Copper	1.01	0.010	mg/L	1.00	0.0178	99.5		75-125			
Iron	7.76	0.050	mg/L	4.00	3.50	107		75-125			
Lead	0.499	0.010	mg/L	0.500	ND	99.9		75-125			
Magnesium	92.2	0.25	mg/L	4.00	91.8	**11.0**	*	75-125			MS-19
Manganese	7.01	0.010	mg/L	0.500	6.50	103		75-125			MS-19
Nickel	0.506	0.010	mg/L	0.500	0.0256	96.1		75-125			
Potassium	25.6	2.0	mg/L	4.00	21.4	105		75-125			MS-19
Selenium	0.541	0.050	mg/L	0.500	ND	108		75-125			
Silver	0.563	0.010	mg/L	0.500	ND	113		75-125			
Sodium	20.4	2.0	mg/L	4.00	16.4	99.7		75-125			
Thallium	0.547	0.050	mg/L	0.500	ND	109		75-125			
Vanadium	0.513	0.010	mg/L	0.500	ND	103		75-125			
Zinc	0.952	0.010	mg/L	1.00	0.0437	90.8		75-125			
Hardness	900	7.2	mg/L	26.4	910	**-30.2**	*	75-125			MS-19
Matrix Spike Dup (B309124-MSD1)	**Source: 22E1360-02**			Prepared: 05/24/22 Analyzed: 05/27/22							
Aluminum	2.07	0.050	mg/L	0.500	1.10	**193**	*	75-125	0.135	20	MS-12
Antimony	0.502	0.050	mg/L	0.500	ND	100		75-125	1.04	20	
Arsenic	0.482	0.010	mg/L	0.500	ND	96.4		75-125	0.366	20	
Barium	0.846	0.050	mg/L	0.500	0.353	98.7		75-125	0.191	20	
Beryllium	0.537	0.0040	mg/L	0.500	ND	107		75-125	2.61	20	
Cadmium	0.491	0.0040	mg/L	0.500	0.00350	97.6		75-125	0.728	20	
Calcium	207	0.50	mg/L	4.00	196	**261**	*	75-125	3.58	20	MS-19
Chromium	0.501	0.010	mg/L	0.500	0.00393	99.5		75-125	0.782	20	
Cobalt	0.483	0.010	mg/L	0.500	0.00714	95.2		75-125	0.668	20	
Copper	1.00	0.010	mg/L	1.00	0.0178	98.6		75-125	0.856	20	
Iron	7.87	0.050	mg/L	4.00	3.50	109		75-125	1.37	20	
Lead	0.498	0.010	mg/L	0.500	ND	99.6		75-125	0.276	20	
Magnesium	94.3	0.25	mg/L	4.00	91.8	**62.0**	*	75-125	2.19	20	MS-19
Manganese	7.25	0.010	mg/L	0.500	6.50	**151**	*	75-125	3.41	20	MS-19
Nickel	0.502	0.010	mg/L	0.500	0.0256	95.2		75-125	0.827	20	
Potassium	26.5	2.0	mg/L	4.00	21.4	**126**	*	75-125	3.31	20	MS-19
Selenium	0.533	0.050	mg/L	0.500	ND	107		75-125	1.38	20	
Silver	0.556	0.010	mg/L	0.500	ND	111		75-125	1.35	20	
Sodium	21.0	2.0	mg/L	4.00	16.4	117		75-125	3.30	20	

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B309124 - SW-846 3005A											
Matrix Spike Dup (B309124-MSD1)		**Source: 22E1360-02**		Prepared: 05/24/22 Analyzed: 05/25/22							
Thallium	0.544	0.050	mg/L	0.500	ND	109		75-125	0.640	20	
Vanadium	0.508	0.010	mg/L	0.500	ND	102		75-125	0.971	20	
Zinc	0.945	0.010	mg/L	1.00	0.0437	90.2		75-125	0.682	20	
Hardness	920	7.2	mg/L	26.4	910	**44.0**	*	75-125	2.16	20	MS-19

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B309012 - EPA 420.1										
Blank (B309012-BLK1)				Prepared: 05/23/22 Analyzed: 05/24/22						
Phenol	ND	0.050	mg/L							
LCS (B309012-BS1)				Prepared: 05/23/22 Analyzed: 05/24/22						
Phenol	0.49	0.050	mg/L	0.500		98.1	76.7-125			
LCS Dup (B309012-BSD1)				Prepared: 05/23/22 Analyzed: 05/24/22						
Phenol	0.50	0.050	mg/L	0.500		101	76.7-125	2.89	6.22	
Matrix Spike (B309012-MS1)	**Source: 22E1360-02**			Prepared: 05/23/22 Analyzed: 05/24/22						
Phenol	0.41	0.050	mg/L	0.500	0.088	64.7	49.2-131			
Matrix Spike Dup (B309012-MSD1)	**Source: 22E1360-02**			Prepared: 05/23/22 Analyzed: 05/24/22						
Phenol	0.43	0.050	mg/L	0.500	0.088	67.5	49.2-131	3.43	20	
Batch B309331 - SM21-23 2320B										
Blank (B309331-BLK1)				Prepared & Analyzed: 05/26/22						
Alkalinity	ND	1.0	mg/L							
LCS (B309331-BS1)				Prepared & Analyzed: 05/26/22						
Alkalinity	62	1.0	mg/L	61.2		100	85.8-110			
LCS Dup (B309331-BSD1)				Prepared & Analyzed: 05/26/22						
Alkalinity	62	1.0	mg/L	61.2		100	85.8-110	0.00	6.91	
Matrix Spike (B309331-MS1)	**Source: 22E1360-02**			Prepared & Analyzed: 05/26/22						
Alkalinity	1100	1.0	mg/L	50.0	1000	88.0	81.4-115			PR-18
Matrix Spike Dup (B309331-MSD1)	**Source: 22E1360-02**			Prepared & Analyzed: 05/26/22						
Alkalinity	1100	1.0	mg/L	50.0	1000	92.0	81.4-115	0.185	20	PR-18
Batch B309410 - SM19-23 4500 NH3 C										
Blank (B309410-BLK1)				Prepared: 05/27/22 Analyzed: 06/01/22						
Ammonia as N	ND	0.30	mg/L							
LCS (B309410-BS1)				Prepared: 05/27/22 Analyzed: 06/01/22						
Ammonia as N	4.6	0.30	mg/L	5.00		92.4	85.6-110			
LCS Dup (B309410-BSD1)				Prepared: 05/27/22 Analyzed: 06/01/22						
Ammonia as N	4.9	0.30	mg/L	5.00		98.6	85.6-110	6.45	9.25	

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B309410 - SM19-23 4500 NH3 C										
Matrix Spike (B309410-MS1)	**Source: 22E1360-02**			Prepared: 05/27/22 Analyzed: 06/01/22						
Ammonia as N	16	0.30	mg/L	2.00	14	61.6	50.9-142			
Matrix Spike Dup (B309410-MSD1)	**Source: 22E1360-02**			Prepared: 05/27/22 Analyzed: 06/01/22						
Ammonia as N	17	0.30	mg/L	2.00	14	139	50.9-142	9.35	20	
Batch B309414 - SM4500 N Org B C										
Blank (B309414-BLK1)				Prepared: 05/27/22 Analyzed: 05/31/22						
Total Kjeldahl Nitrogen	ND	1.0	mg/L							
LCS (B309414-BS1)				Prepared: 05/27/22 Analyzed: 05/31/22						
Total Kjeldahl Nitrogen	22	1.0	mg/L	20.0		109	84.1-113			
Matrix Spike (B309414-MS1)	**Source: 22E1360-02**			Prepared: 05/27/22 Analyzed: 05/31/22						
Total Kjeldahl Nitrogen	39	1.0	mg/L	20.0	17	106	82-122			
Matrix Spike Dup (B309414-MSD1)	**Source: 22E1360-02**			Prepared: 05/27/22 Analyzed: 05/31/22						
Total Kjeldahl Nitrogen	38	1.0	mg/L	20.0	17	104	82-122	1.46	20	
Batch B309529 - SM4500 N Org B C										
Blank (B309529-BLK1)				Prepared: 05/29/22 Analyzed: 05/31/22						
Total Kjeldahl Nitrogen	ND	1.0	mg/L							
LCS (B309529-BS1)				Prepared: 05/29/22 Analyzed: 05/31/22						
Total Kjeldahl Nitrogen	21	1.0	mg/L	20.0		104	84.1-113			
Batch B309537 - SM21-23 2320B										
Blank (B309537-BLK1)				Prepared & Analyzed: 05/30/22						
Alkalinity	ND	1.0	mg/L							
LCS (B309537-BS1)				Prepared & Analyzed: 05/30/22						
Alkalinity	63	1.0	mg/L	61.2		103	85.8-110			
LCS Dup (B309537-BSD1)				Prepared & Analyzed: 05/30/22						
Alkalinity	62	1.0	mg/L	61.2		100	85.8-110	2.41	6.91	
Batch B309611 - SM4500 CN C										
Blank (B309611-BLK1)				Prepared: 05/31/22 Analyzed: 06/01/22						
Cyanide	0.0047	0.010	mg/L							J

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B309611 - SM4500 CN C											
LCS (B309611-BS1)				Prepared: 05/31/22 Analyzed: 06/01/22							
Cyanide	0.67	0.010	mg/L	0.784		85.5		75.5-121			
LCS Dup (B309611-BSD1)				Prepared: 05/31/22 Analyzed: 06/01/22							
Cyanide	0.73	0.010	mg/L	0.784		93.7		75.5-121	9.14	10.2	E
Matrix Spike (B309611-MS1)	**Source: 22E1360-02**			Prepared: 05/31/22 Analyzed: 06/01/22							
Cyanide	0.0067	0.010	mg/L	0.410	0.0094	**-0.659**	*	31.6-149			MS-07, J
Matrix Spike Dup (B309611-MSD1)	**Source: 22E1360-02**			Prepared: 05/31/22 Analyzed: 06/01/22							
Cyanide	0.0067	0.010	mg/L	0.410	0.0094	**-0.659**	*	31.6-149	0.00	28.4	MS-07, J
Batch B309781 - EPA 410.4											
Blank (B309781-BLK1)				Prepared & Analyzed: 06/02/22							
Chemical Oxygen Demand	ND	15	mg/L								
LCS (B309781-BS1)				Prepared & Analyzed: 06/02/22							
Chemical Oxygen Demand	210	15	mg/L	200		103		90-110			
LCS Dup (B309781-BSD1)				Prepared & Analyzed: 06/02/22							
Chemical Oxygen Demand	200	15	mg/L	200		99.6		90-110	3.03	5	
Matrix Spike (B309781-MS1)	**Source: 22E1360-02**			Prepared & Analyzed: 06/02/22							
Chemical Oxygen Demand	160	15	mg/L	100	64	92.0		90-110			Z-01a
Matrix Spike Dup (B309781-MSD1)	**Source: 22E1360-02**			Prepared & Analyzed: 06/02/22							
Chemical Oxygen Demand	160	15	mg/L	100	64	92.0		90-110	0.00	20	Z-01a

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Dissolved) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B309095 - SM21-23 2540C										
Blank (B309095-BLK1)				Prepared & Analyzed: 05/24/22						
Total Dissolved Solids	ND	10	mg/L							
LCS (B309095-BS1)				Prepared & Analyzed: 05/24/22						
Total Dissolved Solids	260	10	mg/L	293		89.8	64.9-119			

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B309302-BS1 Date(s) Analyzed: 06/03/2022 06/03/2022

Instrument ID (1): ECD1 Instrument ID (2): ECD1

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.39	
	2	0.000	0.000	0.000	0.44	12.0
Aroclor-1260	1	0.000	0.000	0.000	0.41	
	2	0.000	0.000	0.000	0.46	11.5

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B309302-BSD1 Date(s) Analyzed: 06/03/2022 06/03/2022

Instrument ID (1): ECD1 Instrument ID (2): ECD1

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.41	
	2	0.000	0.000	0.000	0.44	7.1
Aroclor-1260	1	0.000	0.000	0.000	0.42	
	2	0.000	0.000	0.000	0.46	9.1

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B309302-MS1 Date(s) Analyzed: 06/04/2022 06/04/2022

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.40	
	2	0.000	0.000	0.000	0.34	16.2
Aroclor-1260	1	0.000	0.000	0.000	0.39	
	2	0.000	0.000	0.000	0.32	19.7

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B309302-MSD1 Date(s) Analyzed: 06/04/2022 06/04/2022

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.41	
	2	0.000	0.000	0.000	0.39	5.0
Aroclor-1260	1	0.000	0.000	0.000	0.41	
	2	0.000	0.000	0.000	0.33	21.6

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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.
B	Analyte is found in the associated laboratory blank as well as in the sample.
DL-01	Elevated reporting limits for all volatile compounds due to foaming sample matrix.
E	Reported result is estimated. Value reported over verified calibration range.
H-06	Sample was extracted past the recommended holding time.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-02	Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
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-07	Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery.Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.
MS-07A	Matrix spike and spike duplicate recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of matrix effects that lead to low bias or non-homogeneous sample aliquot cannot be eliminated.
MS-09	Matrix spike recovery and/or matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a low bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
MS-12	Matrix spike recovery and matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
MS-15	Matrix spike and matrix spike duplicate recoveries are outside of control limits. Data validation is not affected since results for this compound in this sample are "not detected", and recovery bias is on the high side.
MS-19	Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.
MS-22	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 within method specified criteria.
PF-17	Extracted Internal Standard recovery is outside of control limits. Data is not significantly affected since associated analyte is not detected and bias is on the high side.
PF-18	Duplicate analysis confirmed Extracted Internal Standard failure due to matrix effects.
PF-19	Duplicate analysis confirmed Extracted Internal Standard failure due to matrix effects. Original results reported.
PF-20	Sample extracted at a dilution. Elevated reporting limits due to adjusted sample volume during preparation.
PR-18	Headspace present in sample container.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
S-10	Sample was re-extracted outside of holding time since surrogate standard recovery was outside of control limits. Data from analysis performed outside of holding time is also reported since surrogate recovery is acceptable.
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-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

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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.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.
Z-01	Analyte qualifier ion ratio is >150%. Analyte detection suspect.
Z-01a	Test EPA 410.4 had a calibration point outside acceptable limits. Reanalysis yielded similar non-conformance.

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SP-01-051922 (22E1360-01)			Lab File ID: 22E1360-01.d			Analyzed: 05/25/22 09:48			
M8FOSA	226757	4.044533	278,163.00	4.044517	82	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	151298.9	2.628217	99,807.00	2.6531	152	50 - 150	-0.0249	+/-0.50	*
M2PFTA	951645.1	4.410917	1,030,924.00	4.410917	92	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	172891.9	3.875067	88,177.00	3.875067	196	50 - 150	0.0000	+/-0.50	*
MPFBA	229741.5	1.108317	575,637.00	1.12495	40	50 - 150	-0.0166	+/-0.50	*
M3HFPO-DA	85896.09	2.945967	175,440.00	2.9622	49	50 - 150	-0.0162	+/-0.50	*
M6PFDA	508298.1	3.8756	574,987.00	3.8756	88	50 - 150	0.0000	+/-0.50	
M3PFBS	88250.48	2.002783	118,880.00	2.02765	74	50 - 150	-0.0249	+/-0.50	
M7PFUnA	693042.3	4.025983	738,064.00	4.025967	94	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	105316.4	3.509617	63,701.00	3.517617	165	50 - 150	-0.0080	+/-0.50	*
M5PFPeA	330861.6	1.80795	477,508.00	1.8411	69	50 - 150	-0.0332	+/-0.50	
M5PFHxA	576502.9	2.7145	728,553.00	2.747233	79	50 - 150	-0.0327	+/-0.50	
M3PFHxS	84397.91	3.28425	102,709.00	3.2923	82	50 - 150	-0.0080	+/-0.50	
M4PFHpA	546458.6	3.25995	727,773.00	3.25995	75	50 - 150	0.0000	+/-0.50	
M8PFOA	444940.9	3.52615	684,344.00	3.52615	65	50 - 150	0.0000	+/-0.50	
M8PFOS	82868.98	3.7083	121,421.00	3.7083	68	50 - 150	0.0000	+/-0.50	
M9PFNA	375579.6	3.7093	620,680.00	3.71725	61	50 - 150	-0.0080	+/-0.50	
MPFDoA	765540.5	4.169267	834,049.00	4.169267	92	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	140727.4	4.03345	162,923.00	4.033433	86	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	168929.5	3.953867	197,528.00	3.953867	86	50 - 150	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	109688	3.243	115,888.00	3.243	95	50 - 200	0.0000	+/-0.50	
Pentafluorobenzene	347229	4.111	341,989.00	4.111	102	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	658874	11.057	607,131.00	11.057	109	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	494543	4.877	489,204.00	4.878	101	50 - 200	-0.0010	+/-0.50	
Naphthalene-d8	436626	3.969	448,547.00	3.969	97	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	261804	5.038	254,610.00	5.038	103	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	244318	7.761	238,866.00	7.758	102	50 - 200	0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	233572	10.028	233,563.00	10.028	100	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	448287	5.962	439,452.00	5.965	102	50 - 200	-0.0030	+/-0.50	
Chrysene-d12	331671	8.351	361,806.00	8.359	92	50 - 200	-0.0080	+/-0.50	
Perylene-d12	298579	10.834	330,153.00	10.836	90	50 - 200	-0.0020	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SW-846 8260D

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SP-14-051922 (22E1360-02)			Lab File ID: E22V14610.D			Analyzed: 05/26/22 13:51			
Pentafluorobenzene	346607	4.108	341,989.00	4.111	101	50 - 200	-0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	695568	11.057	707,138.00	11.054	98	50 - 200	0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	115019	3.235	159,610.00	3.235	72	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	469596	3.961	583,914.00	3.961	80	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	491936	4.875	489,204.00	4.878	101	50 - 200	-0.0030	+/-0.50	
Chlorobenzene-d5	239991	7.758	238,866.00	7.758	100	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	276449	5.027	337,703.00	5.03	82	50 - 200	-0.0030	+/-0.50	
Phenanthrene-d10	473978	5.952	551,685.00	5.954	86	50 - 200	-0.0020	+/-0.50	
1,4-Dichlorobenzene-d4	231214	10.028	233,563.00	10.028	99	50 - 200	0.0000	+/-0.50	
Chrysene-d12	374899	8.333	480,132.00	8.338	78	50 - 200	-0.0050	+/-0.50	
Perylene-d12	334382	10.805	436,925.00	10.81	77	50 - 200	-0.0050	+/-0.50	
SP-14-051922 (22E1360-02RE1)			Lab File ID: 22E1360-02RE1.d			Analyzed: 06/07/22 00:42			
M8FOSA	219164.5	3.988567	281,974.00	3.988567	78	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	101257.6	2.447533	142,802.00	2.45575	71	50 - 150	-0.0082	+/-0.50	
M2PFTA	842567.3	4.3378	1,096,826.00	4.3378	77	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	121493.4	3.810767	139,767.00	3.802783	87	50 - 150	0.0080	+/-0.50	
MPFBA	428526.5	1.066783	596,913.00	1.066783	72	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	151158.7	2.798383	176,204.00	2.806567	86	50 - 150	-0.0082	+/-0.50	
M6PFDA	502818.3	3.803317	615,924.00	3.803317	82	50 - 150	0.0000	+/-0.50	
M3PFBS	87408.84	1.853533	126,073.00	1.861817	69	50 - 150	-0.0083	+/-0.50	
M7PFUnA	636911.1	3.954017	803,507.00	3.954017	79	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	64668.4	3.445283	87,967.00	3.445283	74	50 - 150	0.0000	+/-0.50	
M5PFPeA	363399.3	1.690017	494,651.00	1.690017	73	50 - 150	0.0000	+/-0.50	
M5PFHxA	539946.4	2.539483	736,074.00	2.539483	73	50 - 150	0.0000	+/-0.50	
M3PFHxS	78818.99	3.201883	98,891.00	3.201883	80	50 - 150	0.0000	+/-0.50	
M4PFHpA	581731.3	3.1627	738,769.00	3.1627	79	50 - 150	0.0000	+/-0.50	
M8PFOA	540727.9	3.453817	672,049.00	3.453817	80	50 - 150	0.0000	+/-0.50	
M8PFOS	83038.84	3.65215	105,336.00	3.65215	79	50 - 150	0.0000	+/-0.50	
M9PFNA	436459.3	3.653183	539,046.00	3.653183	81	50 - 150	0.0000	+/-0.50	
MPFDoA	691632.1	4.088634	886,373.00	4.096633	78	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	149843.7	3.961483	173,762.00	3.961483	86	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	192047.5	3.88175	208,301.00	3.88175	92	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SW-846 8260D

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SP-10-051922 (22E1360-03)			Lab File ID: E22V14611.D			Analyzed: 05/26/22 14:18			
Pentafluorobenzene	347064	4.111	341,989.00	4.111	101	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	113210	3.243	115,888.00	3.243	98	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	722882	11.054	607,131.00	11.057	119	50 - 200	-0.0030	+/-0.50	
1,4-Difluorobenzene	491007	4.878	489,204.00	4.878	100	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	428719	3.969	448,547.00	3.969	96	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	235512	5.035	254,610.00	5.038	92	50 - 200	-0.0030	+/-0.50	
Chlorobenzene-d5	241200	7.758	238,866.00	7.758	101	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	400003	5.962	439,452.00	5.965	91	50 - 200	-0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	226786	10.028	233,563.00	10.028	97	50 - 200	0.0000	+/-0.50	
Chrysene-d12	325478	8.354	361,806.00	8.359	90	50 - 200	-0.0050	+/-0.50	
Perylene-d12	296695	10.831	330,153.00	10.836	90	50 - 200	-0.0050	+/-0.50	
SP-10-051922 (22E1360-03RE1)			Lab File ID: 22E1360-03RE1.d			Analyzed: 06/07/22 00:49			
M8FOSA	220211	3.988567	281,974.00	3.988567	78	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	107878.7	2.447533	142,802.00	2.45575	76	50 - 150	-0.0082	+/-0.50	
M2PFTA	834856.6	4.3378	1,096,826.00	4.3378	76	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	131030	3.81075	139,767.00	3.802783	94	50 - 150	0.0080	+/-0.50	
MPFBA	439662.2	1.066783	596,913.00	1.066783	74	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	116407.7	2.798383	176,204.00	2.806567	66	50 - 150	-0.0082	+/-0.50	
M6PFDA	499369.8	3.803317	615,924.00	3.803317	81	50 - 150	0.0000	+/-0.50	
M3PFBS	90435.56	1.861817	126,073.00	1.861817	72	50 - 150	0.0000	+/-0.50	
M7PFUnA	648658.4	3.954017	803,507.00	3.954017	81	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	96211.61	3.4373	87,967.00	3.445283	109	50 - 150	-0.0080	+/-0.50	
M5PFPeA	375730.4	1.690017	494,651.00	1.690017	76	50 - 150	0.0000	+/-0.50	
M5PFHxA	545248.6	2.531267	736,074.00	2.539483	74	50 - 150	-0.0082	+/-0.50	
M3PFHxS	77866.17	3.201883	98,891.00	3.201883	79	50 - 150	0.0000	+/-0.50	
M4PFHpA	596513.4	3.1627	738,769.00	3.1627	81	50 - 150	0.0000	+/-0.50	
M8PFOA	553058.2	3.453817	672,049.00	3.453817	82	50 - 150	0.0000	+/-0.50	
M8PFOS	87843.38	3.65215	105,336.00	3.65215	83	50 - 150	0.0000	+/-0.50	
M9PFNA	456370.6	3.6452	539,046.00	3.653183	85	50 - 150	-0.0080	+/-0.50	
MPFDoA	664660.5	4.088634	886,373.00	4.096633	75	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	168653.6	3.961483	173,762.00	3.961483	97	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	203330.9	3.88175	208,301.00	3.88175	98	50 - 150	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	116524	3.217	142,071.00	3.22	82	50 - 200	-0.0030	+/-0.50	
Naphthalene-d8	458936	3.943	558,875.00	3.946	82	50 - 200	-0.0030	+/-0.50	
Acenaphthene-d10	256666	5.015	328,143.00	5.015	78	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	484041	5.942	550,774.00	5.941	88	50 - 200	0.0010	+/-0.50	
Chrysene-d12	362342	8.321	445,778.00	8.323	81	50 - 200	-0.0020	+/-0.50	
Perylene-d12	275424	10.79	338,092.00	10.792	81	50 - 200	-0.0020	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
SP-05-051922 (22E1360-04)			Lab File ID: 22E1360-04.d			Analyzed: 05/25/22 10:10			
M8FOSA	249444.8	4.044533	278,163.00	4.044517	90	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	159452.1	2.636633	99,807.00	2.6531	160	50 - 150	-0.0165	+/-0.50	*
M2PFTA	341002.3	4.410917	1,030,924.00	4.410917	33	50 - 150	0.0000	+/-0.50	*
M2-8:2FTS	163015.2	3.875067	88,177.00	3.875067	185	50 - 150	0.0000	+/-0.50	*
MPFBA	253028	1.108317	575,637.00	1.12495	44	50 - 150	-0.0166	+/-0.50	*
M3HFPO-DA	81683.94	2.945967	175,440.00	2.9622	47	50 - 150	-0.0162	+/-0.50	*
M6PFDA	517319	3.8756	574,987.00	3.8756	90	50 - 150	0.0000	+/-0.50	
M3PFBS	97032.78	2.002783	118,880.00	2.02765	82	50 - 150	-0.0249	+/-0.50	
M7PFUnA	725170	4.025967	738,064.00	4.025967	98	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	122141.5	3.509617	63,701.00	3.517617	192	50 - 150	-0.0080	+/-0.50	*
M5PFPeA	371886.9	1.816233	477,508.00	1.8411	78	50 - 150	-0.0249	+/-0.50	
M5PFHxA	646053.1	2.722683	728,553.00	2.747233	89	50 - 150	-0.0246	+/-0.50	
M3PFHxS	84046.2	3.2923	102,709.00	3.2923	82	50 - 150	0.0000	+/-0.50	
M4PFHpA	627450.6	3.25995	727,773.00	3.25995	86	50 - 150	0.0000	+/-0.50	
M8PFOA	576160.4	3.52615	684,344.00	3.52615	84	50 - 150	0.0000	+/-0.50	
M8PFOS	95288.52	3.7083	121,421.00	3.7083	78	50 - 150	0.0000	+/-0.50	
M9PFNA	482149.4	3.717267	620,680.00	3.71725	78	50 - 150	0.0000	+/-0.50	
MPFDoA	659550.4	4.169267	834,049.00	4.169267	79	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	168841.6	4.03345	162,923.00	4.033433	104	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	186851.3	3.953867	197,528.00	3.953867	95	50 - 150	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	682356	11.054	607,131.00	11.057	112	50 - 200	-0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	94783	3.243	115,888.00	3.243	82	50 - 200	0.0000	+/-0.50	
Pentafluorobenzene	342462	4.113	341,989.00	4.111	100	50 - 200	0.0020	+/-0.50	
Naphthalene-d8	382802	3.969	448,547.00	3.969	85	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	489634	4.878	489,204.00	4.878	100	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	229604	5.038	254,610.00	5.038	90	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	238079	7.758	238,866.00	7.758	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	232620	10.028	233,563.00	10.028	100	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	401472	5.962	439,452.00	5.965	91	50 - 200	-0.0030	+/-0.50	
Chrysene-d12	313353	8.354	361,806.00	8.359	87	50 - 200	-0.0050	+/-0.50	
Perylene-d12	293026	10.831	330,153.00	10.836	89	50 - 200	-0.0050	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
FD-051922 (22E1360-05)			Lab File ID: 22E1360-05.d			Analyzed: 05/25/22 10:17			
M8FOSA	173922.6	4.044533	278,163.00	4.044517	63	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	154224.4	2.628217	99,807.00	2.6531	155	50 - 150	-0.0249	+/-0.50	*
M2PFTA	716662.2	4.410917	1,030,924.00	4.410917	70	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	160315.5	3.875067	88,177.00	3.875067	182	50 - 150	0.0000	+/-0.50	*
MPFBA	232696	1.108317	575,637.00	1.12495	40	50 - 150	-0.0166	+/-0.50	*
M3HFPO-DA	80991.07	2.945967	175,440.00	2.9622	46	50 - 150	-0.0162	+/-0.50	*
M6PFDA	490317.5	3.8756	574,987.00	3.8756	85	50 - 150	0.0000	+/-0.50	
M3PFBS	87444.77	2.002783	118,880.00	2.02765	74	50 - 150	-0.0249	+/-0.50	
M7PFUnA	655018.7	4.025983	738,064.00	4.025967	89	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	114828.6	3.509617	63,701.00	3.517617	180	50 - 150	-0.0080	+/-0.50	*
M5PFPeA	328430.5	1.80795	477,508.00	1.8411	69	50 - 150	-0.0332	+/-0.50	
M5PFHxA	567725.4	2.722683	728,553.00	2.747233	78	50 - 150	-0.0246	+/-0.50	
M3PFHxS	78828.01	3.28425	102,709.00	3.2923	77	50 - 150	-0.0080	+/-0.50	
M4PFHpA	537395.3	3.25995	727,773.00	3.25995	74	50 - 150	0.0000	+/-0.50	
M8PFOA	451835.7	3.52615	684,344.00	3.52615	66	50 - 150	0.0000	+/-0.50	
M8PFOS	79170.36	3.7083	121,421.00	3.7083	65	50 - 150	0.0000	+/-0.50	
M9PFNA	375728	3.7093	620,680.00	3.71725	61	50 - 150	-0.0080	+/-0.50	
MPFDoA	700133.3	4.169267	834,049.00	4.169267	84	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	148506.2	4.03345	162,923.00	4.033433	91	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	170337	3.953867	197,528.00	3.953867	86	50 - 150	0.0000	+/-0.50	
Pentafluorobenzene	338608	4.113	341,989.00	4.111	99	50 - 200	0.0020	+/-0.50	
1,4-Dichlorobenzene-d4	93568	3.235	159,610.00	3.235	59	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	689253	11.057	607,131.00	11.057	114	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	374734	3.962	583,914.00	3.961	64	50 - 200	0.0010	+/-0.50	
1,4-Difluorobenzene	485213	4.88	489,204.00	4.878	99	50 - 200	0.0020	+/-0.50	
Chlorobenzene-d5	236804	7.761	238,866.00	7.758	99	50 - 200	0.0030	+/-0.50	
Acenaphthene-d10	219020	5.028	337,703.00	5.03	65	50 - 200	-0.0020	+/-0.50	
Phenanthrene-d10	374447	5.952	551,685.00	5.954	68	50 - 200	-0.0020	+/-0.50	
1,4-Dichlorobenzene-d4	232049	10.028	233,563.00	10.028	99	50 - 200	0.0000	+/-0.50	
Chrysene-d12	298942	8.334	480,132.00	8.338	62	50 - 200	-0.0040	+/-0.50	
Perylene-d12	273377	10.803	436,925.00	10.81	63	50 - 200	-0.0070	+/-0.50	
TB-051922 (22E1360-06)			Lab File ID: E22V14608.D			Analyzed: 05/26/22 12:56			
Pentafluorobenzene	347202	4.111	341,989.00	4.111	102	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	489786	4.877	489,204.00	4.878	100	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5	236257	7.761	238,866.00	7.758	99	50 - 200	0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	230392	10.028	233,563.00	10.028	99	50 - 200	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B308947-BLK1)			Lab File ID: B308947-BLK1.d			Analyzed: 05/25/22 06:31			
M8FOSA	202906.7	4.052516	278,163.00	4.044517	73	50 - 150	0.0080	+/-0.50	
M2-4:2FTS	88627.51	2.6531	99,807.00	2.6531	89	50 - 150	0.0000	+/-0.50	
M2PFTA	779326.8	4.410917	1,030,924.00	4.4191	76	50 - 150	-0.0082	+/-0.50	
M2-8:2FTS	75823.52	3.875067	88,177.00	3.875067	86	50 - 150	0.0000	+/-0.50	
MPFBA	553002.4	1.12495	575,637.00	1.12495	96	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	165693.1	2.9622	175,440.00	2.9622	94	50 - 150	0.0000	+/-0.50	
M6PFDA	495939.2	3.875583	574,987.00	3.8756	86	50 - 150	0.0000	+/-0.50	
M3PFBS	107654.4	2.02765	118,880.00	2.02765	91	50 - 150	0.0000	+/-0.50	
M7PFUnA	610149.3	4.025967	738,064.00	4.025967	83	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	52993.4	3.517617	63,701.00	3.517617	83	50 - 150	0.0000	+/-0.50	
M5PFPeA	435493.8	1.8411	477,508.00	1.8411	91	50 - 150	0.0000	+/-0.50	
M5PFHxA	651685.9	2.747233	728,553.00	2.747233	89	50 - 150	0.0000	+/-0.50	
M3PFHxS	90503.95	3.2923	102,709.00	3.2923	88	50 - 150	0.0000	+/-0.50	
M4PFHpA	621324.4	3.268033	727,773.00	3.268033	85	50 - 150	0.0000	+/-0.50	
M8PFOA	604188.7	3.52615	684,344.00	3.52615	88	50 - 150	0.0000	+/-0.50	
M8PFOS	94024.3	3.716267	121,421.00	3.716267	77	50 - 150	0.0000	+/-0.50	
M9PFNA	503218.6	3.71725	620,680.00	3.71725	81	50 - 150	0.0000	+/-0.50	
MPFDoA	642016	4.169267	834,049.00	4.169267	77	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	134947.8	4.033433	162,923.00	4.03345	83	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	162647.5	3.953867	197,528.00	3.953867	82	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B308947-BS1)			Lab File ID: B308947-BS1.d			Analyzed: 05/25/22 06:24			
M8FOSA	213232.6	4.052516	278,163.00	4.044517	77	50 - 150	0.0080	+/-0.50	
M2-4:2FTS	94481.77	2.6531	99,807.00	2.6531	95	50 - 150	0.0000	+/-0.50	
M2PFTA	868226.1	4.410917	1,030,924.00	4.4191	84	50 - 150	-0.0082	+/-0.50	
M2-8:2FTS	84264.5	3.875067	88,177.00	3.875067	96	50 - 150	0.0000	+/-0.50	
MPFBA	589836.4	1.12495	575,637.00	1.12495	102	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	178034.9	2.9622	175,440.00	2.9622	101	50 - 150	0.0000	+/-0.50	
M6PFDA	548571.6	3.875583	574,987.00	3.8756	95	50 - 150	0.0000	+/-0.50	
M3PFBS	114140.7	2.02765	118,880.00	2.02765	96	50 - 150	0.0000	+/-0.50	
M7PFUnA	721532.4	4.025967	738,064.00	4.025967	98	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	55336.8	3.517617	63,701.00	3.517617	87	50 - 150	0.0000	+/-0.50	
M5PFPeA	454700.4	1.8411	477,508.00	1.8411	95	50 - 150	0.0000	+/-0.50	
M5PFHxA	699034.9	2.747233	728,553.00	2.747233	96	50 - 150	0.0000	+/-0.50	
M3PFHxS	96451.39	3.2923	102,709.00	3.2923	94	50 - 150	0.0000	+/-0.50	
M4PFHpA	675187.8	3.268033	727,773.00	3.268033	93	50 - 150	0.0000	+/-0.50	
M8PFOA	627493.8	3.534133	684,344.00	3.52615	92	50 - 150	0.0080	+/-0.50	
M8PFOS	103363.8	3.716267	121,421.00	3.716267	85	50 - 150	0.0000	+/-0.50	
M9PFNA	535582.9	3.71725	620,680.00	3.71725	86	50 - 150	0.0000	+/-0.50	
MPFDoA	736459.3	4.169267	834,049.00	4.169267	88	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	135919.7	4.033433	162,923.00	4.03345	83	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	170994.7	3.953867	197,528.00	3.953867	87	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike (B308947-MS1)			Lab File ID: B308947-MS1.d			Analyzed: 05/25/22 06:38			
M8FOSA	233051.3	4.044533	278,163.00	4.044517	84	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	152097.1	2.636633	99,807.00	2.6531	152	50 - 150	-0.0165	+/-0.50	*
M2PFTA	904685.6	4.410917	1,030,924.00	4.4191	88	50 - 150	-0.0082	+/-0.50	
M2-8:2FTS	151879.6	3.875067	88,177.00	3.875067	172	50 - 150	0.0000	+/-0.50	*
MPFBA	221025	1.108317	575,637.00	1.12495	38	50 - 150	-0.0166	+/-0.50	*
M3HFPO-DA	94226.24	2.954083	175,440.00	2.9622	54	50 - 150	-0.0081	+/-0.50	
M6PFDA	505592.6	3.8756	574,987.00	3.8756	88	50 - 150	0.0000	+/-0.50	
M3PFBS	83969.86	2.002783	118,880.00	2.02765	71	50 - 150	-0.0249	+/-0.50	
M7PFUnA	740356.4	4.025983	738,064.00	4.025967	100	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	106065	3.509617	63,701.00	3.517617	167	50 - 150	-0.0080	+/-0.50	*
M5PFPeA	297622.2	1.816233	477,508.00	1.8411	62	50 - 150	-0.0249	+/-0.50	
M5PFHxA	548970.2	2.722683	728,553.00	2.747233	75	50 - 150	-0.0246	+/-0.50	
M3PFHxS	78469.77	3.2923	102,709.00	3.2923	76	50 - 150	0.0000	+/-0.50	
M4PFHpA	516800.8	3.25995	727,773.00	3.268033	71	50 - 150	-0.0081	+/-0.50	
M8PFOA	450794.1	3.52615	684,344.00	3.52615	66	50 - 150	0.0000	+/-0.50	
M8PFOS	79816.28	3.7083	121,421.00	3.716267	66	50 - 150	-0.0080	+/-0.50	
M9PFNA	355525.8	3.717267	620,680.00	3.71725	57	50 - 150	0.0000	+/-0.50	
MPFDoA	769947	4.169267	834,049.00	4.169267	92	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	182043.8	4.03345	162,923.00	4.03345	112	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	194893.3	3.953867	197,528.00	3.953867	99	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike Dup (B308947-MSD1)			Lab File ID: B308947-MSD1.d			Analyzed: 05/25/22 06:45			
M8FOSA	248699.1	4.044533	278,163.00	4.044517	89	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	154956.3	2.636633	99,807.00	2.6531	155	50 - 150	-0.0165	+/-0.50	*
M2PFTA	923108	4.410917	1,030,924.00	4.4191	90	50 - 150	-0.0082	+/-0.50	
M2-8:2FTS	136629.1	3.875067	88,177.00	3.875067	155	50 - 150	0.0000	+/-0.50	*
MPFBA	231719.5	1.108317	575,637.00	1.12495	40	50 - 150	-0.0166	+/-0.50	*
M3HFPO-DA	101057.7	2.954083	175,440.00	2.9622	58	50 - 150	-0.0081	+/-0.50	
M6PFDA	526523.6	3.8756	574,987.00	3.8756	92	50 - 150	0.0000	+/-0.50	
M3PFBS	88120.01	2.002783	118,880.00	2.02765	74	50 - 150	-0.0249	+/-0.50	
M7PFUnA	713263.8	4.025983	738,064.00	4.025967	97	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	99925.95	3.509617	63,701.00	3.517617	157	50 - 150	-0.0080	+/-0.50	*
M5PFPeA	305380.6	1.816233	477,508.00	1.8411	64	50 - 150	-0.0249	+/-0.50	
M5PFHxA	562914.8	2.730867	728,553.00	2.747233	77	50 - 150	-0.0164	+/-0.50	
M3PFHxS	79141.19	3.2923	102,709.00	3.2923	77	50 - 150	0.0000	+/-0.50	
M4PFHpA	544585.2	3.25995	727,773.00	3.268033	75	50 - 150	-0.0081	+/-0.50	
M8PFOA	493462.9	3.52615	684,344.00	3.52615	72	50 - 150	0.0000	+/-0.50	
M8PFOS	78138.29	3.716267	121,421.00	3.716267	64	50 - 150	0.0000	+/-0.50	
M9PFNA	387110.7	3.717267	620,680.00	3.71725	62	50 - 150	0.0000	+/-0.50	
MPFDoA	767250.7	4.169267	834,049.00	4.169267	92	50 - 150	0.0000	+/-0.50	
d5-NEtFOSAA	178566.3	4.03345	162,923.00	4.03345	110	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	222519.5	3.953867	197,528.00	3.953867	113	50 - 150	0.0000	+/-0.50	
Blank (B309306-BLK1)			Lab File ID: D22S152023.D			Analyzed: 06/01/22 16:50			
1,4-Dichlorobenzene-d4	115124	3.248	143,586.00	3.248	80	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	449684	3.972	547,835.00	3.974	82	50 - 200	-0.0020	+/-0.50	
Acenaphthene-d10	248385	5.04	318,807.00	5.043	78	50 - 200	-0.0030	+/-0.50	
Phenanthrene-d10	435980	5.967	578,425.00	5.967	75	50 - 200	0.0000	+/-0.50	
Chrysene-d12	404377	8.364	517,003.00	8.367	78	50 - 200	-0.0030	+/-0.50	
Perylene-d12	381747	10.839	478,704.00	10.846	80	50 - 200	-0.0070	+/-0.50	
LCS (B309306-BS1)			Lab File ID: D22S152021.D			Analyzed: 06/01/22 16:01			
1,4-Dichlorobenzene-d4	136287	3.248	143,586.00	3.248	95	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	515724	3.974	547,835.00	3.974	94	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	288030	5.043	318,807.00	5.043	90	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	496022	5.967	578,425.00	5.967	86	50 - 200	0.0000	+/-0.50	
Chrysene-d12	459502	8.367	517,003.00	8.367	89	50 - 200	0.0000	+/-0.50	
Perylene-d12	438799	10.844	478,704.00	10.846	92	50 - 200	-0.0020	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SW-846 8270E

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS Dup (B309306-BSD1)			Lab File ID: D22S152022.D			Analyzed: 06/01/22 16:25			
1,4-Dichlorobenzene-d4	115721	3.246	143,586.00	3.248	81	50 - 200	-0.0020	+/-0.50	
Naphthalene-d8	447497	3.974	547,835.00	3.974	82	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	231341	5.043	318,807.00	5.043	73	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	429222	5.967	578,425.00	5.967	74	50 - 200	0.0000	+/-0.50	
Chrysene-d12	374065	8.367	517,003.00	8.367	72	50 - 200	0.0000	+/-0.50	
Perylene-d12	366006	10.846	478,704.00	10.846	76	50 - 200	0.0000	+/-0.50	
Matrix Spike (B309306-MS1)			Lab File ID: D22S155012.D			Analyzed: 06/04/22 18:42			
1,4-Dichlorobenzene-d4	97352	3.235	159,610.00	3.235	61	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	391234	3.962	583,914.00	3.961	67	50 - 200	0.0010	+/-0.50	
Acenaphthene-d10	238990	5.03	337,703.00	5.03	71	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	417524	5.954	551,685.00	5.954	76	50 - 200	0.0000	+/-0.50	
Chrysene-d12	355164	8.336	480,132.00	8.338	74	50 - 200	-0.0020	+/-0.50	
Perylene-d12	320533	10.805	436,925.00	10.81	73	50 - 200	-0.0050	+/-0.50	
Matrix Spike Dup (B309306-MSD1)			Lab File ID: D22S155013.D			Analyzed: 06/04/22 19:08			
1,4-Dichlorobenzene-d4	117363	3.235	159,610.00	3.235	74	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	466386	3.961	583,914.00	3.961	80	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	292321	5.03	337,703.00	5.03	87	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	509690	5.954	551,685.00	5.954	92	50 - 200	0.0000	+/-0.50	
Chrysene-d12	430554	8.339	480,132.00	8.338	90	50 - 200	0.0010	+/-0.50	
Perylene-d12	378857	10.805	436,925.00	10.81	87	50 - 200	-0.0050	+/-0.50	
Blank (B309307-BLK1)			Lab File ID: F22S152048.D			Analyzed: 06/02/22 01:23			
1,4-Dichlorobenzene-d4	622530	11.057	707,138.00	11.054	88	50 - 200	0.0030	+/-0.50	
LCS (B309307-BS1)			Lab File ID: F22S152046.D			Analyzed: 06/02/22 00:43			
1,4-Dichlorobenzene-d4	700583	11.057	707,138.00	11.054	99	50 - 200	0.0030	+/-0.50	
LCS Dup (B309307-BSD1)			Lab File ID: F22S152047.D			Analyzed: 06/02/22 01:03			
1,4-Dichlorobenzene-d4	708423	11.057	707,138.00	11.054	100	50 - 200	0.0030	+/-0.50	
Matrix Spike (B309307-MS1)			Lab File ID: F22S152049.D			Analyzed: 06/02/22 01:43			
1,4-Dichlorobenzene-d4	680516	11.057	707,138.00	11.054	96	50 - 200	0.0030	+/-0.50	
Matrix Spike Dup (B309307-MSD1)			Lab File ID: F22S152050.D			Analyzed: 06/02/22 02:03			
1,4-Dichlorobenzene-d4	695844	11.057	707,138.00	11.054	98	50 - 200	0.0030	+/-0.50	
Blank (B309329-BLK1)			Lab File ID: E22V14606.D			Analyzed: 05/26/22 12:02			
Pentafluorobenzene	350007	4.111	341,989.00	4.111	102	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	503262	4.878	489,204.00	4.878	103	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	242913	7.761	238,866.00	7.758	102	50 - 200	0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	231618	10.028	233,563.00	10.028	99	50 - 200	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SW-846 8260D

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B309329-BS1)			Lab File ID: E22V14603.D			Analyzed: 05/26/22 10:40			
Pentafluorobenzene	345321	4.111	341,989.00	4.111	101	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	499593	4.878	489,204.00	4.878	102	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	241847	7.758	238,866.00	7.758	101	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	233818	10.028	233,563.00	10.028	100	50 - 200	0.0000	+/-0.50	
LCS Dup (B309329-BSD1)			Lab File ID: E22V14604.D			Analyzed: 05/26/22 11:07			
Pentafluorobenzene	348624	4.111	341,989.00	4.111	102	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	503232	4.877	489,204.00	4.878	103	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5	242625	7.758	238,866.00	7.758	102	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	236200	10.028	233,563.00	10.028	101	50 - 200	0.0000	+/-0.50	
Matrix Spike (B309329-MS1)			Lab File ID: E22V14626.D			Analyzed: 05/26/22 21:06			
Pentafluorobenzene	354327	4.111	341,989.00	4.111	104	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	505928	4.878	489,204.00	4.878	103	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	243597	7.761	238,866.00	7.758	102	50 - 200	0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	237547	10.028	233,563.00	10.028	102	50 - 200	0.0000	+/-0.50	
Matrix Spike Dup (B309329-MSD1)			Lab File ID: E22V14627.D			Analyzed: 05/26/22 21:34			
Pentafluorobenzene	350257	4.114	341,989.00	4.111	102	50 - 200	0.0030	+/-0.50	
1,4-Difluorobenzene	497768	4.878	489,204.00	4.878	102	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	244386	7.761	238,866.00	7.758	102	50 - 200	0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	236750	10.028	233,563.00	10.028	101	50 - 200	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B309532-BLK1)			Lab File ID: B309532-BLK1.d			Analyzed: 06/07/22 00:06			
M8FOSA	220915.4	3.980567	281,974.00	3.988567	78	50 - 150	-0.0080	+/-0.50	
M2-4:2FTS	116645.9	2.45575	142,802.00	2.45575	82	50 - 150	0.0000	+/-0.50	
M2PFTA	874689	4.337783	1,096,826.00	4.3378	80	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	119179.4	3.802783	139,767.00	3.802783	85	50 - 150	0.0000	+/-0.50	
MPFBA	641119.6	1.066783	596,913.00	1.066783	107	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	210648.9	2.806567	176,204.00	2.806567	120	50 - 150	0.0000	+/-0.50	
M6PFDA	552278.3	3.8033	615,924.00	3.803317	90	50 - 150	0.0000	+/-0.50	
M3PFBS	117805.6	1.861817	126,073.00	1.861817	93	50 - 150	0.0000	+/-0.50	
M7PFUnA	691048.4	3.954017	803,507.00	3.954017	86	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	68228.3	3.437283	87,967.00	3.445283	78	50 - 150	-0.0080	+/-0.50	
M5PFPeA	472231.5	1.698283	494,651.00	1.690017	95	50 - 150	0.0083	+/-0.50	
M5PFHxA	648460.3	2.5477	736,074.00	2.539483	88	50 - 150	0.0082	+/-0.50	
M3PFHxS	96207.05	3.201883	98,891.00	3.201883	97	50 - 150	0.0000	+/-0.50	
M4PFHpA	689497.6	3.170783	738,769.00	3.1627	93	50 - 150	0.0081	+/-0.50	
M8PFOA	631639.4	3.453817	672,049.00	3.453817	94	50 - 150	0.0000	+/-0.50	
M8PFOS	96144.05	3.65215	105,336.00	3.65215	91	50 - 150	0.0000	+/-0.50	
M9PFNA	509917.8	3.653183	539,046.00	3.653183	95	50 - 150	0.0000	+/-0.50	
MPFDoA	703242.4	4.088634	886,373.00	4.096633	79	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	151265.7	3.961483	173,762.00	3.961483	87	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	194317.3	3.88175	208,301.00	3.88175	93	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B309532-BS1)			Lab File ID: B309532-BS1.d			Analyzed: 06/06/22 23:59			
M8FOSA	227698.4	3.988567	281,974.00	3.988567	81	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	120400.9	2.45575	142,802.00	2.45575	84	50 - 150	0.0000	+/-0.50	
M2PFTA	906884.1	4.3378	1,096,826.00	4.3378	83	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	133855.3	3.802783	139,767.00	3.802783	96	50 - 150	0.0000	+/-0.50	
MPFBA	677462.1	1.066783	596,913.00	1.066783	113	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	141784.8	2.806567	176,204.00	2.806567	80	50 - 150	0.0000	+/-0.50	
M6PFDA	610428	3.811283	615,924.00	3.803317	99	50 - 150	0.0080	+/-0.50	
M3PFBS	124567.6	1.861817	126,073.00	1.861817	99	50 - 150	0.0000	+/-0.50	
M7PFUnA	753782.4	3.954017	803,507.00	3.954017	94	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	74050.45	3.445283	87,967.00	3.445283	84	50 - 150	0.0000	+/-0.50	
M5PFPeA	501808.4	1.698283	494,651.00	1.690017	101	50 - 150	0.0083	+/-0.50	
M5PFHxA	703154.3	2.539483	736,074.00	2.539483	96	50 - 150	0.0000	+/-0.50	
M3PFHxS	97867.09	3.201883	98,891.00	3.201883	99	50 - 150	0.0000	+/-0.50	
M4PFHpA	728386.7	3.170783	738,769.00	3.1627	99	50 - 150	0.0081	+/-0.50	
M8PFOA	665856.9	3.453817	672,049.00	3.453817	99	50 - 150	0.0000	+/-0.50	
M8PFOS	102408.7	3.65215	105,336.00	3.65215	97	50 - 150	0.0000	+/-0.50	
M9PFNA	522541.6	3.653183	539,046.00	3.653183	97	50 - 150	0.0000	+/-0.50	
MPFDoA	716986.5	4.088634	886,373.00	4.096633	81	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	152160.6	3.961483	173,762.00	3.961483	88	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	209177.1	3.88175	208,301.00	3.88175	100	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike (B309532-MS1)			Lab File ID: B309532-MS1.d			Analyzed: 06/07/22 00:13			
M8FOSA	229639.6	3.980567	281,974.00	3.988567	81	50 - 150	-0.0080	+/-0.50	
M2-4:2FTS	109599.4	2.447533	142,802.00	2.45575	77	50 - 150	-0.0082	+/-0.50	
M2PFTA	852364.4	4.3378	1,096,826.00	4.3378	78	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	125388.3	3.802783	139,767.00	3.802783	90	50 - 150	0.0000	+/-0.50	
MPFBA	463968.9	1.066783	596,913.00	1.066783	78	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	124888.6	2.798383	176,204.00	2.806567	71	50 - 150	-0.0082	+/-0.50	
M6PFDA	526985.9	3.803317	615,924.00	3.803317	86	50 - 150	0.0000	+/-0.50	
M3PFBS	88986.07	1.861817	126,073.00	1.861817	71	50 - 150	0.0000	+/-0.50	
M7PFUnA	652821.8	3.954017	803,507.00	3.954017	81	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	72125.16	3.445283	87,967.00	3.445283	82	50 - 150	0.0000	+/-0.50	
M5PFPeA	387157.5	1.690017	494,651.00	1.690017	78	50 - 150	0.0000	+/-0.50	
M5PFHxA	565620.6	2.539483	736,074.00	2.539483	77	50 - 150	0.0000	+/-0.50	
M3PFHxS	82218.71	3.201883	98,891.00	3.201883	83	50 - 150	0.0000	+/-0.50	
M4PFHpA	617438.1	3.1627	738,769.00	3.1627	84	50 - 150	0.0000	+/-0.50	
M8PFOA	558138.3	3.453817	672,049.00	3.453817	83	50 - 150	0.0000	+/-0.50	
M8PFOS	84191.34	3.65215	105,336.00	3.65215	80	50 - 150	0.0000	+/-0.50	
M9PFNA	448751.6	3.653183	539,046.00	3.653183	83	50 - 150	0.0000	+/-0.50	
MPFDoA	664065.8	4.08865	886,373.00	4.096633	75	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	153324.3	3.9615	173,762.00	3.961483	88	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	196250	3.88175	208,301.00	3.88175	94	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike Dup (B309532-MSD1)			Lab File ID: B309532-MSD1.d			Analyzed: 06/07/22 00:20			
M8FOSA	212629.8	3.988567	281,974.00	3.988567	75	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	102982.1	2.45575	142,802.00	2.45575	72	50 - 150	0.0000	+/-0.50	
M2PFTA	804690.9	4.3378	1,096,826.00	4.3378	73	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	115140.4	3.8028	139,767.00	3.802783	82	50 - 150	0.0000	+/-0.50	
MPFBA	418501.4	1.066783	596,913.00	1.066783	70	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	112406.6	2.798383	176,204.00	2.806567	64	50 - 150	-0.0082	+/-0.50	
M6PFDA	498107.9	3.803317	615,924.00	3.803317	81	50 - 150	0.0000	+/-0.50	
M3PFBS	85926.61	1.861817	126,073.00	1.861817	68	50 - 150	0.0000	+/-0.50	
M7PFUnA	619942.1	3.954017	803,507.00	3.954017	77	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	67897.64	3.445283	87,967.00	3.445283	77	50 - 150	0.0000	+/-0.50	
M5PFPeA	361717.4	1.690017	494,651.00	1.690017	73	50 - 150	0.0000	+/-0.50	
M5PFHxA	522361.4	2.539483	736,074.00	2.539483	71	50 - 150	0.0000	+/-0.50	
M3PFHxS	79208.77	3.201883	98,891.00	3.201883	80	50 - 150	0.0000	+/-0.50	
M4PFHpA	560860.7	3.1627	738,769.00	3.1627	76	50 - 150	0.0000	+/-0.50	
M8PFOA	533170.8	3.453817	672,049.00	3.453817	79	50 - 150	0.0000	+/-0.50	
M8PFOS	85290.36	3.65215	105,336.00	3.65215	81	50 - 150	0.0000	+/-0.50	
M9PFNA	426634.7	3.653183	539,046.00	3.653183	79	50 - 150	0.0000	+/-0.50	
MPFDoA	638559.8	4.08865	886,373.00	4.096633	72	50 - 150	-0.0080	+/-0.50	
d5-NEtFOSAA	145432.6	3.9615	173,762.00	3.961483	84	50 - 150	0.0000	+/-0.50	
d3-NMeFOSAA	189576.3	3.88175	208,301.00	3.88175	91	50 - 150	0.0000	+/-0.50	
Blank (B310070-BLK1)			Lab File ID: D22S159026.D			Analyzed: 06/08/22 17:52			
1,4-Dichlorobenzene-d4	108313	3.217	142,071.00	3.22	76	50 - 200	-0.0030	+/-0.50	
Naphthalene-d8	417303	3.943	558,875.00	3.946	75	50 - 200	-0.0030	+/-0.50	
Acenaphthene-d10	238398	5.015	328,143.00	5.015	73	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	438309	5.941	550,774.00	5.941	80	50 - 200	0.0000	+/-0.50	
Chrysene-d12	338775	8.323	445,778.00	8.323	76	50 - 200	0.0000	+/-0.50	
Perylene-d12	270609	10.787	338,092.00	10.792	80	50 - 200	-0.0050	+/-0.50	
LCS (B310070-BS1)			Lab File ID: D22S159024.D			Analyzed: 06/08/22 17:03			
1,4-Dichlorobenzene-d4	108304	3.22	142,071.00	3.22	76	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	416462	3.946	558,875.00	3.946	75	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	222686	5.014	328,143.00	5.015	68	50 - 200	-0.0010	+/-0.50	
Phenanthrene-d10	430131	5.941	550,774.00	5.941	78	50 - 200	0.0000	+/-0.50	
Chrysene-d12	355132	8.323	445,778.00	8.323	80	50 - 200	0.0000	+/-0.50	
Perylene-d12	280170	10.792	338,092.00	10.792	83	50 - 200	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

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Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS Dup (B310070-BSD1)			Lab File ID: D22S159025.D			Analyzed: 06/08/22 17:28			
1,4-Dichlorobenzene-d4	111922	3.217	142,071.00	3.22	79	50 - 200	-0.0030	+/-0.50	
Naphthalene-d8	437948	3.946	558,875.00	3.946	78	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	248139	5.015	328,143.00	5.015	76	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	449374	5.941	550,774.00	5.941	82	50 - 200	0.0000	+/-0.50	
Chrysene-d12	359938	8.323	445,778.00	8.323	81	50 - 200	0.0000	+/-0.50	
Perylene-d12	286659	10.79	338,092.00	10.792	85	50 - 200	-0.0020	+/-0.50	

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 410.4 in Water	
Chemical Oxygen Demand	CT,MA,NH,NY,RI,NC,ME,VA
EPA 420.1 in Water	
Phenol	CT,MA,NH,NY,RI,NC,ME,VA
SM19-23 4500 NH3 C in Water	
Ammonia as N	NY,MA,CT,RI,VA,NC,ME
SM19-23 4500-N Org B,C-NH3 C in Water	
Total Kjeldahl Nitrogen	CT,MA,NH,NY,RI,NC,ME,VA
SM21-23 2320B in Water	
Alkalinity	CT,MA,NH,NY,RI,NC,ME,VA
SM21-23 2540C in Water	
Total Dissolved Solids	CT,MA,NH,NY,RI,NC,ME,VA
SM21-23 4500 CN E in Water	
Cyanide	CT,MA,NH,NY,RI,NC,ME,VA
SOP-454 PFAS in Water	
Perfluorobutanoic acid (PFBA)	NH-P
Perfluorobutanesulfonic acid (PFBS)	NH-P
Perfluoropentanoic acid (PFPeA)	NH-P
Perfluorohexanoic acid (PFHxA)	NH-P
11Cl-PF3OUdS (F53B Minor)	NH-P
9Cl-PF3ONS (F53B Major)	NH-P
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NH-P
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P
8:2 Fluorotelomersulfonic acid (8:2FTS A)	NH-P
Perfluorodecanoic acid (PFDA)	NH-P
Perfluorododecanoic acid (PFDoA)	NH-P
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NH-P
Perfluoroheptanesulfonic acid (PFHpS)	NH-P
N-EtFOSAA	NH-P
N-MeFOSAA	NH-P
Perfluorotetradecanoic acid (PFTA)	NH-P
Perfluorotridecanoic acid (PFTrDA)	NH-P
4:2 Fluorotelomersulfonic acid (4:2FTS A)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P
Perfluorooctanesulfonamide (FOSA)	NH-P
Perfluorononanesulfonic acid (PFNS)	NH-P
Perfluoro-1-hexanesulfonamide (FHxSA)	NH-P
Perfluoro-1-butanesulfonamide (FBSA)	NH-P
Perfluorohexanesulfonic acid (PFHxS)	NH-P
Perfluoro-4-oxapentanoic acid (PFMPA)	NH-P
Perfluoro-5-oxahexanoic acid (PFMBA)	NH-P
6:2 Fluorotelomersulfonic acid (6:2FTS A)	NH-P
Perfluoropetanesulfonic acid (PFPeS)	NH-P
Perfluoroundecanoic acid (PFUnA)	NH-P
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SOP-454 PFAS in Water	
Perfluoroheptanoic acid (PFHpA)	NH-P
Perfluorooctanoic acid (PFOA)	NH-P
Perfluorooctanesulfonic acid (PFOS)	NH-P
Perfluorononanoic acid (PFNA)	NH-P
SW-846 6010 in Water	
Hardness	CT,MA,NH,NY
SW-846 6010D in Water	
Aluminum	CT,NH,NY,ME,VA,NC
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,VA,RI,NC
Barium	CT,NH,NY,ME,VA,NC
Beryllium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Calcium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Cobalt	CT,NH,NY,ME,VA,NC
Copper	CT,NH,NY,ME,VA,NC
Iron	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,ME,VA,NC
Magnesium	CT,NH,NY,ME,VA,NC
Manganese	CT,NH,NY,ME,VA,NC
Nickel	CT,NH,NY,ME,VA,NC
Potassium	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Sodium	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,VA,NC
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
SW-846 7470A in Water	
Mercury	CT,NH,NY,NC,ME,VA
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,NC,ME,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260	CT,NH,NY,NC,ME,VA,PA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1262	NH,NY,NC,ME,VA,PA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA,PA
Aroclor-1268	NH,NY,NC,ME,VA,PA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA,PA
SW-846 8082A in Water	
Aroclor-1016	CT,NH,NY,NC,ME,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1262	NH,NY,NC,ME,VA,PA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA,PA
Aroclor-1268	NH,NY,NC,ME,VA,PA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA,PA
SW-846 8260D in Water	
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
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
1,3-Dichlorobenzene	CT,ME,NH,VA,NY
1,4-Dichlorobenzene	CT,ME,NH,VA,NY
Dichlorodifluoromethane (Freon 12)	ME,NH,VA,NY

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260D in Water	
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
SW-846 8270E in Soil	
Acenaphthene	CT,NY,NH,ME,NC,VA
Acenaphthylene	CT,NY,NH,ME,NC,VA
Acetophenone	NY,NH,ME,NC,VA
Anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)pyrene	CT,NY,NH,ME,NC,VA
Benzo(b)fluoranthene	CT,NY,NH,ME,NC,VA
Benzo(g,h,i)perylene	CT,NY,NH,ME,NC,VA
Benzo(k)fluoranthene	CT,NY,NH,ME,NC,VA
Bis(2-chloroethoxy)methane	CT,NY,NH,ME,NC,VA
Bis(2-chloroethyl)ether	CT,NY,NH,ME,NC,VA
Bis(2-chloroisopropyl)ether	CT,NY,NH,ME,NC,VA
Bis(2-Ethylhexyl)phthalate	CT,NY,NH,ME,NC,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270E in Soil	
4-Bromophenylphenylether	CT,NY,NH,ME,NC,VA
Butylbenzylphthalate	CT,NY,NH,ME,NC,VA
Carbazole	NC
4-Chloroaniline	CT,NY,NH,ME,NC,VA
4-Chloro-3-methylphenol	CT,NY,NH,ME,NC,VA
2-Chloronaphthalene	CT,NY,NH,NC,VA
2-Chlorophenol	CT,NY,NH,ME,NC,VA
4-Chlorophenylphenylether	CT,NY,NH,ME,NC,VA
Chrysene	CT,NY,NH,ME,NC,VA
Dibenz(a,h)anthracene	CT,NY,NH,ME,NC,VA
Dibenzofuran	CT,NY,NH,ME,NC,VA
Di-n-butylphthalate	CT,NY,NH,ME,NC,VA
1,2-Dichlorobenzene	NY,NH,ME,NC,VA
1,3-Dichlorobenzene	NY,NH,ME,NC,VA
1,4-Dichlorobenzene	NY,NH,ME,NC,VA
3,3-Dichlorobenzidine	CT,NY,NH,ME,NC,VA
2,4-Dichlorophenol	CT,NY,NH,ME,NC,VA
Diethylphthalate	CT,NY,NH,ME,NC,VA
2,4-Dimethylphenol	CT,NY,NH,ME,NC,VA
Dimethylphthalate	CT,NY,NH,ME,NC,VA
4,6-Dinitro-2-methylphenol	CT,NY,NH,ME,NC,VA
2,4-Dinitrophenol	CT,NY,NH,ME,NC,VA
2,4-Dinitrotoluene	CT,NY,NH,ME,NC,VA
2,6-Dinitrotoluene	CT,NY,NH,ME,NC,VA
Di-n-octylphthalate	CT,NY,NH,ME,NC,VA
Fluoranthene	CT,NY,NH,ME,NC,VA
Fluorene	NY,NH,ME,NC,VA
Hexachlorobenzene	CT,NY,NH,ME,NC,VA
Hexachlorobutadiene	CT,NY,NH,ME,NC,VA
Hexachlorocyclopentadiene	CT,NY,NH,ME,NC,VA
Hexachloroethane	CT,NY,NH,ME,NC,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NH,ME,NC,VA
Isophorone	CT,NY,NH,ME,NC,VA
2-Methylnaphthalene	CT,NY,NH,ME,NC,VA
2-Methylphenol	CT,NY,NH,ME,NC,VA
3/4-Methylphenol	CT,NY,NH,ME,NC,VA
Naphthalene	CT,NY,NH,ME,NC,VA
2-Nitroaniline	CT,NY,NH,ME,NC,VA
3-Nitroaniline	CT,NY,NH,ME,NC,VA
4-Nitroaniline	CT,NY,NH,ME,NC,VA
Nitrobenzene	CT,NY,NH,ME,NC,VA
2-Nitrophenol	CT,NY,NH,ME,NC,VA
4-Nitrophenol	CT,NY,NH,ME,NC,VA
N-Nitrosodi-n-propylamine	CT,NY,NH,ME,NC,VA
Pentachlorophenol	CT,NY,NH,ME,NC,VA
Phenanthrene	CT,NY,NH,ME,NC,VA
Phenol	CT,NY,NH,ME,NC,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270E in Soil	
Pyrene	CT,NY,NH,ME,NC,VA
1,2,4,5-Tetrachlorobenzene	NY,NC
1,2,4-Trichlorobenzene	CT,NY,NH,ME,NC,VA
2,4,5-Trichlorophenol	CT,NY,NH,ME,NC,VA
2,4,6-Trichlorophenol	CT,NY,NH,ME,NC,VA
Atrazine	ME,NC
2-Fluorophenol	NC
SW-846 8270E in Water	
1,4-Dioxane	NY
Acenaphthene	CT,NY,NC,ME,NH,VA
Acenaphthylene	CT,NY,NC,ME,NH,VA
Acetophenone	NY,NC
Anthracene	CT,NY,NC,ME,NH,VA
Benzo(a)anthracene	CT,NY,NC,ME,NH,VA
Benzo(a)pyrene	CT,NY,NC,ME,NH,VA
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
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

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270E in Water	
Di-n-octylphthalate	CT,NY,NC,ME,NH,VA
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
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
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-Nitrosodi-n-propylamine	CT,NY,NC,ME,NH,VA
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
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

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2024
MA	Massachusetts DEP	M-MA100	06/30/2023
CT	Connecticut Department of Publilc Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2023
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2023
RI	Rhode Island Department of Health	LAO00373	12/30/2022
NC	North Carolina Div. of Water Quality	652	12/31/2022
NJ	New Jersey DEP	MA007 NELAP	06/30/2023
FL	Florida Department of Health	E871027 NELAP	06/30/2023
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2023
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2022
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2022
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2023
NC-DW	North Carolina Department of Health	25703	07/31/2022
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2022

Chain of Custody / Analysis Report

RAMBOLL

Page 1 of 1

Sampler(s): Sara Hahne, Liam Blake (Signature)

22E1360

Laboratory Use Only

Contact:	Samantha Salotto (NYSDEC)
Address:	625 Broadway, 12th Floor Albany, NY 12233-7012
Phone:	(518) 402-9764
E-mail:	Samantha.Salotto@dec.ny.gov
Project:	NYSDEC Utica City Dump, Site #633015 Seep Sampling
Location:	Incinerator Rd, Utica, NY 13502

Laboratory: Pace Analytical Laboratories (Con-Test), 39 Spruce Street, East Longmeadow, MA 01028
Attn: Mike Buttrick
Phone: 860-999-3563

Holding Time:

Package Requirement: NYS Cat B. Deliverable. w/ EDD

EDD Format: NYSDEC 4-file

Project Number: 1940101207

Job Number:

Laboratory ID:

Analysis Required

Preservatives: (see key at bottom)

	Sample Identification: Unique Field Sample ID (sys_sample_code)	Sample Location	Date	Time	Sample Type (See Key)	Sample Matrix (See Key)	Number of Containers	Grab [G] or Composite [C]	Field Filtered? (Y / N)	1 TCL VOCs by EPA 8260C + 10	0 TCL SVOCs by EPA 8270D + 20	0 TCL PCBs by EPA 8082	0 1,4-Dioxane by EPA 8270 SIM	0 PFAS by EPA 537.1	2 TAL Metals and Hardness by EPA 6010B	4 Cyanide, Total by SM4500 CNE	2 Mercury by EPA 7471A	3 TKN, COD, Ammonia by Multiple Methods	0 BOD + TDS by Multiple Methods	0 Phenol by EPA 420.1	0 Alkalinity by EPA SM4500 H B	Lab Sample ID:
1	SP-01-051922	SP-01	5/19/22	09:45	N	WS	17	G	N	X	X	X	X	X	X	X	X	X	X	X	X	1
2	SP-14-051922	SP-14	5/19/22	10:45	N	WS	17	G	N	X	X	X	X	X	X	X	X	X	X	X	X	2
3	SP-14-051922-MS	SP-14	5/19/22	10:45	MS	WS	17	G	N	X	X	X	X	X	X	X	X	X	X	X	X	1
4	SP-14-051922-MSD	SP-14	5/19/22	10:45	MS	WS	17	G	N	X	X	X	X	X	X	X	X	X	X	X	X	—
5	SP-10-051922	SP-10	5/19/22	12:30	N	~~WG~~ WS	17	G	N	X	X	X	X	X	X	X	X	X	X	X	X	3
6	SP-DS-051922	SP-05	5/19/22	18:00	N	WS	17	G	N	X	X	X	X	X	X	X	X	X	X	X	X	4
7	FD-051922	~~X~~	5/19/22	~~X~~	FD	WS	17	G	N	X	X	X	X	X	X	X	X	X	X	X	X	5
8	TB-051922	~~X~~	5/19/22	~~X~~	TB	WQ	2	G	N	X												6
9																						
10																						
11																						
12		Spot																				
13																						
14																						
15																						
16																						
17																						

Special Instructions: 1) Report detections above MDL, but below PQL with a "J" flags. Deliverables include: 1 PDF copy of full package and pdf of summary package, a New York State DEC compliant EDD. Please copy Deborah Wright (Deborah.Wright@ramboll.com) on each data transmittal.

Use the top boxes if the samples are to be shipped via courier (e.g., Fed Ex)

Relinquished by: Sara Hahne	Date: 5/19/22	~~Courier Name:~~ ~~FedEx~~ received by: SM	Date:
Of: Ramboll Americas Engineering Solutions, Inc.	Time: 14:55	~~Tracking #:~~	Time:
Relinquished by: Courier	Date: 5/19/22	Received By:	Date: 5/19/22 14:55
FedEx, 7764 7998 2908	Time: 17:30	Of: Pace Analytical - Con-Test	Time:
Courier Name:	Date:	Received By:	Date: 5/20
Tracking #:	Time:	Of: Pace	Time: 936

Condition:

Other comments or notes regarding condition of samples as received:

Custody Seals Intact? *(if so, indicate the #, date, and time of the seal)*

Cooler Temperature: 2.5, 3.0, 2.0, 2.1 4.1, 3.3, 4.3

Sample Type: N = Normal env. sample, FD = field duplicate, EB = Equipment Blank, TB = Trip Blank, MS = Lab Matrix Spike, Other (Specify):

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 = HNO_3, 3 = H_2SO_4, 4 = NaOH, 5 = Zn Acetate, 6 = MeOH, 7 = $NaHSO_4$, 8 = Na_2PO_4, 9 = BenzalkoniumCl, 10 = other

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[redacted]

FedEx® Tracking

776909231618

ADD NICKNAME

Delivered
Friday, 5/20/2022 at 9:36 am

THIS IS 1 OF 7 PIECES
GET STATUS UPDATES

OBTAIN PROOF OF DELIVERY

FROM
East Syracuse, NY US

Label Created
05/19/2022 2:44 PM

PACKAGE RECEIVED BY FEDEX
NORTH SYRACUSE, NY
05/19/2022 3:55 PM

IN TRANSIT
NEWARK, NJ
05/19/2022 11:37 PM

OUT FOR DELIVERY
WINDSOR LOCKS, CT
05/20/2022 7:52 AM

DELIVERED
EAST LONGMEADOW, MA US

Delivered
5/20/2022 at 9:36 AM

MANAGE DELIVERY

7 Piece Shipment

TRACKING ID	STATUS	SHIP DATE	DELIVERY DATE	HANDLING PIECE UNITS	SHIPPER CITY, STATE	RECIPIENT CITY, STATE
776909229228 (master)	Delivered	5/19/22	5/20/22	0	East Syracuse NY	EAST LONGMEADOW MA
776909229011	Delivered	5/19/22	5/20/22	0	East Syracuse NY	EAST LONGMEADOW MA
776909230140	Delivered	5/19/22	5/20/22	0	East Syracuse NY	EAST LONGMEADOW MA

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples_____

Doc# 277 Rev 5 2017

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

Client NY Lamboll

Received By _____ Date 5/20 Time 936

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____
Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 3 Actual Temp -2.5, 3.0, 2.0, 2.1, 4.1, 3.3, 4.3
By Blank # _____ Actual Temp -

Was Custody Seal Intact? T Were Samples Tampered with? F
Was COC Relinquished ? T Does Chain Agree With Samples? T
Are there broken/leaking/loose caps on any samples? F
Is COC in ink/ Legible? T Were samples received within holding time? T
Did COC include all pertinent Information? Client T Analysis T Sampler Name T
Project T ID's T Collection Dates/Times T
Are Sample labels filled out and legible? T
Are there Lab to Filters? F Who was notified? _____
Are there Rushes? F Who was notified? _____
Are there Short Holds? N/A T Who was notified? NA
Is there enough Volume? T
Is there Headspace where applicable? F MS/MSD? T
Proper Media/Containers Used? T Is splitting samples required? N/A T
Were trip blanks received? T On COC? T
Do all samples have the proper pH? Acid T Base T

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.	42	1 Liter Plastic	21	16 oz Amb.	
HCL-	16	500 mL Amb.	7	500 mL Plastic	7	8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic	28	4oz Amb/Clear	
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear	
DI-		Other Glass		Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

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April 19, 2023

Deborah Y. Wright
NYDEC_Ramboll US Consulting, Inc. - Syracuse
333 West Washington Street, PO Box 4873
Syracuse, NY 13221

Project Location: Incinerator Rd, Utica, NY
Client Job Number:
Project Number: 633015
Laboratory Work Order Number: 23C3414

Enclosed are results of analyses for samples as received by the laboratory on March 30, 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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B336016 21

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

NYDEC_Ramboll US Consulting, Inc. - Syracuse
333 West Washington Street, PO Box 4873
Syracuse, NY 13221
ATTN: Deborah Y. Wright

REPORT DATE: 4/19/2023

PURCHASE ORDER NUMBER: 144354

PROJECT NUMBER: 633015

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23C3414

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

PROJECT LOCATION: Incinerator Rd, Utica, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
UD-3-032823	23C3414-01	Ground Water		SOP-454 PFAS	
				SW-846 8082A	
				SW-846 8270E	
CHA-3S-032823	23C3414-02	Ground Water		SOP-454 PFAS	
				SW-846 8082A	
				SW-846 8270E	
CHA-9S-032823	23C3414-03	Ground Water		SOP-454 PFAS	
				SW-846 8082A	
				SW-846 8270E	
CHA-4S-032823	23C3414-04	Ground Water		SOP-454 PFAS	
				SW-846 8082A	
				SW-846 8270E	

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CASE NARRATIVE SUMMARY

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

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Qualifications:

D-01

Sample extracted/prepared at a dilution due to sample matrix interference.

Analyte & Samples(s) Qualified:

23C3414-01[UD-3-032823], 23C3414-02RE1[CHA-3S-032823], 23C3414-03RE1[CHA-9S-032823]

L-06

Laboratory fortified blank/laboratory control sample recovery and/or duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

N-MeFOSAA (NMeFOSAA)
B335840-BS1, B335840-BSD1

Perfluorotetradecanoic acid (PFTA)
B335840-BS1, B335840-BSD1

Perfluoroundecanoic acid (PFUnA)
B335840-BS1, B335840-BSD1

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-EtFOSAA (NEtFOSAA)
23C3414-01[UD-3-032823], B335840-BSD1

PF-17

Extracted Internal Standard recovery is outside of control limits. Data is not significantly affected since associated analyte is not detected and bias is on the high side.

Analyte & Samples(s) Qualified:

M2-8:2FTS
B336659-BLK1

PF-18

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

Analyte & Samples(s) Qualified:

M2-4:2FTS
23C3414-01[UD-3-032823], 23C3414-02RE1[CHA-3S-032823], 23C3414-03RE1[CHA-9S-032823], 23C3414-04RE1[CHA-4S-032823]

M2-6:2FTS
23C3414-01[UD-3-032823], 23C3414-02RE1[CHA-3S-032823], 23C3414-03RE1[CHA-9S-032823], 23C3414-04RE1[CHA-4S-032823]

M2-8:2FTS
23C3414-01[UD-3-032823], 23C3414-02RE1[CHA-3S-032823], 23C3414-03RE1[CHA-9S-032823], 23C3414-04RE1[CHA-4S-032823]

M8FOSA
23C3414-04RE1[CHA-4S-032823]

MPFBA
23C3414-01[UD-3-032823], 23C3414-02RE1[CHA-3S-032823], 23C3414-03RE1[CHA-9S-032823], 23C3414-04RE1[CHA-4S-032823]

PF-19

Sample re-analyzed at a dilution that was re-fortified with internal standard.

Analyte & Samples(s) Qualified:

Perfluorooctanesulfonic acid (PFOS)
23C3414-01RE2[UD-3-032823]

Perfluorooctanoic acid (PFOA)
23C3414-01RE2[UD-3-032823]

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PF-20

Quantifying ion signal to noise ratio is <10. Detection is suspect.

Analyte & Samples(s) Qualified:

Perfluorobutanoic acid (PFBA)
23C3414-03RE1[CHA-9S-032823], 23C3414-04RE1[CHA-4S-032823]

Perfluoroheptanesulfonic acid (PFHpS)
23C3414-04RE1[CHA-4S-032823]

Perfluorononanoic acid (PFNA)
23C3414-04RE1[CHA-4S-032823]

Perfluoropetanesulfonic acid (PFPeS)
23C3414-03RE1[CHA-9S-032823]

PF-21

Qualifying ion signal to noise ratio is <3. Detection is suspect.

Analyte & Samples(s) Qualified:

Perfluoropetanesulfonic acid (PFPeS)
23C3414-04RE1[CHA-4S-032823]

PF-22

Qualifier ion ratio >150% of associated calibration. Detection is suspect.

Analyte & Samples(s) Qualified:

Perfluorononanoic acid (PFNA)
23C3414-02RE1[CHA-3S-032823]

PF-23

Qualifier ion ratio <50% of associated calibration. Detection is suspect.

Analyte & Samples(s) Qualified:

Perfluorobutanesulfonic acid (PFBS)
23C3414-04RE1[CHA-4S-032823]

Perfluoroheptanoic acid (PFHpA)
23C3414-03RE1[CHA-9S-032823]

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:

11Cl-PF3OUdS (F53B Major)
B335840-BSD1

Hexafluoropropylene oxide dimer acid (HFPO-DA)
B336659-BSD1

Perfluorodecanesulfonic acid (PFDS)
B335840-BSD1

Perfluorononanesulfonic acid (PFNS)
B335840-BSD1

S-29

Extracted Internal Standard is outside of control limits.

Analyte & Samples(s) Qualified:

D5-NEtFOSAA
B335840-BSD1

M2-4:2FTS
S085768-CCV5

M2-8:2FTS
B336659-BS1, B336659-BSD1

M2PFTA
B335840-BSD1

MPFDoA
B335840-BSD1

SW-846 8270E

Qualifications:

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L-06

Laboratory fortified blank/laboratory control sample recovery and/or duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

1,4-Dioxane

23C3414-01[UD-3-032823], 23C3414-02[CHA-3S-032823], 23C3414-03[CHA-9S-032823], B336016-BS1, B336016-BSD1

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.



Lisa A. Worthington
Technical Representative

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23C3414

Date Received: 3/30/2023

Field Sample #: UD-3-032823 | Sampled: 3/28/2023 12:40

Sample ID: 23C3414-01

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	2.7	0.21	0.034	µg/L	1	L-06	SW-846 8270E	4/4/23	4/6/23 19:37	SPF

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
1,4-Dioxane-d8	20.2	15-110			4/6/23 19:37

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23C3414

Date Received: 3/30/2023

Field Sample #: UD-3-032823 | Sampled: 3/28/2023 12:40

Sample ID: 23C3414-01

Sample Matrix: Ground Water

Sample Flags: D-01

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	52	4.1	1.5	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
Perfluorobutanesulfonic acid (PFBS)	66	4.1	1.5	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
Perfluoropentanoic acid (PFPeA)	63	4.1	1.6	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
Perfluorohexanoic acid (PFHxA)	91	4.1	1.7	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
11Cl-PF3OUdS (F53B Major)	ND	4.1	1.6	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
9Cl-PF3ONS (F53B Minor)	ND	4.1	1.5	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.1	2.1	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.1	1.2	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	4.1	2.0	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
Perfluorodecanoic acid (PFDA)	ND	4.1	1.7	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
Perfluorododecanoic acid (PFDoA)	ND	4.1	1.9	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	4.1	1.5	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
Perfluoroheptanesulfonic acid (PFHpS)	39	4.1	1.7	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
N-EtFOSAA (NEtFOSAA)	7.2	4.1	1.7	ng/L	1	L-07	SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
N-MeFOSAA (NMeFOSAA)	ND	4.1	2.2	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
Perfluorotetradecanoic acid (PFTA)	ND	4.1	2.0	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	4.1	1.7	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	4.1	1.6	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	4.1	2.1	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
Perfluorooctanesulfonamide (FOSA)	ND	4.1	2.1	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
Perfluorononanesulfonic acid (PFNS)	ND	4.1	2.1	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
Perfluoro-1-hexanesulfonamide (FHxSA)	8.5	4.1	2.2	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
Perfluoro-1-butanesulfonamide (FBSA)	17	4.1	1.6	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
Perfluorohexanesulfonic acid (PFHxS)	150	4.1	1.5	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	4.1	1.5	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	4.1	1.3	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	4.1	2.5	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
Perfluoropetanesulfonic acid (PFPeS)	64	4.1	1.6	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
Perfluoroundecanoic acid (PFUnA)	ND	4.1	1.8	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	4.1	1.6	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
Perfluoroheptanoic acid (PFHpA)	96	4.1	1.7	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS
Perfluorooctanoic acid (PFOA)	540	41	28	ng/L	10	PF-19	SOP-454 PFAS	3/31/23	4/10/23 15:27	RRB
Perfluorooctanesulfonic acid (PFOS)	430	41	17	ng/L	10	PF-19	SOP-454 PFAS	3/31/23	4/10/23 15:27	RRB
Perfluorononanoic acid (PFNA)	14	4.1	1.9	ng/L	1		SOP-454 PFAS	3/31/23	4/7/23 21:36	AMS

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23C3414

Date Received: 3/30/2023

Field Sample #: UD-3-032823 | Sampled: 3/28/2023 12:40

Sample ID: 23C3414-01

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	0.058	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:11	SFM
Aroclor-1221 [1]	ND	0.20	0.080	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:11	SFM
Aroclor-1232 [1]	ND	0.20	0.072	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:11	SFM
Aroclor-1242 [1]	ND	0.20	0.077	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:11	SFM
Aroclor-1248 [1]	ND	0.20	0.082	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:11	SFM
Aroclor-1254 [1]	ND	0.20	0.080	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:11	SFM
Aroclor-1260 [1]	ND	0.20	0.060	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:11	SFM
Aroclor-1262 [1]	ND	0.20	0.093	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:11	SFM
Aroclor-1268 [1]	ND	0.20	0.074	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:11	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	73.3	30-150		4/6/23 11:11
Decachlorobiphenyl [2]	78.6	30-150		4/6/23 11:11
Tetrachloro-m-xylene [1]	61.1	30-150		4/6/23 11:11
Tetrachloro-m-xylene [2]	66.1	30-150		4/6/23 11:11

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23C3414

Date Received: 3/30/2023

Field Sample #: CHA-3S-032823 | Sampled: 3/28/2023 13:10

Sample ID: 23C3414-02

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	38	0.21	0.034	µg/L	1	L-06	SW-846 8270E	4/4/23	4/6/23 19:58	SPF

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
1,4-Dioxane-d8	28.0	15-110		4/6/23 19:58	

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23C3414

Date Received: 3/30/2023

Field Sample #: CHA-3S-032823 | Sampled: 3/28/2023 13:10

Sample ID: 23C3414-02

Sample Matrix: Ground Water

Sample Flags: D-01

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	76	4.2	1.6	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
Perfluorobutanesulfonic acid (PFBS)	39	4.2	1.5	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
Perfluoropentanoic acid (PFPeA)	54	4.2	1.7	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
Perfluorohexanoic acid (PFHxA)	68	4.2	1.7	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
11Cl-PF3OUdS (F53B Major)	ND	4.2	1.6	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
9Cl-PF3ONS (F53B Minor)	ND	4.2	1.5	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.2	2.2	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.2	1.2	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	4.2	2.0	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
Perfluorodecanoic acid (PFDA)	ND	4.2	1.7	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
Perfluorododecanoic acid (PFDoA)	ND	4.2	1.9	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	4.2	1.5	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
Perfluoroheptanesulfonic acid (PFHpS)	13	4.2	1.7	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
N-EtFOSAA (NEtFOSAA)	22	4.2	1.7	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
N-MeFOSAA (NMeFOSAA)	3.0	4.2	2.2	ng/L	1	J	SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
Perfluorotetradecanoic acid (PFTA)	ND	4.2	2.0	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
Perfluorotridecanoic acid (PFTrDA)	ND	4.2	1.7	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	4.2	1.6	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
Perfluorodecanesulfonic acid (PFDS)	ND	4.2	2.2	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
Perfluorooctanesulfonamide (FOSA)	ND	4.2	2.1	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
Perfluorononanesulfonic acid (PFNS)	ND	4.2	2.1	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	4.2	2.2	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
Perfluoro-1-butanesulfonamide (FBSA)	6.8	4.2	1.6	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
Perfluorohexanesulfonic acid (PFHxS)	74	4.2	1.5	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	4.2	1.5	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	4.2	1.4	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	4.2	2.5	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
Perfluoropetanesulfonic acid (PFPeS)	24	4.2	1.6	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
Perfluoroundecanoic acid (PFUnA)	ND	4.2	1.8	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	4.2	1.6	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
Perfluoroheptanoic acid (PFHpA)	60	4.2	1.8	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
Perfluorooctanoic acid (PFOA)	270	4.2	2.8	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
Perfluorooctanesulfonic acid (PFOS)	180	4.2	1.8	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB
Perfluorononanoic acid (PFNA)	4.9	4.2	1.9	ng/L	1	PF-22	SOP-454 PFAS	4/11/23	4/14/23 14:09	RRB

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23C3414

Date Received: 3/30/2023

Field Sample #: CHA-3S-032823 | Sampled: 3/28/2023 13:10

Sample ID: 23C3414-02

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	0.056	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:28	SFM
Aroclor-1221 [1]	ND	0.20	0.078	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:28	SFM
Aroclor-1232 [1]	ND	0.20	0.070	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:28	SFM
Aroclor-1242 [1]	ND	0.20	0.075	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:28	SFM
Aroclor-1248 [1]	ND	0.20	0.079	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:28	SFM
Aroclor-1254 [1]	ND	0.20	0.078	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:28	SFM
Aroclor-1260 [1]	ND	0.20	0.058	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:28	SFM
Aroclor-1262 [1]	ND	0.20	0.090	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:28	SFM
Aroclor-1268 [1]	ND	0.20	0.072	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:28	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	62.5	30-150		4/6/23 11:28
Decachlorobiphenyl [2]	64.9	30-150		4/6/23 11:28
Tetrachloro-m-xylene [1]	64.8	30-150		4/6/23 11:28
Tetrachloro-m-xylene [2]	68.7	30-150		4/6/23 11:28

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

Project Location: Incinerator Rd, Utica, NY Sample Description: Work Order: 23C3414

Date Received: 3/30/2023

Field Sample #: CHA-9S-032823 Sampled: 3/28/2023 15:05

Sample ID: 23C3414-03

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	0.81	0.21	0.035	µg/L	1	L-06	SW-846 8270E	4/4/23	4/6/23 20:18	SPF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,4-Dioxane-d8	20.9	15-110		4/6/23 20:18

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23C3414

Date Received: 3/30/2023

Field Sample #: CHA-9S-032823 | Sampled: 3/28/2023 15:05

Sample ID: 23C3414-03

Sample Matrix: Ground Water

Sample Flags: D-01

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	4.1	4.1	1.5	ng/L	1	J, PF-20	SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
Perfluorobutanesulfonic acid (PFBS)	4.6	4.1	1.5	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
Perfluoropentanoic acid (PFPeA)	34	4.1	1.6	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
Perfluorohexanoic acid (PFHxA)	5.6	4.1	1.7	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
11Cl-PF3OUdS (F53B Major)	ND	4.1	1.6	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
9Cl-PF3ONS (F53B Minor)	ND	4.1	1.5	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.1	2.1	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.1	1.2	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	4.1	2.0	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
Perfluorodecanoic acid (PFDA)	ND	4.1	1.7	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
Perfluorododecanoic acid (PFDoA)	ND	4.1	1.9	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	4.1	1.5	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
Perfluoroheptanesulfonic acid (PFHpS)	7.1	4.1	1.7	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
N-EtFOSAA (NEtFOSAA)	ND	4.1	1.7	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
N-MeFOSAA (NMeFOSAA)	ND	4.1	2.2	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
Perfluorotetradecanoic acid (PFTA)	ND	4.1	2.0	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
Perfluorotridecanoic acid (PFTrDA)	ND	4.1	1.7	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	4.1	1.6	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
Perfluorodecanesulfonic acid (PFDS)	ND	4.1	2.1	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
Perfluorooctanesulfonamide (FOSA)	ND	4.1	2.1	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
Perfluorononanesulfonic acid (PFNS)	ND	4.1	2.1	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	4.1	2.2	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
Perfluoro-1-butanesulfonamide (FBSA)	ND	4.1	1.6	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
Perfluorohexanesulfonic acid (PFHxS)	20	4.1	1.5	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	4.1	1.5	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	4.1	1.3	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	4.1	2.5	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
Perfluoropetanesulfonic acid (PFPeS)	4.6	4.1	1.6	ng/L	1	PF-20	SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
Perfluoroundecanoic acid (PFUnA)	ND	4.1	1.8	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	4.1	1.6	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
Perfluoroheptanoic acid (PFHpA)	14	4.1	1.7	ng/L	1	PF-23	SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
Perfluorooctanoic acid (PFOA)	41	4.1	2.8	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
Perfluorooctanesulfonic acid (PFOS)	140	4.1	1.8	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB
Perfluorononanoic acid (PFNA)	ND	4.1	1.9	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:16	RRB

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23C3414

Date Received: 3/30/2023

Field Sample #: CHA-9S-032823 | Sampled: 3/28/2023 15:05

Sample ID: 23C3414-03

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	0.059	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:46	SFM
Aroclor-1221 [1]	ND	0.20	0.081	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:46	SFM
Aroclor-1232 [1]	ND	0.20	0.073	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:46	SFM
Aroclor-1242 [1]	ND	0.20	0.078	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:46	SFM
Aroclor-1248 [1]	ND	0.20	0.082	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:46	SFM
Aroclor-1254 [1]	ND	0.20	0.081	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:46	SFM
Aroclor-1260 [1]	ND	0.20	0.060	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:46	SFM
Aroclor-1262 [1]	ND	0.20	0.094	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:46	SFM
Aroclor-1268 [1]	ND	0.20	0.075	µg/L	1		SW-846 8082A	4/4/23	4/6/23 11:46	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	65.0	30-150		4/6/23 11:46
Decachlorobiphenyl [2]	68.0	30-150		4/6/23 11:46
Tetrachloro-m-xylene [1]	65.7	30-150		4/6/23 11:46
Tetrachloro-m-xylene [2]	70.4	30-150		4/6/23 11:46

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23C3414

Date Received: 3/30/2023

Field Sample #: CHA-4S-032823 | Sampled: 3/28/2023 15:45

Sample ID: 23C3414-04

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	ND	0.20	0.032	µg/L	1		SW-846 8270E	4/4/23	4/6/23 20:38	SPF

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
1,4-Dioxane-d8	19.6	15-110			4/6/23 20:38

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23C3414

Date Received: 3/30/2023

Field Sample #: CHA-4S-032823 | Sampled: 3/28/2023 15:45

Sample ID: 23C3414-04

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	8.7	1.7	0.65	ng/L	1	PF-20	SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
Perfluorobutanesulfonic acid (PFBS)	5.2	1.7	0.65	ng/L	1	PF-23	SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
Perfluoropentanoic acid (PFPeA)	18	1.7	0.70	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
Perfluorohexanoic acid (PFHxA)	4.4	1.7	0.71	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
11Cl-PF3OUdS (F53B Major)	ND	1.7	0.66	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
9Cl-PF3ONS (F53B Minor)	ND	1.7	0.65	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.7	0.91	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.7	0.52	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.7	0.84	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
Perfluorodecanoic acid (PFDA)	ND	1.7	0.73	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
Perfluorododecanoic acid (PFDoA)	ND	1.7	0.81	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.7	0.64	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
Perfluoroheptanesulfonic acid (PFHpS)	1.8	1.7	0.72	ng/L	1	PF-20	SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
N-EtFOSAA (NEtFOSAA)	ND	1.7	0.70	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
N-MeFOSAA (NMeFOSAA)	ND	1.7	0.91	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
Perfluorotetradecanoic acid (PFTA)	ND	1.7	0.83	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
Perfluorotridecanoic acid (PFTrDA)	ND	1.7	0.72	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.7	0.67	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
Perfluorodecanesulfonic acid (PFDS)	ND	1.7	0.90	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
Perfluorooctanesulfonamide (FOSA)	ND	1.7	0.89	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
Perfluorononanesulfonic acid (PFNS)	ND	1.7	0.89	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.7	0.92	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
Perfluoro-1-butanesulfonamide (FBSA)	ND	1.7	0.68	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
Perfluorohexanesulfonic acid (PFHxS)	6.7	1.7	0.62	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.7	0.62	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.7	0.57	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.7	1.1	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
Perfluoropetanesulfonic acid (PFPeS)	0.89	1.7	0.67	ng/L	1	J, PF-21	SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
Perfluoroundecanoic acid (PFUnA)	ND	1.7	0.75	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.7	0.68	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
Perfluoroheptanoic acid (PFHpA)	7.5	1.7	0.74	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
Perfluorooctanoic acid (PFOA)	30	1.7	1.2	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
Perfluorooctanesulfonic acid (PFOS)	45	1.7	0.74	ng/L	1		SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB
Perfluorononanoic acid (PFNA)	1.3	1.7	0.81	ng/L	1	J, PF-20	SOP-454 PFAS	4/11/23	4/14/23 14:23	RRB

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23C3414

Date Received: 3/30/2023

Field Sample #: CHA-4S-032823 | Sampled: 3/28/2023 15:45

Sample ID: 23C3414-04

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	0.056	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:03	SFM
Aroclor-1221 [1]	ND	0.20	0.078	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:03	SFM
Aroclor-1232 [1]	ND	0.20	0.070	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:03	SFM
Aroclor-1242 [1]	ND	0.20	0.075	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:03	SFM
Aroclor-1248 [1]	ND	0.20	0.079	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:03	SFM
Aroclor-1254 [1]	ND	0.20	0.078	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:03	SFM
Aroclor-1260 [1]	ND	0.20	0.058	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:03	SFM
Aroclor-1262 [1]	ND	0.20	0.090	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:03	SFM
Aroclor-1268 [1]	ND	0.20	0.072	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:03	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	77.8	30-150		4/6/23 12:03
Decachlorobiphenyl [2]	83.6	30-150		4/6/23 12:03
Tetrachloro-m-xylene [1]	70.3	30-150		4/6/23 12:03
Tetrachloro-m-xylene [2]	74.7	30-150		4/6/23 12:03

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Sample Extraction Data

Prep Method: SOP 454-PFAAS **Analytical Method: SOP-454 PFAS**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23C3414-01 [UD-3-032823]	B335840	121	1.00	03/31/23
23C3414-01RE2 [UD-3-032823]	B335840	121	1.00	03/31/23

Prep Method: SOP 454-PFAAS **Analytical Method: SOP-454 PFAS**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23C3414-02RE1 [CHA-3S-032823]	B336659	120	1.00	04/11/23
23C3414-03RE1 [CHA-9S-032823]	B336659	121	1.00	04/11/23
23C3414-04RE1 [CHA-4S-032823]	B336659	286	1.00	04/11/23

Prep Method: SW-846 3510C **Analytical Method: SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23C3414-01 [UD-3-032823]	B336013	990	10.0	04/04/23
23C3414-02 [CHA-3S-032823]	B336013	1020	10.0	04/04/23
23C3414-03 [CHA-9S-032823]	B336013	980	10.0	04/04/23
23C3414-04 [CHA-4S-032823]	B336013	1020	10.0	04/04/23

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23C3414-01 [UD-3-032823]	B336016	955	1.00	04/04/23
23C3414-02 [CHA-3S-032823]	B336016	970	1.00	04/04/23
23C3414-03 [CHA-9S-032823]	B336016	935	1.00	04/04/23
23C3414-04 [CHA-4S-032823]	B336016	1020	1.00	04/04/23

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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 B336016 - SW-846 3510C											
Blank (B336016-BLK1)				Prepared: 04/04/23 Analyzed: 04/06/23							
1,4-Dioxane	ND	0.20	µg/L								
Surrogate: 1,4-Dioxane-d8	*2.51*		µg/L	10.0		25.1		15-110			
LCS (B336016-BS1)				Prepared: 04/04/23 Analyzed: 04/06/23							
1,4-Dioxane	14.3	0.20	µg/L	10.0		**143**	*	40-140			L-06
Surrogate: 1,4-Dioxane-d8	*2.83*		µg/L	10.0		28.3		15-110			
LCS Dup (B336016-BSD1)				Prepared: 04/04/23 Analyzed: 04/06/23							
1,4-Dioxane	15.7	0.20	µg/L	10.0		**157**	*	40-140	9.32	30	L-06
Surrogate: 1,4-Dioxane-d8	*2.58*		µg/L	10.0		25.8		15-110			

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

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 B335840 - SOP 454-PFAAS										
Blank (B335840-BLK1)				Prepared: 03/31/23 Analyzed: 04/07/23						
Perfluorobutanoic acid (PFBA)	ND	2.0	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	2.0	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.0	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.0	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.0	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.0	ng/L							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.0	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.0	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.0	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	2.0	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	2.0	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.0	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.0	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	2.0	ng/L							
Perfluorooctanesulfonamide (FOSA)	ND	2.0	ng/L							
Perfluorononanesulfonic acid (PFNS)	ND	2.0	ng/L							
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	2.0	ng/L							
Perfluoro-1-butanesulfonamide (FBSA)	ND	2.0	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L							
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.0	ng/L							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.0	ng/L							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.0	ng/L							
Perfluoropetanesulfonic acid (PFPeS)	ND	2.0	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.0	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L							
LCS (B335840-BS1)				Prepared: 03/31/23 Analyzed: 04/07/23						
Perfluorobutanoic acid (PFBA)	12.7	2.0	ng/L	10.0		127	73-129			
Perfluorobutanesulfonic acid (PFBS)	11.0	2.0	ng/L	8.85		125	72-130			
Perfluoropentanoic acid (PFPeA)	12.5	2.0	ng/L	10.0		125	72-129			
Perfluorohexanoic acid (PFHxA)	12.3	2.0	ng/L	10.0		123	72-129			
11Cl-PF3OUdS (F53B Major)	11.3	2.0	ng/L	9.42		120	55.1-141			
9Cl-PF3ONS (F53B Minor)	10.1	2.0	ng/L	9.32		109	59.6-146			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	10.6	2.0	ng/L	9.42		113	60.3-131			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	7.77	2.0	ng/L	10.0		77.7	37.6-167			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	10.8	2.0	ng/L	9.60		112	67-138			
Perfluorodecanoic acid (PFDA)	12.7	2.0	ng/L	10.0		127	71-129			
Perfluorododecanoic acid (PFDoA)	13.0	2.0	ng/L	10.0		130	72-134			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	11.0	2.0	ng/L	8.90		123	49.4-154			

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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 B335840 - SOP 454-PFAAS												
LCS (B335840-BS1)				Prepared: 03/31/23 Analyzed: 04/07/23								
Perfluoroheptanesulfonic acid (PFHpS)	12.4	2.0	ng/L	9.55		130		69-134				
N-EtFOSAA (NEtFOSAA)	13.5	2.0	ng/L	10.0		135		61-135				
N-MeFOSAA (NMeFOSAA)	13.8	2.0	ng/L	10.0		**138**	*	65-136				L-06
Perfluorotetradecanoic acid (PFTA)	13.5	2.0	ng/L	10.0		**135**	*	71-132				L-06
Perfluorotridecanoic acid (PFTrDA)	14.4	2.0	ng/L	10.0		144		65-144				
4:2 Fluorotelomersulfonic acid (4:2FTS A)	11.5	2.0	ng/L	9.35		123		63-143				
Perfluorodecanesulfonic acid (PFDS)	9.53	2.0	ng/L	9.65		98.8		53-142				
Perfluorooctanesulfonamide (FOSA)	12.8	2.0	ng/L	10.0		128		67-137				
Perfluorononanesulfonic acid (PFNS)	11.3	2.0	ng/L	9.60		118		69-127				
Perfluoro-1-hexanesulfonamide (FHxSA)	10.1	2.0	ng/L	10.0		101		61.7-156				
Perfluoro-1-butanesulfonamide (FBSA)	10.8	2.0	ng/L	10.0		108		61.3-145				
Perfluorohexanesulfonic acid (PFHxS)	11.4	2.0	ng/L	9.15		125		68-131				
Perfluoro-4-oxapentanoic acid (PFMPA)	13.4	2.0	ng/L	10.0		134		59.8-147				
Perfluoro-5-oxahexanoic acid (PFMBA)	12.6	2.0	ng/L	10.0		126		59.5-146				
6:2 Fluorotelomersulfonic acid (6:2FTS A)	12.4	2.0	ng/L	9.50		131		64-140				
Perfluoropetanesulfonic acid (PFPeS)	11.3	2.0	ng/L	9.40		120		71-127				
Perfluoroundecanoic acid (PFUnA)	14.1	2.0	ng/L	10.0		**141**	*	69-133				L-06
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	12.1	2.0	ng/L	10.0		121		58.5-143				
Perfluoroheptanoic acid (PFHpA)	12.1	2.0	ng/L	10.0		121		72-130				
Perfluorooctanoic acid (PFOA)	12.2	2.0	ng/L	10.0		122		71-133				
Perfluorooctanesulfonic acid (PFOS)	11.2	2.0	ng/L	9.25		121		65-140				
Perfluorononanoic acid (PFNA)	12.1	2.0	ng/L	10.0		121		69-130				
LCS Dup (B335840-BSD1)				Prepared: 03/31/23 Analyzed: 04/07/23								
Perfluorobutanoic acid (PFBA)	11.7	2.0	ng/L	10.0		117		73-129	8.12		30	
Perfluorobutanesulfonic acid (PFBS)	10.2	2.0	ng/L	8.85		116		72-130	7.49		30	
Perfluoropentanoic acid (PFPeA)	11.7	2.0	ng/L	10.0		117		72-129	7.11		30	
Perfluorohexanoic acid (PFHxA)	11.6	2.0	ng/L	10.0		116		72-129	5.79		30	
11Cl-PF3OUdS (F53B Major)	6.67	2.0	ng/L	9.42		70.8		55.1-141	**51.8**	*	30	R-05
9Cl-PF3ONS (F53B Minor)	8.46	2.0	ng/L	9.32		90.7		59.6-146	18.1		30	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	10.0	2.0	ng/L	9.42		107		60.3-131	5.80		30	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	7.47	2.0	ng/L	10.0		74.7		37.6-167	4.03		30	
8:2 Fluorotelomersulfonic acid (8:2FTS A)	11.7	2.0	ng/L	9.60		122		67-138	8.29		30	
Perfluorodecanoic acid (PFDA)	12.0	2.0	ng/L	10.0		120		71-129	5.61		30	
Perfluorododecanoic acid (PFDoA)	12.6	2.0	ng/L	10.0		126		72-134	3.18		30	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	10.6	2.0	ng/L	8.90		119		49.4-154	3.75		30	
Perfluoroheptanesulfonic acid (PFHpS)	11.0	2.0	ng/L	9.55		116		69-134	11.7		30	
N-EtFOSAA (NEtFOSAA)	14.6	2.0	ng/L	10.0		**146**	*	61-135	7.64		30	L-07
N-MeFOSAA (NMeFOSAA)	14.9	2.0	ng/L	10.0		**149**	*	65-136	7.42		30	L-06
Perfluorotetradecanoic acid (PFTA)	14.7	2.0	ng/L	10.0		**147**	*	71-132	8.89		30	L-06
Perfluorotridecanoic acid (PFTrDA)	14.3	2.0	ng/L	10.0		143		65-144	0.606		30	
4:2 Fluorotelomersulfonic acid (4:2FTS A)	10.5	2.0	ng/L	9.35		112		63-143	9.67		30	
Perfluorodecanesulfonic acid (PFDS)	6.80	2.0	ng/L	9.65		70.5		53-142	**33.4**	*	30	R-05
Perfluorooctanesulfonamide (FOSA)	12.1	2.0	ng/L	10.0		121		67-137	5.38		30	
Perfluorononanesulfonic acid (PFNS)	7.93	2.0	ng/L	9.60		82.6		69-127	**35.4**	*	30	R-05
Perfluoro-1-hexanesulfonamide (FHxSA)	11.2	2.0	ng/L	10.0		112		61.7-156	10.4		30	
Perfluoro-1-butanesulfonamide (FBSA)	10.1	2.0	ng/L	10.0		101		61.3-145	7.24		30	
Perfluorohexanesulfonic acid (PFHxS)	11.1	2.0	ng/L	9.15		121		68-131	3.23		30	
Perfluoro-4-oxapentanoic acid (PFMPA)	12.6	2.0	ng/L	10.0		126		59.8-147	6.56		30	
Perfluoro-5-oxahexanoic acid (PFMBA)	11.8	2.0	ng/L	10.0		118		59.5-146	6.72		30	

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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 B335840 - SOP 454-PFAAS											
LCS Dup (B335840-BSD1)				Prepared: 03/31/23 Analyzed: 04/07/23							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	11.3	2.0	ng/L	9.50		119		64-140	9.13	30	
Perfluoropetanesulfonic acid (PFPeS)	11.5	2.0	ng/L	9.40		122		71-127	1.54	30	
Perfluoroundecanoic acid (PFUnA)	15.1	2.0	ng/L	10.0		**151**	*	69-133	7.10	30	L-06
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	11.6	2.0	ng/L	10.0		116		58.5-143	4.27	30	
Perfluoroheptanoic acid (PFHpA)	11.4	2.0	ng/L	10.0		114		72-130	6.41	30	
Perfluorooctanoic acid (PFOA)	11.7	2.0	ng/L	10.0		117		71-133	4.26	30	
Perfluorooctanesulfonic acid (PFOS)	10.3	2.0	ng/L	9.25		112		65-140	7.80	30	
Perfluorononanoic acid (PFNA)	12.4	2.0	ng/L	10.0		124		69-130	2.28	30	
Batch B336659 - SOP 454-PFAAS											
Blank (B336659-BLK1)				Prepared: 04/11/23 Analyzed: 04/14/23							
Perfluorobutanoic acid (PFBA)	ND	1.9	ng/L								
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	ng/L								
Perfluoropentanoic acid (PFPeA)	ND	1.9	ng/L								
Perfluorohexanoic acid (PFHxA)	ND	1.9	ng/L								
11Cl-PF3OUdS (F53B Major)	ND	1.9	ng/L								
9Cl-PF3ONS (F53B Minor)	ND	1.9	ng/L								
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9	ng/L								
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9	ng/L								
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9	ng/L								
Perfluorodecanoic acid (PFDA)	ND	1.9	ng/L								
Perfluorododecanoic acid (PFDoA)	ND	1.9	ng/L								
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	ng/L								
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	ng/L								
N-EtFOSAA (NEtFOSAA)	ND	1.9	ng/L								
N-MeFOSAA (NMeFOSAA)	ND	1.9	ng/L								
Perfluorotetradecanoic acid (PFTA)	ND	1.9	ng/L								
Perfluorotridecanoic acid (PFTrDA)	ND	1.9	ng/L								
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9	ng/L								
Perfluorodecanesulfonic acid (PFDS)	ND	1.9	ng/L								
Perfluorooctanesulfonamide (FOSA)	ND	1.9	ng/L								
Perfluorononanesulfonic acid (PFNS)	ND	1.9	ng/L								
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.9	ng/L								
Perfluoro-1-butanesulfonamide (FBSA)	ND	1.9	ng/L								
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	ng/L								
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9	ng/L								
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9	ng/L								
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9	ng/L								
Perfluoropetanesulfonic acid (PFPeS)	ND	1.9	ng/L								
Perfluoroundecanoic acid (PFUnA)	ND	1.9	ng/L								
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	ng/L								
Perfluoroheptanoic acid (PFHpA)	ND	1.9	ng/L								
Perfluorooctanoic acid (PFOA)	ND	1.9	ng/L								
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	ng/L								
Perfluorononanoic acid (PFNA)	ND	1.9	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
Batch B336659 - SOP 454-PFAAS											
LCS (B336659-BS1)				Prepared: 04/11/23 Analyzed: 04/14/23							
Perfluorobutanoic acid (PFBA)	9.37	1.9	ng/L	9.57		97.8	73-129				
Perfluorobutanesulfonic acid (PFBS)	8.31	1.9	ng/L	8.47		98.0	72-130				
Perfluoropentanoic acid (PFPeA)	9.45	1.9	ng/L	9.57		98.7	72-129				
Perfluorohexanoic acid (PFHxA)	9.35	1.9	ng/L	9.57		97.6	72-129				
11Cl-PF3OUdS (F53B Major)	8.05	1.9	ng/L	9.02		89.2	55.1-141				
9Cl-PF3ONS (F53B Minor)	7.89	1.9	ng/L	8.92		88.4	59.6-146				
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	8.22	1.9	ng/L	9.02		91.2	60.3-131				
Hexafluoropropylene oxide dimer acid (HFPO-DA)	7.61	1.9	ng/L	9.57		79.5	37.6-167				
8:2 Fluorotelomersulfonic acid (8:2FTS A)	8.90	1.9	ng/L	9.19		96.8	67-138				
Perfluorodecanoic acid (PFDA)	9.66	1.9	ng/L	9.57		101	71-129				
Perfluorododecanoic acid (PFDoA)	9.73	1.9	ng/L	9.57		102	72-134				
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	7.82	1.9	ng/L	8.52		91.8	49.4-154				
Perfluoroheptanesulfonic acid (PFHpS)	9.10	1.9	ng/L	9.14		99.5	69-134				
N-EtFOSAA (NEtFOSAA)	10.0	1.9	ng/L	9.57		105	61-135				
N-MeFOSAA (NMeFOSAA)	10.8	1.9	ng/L	9.57		113	65-136				
Perfluorotetradecanoic acid (PFTA)	9.93	1.9	ng/L	9.57		104	71-132				
Perfluorotridecanoic acid (PFTrDA)	10.8	1.9	ng/L	9.57		113	65-144				
4:2 Fluorotelomersulfonic acid (4:2FTS A)	8.84	1.9	ng/L	8.95		98.8	63-143				
Perfluorodecanesulfonic acid (PFDS)	8.21	1.9	ng/L	9.24		88.9	53-142				
Perfluorooctanesulfonamide (FOSA)	9.65	1.9	ng/L	9.57		101	67-137				
Perfluorononanesulfonic acid (PFNS)	8.26	1.9	ng/L	9.19		89.9	69-127				
Perfluoro-1-hexanesulfonamide (FHxSA)	8.41	1.9	ng/L	9.57		87.8	61.7-156				
Perfluoro-1-butanesulfonamide (FBSA)	8.49	1.9	ng/L	9.57		88.7	61.3-145				
Perfluorohexanesulfonic acid (PFHxS)	7.71	1.9	ng/L	8.76		88.0	68-131				
Perfluoro-4-oxapentanoic acid (PFMPA)	8.24	1.9	ng/L	9.57		86.1	59.8-147				
Perfluoro-5-oxahexanoic acid (PFMBA)	9.09	1.9	ng/L	9.57		94.9	59.5-146				
6:2 Fluorotelomersulfonic acid (6:2FTS A)	9.32	1.9	ng/L	9.10		102	64-140				
Perfluoropetanesulfonic acid (PFPeS)	8.32	1.9	ng/L	9.00		92.4	71-127				
Perfluoroundecanoic acid (PFUnA)	9.28	1.9	ng/L	9.57		96.9	69-133				
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	8.70	1.9	ng/L	9.57		90.9	58.5-143				
Perfluoroheptanoic acid (PFHpA)	9.24	1.9	ng/L	9.57		96.5	72-130				
Perfluorooctanoic acid (PFOA)	9.93	1.9	ng/L	9.57		104	71-133				
Perfluorooctanesulfonic acid (PFOS)	8.76	1.9	ng/L	8.86		98.9	65-140				
Perfluorononanoic acid (PFNA)	9.41	1.9	ng/L	9.57		98.3	69-130				
LCS Dup (B336659-BSD1)				Prepared: 04/11/23 Analyzed: 04/14/23							
Perfluorobutanoic acid (PFBA)	11.3	2.0	ng/L	9.76		116	73-129	18.5		30	
Perfluorobutanesulfonic acid (PFBS)	9.94	2.0	ng/L	8.64		115	72-130	17.9		30	
Perfluoropentanoic acid (PFPeA)	10.9	2.0	ng/L	9.76		112	72-129	14.2		30	
Perfluorohexanoic acid (PFHxA)	11.4	2.0	ng/L	9.76		116	72-129	19.5		30	
11Cl-PF3OUdS (F53B Major)	9.58	2.0	ng/L	9.19		104	55.1-141	17.4		30	
9Cl-PF3ONS (F53B Minor)	9.00	2.0	ng/L	9.09		99.0	59.6-146	13.2		30	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	9.82	2.0	ng/L	9.19		107	60.3-131	17.8		30	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	10.9	2.0	ng/L	9.76		112	37.6-167	**35.8**	*	30	R-05
8:2 Fluorotelomersulfonic acid (8:2FTS A)	10.4	2.0	ng/L	9.37		111	67-138	16.0		30	
Perfluorodecanoic acid (PFDA)	11.1	2.0	ng/L	9.76		114	71-129	13.9		30	
Perfluorododecanoic acid (PFDoA)	11.1	2.0	ng/L	9.76		114	72-134	13.4		30	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	9.39	2.0	ng/L	8.68		108	49.4-154	18.1		30	

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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 B336659 - SOP 454-PFAAS										
LCS Dup (B336659-BSD1)				Prepared: 04/11/23 Analyzed: 04/14/23						
Perfluoroheptanesulfonic acid (PFHpS)	10.8	2.0	ng/L	9.32		116	69-134	17.6	30	
N-EtFOSAA (NEtFOSAA)	11.8	2.0	ng/L	9.76		121	61-135	16.1	30	
N-MeFOSAA (NMeFOSAA)	13.2	2.0	ng/L	9.76		135	65-136	19.7	30	
Perfluorotetradecanoic acid (PFTA)	12.2	2.0	ng/L	9.76		125	71-132	20.3	30	
Perfluorotridecanoic acid (PFTrDA)	11.6	2.0	ng/L	9.76		119	65-144	6.94	30	
4:2 Fluorotelomersulfonic acid (4:2FTS A)	10.7	2.0	ng/L	9.12		117	63-143	18.6	30	
Perfluorodecanesulfonic acid (PFDS)	10.1	2.0	ng/L	9.42		107	53-142	20.5	30	
Perfluorooctanesulfonamide (FOSA)	11.5	2.0	ng/L	9.76		118	67-137	17.8	30	
Perfluorononanesulfonic acid (PFNS)	9.21	2.0	ng/L	9.37		98.3	69-127	10.8	30	
Perfluoro-1-hexanesulfonamide (FHxSA)	10.3	2.0	ng/L	9.76		105	61.7-156	19.8	30	
Perfluoro-1-butanesulfonamide (FBSA)	9.90	2.0	ng/L	9.76		101	61.3-145	15.3	30	
Perfluorohexanesulfonic acid (PFHxS)	9.56	2.0	ng/L	8.93		107	68-131	21.4	30	
Perfluoro-4-oxapentanoic acid (PFMPA)	9.82	2.0	ng/L	9.76		101	59.8-147	17.4	30	
Perfluoro-5-oxahexanoic acid (PFMBA)	10.7	2.0	ng/L	9.76		109	59.5-146	16.1	30	
6:2 Fluorotelomersulfonic acid (6:2FTS A)	10.1	2.0	ng/L	9.27		109	64-140	7.61	30	
Perfluoropetanesulfonic acid (PFPeS)	9.68	2.0	ng/L	9.17		106	71-127	15.1	30	
Perfluoroundecanoic acid (PFUnA)	11.1	2.0	ng/L	9.76		114	69-133	17.8	30	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	10.5	2.0	ng/L	9.76		107	58.5-143	18.3	30	
Perfluoroheptanoic acid (PFHpA)	11.1	2.0	ng/L	9.76		113	72-130	18.0	30	
Perfluorooctanoic acid (PFOA)	11.3	2.0	ng/L	9.76		116	71-133	13.2	30	
Perfluorooctanesulfonic acid (PFOS)	9.35	2.0	ng/L	9.03		104	65-140	6.57	30	
Perfluorononanoic acid (PFNA)	11.2	2.0	ng/L	9.76		115	69-130	17.5	30	

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B336013 - SW-846 3510C										
Blank (B336013-BLK1)				Prepared: 04/04/23 Analyzed: 04/06/23						
Aroclor-1016	ND	0.20	µg/L							
Aroclor-1016 [2C]	ND	0.20	µg/L							
Aroclor-1221	ND	0.20	µg/L							
Aroclor-1221 [2C]	ND	0.20	µg/L							
Aroclor-1232	ND	0.20	µg/L							
Aroclor-1232 [2C]	ND	0.20	µg/L							
Aroclor-1242	ND	0.20	µg/L							
Aroclor-1242 [2C]	ND	0.20	µg/L							
Aroclor-1248	ND	0.20	µg/L							
Aroclor-1248 [2C]	ND	0.20	µg/L							
Aroclor-1254	ND	0.20	µg/L							
Aroclor-1254 [2C]	ND	0.20	µg/L							
Aroclor-1260	ND	0.20	µg/L							
Aroclor-1260 [2C]	ND	0.20	µg/L							
Aroclor-1262	ND	0.20	µg/L							
Aroclor-1262 [2C]	ND	0.20	µg/L							
Aroclor-1268	ND	0.20	µg/L							
Aroclor-1268 [2C]	ND	0.20	µg/L							
Surrogate: Decachlorobiphenyl	*1.82*		µg/L	2.00		90.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.89*		µg/L	2.00		94.4	30-150			
Surrogate: Tetrachloro-m-xylene	*1.44*		µg/L	2.00		71.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.47*		µg/L	2.00		73.4	30-150			
LCS (B336013-BS1)				Prepared: 04/04/23 Analyzed: 04/06/23						
Aroclor-1016	0.47	0.20	µg/L	0.500		93.7	40-140			
Aroclor-1016 [2C]	0.51	0.20	µg/L	0.500		102	40-140			
Aroclor-1260	0.42	0.20	µg/L	0.500		84.1	40-140			
Aroclor-1260 [2C]	0.44	0.20	µg/L	0.500		88.4	40-140			
Surrogate: Decachlorobiphenyl	*2.00*		µg/L	2.00		100	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.99*		µg/L	2.00		99.6	30-150			
Surrogate: Tetrachloro-m-xylene	*1.64*		µg/L	2.00		81.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.67*		µg/L	2.00		83.7	30-150			
LCS Dup (B336013-BSD1)				Prepared: 04/04/23 Analyzed: 04/06/23						
Aroclor-1016	0.46	0.20	µg/L	0.500		92.8	40-140	0.922	20	
Aroclor-1016 [2C]	0.51	0.20	µg/L	0.500		102	40-140	0.495	20	
Aroclor-1260	0.44	0.20	µg/L	0.500		87.4	40-140	3.87	20	
Aroclor-1260 [2C]	0.46	0.20	µg/L	0.500		92.7	40-140	4.76	20	
Surrogate: Decachlorobiphenyl	*2.00*		µg/L	2.00		100	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.99*		µg/L	2.00		99.6	30-150			
Surrogate: Tetrachloro-m-xylene	*1.64*		µg/L	2.00		82.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.70*		µg/L	2.00		84.9	30-150			

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B336013-BS1

Date(s) Analyzed: 04/06/2023 04/06/2023

Instrument ID (1): ECD1

Instrument ID (2): ECD1

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.47	
	2	0.000	0.000	0.000	0.51	8.2
Aroclor-1260	1	0.000	0.000	0.000	0.42	
	2	0.000	0.000	0.000	0.44	4.7

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B336013-BSD1 Date(s) Analyzed: 04/06/2023 04/06/2023

Instrument ID (1): ECD1 Instrument ID (2): ECD1

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.46	
	2	0.000	0.000	0.000	0.51	10.3
Aroclor-1260	1	0.000	0.000	0.000	0.44	
	2	0.000	0.000	0.000	0.46	4.4

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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.
D-01	Sample extracted/prepared at a dilution due to sample matrix interference.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-06	Laboratory fortified blank/laboratory control sample recovery and/or duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the high side.
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.
PF-17	Extracted Internal Standard recovery is outside of control limits. Data is not significantly affected since associated analyte is not detected and bias is on the high side.
PF-18	Duplicate analysis confirmed Extracted Internal Standard failure due to matrix effects.
PF-19	Sample re-analyzed at a dilution that was re-fortified with internal standard.
PF-20	Quantifying ion signal to noise ratio is <10. Detection is suspect.
PF-21	Qualifying ion signal to noise ratio is <3. Detection is suspect.
PF-22	Qualifier ion ratio >150% of associated calibration. Detection is suspect.
PF-23	Qualifier ion ratio <50% of associated calibration. Detection is suspect.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
S-29	Extracted Internal Standard is outside of control limits.

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
UD-3-032823 (23C3414-01)			Lab File ID: 23C3414-01.d			Analyzed: 04/07/23 21:36			
M8FOSA	209737.3	3.99655	268,218.00	3.99655	78	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	212493.9	2.51325	70,604.00	2.529667	301	50 - 150	-0.0164	+/-0.50	*
M2PFTA	320799.7	4.297266	509,875.00	4.29725	63	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	126402.7	3.778883	43,132.00	3.778883	293	50 - 150	0.0000	+/-0.50	*
MPFBA	62529.86	1.050167	290,328.00	1.066783	22	50 - 150	-0.0166	+/-0.50	*
M3HFPO-DA	67128.09	2.847483	95,416.00	2.86385	70	50 - 150	-0.0164	+/-0.50	
M6PFDA	270491	3.7794	416,071.00	3.7794	65	50 - 150	0.0000	+/-0.50	
M3PFBS	87235.31	1.894967	117,612.00	1.919817	74	50 - 150	-0.0249	+/-0.50	
M7PFUnA	344770	3.92205	426,970.00	3.92205	81	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	150478.8	3.4205	39,901.00	3.4293	377	50 - 150	-0.0088	+/-0.50	*
M5PFPeA	151646.2	1.714833	284,204.00	1.741117	53	50 - 150	-0.0263	+/-0.50	
M5PFHxA	324692.8	2.596983	404,804.00	2.621617	80	50 - 150	-0.0246	+/-0.50	
M3PFHxS	62869.37	3.201883	75,692.00	3.21025	83	50 - 150	-0.0084	+/-0.50	
M4PFHpA	334348.3	3.170783	421,998.00	3.17885	79	50 - 150	-0.0081	+/-0.50	
M8PFOA	323477.2	3.437833	471,571.00	3.445817	69	50 - 150	-0.0080	+/-0.50	
M8PFOS	62229.09	3.620217	85,233.00	3.628183	73	50 - 150	-0.0080	+/-0.50	
M9PFNA	285428.5	3.62125	458,139.00	3.629233	62	50 - 150	-0.0080	+/-0.50	
MPFDoA	288413.6	4.06465	401,533.00	4.06465	72	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	138691.1	3.929517	152,760.00	3.929517	91	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	153858.4	3.85765	176,601.00	3.85765	87	50 - 150	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	890067	11.052	713,076.00	11.052	125	50 - 200	0.0000	+/-0.50	
UD-3-032823 (23C3414-01RE2)			Lab File ID: 23C3414-01RE1.d			Analyzed: 04/10/23 15:27			
M8PFOA	442451.7	3.437833	431,283.00	3.437833	103	50 - 150	0.0000	+/-0.50	
M8PFOS	81601.51	3.6202	82,209.00	3.6202	99	50 - 150	0.0000	+/-0.50	
CHA-3S-032823 (23C3414-02)			Lab File ID: F23S096028.D			Analyzed: 04/06/23 19:58			
1,4-Dichlorobenzene-d4	676204	11.052	713,076.00	11.052	95	50 - 200	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
CHA-3S-032823 (23C3414-02RE1)			Lab File ID: 23C3414-02RE1.d			Analyzed: 04/14/23 14:09			
M8FOSA	187438.4	3.988567	254,547.00	3.98855	74	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	248253.8	2.4886	60,965.00	2.52145	407	50 - 150	-0.0329	+/-0.50	*
M2PFTA	310087.9	4.281116	498,398.00	4.281116	62	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	164943.3	3.76295	44,875.00	3.770917	368	50 - 150	-0.0080	+/-0.50	*
MPFBA	55795.23	1.04185	255,938.00	1.058467	22	50 - 150	-0.0166	+/-0.50	*
M3HFPO-DA	61193.1	2.822933	99,673.00	2.855667	61	50 - 150	-0.0327	+/-0.50	
M6PFDA	361876.8	3.763467	392,255.00	3.771433	92	50 - 150	-0.0080	+/-0.50	
M3PFBS	88735.41	1.878383	104,267.00	1.911533	85	50 - 150	-0.0332	+/-0.50	
M7PFUnA	366295.4	3.91405	448,902.00	3.91405	82	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	170226.5	3.41245	40,947.00	3.4205	416	50 - 150	-0.0080	+/-0.50	*
M5PFPeA	156937.6	1.698283	254,778.00	1.731383	62	50 - 150	-0.0331	+/-0.50	
M5PFHxA	349277.1	2.572333	371,441.00	2.6134	94	50 - 150	-0.0411	+/-0.50	
M3PFHxS	66136.48	3.185733	70,554.00	3.201883	94	50 - 150	-0.0162	+/-0.50	
M4PFHpA	358621.6	3.154633	388,730.00	3.170783	92	50 - 150	-0.0162	+/-0.50	
M8PFOA	330856.3	3.421167	435,986.00	3.437833	76	50 - 150	-0.0167	+/-0.50	
M8PFOS	56968.72	3.612233	71,378.00	3.6202	80	50 - 150	-0.0080	+/-0.50	
M9PFNA	302538.4	3.613267	446,932.00	3.62125	68	50 - 150	-0.0080	+/-0.50	
MPFDoA	300023.6	4.048666	401,763.00	4.048666	75	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	171014.4	3.921517	144,525.00	3.921517	118	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	161412.1	3.841733	164,351.00	3.841733	98	50 - 150	0.0000	+/-0.50	
CHA-9S-032823 (23C3414-03)			Lab File ID: F23S096029.D			Analyzed: 04/06/23 20:18			
1,4-Dichlorobenzene-d4	888486	11.052	713,076.00	11.052	125	50 - 200	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
CHA-9S-032823 (23C3414-03RE1)			Lab File ID: 23C3414-03RE1.d			Analyzed: 04/14/23 14:16			
M8FOSA	152979.5	3.988567	254,547.00	3.98855	60	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	130628.8	2.505033	60,965.00	2.52145	214	50 - 150	-0.0164	+/-0.50	*
M2PFTA	308156	4.281116	498,398.00	4.281116	62	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	89707.34	3.76295	44,875.00	3.770917	200	50 - 150	-0.0080	+/-0.50	*
MPFBA	79176.04	1.058467	255,938.00	1.058467	31	50 - 150	0.0000	+/-0.50	*
M3HFPO-DA	69696.42	2.8393	99,673.00	2.855667	70	50 - 150	-0.0164	+/-0.50	
M6PFDA	281678.9	3.763467	392,255.00	3.771433	72	50 - 150	-0.0080	+/-0.50	
M3PFBS	77573.5	1.894967	104,267.00	1.911533	74	50 - 150	-0.0166	+/-0.50	
M7PFUnA	309858.8	3.91405	448,902.00	3.91405	69	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	110883.1	3.4205	40,947.00	3.4205	271	50 - 150	0.0000	+/-0.50	*
M5PFPeA	155940.7	1.7231	254,778.00	1.731383	61	50 - 150	-0.0083	+/-0.50	
M5PFHxA	297764.7	2.588767	371,441.00	2.6134	80	50 - 150	-0.0246	+/-0.50	
M3PFHxS	52700.81	3.193817	70,554.00	3.201883	75	50 - 150	-0.0081	+/-0.50	
M4PFHpA	311172.6	3.1627	388,730.00	3.170783	80	50 - 150	-0.0081	+/-0.50	
M8PFOA	341843.7	3.42985	435,986.00	3.437833	78	50 - 150	-0.0080	+/-0.50	
M8PFOS	53626.41	3.612217	71,378.00	3.6202	75	50 - 150	-0.0080	+/-0.50	
M9PFNA	312954.8	3.613267	446,932.00	3.62125	70	50 - 150	-0.0080	+/-0.50	
MPFDoA	271263.1	4.048666	401,763.00	4.048666	68	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	109812.2	3.921517	144,525.00	3.921517	76	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	123219.7	3.841733	164,351.00	3.841733	75	50 - 150	0.0000	+/-0.50	
CHA-4S-032823 (23C3414-04)			Lab File ID: F23S096030.D			Analyzed: 04/06/23 20:38			
1,4-Dichlorobenzene-d4	861911	11.052	713,076.00	11.052	121	50 - 200	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
CHA-4S-032823 (23C3414-04RE1)			Lab File ID: 23C3414-04RE1.d			Analyzed: 04/14/23 14:23			
M8FOSA	123016.9	3.988567	254,547.00	3.98855	48	50 - 150	0.0000	+/-0.50	*
M2-4:2FTS	169377.1	2.496817	60,965.00	2.52145	278	50 - 150	-0.0246	+/-0.50	*
M2PFTA	324878.4	4.281116	498,398.00	4.281116	65	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	131087.8	3.770917	44,875.00	3.770917	292	50 - 150	0.0000	+/-0.50	*
MPFBA	60599.75	1.050167	255,938.00	1.058467	24	50 - 150	-0.0083	+/-0.50	*
M3HFPO-DA	62825.67	2.831117	99,673.00	2.855667	63	50 - 150	-0.0246	+/-0.50	
M6PFDA	291367.2	3.763467	392,255.00	3.771433	74	50 - 150	-0.0080	+/-0.50	
M3PFBS	80536.94	1.894967	104,267.00	1.911533	77	50 - 150	-0.0166	+/-0.50	
M7PFUnA	306370.6	3.91405	448,902.00	3.91405	68	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	142765.4	3.41245	40,947.00	3.4205	349	50 - 150	-0.0080	+/-0.50	*
M5PFPeA	152957.3	1.714833	254,778.00	1.731383	60	50 - 150	-0.0165	+/-0.50	
M5PFHxA	314822.1	2.588767	371,441.00	2.6134	85	50 - 150	-0.0246	+/-0.50	
M3PFHxS	59085.06	3.193817	70,554.00	3.201883	84	50 - 150	-0.0081	+/-0.50	
M4PFHpA	315084.8	3.154633	388,730.00	3.170783	81	50 - 150	-0.0162	+/-0.50	
M8PFOA	333541.7	3.42985	435,986.00	3.437833	77	50 - 150	-0.0080	+/-0.50	
M8PFOS	51980.78	3.612217	71,378.00	3.6202	73	50 - 150	-0.0080	+/-0.50	
M9PFNA	303686.2	3.613267	446,932.00	3.62125	68	50 - 150	-0.0080	+/-0.50	
MPFDoA	275050.3	4.048666	401,763.00	4.048666	68	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	126055.7	3.921517	144,525.00	3.921517	87	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	135594.3	3.841733	164,351.00	3.841733	83	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B335840-BLK1)			Lab File ID: B335840-BLK1.d			Analyzed: 04/07/23 20:31			
M8FOSA	205110.4	3.99655	268,218.00	3.99655	76	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	57434.19	2.537883	70,604.00	2.529667	81	50 - 150	0.0082	+/-0.50	
M2PFTA	367309.7	4.29725	509,875.00	4.29725	72	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	56878.09	3.778883	43,132.00	3.778883	132	50 - 150	0.0000	+/-0.50	
MPFBA	241924.6	1.066783	290,328.00	1.066783	83	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	106658.3	2.86385	95,416.00	2.86385	112	50 - 150	0.0000	+/-0.50	
M6PFDA	364217.9	3.7794	416,071.00	3.7794	88	50 - 150	0.0000	+/-0.50	
M3PFBS	102343.8	1.919817	117,612.00	1.919817	87	50 - 150	0.0000	+/-0.50	
M7PFUnA	343028.3	3.922033	426,970.00	3.92205	80	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	38126.08	3.4293	39,901.00	3.4293	96	50 - 150	0.0000	+/-0.50	
M5PFPeA	239062.6	1.741117	284,204.00	1.741117	84	50 - 150	0.0000	+/-0.50	
M5PFHxA	357103.5	2.621617	404,804.00	2.621617	88	50 - 150	0.0000	+/-0.50	
M3PFHxS	69579.31	3.21025	75,692.00	3.21025	92	50 - 150	0.0000	+/-0.50	
M4PFHpA	373156.9	3.17885	421,998.00	3.17885	88	50 - 150	0.0000	+/-0.50	
M8PFOA	422288.5	3.437833	471,571.00	3.445817	90	50 - 150	-0.0080	+/-0.50	
M8PFOS	65999.11	3.628183	85,233.00	3.628183	77	50 - 150	0.0000	+/-0.50	
M9PFNA	377965.3	3.629233	458,139.00	3.629233	83	50 - 150	0.0000	+/-0.50	
MPFDoA	302718.2	4.06465	401,533.00	4.06465	75	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	107590.3	3.929517	152,760.00	3.929517	70	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	123345	3.85765	176,601.00	3.85765	70	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B335840-BS1)			Lab File ID: B335840-BS1.d			Analyzed: 04/07/23 20:17			
M8FOSA	214776.6	3.99655	268,218.00	3.99655	80	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	63130.32	2.529667	70,604.00	2.529667	89	50 - 150	0.0000	+/-0.50	
M2PFTA	396246.8	4.29725	509,875.00	4.29725	78	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	61182.2	3.778883	43,132.00	3.778883	142	50 - 150	0.0000	+/-0.50	
MPFBA	261618.8	1.066783	290,328.00	1.066783	90	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	127780.6	2.86385	95,416.00	2.86385	134	50 - 150	0.0000	+/-0.50	
M6PFDA	386226.2	3.7794	416,071.00	3.7794	93	50 - 150	0.0000	+/-0.50	
M3PFBS	110154.3	1.919817	117,612.00	1.919817	94	50 - 150	0.0000	+/-0.50	
M7PFUnA	380473.2	3.92205	426,970.00	3.92205	89	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	38288.82	3.4293	39,901.00	3.4293	96	50 - 150	0.0000	+/-0.50	
M5PFPeA	257277.8	1.741117	284,204.00	1.741117	91	50 - 150	0.0000	+/-0.50	
M5PFHxA	381885.9	2.621617	404,804.00	2.621617	94	50 - 150	0.0000	+/-0.50	
M3PFHxS	76952.37	3.201883	75,692.00	3.21025	102	50 - 150	-0.0084	+/-0.50	
M4PFHpA	408311.1	3.17885	421,998.00	3.17885	97	50 - 150	0.0000	+/-0.50	
M8PFOA	455119.3	3.437833	471,571.00	3.445817	97	50 - 150	-0.0080	+/-0.50	
M8PFOS	73481.22	3.6282	85,233.00	3.628183	86	50 - 150	0.0000	+/-0.50	
M9PFNA	398599.9	3.629233	458,139.00	3.629233	87	50 - 150	0.0000	+/-0.50	
MPFDoA	331406.7	4.06465	401,533.00	4.06465	83	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	122906.8	3.929517	152,760.00	3.929517	80	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	147869.1	3.85765	176,601.00	3.85765	84	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS Dup (B335840-BSD1)			Lab File ID: B335840-BSD1.d			Analyzed: 04/07/23 20:24			
M8FOSA	214617.3	3.99655	268,218.00	3.99655	80	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	58006.09	2.537883	70,604.00	2.529667	82	50 - 150	0.0082	+/-0.50	
M2PFTA	232705.4	4.29725	509,875.00	4.29725	46	50 - 150	0.0000	+/-0.50	*
M2-8:2FTS	45943.16	3.778883	43,132.00	3.778883	107	50 - 150	0.0000	+/-0.50	
MPFBA	246397	1.066783	290,328.00	1.066783	85	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	113845.6	2.86385	95,416.00	2.86385	119	50 - 150	0.0000	+/-0.50	
M6PFDA	334471.8	3.7794	416,071.00	3.7794	80	50 - 150	0.0000	+/-0.50	
M3PFBS	101138.4	1.919817	117,612.00	1.919817	86	50 - 150	0.0000	+/-0.50	
M7PFUnA	233246.3	3.92205	426,970.00	3.92205	55	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	35327.31	3.4293	39,901.00	3.4293	89	50 - 150	0.0000	+/-0.50	
M5PFPeA	246011.9	1.741117	284,204.00	1.741117	87	50 - 150	0.0000	+/-0.50	
M5PFHxA	366542.9	2.621617	404,804.00	2.621617	91	50 - 150	0.0000	+/-0.50	
M3PFHxS	67747.45	3.21025	75,692.00	3.21025	90	50 - 150	0.0000	+/-0.50	
M4PFHpA	403515.6	3.17885	421,998.00	3.17885	96	50 - 150	0.0000	+/-0.50	
M8PFOA	419892.8	3.445817	471,571.00	3.445817	89	50 - 150	0.0000	+/-0.50	
M8PFOS	67092.81	3.628183	85,233.00	3.628183	79	50 - 150	0.0000	+/-0.50	
M9PFNA	372592.3	3.629233	458,139.00	3.629233	81	50 - 150	0.0000	+/-0.50	
MPFDoA	182195.8	4.06465	401,533.00	4.06465	45	50 - 150	0.0000	+/-0.50	*
D5-NEtFOSAA	71582.93	3.929517	152,760.00	3.929517	47	50 - 150	0.0000	+/-0.50	*
D3-NMeFOSAA	105628.4	3.85765	176,601.00	3.85765	60	50 - 150	0.0000	+/-0.50	
Blank (B336016-BLK1)			Lab File ID: F23S096017.D			Analyzed: 04/06/23 16:17			
1,4-Dichlorobenzene-d4	668510	11.052	713,076.00	11.052	94	50 - 200	0.0000	+/-0.50	
LCS (B336016-BS1)			Lab File ID: F23S096018.D			Analyzed: 04/06/23 16:37			
1,4-Dichlorobenzene-d4	665615	11.052	713,076.00	11.052	93	50 - 200	0.0000	+/-0.50	
LCS Dup (B336016-BSD1)			Lab File ID: F23S096019.D			Analyzed: 04/06/23 16:57			
1,4-Dichlorobenzene-d4	745261	11.048	713,076.00	11.052	105	50 - 200	-0.0040	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B336659-BLK1)			Lab File ID: B336659-BLK1.d			Analyzed: 04/14/23 13:40			
M8FOSA	224227.3	3.98855	254,547.00	3.98855	88	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	56085.86	2.529667	60,965.00	2.52145	92	50 - 150	0.0082	+/-0.50	
M2PFTA	426919.4	4.289183	498,398.00	4.281116	86	50 - 150	0.0081	+/-0.50	
M2-8:2FTS	80063.34	3.76295	44,875.00	3.770917	178	50 - 150	-0.0080	+/-0.50	*
MPFBA	239253.7	1.058467	255,938.00	1.058467	93	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	92936.16	2.855667	99,673.00	2.855667	93	50 - 150	0.0000	+/-0.50	
M6PFDA	403968.6	3.771433	392,255.00	3.771433	103	50 - 150	0.0000	+/-0.50	
M3PFBS	98868.83	1.919817	104,267.00	1.911533	95	50 - 150	0.0083	+/-0.50	
M7PFUnA	397407.1	3.91405	448,902.00	3.91405	89	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	38482.94	3.4205	40,947.00	3.4205	94	50 - 150	0.0000	+/-0.50	
M5PFPeA	243599.7	1.741117	254,778.00	1.731383	96	50 - 150	0.0097	+/-0.50	
M5PFHxA	368728.4	2.6134	371,441.00	2.6134	99	50 - 150	0.0000	+/-0.50	
M3PFHxS	69439.99	3.201883	70,554.00	3.201883	98	50 - 150	0.0000	+/-0.50	
M4PFHpA	389252.6	3.170783	388,730.00	3.170783	100	50 - 150	0.0000	+/-0.50	
M8PFOA	442147.2	3.42985	435,986.00	3.437833	101	50 - 150	-0.0080	+/-0.50	
M8PFOS	69915.54	3.6202	71,378.00	3.6202	98	50 - 150	0.0000	+/-0.50	
M9PFNA	454122.7	3.62125	446,932.00	3.62125	102	50 - 150	0.0000	+/-0.50	
MPFDoA	342807.4	4.048666	401,763.00	4.048666	85	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	126615	3.921517	144,525.00	3.921517	88	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	150140.1	3.841733	164,351.00	3.841733	91	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B336659-BS1)			Lab File ID: B336659-BS1.d			Analyzed: 04/14/23 13:25			
M8FOSA	247103	3.988567	254,547.00	3.98855	97	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	69730.5	2.529667	60,965.00	2.52145	114	50 - 150	0.0082	+/-0.50	
M2PFTA	483388.7	4.281116	498,398.00	4.281116	97	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	108246.7	3.76295	44,875.00	3.770917	241	50 - 150	-0.0080	+/-0.50	*
MPFBA	288067	1.058467	255,938.00	1.058467	113	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	118696.5	2.855667	99,673.00	2.855667	119	50 - 150	0.0000	+/-0.50	
M6PFDA	490586.2	3.771433	392,255.00	3.771433	125	50 - 150	0.0000	+/-0.50	
M3PFBS	121047.5	1.919817	104,267.00	1.911533	116	50 - 150	0.0083	+/-0.50	
M7PFUnA	466769.6	3.91405	448,902.00	3.91405	104	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	46232.31	3.4205	40,947.00	3.4205	113	50 - 150	0.0000	+/-0.50	
M5PFPeA	292223.3	1.741117	254,778.00	1.731383	115	50 - 150	0.0097	+/-0.50	
M5PFHxA	436790.7	2.6134	371,441.00	2.6134	118	50 - 150	0.0000	+/-0.50	
M3PFHxS	85373.26	3.201883	70,554.00	3.201883	121	50 - 150	0.0000	+/-0.50	
M4PFHpA	477392.8	3.170783	388,730.00	3.170783	123	50 - 150	0.0000	+/-0.50	
M8PFOA	514947.2	3.437833	435,986.00	3.437833	118	50 - 150	0.0000	+/-0.50	
M8PFOS	83032.8	3.6202	71,378.00	3.6202	116	50 - 150	0.0000	+/-0.50	
M9PFNA	538726.4	3.62125	446,932.00	3.62125	121	50 - 150	0.0000	+/-0.50	
MPFDoA	390534.3	4.048666	401,763.00	4.048666	97	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	146848.3	3.921517	144,525.00	3.921517	102	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	172418.2	3.841733	164,351.00	3.841733	105	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS Dup (B336659-BSD1)			Lab File ID: B336659-BSD1.d			Analyzed: 04/14/23 13:33			
M8FOSA	234431.6	3.988567	254,547.00	3.98855	92	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	61941.11	2.52145	60,965.00	2.52145	102	50 - 150	0.0000	+/-0.50	
M2PFTA	456329.4	4.289183	498,398.00	4.281116	92	50 - 150	0.0081	+/-0.50	
M2-8:2FTS	117458	3.76295	44,875.00	3.770917	262	50 - 150	-0.0080	+/-0.50	*
MPFBA	259661.9	1.058467	255,938.00	1.058467	101	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	96168.7	2.855667	99,673.00	2.855667	96	50 - 150	0.0000	+/-0.50	
M6PFDA	451066.5	3.771433	392,255.00	3.771433	115	50 - 150	0.0000	+/-0.50	
M3PFBS	109651.1	1.919817	104,267.00	1.911533	105	50 - 150	0.0083	+/-0.50	
M7PFUnA	407724.8	3.91405	448,902.00	3.91405	91	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	42349.79	3.4205	40,947.00	3.4205	103	50 - 150	0.0000	+/-0.50	
M5PFPeA	268857.8	1.741117	254,778.00	1.731383	106	50 - 150	0.0097	+/-0.50	
M5PFHxA	393071.8	2.6134	371,441.00	2.6134	106	50 - 150	0.0000	+/-0.50	
M3PFHxS	76942.05	3.201883	70,554.00	3.201883	109	50 - 150	0.0000	+/-0.50	
M4PFHpA	426226.6	3.170783	388,730.00	3.170783	110	50 - 150	0.0000	+/-0.50	
M8PFOA	482353.1	3.437833	435,986.00	3.437833	111	50 - 150	0.0000	+/-0.50	
M8PFOS	76367.3	3.6202	71,378.00	3.6202	107	50 - 150	0.0000	+/-0.50	
M9PFNA	469528.2	3.62125	446,932.00	3.62125	105	50 - 150	0.0000	+/-0.50	
MPFDoA	359819	4.048666	401,763.00	4.048666	90	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	124813.6	3.921517	144,525.00	3.921517	86	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	148492.2	3.841733	164,351.00	3.841733	90	50 - 150	0.0000	+/-0.50	

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SOP-454 PFAS in Water	
Perfluorobutanoic acid (PFBA)	NH-P
Perfluorobutanesulfonic acid (PFBS)	NH-P
Perfluoropentanoic acid (PFPeA)	NH-P
Perfluorohexanoic acid (PFHxA)	NH-P
11Cl-PF3OUdS (F53B Major)	NH-P
9Cl-PF3ONS (F53B Minor)	NH-P
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NH-P
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P
8:2 Fluorotelomersulfonic acid (8:2FTS A)	NH-P
Perfluorodecanoic acid (PFDA)	NH-P
Perfluorododecanoic acid (PFDoA)	NH-P
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NH-P
Perfluoroheptanesulfonic acid (PFHpS)	NH-P
N-EtFOSAA (NEtFOSAA)	NH-P
N-MeFOSAA (NMeFOSAA)	NH-P
Perfluorotetradecanoic acid (PFTA)	NH-P
Perfluorotridecanoic acid (PFTrDA)	NH-P
4:2 Fluorotelomersulfonic acid (4:2FTS A)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P
Perfluorooctanesulfonamide (FOSA)	NH-P
Perfluorononanesulfonic acid (PFNS)	NH-P
Perfluoro-1-hexanesulfonamide (FHxSA)	NH-P
Perfluoro-1-butanesulfonamide (FBSA)	NH-P
Perfluorohexanesulfonic acid (PFHxS)	NH-P
Perfluoro-4-oxapentanoic acid (PFMPA)	NH-P
Perfluoro-5-oxahexanoic acid (PFMBA)	NH-P
6:2 Fluorotelomersulfonic acid (6:2FTS A)	NH-P
Perfluoropetanesulfonic acid (PFPeS)	NH-P
Perfluoroundecanoic acid (PFUnA)	NH-P
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P
Perfluoroheptanoic acid (PFHpA)	NH-P
Perfluorooctanoic acid (PFOA)	NH-P
Perfluorooctanesulfonic acid (PFOS)	NH-P
Perfluorononanoic acid (PFNA)	NH-P
SW-846 8082A in Water	
Aroclor-1016	CT,NH,NY,NC,ME,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254	CT,NH,NY,NC,ME,VA,PA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Water	
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1262	NH,NY,NC,ME,VA,PA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA,PA
Aroclor-1268	NH,NY,NC,ME,VA,PA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA,PA
SW-846 8270E in Water	
1,4-Dioxane	NY,NH

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

Code	Description	Number	Expires
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
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
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023

Chain of Custody / Analysis Report

Page 1 of 1

RAMBOLL

23C344

Laboratory Use Only

Sampler(s): Sara Hahne, Liam Blake

(Signature)

Project Number: 1940101207

Job Number:

Laboratory ID:

Lab Sample ID:

Contact:	Samantha Salotto (NYSDEC)
Address:	625 Broadway, 12th Floor Albany, NY 12233-7012
Phone:	(518) 402-9764
E-mail:	Samantha.Salotto@dec.ny.gov
Project:	NYSDEC Utica City Dump, Site #633015 Groundwater Sampling CO#144354
Location:	Incinerator Rd, Utica, NY 13502

Laboratory:
Pace Analytical Laboratories (Con-Test)
39 Spruce Street
East Longmeadow, MA 01028
Attn: Mike Buttrick
Phone: 860-999-3563

Holding Time:

Package Requirement: NYS Cat B. Deliverable. w/ EDD

EDD Format: NYSDEC 4-file

Analysis Required

Preservatives: (see key at bottom)

	Sample Identification											Analysis Required																				
	Unique Field Sample ID (sys_sample_code)	Sample Location	Date	Time	Sample Type (See Key)	Sample Matrix (See Key)	Number of Containers	Grab [G] or Composite [C]	Field Filtered? (Y / N)																								
										1	0	0	0	0	2	4	2	3	8	0	0											
										VOCs by 8260	SVOCs by 8270	PCBs by 8082	1,4-Dioxane by 8270 SIM	PFAS by 537.1	Metals, Hardness, Boron by calc	Cyanide, Total by SM4500 CNE	Mercury by EPA 7473-A	COD, Ammonia by Multiple Methods	TOC	Alkalinity	TDS, Sulfate, Bromide, Chloride										
1	UD-3-032823	UD-3	3/28/23	12:40	N	WG	6	G	N	X	SW	X	X	X																		
2	CHA-3S-032823	CHA-3S	3/28/23	13:10	N	WG	6	G	N			X	X	X																		
3	CHA-9S-032823	CHA-9S	3/28/23	15:05	N	WG	6	G	N			X	X	X																		
4	CHA-4S-032823	CHA-4S	3/28/23	15:45	N	WG	6	G	N			X	X	X																		
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SW

Special Instructions: 1) Report detections above MDL, but below PQL with a "J" flags. Deliverables include: 1 PDF copy of full package and pdf of summary package, a New York State DEC compliant EDD. Please copy Deborah Wright (Deborah.Wright@ramboll.com) on each data transmittal.

Use the top boxes if the samples are to be shipped via courier (e.g., Fed Ex)

Relinquished by: Sara Hahne	Date: 3/29/23	Received By: PACE	Date: 3/30/23	Condition:
Of: Ramboll Americas Engineering Solutions, Inc.	Time: 08:15	Of: Pace Analytical - Con-Test	Time: 0815	
Relinquished by: PACE	Date: 3/30/23	Received By: 2.5/30	Date: 3-30-23	Custody Seals Intact? *(if so, indicate the #, date, and time of the seal)*
	Time: 1700	Of: Pace Analytical - Con-Test	Time: 1016	
Courier Name:	Date:	Received By:	Date:	Cooler Temperature:
Tracking #:	Time:	Of:	Time:	

Other comments or notes regarding condition of samples as received:

Sample Type: N = Normal env. sample, FD = field duplicate, EB = Equipment Blank, TB = Trip Blank, MS = Lab Matrix Spike, Other (Specify):
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 = HNO_3, 3 = H_2SO_4, 4 = NaOH, 5 = Zn Acetate, 6 = MeOH, 7 = $NaHSO_4$, 8 = Na_3PO_4, 9 = BenzalkoniumCl, 10 = other

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FedEx® Tracking

DELIVERED

Thursday

3/30/2023 at 10:03 am

Signed for by: L.ARROY

Obtain Proof of delivery

DELIVERY STATUS

Delivered

Shipment is 1 of 2 pieces

TRACKING ID

771700575779

FROM
East Syracuse, NY US

Label Created
3/29/2023 2:29 PM

PACKAGE RECEIVED BY FEDEX
NORTH SYRACUSE, NY
3/29/2023 3:54 PM

IN TRANSIT
WINDSOR LOCKS, CT
3/30/2023 8:07 AM

OUT FOR DELIVERY
WINDSOR LOCKS, CT
3/30/2023 8:18 AM

DELIVERED
EAST LONGMEADOW, MA US

Delivered
3/30/2023 at 10:03 AM

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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

Pace
PEOPLE ADVANCING SCIE

Client Ramboll
Project Utica City Dump,
MCP/RCP Required NA
Deliverable Package Req. NA
Location Incinerator Rd, Utica, NY
PWSID# (When Applicable) NA

Arrival Method:

Courier ☐ Fed Ex ☑ Walk In ☐ Other ☐

Received By / Date / Time LA 3/30/23 1003
Back-Sheet By / Date / Time LA 3/30/23 1145
Temperature Method Gun #5
Temp ☑ < 6° C Actual Temperature 2.5/3.0
Rush Samples: Yes / (No) Notify
Short Hold: Yes / (No) Notify

	True	False
Received on Ice	☑	☐
Received in Cooler	☑	☐
Custody Seal: DATE TIME	☑	☒ (A)
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) ☐ ☐

Notes regarding Samples/COC outside of SOP:

Container (Circle when applicable)	UnP	HCl	HNO3	H2SO4	NaOH	Trizma	NaS2O3	Other Preservative
1L (Amber) Plastic	16							
500 mL Amber Plastic								
250 mL Amber (Plastic)	5							
Other Amber Clear Plastic								
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									

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May 11, 2023

Deborah Y. Wright
NYDEC_Ramboll US Consulting, Inc. - Syracuse
333 West Washington Street, PO Box 4873
Syracuse, NY 13221

Project Location: Incinerator Rd Utica, NY
Client Job Number:
Project Number: 633015
Laboratory Work Order Number: 23C3630

Enclosed are results of analyses for samples as received by the laboratory on March 31, 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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NYDEC_Ramboll US Consulting, Inc. - Syracuse
333 West Washington Street, PO Box 4873
Syracuse, NY 13221
ATTN: Deborah Y. Wright

REPORT DATE: 5/11/2023

PURCHASE ORDER NUMBER: 144354

PROJECT NUMBER: 633015

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23C3630

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

PROJECT LOCATION: Incinerator Rd Utica, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-4-032923	23C3630-01	Water		SOP-454 PFAS	
				SW-846 8082A	
				SW-846 8270E	
CHA-1S-032923	23C3630-02	Water		SOP-454 PFAS	
				SW-846 8082A	
				SW-846 8270E	
FB-032923	23C3630-03	Water		SOP-454 PFAS	
MW-TP-8-032923	23C3630-04	Water		-	New York Certification# NY10478
				EPA 300.0	
				EPA 410.4	
				SM 21-23 5310B	
				SM19-23 4500 NH3 C	
				SM21-23 2320B	
				SM21-23 2540C	
				SM4500 CN C	New York Certification# NY10478
				SOP-454 PFAS	
				SW-846 6010	
				SW-846 6010D	
				SW-846 7470A	
				SW-846 8082A	
				SW-846 8260D	
				SW-846 8270E	
MW-TP-7-032923	23C3630-05	Water		-	New York Certification# NY10478
				EPA 300.0	
				EPA 410.4	
				SM 21-23 5310B	
				SM19-23 4500 NH3 C	
				SM21-23 2320B	
				SM21-23 2540C	
				SM4500 CN C	New York Certification# NY10478
				SOP-454 PFAS	
				SW-846 6010	
				SW-846 6010D	
				SW-846 7470A	
				SW-846 8082A	
				SW-846 8260D	
				SW-846 8270E	
TB-032923	23C3630-06	Water		SW-846 8260D	

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CASE NARRATIVE SUMMARY

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

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SM 21-23 5310B

Qualifications:

MS-07

Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery.Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

Analyte & Samples(s) Qualified:

Total Organic Carbon
23C3630-05[MW-TP-7-032923], B337332-MS1

SM21-23 2320B

Qualifications:

PR-18

Headspace present in sample container.

Analyte & Samples(s) Qualified:

Alkalinity to pH 4.5
23C3630-04[MW-TP-8-032923], 23C3630-05[MW-TP-7-032923]

SOP-454 PFAS

Qualifications:

D-01

Sample extracted/prepared at a dilution due to sample matrix interference.

Analyte & Samples(s) Qualified:

23C3630-01[MW-4-032923], 23C3630-02[CHA-1S-032923], 23C3630-04[MW-TP-8-032923]

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-EtFOSAA (NEtFOSAA)
23C3630-04[MW-TP-8-032923], 23C3630-05[MW-TP-7-032923], B335924-BS1, B337100-BS1

N-MeFOSAA (NMeFOSAA)
B335924-BSD1, B337100-BSD1

PF-17

Extracted Internal Standard recovery is outside of control limits. Data is not significantly affected since associated analyte is not detected and bias is on the high side.

Analyte & Samples(s) Qualified:

M2-4:2FTS
23C3630-01[MW-4-032923], 23C3630-02[CHA-1S-032923], 23C3630-04[MW-TP-8-032923]

M2-6:2FTS
23C3630-01[MW-4-032923], 23C3630-02[CHA-1S-032923], 23C3630-04[MW-TP-8-032923]

M2-8:2FTS
23C3630-01[MW-4-032923], 23C3630-02[CHA-1S-032923], 23C3630-03[FB-032923], 23C3630-04[MW-TP-8-032923], 23C3630-05[MW-TP-7-032923], B335924-BLK1

PF-18

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

Analyte & Samples(s) Qualified:

M2-4:2FTS
23C3630-05[MW-TP-7-032923]

M2-6:2FTS
23C3630-05[MW-TP-7-032923]

M2PFTA
23C3630-05[MW-TP-7-032923]

M8FOSA
23C3630-05[MW-TP-7-032923]

MPFBA
23C3630-05[MW-TP-7-032923]

MPFDoA
23C3630-05[MW-TP-7-032923]

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PF-19

Sample re-analyzed at a dilution that was re-fortified with internal standard.

Analyte & Samples(s) Qualified:

Perfluorooctanesulfonic acid (PFOS)
23C3630-02RE1[CHA-1S-032923], 23C3630-04RE1[MW-TP-8-032923], 23C3630-05RE2[MW-TP-7-032923]

PF-20

Quantifying ion signal to noise ratio is <10. Detection is suspect.

Analyte & Samples(s) Qualified:

Perfluoroheptanoic acid (PFHpA)
23C3630-02[CHA-1S-032923]

Perfluorohexanesulfonic acid (PFHxS)
23C3630-01[MW-4-032923]

Perfluoropentanoic acid (PFPeA)
23C3630-01[MW-4-032923], 23C3630-04[MW-TP-8-032923]

Perfluoropetanesulfonic acid (PFPeS)
23C3630-05[MW-TP-7-032923]

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:

Hexafluoropropylene oxide dimer acid (HFPO-DA)
B335924-BSD1

S-29

Extracted Internal Standard is outside of control limits.

Analyte & Samples(s) Qualified:

M2-8:2FTS
B335924-BS1, B335924-BSD1

MPFBA
23C3630-04[MW-TP-8-032923]

SW-846 6010

Qualifications:

MS-19

Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.

Analyte & Samples(s) Qualified:

Hardness
23C3630-04[MW-TP-8-032923], B335903-MS2

SW-846 6010D

Qualifications:

MS-19

Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.

Analyte & Samples(s) Qualified:

Calcium
23C3630-04[MW-TP-8-032923], B335903-MS2

SW-846 8260D

Qualifications:

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:

Chloromethane
23C3630-04[MW-TP-8-032923], 23C3630-05[MW-TP-7-032923], 23C3630-06[TB-032923], B336009-BLK1, B336009-BS1, B336009-BSD1, S085523-CCV1

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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:

Vinyl Chloride
23C3630-04[MW-TP-8-032923], B336009-BS1, B336009-BSD1, S085523-CCV1

SW-846 8270E

Qualifications:

L-04

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

1,2,4,5-Tetrachlorobenzene
23C3630-04[MW-TP-8-032923], 23C3630-05[MW-TP-7-032923], B336097-BLK1, B336097-BS1, B336097-BSD1

1,2,4-Trichlorobenzene
23C3630-04[MW-TP-8-032923], 23C3630-05[MW-TP-7-032923], B336097-BLK1, B336097-BS1, B336097-BSD1

1,2-Dichlorobenzene
23C3630-04[MW-TP-8-032923], 23C3630-05[MW-TP-7-032923], B336097-BLK1, B336097-BS1, B336097-BSD1

1,3-Dichlorobenzene
23C3630-04[MW-TP-8-032923], 23C3630-05[MW-TP-7-032923], B336097-BLK1, B336097-BS1, B336097-BSD1

1,4-Dichlorobenzene
23C3630-04[MW-TP-8-032923], 23C3630-05[MW-TP-7-032923], B336097-BLK1, B336097-BS1, B336097-BSD1

1-Methylnaphthalene
23C3630-04[MW-TP-8-032923], 23C3630-05[MW-TP-7-032923], B336097-BLK1, B336097-BS1, B336097-BSD1

2-Chloronaphthalene
23C3630-04[MW-TP-8-032923], 23C3630-05[MW-TP-7-032923], B336097-BLK1, B336097-BS1, B336097-BSD1

2-Methylnaphthalene
23C3630-04[MW-TP-8-032923], 23C3630-05[MW-TP-7-032923], B336097-BLK1, B336097-BS1, B336097-BSD1

Benzidine
23C3630-04[MW-TP-8-032923], 23C3630-05[MW-TP-7-032923], B336097-BLK1, B336097-BS1, B336097-BSD1

Hexachlorobutadiene
23C3630-04[MW-TP-8-032923], 23C3630-05[MW-TP-7-032923], B336097-BLK1, B336097-BS1, B336097-BSD1

Hexachlorocyclopentadiene
23C3630-04[MW-TP-8-032923], 23C3630-05[MW-TP-7-032923], B336097-BLK1, B336097-BS1, B336097-BSD1

Hexachloroethane
23C3630-04[MW-TP-8-032923], 23C3630-05[MW-TP-7-032923], B336097-BLK1, B336097-BS1, B336097-BSD1

L-06

Laboratory fortified blank/laboratory control sample recovery and/or duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

1,4-Dioxane
23C3630-01[MW-4-032923], 23C3630-05[MW-TP-7-032923], B336016-BS1, B336016-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
23C3630-04[MW-TP-8-032923], 23C3630-05[MW-TP-7-032923], B336097-BLK1, B336097-BS1, B336097-BSD1, S085615-CCV1, S085752-CCV1

Benzidine
23C3630-04[MW-TP-8-032923], 23C3630-05[MW-TP-7-032923], B336097-BLK1, B336097-BS1, B336097-BSD1, S085615-CCV1, S085752-CCV1

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
23C3630-04[MW-TP-8-032923], 23C3630-05[MW-TP-7-032923], B336097-BLK1, B336097-BS1, B336097-BSD1, S085615-CCV1, S085752-CCV1

Benzidine
23C3630-04[MW-TP-8-032923], 23C3630-05[MW-TP-7-032923], B336097-BLK1, B336097-BS1, B336097-BSD1, S085615-CCV1, S085752-CCV1

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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
23C3630-04[MW-TP-8-032923], 23C3630-05[MW-TP-7-032923], B336097-BLK1, B336097-BS1, B336097-BSD1, S085615-CCV1, S085752-CCV1

2,4-Dinitrotoluene
23C3630-04[MW-TP-8-032923], 23C3630-05[MW-TP-7-032923], B336097-BLK1, B336097-BS1, B336097-BSD1, S085615-CCV1, S085752-CCV1

2,6-Dinitrotoluene
B336097-BLK1, B336097-BSD1, S085615-CCV1

3-Nitroaniline
B336097-BLK1, B336097-BS1, B336097-BSD1, S085615-CCV1

Benzo(g,h,i)perylene
23C3630-04[MW-TP-8-032923], 23C3630-05[MW-TP-7-032923], B336097-BS1, S085752-CCV1

Pentachloronitrobenzene
B336097-BS1

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.



Lisa A. Worthington
Technical Representative

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

Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: MW-4-032923 | Sampled: 3/29/2023 11:00

Sample ID: 23C3630-01

Sample Matrix: Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	5.8	0.22	0.036	µg/L	1	L-06	SW-846 8270E	4/4/23	4/6/23 20:58	SPF

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
1,4-Dioxane-d8	20.0	15-110			4/6/23 20:58

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Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: MW-4-032923 | Sampled: 3/29/2023 11:00

Sample ID: 23C3630-01

Sample Matrix: Water

Sample Flags: D-01

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	45	11	4.0	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
Perfluorobutanesulfonic acid (PFBS)	ND	11	3.9	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
Perfluoropentanoic acid (PFPeA)	18	11	4.2	ng/L	1	PF-20	SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
Perfluorohexanoic acid (PFHxA)	12	11	4.4	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
11Cl-PF3OUdS (F53B Major)	ND	11	4.0	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
9Cl-PF3ONS (F53B Minor)	ND	11	3.9	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	11	5.5	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	11	3.1	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	11	5.1	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
Perfluorodecanoic acid (PFDA)	ND	11	4.4	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
Perfluorododecanoic acid (PFDoA)	ND	11	4.9	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	11	3.9	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
Perfluoroheptanesulfonic acid (PFHpS)	ND	11	4.4	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
N-EtFOSAA (NEtFOSAA)	ND	11	4.3	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
N-MeFOSAA (NMeFOSAA)	ND	11	5.6	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
Perfluorotetradecanoic acid (PFTA)	ND	11	5.1	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
Perfluorotridecanoic acid (PFTrDA)	ND	11	4.4	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	11	4.1	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
Perfluorodecanesulfonic acid (PFDS)	ND	11	5.5	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
Perfluorooctanesulfonamide (FOSA)	ND	11	5.4	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
Perfluorononanesulfonic acid (PFNS)	ND	11	5.5	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	11	5.6	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
Perfluoro-1-butanesulfonamide (FBSA)	ND	11	4.2	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
Perfluorohexanesulfonic acid (PFHxS)	ND	11	3.8	ng/L	1	PF-20	SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	11	3.8	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	11	3.5	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	11	6.4	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
Perfluoropetanesulfonic acid (PFPeS)	ND	11	4.1	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
Perfluoroundecanoic acid (PFUnA)	ND	11	4.6	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	11	4.1	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
Perfluoroheptanoic acid (PFHpA)	ND	11	4.5	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
Perfluorooctanoic acid (PFOA)	16	11	7.2	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
Perfluorooctanesulfonic acid (PFOS)	ND	11	4.5	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB
Perfluorononanoic acid (PFNA)	ND	11	4.9	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:40	RRB

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

Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: MW-4-032923 | Sampled: 3/29/2023 11:00

Sample ID: 23C3630-01

Sample Matrix: Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	0.056	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:21	SFM
Aroclor-1221 [1]	ND	0.20	0.078	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:21	SFM
Aroclor-1232 [1]	ND	0.20	0.070	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:21	SFM
Aroclor-1242 [1]	ND	0.20	0.075	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:21	SFM
Aroclor-1248 [1]	ND	0.20	0.079	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:21	SFM
Aroclor-1254 [1]	ND	0.20	0.078	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:21	SFM
Aroclor-1260 [1]	ND	0.20	0.058	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:21	SFM
Aroclor-1262 [1]	ND	0.20	0.090	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:21	SFM
Aroclor-1268 [1]	ND	0.20	0.072	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:21	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	67.7	30-150		4/6/23 12:21
Decachlorobiphenyl [2]	73.1	30-150		4/6/23 12:21
Tetrachloro-m-xylene [1]	64.1	30-150		4/6/23 12:21
Tetrachloro-m-xylene [2]	69.7	30-150		4/6/23 12:21

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

Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: CHA-1S-032923 | Sampled: 3/29/2023 12:50

Sample ID: 23C3630-02

Sample Matrix: Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	ND	0.20	0.033	µg/L	1		SW-846 8270E	4/4/23	4/6/23 21:19	SPF

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
1,4-Dioxane-d8	18.6	15-110			4/6/23 21:19

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Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: CHA-1S-032923 | Sampled: 3/29/2023 12:50

Sample ID: 23C3630-02

Sample Matrix: Water

Sample Flags: D-01

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	6.0	4.2	1.5	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
Perfluorobutanesulfonic acid (PFBS)	2.9	4.2	1.5	ng/L	1	J	SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
Perfluoropentanoic acid (PFPeA)	3.9	4.2	1.7	ng/L	1	J	SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
Perfluorohexanoic acid (PFHxA)	2.7	4.2	1.7	ng/L	1	J	SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
11Cl-PF3OUdS (F53B Major)	ND	4.2	1.6	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
9Cl-PF3ONS (F53B Minor)	ND	4.2	1.5	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.2	2.2	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.2	1.2	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	4.2	2.0	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
Perfluorodecanoic acid (PFDA)	ND	4.2	1.7	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
Perfluorododecanoic acid (PFDoA)	ND	4.2	1.9	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	4.2	1.5	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
Perfluoroheptanesulfonic acid (PFHpS)	2.8	4.2	1.7	ng/L	1	J	SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
N-EtFOSAA (NEtFOSAA)	ND	4.2	1.7	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
N-MeFOSAA (NMeFOSAA)	ND	4.2	2.2	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
Perfluorotetradecanoic acid (PFTA)	ND	4.2	2.0	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
Perfluorotridecanoic acid (PFTrDA)	ND	4.2	1.7	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	4.2	1.6	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
Perfluorodecanesulfonic acid (PFDS)	ND	4.2	2.1	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
Perfluorooctanesulfonamide (FOSA)	20	4.2	2.1	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
Perfluorononanesulfonic acid (PFNS)	ND	4.2	2.1	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	4.2	2.2	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
Perfluoro-1-butanesulfonamide (FBSA)	ND	4.2	1.6	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
Perfluorohexanesulfonic acid (PFHxS)	2.1	4.2	1.5	ng/L	1	J	SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	4.2	1.5	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	4.2	1.4	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	4.2	2.5	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
Perfluoropetanesulfonic acid (PFPeS)	ND	4.2	1.6	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
Perfluoroundecanoic acid (PFUnA)	ND	4.2	1.8	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	4.2	1.6	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
Perfluoroheptanoic acid (PFHpA)	3.7	4.2	1.8	ng/L	1	PF-20, J	SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
Perfluorooctanoic acid (PFOA)	57	4.2	2.8	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB
Perfluorooctanesulfonic acid (PFOS)	510	42	18	ng/L	10	PF-19	SOP-454 PFAS	4/6/23	4/14/23 21:38	RRB
Perfluorononanoic acid (PFNA)	3.1	4.2	1.9	ng/L	1	J	SOP-454 PFAS	4/6/23	4/12/23 17:47	RRB

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

Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: CHA-1S-032923 | Sampled: 3/29/2023 12:50

Sample ID: 23C3630-02

Sample Matrix: Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.19	0.056	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:38	SFM
Aroclor-1221 [1]	ND	0.19	0.077	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:38	SFM
Aroclor-1232 [1]	ND	0.19	0.070	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:38	SFM
Aroclor-1242 [1]	ND	0.19	0.074	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:38	SFM
Aroclor-1248 [1]	ND	0.19	0.078	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:38	SFM
Aroclor-1254 [1]	ND	0.19	0.077	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:38	SFM
Aroclor-1260 [1]	ND	0.19	0.057	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:38	SFM
Aroclor-1262 [1]	ND	0.19	0.089	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:38	SFM
Aroclor-1268 [1]	ND	0.19	0.071	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:38	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	72.2	30-150		4/6/23 12:38
Decachlorobiphenyl [2]	79.5	30-150		4/6/23 12:38
Tetrachloro-m-xylene [1]	72.8	30-150		4/6/23 12:38
Tetrachloro-m-xylene [2]	79.2	30-150		4/6/23 12:38

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

Project Location: Incinerator Rd Utica, NY
Sample Description:
Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: FB-032923
Sampled: 3/29/2023 13:15

Sample ID: 23C3630-03

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	1.7	0.65	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
Perfluorobutanesulfonic acid (PFBS)	ND	1.7	0.65	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
Perfluoropentanoic acid (PFPeA)	ND	1.7	0.70	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
Perfluorohexanoic acid (PFHxA)	ND	1.7	0.71	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
11Cl-PF3OUdS (F53B Major)	ND	1.7	0.66	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
9Cl-PF3ONS (F53B Minor)	ND	1.7	0.65	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.7	0.91	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.7	0.52	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.7	0.84	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
Perfluorodecanoic acid (PFDA)	ND	1.7	0.73	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
Perfluorododecanoic acid (PFDoA)	ND	1.7	0.81	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.7	0.64	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.7	0.72	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
N-EtFOSAA (NEtFOSAA)	ND	1.7	0.70	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
N-MeFOSAA (NMeFOSAA)	ND	1.7	0.91	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
Perfluorotetradecanoic acid (PFTA)	ND	1.7	0.83	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
Perfluorotridecanoic acid (PFTrDA)	ND	1.7	0.72	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.7	0.68	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
Perfluorodecanesulfonic acid (PFDS)	ND	1.7	0.90	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
Perfluorooctanesulfonamide (FOSA)	ND	1.7	0.89	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
Perfluorononanesulfonic acid (PFNS)	ND	1.7	0.90	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.7	0.92	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
Perfluoro-1-butanesulfonamide (FBSA)	ND	1.7	0.68	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
Perfluorohexanesulfonic acid (PFHxS)	ND	1.7	0.63	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.7	0.62	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.7	0.57	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.7	1.1	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
Perfluoropetanesulfonic acid (PFPeS)	ND	1.7	0.67	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
Perfluoroundecanoic acid (PFUnA)	ND	1.7	0.75	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.7	0.68	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
Perfluoroheptanoic acid (PFHpA)	ND	1.7	0.74	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
Perfluorooctanoic acid (PFOA)	ND	1.7	1.2	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
Perfluorooctanesulfonic acid (PFOS)	ND	1.7	0.74	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB
Perfluorononanoic acid (PFNA)	ND	1.7	0.81	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 17:55	RRB

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

Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: MW-TP-8-032923 | Sampled: 3/29/2023 13:30

Sample ID: 23C3630-04

Sample Matrix: Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	7.5	50	2.0	µg/L	1	J	SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Acrylonitrile	ND	5.0	0.47	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.13	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Bromochloromethane	ND	1.0	0.28	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Bromoform	ND	1.0	0.41	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Bromomethane	ND	2.0	1.3	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
2-Butanone (MEK)	ND	20	1.7	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.3	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
n-Butylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
sec-Butylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
tert-Butylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Carbon Disulfide	ND	5.0	1.6	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Chlorobenzene	4.1	1.0	0.12	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Chlorodibromomethane	ND	0.50	0.20	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Chloroethane	ND	2.0	0.34	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Chloroform	ND	2.0	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Chloromethane	ND	2.0	0.50	µg/L	1	V-05	SW-846 8260D	4/4/23	4/4/23 16:13	EEH
2-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
4-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.85	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.16	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Dibromomethane	ND	1.0	0.32	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
1,2-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
1,3-Dichlorobenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
1,4-Dichlorobenzene	1.6	1.0	0.13	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	1.5	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.16	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
1,1-Dichloroethane	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
1,2-Dichloroethane	ND	1.0	0.30	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
1,1-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
cis-1,2-Dichloroethylene	1.1	1.0	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
1,2-Dichloropropane	ND	1.0	0.19	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
1,3-Dichloropropane	ND	0.50	0.12	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
2,2-Dichloropropane	ND	1.0	0.35	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
1,1-Dichloropropene	ND	2.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
trans-1,3-Dichloropropene	ND	0.50	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Diethyl Ether	ND	2.0	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH

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

Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: MW-TP-8-032923 | Sampled: 3/29/2023 13:30

Sample ID: 23C3630-04

Sample Matrix: Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.20	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
1,4-Dioxane	ND	50	18	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Ethylbenzene	ND	1.0	0.22	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
2-Hexanone (MBK)	ND	10	1.2	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.13	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Methyl Acetate	ND	1.0	0.61	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Methyl Cyclohexane	ND	1.0	0.16	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Methylene Chloride	ND	5.0	0.18	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.3	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Naphthalene	ND	2.0	0.38	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
n-Propylbenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Tetrachloroethylene	0.24	1.0	0.17	µg/L	1	J	SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Tetrahydrofuran	ND	10	0.49	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Toluene	ND	1.0	0.22	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.34	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
1,1,1-Trichloroethane	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
1,1,2-Trichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Trichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
1,2,3-Trichloropropane	ND	2.0	0.28	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.21	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.20	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
Vinyl Chloride	0.54	2.0	0.24	µg/L	1	V-06, J	SW-846 8260D	4/4/23	4/4/23 16:13	EEH
m+p Xylene	ND	2.0	0.49	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH
o-Xylene	ND	1.0	0.24	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:13	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	95.9	70-130		4/4/23 16:13
Toluene-d8	100	70-130		4/4/23 16:13
4-Bromofluorobenzene	99.5	70-130		4/4/23 16:13

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

Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: MW-TP-8-032923 | Sampled: 3/29/2023 13:30

Sample ID: 23C3630-04

Sample Matrix: Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.0	0.53	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Acenaphthylene	ND	5.0	0.55	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Acetophenone	ND	9.9	0.50	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Aniline	ND	5.0	0.59	µg/L	1	V-05	SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Anthracene	ND	5.0	0.49	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Benzidine	ND	20	10	µg/L	1	L-04, V-04, V-05	SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Benzo(a)anthracene	ND	5.0	0.46	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Benzo(a)pyrene	ND	5.0	0.69	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Benzo(b)fluoranthene	ND	5.0	0.54	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Benzo(g,h,i)perylene	ND	5.0	0.67	µg/L	1	V-06	SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Benzo(k)fluoranthene	ND	5.0	0.63	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Benzoic Acid	ND	9.9	8.3	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Bis(2-chloroethoxy)methane	ND	9.9	0.42	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Bis(2-chloroethyl)ether	ND	9.9	0.49	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Bis(2-chloroisopropyl)ether	ND	9.9	0.64	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Bis(2-Ethylhexyl)phthalate	ND	9.9	0.83	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
4-Bromophenylphenylether	ND	9.9	0.52	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Butylbenzylphthalate	ND	9.9	0.65	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Carbazole	ND	9.9	0.45	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
4-Chloroaniline	ND	9.9	0.62	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
4-Chloro-3-methylphenol	ND	9.9	0.52	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
2-Chloronaphthalene	ND	9.9	0.52	µg/L	1	L-04	SW-846 8270E	4/5/23	4/6/23 17:49	AR2
2-Chlorophenol	ND	9.9	0.45	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
4-Chlorophenylphenylether	ND	9.9	0.55	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Chrysene	ND	5.0	0.44	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Dibenz(a,h)anthracene	ND	5.0	0.73	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Dibenzofuran	ND	5.0	0.56	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Di-n-butylphthalate	ND	9.9	0.49	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
1,2-Dichlorobenzene	ND	5.0	0.63	µg/L	1	L-04	SW-846 8270E	4/5/23	4/6/23 17:49	AR2
1,3-Dichlorobenzene	ND	5.0	0.63	µg/L	1	L-04	SW-846 8270E	4/5/23	4/6/23 17:49	AR2
1,4-Dichlorobenzene	ND	5.0	0.62	µg/L	1	L-04	SW-846 8270E	4/5/23	4/6/23 17:49	AR2
3,3-Dichlorobenzidine	ND	9.9	0.77	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
2,4-Dichlorophenol	ND	9.9	0.49	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Diethylphthalate	0.50	9.9	0.41	µg/L	1	J	SW-846 8270E	4/5/23	4/6/23 17:49	AR2
2,4-Dimethylphenol	ND	9.9	0.50	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Dimethylphthalate	ND	9.9	0.38	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
4,6-Dinitro-2-methylphenol	ND	9.9	8.4	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
2,4-Dinitrophenol	ND	9.9	8.4	µg/L	1	V-04, V-06	SW-846 8270E	4/5/23	4/6/23 17:49	AR2
2,4-Dinitrotoluene	ND	9.9	0.67	µg/L	1	V-06	SW-846 8270E	4/5/23	4/6/23 17:49	AR2
2,6-Dinitrotoluene	ND	9.9	0.56	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Di-n-octylphthalate	ND	9.9	3.1	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
1,2-Diphenylhydrazine/Azobenzene	ND	9.9	0.57	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Fluoranthene	ND	5.0	0.48	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Fluorene	ND	5.0	0.53	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2

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

Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: MW-TP-8-032923 | Sampled: 3/29/2023 13:30

Sample ID: 23C3630-04

Sample Matrix: Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	9.9	0.58	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Hexachlorobutadiene	ND	9.9	0.74	µg/L	1	L-04	SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Hexachlorocyclopentadiene	ND	9.9	5.9	µg/L	1	L-04	SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Hexachloroethane	ND	9.9	0.71	µg/L	1	L-04	SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Indeno(1,2,3-cd)pyrene	ND	5.0	0.78	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Isophorone	ND	9.9	0.51	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
1-Methylnaphthalene	ND	5.0	0.57	µg/L	1	L-04	SW-846 8270E	4/5/23	4/6/23 17:49	AR2
2-Methylnaphthalene	ND	5.0	0.67	µg/L	1	L-04	SW-846 8270E	4/5/23	4/6/23 17:49	AR2
2-Methylphenol	ND	9.9	0.48	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
3/4-Methylphenol	0.73	9.9	0.43	µg/L	1	J	SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Naphthalene	ND	5.0	0.59	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
2-Nitroaniline	ND	9.9	0.71	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
3-Nitroaniline	ND	9.9	0.59	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
4-Nitroaniline	ND	9.9	0.67	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Nitrobenzene	ND	9.9	0.57	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
2-Nitrophenol	ND	9.9	0.51	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
4-Nitrophenol	ND	9.9	1.9	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
N-Nitrosodimethylamine	ND	9.9	0.56	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
N-Nitrosodiphenylamine/Diphenylamine	ND	9.9	0.43	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
N-Nitrosodi-n-propylamine	ND	9.9	0.57	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Pentachloronitrobenzene	ND	9.9	0.68	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Pentachlorophenol	ND	9.9	0.66	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Phenanthrene	ND	5.0	0.51	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Phenol	ND	9.9	0.19	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Pyrene	ND	5.0	0.65	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
Pyridine	ND	5.0	3.6	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
1,2,4,5-Tetrachlorobenzene	ND	9.9	0.65	µg/L	1	L-04	SW-846 8270E	4/5/23	4/6/23 17:49	AR2
1,2,4-Trichlorobenzene	ND	5.0	0.66	µg/L	1	L-04	SW-846 8270E	4/5/23	4/6/23 17:49	AR2
2,4,5-Trichlorophenol	ND	9.9	0.54	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2
2,4,6-Trichlorophenol	ND	9.9	0.47	µg/L	1		SW-846 8270E	4/5/23	4/6/23 17:49	AR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	29.7	15-110		4/6/23 17:49
Phenol-d6	20.6	15-110		4/6/23 17:49
Nitrobenzene-d5	51.8	30-130		4/6/23 17:49
2-Fluorobiphenyl	40.5	30-130		4/6/23 17:49
2,4,6-Tribromophenol	64.7	15-110		4/6/23 17:49
p-Terphenyl-d14	62.3	30-130		4/6/23 17:49

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

Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: MW-TP-8-032923 | Sampled: 3/29/2023 13:30

Sample ID: 23C3630-04

Sample Matrix: Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	ND	0.20	0.032	µg/L	1		SW-846 8270E	4/4/23	4/6/23 21:39	SPF

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
1,4-Dioxane-d8	17.5	15-110			4/6/23 21:39

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Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: MW-TP-8-032923 | Sampled: 3/29/2023 13:30

Sample ID: 23C3630-04

Sample Matrix: Water

Sample Flags: D-01

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	25	4.3	1.6	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
Perfluorobutanesulfonic acid (PFBS)	28	4.3	1.6	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
Perfluoropentanoic acid (PFPeA)	10	4.3	1.7	ng/L	1	PF-20	SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
Perfluorohexanoic acid (PFHxA)	15	4.3	1.7	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
11Cl-PF3OUdS (F53B Major)	ND	4.3	1.6	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
9Cl-PF3ONS (F53B Minor)	ND	4.3	1.6	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.3	2.2	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.3	1.3	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	4.3	2.0	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
Perfluorodecanoic acid (PFDA)	ND	4.3	1.8	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
Perfluorododecanoic acid (PFDoA)	ND	4.3	2.0	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	4.3	1.6	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
Perfluoroheptanesulfonic acid (PFHpS)	28	4.3	1.7	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
N-EtFOSAA (NEtFOSAA)	16	4.3	1.7	ng/L	1	L-07	SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
N-MeFOSAA (NMeFOSAA)	ND	4.3	2.2	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
Perfluorotetradecanoic acid (PFTA)	ND	4.3	2.0	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
Perfluorotridecanoic acid (PFTrDA)	ND	4.3	1.8	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	4.3	1.6	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
Perfluorodecanesulfonic acid (PFDS)	ND	4.3	2.2	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
Perfluorooctanesulfonamide (FOSA)	3.2	4.3	2.2	ng/L	1	J	SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
Perfluorononanesulfonic acid (PFNS)	ND	4.3	2.2	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
Perfluoro-1-hexanesulfonamide (FHxSA)	3.0	4.3	2.2	ng/L	1	J	SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
Perfluoro-1-butanesulfonamide (FBSA)	5.8	4.3	1.7	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
Perfluorohexanesulfonic acid (PFHxS)	110	4.3	1.5	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	4.3	1.5	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	4.3	1.4	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	4.3	2.6	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
Perfluoropetanesulfonic acid (PFPeS)	38	4.3	1.6	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
Perfluoroundecanoic acid (PFUnA)	ND	4.3	1.8	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	4.3	1.7	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
Perfluoroheptanoic acid (PFHpA)	24	4.3	1.8	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
Perfluorooctanoic acid (PFOA)	240	4.3	2.9	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB
Perfluorooctanesulfonic acid (PFOS)	620	43	18	ng/L	10	PF-19	SOP-454 PFAS	4/6/23	4/14/23 21:46	RRB
Perfluorononanoic acid (PFNA)	8.6	4.3	2.0	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:02	RRB

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Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: MW-TP-8-032923 | Sampled: 3/29/2023 13:30

Sample ID: 23C3630-04

Sample Matrix: Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	0.057	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:56	SFM
Aroclor-1221 [1]	ND	0.20	0.079	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:56	SFM
Aroclor-1232 [1]	ND	0.20	0.072	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:56	SFM
Aroclor-1242 [1]	ND	0.20	0.077	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:56	SFM
Aroclor-1248 [1]	ND	0.20	0.081	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:56	SFM
Aroclor-1254 [1]	ND	0.20	0.079	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:56	SFM
Aroclor-1260 [1]	ND	0.20	0.059	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:56	SFM
Aroclor-1262 [1]	ND	0.20	0.092	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:56	SFM
Aroclor-1268 [1]	ND	0.20	0.073	µg/L	1		SW-846 8082A	4/4/23	4/6/23 12:56	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	71.6	30-150		4/6/23 12:56
Decachlorobiphenyl [2]	80.7	30-150		4/6/23 12:56
Tetrachloro-m-xylene [1]	66.4	30-150		4/6/23 12:56
Tetrachloro-m-xylene [2]	73.7	30-150		4/6/23 12:56

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Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: MW-TP-8-032923 | Sampled: 3/29/2023 13:30

Sample ID: 23C3630-04

Sample Matrix: Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	ND	0.050	0.045	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:27	HNN
Antimony	ND	0.050	0.0082	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:27	HNN
Arsenic	ND	0.010	0.0047	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:27	HNN
Barium	0.13	0.050	0.0051	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:27	HNN
Beryllium	ND	0.0040	0.0012	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:27	HNN
Cadmium	ND	0.0040	0.0018	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:27	HNN
Calcium	230	0.50	0.22	mg/L	1	MS-19	SW-846 6010D	4/3/23	4/10/23 12:50	ATP
Chromium	ND	0.010	0.0068	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:27	HNN
Cobalt	0.018	0.010	0.0021	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:27	HNN
Copper	0.0058	0.010	0.0036	mg/L	1	J	SW-846 6010D	4/3/23	4/3/23 18:27	HNN
Iron	19	0.050	0.047	mg/L	1		SW-846 6010D	4/3/23	4/10/23 12:50	ATP
Lead	ND	0.010	0.0068	mg/L	1		SW-846 6010D	4/3/23	4/10/23 12:50	ATP
Magnesium	22	0.050	0.0095	mg/L	1		SW-846 6010D	4/3/23	4/10/23 12:50	ATP
Manganese	2.0	0.010	0.0033	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:27	HNN
Mercury	ND	0.00010	0.000040	mg/L	1		SW-846 7470A	4/3/23	4/3/23 16:03	AAJ
Nickel	0.021	0.010	0.0098	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:27	HNN
Potassium	7.1	2.0	0.28	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:27	HNN
Selenium	ND	0.050	0.014	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:27	HNN
Silver	ND	0.010	0.0035	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:27	HNN
Sodium	4.6	2.0	1.2	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:27	HNN
Thallium	ND	0.050	0.021	mg/L	1		SW-846 6010D	4/3/23	4/10/23 12:50	ATP
Vanadium	ND	0.010	0.0038	mg/L	1		SW-846 6010D	4/3/23	4/10/23 12:50	ATP
Zinc	0.079	0.010	0.0042	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:27	HNN
Boron	0.20	0.10	0.073	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:27	HNN
Hardness	670	1.4		mg/L	1	MS-19	SW-846 6010	4/3/23	4/10/23 12:50	ATP

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Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: MW-TP-8-032923 | Sampled: 3/29/2023 13:30

Sample ID: 23C3630-04

Sample Matrix: Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	3.2	0.30	0.17	mg/L	1		SM19-23 4500 NH3 C	4/10/23	4/11/23 15:15	EC
Bromide	ND	0.50	0.15	mg/L	1		EPA 300.0	4/18/23	4/18/23 18:55	IS
Chemical Oxygen Demand	39	15	13	mg/L	1		EPA 410.4	4/17/23	4/17/23 12:33	IS
Chloride	4.9	1.0	0.65	mg/L	1		EPA 300.0	4/18/23	4/18/23 18:55	IS
Sulfate	100	5.0	1.6	mg/L	5		EPA 300.0	4/19/23	4/19/23 11:37	is
Total Organic Carbon	34	1.0	0.56	mg/L	1		SM 21-23 5310B	4/17/23	4/17/23 16:55	QH
Alkalinity to pH 4.5	580	1.0	0.70	mg/L	1	PR-18	SM21-23 2320B	4/9/23	4/9/23 14:25	DET

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Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: MW-TP-8-032923 | Sampled: 3/29/2023 13:30

Sample ID: 23C3630-04

Sample Matrix: Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Dissolved)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Dissolved Solids	720	10	4.9	mg/L	1		SM21-23 2540C	4/4/23	4/4/23 12:55	LL

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Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: MW-TP-8-032923 | Sampled: 3/29/2023 13:30

Sample ID: 23C3630-04

Sample Matrix: Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached	-	-		ug/L	1		SM4500 CN C			PALI

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Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: MW-TP-7-032923 | Sampled: 3/29/2023 14:30

Sample ID: 23C3630-05

Sample Matrix: Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	34	50	2.0	µg/L	1	J	SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Acrylonitrile	ND	5.0	0.47	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.13	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Bromochloromethane	ND	1.0	0.28	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Bromoform	ND	1.0	0.41	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Bromomethane	ND	2.0	1.3	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
2-Butanone (MEK)	3.4	20	1.7	µg/L	1	J	SW-846 8260D	4/4/23	4/4/23 16:40	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.3	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
n-Butylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
sec-Butylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
tert-Butylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Carbon Disulfide	ND	5.0	1.6	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Chlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Chlorodibromomethane	ND	0.50	0.20	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Chloroethane	ND	2.0	0.34	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Chloroform	ND	2.0	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Chloromethane	ND	2.0	0.50	µg/L	1	V-05	SW-846 8260D	4/4/23	4/4/23 16:40	EEH
2-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
4-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.85	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.16	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Dibromomethane	ND	1.0	0.32	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
1,2-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
1,3-Dichlorobenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	1.5	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.16	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
1,1-Dichloroethane	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
1,2-Dichloroethane	ND	1.0	0.30	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
1,1-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
1,2-Dichloropropane	ND	1.0	0.19	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
1,3-Dichloropropane	ND	0.50	0.12	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
2,2-Dichloropropane	ND	1.0	0.35	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
1,1-Dichloropropene	ND	2.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
trans-1,3-Dichloropropene	ND	0.50	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Diethyl Ether	ND	2.0	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH

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Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: MW-TP-7-032923 | Sampled: 3/29/2023 14:30

Sample ID: 23C3630-05

Sample Matrix: Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.20	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
1,4-Dioxane	ND	50	18	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Ethylbenzene	ND	1.0	0.22	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
2-Hexanone (MBK)	ND	10	1.2	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.13	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Methyl Acetate	ND	1.0	0.61	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Methyl Cyclohexane	0.36	1.0	0.16	µg/L	1	J	SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Methylene Chloride	ND	5.0	0.18	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.3	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Naphthalene	ND	2.0	0.38	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
n-Propylbenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Tetrachloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Tetrahydrofuran	ND	10	0.49	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Toluene	ND	1.0	0.22	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.34	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
1,1,1-Trichloroethane	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
1,1,2-Trichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Trichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Trichlorofluoromethane (Freon 11)	1.4	2.0	0.15	µg/L	1	J	SW-846 8260D	4/4/23	4/4/23 16:40	EEH
1,2,3-Trichloropropane	ND	2.0	0.28	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.21	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.20	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
Vinyl Chloride	ND	2.0	0.24	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
m+p Xylene	ND	2.0	0.49	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH
o-Xylene	ND	1.0	0.24	µg/L	1		SW-846 8260D	4/4/23	4/4/23 16:40	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	94.7	70-130		4/4/23 16:40
Toluene-d8	100	70-130		4/4/23 16:40
4-Bromofluorobenzene	97.5	70-130		4/4/23 16:40

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

Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: MW-TP-7-032923 | Sampled: 3/29/2023 14:30

Sample ID: 23C3630-05

Sample Matrix: Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	4.8	0.51	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Acenaphthylene	ND	4.8	0.53	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Acetophenone	ND	9.5	0.48	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Aniline	ND	4.8	0.57	µg/L	1	V-05	SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Anthracene	ND	4.8	0.47	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Benzidine	ND	19	9.9	µg/L	1	L-04, V-04, V-05	SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Benzo(a)anthracene	ND	4.8	0.44	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Benzo(a)pyrene	ND	4.8	0.66	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Benzo(b)fluoranthene	ND	4.8	0.52	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Benzo(g,h,i)perylene	ND	4.8	0.65	µg/L	1	V-06	SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Benzo(k)fluoranthene	ND	4.8	0.60	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Benzoic Acid	9.6	9.5	8.0	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Bis(2-chloroethoxy)methane	ND	9.5	0.40	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Bis(2-chloroethyl)ether	ND	9.5	0.47	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Bis(2-chloroisopropyl)ether	ND	9.5	0.61	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Bis(2-Ethylhexyl)phthalate	ND	9.5	0.80	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
4-Bromophenylphenylether	ND	9.5	0.50	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Butylbenzylphthalate	ND	9.5	0.63	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Carbazole	ND	9.5	0.43	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
4-Chloroaniline	ND	9.5	0.59	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
4-Chloro-3-methylphenol	ND	9.5	0.50	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
2-Chloronaphthalene	ND	9.5	0.50	µg/L	1	L-04	SW-846 8270E	4/5/23	4/6/23 18:10	AR2
2-Chlorophenol	ND	9.5	0.44	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
4-Chlorophenylphenylether	ND	9.5	0.52	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Chrysene	ND	4.8	0.42	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Dibenz(a,h)anthracene	ND	4.8	0.70	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Dibenzofuran	ND	4.8	0.53	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Di-n-butylphthalate	ND	9.5	0.47	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
1,2-Dichlorobenzene	ND	4.8	0.61	µg/L	1	L-04	SW-846 8270E	4/5/23	4/6/23 18:10	AR2
1,3-Dichlorobenzene	ND	4.8	0.61	µg/L	1	L-04	SW-846 8270E	4/5/23	4/6/23 18:10	AR2
1,4-Dichlorobenzene	ND	4.8	0.59	µg/L	1	L-04	SW-846 8270E	4/5/23	4/6/23 18:10	AR2
3,3-Dichlorobenzidine	ND	9.5	0.74	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
2,4-Dichlorophenol	ND	9.5	0.47	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Diethylphthalate	ND	9.5	0.40	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
2,4-Dimethylphenol	ND	9.5	0.48	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Dimethylphthalate	ND	9.5	0.37	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
4,6-Dinitro-2-methylphenol	ND	9.5	8.1	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
2,4-Dinitrophenol	ND	9.5	8.1	µg/L	1	V-04, V-06	SW-846 8270E	4/5/23	4/6/23 18:10	AR2
2,4-Dinitrotoluene	ND	9.5	0.64	µg/L	1	V-06	SW-846 8270E	4/5/23	4/6/23 18:10	AR2
2,6-Dinitrotoluene	ND	9.5	0.54	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Di-n-octylphthalate	ND	9.5	3.0	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
1,2-Diphenylhydrazine/Azobenzene	ND	9.5	0.54	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Fluoranthene	ND	4.8	0.46	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Fluorene	ND	4.8	0.51	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2

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

Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: MW-TP-7-032923 | Sampled: 3/29/2023 14:30

Sample ID: 23C3630-05

Sample Matrix: Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	9.5	0.55	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Hexachlorobutadiene	ND	9.5	0.71	µg/L	1	L-04	SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Hexachlorocyclopentadiene	ND	9.5	5.7	µg/L	1	L-04	SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Hexachloroethane	ND	9.5	0.68	µg/L	1	L-04	SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Indeno(1,2,3-cd)pyrene	ND	4.8	0.75	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Isophorone	ND	9.5	0.49	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
1-Methylnaphthalene	ND	4.8	0.55	µg/L	1	L-04	SW-846 8270E	4/5/23	4/6/23 18:10	AR2
2-Methylnaphthalene	ND	4.8	0.64	µg/L	1	L-04	SW-846 8270E	4/5/23	4/6/23 18:10	AR2
2-Methylphenol	ND	9.5	0.47	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
3/4-Methylphenol	ND	9.5	0.41	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Naphthalene	ND	4.8	0.57	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
2-Nitroaniline	ND	9.5	0.69	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
3-Nitroaniline	ND	9.5	0.56	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
4-Nitroaniline	ND	9.5	0.65	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Nitrobenzene	ND	9.5	0.55	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
2-Nitrophenol	ND	9.5	0.49	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
4-Nitrophenol	ND	9.5	1.8	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
N-Nitrosodimethylamine	ND	9.5	0.54	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
N-Nitrosodiphenylamine/Diphenylamine	ND	9.5	0.41	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
N-Nitrosodi-n-propylamine	ND	9.5	0.55	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Pentachloronitrobenzene	ND	9.5	0.65	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Pentachlorophenol	ND	9.5	0.64	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Phenanthrene	ND	4.8	0.49	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Phenol	ND	9.5	0.18	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Pyrene	ND	4.8	0.62	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
Pyridine	ND	4.8	3.4	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
1,2,4,5-Tetrachlorobenzene	ND	9.5	0.63	µg/L	1	L-04	SW-846 8270E	4/5/23	4/6/23 18:10	AR2
1,2,4-Trichlorobenzene	ND	4.8	0.63	µg/L	1	L-04	SW-846 8270E	4/5/23	4/6/23 18:10	AR2
2,4,5-Trichlorophenol	ND	9.5	0.52	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2
2,4,6-Trichlorophenol	ND	9.5	0.45	µg/L	1		SW-846 8270E	4/5/23	4/6/23 18:10	AR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	34.2	15-110		4/6/23 18:10
Phenol-d6	23.8	15-110		4/6/23 18:10
Nitrobenzene-d5	62.6	30-130		4/6/23 18:10
2-Fluorobiphenyl	50.5	30-130		4/6/23 18:10
2,4,6-Tribromophenol	80.5	15-110		4/6/23 18:10
p-Terphenyl-d14	78.3	30-130		4/6/23 18:10

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

Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: MW-TP-7-032923 | Sampled: 3/29/2023 14:30

Sample ID: 23C3630-05

Sample Matrix: Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	0.18	0.20	0.032	µg/L	1	J, L-06	SW-846 8270E	4/4/23	4/6/23 21:59	SPF

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
1,4-Dioxane-d8	17.8	15-110		4/6/23 21:59	

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

Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: MW-TP-7-032923 | Sampled: 3/29/2023 14:30

Sample ID: 23C3630-05

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	84	1.9	0.71	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
Perfluorobutanesulfonic acid (PFBS)	4.9	1.9	0.70	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
Perfluoropentanoic acid (PFPeA)	45	1.9	0.76	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
Perfluorohexanoic acid (PFHxA)	41	1.9	0.78	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
11Cl-PF3OUdS (F53B Major)	ND	1.9	0.72	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
9Cl-PF3ONS (F53B Minor)	ND	1.9	0.70	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9	0.99	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9	0.56	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9	0.91	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
Perfluorodecanoic acid (PFDA)	0.88	1.9	0.79	ng/L	1	J	SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
Perfluorododecanoic acid (PFDoA)	ND	1.9	0.88	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.70	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
Perfluoroheptanesulfonic acid (PFHpS)	5.4	1.9	0.78	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
N-EtFOSAA (NEtFOSAA)	0.90	1.9	0.76	ng/L	1	L-07, J	SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
N-MeFOSAA (NMeFOSAA)	ND	1.9	0.99	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
Perfluorotetradecanoic acid (PFTA)	ND	1.9	0.91	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
Perfluorotridecanoic acid (PFTrDA)	ND	1.9	0.79	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9	0.73	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
Perfluorodecanesulfonic acid (PFDS)	ND	1.9	0.98	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
Perfluorooctanesulfonamide (FOSA)	ND	1.9	0.97	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
Perfluorononanesulfonic acid (PFNS)	ND	1.9	0.97	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.9	1.0	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
Perfluoro-1-butanesulfonamide (FBSA)	ND	1.9	0.74	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
Perfluorohexanesulfonic acid (PFHxS)	7.0	1.9	0.68	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
Perfluoro-4-oxapentanoic acid (PFMPA)	0.86	1.9	0.68	ng/L	1	J	SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9	0.62	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9	1.1	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
Perfluoropetanesulfonic acid (PFPeS)	1.8	1.9	0.72	ng/L	1	PF-20, J	SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
Perfluoroundecanoic acid (PFUnA)	ND	1.9	0.81	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.74	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
Perfluoroheptanoic acid (PFHpA)	31	1.9	0.80	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
Perfluorooctanoic acid (PFOA)	160	1.9	1.3	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB
Perfluorooctanesulfonic acid (PFOS)	200	19	8.1	ng/L	10	PF-19	SOP-454 PFAS	4/6/23	4/14/23 21:53	RRB
Perfluorononanoic acid (PFNA)	9.5	1.9	0.88	ng/L	1		SOP-454 PFAS	4/6/23	4/12/23 18:09	RRB

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Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: MW-TP-7-032923 | Sampled: 3/29/2023 14:30

Sample ID: 23C3630-05

Sample Matrix: Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	0.056	µg/L	1		SW-846 8082A	4/4/23	4/6/23 13:14	SFM
Aroclor-1221 [1]	ND	0.20	0.078	µg/L	1		SW-846 8082A	4/4/23	4/6/23 13:14	SFM
Aroclor-1232 [1]	ND	0.20	0.070	µg/L	1		SW-846 8082A	4/4/23	4/6/23 13:14	SFM
Aroclor-1242 [1]	ND	0.20	0.075	µg/L	1		SW-846 8082A	4/4/23	4/6/23 13:14	SFM
Aroclor-1248 [1]	ND	0.20	0.079	µg/L	1		SW-846 8082A	4/4/23	4/6/23 13:14	SFM
Aroclor-1254 [1]	ND	0.20	0.078	µg/L	1		SW-846 8082A	4/4/23	4/6/23 13:14	SFM
Aroclor-1260 [1]	ND	0.20	0.058	µg/L	1		SW-846 8082A	4/4/23	4/6/23 13:14	SFM
Aroclor-1262 [1]	ND	0.20	0.090	µg/L	1		SW-846 8082A	4/4/23	4/6/23 13:14	SFM
Aroclor-1268 [1]	ND	0.20	0.072	µg/L	1		SW-846 8082A	4/4/23	4/6/23 13:14	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	84.1	30-150		4/6/23 13:14
Decachlorobiphenyl [2]	91.5	30-150		4/6/23 13:14
Tetrachloro-m-xylene [1]	63.4	30-150		4/6/23 13:14
Tetrachloro-m-xylene [2]	67.7	30-150		4/6/23 13:14

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Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: MW-TP-7-032923 | Sampled: 3/29/2023 14:30

Sample ID: 23C3630-05

Sample Matrix: Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	0.051	0.050	0.045	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:34	HNN
Antimony	ND	0.050	0.0082	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:34	HNN
Arsenic	ND	0.010	0.0047	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:34	HNN
Barium	0.19	0.050	0.0051	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:34	HNN
Beryllium	ND	0.0040	0.0012	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:34	HNN
Cadmium	ND	0.0040	0.0018	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:34	HNN
Calcium	270	0.50	0.22	mg/L	1		SW-846 6010D	4/3/23	4/10/23 12:56	ATP
Chromium	ND	0.010	0.0068	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:34	HNN
Cobalt	0.0075	0.010	0.0021	mg/L	1	J	SW-846 6010D	4/3/23	4/3/23 18:34	HNN
Copper	0.0085	0.010	0.0036	mg/L	1	J	SW-846 6010D	4/3/23	4/3/23 18:34	HNN
Iron	1.5	0.050	0.047	mg/L	1		SW-846 6010D	4/3/23	4/10/23 12:56	ATP
Lead	ND	0.010	0.0068	mg/L	1		SW-846 6010D	4/3/23	4/10/23 12:56	ATP
Magnesium	17	0.050	0.0095	mg/L	1		SW-846 6010D	4/3/23	4/10/23 12:56	ATP
Manganese	2.7	0.010	0.0033	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:34	HNN
Mercury	ND	0.00010	0.000040	mg/L	1		SW-846 7470A	4/3/23	4/3/23 16:04	AAJ
Nickel	0.014	0.010	0.0098	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:34	HNN
Potassium	12	2.0	0.28	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:34	HNN
Selenium	ND	0.050	0.014	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:34	HNN
Silver	ND	0.010	0.0035	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:34	HNN
Sodium	7.8	2.0	1.2	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:34	HNN
Thallium	ND	0.050	0.021	mg/L	1		SW-846 6010D	4/3/23	4/10/23 12:56	ATP
Vanadium	ND	0.010	0.0038	mg/L	1		SW-846 6010D	4/3/23	4/10/23 12:56	ATP
Zinc	0.34	0.010	0.0042	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:34	HNN
Boron	0.11	0.10	0.073	mg/L	1		SW-846 6010D	4/3/23	4/3/23 18:34	HNN
Hardness	750	1.4		mg/L	1		SW-846 6010	4/3/23	4/10/23 12:56	ATP

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Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: MW-TP-7-032923 | Sampled: 3/29/2023 14:30

Sample ID: 23C3630-05

Sample Matrix: Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	0.84	0.30	0.17	mg/L	1		SM19-23 4500 NH3 C	4/10/23	4/11/23 15:16	EC
Bromide	ND	0.50	0.15	mg/L	1		EPA 300.0	4/18/23	4/18/23 19:17	IS
Chemical Oxygen Demand	60	15	13	mg/L	1		EPA 410.4	4/17/23	4/17/23 12:33	IS
Chloride	6.7	1.0	0.65	mg/L	1		EPA 300.0	4/18/23	4/18/23 19:17	IS
Sulfate	220	5.0	1.6	mg/L	5		EPA 300.0	4/19/23	4/19/23 11:59	is
Total Organic Carbon	22	1.0	0.56	mg/L	1	MS-07	SM 21-23 5310B	4/17/23	4/17/23 17:24	QH
Alkalinity to pH 4.5	560	1.0	0.70	mg/L	1	PR-18	SM21-23 2320B	4/9/23	4/9/23 14:25	DET

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Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: MW-TP-7-032923 | Sampled: 3/29/2023 14:30

Sample ID: 23C3630-05

Sample Matrix: Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Dissolved)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Dissolved Solids	870	10	4.9	mg/L	1		SM21-23 2540C	4/4/23	4/4/23 12:55	LL

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Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: MW-TP-7-032923 | Sampled: 3/29/2023 14:30

Sample ID: 23C3630-05

Sample Matrix: Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached	-	-		ug/L	1		SM4500 CN C			PALI

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Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: TB-032923 | Sampled: 3/29/2023 00:00

Sample ID: 23C3630-06

Sample Matrix: Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	2.0	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Acrylonitrile	ND	5.0	0.47	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.13	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Bromochloromethane	ND	1.0	0.28	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Bromoform	ND	1.0	0.41	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Bromomethane	ND	2.0	1.3	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
2-Butanone (MEK)	ND	20	1.7	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.3	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
n-Butylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
sec-Butylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
tert-Butylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Carbon Disulfide	ND	5.0	1.6	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Chlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Chlorodibromomethane	ND	0.50	0.20	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Chloroethane	ND	2.0	0.34	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Chloroform	ND	2.0	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Chloromethane	ND	2.0	0.50	µg/L	1	V-05	SW-846 8260D	4/4/23	4/4/23 11:11	EEH
2-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
4-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.85	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.16	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Dibromomethane	ND	1.0	0.32	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
1,2-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
1,3-Dichlorobenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	1.5	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.16	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
1,1-Dichloroethane	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
1,2-Dichloroethane	ND	1.0	0.30	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
1,1-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
1,2-Dichloropropane	ND	1.0	0.19	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
1,3-Dichloropropane	ND	0.50	0.12	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
2,2-Dichloropropane	ND	1.0	0.35	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
1,1-Dichloropropene	ND	2.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
trans-1,3-Dichloropropene	ND	0.50	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Diethyl Ether	ND	2.0	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH

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Project Location: Incinerator Rd Utica, NY | Sample Description: | Work Order: 23C3630

Date Received: 3/31/2023

Field Sample #: TB-032923 | Sampled: 3/29/2023 00:00

Sample ID: 23C3630-06

Sample Matrix: Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.20	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
1,4-Dioxane	ND	50	18	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Ethylbenzene	ND	1.0	0.22	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
2-Hexanone (MBK)	ND	10	1.2	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.13	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Methyl Acetate	ND	1.0	0.61	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Methyl Cyclohexane	ND	1.0	0.16	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Methylene Chloride	ND	5.0	0.18	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.3	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Naphthalene	ND	2.0	0.38	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
n-Propylbenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.14	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Tetrachloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Tetrahydrofuran	ND	10	0.49	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Toluene	ND	1.0	0.22	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.34	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
1,1,1-Trichloroethane	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
1,1,2-Trichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Trichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
1,2,3-Trichloropropane	ND	2.0	0.28	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.21	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.20	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
Vinyl Chloride	ND	2.0	0.24	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
m+p Xylene	ND	2.0	0.49	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH
o-Xylene	ND	1.0	0.24	µg/L	1		SW-846 8260D	4/4/23	4/4/23 11:11	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	92.0	70-130		4/4/23 11:11
Toluene-d8	97.3	70-130		4/4/23 11:11
4-Bromofluorobenzene	98.7	70-130		4/4/23 11:11

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Sample Extraction Data

Prep Method: EPA 300.0 **Analytical Method: EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23C3630-04 [MW-TP-8-032923]	B337499	10.0	10.0	04/18/23
23C3630-05 [MW-TP-7-032923]	B337499	10.0	10.0	04/18/23

Prep Method: EPA 300.0 **Analytical Method: EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23C3630-04 [MW-TP-8-032923]	B337503	10.0	10.0	04/18/23
23C3630-05 [MW-TP-7-032923]	B337503	10.0	10.0	04/18/23

Prep Method: EPA 300.0 **Analytical Method: EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23C3630-04 [MW-TP-8-032923]	B337578	10.0	10.0	04/19/23
23C3630-05 [MW-TP-7-032923]	B337578	10.0	10.0	04/19/23

EPA 410.4

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23C3630-04 [MW-TP-8-032923]	B337261	2.00	2.00	04/17/23
23C3630-05 [MW-TP-7-032923]	B337261	2.00	2.00	04/17/23

SM 21-23 5310B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23C3630-04 [MW-TP-8-032923]	B337332	50.0	50.0	04/17/23
23C3630-05 [MW-TP-7-032923]	B337332	50.0	50.0	04/17/23

Prep Method: SM 4500-NH3 C **Analytical Method: SM19-23 4500 NH3 C**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23C3630-04 [MW-TP-8-032923]	B336667	100	100	04/10/23
23C3630-05 [MW-TP-7-032923]	B336667	100	100	04/10/23

SM21-23 2320B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23C3630-04 [MW-TP-8-032923]	B336616	100	100	04/09/23
23C3630-05 [MW-TP-7-032923]	B336616	100	100	04/09/23

SM21-23 2540C

Lab Number [Field ID]	Batch	Initial [mL]	Date
23C3630-04 [MW-TP-8-032923]	B336005	50.0	04/04/23
23C3630-05 [MW-TP-7-032923]	B336005	50.0	04/04/23

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Sample Extraction Data

Prep Method: SOP 454-PFAAS **Analytical Method: SOP-454 PFAS**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23C3630-01 [MW-4-032923]	B335924	46.9	1.00	04/06/23
23C3630-02 [CHA-1S-032923]	B335924	120	1.00	04/06/23
23C3630-02RE1 [CHA-1S-032923]	B335924	120	1.00	04/06/23
23C3630-03 [FB-032923]	B335924	286	1.00	04/06/23
23C3630-04 [MW-TP-8-032923]	B335924	117	1.00	04/06/23
23C3630-04RE1 [MW-TP-8-032923]	B335924	117	1.00	04/06/23
23C3630-05 [MW-TP-7-032923]	B335924	263	1.00	04/06/23
23C3630-05RE2 [MW-TP-7-032923]	B335924	263	1.00	04/06/23

Prep Method: SW-846 3005A **Analytical Method: SW-846 6010**

Lab Number [Field ID]	Batch	Initial [mL]	Date
23C3630-04 [MW-TP-8-032923]	B335903	50.0	04/03/23
23C3630-05 [MW-TP-7-032923]	B335903	50.0	04/03/23

Prep Method: SW-846 3005A **Analytical Method: SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23C3630-04 [MW-TP-8-032923]	B335903	50.0	50.0	04/03/23
23C3630-05 [MW-TP-7-032923]	B335903	50.0	50.0	04/03/23

Prep Method: SW-846 7470A Prep **Analytical Method: SW-846 7470A**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23C3630-04 [MW-TP-8-032923]	B335901	10.0	10.0	04/03/23
23C3630-05 [MW-TP-7-032923]	B335901	10.0	10.0	04/03/23

Prep Method: SW-846 3510C **Analytical Method: SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23C3630-01 [MW-4-032923]	B336013	1020	10.0	04/04/23
23C3630-02 [CHA-1S-032923]	B336013	1030	10.0	04/04/23
23C3630-04 [MW-TP-8-032923]	B336013	1000	10.0	04/04/23
23C3630-05 [MW-TP-7-032923]	B336013	1020	10.0	04/04/23

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23C3630-04 [MW-TP-8-032923]	B336009	5	5.00	04/04/23
23C3630-05 [MW-TP-7-032923]	B336009	5	5.00	04/04/23
23C3630-06 [TB-032923]	B336009	5	5.00	04/04/23

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23C3630-01 [MW-4-032923]	B336016	915	1.00	04/04/23
23C3630-02 [CHA-1S-032923]	B336016	990	1.00	04/04/23

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Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23C3630-04 [MW-TP-8-032923]	B336016	1020	1.00	04/04/23
23C3630-05 [MW-TP-7-032923]	B336016	1020	1.00	04/04/23

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23C3630-04 [MW-TP-8-032923]	B336097	1010	1.00	04/05/23
23C3630-05 [MW-TP-7-032923]	B336097	1050	1.00	04/05/23

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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
Batch B336009 - SW-846 5030B										
Blank (B336009-BLK1)				Prepared & Analyzed: 04/04/23						
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							V-05
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							
Iodomethane	ND	20	µg/L							
Isopropylbenzene (Cumene)	ND	1.0	µg/L							
p-Isopropyltoluene (p-Cymene)	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
Batch B336009 - SW-846 5030B										
Blank (B336009-BLK1)				Prepared & Analyzed: 04/04/23						
Methyl Acetate	ND	1.0	µg/L							
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 Acetate	ND	20	µg/L							
Vinyl Chloride	ND	2.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Xylenes (total)	ND	1.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	*23.1*		µg/L	25.0		92.4	70-130			
Surrogate: Toluene-d8	*24.9*		µg/L	25.0		99.7	70-130			
Surrogate: 4-Bromofluorobenzene	*24.6*		µg/L	25.0		98.5	70-130			
LCS (B336009-BS1)				Prepared & Analyzed: 04/04/23						
Acetone	98.5	50	µg/L	100		98.5	70-160			†
Acrylonitrile	9.60	5.0	µg/L	10.0		96.0	70-130			
tert-Amyl Methyl Ether (TAME)	8.76	0.50	µg/L	10.0		87.6	70-130			
Benzene	9.18	1.0	µg/L	10.0		91.8	70-130			
Bromobenzene	9.77	1.0	µg/L	10.0		97.7	70-130			
Bromochloromethane	10.1	1.0	µg/L	10.0		101	70-130			
Bromodichloromethane	9.64	0.50	µg/L	10.0		96.4	70-130			
Bromoform	10.4	1.0	µg/L	10.0		104	70-130			
Bromomethane	8.70	2.0	µg/L	10.0		87.0	40-160			†
2-Butanone (MEK)	101	20	µg/L	100		101	40-160			†
tert-Butyl Alcohol (TBA)	99.1	20	µg/L	100		99.1	40-160			†
n-Butylbenzene	9.86	1.0	µg/L	10.0		98.6	70-130			
sec-Butylbenzene	9.75	1.0	µg/L	10.0		97.5	70-130			
tert-Butylbenzene	9.70	1.0	µg/L	10.0		97.0	70-130			
tert-Butyl Ethyl Ether (TBEE)	8.96	0.50	µg/L	10.0		89.6	70-130			
Carbon Disulfide	108	5.0	µg/L	100		108	70-130			
Carbon Tetrachloride	10.2	5.0	µg/L	10.0		102	70-130			
Chlorobenzene	10.2	1.0	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 B336009 - SW-846 5030B											
LCS (B336009-BS1)				Prepared & Analyzed: 04/04/23							
Chlorodibromomethane	10.2	0.50	µg/L	10.0		102	70-130				
Chloroethane	10.7	2.0	µg/L	10.0		107	70-130				
Chloroform	9.29	2.0	µg/L	10.0		92.9	70-130				
Chloromethane	7.13	2.0	µg/L	10.0		71.3	40-160			V-05	†
2-Chlorotoluene	9.05	1.0	µg/L	10.0		90.5	70-130				
4-Chlorotoluene	9.86	1.0	µg/L	10.0		98.6	70-130				
1,2-Dibromo-3-chloropropane (DBCP)	9.47	5.0	µg/L	10.0		94.7	70-130				
1,2-Dibromoethane (EDB)	9.82	0.50	µg/L	10.0		98.2	70-130				
Dibromomethane	9.73	1.0	µg/L	10.0		97.3	70-130				
1,2-Dichlorobenzene	9.57	1.0	µg/L	10.0		95.7	70-130				
1,3-Dichlorobenzene	9.73	1.0	µg/L	10.0		97.3	70-130				
1,4-Dichlorobenzene	9.48	1.0	µg/L	10.0		94.8	70-130				
trans-1,4-Dichloro-2-butene	9.07	2.0	µg/L	10.0		90.7	70-130				
Dichlorodifluoromethane (Freon 12)	9.59	2.0	µg/L	10.0		95.9	40-160				†
1,1-Dichloroethane	9.48	1.0	µg/L	10.0		94.8	70-130				
1,2-Dichloroethane	8.86	1.0	µg/L	10.0		88.6	70-130				
1,1-Dichloroethylene	10.3	1.0	µg/L	10.0		103	70-130				
cis-1,2-Dichloroethylene	9.62	1.0	µg/L	10.0		96.2	70-130				
trans-1,2-Dichloroethylene	9.41	1.0	µg/L	10.0		94.1	70-130				
1,2-Dichloropropane	9.26	1.0	µg/L	10.0		92.6	70-130				
1,3-Dichloropropane	9.48	0.50	µg/L	10.0		94.8	70-130				
2,2-Dichloropropane	9.90	1.0	µg/L	10.0		99.0	40-130				†
1,1-Dichloropropene	9.69	2.0	µg/L	10.0		96.9	70-130				
cis-1,3-Dichloropropene	9.38	0.50	µg/L	10.0		93.8	70-130				
trans-1,3-Dichloropropene	8.92	0.50	µg/L	10.0		89.2	70-130				
Diethyl Ether	10.2	2.0	µg/L	10.0		102	70-130				
Diisopropyl Ether (DIPE)	9.37	0.50	µg/L	10.0		93.7	70-130				
1,4-Dioxane	99.9	50	µg/L	100		99.9	40-130				†
Ethylbenzene	9.94	1.0	µg/L	10.0		99.4	70-130				
Hexachlorobutadiene	10.4	0.60	µg/L	10.0		104	70-130				
2-Hexanone (MBK)	95.6	10	µg/L	100		95.6	70-160				†
Iodomethane	94.7	20	µg/L	100		94.7	70-130				
Isopropylbenzene (Cumene)	10.0	1.0	µg/L	10.0		100	70-130				
p-Isopropyltoluene (p-Cymene)	9.80	1.0	µg/L	10.0		98.0	70-130				
Methyl Acetate	9.84	1.0	µg/L	10.0		98.4	70-130				
Methyl tert-Butyl Ether (MTBE)	9.33	1.0	µg/L	10.0		93.3	70-130				
Methyl Cyclohexane	9.61	1.0	µg/L	10.0		96.1	70-130				
Methylene Chloride	10.4	5.0	µg/L	10.0		104	70-130				
4-Methyl-2-pentanone (MIBK)	97.3	10	µg/L	100		97.3	70-160				†
Naphthalene	9.41	2.0	µg/L	10.0		94.1	40-130				†
n-Propylbenzene	9.88	1.0	µg/L	10.0		98.8	70-130				
Styrene	10.0	1.0	µg/L	10.0		100	70-130				
1,1,1,2-Tetrachloroethane	10.1	1.0	µg/L	10.0		101	70-130				
1,1,2,2-Tetrachloroethane	10.1	0.50	µg/L	10.0		101	70-130				
Tetrachloroethylene	9.96	1.0	µg/L	10.0		99.6	70-130				
Tetrahydrofuran	9.52	10	µg/L	10.0		95.2	70-130			J	
Toluene	9.57	1.0	µg/L	10.0		95.7	70-130				
1,2,3-Trichlorobenzene	9.61	5.0	µg/L	10.0		96.1	70-130				
1,2,4-Trichlorobenzene	9.36	1.0	µg/L	10.0		93.6	70-130				
1,3,5-Trichlorobenzene	9.71	1.0	µg/L	10.0		97.1	70-130				
1,1,1-Trichloroethane	9.88	1.0	µg/L	10.0		98.8	70-130				
1,1,2-Trichloroethane	9.70	1.0	µg/L	10.0		97.0	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 B336009 - SW-846 5030B											
LCS (B336009-BS1)				Prepared & Analyzed: 04/04/23							
Trichloroethylene	9.45	1.0	µg/L	10.0		94.5	70-130				
Trichlorofluoromethane (Freon 11)	10.8	2.0	µg/L	10.0		108	70-130				
1,2,3-Trichloropropane	9.85	2.0	µg/L	10.0		98.5	70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10.7	1.0	µg/L	10.0		107	70-130				
1,2,4-Trimethylbenzene	9.62	1.0	µg/L	10.0		96.2	70-130				
1,3,5-Trimethylbenzene	9.92	1.0	µg/L	10.0		99.2	70-130				
Vinyl Acetate	106	20	µg/L	100		106	70-130				
Vinyl Chloride	12.1	2.0	µg/L	10.0		121	40-160			V-06	†
m+p Xylene	20.0	2.0	µg/L	20.0		100	70-130				
o-Xylene	10.1	1.0	µg/L	10.0		101	70-130				
Xylenes (total)	30.1	1.0	µg/L	30.0		100	0-200				
Surrogate: 1,2-Dichloroethane-d4	*24.2*		µg/L	25.0		96.6	70-130				
Surrogate: Toluene-d8	*24.7*		µg/L	25.0		98.6	70-130				
Surrogate: 4-Bromofluorobenzene	*25.4*		µg/L	25.0		101	70-130				
LCS Dup (B336009-BSD1)				Prepared & Analyzed: 04/04/23							
Acetone	97.4	50	µg/L	100		97.4	70-160	1.14	25		†
Acrylonitrile	9.62	5.0	µg/L	10.0		96.2	70-130	0.208	25		
tert-Amyl Methyl Ether (TAME)	8.58	0.50	µg/L	10.0		85.8	70-130	2.08	25		
Benzene	9.18	1.0	µg/L	10.0		91.8	70-130	0.00	25		
Bromobenzene	9.80	1.0	µg/L	10.0		98.0	70-130	0.307	25		
Bromochloromethane	9.91	1.0	µg/L	10.0		99.1	70-130	1.60	25		
Bromodichloromethane	9.55	0.50	µg/L	10.0		95.5	70-130	0.938	25		
Bromoform	10.3	1.0	µg/L	10.0		103	70-130	1.45	25		
Bromomethane	9.77	2.0	µg/L	10.0		97.7	40-160	11.6	25		†
2-Butanone (MEK)	92.3	20	µg/L	100		92.3	40-160	8.78	25		†
tert-Butyl Alcohol (TBA)	92.9	20	µg/L	100		92.9	40-160	6.54	25		†
n-Butylbenzene	10.1	1.0	µg/L	10.0		101	70-130	2.80	25		
sec-Butylbenzene	10.1	1.0	µg/L	10.0		101	70-130	3.92	25		
tert-Butylbenzene	9.95	1.0	µg/L	10.0		99.5	70-130	2.54	25		
tert-Butyl Ethyl Ether (TBEE)	8.99	0.50	µg/L	10.0		89.9	70-130	0.334	25		
Carbon Disulfide	107	5.0	µg/L	100		107	70-130	0.882	25		
Carbon Tetrachloride	10.5	5.0	µg/L	10.0		105	70-130	3.20	25		
Chlorobenzene	10.3	1.0	µg/L	10.0		103	70-130	0.979	25		
Chlorodibromomethane	10.1	0.50	µg/L	10.0		101	70-130	0.787	25		
Chloroethane	11.2	2.0	µg/L	10.0		112	70-130	4.47	25		
Chloroform	9.15	2.0	µg/L	10.0		91.5	70-130	1.52	25		
Chloromethane	8.38	2.0	µg/L	10.0		83.8	40-160	16.1	25	V-05	†
2-Chlorotoluene	9.23	1.0	µg/L	10.0		92.3	70-130	1.97	25		
4-Chlorotoluene	9.98	1.0	µg/L	10.0		99.8	70-130	1.21	25		
1,2-Dibromo-3-chloropropane (DBCP)	9.24	5.0	µg/L	10.0		92.4	70-130	2.46	25		
1,2-Dibromoethane (EDB)	9.91	0.50	µg/L	10.0		99.1	70-130	0.912	25		
Dibromomethane	9.81	1.0	µg/L	10.0		98.1	70-130	0.819	25		
1,2-Dichlorobenzene	9.69	1.0	µg/L	10.0		96.9	70-130	1.25	25		
1,3-Dichlorobenzene	9.82	1.0	µg/L	10.0		98.2	70-130	0.921	25		
1,4-Dichlorobenzene	9.53	1.0	µg/L	10.0		95.3	70-130	0.526	25		
trans-1,4-Dichloro-2-butene	8.85	2.0	µg/L	10.0		88.5	70-130	2.46	25		
Dichlorodifluoromethane (Freon 12)	9.74	2.0	µg/L	10.0		97.4	40-160	1.55	25		†
1,1-Dichloroethane	9.46	1.0	µg/L	10.0		94.6	70-130	0.211	25		
1,2-Dichloroethane	9.20	1.0	µg/L	10.0		92.0	70-130	3.77	25		
1,1-Dichloroethylene	10.5	1.0	µg/L	10.0		105	70-130	1.93	25		
cis-1,2-Dichloroethylene	9.75	1.0	µg/L	10.0		97.5	70-130	1.34	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	
Batch B336009 - SW-846 5030B											
LCS Dup (B336009-BSD1)				Prepared & Analyzed: 04/04/23							
trans-1,2-Dichloroethylene	9.34	1.0	µg/L	10.0		93.4	70-130	0.747	25		
1,2-Dichloropropane	9.12	1.0	µg/L	10.0		91.2	70-130	1.52	25		
1,3-Dichloropropane	9.39	0.50	µg/L	10.0		93.9	70-130	0.954	25		
2,2-Dichloropropane	9.88	1.0	µg/L	10.0		98.8	40-130	0.202	25		†
1,1-Dichloropropene	9.78	2.0	µg/L	10.0		97.8	70-130	0.925	25		
cis-1,3-Dichloropropene	9.70	0.50	µg/L	10.0		97.0	70-130	3.35	25		
trans-1,3-Dichloropropene	9.24	0.50	µg/L	10.0		92.4	70-130	3.52	25		
Diethyl Ether	9.93	2.0	µg/L	10.0		99.3	70-130	2.88	25		
Diisopropyl Ether (DIPE)	9.41	0.50	µg/L	10.0		94.1	70-130	0.426	25		
1,4-Dioxane	92.1	50	µg/L	100		92.1	40-130	8.18	50		† ‡
Ethylbenzene	10.2	1.0	µg/L	10.0		102	70-130	2.97	25		
Hexachlorobutadiene	10.7	0.60	µg/L	10.0		107	70-130	2.56	25		
2-Hexanone (MBK)	97.9	10	µg/L	100		97.9	70-160	2.29	25		†
Iodomethane	97.7	20	µg/L	100		97.7	70-130	3.20	25		
Isopropylbenzene (Cumene)	10.3	1.0	µg/L	10.0		103	70-130	3.25	25		
p-Isopropyltoluene (p-Cymene)	10.1	1.0	µg/L	10.0		101	70-130	2.92	25		
Methyl Acetate	9.08	1.0	µg/L	10.0		90.8	70-130	8.03	25		
Methyl tert-Butyl Ether (MTBE)	8.99	1.0	µg/L	10.0		89.9	70-130	3.71	25		
Methyl Cyclohexane	10.1	1.0	µg/L	10.0		101	70-130	5.17	25		
Methylene Chloride	10.1	5.0	µg/L	10.0		101	70-130	3.03	25		
4-Methyl-2-pentanone (MIBK)	97.8	10	µg/L	100		97.8	70-160	0.523	25		†
Naphthalene	9.01	2.0	µg/L	10.0		90.1	40-130	4.34	25		†
n-Propylbenzene	10.4	1.0	µg/L	10.0		104	70-130	5.03	25		
Styrene	10.1	1.0	µg/L	10.0		101	70-130	0.896	25		
1,1,1,2-Tetrachloroethane	10.3	1.0	µg/L	10.0		103	70-130	1.76	25		
1,1,2,2-Tetrachloroethane	9.95	0.50	µg/L	10.0		99.5	70-130	1.30	25		
Tetrachloroethylene	10.6	1.0	µg/L	10.0		106	70-130	5.94	25		
Tetrahydrofuran	9.08	10	µg/L	10.0		90.8	70-130	4.73	25	J	
Toluene	9.82	1.0	µg/L	10.0		98.2	70-130	2.58	25		
1,2,3-Trichlorobenzene	9.68	5.0	µg/L	10.0		96.8	70-130	0.726	25		
1,2,4-Trichlorobenzene	9.41	1.0	µg/L	10.0		94.1	70-130	0.533	25		
1,3,5-Trichlorobenzene	10.0	1.0	µg/L	10.0		100	70-130	3.04	25		
1,1,1-Trichloroethane	9.97	1.0	µg/L	10.0		99.7	70-130	0.907	25		
1,1,2-Trichloroethane	9.46	1.0	µg/L	10.0		94.6	70-130	2.51	25		
Trichloroethylene	9.90	1.0	µg/L	10.0		99.0	70-130	4.65	25		
Trichlorofluoromethane (Freon 11)	11.0	2.0	µg/L	10.0		110	70-130	2.57	25		
1,2,3-Trichloropropane	9.71	2.0	µg/L	10.0		97.1	70-130	1.43	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10.6	1.0	µg/L	10.0		106	70-130	1.50	25		
1,2,4-Trimethylbenzene	9.92	1.0	µg/L	10.0		99.2	70-130	3.07	25		
1,3,5-Trimethylbenzene	10.3	1.0	µg/L	10.0		103	70-130	3.47	25		
Vinyl Acetate	102	20	µg/L	100		102	70-130	3.77	25		
Vinyl Chloride	13.0	2.0	µg/L	10.0		130	40-160	7.09	25	V-06	†
m+p Xylene	20.4	2.0	µg/L	20.0		102	70-130	2.03	25		
o-Xylene	10.3	1.0	µg/L	10.0		103	70-130	1.96	25		
Xylenes (total)	30.7	1.0	µg/L	30.0		102	0-200	2.01			
Surrogate: 1,2-Dichloroethane-d4	*23.3*		µg/L	25.0		93.2	70-130				
Surrogate: Toluene-d8	*24.9*		µg/L	25.0		99.8	70-130				
Surrogate: 4-Bromofluorobenzene	*25.1*		µg/L	25.0		100	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
Batch B336097 - SW-846 3510C										
Blank (B336097-BLK1)				Prepared & Analyzed: 04/05/23						
Acenaphthene	ND	5.0	µg/L							
Acenaphthylene	ND	5.0	µg/L							
Acetophenone	ND	10	µg/L							
Aniline	ND	5.0	µg/L							V-05
Anthracene	ND	5.0	µg/L							
Benzidine	ND	20	µg/L							L-04, V-04, V-05
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							L-04
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							L-04
1,3-Dichlorobenzene	ND	5.0	µg/L							L-04
1,4-Dichlorobenzene	ND	5.0	µg/L							L-04
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							V-06
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							L-04
Hexachlorocyclopentadiene	ND	10	µg/L							L-04
Hexachloroethane	ND	10	µg/L							L-04
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L							
Isophorone	ND	10	µg/L							
1-Methylnaphthalene	ND	5.0	µg/L							L-04
2-Methylnaphthalene	ND	5.0	µg/L							L-04

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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 B336097 - SW-846 3510C											
Blank (B336097-BLK1)				Prepared & Analyzed: 04/05/23							
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								V-06
4-Nitroaniline	ND	10	µg/L								
Nitrobenzene	ND	10	µg/L								
2-Nitrophenol	ND	10	µg/L								
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								L-04
1,2,4-Trichlorobenzene	ND	5.0	µg/L								L-04
2,4,5-Trichlorophenol	ND	10	µg/L								
2,4,6-Trichlorophenol	ND	10	µg/L								
Surrogate: 2-Fluorophenol	*88.6*		µg/L	200		44.3		15-110			
Surrogate: Phenol-d6	*64.5*		µg/L	200		32.3		15-110			
Surrogate: Nitrobenzene-d5	*78.9*		µg/L	100		78.9		30-130			
Surrogate: 2-Fluorobiphenyl	*56.9*		µg/L	100		56.9		30-130			
Surrogate: 2,4,6-Tribromophenol	*187*		µg/L	200		93.5		15-110			
Surrogate: p-Terphenyl-d14	*98.2*		µg/L	100		98.2		30-130			
LCS (B336097-BS1)				Prepared & Analyzed: 04/05/23							
Acenaphthene	28.2	5.0	µg/L	50.0		56.5		40-140			
Acenaphthylene	26.4	5.0	µg/L	50.0		52.8		40-140			
Acetophenone	34.3	10	µg/L	50.0		68.6		40-140			
Aniline	27.1	5.0	µg/L	50.0		54.2		40-140			V-05
Anthracene	37.7	5.0	µg/L	50.0		75.5		40-140			
Benzidine	15.0	20	µg/L	50.0		**29.9**	*	40-140			L-04, V-04, V-05, J
Benzo(a)anthracene	37.7	5.0	µg/L	50.0		75.5		40-140			
Benzo(a)pyrene	36.3	5.0	µg/L	50.0		72.7		40-140			
Benzo(b)fluoranthene	40.2	5.0	µg/L	50.0		80.5		40-140			
Benzo(g,h,i)perylene	39.3	5.0	µg/L	50.0		78.6		40-140			V-06
Benzo(k)fluoranthene	42.6	5.0	µg/L	50.0		85.2		40-140			
Benzoic Acid	19.1	10	µg/L	50.0		38.2		10-130			†
Bis(2-chloroethoxy)methane	32.6	10	µg/L	50.0		65.2		40-140			
Bis(2-chloroethyl)ether	30.0	10	µg/L	50.0		59.9		40-140			
Bis(2-chloroisopropyl)ether	31.0	10	µg/L	50.0		61.9		40-140			
Bis(2-Ethylhexyl)phthalate	31.4	10	µg/L	50.0		62.7		40-140			
4-Bromophenylphenylether	31.1	10	µg/L	50.0		62.2		40-140			
Butylbenzylphthalate	33.5	10	µg/L	50.0		67.1		40-140			
Carbazole	39.3	10	µg/L	50.0		78.5		40-140			
4-Chloroaniline	35.3	10	µg/L	50.0		70.6		40-140			
4-Chloro-3-methylphenol	35.7	10	µg/L	50.0		71.4		30-130			
2-Chloronaphthalene	18.2	10	µg/L	50.0		**36.5**	*	40-140			L-04

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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 B336097 - SW-846 3510C												
LCS (B336097-BS1)				Prepared & Analyzed: 04/05/23								
2-Chlorophenol	31.4	10	µg/L	50.0		62.8		30-130				
4-Chlorophenylphenylether	29.7	10	µg/L	50.0		59.5		40-140				
Chrysene	37.1	5.0	µg/L	50.0		74.1		40-140				
Dibenz(a,h)anthracene	36.9	5.0	µg/L	50.0		73.8		40-140				
Dibenzofuran	29.2	5.0	µg/L	50.0		58.5		40-140				
Di-n-butylphthalate	34.0	10	µg/L	50.0		68.0		40-140				
1,2-Dichlorobenzene	16.0	5.0	µg/L	50.0		**32.1**	*	40-140			L-04	
1,3-Dichlorobenzene	14.6	5.0	µg/L	50.0		**29.2**	*	40-140			L-04	
1,4-Dichlorobenzene	14.8	5.0	µg/L	50.0		**29.7**	*	40-140			L-04	
3,3-Dichlorobenzidine	41.4	10	µg/L	50.0		82.8		40-140				
2,4-Dichlorophenol	35.5	10	µg/L	50.0		71.0		30-130				
Diethylphthalate	37.1	10	µg/L	50.0		74.2		40-140				
2,4-Dimethylphenol	35.6	10	µg/L	50.0		71.1		30-130				
Dimethylphthalate	37.0	10	µg/L	50.0		74.0		40-140				
4,6-Dinitro-2-methylphenol	50.6	10	µg/L	50.0		101		30-130				
2,4-Dinitrophenol	53.5	10	µg/L	50.0		107		30-130			V-04, V-06	
2,4-Dinitrotoluene	48.7	10	µg/L	50.0		97.3		40-140			V-06	
2,6-Dinitrotoluene	45.3	10	µg/L	50.0		90.5		40-140				
Di-n-octylphthalate	31.1	10	µg/L	50.0		62.2		40-140				
1,2-Diphenylhydrazine/Azobenzene	30.5	10	µg/L	50.0		61.0		40-140				
Fluoranthene	40.4	5.0	µg/L	50.0		80.7		40-140				
Fluorene	33.3	5.0	µg/L	50.0		66.6		40-140				
Hexachlorobenzene	37.6	10	µg/L	50.0		75.2		40-140				
Hexachlorobutadiene	13.8	10	µg/L	50.0		**27.7**	*	40-140			L-04	
Hexachlorocyclopentadiene	9.74	10	µg/L	50.0		**19.5**	*	30-140			L-04, J	†
Hexachloroethane	12.5	10	µg/L	50.0		**24.9**	*	40-140			L-04	
Indeno(1,2,3-cd)pyrene	37.4	5.0	µg/L	50.0		74.8		40-140				
Isophorone	38.0	10	µg/L	50.0		75.9		40-140				
1-Methylnaphthalene	19.3	5.0	µg/L	50.0		**38.6**	*	40-140			L-04	
2-Methylnaphthalene	17.9	5.0	µg/L	50.0		**35.8**	*	40-140			L-04	
2-Methylphenol	28.8	10	µg/L	50.0		57.6		30-130				
3/4-Methylphenol	30.4	10	µg/L	50.0		60.9		30-130				
Naphthalene	20.3	5.0	µg/L	50.0		40.5		40-140				
2-Nitroaniline	37.0	10	µg/L	50.0		74.0		40-140				
3-Nitroaniline	44.1	10	µg/L	50.0		88.2		40-140			V-06	
4-Nitroaniline	43.5	10	µg/L	50.0		87.0		40-140				
Nitrobenzene	33.4	10	µg/L	50.0		66.7		40-140				
2-Nitrophenol	36.4	10	µg/L	50.0		72.9		30-130				
4-Nitrophenol	20.8	10	µg/L	50.0		41.5		10-130				†
N-Nitrosodimethylamine	22.8	10	µg/L	50.0		45.5		40-140				
N-Nitrosodiphenylamine/Diphenylamine	36.1	10	µg/L	50.0		72.3		40-140				
N-Nitrosodi-n-propylamine	32.7	10	µg/L	50.0		65.4		40-140				
Pentachloronitrobenzene	43.2	10	µg/L	50.0		86.5		40-140			V-06	
Pentachlorophenol	35.2	10	µg/L	50.0		70.4		30-130				
Phenanthrene	37.5	5.0	µg/L	50.0		74.9		40-140				
Phenol	15.8	10	µg/L	50.0		31.5		20-130				†
Pyrene	39.2	5.0	µg/L	50.0		78.3		40-140				
Pyridine	14.8	5.0	µg/L	50.0		29.5		10-140				†
1,2,4,5-Tetrachlorobenzene	17.2	10	µg/L	50.0		**34.3**	*	40-140			L-04	
1,2,4-Trichlorobenzene	15.9	5.0	µg/L	50.0		**31.8**	*	40-140			L-04	
2,4,5-Trichlorophenol	40.0	10	µg/L	50.0		79.9		30-130				
2,4,6-Trichlorophenol	36.7	10	µg/L	50.0		73.5		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	
Batch B336097 - SW-846 3510C												
LCS (B336097-BS1)				Prepared & Analyzed: 04/05/23								
Surrogate: 2-Fluorophenol	*86.5*		µg/L	200		43.3		15-110				
Surrogate: Phenol-d6	*62.9*		µg/L	200		31.4		15-110				
Surrogate: Nitrobenzene-d5	*73.7*		µg/L	100		73.7		30-130				
Surrogate: 2-Fluorobiphenyl	*59.7*		µg/L	100		59.7		30-130				
Surrogate: 2,4,6-Tribromophenol	*185*		µg/L	200		92.5		15-110				
Surrogate: p-Terphenyl-d14	*89.5*		µg/L	100		89.5		30-130				
LCS Dup (B336097-BSD1)				Prepared & Analyzed: 04/05/23								
Acenaphthene	25.6	5.0	µg/L	50.0		51.1		40-140	9.97	20		
Acenaphthylene	24.2	5.0	µg/L	50.0		48.4		40-140	8.77	20		
Acetophenone	36.7	10	µg/L	50.0		73.4		40-140	6.79	20		
Aniline	31.9	5.0	µg/L	50.0		63.9		40-140	16.3	50	V-05	‡
Anthracene	38.1	5.0	µg/L	50.0		76.2		40-140	1.00	20		
Benzidine	15.0	20	µg/L	50.0		**30.1**	*	40-140	0.600	20	L-04, V-04, V-05, J	
Benzo(a)anthracene	38.4	5.0	µg/L	50.0		76.7		40-140	1.63	20		
Benzo(a)pyrene	35.8	5.0	µg/L	50.0		71.5		40-140	1.58	20		
Benzo(b)fluoranthene	39.6	5.0	µg/L	50.0		79.1		40-140	1.70	20		
Benzo(g,h,i)perylene	40.0	5.0	µg/L	50.0		80.1		40-140	1.84	20		
Benzo(k)fluoranthene	41.9	5.0	µg/L	50.0		83.8		40-140	1.56	20		
Benzoic Acid	19.8	10	µg/L	50.0		39.6		10-130	3.45	50		† ‡
Bis(2-chloroethoxy)methane	34.5	10	µg/L	50.0		68.9		40-140	5.58	20		
Bis(2-chloroethyl)ether	32.5	10	µg/L	50.0		65.0		40-140	8.17	20		
Bis(2-chloroisopropyl)ether	32.7	10	µg/L	50.0		65.3		40-140	5.31	20		
Bis(2-Ethylhexyl)phthalate	32.3	10	µg/L	50.0		64.5		40-140	2.86	20		
4-Bromophenylphenylether	30.0	10	µg/L	50.0		60.0		40-140	3.70	20		
Butylbenzylphthalate	34.4	10	µg/L	50.0		68.9		40-140	2.71	20		
Carbazole	40.4	10	µg/L	50.0		80.9		40-140	2.94	20		
4-Chloroaniline	35.1	10	µg/L	50.0		70.1		40-140	0.597	20		
4-Chloro-3-methylphenol	37.1	10	µg/L	50.0		74.2		30-130	3.76	20		
2-Chloronaphthalene	15.5	10	µg/L	50.0		**31.0**	*	40-140	16.2	20	L-04	
2-Chlorophenol	34.1	10	µg/L	50.0		68.1		30-130	8.13	20		
4-Chlorophenylphenylether	26.0	10	µg/L	50.0		52.0		40-140	13.4	20		
Chrysene	37.4	5.0	µg/L	50.0		74.9		40-140	1.02	20		
Dibenz(a,h)anthracene	37.6	5.0	µg/L	50.0		75.3		40-140	2.04	20		
Dibenzofuran	25.7	5.0	µg/L	50.0		51.3		40-140	13.0	20		
Di-n-butylphthalate	34.8	10	µg/L	50.0		69.7		40-140	2.50	20		
1,2-Dichlorobenzene	17.4	5.0	µg/L	50.0		**34.7**	*	40-140	7.90	20	L-04	
1,3-Dichlorobenzene	15.6	5.0	µg/L	50.0		**31.2**	*	40-140	6.89	20	L-04	
1,4-Dichlorobenzene	16.4	5.0	µg/L	50.0		**32.7**	*	40-140	9.74	20	L-04	
3,3-Dichlorobenzidine	43.2	10	µg/L	50.0		86.4		40-140	4.23	20		
2,4-Dichlorophenol	37.0	10	µg/L	50.0		73.9		30-130	4.11	20		
Diethylphthalate	37.2	10	µg/L	50.0		74.5		40-140	0.350	20		
2,4-Dimethylphenol	36.5	10	µg/L	50.0		73.0		30-130	2.66	20		
Dimethylphthalate	36.8	10	µg/L	50.0		73.6		40-140	0.515	50		‡
4,6-Dinitro-2-methylphenol	51.6	10	µg/L	50.0		103		30-130	1.82	50		‡
2,4-Dinitrophenol	53.6	10	µg/L	50.0		107		30-130	0.0374	50	V-04, V-06	‡
2,4-Dinitrotoluene	49.1	10	µg/L	50.0		98.2		40-140	0.839	20	V-06	
2,6-Dinitrotoluene	46.1	10	µg/L	50.0		92.3		40-140	1.90	20	V-06	
Di-n-octylphthalate	30.5	10	µg/L	50.0		61.0		40-140	2.01	20		
1,2-Diphenylhydrazine/Azobenzene	30.0	10	µg/L	50.0		60.0		40-140	1.62	20		
Fluoranthene	41.3	5.0	µg/L	50.0		82.6		40-140	2.33	20		
Fluorene	30.1	5.0	µg/L	50.0		60.2		40-140	10.0	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 B336097 - SW-846 3510C												
LCS Dup (B336097-BSD1)				Prepared & Analyzed: 04/05/23								
Hexachlorobenzene	37.3	10	µg/L	50.0		74.6		40-140	0.802	20		
Hexachlorobutadiene	14.2	10	µg/L	50.0		**28.3**	*	40-140	2.29	20	L-04	
Hexachlorocyclopentadiene	9.27	10	µg/L	50.0		**18.5**	*	30-140	4.94	50	L-04, J	† ‡
Hexachloroethane	13.5	10	µg/L	50.0		**26.9**	*	40-140	7.79	50	L-04	‡
Indeno(1,2,3-cd)pyrene	38.7	5.0	µg/L	50.0		77.3		40-140	3.39	50		‡
Isophorone	39.4	10	µg/L	50.0		78.7		40-140	3.62	20		
1-Methylnaphthalene	18.9	5.0	µg/L	50.0		**37.8**	*	40-140	2.04	20	L-04	
2-Methylnaphthalene	17.3	5.0	µg/L	50.0		**34.7**	*	40-140	3.24	20	L-04	
2-Methylphenol	31.0	10	µg/L	50.0		62.0		30-130	7.26	20		
3/4-Methylphenol	32.3	10	µg/L	50.0		64.7		30-130	6.05	20		
Naphthalene	20.3	5.0	µg/L	50.0		40.5		40-140	0.00	20		
2-Nitroaniline	39.8	10	µg/L	50.0		79.7		40-140	7.34	20		
3-Nitroaniline	44.2	10	µg/L	50.0		88.4		40-140	0.227	20	V-06	
4-Nitroaniline	44.0	10	µg/L	50.0		88.0		40-140	1.10	20		
Nitrobenzene	34.6	10	µg/L	50.0		69.1		40-140	3.50	20		
2-Nitrophenol	37.7	10	µg/L	50.0		75.3		30-130	3.29	20		
4-Nitrophenol	22.2	10	µg/L	50.0		44.5		10-130	6.84	50		† ‡
N-Nitrosodimethylamine	24.2	10	µg/L	50.0		48.5		40-140	6.34	20		
N-Nitrosodiphenylamine/Diphenylamine	36.4	10	µg/L	50.0		72.8		40-140	0.744	20		
N-Nitrosodi-n-propylamine	35.1	10	µg/L	50.0		70.2		40-140	6.96	20		
Pentachloronitrobenzene	41.9	10	µg/L	50.0		83.8		40-140	3.12	20		
Pentachlorophenol	35.7	10	µg/L	50.0		71.4		30-130	1.35	50		‡
Phenanthrene	37.2	5.0	µg/L	50.0		74.4		40-140	0.723	20		
Phenol	16.9	10	µg/L	50.0		33.8		20-130	6.99	20		†
Pyrene	40.0	5.0	µg/L	50.0		80.0		40-140	2.07	20		
Pyridine	15.9	5.0	µg/L	50.0		31.8		10-140	7.37	50		† ‡
1,2,4,5-Tetrachlorobenzene	15.1	10	µg/L	50.0		**30.3**	*	40-140	12.6	20	L-04	
1,2,4-Trichlorobenzene	15.9	5.0	µg/L	50.0		**31.9**	*	40-140	0.251	20	L-04	
2,4,5-Trichlorophenol	39.2	10	µg/L	50.0		78.3		30-130	2.02	20		
2,4,6-Trichlorophenol	36.7	10	µg/L	50.0		73.4		30-130	0.109	50		‡
Surrogate: 2-Fluorophenol	*89.6*		µg/L	200		44.8		15-110				
Surrogate: Phenol-d6	*66.2*		µg/L	200		33.1		15-110				
Surrogate: Nitrobenzene-d5	*76.1*		µg/L	100		76.1		30-130				
Surrogate: 2-Fluorobiphenyl	*57.3*		µg/L	100		57.3		30-130				
Surrogate: 2,4,6-Tribromophenol	*183*		µg/L	200		91.4		15-110				
Surrogate: p-Terphenyl-d14	*89.2*		µg/L	100		89.2		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 B336016 - SW-846 3510C											
Blank (B336016-BLK1)				Prepared: 04/04/23 Analyzed: 04/06/23							
1,4-Dioxane	ND	0.20	µg/L								
Surrogate: 1,4-Dioxane-d8	*2.51*		µg/L	10.0		25.1		15-110			
LCS (B336016-BS1)				Prepared: 04/04/23 Analyzed: 04/06/23							
1,4-Dioxane	14.3	0.20	µg/L	10.0		**143**	*	40-140			L-06
Surrogate: 1,4-Dioxane-d8	*2.83*		µg/L	10.0		28.3		15-110			
LCS Dup (B336016-BSD1)				Prepared: 04/04/23 Analyzed: 04/06/23							
1,4-Dioxane	15.7	0.20	µg/L	10.0		**157**	*	40-140	9.32	30	L-06
Surrogate: 1,4-Dioxane-d8	*2.58*		µg/L	10.0		25.8		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 B335924 - SOP 454-PFAAS										
Blank (B335924-BLK1)				Prepared: 04/06/23 Analyzed: 04/12/23						
Perfluorobutanoic acid (PFBA)	ND	1.9	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	1.9	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	1.9	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	1.9	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	1.9	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9	ng/L							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9	ng/L							
Perfluorodecanoic acid (PFDA)	ND	1.9	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	1.9	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	1.9	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	1.9	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	1.9	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	1.9	ng/L							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	1.9	ng/L							
Perfluorooctanesulfonamide (FOSA)	ND	1.9	ng/L							
Perfluorononanesulfonic acid (PFNS)	ND	1.9	ng/L							
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.9	ng/L							
Perfluoro-1-butanesulfonamide (FBSA)	ND	1.9	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	ng/L							
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9	ng/L							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9	ng/L							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9	ng/L							
Perfluoropetanesulfonic acid (PFPeS)	ND	1.9	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	1.9	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	1.9	ng/L							
Perfluorooctanoic acid (PFOA)	ND	1.9	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	ng/L							
Perfluorononanoic acid (PFNA)	ND	1.9	ng/L							
LCS (B335924-BS1)				Prepared: 04/06/23 Analyzed: 04/12/23						
Perfluorobutanoic acid (PFBA)	11.4	2.0	ng/L	9.96		114	73-129			
Perfluorobutanesulfonic acid (PFBS)	10.0	2.0	ng/L	8.81		114	72-130			
Perfluoropentanoic acid (PFPeA)	11.2	2.0	ng/L	9.96		113	72-129			
Perfluorohexanoic acid (PFHxA)	10.9	2.0	ng/L	9.96		110	72-129			
11Cl-PF3OUdS (F53B Major)	9.19	2.0	ng/L	9.38		98.0	55.1-141			
9Cl-PF3ONS (F53B Minor)	8.92	2.0	ng/L	9.28		96.1	59.6-146			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	9.32	2.0	ng/L	9.38		99.3	60.3-131			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	7.31	2.0	ng/L	9.96		73.4	37.6-167			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	12.0	2.0	ng/L	9.56		125	67-138			
Perfluorodecanoic acid (PFDA)	11.9	2.0	ng/L	9.96		120	71-129			
Perfluorododecanoic acid (PFDoA)	12.0	2.0	ng/L	9.96		120	72-134			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	10.2	2.0	ng/L	8.86		115	49.4-154			

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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 B335924 - SOP 454-PFAAS												
LCS (B335924-BS1)				Prepared: 04/06/23 Analyzed: 04/12/23								
Perfluoroheptanesulfonic acid (PFHpS)	10.2	2.0	ng/L	9.51		107		69-134				
N-EtFOSAA (NEtFOSAA)	13.6	2.0	ng/L	9.96		**137**	*	61-135				L-07
N-MeFOSAA (NMeFOSAA)	13.4	2.0	ng/L	9.96		135		65-136				
Perfluorotetradecanoic acid (PFTA)	12.2	2.0	ng/L	9.96		122		71-132				
Perfluorotridecanoic acid (PFTrDA)	12.8	2.0	ng/L	9.96		128		65-144				
4:2 Fluorotelomersulfonic acid (4:2FTS A)	9.97	2.0	ng/L	9.31		107		63-143				
Perfluorodecanesulfonic acid (PFDS)	9.88	2.0	ng/L	9.61		103		53-142				
Perfluorooctanesulfonamide (FOSA)	12.5	2.0	ng/L	9.96		126		67-137				
Perfluorononanesulfonic acid (PFNS)	9.76	2.0	ng/L	9.56		102		69-127				
Perfluoro-1-hexanesulfonamide (FHxSA)	9.23	2.0	ng/L	9.96		92.7		61.7-156				
Perfluoro-1-butanesulfonamide (FBSA)	9.42	2.0	ng/L	9.96		94.6		61.3-145				
Perfluorohexanesulfonic acid (PFHxS)	10.4	2.0	ng/L	9.11		114		68-131				
Perfluoro-4-oxapentanoic acid (PFMPA)	12.1	2.0	ng/L	9.96		122		59.8-147				
Perfluoro-5-oxahexanoic acid (PFMBA)	11.5	2.0	ng/L	9.96		116		59.5-146				
6:2 Fluorotelomersulfonic acid (6:2FTS A)	9.46	2.0	ng/L	9.46		100		64-140				
Perfluoropetanesulfonic acid (PFPeS)	10.4	2.0	ng/L	9.36		111		71-127				
Perfluoroundecanoic acid (PFUnA)	12.8	2.0	ng/L	9.96		129		69-133				
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	10.5	2.0	ng/L	9.96		106		58.5-143				
Perfluoroheptanoic acid (PFHpA)	11.3	2.0	ng/L	9.96		113		72-130				
Perfluorooctanoic acid (PFOA)	11.0	2.0	ng/L	9.96		111		71-133				
Perfluorooctanesulfonic acid (PFOS)	10.8	2.0	ng/L	9.21		117		65-140				
Perfluorononanoic acid (PFNA)	10.4	2.0	ng/L	9.96		105		69-130				
LCS Dup (B335924-BSD1)				Prepared: 04/06/23 Analyzed: 04/12/23								
Perfluorobutanoic acid (PFBA)	11.3	1.9	ng/L	9.57		119		73-129	0.112		30	
Perfluorobutanesulfonic acid (PFBS)	9.85	1.9	ng/L	8.47		116		72-130	1.88		30	
Perfluoropentanoic acid (PFPeA)	11.0	1.9	ng/L	9.57		115		72-129	1.81		30	
Perfluorohexanoic acid (PFHxA)	10.8	1.9	ng/L	9.57		113		72-129	0.951		30	
11Cl-PF3OUdS (F53B Major)	9.29	1.9	ng/L	9.01		103		55.1-141	1.08		30	
9Cl-PF3ONS (F53B Minor)	9.16	1.9	ng/L	8.92		103		59.6-146	2.63		30	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	8.97	1.9	ng/L	9.01		99.5		60.3-131	3.80		30	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	10.1	1.9	ng/L	9.57		106		37.6-167	**32.4**	*	30	R-05
8:2 Fluorotelomersulfonic acid (8:2FTS A)	11.4	1.9	ng/L	9.18		124		67-138	5.08		30	
Perfluorodecanoic acid (PFDA)	12.0	1.9	ng/L	9.57		125		71-129	0.840		30	
Perfluorododecanoic acid (PFDoA)	11.5	1.9	ng/L	9.57		120		72-134	4.04		30	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	9.76	1.9	ng/L	8.51		115		49.4-154	4.09		30	
Perfluoroheptanesulfonic acid (PFHpS)	10.3	1.9	ng/L	9.14		113		69-134	1.66		30	
N-EtFOSAA (NEtFOSAA)	12.0	1.9	ng/L	9.57		126		61-135	12.2		30	
N-MeFOSAA (NMeFOSAA)	13.1	1.9	ng/L	9.57		**137**	*	65-136	2.60		30	L-07
Perfluorotetradecanoic acid (PFTA)	11.9	1.9	ng/L	9.57		124		71-132	2.19		30	
Perfluorotridecanoic acid (PFTrDA)	11.8	1.9	ng/L	9.57		124		65-144	7.72		30	
4:2 Fluorotelomersulfonic acid (4:2FTS A)	9.92	1.9	ng/L	8.94		111		63-143	0.541		30	
Perfluorodecanesulfonic acid (PFDS)	9.77	1.9	ng/L	9.23		106		53-142	1.10		30	
Perfluorooctanesulfonamide (FOSA)	11.3	1.9	ng/L	9.57		118		67-137	10.2		30	
Perfluorononanesulfonic acid (PFNS)	9.42	1.9	ng/L	9.18		103		69-127	3.53		30	
Perfluoro-1-hexanesulfonamide (FHxSA)	8.69	1.9	ng/L	9.57		90.8		61.7-156	6.09		30	
Perfluoro-1-butanesulfonamide (FBSA)	9.29	1.9	ng/L	9.57		97.1		61.3-145	1.42		30	
Perfluorohexanesulfonic acid (PFHxS)	9.61	1.9	ng/L	8.75		110		68-131	8.05		30	
Perfluoro-4-oxapentanoic acid (PFMPA)	12.2	1.9	ng/L	9.57		127		59.8-147	0.414		30	
Perfluoro-5-oxahexanoic acid (PFMBA)	11.3	1.9	ng/L	9.57		118		59.5-146	1.68		30	

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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 B335924 - SOP 454-PFAAS										
LCS Dup (B335924-BSD1)				Prepared: 04/06/23 Analyzed: 04/12/23						
6:2 Fluorotelomersulfonic acid (6:2FTS A)	9.25	1.9	ng/L	9.09		102	64-140	2.20	30	
Perfluoropetanesulfonic acid (PFPeS)	10.1	1.9	ng/L	8.99		112	71-127	3.15	30	
Perfluoroundecanoic acid (PFUnA)	12.4	1.9	ng/L	9.57		130	69-133	2.87	30	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	10.3	1.9	ng/L	9.57		108	58.5-143	2.24	30	
Perfluoroheptanoic acid (PFHpA)	11.0	1.9	ng/L	9.57		115	72-130	2.20	30	
Perfluorooctanoic acid (PFOA)	10.6	1.9	ng/L	9.57		111	71-133	3.86	30	
Perfluorooctanesulfonic acid (PFOS)	9.92	1.9	ng/L	8.85		112	65-140	8.37	30	
Perfluorononanoic acid (PFNA)	10.6	1.9	ng/L	9.57		111	69-130	1.46	30	
Batch B337100 - SOP 454-PFAAS										
Blank (B337100-BLK1)				Prepared: 04/14/23 Analyzed: 05/10/23						
Perfluorobutanoic acid (PFBA)	ND	1.9	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	1.9	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	1.9	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	1.9	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	1.9	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9	ng/L							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9	ng/L							
Perfluorodecanoic acid (PFDA)	ND	1.9	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	1.9	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	1.9	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	1.9	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	1.9	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	1.9	ng/L							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	1.9	ng/L							
Perfluorooctanesulfonamide (FOSA)	ND	1.9	ng/L							
Perfluorononanesulfonic acid (PFNS)	ND	1.9	ng/L							
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.9	ng/L							
Perfluoro-1-butanesulfonamide (FBSA)	ND	1.9	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	ng/L							
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9	ng/L							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9	ng/L							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9	ng/L							
Perfluoropetanesulfonic acid (PFPeS)	ND	1.9	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	1.9	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	1.9	ng/L							
Perfluorooctanoic acid (PFOA)	ND	1.9	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	ng/L							
Perfluorononanoic acid (PFNA)	ND	1.9	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
Batch B337100 - SOP 454-PFAAS											
LCS (B337100-BS1)				Prepared: 04/14/23 Analyzed: 05/10/23							
Perfluorobutanoic acid (PFBA)	11.1	2.0	ng/L	9.94		112		73-129			
Perfluorobutanesulfonic acid (PFBS)	10.5	2.0	ng/L	8.80		119		72-130			
Perfluoropentanoic acid (PFPeA)	11.1	2.0	ng/L	9.94		111		72-129			
Perfluorohexanoic acid (PFHxA)	10.8	2.0	ng/L	9.94		109		72-129			
11Cl-PF3OUdS (F53B Major)	9.13	2.0	ng/L	9.37		97.5		55.1-141			
9Cl-PF3ONS (F53B Minor)	9.85	2.0	ng/L	9.27		106		59.6-146			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	10.6	2.0	ng/L	9.37		113		60.3-131			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	11.0	2.0	ng/L	9.94		111		37.6-167			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	12.2	2.0	ng/L	9.54		128		67-138			
Perfluorodecanoic acid (PFDA)	11.9	2.0	ng/L	9.94		120		71-129			
Perfluorododecanoic acid (PFDoA)	11.5	2.0	ng/L	9.94		116		72-134			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	8.40	2.0	ng/L	8.85		94.9		49.4-154			
Perfluoroheptanesulfonic acid (PFHpS)	11.8	2.0	ng/L	9.49		124		69-134			
N-EtFOSAA (NEtFOSAA)	13.8	2.0	ng/L	9.94		**139**	*	61-135			L-07
N-MeFOSAA (NMeFOSAA)	13.6	2.0	ng/L	9.94		136		65-136			
Perfluorotetradecanoic acid (PFTA)	12.6	2.0	ng/L	9.94		127		71-132			
Perfluorotridecanoic acid (PFTrDA)	11.4	2.0	ng/L	9.94		114		65-144			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	10.6	2.0	ng/L	9.30		114		63-143			
Perfluorodecanesulfonic acid (PFDS)	9.52	2.0	ng/L	9.59		99.3		53-142			
Perfluorooctanesulfonamide (FOSA)	10.4	2.0	ng/L	9.94		104		67-137			
Perfluorononanesulfonic acid (PFNS)	11.5	2.0	ng/L	9.54		121		69-127			
Perfluoro-1-hexanesulfonamide (FHxSA)	9.63	2.0	ng/L	9.94		96.9		61.7-156			
Perfluoro-1-butanesulfonamide (FBSA)	10.1	2.0	ng/L	9.94		102		61.3-145			
Perfluorohexanesulfonic acid (PFHxS)	11.3	2.0	ng/L	9.10		124		68-131			
Perfluoro-4-oxapentanoic acid (PFMPA)	9.97	2.0	ng/L	9.94		100		59.8-147			
Perfluoro-5-oxahexanoic acid (PFMBA)	9.89	2.0	ng/L	9.94		99.5		59.5-146			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	10.1	2.0	ng/L	9.44		107		64-140			
Perfluoropetanesulfonic acid (PFPeS)	10.6	2.0	ng/L	9.35		114		71-127			
Perfluoroundecanoic acid (PFUnA)	11.2	2.0	ng/L	9.94		112		69-133			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	9.60	2.0	ng/L	9.94		96.6		58.5-143			
Perfluoroheptanoic acid (PFHpA)	11.2	2.0	ng/L	9.94		112		72-130			
Perfluorooctanoic acid (PFOA)	11.4	2.0	ng/L	9.94		114		71-133			
Perfluorooctanesulfonic acid (PFOS)	10.3	2.0	ng/L	9.20		112		65-140			
Perfluorononanoic acid (PFNA)	12.3	2.0	ng/L	9.94		124		69-130			
LCS Dup (B337100-BSD1)				Prepared: 04/14/23 Analyzed: 05/10/23							
Perfluorobutanoic acid (PFBA)	11.1	2.0	ng/L	9.83		113		73-129	0.196	30	
Perfluorobutanesulfonic acid (PFBS)	10.1	2.0	ng/L	8.70		116		72-130	4.06	30	
Perfluoropentanoic acid (PFPeA)	11.0	2.0	ng/L	9.83		112		72-129	0.481	30	
Perfluorohexanoic acid (PFHxA)	10.7	2.0	ng/L	9.83		109		72-129	1.03	30	
11Cl-PF3OUdS (F53B Major)	9.96	2.0	ng/L	9.26		108		55.1-141	8.65	30	
9Cl-PF3ONS (F53B Minor)	9.26	2.0	ng/L	9.17		101		59.6-146	6.22	30	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	9.99	2.0	ng/L	9.26		108		60.3-131	5.93	30	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	10.5	2.0	ng/L	9.83		107		37.6-167	4.43	30	
8:2 Fluorotelomersulfonic acid (8:2FTS A)	12.8	2.0	ng/L	9.44		136		67-138	5.16	30	
Perfluorodecanoic acid (PFDA)	11.9	2.0	ng/L	9.83		121		71-129	0.383	30	
Perfluorododecanoic acid (PFDoA)	12.6	2.0	ng/L	9.83		128		72-134	8.89	30	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	8.03	2.0	ng/L	8.75		91.7		49.4-154	4.51	30	

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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 B337100 - SOP 454-PFAAS											
LCS Dup (B337100-BSD1)				Prepared: 04/14/23 Analyzed: 05/10/23							
Perfluoroheptanesulfonic acid (PFHpS)	12.0	2.0	ng/L	9.39		128		69-134	2.18	30	
N-EtFOSAA (NEtFOSAA)	12.0	2.0	ng/L	9.83		122		61-135	14.5	30	
N-MeFOSAA (NMeFOSAA)	14.2	2.0	ng/L	9.83		**145**	*	65-136	4.90	30	L-07
Perfluorotetradecanoic acid (PFTA)	11.8	2.0	ng/L	9.83		120		71-132	6.49	30	
Perfluorotridecanoic acid (PFTrDA)	11.3	2.0	ng/L	9.83		115		65-144	0.0645	30	
4:2 Fluorotelomersulfonic acid (4:2FTS A)	10.6	2.0	ng/L	9.19		115		63-143	0.00417	30	
Perfluorodecanesulfonic acid (PFDS)	7.81	2.0	ng/L	9.49		82.3		53-142	19.7	30	
Perfluorooctanesulfonamide (FOSA)	10.9	2.0	ng/L	9.83		111		67-137	4.68	30	
Perfluorononanesulfonic acid (PFNS)	10.4	2.0	ng/L	9.44		110		69-127	10.0	30	
Perfluoro-1-hexanesulfonamide (FHxSA)	9.23	2.0	ng/L	9.83		93.8		61.7-156	4.32	30	
Perfluoro-1-butanesulfonamide (FBSA)	9.86	2.0	ng/L	9.83		100		61.3-145	2.76	30	
Perfluorohexanesulfonic acid (PFHxS)	10.9	2.0	ng/L	9.00		121		68-131	3.65	30	
Perfluoro-4-oxapentanoic acid (PFMPA)	9.87	2.0	ng/L	9.83		100		59.8-147	1.01	30	
Perfluoro-5-oxahexanoic acid (PFMBA)	9.72	2.0	ng/L	9.83		98.8		59.5-146	1.77	30	
6:2 Fluorotelomersulfonic acid (6:2FTS A)	12.0	2.0	ng/L	9.34		129		64-140	17.0	30	
Perfluoropetanesulfonic acid (PFPeS)	10.9	2.0	ng/L	9.24		118		71-127	2.57	30	
Perfluoroundecanoic acid (PFUnA)	11.0	2.0	ng/L	9.83		112		69-133	1.81	30	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	9.39	2.0	ng/L	9.83		95.5		58.5-143	2.22	30	
Perfluoroheptanoic acid (PFHpA)	11.3	2.0	ng/L	9.83		115		72-130	1.20	30	
Perfluorooctanoic acid (PFOA)	10.5	2.0	ng/L	9.83		107		71-133	8.02	30	
Perfluorooctanesulfonic acid (PFOS)	11.1	2.0	ng/L	9.10		122		65-140	7.26	30	
Perfluorononanoic acid (PFNA)	12.0	2.0	ng/L	9.83		122		69-130	2.50	30	

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B336013 - SW-846 3510C										
Blank (B336013-BLK1)				Prepared: 04/04/23 Analyzed: 04/06/23						
Aroclor-1016	ND	0.20	µg/L							
Aroclor-1016 [2C]	ND	0.20	µg/L							
Aroclor-1221	ND	0.20	µg/L							
Aroclor-1221 [2C]	ND	0.20	µg/L							
Aroclor-1232	ND	0.20	µg/L							
Aroclor-1232 [2C]	ND	0.20	µg/L							
Aroclor-1242	ND	0.20	µg/L							
Aroclor-1242 [2C]	ND	0.20	µg/L							
Aroclor-1248	ND	0.20	µg/L							
Aroclor-1248 [2C]	ND	0.20	µg/L							
Aroclor-1254	ND	0.20	µg/L							
Aroclor-1254 [2C]	ND	0.20	µg/L							
Aroclor-1260	ND	0.20	µg/L							
Aroclor-1260 [2C]	ND	0.20	µg/L							
Aroclor-1262	ND	0.20	µg/L							
Aroclor-1262 [2C]	ND	0.20	µg/L							
Aroclor-1268	ND	0.20	µg/L							
Aroclor-1268 [2C]	ND	0.20	µg/L							
Surrogate: Decachlorobiphenyl	*1.82*		µg/L	2.00		90.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.89*		µg/L	2.00		94.4	30-150			
Surrogate: Tetrachloro-m-xylene	*1.44*		µg/L	2.00		71.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.47*		µg/L	2.00		73.4	30-150			
LCS (B336013-BS1)				Prepared: 04/04/23 Analyzed: 04/06/23						
Aroclor-1016	0.47	0.20	µg/L	0.500		93.7	40-140			
Aroclor-1016 [2C]	0.51	0.20	µg/L	0.500		102	40-140			
Aroclor-1260	0.42	0.20	µg/L	0.500		84.1	40-140			
Aroclor-1260 [2C]	0.44	0.20	µg/L	0.500		88.4	40-140			
Surrogate: Decachlorobiphenyl	*2.00*		µg/L	2.00		100	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.99*		µg/L	2.00		99.6	30-150			
Surrogate: Tetrachloro-m-xylene	*1.64*		µg/L	2.00		81.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.67*		µg/L	2.00		83.7	30-150			
LCS Dup (B336013-BSD1)				Prepared: 04/04/23 Analyzed: 04/06/23						
Aroclor-1016	0.46	0.20	µg/L	0.500		92.8	40-140	0.922	20	
Aroclor-1016 [2C]	0.51	0.20	µg/L	0.500		102	40-140	0.495	20	
Aroclor-1260	0.44	0.20	µg/L	0.500		87.4	40-140	3.87	20	
Aroclor-1260 [2C]	0.46	0.20	µg/L	0.500		92.7	40-140	4.76	20	
Surrogate: Decachlorobiphenyl	*2.00*		µg/L	2.00		100	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.99*		µg/L	2.00		99.6	30-150			
Surrogate: Tetrachloro-m-xylene	*1.64*		µg/L	2.00		82.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.70*		µg/L	2.00		84.9	30-150			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B335901 - SW-846 7470A Prep										
Blank (B335901-BLK1)				Prepared & Analyzed: 04/03/23						
Mercury	ND	0.00010	mg/L							
LCS (B335901-BS1)				Prepared & Analyzed: 04/03/23						
Mercury	0.00366	0.00010	mg/L	0.00402		91.0	80-120			
LCS Dup (B335901-BSD1)				Prepared & Analyzed: 04/03/23						
Mercury	0.00366	0.00010	mg/L	0.00402		91.1	80-120	0.154	20	
Batch B335903 - SW-846 3005A										
Blank (B335903-BLK1)				Prepared & Analyzed: 04/03/23						
Aluminum	ND	0.050	mg/L							
Antimony	ND	0.050	mg/L							
Arsenic	ND	0.010	mg/L							
Barium	ND	0.050	mg/L							
Beryllium	ND	0.0040	mg/L							
Cadmium	ND	0.0040	mg/L							
Chromium	ND	0.010	mg/L							
Cobalt	ND	0.010	mg/L							
Copper	ND	0.010	mg/L							
Iron	ND	0.050	mg/L							
Lead	ND	0.010	mg/L							
Manganese	ND	0.010	mg/L							
Nickel	ND	0.010	mg/L							
Potassium	ND	2.0	mg/L							
Selenium	ND	0.050	mg/L							
Silver	ND	0.010	mg/L							
Sodium	ND	2.0	mg/L							
Thallium	ND	0.050	mg/L							
Vanadium	ND	0.010	mg/L							
Zinc	0.0052	0.010	mg/L							J
Boron	ND	0.10	mg/L							
Blank (B335903-BLK2)				Prepared: 04/03/23 Analyzed: 04/10/23						
Calcium	ND	0.50	mg/L							
Iron	ND	0.050	mg/L							
Lead	ND	0.010	mg/L							
Magnesium	ND	0.050	mg/L							
Thallium	ND	0.050	mg/L							
Vanadium	ND	0.010	mg/L							
Hardness	0.011	1.4	mg/L							J

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B335903 - SW-846 3005A										
LCS (B335903-BS1)				Prepared & Analyzed: 04/03/23						
Aluminum	0.507	0.050	mg/L	0.500		101	45.3-154.7			
Antimony	0.497	0.050	mg/L	0.500		99.4	80-120			
Arsenic	0.479	0.010	mg/L	0.500		95.8	80-120			
Barium	0.513	0.050	mg/L	0.500		103	80-120			
Beryllium	0.520	0.0040	mg/L	0.500		104	80-120			
Cadmium	0.501	0.0040	mg/L	0.500		100	80-120			
Chromium	0.498	0.010	mg/L	0.500		99.5	80-120			
Cobalt	0.493	0.010	mg/L	0.500		98.6	80-120			
Copper	0.988	0.010	mg/L	1.00		98.8	80-120			
Manganese	0.522	0.010	mg/L	0.500		104	80-120			
Nickel	0.502	0.010	mg/L	0.500		100	80-120			
Potassium	4.03	2.0	mg/L	4.00		101	80-120			
Selenium	0.500	0.050	mg/L	0.500		100	80-120			
Silver	0.519	0.010	mg/L	0.500		104	80-120			
Sodium	4.09	2.0	mg/L	4.00		102	80-120			
Zinc	1.05	0.010	mg/L	1.00		105	80-120			
Boron	0.956	0.10	mg/L	1.00		95.6	80-120			
LCS (B335903-BS2)				Prepared: 04/03/23 Analyzed: 04/10/23						
Calcium	4.00	0.50	mg/L	4.00		100	80-120			
Iron	4.16	0.050	mg/L	4.00		104	80-120			
Lead	0.526	0.010	mg/L	0.500		105	80-120			
Magnesium	3.88	0.050	mg/L	4.00		97.1	80-120			
Thallium	0.526	0.050	mg/L	0.500		105	80-120			
Vanadium	0.509	0.010	mg/L	0.500		102	80-120			
Hardness	26	1.4	mg/L	26.4		98.3	80-120			
LCS Dup (B335903-BSD1)				Prepared & Analyzed: 04/03/23						
Aluminum	0.503	0.050	mg/L	0.500		101	45.3-154.7	0.800	30	
Antimony	0.494	0.050	mg/L	0.500		98.8	80-120	0.646	20	
Arsenic	0.475	0.010	mg/L	0.500		94.9	80-120	0.870	20	
Barium	0.508	0.050	mg/L	0.500		102	80-120	0.927	20	
Beryllium	0.521	0.0040	mg/L	0.500		104	80-120	0.0566	20	
Cadmium	0.495	0.0040	mg/L	0.500		99.0	80-120	1.14	20	
Chromium	0.492	0.010	mg/L	0.500		98.5	80-120	1.09	20	
Cobalt	0.487	0.010	mg/L	0.500		97.4	80-120	1.25	20	
Copper	0.972	0.010	mg/L	1.00		97.2	80-120	1.65	20	
Iron	4.16	0.050	mg/L	4.00		104	80-120	0.967	20	
Lead	0.504	0.010	mg/L	0.500		101	80-120	0.407	20	
Manganese	0.525	0.010	mg/L	0.500		105	80-120	0.466	20	
Nickel	0.496	0.010	mg/L	0.500		99.2	80-120	1.23	30	
Potassium	3.98	2.0	mg/L	4.00		99.6	80-120	1.21	20	
Selenium	0.496	0.050	mg/L	0.500		99.1	80-120	0.899	20	
Silver	0.511	0.010	mg/L	0.500		102	80-120	1.55	20	
Sodium	4.10	2.0	mg/L	4.00		103	80-120	0.366	20	
Thallium	0.535	0.050	mg/L	0.500		107	80-120	1.19	20	
Vanadium	0.588	0.010	mg/L	0.500		118	80-120	1.14	20	
Zinc	1.04	0.010	mg/L	1.00		104	80-120	0.718	20	
Boron	0.950	0.10	mg/L	1.00		95.0	80-120	0.621	20	

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B335903 - SW-846 3005A										
LCS Dup (B335903-BSD2)				Prepared: 04/03/23 Analyzed: 04/10/23						
Calcium	4.09	0.50	mg/L	4.00		102	80-120	2.01	20	
Iron	4.18	0.050	mg/L	4.00		104	80-120	0.278	20	
Lead	0.534	0.010	mg/L	0.500		107	80-120	1.55	20	
Magnesium	3.93	0.050	mg/L	4.00		98.2	80-120	1.18	20	
Thallium	0.534	0.050	mg/L	0.500		107	80-120	1.46	20	
Vanadium	0.516	0.010	mg/L	0.500		103	80-120	1.39	20	
Hardness	26	1.4	mg/L	26.4		99.7	80-120	1.50	20	
Duplicate (B335903-DUP1)		**Source: 23C3630-04**		Prepared & Analyzed: 04/03/23						
Aluminum	ND	0.050	mg/L		ND			NC	20	
Antimony	0.00870	0.050	mg/L		ND			NC	20	J
Arsenic	ND	0.010	mg/L		ND			NC	20	
Barium	0.131	0.050	mg/L		0.132			0.659	20	
Beryllium	ND	0.0040	mg/L		ND			NC	20	
Cadmium	ND	0.0040	mg/L		ND			NC	20	
Chromium	ND	0.010	mg/L		ND			NC	20	
Cobalt	0.0181	0.010	mg/L		0.0183			1.38	20	
Copper	0.00564	0.010	mg/L		0.00577			2.22	20	J
Iron	19.6	0.050	mg/L		19.5			0.874	20	
Lead	ND	0.010	mg/L		ND			NC	20	
Manganese	2.05	0.010	mg/L		2.04			0.651	20	
Nickel	0.0209	0.010	mg/L		0.0211			1.05	20	
Potassium	7.19	2.0	mg/L		7.12			0.901	20	
Selenium	ND	0.050	mg/L		ND			NC	20	
Silver	ND	0.010	mg/L		ND			NC	20	
Sodium	4.64	2.0	mg/L		4.61			0.838	20	
Thallium	ND	0.050	mg/L		ND			NC	20	
Vanadium	0.0336	0.010	mg/L		ND			NC	20	
Zinc	0.0784	0.010	mg/L		0.0788			0.499	20	
Boron	0.198	0.10	mg/L		0.195			1.65	20	
Duplicate (B335903-DUP2)		**Source: 23C3630-04**		Prepared: 04/03/23 Analyzed: 04/10/23						
Calcium	230	0.50	mg/L		231			0.442	20	
Iron	19.6	0.050	mg/L		19.5			0.454	20	
Lead	ND	0.010	mg/L		ND			NC	20	
Magnesium	21.6	0.050	mg/L		21.6			0.188	20	
Thallium	ND	0.050	mg/L		ND			NC	20	
Vanadium	ND	0.010	mg/L		ND			NC	20	
Hardness	660	1.4	mg/L		670			0.358		
Matrix Spike (B335903-MS1)		**Source: 23C3630-04**		Prepared & Analyzed: 04/03/23						
Aluminum	0.530	0.050	mg/L	0.500	ND	106	75-125			
Antimony	0.521	0.050	mg/L	0.500	ND	104	75-125			
Arsenic	0.502	0.010	mg/L	0.500	ND	100	75-125			
Barium	0.643	0.050	mg/L	0.500	0.132	102	75-125			
Beryllium	0.532	0.0040	mg/L	0.500	ND	106	75-125			
Cadmium	0.512	0.0040	mg/L	0.500	ND	102	75-125			
Chromium	0.498	0.010	mg/L	0.500	ND	99.7	75-125			
Cobalt	0.495	0.010	mg/L	0.500	0.0183	95.4	75-125			
Copper	1.02	0.010	mg/L	1.00	0.00577	101	75-125			
Manganese	2.61	0.010	mg/L	0.500	2.04	114	75-125			
Nickel	0.503	0.010	mg/L	0.500	0.0211	96.3	75-125			
Potassium	11.4	2.0	mg/L	4.00	7.12	106	75-125			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B335903 - SW-846 3005A											
Matrix Spike (B335903-MS1)	**Source: 23C3630-04**			Prepared & Analyzed: 04/03/23							
Selenium	0.519	0.050	mg/L	0.500	ND	104		75-125			
Silver	0.526	0.010	mg/L	0.500	ND	105		75-125			
Sodium	8.94	2.0	mg/L	4.00	4.61	108		75-125			
Zinc	1.11	0.010	mg/L	1.00	0.0788	103		75-125			
Boron	1.18	0.10	mg/L	1.00	0.195	98.2		75-125			
Matrix Spike (B335903-MS2)	**Source: 23C3630-04**			Prepared: 04/03/23 Analyzed: 04/10/23							
Calcium	241	0.50	mg/L	4.00	231	**262**	*	75-125			MS-19
Iron	24.0	0.050	mg/L	4.00	19.5	114		75-125			
Lead	0.524	0.010	mg/L	0.500	ND	105		75-125			
Magnesium	26.3	0.050	mg/L	4.00	21.6	118		75-125			
Thallium	0.562	0.050	mg/L	0.500	ND	112		75-125			
Vanadium	0.518	0.010	mg/L	0.500	ND	104		75-125			
Hardness	710	1.4	mg/L	26.4	670	**172**	*	75-125			MS-19

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B336616 - SM21-23 2320B										
Blank (B336616-BLK1)				Prepared & Analyzed: 04/09/23						
Alkalinity to pH 4.2	ND	1.0	mg/L							
LCS (B336616-BS1)				Prepared & Analyzed: 04/09/23						
Alkalinity to pH 4.5	58	1.0	mg/L	61.2		95.6	85.8-110			
LCS Dup (B336616-BSD1)				Prepared & Analyzed: 04/09/23						
Alkalinity to pH 4.5	58	1.0	mg/L	61.2		95.6	85.8-110	0.00	6.91	
Batch B336667 - SM 4500-NH3 C										
Blank (B336667-BLK1)				Prepared: 04/10/23 Analyzed: 04/11/23						
Ammonia as N	ND	0.30	mg/L							
LCS (B336667-BS1)				Prepared: 04/10/23 Analyzed: 04/11/23						
Ammonia as N	4.8	0.30	mg/L	5.00		95.2	85.6-110			
LCS Dup (B336667-BSD1)				Prepared: 04/10/23 Analyzed: 04/11/23						
Ammonia as N	4.8	0.30	mg/L	5.00		95.2	85.6-110	0.00	9.25	
Batch B337261 - EPA 410.4										
Blank (B337261-BLK1)				Prepared & Analyzed: 04/17/23						
Chemical Oxygen Demand	ND	15	mg/L							
LCS (B337261-BS1)				Prepared & Analyzed: 04/17/23						
Chemical Oxygen Demand	180	15	mg/L	200		90.0	90-110			
LCS Dup (B337261-BSD1)				Prepared & Analyzed: 04/17/23						
Chemical Oxygen Demand	190	15	mg/L	200		94.5	90-110	4.87	5	
Batch B337332 - SM 21-23 5310B										
Blank (B337332-BLK1)				Prepared & Analyzed: 04/17/23						
Total Organic Carbon	ND	1.0	mg/L							
LCS (B337332-BS1)				Prepared & Analyzed: 04/17/23						
Total Organic Carbon	9.77	1.0	mg/L	10.0		97.7	90-110			
LCS Dup (B337332-BSD1)				Prepared & Analyzed: 04/17/23						
Total Organic Carbon	10.5	1.0	mg/L	10.0		105	90-110	6.86	15	

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B337332 - SM 21-23 5310B											
Duplicate (B337332-DUP1)	**Source: 23C3630-05**			Prepared & Analyzed: 04/17/23							
Total Organic Carbon	20.7	1.0	mg/L		22.1				6.30	15	
Matrix Spike (B337332-MS1)	**Source: 23C3630-05**			Prepared & Analyzed: 04/17/23							
Total Organic Carbon	24.4	1.0	mg/L	5.00	22.1	**46.7**	*	85-115			MS-07
Batch B337499 - EPA 300.0											
Blank (B337499-BLK1)				Prepared & Analyzed: 04/18/23							
Bromide	ND	0.50	mg/L								
LCS (B337499-BS1)				Prepared & Analyzed: 04/18/23							
Bromide	0.933	0.50	mg/L	1.00		93.3		90-110			
LCS Dup (B337499-BSD1)				Prepared & Analyzed: 04/18/23							
Bromide	0.936	0.50	mg/L	1.00		93.6		90-110	0.300	20	
Batch B337503 - EPA 300.0											
Blank (B337503-BLK1)				Prepared & Analyzed: 04/18/23							
Chloride	ND	1.0	mg/L								
LCS (B337503-BS1)				Prepared & Analyzed: 04/18/23							
Chloride	9.7	1.0	mg/L	10.0		97.1		90-110			
LCS Dup (B337503-BSD1)				Prepared & Analyzed: 04/18/23							
Chloride	9.7	1.0	mg/L	10.0		97.5		90-110	0.362	20	
Batch B337578 - EPA 300.0											
Blank (B337578-BLK1)				Prepared & Analyzed: 04/19/23							
Sulfate	ND	1.0	mg/L								
LCS (B337578-BS1)				Prepared & Analyzed: 04/19/23							
Sulfate	10	1.0	mg/L	10.0		101		90-110			
LCS Dup (B337578-BSD1)				Prepared & Analyzed: 04/19/23							
Sulfate	10	1.0	mg/L	10.0		101		90-110	0.0721	20	

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Dissolved) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B336005 - SM21-23 2540C										
Blank (B336005-BLK1)				Prepared & Analyzed: 04/04/23						
Total Dissolved Solids	ND	10	mg/L							
LCS (B336005-BS1)				Prepared & Analyzed: 04/04/23						
Total Dissolved Solids	280	10	mg/L	293		96.6	64.9-119			

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B336013-BS1

Date(s) Analyzed: 04/06/2023 04/06/2023

Instrument ID (1): ECD1

Instrument ID (2): ECD1

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.47	
	2	0.000	0.000	0.000	0.51	8.2
Aroclor-1260	1	0.000	0.000	0.000	0.42	
	2	0.000	0.000	0.000	0.44	4.7

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B336013-BSD1 Date(s) Analyzed: 04/06/2023 04/06/2023

Instrument ID (1): ECD1 Instrument ID (2): ECD1

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.46	
	2	0.000	0.000	0.000	0.51	10.3
Aroclor-1260	1	0.000	0.000	0.000	0.44	
	2	0.000	0.000	0.000	0.46	4.4

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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.
D-01	Sample extracted/prepared at a dilution due to sample matrix interference.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
L-06	Laboratory fortified blank/laboratory control sample recovery and/or duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the high side.
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-07	Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery.Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.
MS-19	Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.
PF-17	Extracted Internal Standard recovery is outside of control limits. Data is not significantly affected since associated analyte is not detected and bias is on the high side.
PF-18	Duplicate analysis confirmed Extracted Internal Standard failure due to matrix effects.
PF-19	Sample re-analyzed at a dilution that was re-fortified with internal standard.
PF-20	Quantifying ion signal to noise ratio is <10. Detection is suspect.
PR-18	Headspace present in sample container.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
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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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
MW-4-032923 (23C3630-01)			Lab File ID: 23C3630-01.d			Analyzed: 04/12/23 17:40			
M8FOSA	269897.8	3.988567	252,001.00	3.98855	107	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	200523.5	2.51325	71,165.00	2.513233	282	50 - 150	0.0000	+/-0.50	*
M2PFTA	504352.2	4.289183	495,165.00	4.289183	102	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	181823.4	3.770917	43,674.00	3.770917	416	50 - 150	0.0000	+/-0.50	*
MPFBA	142957.7	1.058467	278,249.00	1.058467	51	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	82031.67	2.8393	93,100.00	2.847483	88	50 - 150	-0.0082	+/-0.50	
M6PFDA	417417.2	3.771433	385,509.00	3.771433	108	50 - 150	0.0000	+/-0.50	
M3PFBS	116368.7	1.90325	114,008.00	1.911533	102	50 - 150	-0.0083	+/-0.50	
M7PFUnA	486833	3.91405	427,712.00	3.91405	114	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	198713.4	3.4205	40,234.00	3.4205	494	50 - 150	0.0000	+/-0.50	*
M5PFPeA	248395	1.7231	263,086.00	1.731383	94	50 - 150	-0.0083	+/-0.50	
M5PFHxA	439101.3	2.596967	393,748.00	2.605183	112	50 - 150	-0.0082	+/-0.50	
M3PFHxS	81699.11	3.193817	78,039.00	3.1938	105	50 - 150	0.0000	+/-0.50	
M4PFHpA	451073.1	3.1627	424,375.00	3.1627	106	50 - 150	0.0000	+/-0.50	
M8PFOA	476646.4	3.42985	454,382.00	3.42985	105	50 - 150	0.0000	+/-0.50	
M8PFOS	79864.69	3.620217	82,919.00	3.6202	96	50 - 150	0.0000	+/-0.50	
M9PFNA	430815.3	3.62125	397,946.00	3.62125	108	50 - 150	0.0000	+/-0.50	
MPFDoA	419078.3	4.048666	398,039.00	4.048666	105	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	183487.2	3.921517	135,772.00	3.921517	135	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	206210.3	3.8497	160,160.00	3.841733	129	50 - 150	0.0080	+/-0.50	
1,4-Dichlorobenzene-d4	971898	11.049	713,076.00	11.052	136	50 - 200	-0.0030	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
CHA-1S-032923 (23C3630-02)			Lab File ID: 23C3630-02.d			Analyzed: 04/12/23 17:47			
M8FOSA	294049.9	3.988567	252,001.00	3.98855	117	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	170750	2.51325	71,165.00	2.513233	240	50 - 150	0.0000	+/-0.50	*
M2PFTA	536631.9	4.289183	495,165.00	4.289183	108	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	164589.7	3.770917	43,674.00	3.770917	377	50 - 150	0.0000	+/-0.50	*
MPFBA	154723.9	1.058467	278,249.00	1.058467	56	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	86695.17	2.847483	93,100.00	2.847483	93	50 - 150	0.0000	+/-0.50	
M6PFDA	473585.5	3.771433	385,509.00	3.771433	123	50 - 150	0.0000	+/-0.50	
M3PFBS	121715.7	1.90325	114,008.00	1.911533	107	50 - 150	-0.0083	+/-0.50	
M7PFUnA	539718.4	3.91405	427,712.00	3.91405	126	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	152711.2	3.4205	40,234.00	3.4205	380	50 - 150	0.0000	+/-0.50	*
M5PFPeA	263328	1.731383	263,086.00	1.731383	100	50 - 150	0.0000	+/-0.50	
M5PFHxA	456863.1	2.605183	393,748.00	2.605183	116	50 - 150	0.0000	+/-0.50	
M3PFHxS	89083.16	3.193817	78,039.00	3.1938	114	50 - 150	0.0000	+/-0.50	
M4PFHpA	484863.8	3.1627	424,375.00	3.1627	114	50 - 150	0.0000	+/-0.50	
M8PFOA	530353.8	3.42985	454,382.00	3.42985	117	50 - 150	0.0000	+/-0.50	
M8PFOS	85921.42	3.620217	82,919.00	3.6202	104	50 - 150	0.0000	+/-0.50	
M9PFNA	449760.3	3.62125	397,946.00	3.62125	113	50 - 150	0.0000	+/-0.50	
MPFDoA	442259.3	4.048666	398,039.00	4.048666	111	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	180938.7	3.921517	135,772.00	3.921517	133	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	212848.3	3.8497	160,160.00	3.841733	133	50 - 150	0.0080	+/-0.50	
1,4-Dichlorobenzene-d4	878165	11.055	713,076.00	11.052	123	50 - 200	0.0030	+/-0.50	
CHA-1S-032923 (23C3630-02RE1)			Lab File ID: 23C3630-02RE1.d			Analyzed: 04/14/23 21:38			
M8PFOS	77029.24	3.612217	71,378.00	3.612217	108	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
FB-032923 (23C3630-03)			Lab File ID: 23C3630-03.d			Analyzed: 04/12/23 17:55			
M8FOSA	281682.9	3.98855	252,001.00	3.98855	112	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	70751.21	2.52145	71,165.00	2.513233	99	50 - 150	0.0082	+/-0.50	
M2PFTA	521809.6	4.289183	495,165.00	4.289183	105	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	219731.7	3.770917	43,674.00	3.770917	503	50 - 150	0.0000	+/-0.50	*
MPFBA	290296.3	1.058467	278,249.00	1.058467	104	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	98559.66	2.847483	93,100.00	2.847483	106	50 - 150	0.0000	+/-0.50	
M6PFDA	505200.1	3.771433	385,509.00	3.771433	131	50 - 150	0.0000	+/-0.50	
M3PFBS	129255	1.911533	114,008.00	1.911533	113	50 - 150	0.0000	+/-0.50	
M7PFUnA	463404.1	3.91405	427,712.00	3.91405	108	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	46692.86	3.4205	40,234.00	3.4205	116	50 - 150	0.0000	+/-0.50	
M5PFPeA	309255.8	1.731383	263,086.00	1.731383	118	50 - 150	0.0000	+/-0.50	
M5PFHxA	463064.5	2.6134	393,748.00	2.605183	118	50 - 150	0.0082	+/-0.50	
M3PFHxS	91361.89	3.201883	78,039.00	3.1938	117	50 - 150	0.0081	+/-0.50	
M4PFHpA	510290.7	3.170783	424,375.00	3.1627	120	50 - 150	0.0081	+/-0.50	
M8PFOA	566604.7	3.437833	454,382.00	3.42985	125	50 - 150	0.0080	+/-0.50	
M8PFOS	89077.84	3.6202	82,919.00	3.6202	107	50 - 150	0.0000	+/-0.50	
M9PFNA	550933.8	3.62125	397,946.00	3.62125	138	50 - 150	0.0000	+/-0.50	
MPFDoA	418371.4	4.048666	398,039.00	4.048666	105	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	145743.3	3.921517	135,772.00	3.921517	107	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	170678.5	3.849683	160,160.00	3.841733	107	50 - 150	0.0080	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
MW-TP-8-032923 (23C3630-04)			Lab File ID: 23C3630-04.d			Analyzed: 04/12/23 18:02			
M8FOSA	260314.7	3.988567	252,001.00	3.98855	103	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	255009.3	2.505033	71,165.00	2.513233	358	50 - 150	-0.0082	+/-0.50	*
M2PFTA	439773.4	4.289183	495,165.00	4.289183	89	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	195617.8	3.770917	43,674.00	3.770917	448	50 - 150	0.0000	+/-0.50	*
MPFBA	109274.4	1.050167	278,249.00	1.058467	39	50 - 150	-0.0083	+/-0.50	*
M3HFPO-DA	82023.46	2.8393	93,100.00	2.847483	88	50 - 150	-0.0082	+/-0.50	
M6PFDA	423177.6	3.771433	385,509.00	3.771433	110	50 - 150	0.0000	+/-0.50	
M3PFBS	115656.8	1.894967	114,008.00	1.911533	101	50 - 150	-0.0166	+/-0.50	
M7PFUnA	442110.5	3.91405	427,712.00	3.91405	103	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	211988.1	3.4205	40,234.00	3.4205	527	50 - 150	0.0000	+/-0.50	*
M5PFPeA	228139.9	1.7231	263,086.00	1.731383	87	50 - 150	-0.0083	+/-0.50	
M5PFHxA	454386.7	2.596983	393,748.00	2.605183	115	50 - 150	-0.0082	+/-0.50	
M3PFHxS	83890.2	3.193817	78,039.00	3.1938	107	50 - 150	0.0000	+/-0.50	
M4PFHpA	460364.1	3.1627	424,375.00	3.1627	108	50 - 150	0.0000	+/-0.50	
M8PFOA	473635.3	3.42985	454,382.00	3.42985	104	50 - 150	0.0000	+/-0.50	
M8PFOS	81015.62	3.620217	82,919.00	3.6202	98	50 - 150	0.0000	+/-0.50	
M9PFNA	420252.5	3.62125	397,946.00	3.62125	106	50 - 150	0.0000	+/-0.50	
MPFDoA	322977.9	4.048666	398,039.00	4.048666	81	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	178057.4	3.921517	135,772.00	3.921517	131	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	210417.1	3.8497	160,160.00	3.841733	131	50 - 150	0.0080	+/-0.50	
1,4-Dichlorobenzene-d4	117849	3.328	97,626.00	3.328	121	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	912135	11.052	713,076.00	11.052	128	50 - 200	0.0000	+/-0.50	
Pentafluorobenzene	348018	4.1	360,892.00	4.097	96	50 - 200	0.0030	+/-0.50	
Naphthalene-d8	415108	4.065	331,490.00	4.064	125	50 - 200	0.0010	+/-0.50	
1,4-Difluorobenzene	501362	4.867	523,186.00	4.864	96	50 - 200	0.0030	+/-0.50	
Chlorobenzene-d5	237330	7.753	242,311.00	7.75	98	50 - 200	0.0030	+/-0.50	
Acenaphthene-d10	239836	5.141	200,252.00	5.141	120	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	480775	6.07	409,723.00	6.073	117	50 - 200	-0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	214586	10.023	224,459.00	10.02	96	50 - 200	0.0030	+/-0.50	
Chrysene-d12	415144	8.594	378,463.00	8.599	110	50 - 200	-0.0050	+/-0.50	
Perylene-d12	469211	11.181	401,366.00	11.186	117	50 - 200	-0.0050	+/-0.50	
MW-TP-8-032923 (23C3630-04RE1)			Lab File ID: 23C3630-04RE1.d			Analyzed: 04/14/23 21:46			
M8PFOS	86556.52	3.612217	71,378.00	3.612217	121	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
MW-TP-7-032923 (23C3630-05)			Lab File ID: 23C3630-05.d			Analyzed: 04/12/23 18:09			
M8FOSA	56283.79	3.988567	252,001.00	3.98855	22	50 - 150	0.0000	+/-0.50	*
M2-4:2FTS	256561.4	2.496817	71,165.00	2.513233	361	50 - 150	-0.0164	+/-0.50	*
M2PFTA	71152.27	4.289183	495,165.00	4.289183	14	50 - 150	0.0000	+/-0.50	*
M2-8:2FTS	145070.2	3.770917	43,674.00	3.770917	332	50 - 150	0.0000	+/-0.50	*
MPFBA	64934.01	1.050167	278,249.00	1.058467	23	50 - 150	-0.0083	+/-0.50	*
M3HFPO-DA	66596.23	2.831117	93,100.00	2.847483	72	50 - 150	-0.0164	+/-0.50	
M6PFDA	309785.6	3.771433	385,509.00	3.771433	80	50 - 150	0.0000	+/-0.50	
M3PFBS	108140.3	1.886667	114,008.00	1.911533	95	50 - 150	-0.0249	+/-0.50	
M7PFUnA	287711.3	3.91405	427,712.00	3.91405	67	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	131016	3.4205	40,234.00	3.4205	326	50 - 150	0.0000	+/-0.50	*
M5PFPeA	188641.8	1.714833	263,086.00	1.731383	72	50 - 150	-0.0165	+/-0.50	
M5PFHxA	404112.3	2.588767	393,748.00	2.605183	103	50 - 150	-0.0164	+/-0.50	
M3PFHxS	75707.16	3.193817	78,039.00	3.1938	97	50 - 150	0.0000	+/-0.50	
M4PFHpA	387097.6	3.1627	424,375.00	3.1627	91	50 - 150	0.0000	+/-0.50	
M8PFOA	390127.1	3.42985	454,382.00	3.42985	86	50 - 150	0.0000	+/-0.50	
M8PFOS	61352.73	3.620217	82,919.00	3.6202	74	50 - 150	0.0000	+/-0.50	
M9PFNA	352144	3.62125	397,946.00	3.62125	88	50 - 150	0.0000	+/-0.50	
MPFDoA	187207.2	4.048666	398,039.00	4.048666	47	50 - 150	0.0000	+/-0.50	*
D5-NEtFOSAA	128411.7	3.921517	135,772.00	3.921517	95	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	167577.9	3.841733	160,160.00	3.841733	105	50 - 150	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	125323	3.328	97,626.00	3.328	128	50 - 200	0.0000	+/-0.50	
Pentafluorobenzene	352999	4.097	360,892.00	4.097	98	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	843426	11.052	713,076.00	11.052	118	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	511609	4.864	523,186.00	4.864	98	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	428426	4.064	331,490.00	4.064	129	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	241767	7.75	242,311.00	7.75	100	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	245956	5.141	200,252.00	5.141	123	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	480542	6.07	409,723.00	6.073	117	50 - 200	-0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	217559	10.023	224,459.00	10.02	97	50 - 200	0.0030	+/-0.50	
Chrysene-d12	434168	8.593	378,463.00	8.599	115	50 - 200	-0.0060	+/-0.50	
Perylene-d12	480612	11.181	401,366.00	11.186	120	50 - 200	-0.0050	+/-0.50	
MW-TP-7-032923 (23C3630-05RE2)			Lab File ID: 23C3630-05RE1.d			Analyzed: 04/14/23 21:53			
M8PFOS	79853.72	3.612217	71,378.00	3.612217	112	50 - 150	0.0000	+/-0.50	
TB-032923 (23C3630-06)			Lab File ID: E23V09407.D			Analyzed: 04/04/23 11:11			
Pentafluorobenzene	361864	4.097	360,892.00	4.097	100	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	527249	4.864	523,186.00	4.864	101	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	244882	7.75	242,311.00	7.75	101	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	216725	10.02	224,459.00	10.02	97	50 - 200	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B335924-BLK1)			Lab File ID: B335924-BLK1.d			Analyzed: 04/12/23 17:33			
M8FOSA	241681.4	3.98855	252,001.00	3.98855	96	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	61740.88	2.52145	71,165.00	2.513233	87	50 - 150	0.0082	+/-0.50	
M2PFTA	463187.7	4.289183	495,165.00	4.289183	94	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	138540.9	3.76295	43,674.00	3.770917	317	50 - 150	-0.0080	+/-0.50	*
MPFBA	272365.9	1.058467	278,249.00	1.058467	98	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	78184.41	2.847483	93,100.00	2.847483	84	50 - 150	0.0000	+/-0.50	
M6PFDA	444065	3.771433	385,509.00	3.771433	115	50 - 150	0.0000	+/-0.50	
M3PFBS	111304.8	1.911533	114,008.00	1.911533	98	50 - 150	0.0000	+/-0.50	
M7PFUnA	429426	3.91405	427,712.00	3.91405	100	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	40831.36	3.4205	40,234.00	3.4205	101	50 - 150	0.0000	+/-0.50	
M5PFPeA	264773.4	1.731383	263,086.00	1.731383	101	50 - 150	0.0000	+/-0.50	
M5PFHxA	402894.6	2.605183	393,748.00	2.605183	102	50 - 150	0.0000	+/-0.50	
M3PFHxS	80544.1	3.1938	78,039.00	3.1938	103	50 - 150	0.0000	+/-0.50	
M4PFHpA	436255.7	3.1627	424,375.00	3.1627	103	50 - 150	0.0000	+/-0.50	
M8PFOA	486443.8	3.437833	454,382.00	3.42985	107	50 - 150	0.0080	+/-0.50	
M8PFOS	81962.42	3.6202	82,919.00	3.6202	99	50 - 150	0.0000	+/-0.50	
M9PFNA	438302.6	3.62125	397,946.00	3.62125	110	50 - 150	0.0000	+/-0.50	
MPFDoA	387893.8	4.048666	398,039.00	4.048666	97	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	129460.1	3.921517	135,772.00	3.921517	95	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	160438.4	3.849683	160,160.00	3.841733	100	50 - 150	0.0080	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B335924-BS1)			Lab File ID: B335924-BS1.d			Analyzed: 04/12/23 17:18			
M8FOSA	225923.2	3.98855	252,001.00	3.98855	90	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	59168.84	2.52145	71,165.00	2.513233	83	50 - 150	0.0082	+/-0.50	
M2PFTA	416055.9	4.289183	495,165.00	4.289183	84	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	69897.27	3.770917	43,674.00	3.770917	160	50 - 150	0.0000	+/-0.50	*
MPFBA	255033.1	1.058467	278,249.00	1.058467	92	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	97946.56	2.847483	93,100.00	2.847483	105	50 - 150	0.0000	+/-0.50	
M6PFDA	388595	3.771433	385,509.00	3.771433	101	50 - 150	0.0000	+/-0.50	
M3PFBS	105925.2	1.911533	114,008.00	1.911533	93	50 - 150	0.0000	+/-0.50	
M7PFUnA	393062	3.91405	427,712.00	3.91405	92	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	40460.12	3.4205	40,234.00	3.4205	101	50 - 150	0.0000	+/-0.50	
M5PFPeA	252022.8	1.731383	263,086.00	1.731383	96	50 - 150	0.0000	+/-0.50	
M5PFHxA	385520.7	2.605183	393,748.00	2.605183	98	50 - 150	0.0000	+/-0.50	
M3PFHxS	74733.83	3.1938	78,039.00	3.1938	96	50 - 150	0.0000	+/-0.50	
M4PFHpA	421103.9	3.1627	424,375.00	3.1627	99	50 - 150	0.0000	+/-0.50	
M8PFOA	465876	3.42985	454,382.00	3.42985	103	50 - 150	0.0000	+/-0.50	
M8PFOS	74467.67	3.6202	82,919.00	3.6202	90	50 - 150	0.0000	+/-0.50	
M9PFNA	458577.9	3.62125	397,946.00	3.62125	115	50 - 150	0.0000	+/-0.50	
MPFDoA	334944	4.048666	398,039.00	4.048666	84	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	121089	3.921517	135,772.00	3.921517	89	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	140781.9	3.841733	160,160.00	3.841733	88	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS Dup (B335924-BSD1)			Lab File ID: B335924-BSD1.d			Analyzed: 04/12/23 17:26			
M8FOSA	231003.8	3.988567	252,001.00	3.98855	92	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	58933.92	2.52145	71,165.00	2.513233	83	50 - 150	0.0082	+/-0.50	
M2PFTA	435205.6	4.289183	495,165.00	4.289183	88	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	115207.7	3.76295	43,674.00	3.770917	264	50 - 150	-0.0080	+/-0.50	*
MPFBA	254372.8	1.058467	278,249.00	1.058467	91	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	78093.97	2.847483	93,100.00	2.847483	84	50 - 150	0.0000	+/-0.50	
M6PFDA	412095.7	3.771433	385,509.00	3.771433	107	50 - 150	0.0000	+/-0.50	
M3PFBS	106675.4	1.911533	114,008.00	1.911533	94	50 - 150	0.0000	+/-0.50	
M7PFUnA	396726.2	3.91405	427,712.00	3.91405	93	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	41481.14	3.4205	40,234.00	3.4205	103	50 - 150	0.0000	+/-0.50	
M5PFPeA	251674	1.731383	263,086.00	1.731383	96	50 - 150	0.0000	+/-0.50	
M5PFHxA	387068.4	2.605183	393,748.00	2.605183	98	50 - 150	0.0000	+/-0.50	
M3PFHxS	76587.84	3.1938	78,039.00	3.1938	98	50 - 150	0.0000	+/-0.50	
M4PFHpA	416779.2	3.1627	424,375.00	3.1627	98	50 - 150	0.0000	+/-0.50	
M8PFOA	473933.2	3.437833	454,382.00	3.42985	104	50 - 150	0.0080	+/-0.50	
M8PFOS	73529.27	3.6202	82,919.00	3.6202	89	50 - 150	0.0000	+/-0.50	
M9PFNA	432060.3	3.62125	397,946.00	3.62125	109	50 - 150	0.0000	+/-0.50	
MPFDoA	347005.2	4.048666	398,039.00	4.048666	87	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	125128	3.921517	135,772.00	3.921517	92	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	143726.1	3.841733	160,160.00	3.841733	90	50 - 150	0.0000	+/-0.50	
Blank (B336009-BLK1)			Lab File ID: E23V09405.D			Analyzed: 04/04/23 10:16			
Pentafluorobenzene	355692	4.097	360,892.00	4.097	99	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	517564	4.864	523,186.00	4.864	99	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	242110	7.75	242,311.00	7.75	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	216862	10.023	224,459.00	10.02	97	50 - 200	0.0030	+/-0.50	
LCS (B336009-BS1)			Lab File ID: E23V09402.D			Analyzed: 04/04/23 08:54			
Pentafluorobenzene	356224	4.097	360,892.00	4.097	99	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	531829	4.866	523,186.00	4.864	102	50 - 200	0.0020	+/-0.50	
Chlorobenzene-d5	250079	7.75	242,311.00	7.75	103	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	225486	10.02	224,459.00	10.02	100	50 - 200	0.0000	+/-0.50	
LCS Dup (B336009-BSD1)			Lab File ID: E23V09403.D			Analyzed: 04/04/23 09:21			
Pentafluorobenzene	353632	4.094	360,892.00	4.097	98	50 - 200	-0.0030	+/-0.50	
1,4-Difluorobenzene	512808	4.864	523,186.00	4.864	98	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	241751	7.75	242,311.00	7.75	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	218552	10.02	224,459.00	10.02	97	50 - 200	0.0000	+/-0.50	
Blank (B336016-BLK1)			Lab File ID: F23S096017.D			Analyzed: 04/06/23 16:17			
1,4-Dichlorobenzene-d4	668510	11.052	713,076.00	11.052	94	50 - 200	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SW-846 8270E

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B336016-BS1)			Lab File ID: F23S096018.D			Analyzed: 04/06/23 16:37			
1,4-Dichlorobenzene-d4	665615	11.052	713,076.00	11.052	93	50 - 200	0.0000	+/-0.50	
LCS Dup (B336016-BSD1)			Lab File ID: F23S096019.D			Analyzed: 04/06/23 16:57			
1,4-Dichlorobenzene-d4	745261	11.048	713,076.00	11.052	105	50 - 200	-0.0040	+/-0.50	
Blank (B336097-BLK1)			Lab File ID: D23S095007.D			Analyzed: 04/05/23 15:58			
1,4-Dichlorobenzene-d4	90828	3.328	85,074.00	3.331	107	50 - 200	-0.0030	+/-0.50	
Naphthalene-d8	324475	4.064	288,551.00	4.067	112	50 - 200	-0.0030	+/-0.50	
Acenaphthene-d10	197835	5.141	178,685.00	5.143	111	50 - 200	-0.0020	+/-0.50	
Phenanthrene-d10	398659	6.07	377,494.00	6.075	106	50 - 200	-0.0050	+/-0.50	
Chrysene-d12	347038	8.594	340,144.00	8.606	102	50 - 200	-0.0120	+/-0.50	
Perylene-d12	373183	11.181	330,874.00	11.197	113	50 - 200	-0.0160	+/-0.50	
LCS (B336097-BS1)			Lab File ID: D23S095005.D			Analyzed: 04/05/23 15:16			
1,4-Dichlorobenzene-d4	103539	3.331	85,074.00	3.331	122	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	350163	4.067	288,551.00	4.067	121	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	205423	5.146	178,685.00	5.143	115	50 - 200	0.0030	+/-0.50	
Phenanthrene-d10	423818	6.08	377,494.00	6.075	112	50 - 200	0.0050	+/-0.50	
Chrysene-d12	374123	8.614	340,144.00	8.606	110	50 - 200	0.0080	+/-0.50	
Perylene-d12	376946	11.207	330,874.00	11.197	114	50 - 200	0.0100	+/-0.50	
LCS Dup (B336097-BSD1)			Lab File ID: D23S095006.D			Analyzed: 04/05/23 15:37			
1,4-Dichlorobenzene-d4	93407	3.328	85,074.00	3.331	110	50 - 200	-0.0030	+/-0.50	
Naphthalene-d8	326500	4.064	288,551.00	4.067	113	50 - 200	-0.0030	+/-0.50	
Acenaphthene-d10	196872	5.141	178,685.00	5.143	110	50 - 200	-0.0020	+/-0.50	
Phenanthrene-d10	403256	6.073	377,494.00	6.075	107	50 - 200	-0.0020	+/-0.50	
Chrysene-d12	358549	8.599	340,144.00	8.606	105	50 - 200	-0.0070	+/-0.50	
Perylene-d12	378502	11.181	330,874.00	11.197	114	50 - 200	-0.0160	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B337100-BLK1)			Lab File ID: B337100-BLK1.d			Analyzed: 05/10/23 18:44			
M8FOSA	147478.2	4.044533	210,079.00	4.044533	70	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	51625.26	2.505033	68,102.00	2.496817	76	50 - 150	0.0082	+/-0.50	
M2PFTA	378549.1	4.2892	520,002.00	4.281133	73	50 - 150	0.0081	+/-0.50	
M2-8:2FTS	51519.04	3.786867	48,895.00	3.786867	105	50 - 150	0.0000	+/-0.50	
MPFBA	414290.7	1.0834	477,413.00	1.0834	87	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	104890.2	2.847483	129,174.00	2.8393	81	50 - 150	0.0082	+/-0.50	
M6PFDA	309508.1	3.787383	392,781.00	3.7874	79	50 - 150	0.0000	+/-0.50	
M3PFBS	113035.9	1.911533	123,093.00	1.90325	92	50 - 150	0.0083	+/-0.50	
M7PFUnA	264621.4	3.922067	380,840.00	3.922067	69	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	28720.92	3.445283	32,650.00	3.445283	88	50 - 150	0.0000	+/-0.50	
M5PFPeA	311179.5	1.731383	363,549.00	1.7231	86	50 - 150	0.0083	+/-0.50	
M5PFHxA	529454.5	2.588767	603,066.00	2.588767	88	50 - 150	0.0000	+/-0.50	
M3PFHxS	67061.98	3.218333	90,122.00	3.218333	74	50 - 150	0.0000	+/-0.50	
M4PFHpA	537837.4	3.186933	622,459.00	3.186933	86	50 - 150	0.0000	+/-0.50	
M8PFOA	456159.8	3.453817	518,833.00	3.453817	88	50 - 150	0.0000	+/-0.50	
M8PFOS	50577.39	3.644167	69,191.00	3.636183	73	50 - 150	0.0080	+/-0.50	
M9PFNA	305368.7	3.637233	393,534.00	3.637233	78	50 - 150	0.0000	+/-0.50	
MPFDoA	240813.7	4.056684	343,270.00	4.056684	70	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	55348.45	3.929533	94,298.00	3.929533	59	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	78549.82	3.857667	113,062.00	3.857667	69	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B337100-BS1)			Lab File ID: B337100-BS1.d			Analyzed: 05/10/23 18:30			
M8FOSA	147172.2	4.04455	210,079.00	4.044533	70	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	47269.45	2.505033	68,102.00	2.496817	69	50 - 150	0.0082	+/-0.50	
M2PFTA	417919.3	4.281133	520,002.00	4.281133	80	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	50382.71	3.786867	48,895.00	3.786867	103	50 - 150	0.0000	+/-0.50	
MPFBA	421514.6	1.0834	477,413.00	1.0834	88	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	112617.2	2.847483	129,174.00	2.8393	87	50 - 150	0.0082	+/-0.50	
M6PFDA	317738.1	3.787383	392,781.00	3.7874	81	50 - 150	0.0000	+/-0.50	
M3PFBS	111828.1	1.911533	123,093.00	1.90325	91	50 - 150	0.0083	+/-0.50	
M7PFUnA	302043.5	3.922067	380,840.00	3.922067	79	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	25868.26	3.4453	32,650.00	3.445283	79	50 - 150	0.0000	+/-0.50	
M5PFPeA	318059.3	1.731383	363,549.00	1.7231	87	50 - 150	0.0083	+/-0.50	
M5PFHxA	534388.8	2.588767	603,066.00	2.588767	89	50 - 150	0.0000	+/-0.50	
M3PFHxS	73114.42	3.218333	90,122.00	3.218333	81	50 - 150	0.0000	+/-0.50	
M4PFHpA	532215.3	3.186933	622,459.00	3.186933	86	50 - 150	0.0000	+/-0.50	
M8PFOA	470398	3.453817	518,833.00	3.453817	91	50 - 150	0.0000	+/-0.50	
M8PFOS	50683.18	3.644183	69,191.00	3.636183	73	50 - 150	0.0080	+/-0.50	
M9PFNA	297332.2	3.637233	393,534.00	3.637233	76	50 - 150	0.0000	+/-0.50	
MPFDoA	262117.3	4.056684	343,270.00	4.056684	76	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	59733.86	3.929533	94,298.00	3.929533	63	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	81991.16	3.857667	113,062.00	3.857667	73	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS Dup (B337100-BSD1)			Lab File ID: B337100-BSD1.d			Analyzed: 05/10/23 18:37			
M8FOSA	141171.5	4.044517	210,079.00	4.044533	67	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	51606.79	2.505033	68,102.00	2.496817	76	50 - 150	0.0082	+/-0.50	
M2PFTA	429368.3	4.2892	520,002.00	4.281133	83	50 - 150	0.0081	+/-0.50	
M2-8:2FTS	51439.67	3.78685	48,895.00	3.786867	105	50 - 150	0.0000	+/-0.50	
MPFBA	427035.8	1.0834	477,413.00	1.0834	89	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	109450.9	2.847483	129,174.00	2.8393	85	50 - 150	0.0082	+/-0.50	
M6PFDA	339017.6	3.787383	392,781.00	3.7874	86	50 - 150	0.0000	+/-0.50	
M3PFBS	113128.2	1.911533	123,093.00	1.90325	92	50 - 150	0.0083	+/-0.50	
M7PFUnA	302869.1	3.92205	380,840.00	3.922067	80	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	24831.98	3.445283	32,650.00	3.445283	76	50 - 150	0.0000	+/-0.50	
M5PFPeA	324024.3	1.731383	363,549.00	1.7231	89	50 - 150	0.0083	+/-0.50	
M5PFHxA	539693.6	2.588767	603,066.00	2.588767	89	50 - 150	0.0000	+/-0.50	
M3PFHxS	71627.52	3.218333	90,122.00	3.218333	79	50 - 150	0.0000	+/-0.50	
M4PFHpA	528124.8	3.186933	622,459.00	3.186933	85	50 - 150	0.0000	+/-0.50	
M8PFOA	487157.5	3.453817	518,833.00	3.453817	94	50 - 150	0.0000	+/-0.50	
M8PFOS	53466.01	3.644167	69,191.00	3.636183	77	50 - 150	0.0080	+/-0.50	
M9PFNA	313157.9	3.637217	393,534.00	3.637233	80	50 - 150	0.0000	+/-0.50	
MPFDoA	254065.8	4.056667	343,270.00	4.056684	74	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	71442.01	3.929517	94,298.00	3.929533	76	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	83010.49	3.85765	113,062.00	3.857667	73	50 - 150	0.0000	+/-0.50	

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 300.0 in Water	
Bromide	ME,NY,NC,NH
Chloride	NC,NY,MA,VA,ME,NH,CT,RI
Sulfate	NC,NY,MA,VA,ME,NH,CT,RI
EPA 410.4 in Water	
Chemical Oxygen Demand	CT,MA,NH,NY,RI,NC,ME,VA
SM 21-23 5310B in Water	
Total Organic Carbon	CT,NH,NY,RI,NC,MA,VA
SM19-23 4500 NH3 C in Water	
Ammonia as N	NY,MA,CT,RI,VA,NC,ME
SM21-23 2320B in Water	
Alkalinity to pH 4.5	CT
SM21-23 2540C in Water	
Total Dissolved Solids	CT,MA,NH,NY,RI,NC,ME,VA
SOP-454 PFAS in Water	
Perfluorobutanoic acid (PFBA)	NH-P
Perfluorobutanesulfonic acid (PFBS)	NH-P
Perfluoropentanoic acid (PFPeA)	NH-P
Perfluorohexanoic acid (PFHxA)	NH-P
11Cl-PF3OUdS (F53B Major)	NH-P
9Cl-PF3ONS (F53B Minor)	NH-P
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NH-P
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P
8:2 Fluorotelomersulfonic acid (8:2FTS A)	NH-P
Perfluorodecanoic acid (PFDA)	NH-P
Perfluorododecanoic acid (PFDoA)	NH-P
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NH-P
Perfluoroheptanesulfonic acid (PFHpS)	NH-P
N-EtFOSAA (NEtFOSAA)	NH-P
N-MeFOSAA (NMeFOSAA)	NH-P
Perfluorotetradecanoic acid (PFTA)	NH-P
Perfluorotridecanoic acid (PFTrDA)	NH-P
4:2 Fluorotelomersulfonic acid (4:2FTS A)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P
Perfluorooctanesulfonamide (FOSA)	NH-P
Perfluorononanesulfonic acid (PFNS)	NH-P
Perfluoro-1-hexanesulfonamide (FHxSA)	NH-P
Perfluoro-1-butanesulfonamide (FBSA)	NH-P
Perfluorohexanesulfonic acid (PFHxS)	NH-P
Perfluoro-4-oxapentanoic acid (PFMPA)	NH-P
Perfluoro-5-oxahexanoic acid (PFMBA)	NH-P
6:2 Fluorotelomersulfonic acid (6:2FTS A)	NH-P
Perfluoropetanesulfonic acid (PFPeS)	NH-P
Perfluoroundecanoic acid (PFUnA)	NH-P
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P
Perfluoroheptanoic acid (PFHpA)	NH-P

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SOP-454 PFAS in Water	
Perfluorooctanoic acid (PFOA)	NH-P
Perfluorooctanesulfonic acid (PFOS)	NH-P
Perfluorononanoic acid (PFNA)	NH-P
SW-846 6010 in Water	
Hardness	CT,MA,NH,NY
SW-846 6010D in Water	
Aluminum	CT,NH,NY,ME,VA,NC
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,VA,RI,NC
Barium	CT,NH,NY,ME,VA,NC
Beryllium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Calcium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Cobalt	CT,NH,NY,ME,VA,NC
Copper	CT,NH,NY,ME,VA,NC
Iron	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,ME,VA,NC
Magnesium	CT,NH,NY,ME,VA,NC
Manganese	CT,NH,NY,ME,VA,NC
Nickel	CT,NH,NY,ME,VA,NC
Potassium	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Sodium	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,VA,NC
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
Boron	CT,NH,NY,ME,VA,NC
SW-846 7470A in Water	
Mercury	CT,NH,NY,NC,ME,VA
SW-846 8082A in Water	
Aroclor-1016	CT,NH,NY,NC,ME,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260	CT,NH,NY,NC,ME,VA,PA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Water	
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1262	NH,NY,NC,ME,VA,PA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA,PA
Aroclor-1268	NH,NY,NC,ME,VA,PA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA,PA
SW-846 8260D in Water	
Acetone	CT,ME,NH,VA,NY
Acrylonitrile	CT,ME,NH,VA,NY
tert-Amyl Methyl Ether (TAME)	ME,NH,VA,NY
Benzene	CT,ME,NH,VA,NY
Bromobenzene	ME,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
n-Butylbenzene	ME,VA,NY
sec-Butylbenzene	ME,VA,NY
tert-Butylbenzene	ME,VA,NY
tert-Butyl Ethyl Ether (TBEE)	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
2-Chlorotoluene	ME,NH,VA,NY
4-Chlorotoluene	ME,NH,VA,NY
1,2-Dibromo-3-chloropropane (DBCP)	ME,NY
1,2-Dibromoethane (EDB)	ME,NY
Dibromomethane	ME,NH,VA,NY
1,2-Dichlorobenzene	CT,ME,NH,VA,NY
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
1,3-Dichloropropane	ME,VA,NY
2,2-Dichloropropane	ME,NH,VA,NY

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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260D in Water	
1,1-Dichloropropene	ME,NH,VA,NY
cis-1,3-Dichloropropene	CT,ME,NH,VA,NY
trans-1,3-Dichloropropene	CT,ME,NH,VA,NY
Diethyl Ether	ME,NY
Diisopropyl Ether (DIPE)	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
p-Isopropyltoluene (p-Cymene)	CT,ME,NH,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
n-Propylbenzene	CT,ME,NH,VA,NY
Styrene	CT,ME,NH,VA,NY
1,1,1,2-Tetrachloroethane	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
1,3,5-Trichlorobenzene	ME
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
1,2,3-Trichloropropane	ME,NH,VA,NY
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	VA,NY
1,2,4-Trimethylbenzene	ME,VA,NY
1,3,5-Trimethylbenzene	ME,VA,NY
Vinyl Chloride	CT,ME,NH,VA,NY
m+p Xylene	CT,ME,NH,VA,NY
o-Xylene	CT,ME,NH,VA,NY
SW-846 8270E in Water	
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
Benzidine	CT,NY,NC,ME,NH,VA
Benzo(a)anthracene	CT,NY,NC,ME,NH,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270E in Water	
Benzo(a)pyrene	CT,NY,NC,ME,NH,VA
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

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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270E in Water	
Naphthalene	CT,NY,NC,ME,NH,VA
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-Nitrosodiphenylamine/Diphenylamine	NY
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	06/30/2024
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
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023

Chain of Custody / Analysis Report

RAMBOLL

Page (of)

Sampler(s): Sara Hahne, Liam Blake (Signature)

KM 23C3630

Laboratory Use Only

Project Number: 1940101207

Job Number:

Laboratory ID:

Lab Sample ID:

Contact:	Samantha Salotto (NYSDEC)
Address:	625 Broadway, 12th Floor Albany, NY 12233-7012
Phone:	(518) 402-9764
E-mail:	Samantha.Salotto@dec.ny.gov
Project:	NYSDEC Utica City Dump, Site #633015 Groundwater Sampling CO#144354
Location:	Incinerator Rd, Utica, NY 13502

Laboratory: Pace Analytical Laboratories (Con-Test), 39 Spruce Street, East Longmeadow, MA 01028
Attn: Mike Buttrick
Phone: 860-999-3563

Holding Time:

Package Requirement: NYS Cat B. Deliverable. w/ EDD

EDD Format: NYSDEC 4-file

Analysis Required

Preservatives: (see key at bottom)

	Unique Field Sample ID (sys_sample_code)	Sample Location	Date	Time	Sample Type (See Key)	Sample Matrix (See Key)	Number of Containers	Grab [G] or Composite [C]	Field Filtered? (Y / N)	VOCs by 8260 (1)	SVOCs by 8270 (0)	PCBs by 8082 (0)	1,4-Dioxane by 8270 SIM (0)	PFAS by 537.1 PFAS Isotope (0)	Metals, Hardness, Boron by calc (2)	Cyanide, Total by SM4500 CNE (4)	Mercury by EPA 7471A (2)	COD, Ammonia by Multiple Methods (3)	TOC (8)	Alkalinity (0)	TDS, Sulfate, Bromide, Chloride (0)
1	MW-4-032923	MW-4	3/29/23	11:00	N	WG	6	G	N			X	X	X							
2	CHA-15-032923	CHA-15	3/29/23	12:50	N	WG	6	G	N			X	X	X							
3	FB-032923	X	3/29/23	13:15	FB	WQ	1	G	N					X							
4	MW-TP-8-032923	MW-TP-8	3/29/23	13:30	N	WG	16	G	N	X	X	X	X	X	X	X	X	X	X	X	X
5	MW-TP-7-032923	MW-TP-7	3/29/23	14:30	N	WG	16	G	N	X	X	X	X	X	X	X	X	X	X	X	X
6	TB-032923	X	3/29/23	X	TB	WQ	1	G	N	X											
7																					
8																					
9																					
10																					
11																					
12																					
13	(SM)																				
14																					
15																					
16																					
17																					

Special Instructions: 1) Report detections above MDL, but below PQL with a "J" flags. Deliverables include: 1 PDF copy of full package and pdf of summary package, a New York State DEC compliant EDD. Please copy Deborah Wright (Deborah.Wright@ramboll.com) on each data transmittal.

Use the top boxes if the samples are to be shipped via courier (e.g., Fed Ex)

Relinquished by: Sara Hahne	Date: 3/29/23	Received By:	Date: 3-29-23
Of: Ramboll Americas Engineering Solutions, Inc.	Time: 16:17	Of: Pace Analytical - Con-Test	Time: 16:17
Relinquished by:	Date: 3.30.23	Received By:	Date: 3/31/23
Of:	Time: 1700	Of: Pace Analytical - Con-Test	Time: 0920
Courier Name:	Date:	Received By:	Date:
Tracking #:	Time:	Of:	Time:

Condition: PFAS Isotope, per client. KAM 3/31/23

Other comments or notes regarding condition of samples as received:

Custody Seals Intact? *(if so, indicate the #, date, and time of the seal)*

Cooler Temperature: 2.4/2.0/3.0 °C

Sample Type: N = Normal env. sample, FD = field duplicate, EB = Equipment Blank, TB = Trip Blank, MS = Lab Matrix Spike, Other (Specify): FB = field 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 = HNO_3, 3 = H_2SO_4, 4 = NaOH, 5 = Zn Acetate, 6 = MeOH, 7 = $NaHSO_4$, 8 = Na_3PO_4, 9 = BenzalkoniumCl, 10 = other

Table of Contents

[redacted]

FedEx® Tracking

DELIVERED

Friday

3/31/2023 at 9:20 am

Signed for by: C.HENRIQUEZ

Obtain Proof of delivery

How was your delivery?

☆ ☆ ☆ ☆ ☆

DELIVERY STATUS

Delivered

Shipment is 1 of 7 pieces



TRACKING ID

771713526185

FROM
Pace Analytical
10 Adler Drive
East Syracuse, NY US 13057
5188609724

Label Created
3/30/2023 1:59 PM

PACKAGE RECEIVED BY FEDEX
NORTH SYRACUSE, NY
3/30/2023 3:49 PM

IN TRANSIT
WINDSOR LOCKS, CT
3/31/2023 8:32 AM

OUT FOR DELIVERY
WINDSOR LOCKS, CT
3/31/2023 8:41 AM

DELIVERED
Sample Receiving

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

ENV-FRM-ELON-0005v02__Sample Receiving Checklist

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

Pace
PEOPLE ADVANCING SCIENCE

Client Rumball

Project Utica C&D dump,

MCP/RCP Required N/A

Deliverable Package Req. N/A

Location Incinerator R2, Utica, NY

PWSID# (When Applicable) N/A

Arrival Method:

Courier ☐ Fed Ex ☑ Walk In ☐ Other ☐ _____

Received By / Date / Time AWSH 3/31/23 920

Back-Sheet By / Date / Time LA 3/31/23 1426

Temperature Method Gun # 5

Temp ☑ < 6° C Actual Temperature 2.4/2.0/3.0

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	☐	☑
Labels Filled	☐	☑
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	20							
500 mL Amber Plastic								
250 mL Amber Plastic	11		2	2	2			2
Other Amber Clear Plastic								
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		5						

575 Broad Hollow Road
Melville, NY 11747
516-370-6000

April 07, 2023

Raymond McCarthy
Pace Analytical Services - New England
39 Spruce Street
East Longmeadow, MA 01028

RE: Project: 23C3630
Pace Project No.: 70251299

Dear Raymond McCarthy:

Enclosed are the analytical results for sample(s) received by the laboratory on April 01, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Melville

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brianna D. Rivera for
Matthew T. Nemeth
matthew.nemeth@pacelabs.com
(631)694-3040
Project Manager

Enclosures

cc: Jessica Hoffman, Con-Test
Kyle Stuckey, Pace-Contest

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Melville, NY 11747
516-370-6000

CERTIFICATIONS

Project: 23C3630
Pace Project No.: 70251299

Pace Analytical Services Long Island
575 Broad Hollow Rd, Melville, NY 11747
Connecticut Certification #: PH-0435
Delaware Certification # NY 10478
Maryland Certification #: 208
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987
New Jersey Certification #: NY158
New York Certification #: 10478 Primary Accrediting Body
Pennsylvania Certification #: 68-00350
Rhode Island Certification #: LAO00340
Virginia Certification # 460302

REPORT OF LABORATORY ANALYSIS

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516-370-6000

SAMPLE SUMMARY

Project: 23C3630
Pace Project No.: 70251299

Lab ID	Sample ID	Matrix	Date Collected	Date Received
70251299001	**23C3630-04**	Water	03/29/23 13:30	04/01/23 10:20
70251299002	**23C3630-05**	Water	03/29/23 14:30	04/01/23 10:20

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SAMPLE ANALYTE COUNT

Project: 23C3630
Pace Project No.: 70251299

Lab ID	Sample ID	Method	Analysts	Analytes Reported
70251299001	**23C3630-04**	SM22 4500-CN-E	CEA	1
70251299002	**23C3630-05**	SM22 4500-CN-E	CEA	1

PACE-MV = Pace Analytical Services - Melville

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 23C3630
Pace Project No.: 70251299

Method: **SM22 4500-CN-E**
Description: SM 4500 CNE Cyanide, Total
Client: Pace Analytical Services - New England
Date: April 07, 2023

General Information:
2 samples were analyzed for SM22 4500-CN-E by Pace Analytical Services Melville. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with SM20/22 4500-CN-C with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 23C3630
Pace Project No.: 70251299

Sample: 23C3630-04 **Lab ID: 70251299001** Collected: 03/29/23 13:30 Received: 04/01/23 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
SM 4500 CNE Cyanide, Total	Analytical Method: SM22 4500-CN-E Preparation Method: SM20/22 4500-CN-C Pace Analytical Services - Melville								
Cyanide	**<10.0**	ug/L	10.0	7.1	1	04/05/23 14:35	04/05/23 18:31	57-12-5	

REPORT OF LABORATORY ANALYSIS

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Melville, NY 11747
516-370-6000

ANALYTICAL RESULTS

Project: 23C3630
Pace Project No.: 70251299

Sample: 23C3630-05 **Lab ID: 70251299002** Collected: 03/29/23 14:30 Received: 04/01/23 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
SM 4500 CNE Cyanide, Total	Analytical Method: SM22 4500-CN-E Preparation Method: SM20/22 4500-CN-C Pace Analytical Services - Melville								
Cyanide	**<10.0**	ug/L	10.0	7.1	1	04/05/23 14:35	04/05/23 18:32	57-12-5	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 23C3630
Pace Project No.: 70251299

QC Batch: 299842
QC Batch Method: SM20/22 4500-CN-C
Analysis Method: SM22 4500-CN-E
Analysis Description: 4500 CNE Cyanide, Total
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70251299001, 70251299002

METHOD BLANK: 1518328 Matrix: Water
Associated Lab Samples: 70251299001, 70251299002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Cyanide	ug/L	ND	10.0	7.1	04/05/23 18:14	

LABORATORY CONTROL SAMPLE: 1518329

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	ug/L	75	81.1	108	85-115	

MATRIX SPIKE SAMPLE: 1518330

Parameter	Units	70251298003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cyanide	ug/L	<10.0	100	120	119	75-125	

SAMPLE DUPLICATE: 1518331

Parameter	Units	70251298003 Result	Dup Result	RPD	Max RPD	Qualifiers
Cyanide	ug/L	<10.0	<10.0		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Melville, NY 11747
516-370-6000

QUALIFIERS

Project: 23C3630
Pace Project No.: 70251299

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

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575 Broad Hollow Road
Melville, NY 11747
516-370-6000

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 23C3630
Pace Project No.: 70251299

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70251299001	**23C3630-04**	SM20/22 4500-CN-C	299842	SM22 4500-CN-E	299946
70251299002	**23C3630-05**	SM20/22 4500-CN-C	299842	SM22 4500-CN-E	299946

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WO# : 70251299

SUBCONTRACT CHAIN OF CUSTOD

Pace New England

23C3630

SENDING LABORATORY:

Pace New England
39 Spruce Street
East Longmeadow, MA 01028
Phone: 413.525.2332
Fax: 413.525.6405
Project Manager: Kyle A. Murray

RECEIVING LABORATORY:

Pace Analytical Services - Long Island, NY
575 Broad Hollow Road
Melville, NY 11747
Phone :(516) 370-6000
Fax: -

Analysis	Sample Name	Due		Expires	Comments
Sample ID: 23C3630-04	**MW-TP-8-032923**	**Water**	**Sampled:**	**03/29/23 13:30**	**CAT B**
S-Cyanide, Total		04/14/23 15:30		04/12/23 13:30	
Containers Supplied:					
250 mL plastic + NaOH (J					
Sample ID: 23C3630-05	**MW-TP-7-032923**	**Water**	**Sampled:**	**03/29/23 14:30**	**CAT B**
S-Cyanide, Total		04/14/23 15:30		04/12/23 14:30	
Containers Supplied:					
250 mL plastic + NaOH (J					

Released By	Date	Received By	Date
	3/31/23 17:[illegible]	RLT	4/1/23 10:20
Released By	Date	Received By	Date

Chain of Custody / Analysis Report

RAMBOLL

Page 1 of 1

Sampler(s): Sara Hahne, Liam Blake (Signature)

HM 23C3630

Laboratory Use Only

Project Number: 1940101207

Job Number:

Laboratory ID:

Lab Sample ID:

Contact:	Samantha Salotto (NYSDEC)
Address:	625 Broadway, 12th Floor Albany, NY 12233-7012
Phone:	(518) 402-9764
E-mail:	Samantha.Salotto@dec.ny.gov
Project:	NYSDEC Utica City Dump, Site #633015 Groundwater Sampling CO#144354
Location:	Incinerator Rd, Utica, NY 13502

Laboratory: Pace Analytical Laboratories (Con-Test), 39 Spruce Street, East Longmeadow, MA 01028
Attn: Mike Buttrick
Phone: 860-999-3563

Holding Time:

Package Requirement: NYS Cat B Deliverable. w/ EDD

EDD Format: NYSDEC 4-file

Analysis Required

Preservatives: (see key at bottom)

	Sample Identification: Unique Field Sample ID (sys_sample_code)	Sample Location	Date	Time	Sample Type (See Key)	Sample Matrix (See Key)	Number of Containers	Grab [G] or Composite [C]	Field Filtered? (Y / N)	VOCs by 8260 (1)	SVOCs by 8270 (0)	PCBs by 8082 (0)	1,4-Dioxane by 8270 SIM (0)	PFAS by 537.1 (0)	Metals, Hardness, Boron by calc (2)	Cyanide, Total by SM4500 CNE (4)	Mercury by EPA 7471A (2)	COD, Ammonia by Multiple Methods (3)	TOC (8)	Alkalinity (0)	TDS, Sulfate, Bromide, Chloride (0)
1	MW-4-032923	MW-4	3/29/23	11:00	N	WG	6	G	N			X	X	X							
2	CHA-1S-032923	CHA-1S	3/29/23	12:50	N	WG	6	G	N			X	X	X							
3	FB-032923		3/29/23	13:15	FB	WQ	1	G	N					X							
4	MW-TP-8-032923	MW-TP-8	3/29/23	13:30	N	WG	16	G	N	X	X	X	X	X	X	X	X	X	X	X	X
5	MW-TP-7-032923	MW-TP-7	3/29/23	14:30	N	WG	16	G	N	X	X	X	X	X	X	X	X	X	X	X	X
6	TB-032923		3/29/23		TB	WQ	1	G	N	X											
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					
16																					
17																					

SW

WO#: 70251299
PM: MN2 **Due Date: 04/12/23**
CLIENT: Pace-CON

Special Instructions: 1) Report detections above MDL, but below PQL with a "J" flags. Deliverables include: 1 PDF copy of full package and pdf of summary package, a New York State DEC compliant EDD. Please copy Deborah Wright (Deborah.Wright@ramboll.com) on each data transmittal.

Use the top boxes if the samples are to be shipped via courier (e.g., Fed Ex)

Relinquished by: Sara Hahne	Date: 3/29/23 Time: 16:17	Received By:	Date: 3-29-23 Time: 16:17
Of: Ramboll Americas Engineering Solutions, Inc.		Of: Pace Analytical - Con-Test	
Relinquished by:	Date: 3.30.23 Time: 1700	Received By:	Date: 3/31/23 Time: 0920
Of:		Of: Pace Analytical - Con-Test	
Name:	Date:	Received By:	Date:
Fed Ex Tracking #:	Time:	Of:	Time:

Condition:

Custody Seals Intact? *(if so, indicate the #, date, and time of the seal)*

Cooler Temperature: 2.4/2.0/3.0 °C

Other comments or notes regarding condition of samples as received:

Sample Type: N = Normal env. sample, FD = field duplicate, EB = Equipment Blank, TB = Trip Blank, MS = Lab Matrix Spike, Other (Specify): FB = field 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 = HNO_3, 3 = H_2SO_4, 4 = NaOH, 5 = Zn Acetate, 6 = MeOH, 7 = $NaHSO_4$, 8 = Na_3PO_4, 9 = BenzalkoniumCl, 10 = other

Table of Contents

Sample Condition Upon Receipt

Pace Analytical®

WO#: 70251299

PM: MN2 **Due Date: 04/12/23**

CLIENT: Pace-CON

Client Name: Pace-CON

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #: 7717 2621 2478

Custody Seal on Cooler/Box Present: ☐ Yes ☐ No Seals intact: ☐ Yes ☐ No ☑ N/A

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ Ziploc ☐ None ☐ Other

Thermometer Used: THO TH148 Correction Factor: _____

Cooler Temperature(°C): 1.2 Cooler Temperature Corrected(°C): 1.3

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☑ N/A, water sample)

Temperature Blank Present: ☐ Yes ☑ No

Type of Ice: ☑ Wet ☐ Blue None

☑ Samples on ice, cooling process has begun

Date/Time 5035A kits placed in freezer _____

Date and Initials of person examining contents: SH 4/1/23

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ Yes ☐ No

Did samples originate from a foreign source including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	☑ Yes	☐ No		1.
Chain of Custody Filled Out:	☑ Yes	☐ No		2.
Chain of Custody Relinquished:	☑ Yes	☐ No		3.
Sampler Name & Signature on COC:	☑ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time:	☑ Yes	☐ No		5.
Short Hold Time Analysis (<72hr):	☐ Yes	☑ No		6.
Rush Turn Around Time Requested:	☐ Yes	☑ No		7.
Sufficient Volume: (Triple volume provided for LL)	☑ Yes	☐ No		8.
Correct Containers Used:	☑ Yes	☐ No		9.
-Pace Containers Used:	☑ Yes	☐ No		
Containers Intact:	☑ Yes	☐ No		10.
Filtered volume received for Dissolved tests	☐ Yes	☐ No	☑ N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC: -Includes date/time/ID/Matrix: SCWW Oil	☑ Yes	☐ No		12.
All containers needing preservation have been checked?	☑ Yes	☐ No	☐ N/A	13. ☐ HNO_3 ☑ H_2SO_4 ☐ NaOH ☐ HCl
pH paper Lot # HC293085				Sample #
All containers needing preservation are found to be in compliance with method recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NAOH>12 Cyanide)	☑ Yes	☐ No	☐ N/A	
Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water).				Initial when completed: / Lot # of added preservative: / Date/Time preservative added:
Per Method, VOA pH is checked after analysis				
Samples checked for dechlorination:	☑ Yes	☐ No	☐ N/A	14.
KI starch test strips Lot #: 14860				Positive for Res. Chlorine? Y N
Residual chlorine strips Lot #				
SM 4500 CN samples checked for sulfide?	☑ Yes	☐ No	☐ N/A	15.
Lead Acetate Strips Lot # 14-862				Positive for Sulfide? Y N
Headspace in VOA Vials (>6mm):	☐ Yes	☐ No	☑ N/A	16.
Trip Blank Present:	☐ Yes	☐ No	☑ N/A	17.
Trip Blank Custody Seals Present	☐ Yes	☐ No	☐ N/A	
Pace Trip Blank Lot # (if applicable):				

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

PM (Project Manager) review is documented electronically in LIMS

ENV-CRM-MEHV-0024-01

con-test®
A Pace Analytical® Laboratory

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

May 3, 2023

Deborah Y. Wright
NYDEC_Ramboll US Consulting, Inc. - Syracuse
333 West Washington Street, PO Box 4873
Syracuse, NY 13221

Project Location: Incinerator Rd, Utica, NY
Client Job Number:
Project Number: 633015
Laboratory Work Order Number: 23D0022

Enclosed are results of analyses for samples as received by the laboratory on April 1, 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. 413/525-2332

NYDEC_Ramboll US Consulting, Inc. - Syracuse
333 West Washington Street, PO Box 4873
Syracuse, NY 13221
ATTN: Deborah Y. Wright

REPORT DATE: 5/3/2023

PURCHASE ORDER NUMBER: 144354

PROJECT NUMBER: 633015

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23D0022

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

PROJECT LOCATION: Incinerator Rd, Utica, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-TP-6-033023	23D0022-01	Ground Water		-	New York Certification# NY10478
				EPA 300.0	
				EPA 410.4	
				SM 21-23 5310B	
				SM19-23 4500 NH3 C	
				SM21-23 2320B	
				SM21-23 2540C	
				SM4500 CN C	New York Certification# NY10478
				SOP-454 PFAS	
				SW-846 6010	
				SW-846 6010D	
				SW-846 7470A	
				SW-846 8082A	
				SW-846 8260D	
				SW-846 8270E	
CHA-55-033023	23D0022-02	Ground Water		-	New York Certification# NY10478
				EPA 300.0	
				EPA 410.4	
				SM 21-23 5310B	
				SM19-23 4500 NH3 C	
				SM21-23 2320B	
				SM21-23 2540C	
				SM4500 CN C	New York Certification# NY10478
				SOP-454 PFAS	
				SW-846 6010	
				SW-846 6010D	
				SW-846 7470A	
				SW-846 8082A	
				SW-846 8260D	
				SW-846 8270E	

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NYDEC_Ramboll US Consulting, Inc. - Syracuse
333 West Washington Street, PO Box 4873
Syracuse, NY 13221
ATTN: Deborah Y. Wright

REPORT DATE: 5/3/2023

PURCHASE ORDER NUMBER: 144354

PROJECT NUMBER: 633015

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23D0022

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

PROJECT LOCATION: Incinerator Rd, Utica, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-TP-5-033023	23D0022-03	Ground Water		-	New York Certification# NY10478
				EPA 300.0	
				EPA 410.4	
				SM 21-23 5310B	
				SM19-23 4500 NH3 C	
				SM21-23 2320B	
				SM21-23 2540C	
				SM4500 CN C	New York Certification# NY10478
				SOP-454 PFAS	
				SW-846 6010	
				SW-846 6010D	
				SW-846 7470A	
				SW-846 8082A	
				SW-846 8260D	
				SW-846 8270E	
MW-TP-4-033023	23D0022-04	Ground Water		-	New York Certification# NY10478
				EPA 300.0	
				EPA 410.4	
				SM 21-23 5310B	
				SM19-23 4500 NH3 C	
				SM21-23 2320B	
				SM21-23 2540C	
				SM4500 CN C	New York Certification# NY10478
				SOP-454 PFAS	
				SW-846 6010	
				SW-846 6010D	
				SW-846 7470A	
				SW-846 8082A	
				SW-846 8260D	
				SW-846 8270E	

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

NYDEC_Ramboll US Consulting, Inc. - Syracuse
333 West Washington Street, PO Box 4873
Syracuse, NY 13221
ATTN: Deborah Y. Wright

REPORT DATE: 5/3/2023

PURCHASE ORDER NUMBER: 144354

PROJECT NUMBER: 633015

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23D0022

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

PROJECT LOCATION: Incinerator Rd, Utica, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
CHA-65-033023	23D0022-05	Ground Water		-	New York Certification# NY10478
				EPA 300.0	
				EPA 410.4	
				SM 21-23 5310B	
				SM19-23 4500 NH3 C	
				SM21-23 2320B	
				SM21-23 2540C	
				SM4500 CN C	New York Certification# NY10478
				SOP-454 PFAS	
				SW-846 6010	
				SW-846 6010D	
				SW-846 7470A	
				SW-846 8082A	
				SW-846 8260D	
				SW-846 8270E	
FD-033023	23D0022-06	Ground Water		-	New York Certification# NY10478
				EPA 300.0	
				EPA 410.4	
				SM 21-23 5310B	
				SM19-23 4500 NH3 C	
				SM21-23 2320B	
				SM21-23 2540C	
				SM4500 CN C	New York Certification# NY10478
				SOP-454 PFAS	
				SW-846 6010	
				SW-846 6010D	
				SW-846 7470A	
				SW-846 8082A	
				SW-846 8260D	
				SW-846 8270E	
TB-033023	23D0022-07	Ground 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

EPA 300.0

Qualifications:

MS-07

Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery.Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

Analyte & Samples(s) Qualified:

Sulfate

23D0022-04[MW-TP-4-033023], B337809-MSD1

MS-07A

Matrix spike and spike duplicate recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of matrix effects that lead to low bias or non-homogeneous sample aliquot cannot be eliminated.

Analyte & Samples(s) Qualified:

Chloride

23D0022-04[MW-TP-4-033023], B337504-MS1, B337504-MSD1

EPA 410.4

Qualifications:

MS-11

Matrix spike recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

Analyte & Samples(s) Qualified:

Chemical Oxygen Demand

23D0022-04[MW-TP-4-033023], B337789-MS1, B337789-MSD1

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:

Chemical Oxygen Demand

B337789-BSD1

Z-01

EPA 410.4 test had a calibration point outside acceptable back calculated recoveries.

Analyte & Samples(s) Qualified:

Chemical Oxygen Demand

23D0022-01[MW-TP-6-033023], 23D0022-02[CHA-55-033023], 23D0022-03[MW-TP-5-033023], 23D0022-04[MW-TP-4-033023], 23D0022-05[CHA-65-033023], 23D0022-06[FD-033023]

SM 21-23 5310B

Qualifications:

MS-11

Matrix spike recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

Analyte & Samples(s) Qualified:

Total Organic Carbon

B337475-MS2

SOP-454 PFAS

Qualifications:

D-01

Sample extracted/prepared at a dilution due to sample matrix interference.

Analyte & Samples(s) Qualified:

23D0022-02[CHA-55-033023], 23D0022-03[MW-TP-5-033023], 23D0022-04[MW-TP-4-033023], B336060-MS1, B336060-MSD1

L-05

Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

N-EtFOSAA (NEtFOSAA)

23D0022-01[MW-TP-6-033023], 23D0022-03[MW-TP-5-033023], 23D0022-04[MW-TP-4-033023], 23D0022-06[FD-033023], B336060-BS1

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

MS-12

Matrix spike recovery and matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

Analyte & Samples(s) Qualified:

Perfluoro-4-oxapentanoic acid (PFMPA)
B336060-MS1, B336060-MSD1

Perfluorobutanoic acid (PFBA)
23D0022-04[MW-TP-4-033023], B336060-MS1, B336060-MSD1

MS-19

Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.

Analyte & Samples(s) Qualified:

Perfluorooctanesulfonic acid (PFOS)
23D0022-04[MW-TP-4-033023], B336060-MS1, B336060-MSD1

Perfluorooctanoic acid (PFOA)
23D0022-04[MW-TP-4-033023], B336060-MS1, B336060-MSD1

MS-22

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 within method specified criteria.

Analyte & Samples(s) Qualified:

Perfluorononanoic acid (PFNA)
B336060-MS1

PF-17

Extracted Internal Standard recovery is outside of control limits. Data is not significantly affected since associated analyte is not detected and bias is on the high side.

Analyte & Samples(s) Qualified:

M2-4:2FTS
23D0022-01[MW-TP-6-033023], 23D0022-03[MW-TP-5-033023], 23D0022-05[CHA-65-033023], 23D0022-06[FD-033023]

M2-6:2FTS
23D0022-01[MW-TP-6-033023], 23D0022-02[CHA-55-033023], 23D0022-03[MW-TP-5-033023], 23D0022-05[CHA-65-033023], 23D0022-06[FD-033023]

M2-8:2FTS
23D0022-01[MW-TP-6-033023], 23D0022-02[CHA-55-033023], 23D0022-03[MW-TP-5-033023], 23D0022-05[CHA-65-033023], 23D0022-06[FD-033023], B336060-BLK1

PF-18

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

Analyte & Samples(s) Qualified:

M2-4:2FTS
23D0022-04[MW-TP-4-033023], B336060-MS1, B336060-MSD1

M2-6:2FTS
23D0022-04[MW-TP-4-033023], B336060-MS1, B336060-MSD1

M2-8:2FTS
23D0022-04[MW-TP-4-033023], B336060-MS1, B336060-MSD1

MPFBA
23D0022-04[MW-TP-4-033023], B336060-MS1, B336060-MSD1

PF-19

Sample re-analyzed at a dilution that was re-fortified with internal standard.

Analyte & Samples(s) Qualified:

Perfluorooctanesulfonic acid (PFOS)
23D0022-05RE1[CHA-65-033023]

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

PF-20

Quantifying ion signal to noise ratio is <10. Detection is suspect.

Analyte & Samples(s) Qualified:

Perfluorobutanesulfonic acid (PFBS)
23D0022-01[MW-TP-6-033023], 23D0022-06[FD-033023]

Perfluorobutanoic acid (PFBA)
23D0022-02[CHA-55-033023], 23D0022-04[MW-TP-4-033023]

Perfluoroheptanesulfonic acid (PFHpS)
23D0022-01[MW-TP-6-033023], 23D0022-06[FD-033023]

Perfluorohexanoic acid (PFHxA)
23D0022-02[CHA-55-033023]

Perfluoropentanoic acid (PFPeA)
23D0022-04[MW-TP-4-033023], 23D0022-05[CHA-65-033023]

PF-22

Qualifier ion ratio >150% of associated calibration. Detection is suspect.

Analyte & Samples(s) Qualified:

Perfluoropetanesulfonic acid (PFPeS)
23D0022-01[MW-TP-6-033023]

PF-23

Qualifier ion ratio <50% of associated calibration. Detection is suspect.

Analyte & Samples(s) Qualified:

Hexafluoropropylene oxide dimer acid (HFPO-DA)
23D0022-06[FD-033023]

S-29

Extracted Internal Standard is outside of control limits.

Analyte & Samples(s) Qualified:

M2-8:2FTS
B336060-BS1

M2PFTA
23D0022-01[MW-TP-6-033023], 23D0022-05[CHA-65-033023]

M8FOSA
23D0022-01[MW-TP-6-033023], 23D0022-05[CHA-65-033023], 23D0022-06[FD-033023]

MPFBA
23D0022-01[MW-TP-6-033023], 23D0022-03[MW-TP-5-033023], 23D0022-05[CHA-65-033023], 23D0022-06[FD-033023]

SW-846 6010

Qualifications:

MS-19

Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.

Analyte & Samples(s) Qualified:

Hardness
23D0022-04[MW-TP-4-033023], B336100-MSD1

SW-846 6010D

Qualifications:

MS-19

Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.

Analyte & Samples(s) Qualified:

Calcium
23D0022-04[MW-TP-4-033023], B336100-MS1, B336100-MSD1

Magnesium
23D0022-04[MW-TP-4-033023], B336100-MSD1

SW-846 8260D

Qualifications:

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DL-01

Elevated reporting limits for all volatile compounds due to foaming sample matrix.

Analyte & Samples(s) Qualified:

23D0022-02[CHA-55-033023], 23D0022-02RE1[CHA-55-033023], 23D0022-04[MW-TP-4-033023], 23D0022-05[CHA-65-033023]

L-02

Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.

Analyte & Samples(s) Qualified:

Vinyl Chloride

B336476-BS1, B336476-BSD1, B336476-MS1, B336476-MSD1, B336731-BS1, B336731-BSD1, S085740-CCV1, S085911-CCV1

L-04

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Methyl Acetate

23D0022-01[MW-TP-6-033023], 23D0022-02[CHA-55-033023], 23D0022-03[MW-TP-5-033023], 23D0022-04[MW-TP-4-033023], 23D0022-05[CHA-65-033023], 23D0022-06[FD-033023], 23D0022-07[TB-033023], B336476-BLK1, B336476-BS1, B336476-BSD1, B336476-MS1, B336476-MSD1, B336731-BLK1, B336731-BS1, B336731-BSD1, S085740-CCV1, S085911-CCV1

trans-1,4-Dichloro-2-butene

B336731-BLK1, B336731-BS1, B336731-BSD1, S085911-CCV1

MS-07A

Matrix spike and spike duplicate recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of matrix effects that lead to low bias or non-homogeneous sample aliquot cannot be eliminated.

Analyte & Samples(s) Qualified:

2,2-Dichloropropane

23D0022-04[MW-TP-4-033023], B336476-MS1, B336476-MSD1

trans-1,4-Dichloro-2-butene

23D0022-04[MW-TP-4-033023], B336476-MS1, B336476-MSD1

MS-09

Matrix spike recovery and/or matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a low bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

Analyte & Samples(s) Qualified:

Methyl Acetate

23D0022-04[MW-TP-4-033023], B336476-MS1, B336476-MSD1

MS-22

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 within method specified criteria.

Analyte & Samples(s) Qualified:

Vinyl Chloride

B336476-MSD1

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

B336476-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

23D0022-04[MW-TP-4-033023], B336476-MS1, B336476-MSD1

RL-11

Elevated reporting limit due to high concentration of target compounds.

Analyte & Samples(s) Qualified:

23D0022-01[MW-TP-6-033023], 23D0022-06[FD-033023]

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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:

Chloromethane
23D0022-01[MW-TP-6-033023], 23D0022-02[CHA-55-033023], 23D0022-03[MW-TP-5-033023], 23D0022-04[MW-TP-4-033023], 23D0022-05[CHA-65-033023], 23D0022-06[FD-033023], 23D0022-07[TB-033023], B336476-BLK1, B336476-BS1, B336476-BSD1, B336476-MS1, B336476-MSD1, B336731-BLK1, B336731-BS1, B336731-BSD1, S085740-CCV1, S085911-CCV1

Methyl Acetate
23D0022-01[MW-TP-6-033023], 23D0022-02[CHA-55-033023], 23D0022-03[MW-TP-5-033023], 23D0022-04[MW-TP-4-033023], 23D0022-05[CHA-65-033023], 23D0022-06[FD-033023], 23D0022-07[TB-033023], B336476-BLK1, B336476-BS1, B336476-BSD1, B336476-MS1, B336476-MSD1, B336731-BLK1, B336731-BS1, B336731-BSD1, S085740-CCV1, S085911-CCV1

trans-1,4-Dichloro-2-butene
B336731-BLK1, B336731-BS1, B336731-BSD1, S085911-CCV1

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Chloroethane
B336476-BS1, B336476-BSD1, B336476-MS1, B336476-MSD1, S085740-CCV1

Vinyl Chloride
B336476-BS1, B336476-BSD1, B336476-MS1, B336476-MSD1, B336731-BS1, B336731-BSD1, S085740-CCV1, S085911-CCV1

Z-01a

Hit is possible carryover from previous sample. Rerun for this compound.

Analyte & Samples(s) Qualified:

Naphthalene
23D0022-02[CHA-55-033023]

SW-846 8270E

Qualifications:

L-04

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Benzidine
23D0022-01[MW-TP-6-033023], 23D0022-02[CHA-55-033023], 23D0022-03[MW-TP-5-033023], 23D0022-04[MW-TP-4-033023], 23D0022-05[CHA-65-033023], 23D0022-06[FD-033023], B336331-BLK1, B336331-BS1, B336331-BSD1, B336331-MS1, B336331-MSD1

Hexachlorobutadiene
23D0022-01[MW-TP-6-033023], 23D0022-02[CHA-55-033023], 23D0022-03[MW-TP-5-033023], 23D0022-04[MW-TP-4-033023], 23D0022-05[CHA-65-033023], 23D0022-06[FD-033023], B336331-BLK1, B336331-BS1, B336331-BSD1

Hexachloroethane
23D0022-01[MW-TP-6-033023], 23D0022-02[CHA-55-033023], 23D0022-03[MW-TP-5-033023], 23D0022-04[MW-TP-4-033023], 23D0022-05[CHA-65-033023], 23D0022-06[FD-033023], B336331-BLK1, B336331-BS1, B336331-BSD1

L-06

Laboratory fortified blank/laboratory control sample recovery and/or duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

1,4-Dioxane
23D0022-02[CHA-55-033023], 23D0022-03[MW-TP-5-033023], 23D0022-04[MW-TP-4-033023], B336016-BS1, B336016-BSD1, B336016-MS1, B336016-MSD1

MS-07A

Matrix spike and spike duplicate recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of matrix effects that lead to low bias or non-homogeneous sample aliquot cannot be eliminated.

Analyte & Samples(s) Qualified:

Pyridine
B336331-MS1, B336331-MSD1

MS-09

Matrix spike recovery and/or matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a low bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

Analyte & Samples(s) Qualified:

3,3-Dichlorobenzidine
23D0022-04[MW-TP-4-033023], B336331-MS1, B336331-MSD1

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MS-12A

Matrix spike and spike duplicate recovery is outside of control limits on the high side.

Analyte & Samples(s) Qualified:

1,4-Dioxane
B336016-MS1, B336016-MSD1

MS-22

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 within method specified criteria.

Analyte & Samples(s) Qualified:

Benzoic Acid
B336331-MSD1

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:

3,3-Dichlorobenzidine
23D0022-04[MW-TP-4-033023], B336331-MS1, B336331-MSD1

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
23D0022-01[MW-TP-6-033023], 23D0022-02[CHA-55-033023], 23D0022-03[MW-TP-5-033023], 23D0022-04[MW-TP-4-033023], 23D0022-05[CHA-65-033023], 23D0022-06[FD-033023], B336331-BLK1, B336331-BS1, B336331-BSD1, B336331-MS1, B336331-MSD1, S085685-CCV1
Benzidine
23D0022-01[MW-TP-6-033023], 23D0022-02[CHA-55-033023], 23D0022-03[MW-TP-5-033023], 23D0022-04[MW-TP-4-033023], 23D0022-05[CHA-65-033023], 23D0022-06[FD-033023], B336331-BLK1, B336331-BS1, B336331-BSD1, B336331-MS1, B336331-MSD1, S085685-CCV1

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:

1,2-Diphenylhydrazine/Azobenzene
23D0022-01[MW-TP-6-033023], 23D0022-02[CHA-55-033023], 23D0022-03[MW-TP-5-033023], 23D0022-04[MW-TP-4-033023], 23D0022-05[CHA-65-033023], 23D0022-06[FD-033023], B336331-BLK1, B336331-BS1, B336331-BSD1, B336331-MS1, B336331-MSD1, S085685-CCV1
Aniline
23D0022-01[MW-TP-6-033023], 23D0022-02[CHA-55-033023], 23D0022-03[MW-TP-5-033023], 23D0022-04[MW-TP-4-033023], 23D0022-05[CHA-65-033023], 23D0022-06[FD-033023], B336331-BLK1, B336331-BS1, B336331-BSD1, B336331-MS1, B336331-MSD1, S085685-CCV1
Benzidine
23D0022-01[MW-TP-6-033023], 23D0022-02[CHA-55-033023], 23D0022-03[MW-TP-5-033023], 23D0022-04[MW-TP-4-033023], 23D0022-05[CHA-65-033023], 23D0022-06[FD-033023], B336331-BLK1, B336331-BS1, B336331-BSD1, B336331-MS1, B336331-MSD1, S085685-CCV1

V-06

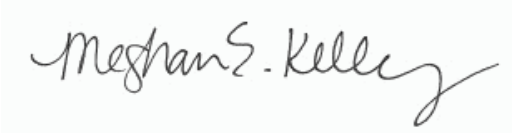
Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.

Analyte & Samples(s) Qualified:

2,4-Dinitrophenol
23D0022-01[MW-TP-6-033023], 23D0022-02[CHA-55-033023], 23D0022-03[MW-TP-5-033023], 23D0022-04[MW-TP-4-033023], 23D0022-05[CHA-65-033023], 23D0022-06[FD-033023], B336331-BLK1, B336331-BS1, B336331-BSD1, B336331-MS1, B336331-MSD1, S085685-CCV1
2,4-Dinitrotoluene
23D0022-01[MW-TP-6-033023], 23D0022-02[CHA-55-033023], 23D0022-03[MW-TP-5-033023], 23D0022-04[MW-TP-4-033023], 23D0022-05[CHA-65-033023], 23D0022-06[FD-033023], B336331-BLK1, B336331-BS1, B336331-BSD1, B336331-MS1, B336331-MSD1, S085685-CCV1

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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

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-6-033023 | Sampled: 3/30/2023 10:10

Sample ID: 23D0022-01

Sample Matrix: Ground Water

Sample Flags: RL-11

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	13	100	4.0	µg/L	2	J	SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Acrylonitrile	ND	10	0.93	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
tert-Amyl Methyl Ether (TAME)	ND	1.0	0.26	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Benzene	ND	2.0	0.37	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Bromobenzene	ND	2.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Bromochloromethane	ND	2.0	0.57	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Bromodichloromethane	ND	1.0	0.32	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Bromoform	ND	2.0	0.82	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Bromomethane	ND	4.0	2.6	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
2-Butanone (MEK)	ND	40	3.4	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
tert-Butyl Alcohol (TBA)	ND	40	8.5	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
n-Butylbenzene	ND	2.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
sec-Butylbenzene	ND	2.0	0.25	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
tert-Butylbenzene	ND	2.0	0.28	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	1.0	0.31	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Carbon Disulfide	ND	10	3.1	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Carbon Tetrachloride	ND	10	0.33	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Chlorobenzene	ND	2.0	0.24	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Chlorodibromomethane	ND	1.0	0.40	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Chloroethane	ND	4.0	0.68	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Chloroform	ND	4.0	0.28	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Chloromethane	ND	4.0	1.0	µg/L	2	V-05	SW-846 8260D	4/7/23	4/8/23 0:30	EEH
2-Chlorotoluene	ND	2.0	0.31	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
4-Chlorotoluene	ND	2.0	0.31	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	10	1.7	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
1,2-Dibromoethane (EDB)	ND	1.0	0.32	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Dibromomethane	ND	2.0	0.64	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
1,2-Dichlorobenzene	ND	2.0	0.26	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
1,3-Dichlorobenzene	ND	2.0	0.27	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
1,4-Dichlorobenzene	ND	2.0	0.26	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
trans-1,4-Dichloro-2-butene	ND	4.0	3.0	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Dichlorodifluoromethane (Freon 12)	ND	4.0	0.32	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
1,1-Dichloroethane	ND	2.0	0.27	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
1,2-Dichloroethane	ND	2.0	0.61	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
1,1-Dichloroethylene	ND	2.0	0.28	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
cis-1,2-Dichloroethylene	ND	2.0	0.28	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
trans-1,2-Dichloroethylene	ND	2.0	0.34	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
1,2-Dichloropropane	ND	2.0	0.39	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
1,3-Dichloropropane	ND	1.0	0.23	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
2,2-Dichloropropane	ND	2.0	0.70	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
1,1-Dichloropropene	ND	4.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
cis-1,3-Dichloropropene	ND	1.0	0.33	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
trans-1,3-Dichloropropene	ND	1.0	0.28	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Diethyl Ether	ND	4.0	0.29	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-6-033023 | Sampled: 3/30/2023 10:10

Sample ID: 23D0022-01

Sample Matrix: Ground Water

Sample Flags: RL-11

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	1.0	0.40	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
1,4-Dioxane	ND	100	36	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Ethylbenzene	ND	2.0	0.44	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Hexachlorobutadiene	ND	1.2	0.94	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
2-Hexanone (MBK)	ND	20	2.4	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Isopropylbenzene (Cumene)	ND	2.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
p-Isopropyltoluene (p-Cymene)	ND	2.0	0.25	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Methyl Acetate	ND	2.0	1.2	µg/L	2	L-04, V-05	SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Methyl tert-Butyl Ether (MTBE)	ND	2.0	0.34	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Methyl Cyclohexane	ND	2.0	0.31	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Methylene Chloride	ND	10	0.35	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
4-Methyl-2-pentanone (MIBK)	ND	20	2.6	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Naphthalene	130	4.0	0.76	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
n-Propylbenzene	ND	2.0	0.25	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Styrene	ND	2.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
1,1,1,2-Tetrachloroethane	ND	2.0	0.32	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
1,1,2,2-Tetrachloroethane	ND	1.0	0.27	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Tetrachloroethylene	ND	2.0	0.34	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Tetrahydrofuran	ND	20	0.98	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Toluene	ND	2.0	0.45	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
1,2,3-Trichlorobenzene	ND	10	0.68	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
1,2,4-Trichlorobenzene	ND	2.0	0.60	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
1,3,5-Trichlorobenzene	ND	2.0	0.42	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
1,1,1-Trichloroethane	ND	2.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
1,1,2-Trichloroethane	ND	2.0	0.38	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Trichloroethylene	ND	2.0	0.35	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Trichlorofluoromethane (Freon 11)	ND	4.0	0.31	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
1,2,3-Trichloropropane	ND	4.0	0.55	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	2.0	0.42	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
1,2,4-Trimethylbenzene	ND	2.0	0.40	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
1,3,5-Trimethylbenzene	ND	2.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
Vinyl Chloride	ND	4.0	0.47	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
m+p Xylene	ND	4.0	0.98	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH
o-Xylene	ND	2.0	0.49	µg/L	2		SW-846 8260D	4/7/23	4/8/23 0:30	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	92.9	70-130		4/8/23 0:30
Toluene-d8	98.3	70-130		4/8/23 0:30
4-Bromofluorobenzene	97.6	70-130		4/8/23 0:30

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-6-033023 | Sampled: 3/30/2023 10:10

Sample ID: 23D0022-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	4.9	0.52	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Acenaphthylene	ND	4.9	0.54	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Acetophenone	ND	9.7	0.49	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Aniline	ND	4.9	0.58	µg/L	1	V-05	SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Anthracene	ND	4.9	0.48	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Benzidine	ND	19	10	µg/L	1	L-04, V-04, V-05	SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Benzo(a)anthracene	ND	4.9	0.45	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Benzo(a)pyrene	ND	4.9	0.68	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Benzo(b)fluoranthene	ND	4.9	0.53	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Benzo(g,h,i)perylene	ND	4.9	0.66	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Benzo(k)fluoranthene	ND	4.9	0.61	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Benzoic Acid	ND	9.7	8.1	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Bis(2-chloroethoxy)methane	ND	9.7	0.41	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Bis(2-chloroethyl)ether	ND	9.7	0.48	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Bis(2-chloroisopropyl)ether	ND	9.7	0.62	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Bis(2-Ethylhexyl)phthalate	ND	9.7	0.81	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
4-Bromophenylphenylether	ND	9.7	0.51	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Butylbenzylphthalate	ND	9.7	0.64	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Carbazole	ND	9.7	0.44	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
4-Chloroaniline	ND	9.7	0.61	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
4-Chloro-3-methylphenol	ND	9.7	0.51	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
2-Chloronaphthalene	ND	9.7	0.51	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
2-Chlorophenol	ND	9.7	0.44	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
4-Chlorophenylphenylether	ND	9.7	0.53	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Chrysene	ND	4.9	0.43	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Dibenz(a,h)anthracene	ND	4.9	0.72	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Dibenzofuran	ND	4.9	0.55	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Di-n-butylphthalate	ND	9.7	0.48	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
1,2-Dichlorobenzene	ND	4.9	0.62	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
1,3-Dichlorobenzene	ND	4.9	0.62	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
1,4-Dichlorobenzene	ND	4.9	0.60	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
3,3-Dichlorobenzidine	ND	9.7	0.76	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
2,4-Dichlorophenol	ND	9.7	0.48	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Diethylphthalate	ND	9.7	0.40	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
2,4-Dimethylphenol	ND	9.7	0.49	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Dimethylphthalate	ND	9.7	0.37	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
4,6-Dinitro-2-methylphenol	ND	9.7	8.3	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
2,4-Dinitrophenol	ND	9.7	8.2	µg/L	1	V-04, V-06	SW-846 8270E	4/6/23	4/7/23 14:46	AR2
2,4-Dinitrotoluene	ND	9.7	0.65	µg/L	1	V-06	SW-846 8270E	4/6/23	4/7/23 14:46	AR2
2,6-Dinitrotoluene	ND	9.7	0.55	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Di-n-octylphthalate	ND	9.7	3.0	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
1,2-Diphenylhydrazine/Azobenzene	ND	9.7	0.55	µg/L	1	V-05	SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Fluoranthene	ND	4.9	0.47	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Fluorene	ND	4.9	0.52	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-6-033023 | Sampled: 3/30/2023 10:10

Sample ID: 23D0022-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	9.7	0.57	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Hexachlorobutadiene	ND	9.7	0.73	µg/L	1	L-04	SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Hexachlorocyclopentadiene	ND	9.7	5.8	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Hexachloroethane	ND	9.7	0.70	µg/L	1	L-04	SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Indeno(1,2,3-cd)pyrene	ND	4.9	0.76	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Isophorone	ND	9.7	0.50	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
1-Methylnaphthalene	ND	4.9	0.56	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
2-Methylnaphthalene	ND	4.9	0.66	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
2-Methylphenol	ND	9.7	0.47	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
3/4-Methylphenol	0.97	9.7	0.42	µg/L	1	J	SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Naphthalene	64	4.9	0.58	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
2-Nitroaniline	ND	9.7	0.70	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
3-Nitroaniline	ND	9.7	0.57	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
4-Nitroaniline	ND	9.7	0.66	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Nitrobenzene	ND	9.7	0.56	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
2-Nitrophenol	ND	9.7	0.50	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
4-Nitrophenol	ND	9.7	1.9	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
N-Nitrosodimethylamine	ND	9.7	0.55	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
N-Nitrosodiphenylamine/Diphenylamine	ND	9.7	0.42	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
N-Nitrosodi-n-propylamine	ND	9.7	0.56	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Pentachloronitrobenzene	ND	9.7	0.66	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Pentachlorophenol	ND	9.7	0.65	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Phenanthrene	ND	4.9	0.50	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Phenol	ND	9.7	0.19	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Pyrene	ND	4.9	0.64	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
Pyridine	ND	4.9	3.5	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
1,2,4,5-Tetrachlorobenzene	ND	9.7	0.64	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
1,2,4-Trichlorobenzene	ND	4.9	0.64	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
2,4,5-Trichlorophenol	ND	9.7	0.53	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2
2,4,6-Trichlorophenol	ND	9.7	0.46	µg/L	1		SW-846 8270E	4/6/23	4/7/23 14:46	AR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	35.6	15-110		4/7/23 14:46
Phenol-d6	24.4	15-110		4/7/23 14:46
Nitrobenzene-d5	67.2	30-130		4/7/23 14:46
2-Fluorobiphenyl	67.0	30-130		4/7/23 14:46
2,4,6-Tribromophenol	82.6	15-110		4/7/23 14:46
p-Terphenyl-d14	78.9	30-130		4/7/23 14:46

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-6-033023 | Sampled: 3/30/2023 10:10

Sample ID: 23D0022-01

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	ND	0.20	0.032	µg/L	1		SW-846 8270E	4/4/23	4/6/23 23:01	SPF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,4-Dioxane-d8	17.8	15-110		4/6/23 23:01

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-6-033023 | Sampled: 3/30/2023 10:10

Sample ID: 23D0022-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	32	1.9	0.69	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
Perfluorobutanesulfonic acid (PFBS)	2.3	1.9	0.69	ng/L	1	PF-20	SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
Perfluoropentanoic acid (PFPeA)	10	1.9	0.74	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
Perfluorohexanoic acid (PFHxA)	7.8	1.9	0.76	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
11Cl-PF3OUdS (F53B Major)	ND	1.9	0.70	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
9Cl-PF3ONS (F53B Minor)	ND	1.9	0.69	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9	0.97	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9	0.55	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9	0.89	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
Perfluorodecanoic acid (PFDA)	ND	1.9	0.77	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
Perfluorododecanoic acid (PFDoA)	ND	1.9	0.86	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	0.68	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
Perfluoroheptanesulfonic acid (PFHpS)	2.3	1.9	0.76	ng/L	1	PF-20	SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
N-EtFOSAA (NEtFOSAA)	0.85	1.9	0.75	ng/L	1	L-05, J	SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
N-MeFOSAA (NMeFOSAA)	ND	1.9	0.97	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
Perfluorotetradecanoic acid (PFTA)	ND	1.9	0.89	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
Perfluorotridecanoic acid (PFTrDA)	ND	1.9	0.77	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9	0.72	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
Perfluorodecanesulfonic acid (PFDS)	ND	1.9	0.96	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
Perfluorooctanesulfonamide (FOSA)	ND	1.9	0.95	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
Perfluorononanesulfonic acid (PFNS)	ND	1.9	0.95	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.9	0.98	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
Perfluoro-1-butanesulfonamide (FBSA)	ND	1.9	0.73	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
Perfluorohexanesulfonic acid (PFHxS)	5.4	1.9	0.67	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9	0.66	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9	0.61	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9	1.1	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
Perfluoropetanesulfonic acid (PFPeS)	0.79	1.9	0.71	ng/L	1	PF-22, J	SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
Perfluoroundecanoic acid (PFUnA)	ND	1.9	0.80	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	0.72	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
Perfluoroheptanoic acid (PFHpA)	6.2	1.9	0.79	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
Perfluorooctanoic acid (PFOA)	34	1.9	1.3	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
Perfluorooctanesulfonic acid (PFOS)	54	1.9	0.79	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB
Perfluorononanoic acid (PFNA)	2.0	1.9	0.86	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:19	RRB

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-6-033023 | Sampled: 3/30/2023 10:10

Sample ID: 23D0022-01

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	0.056	µg/L	1		SW-846 8082A	4/4/23	4/6/23 14:36	SFM
Aroclor-1221 [1]	ND	0.20	0.078	µg/L	1		SW-846 8082A	4/4/23	4/6/23 14:36	SFM
Aroclor-1232 [1]	ND	0.20	0.070	µg/L	1		SW-846 8082A	4/4/23	4/6/23 14:36	SFM
Aroclor-1242 [1]	ND	0.20	0.075	µg/L	1		SW-846 8082A	4/4/23	4/6/23 14:36	SFM
Aroclor-1248 [1]	ND	0.20	0.079	µg/L	1		SW-846 8082A	4/4/23	4/6/23 14:36	SFM
Aroclor-1254 [1]	ND	0.20	0.078	µg/L	1		SW-846 8082A	4/4/23	4/6/23 14:36	SFM
Aroclor-1260 [1]	ND	0.20	0.058	µg/L	1		SW-846 8082A	4/4/23	4/6/23 14:36	SFM
Aroclor-1262 [1]	ND	0.20	0.090	µg/L	1		SW-846 8082A	4/4/23	4/6/23 14:36	SFM
Aroclor-1268 [1]	ND	0.20	0.072	µg/L	1		SW-846 8082A	4/4/23	4/6/23 14:36	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	76.1	30-150		4/6/23 14:36
Decachlorobiphenyl [2]	81.5	30-150		4/6/23 14:36
Tetrachloro-m-xylene [1]	79.9	30-150		4/6/23 14:36
Tetrachloro-m-xylene [2]	85.0	30-150		4/6/23 14:36

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Sample ID: 23D0022-01

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	0.23	0.050	0.045	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:23	HNN
Antimony	ND	0.050	0.0082	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:23	HNN
Arsenic	ND	0.010	0.0047	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:23	HNN
Barium	0.19	0.050	0.0051	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:23	HNN
Beryllium	ND	0.0040	0.0012	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:23	HNN
Cadmium	ND	0.0040	0.0018	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:23	HNN
Calcium	400	0.50	0.22	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:23	HNN
Chromium	ND	0.010	0.0068	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:23	HNN
Cobalt	0.012	0.010	0.0021	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:23	HNN
Copper	0.0059	0.010	0.0036	mg/L	1	J	SW-846 6010D	4/4/23	4/5/23 16:23	HNN
Iron	4.5	0.050	0.047	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:23	HNN
Lead	0.033	0.010	0.0068	mg/L	1		SW-846 6010D	4/4/23	4/8/23 23:21	ATP
Magnesium	32	0.050	0.0095	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:23	HNN
Manganese	5.2	0.010	0.0033	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:23	HNN
Mercury	ND	0.00020	0.00014	mg/L	1		SW-846 7470A	4/4/23	4/4/23 12:26	AAJ
Nickel	0.011	0.010	0.0098	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:23	HNN
Potassium	16	2.0	0.28	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:23	HNN
Selenium	ND	0.050	0.014	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:23	HNN
Silver	ND	0.010	0.0035	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:23	HNN
Sodium	8.0	2.0	1.2	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:23	HNN
Thallium	ND	0.050	0.021	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:23	HNN
Vanadium	0.040	0.010	0.0038	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:23	HNN
Zinc	0.20	0.010	0.0042	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:23	HNN
Boron	0.18	0.10	0.073	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:23	HNN
Hardness	1100	1.4		mg/L	1		SW-846 6010	4/4/23	4/5/23 16:23	HNN

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-6-033023 | Sampled: 3/30/2023 10:10

Sample ID: 23D0022-01

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	0.70	0.30	0.17	mg/L	1		SM19-23 4500 NH3 C	4/12/23	4/13/23 17:22	EC
Bromide	ND	0.50	0.15	mg/L	1		EPA 300.0	4/19/23	4/19/23 3:05	IS
Chemical Oxygen Demand	24	15	13	mg/L	1	Z-01	EPA 410.4	4/20/23	4/20/23 15:30	QH
Chloride	6.7	1.0	0.65	mg/L	1		EPA 300.0	4/19/23	4/19/23 3:05	IS
Sulfate	510	25	7.9	mg/L	25		EPA 300.0	4/19/23	4/19/23 13:29	is
Total Organic Carbon	28	1.0	0.56	mg/L	1		SM 21-23 5310B	4/19/23	4/19/23 19:38	QH
Alkalinity to pH 4.5	600	1.0	0.70	mg/L	1		SM21-23 2320B	4/12/23	4/12/23 12:38	DET

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Date Received: 4/1/2023

Field Sample #: MW-TP-6-033023 | Sampled: 3/30/2023 10:10

Sample ID: 23D0022-01

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Dissolved)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Dissolved Solids	1300	10	4.9	mg/L	1		SM21-23 2540C	4/5/23	4/5/23 14:21	LL

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Field Sample #: MW-TP-6-033023 | Sampled: 3/30/2023 10:10

Sample ID: 23D0022-01

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached	-	-		ug/L	1		SM4500 CN C			PALI

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: CHA-55-033023 | Sampled: 3/30/2023 10:20

Sample ID: 23D0022-02

Sample Matrix: Ground Water

Sample Flags: DL-01

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	250	10	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Acrylonitrile	ND	25	2.3	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
tert-Amyl Methyl Ether (TAME)	ND	2.5	0.66	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Benzene	ND	5.0	0.92	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Bromobenzene	ND	5.0	0.74	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Bromochloromethane	ND	5.0	1.4	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Bromodichloromethane	ND	2.5	0.79	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Bromoform	ND	5.0	2.0	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Bromomethane	ND	10	6.6	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
2-Butanone (MEK)	ND	100	8.4	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
tert-Butyl Alcohol (TBA)	ND	100	21	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
n-Butylbenzene	ND	5.0	0.75	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
sec-Butylbenzene	ND	5.0	0.63	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
tert-Butylbenzene	ND	5.0	0.71	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	2.5	0.77	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Carbon Disulfide	ND	25	7.8	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Carbon Tetrachloride	ND	25	0.82	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Chlorobenzene	1.4	5.0	0.59	µg/L	5	J	SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Chlorodibromomethane	ND	2.5	1.0	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Chloroethane	ND	10	1.7	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Chloroform	ND	10	0.70	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Chloromethane	ND	10	2.5	µg/L	5	V-05	SW-846 8260D	4/7/23	4/8/23 0:58	EEH
2-Chlorotoluene	ND	5.0	0.77	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
4-Chlorotoluene	ND	5.0	0.77	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	25	4.3	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
1,2-Dibromoethane (EDB)	ND	2.5	0.80	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Dibromomethane	ND	5.0	1.6	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
1,2-Dichlorobenzene	ND	5.0	0.65	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
1,3-Dichlorobenzene	ND	5.0	0.68	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
1,4-Dichlorobenzene	ND	5.0	0.64	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
trans-1,4-Dichloro-2-butene	ND	10	7.5	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Dichlorodifluoromethane (Freon 12)	ND	10	0.80	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
1,1-Dichloroethane	ND	5.0	0.68	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
1,2-Dichloroethane	ND	5.0	1.5	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
1,1-Dichloroethylene	ND	5.0	0.70	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
cis-1,2-Dichloroethylene	ND	5.0	0.70	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
trans-1,2-Dichloroethylene	ND	5.0	0.86	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
1,2-Dichloropropane	ND	5.0	0.97	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
1,3-Dichloropropane	ND	2.5	0.58	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
2,2-Dichloropropane	ND	5.0	1.7	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
1,1-Dichloropropene	ND	10	0.75	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
cis-1,3-Dichloropropene	ND	2.5	0.82	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
trans-1,3-Dichloropropene	ND	2.5	0.71	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Diethyl Ether	2.2	10	0.72	µg/L	5	J	SW-846 8260D	4/7/23	4/8/23 0:58	EEH

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: CHA-55-033023 | Sampled: 3/30/2023 10:20

Sample ID: 23D0022-02

Sample Matrix: Ground Water

Sample Flags: DL-01

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	2.5	1.0	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
1,4-Dioxane	ND	250	90	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Ethylbenzene	ND	5.0	1.1	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Hexachlorobutadiene	ND	3.0	2.3	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
2-Hexanone (MBK)	ND	50	6.0	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Isopropylbenzene (Cumene)	ND	5.0	0.76	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
p-Isopropyltoluene (p-Cymene)	ND	5.0	0.63	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Methyl Acetate	ND	5.0	3.0	µg/L	5	L-04, V-05	SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Methyl tert-Butyl Ether (MTBE)	ND	5.0	0.85	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Methyl Cyclohexane	ND	5.0	0.78	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Methylene Chloride	ND	25	0.88	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
4-Methyl-2-pentanone (MIBK)	ND	50	6.6	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Naphthalene	40	10	1.9	µg/L	5	Z-01a	SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Naphthalene	ND	10	1.9	µg/L	5		SW-846 8260D	4/12/23	4/12/23 17:54	EEH
n-Propylbenzene	ND	5.0	0.62	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Styrene	ND	5.0	0.75	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
1,1,1,2-Tetrachloroethane	ND	5.0	0.81	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
1,1,2,2-Tetrachloroethane	ND	2.5	0.68	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Tetrachloroethylene	ND	5.0	0.84	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Tetrahydrofuran	ND	50	2.4	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Toluene	ND	5.0	1.1	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
1,2,3-Trichlorobenzene	ND	25	1.7	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
1,2,4-Trichlorobenzene	ND	5.0	1.5	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
1,3,5-Trichlorobenzene	ND	5.0	1.0	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
1,1,1-Trichloroethane	ND	5.0	0.75	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
1,1,2-Trichloroethane	ND	5.0	0.96	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Trichloroethylene	ND	5.0	0.87	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Trichlorofluoromethane (Freon 11)	ND	10	0.77	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
1,2,3-Trichloropropane	ND	10	1.4	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	5.0	1.0	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
1,2,4-Trimethylbenzene	ND	5.0	0.99	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
1,3,5-Trimethylbenzene	ND	5.0	0.75	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
Vinyl Chloride	ND	10	1.2	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
m+p Xylene	ND	10	2.5	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH
o-Xylene	ND	5.0	1.2	µg/L	5		SW-846 8260D	4/7/23	4/8/23 0:58	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	90.8	70-130		4/8/23 0:58
1,2-Dichloroethane-d4	82.0	70-130		4/12/23 17:54
Toluene-d8	97.6	70-130		4/12/23 17:54
Toluene-d8	98.1	70-130		4/8/23 0:58
4-Bromofluorobenzene	102	70-130		4/12/23 17:54
4-Bromofluorobenzene	99.8	70-130		4/8/23 0:58

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: CHA-55-033023 | Sampled: 3/30/2023 10:20

Sample ID: 23D0022-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.0	0.54	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Acenaphthylene	ND	5.0	0.56	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Acetophenone	ND	10	0.50	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Aniline	ND	5.0	0.60	µg/L	1	V-05	SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Anthracene	ND	5.0	0.50	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Benzidine	ND	20	10	µg/L	1	L-04, V-04, V-05	SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Benzo(a)anthracene	ND	5.0	0.46	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Benzo(a)pyrene	ND	5.0	0.70	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Benzo(b)fluoranthene	ND	5.0	0.55	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Benzo(g,h,i)perylene	ND	5.0	0.68	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Benzo(k)fluoranthene	ND	5.0	0.63	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Benzoic Acid	ND	10	8.4	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Bis(2-chloroethoxy)methane	ND	10	0.42	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Bis(2-chloroethyl)ether	ND	10	0.50	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Bis(2-chloroisopropyl)ether	ND	10	0.64	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Bis(2-Ethylhexyl)phthalate	ND	10	0.84	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
4-Bromophenylphenylether	ND	10	0.52	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Butylbenzylphthalate	ND	10	0.66	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Carbazole	ND	10	0.46	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
4-Chloroaniline	ND	10	0.62	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
4-Chloro-3-methylphenol	ND	10	0.52	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
2-Chloronaphthalene	ND	10	0.52	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
2-Chlorophenol	ND	10	0.46	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
4-Chlorophenylphenylether	ND	10	0.55	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Chrysene	ND	5.0	0.44	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Dibenz(a,h)anthracene	ND	5.0	0.74	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Dibenzofuran	ND	5.0	0.56	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Di-n-butylphthalate	ND	10	0.49	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
1,2-Dichlorobenzene	ND	5.0	0.64	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
1,3-Dichlorobenzene	ND	5.0	0.64	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
1,4-Dichlorobenzene	ND	5.0	0.62	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
3,3-Dichlorobenzidine	ND	10	0.78	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
2,4-Dichlorophenol	ND	10	0.49	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Diethylphthalate	ND	10	0.41	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
2,4-Dimethylphenol	ND	10	0.50	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Dimethylphthalate	ND	10	0.38	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
4,6-Dinitro-2-methylphenol	ND	10	8.5	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
2,4-Dinitrophenol	ND	10	8.5	µg/L	1	V-04, V-06	SW-846 8270E	4/6/23	4/7/23 15:07	AR2
2,4-Dinitrotoluene	ND	10	0.67	µg/L	1	V-06	SW-846 8270E	4/6/23	4/7/23 15:07	AR2
2,6-Dinitrotoluene	ND	10	0.56	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Di-n-octylphthalate	ND	10	3.1	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
1,2-Diphenylhydrazine/Azobenzene	ND	10	0.57	µg/L	1	V-05	SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Fluoranthene	ND	5.0	0.48	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Fluorene	ND	5.0	0.54	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: CHA-55-033023 | Sampled: 3/30/2023 10:20

Sample ID: 23D0022-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	10	0.58	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Hexachlorobutadiene	ND	10	0.75	µg/L	1	L-04	SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Hexachlorocyclopentadiene	ND	10	6.0	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Hexachloroethane	ND	10	0.72	µg/L	1	L-04	SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Indeno(1,2,3-cd)pyrene	ND	5.0	0.78	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Isophorone	ND	10	0.52	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
1-Methylnaphthalene	ND	5.0	0.58	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
2-Methylnaphthalene	ND	5.0	0.68	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
2-Methylphenol	ND	10	0.49	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
3/4-Methylphenol	ND	10	0.43	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Naphthalene	ND	5.0	0.60	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
2-Nitroaniline	ND	10	0.72	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
3-Nitroaniline	ND	10	0.59	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
4-Nitroaniline	ND	10	0.68	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Nitrobenzene	ND	10	0.58	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
2-Nitrophenol	ND	10	0.51	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
4-Nitrophenol	ND	10	1.9	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
N-Nitrosodimethylamine	ND	10	0.57	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
N-Nitrosodiphenylamine/Diphenylamine	ND	10	0.43	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
N-Nitrosodi-n-propylamine	ND	10	0.57	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Pentachloronitrobenzene	ND	10	0.68	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Pentachlorophenol	ND	10	0.67	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Phenanthrene	ND	5.0	0.51	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Phenol	ND	10	0.19	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Pyrene	ND	5.0	0.66	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
Pyridine	ND	5.0	3.6	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
1,2,4,5-Tetrachlorobenzene	ND	10	0.66	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
1,2,4-Trichlorobenzene	ND	5.0	0.66	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
2,4,5-Trichlorophenol	ND	10	0.55	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2
2,4,6-Trichlorophenol	ND	10	0.47	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:07	AR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	40.1	15-110		4/7/23 15:07
Phenol-d6	27.9	15-110		4/7/23 15:07
Nitrobenzene-d5	75.7	30-130		4/7/23 15:07
2-Fluorobiphenyl	73.6	30-130		4/7/23 15:07
2,4,6-Tribromophenol	90.2	15-110		4/7/23 15:07
p-Terphenyl-d14	86.1	30-130		4/7/23 15:07

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: CHA-55-033023 | Sampled: 3/30/2023 10:20

Sample ID: 23D0022-02

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	1.7	0.20	0.033	µg/L	1	L-06	SW-846 8270E	4/4/23	4/6/23 23:21	SPF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,4-Dioxane-d8	19.0	15-110		4/6/23 23:21

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: CHA-55-033023 | Sampled: 3/30/2023 10:20

Sample ID: 23D0022-02

Sample Matrix: Ground Water

Sample Flags: D-01

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	41	20	7.4	ng/L	1	PF-20	SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
Perfluorobutanesulfonic acid (PFBS)	ND	20	7.4	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
Perfluoropentanoic acid (PFPeA)	ND	20	8.0	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
Perfluorohexanoic acid (PFHxA)	12	20	8.2	ng/L	1	PF-20, J	SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
11Cl-PF3OUdS (F53B Major)	ND	20	7.6	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
9Cl-PF3ONS (F53B Minor)	ND	20	7.4	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	20	10	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	20	5.9	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	20	9.6	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
Perfluorodecanoic acid (PFDA)	ND	20	8.3	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
Perfluorododecanoic acid (PFDoA)	ND	20	9.3	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	20	7.3	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
Perfluoroheptanesulfonic acid (PFHpS)	ND	20	8.2	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
N-EtFOSAA (NEtFOSAA)	ND	20	8.0	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
N-MeFOSAA (NMeFOSAA)	ND	20	10	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
Perfluorotetradecanoic acid (PFTA)	ND	20	9.5	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
Perfluorotridecanoic acid (PFTrDA)	ND	20	8.3	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	20	7.7	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
Perfluorodecanesulfonic acid (PFDS)	ND	20	10	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
Perfluorooctanesulfonamide (FOSA)	ND	20	10	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
Perfluorononanesulfonic acid (PFNS)	ND	20	10	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	20	11	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
Perfluoro-1-butanesulfonamide (FBSA)	ND	20	7.8	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
Perfluorohexanesulfonic acid (PFHxS)	20	20	7.1	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	20	7.1	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	20	6.5	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	20	12	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
Perfluoropetanesulfonic acid (PFPeS)	ND	20	7.6	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
Perfluoroundecanoic acid (PFUnA)	ND	20	8.6	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	20	7.8	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
Perfluoroheptanoic acid (PFHpA)	12	20	8.4	ng/L	1	J	SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
Perfluorooctanoic acid (PFOA)	75	20	14	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
Perfluorooctanesulfonic acid (PFOS)	110	20	8.5	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB
Perfluorononanoic acid (PFNA)	ND	20	9.2	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:26	RRB

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: CHA-55-033023 | Sampled: 3/30/2023 10:20

Sample ID: 23D0022-02

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	0.056	µg/L	1		SW-846 8082A	4/4/23	4/6/23 14:54	SFM
Aroclor-1221 [1]	ND	0.20	0.078	µg/L	1		SW-846 8082A	4/4/23	4/6/23 14:54	SFM
Aroclor-1232 [1]	ND	0.20	0.070	µg/L	1		SW-846 8082A	4/4/23	4/6/23 14:54	SFM
Aroclor-1242 [1]	ND	0.20	0.075	µg/L	1		SW-846 8082A	4/4/23	4/6/23 14:54	SFM
Aroclor-1248 [1]	ND	0.20	0.079	µg/L	1		SW-846 8082A	4/4/23	4/6/23 14:54	SFM
Aroclor-1254 [1]	ND	0.20	0.078	µg/L	1		SW-846 8082A	4/4/23	4/6/23 14:54	SFM
Aroclor-1260 [1]	ND	0.20	0.058	µg/L	1		SW-846 8082A	4/4/23	4/6/23 14:54	SFM
Aroclor-1262 [1]	ND	0.20	0.090	µg/L	1		SW-846 8082A	4/4/23	4/6/23 14:54	SFM
Aroclor-1268 [1]	ND	0.20	0.072	µg/L	1		SW-846 8082A	4/4/23	4/6/23 14:54	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	69.3	30-150		4/6/23 14:54
Decachlorobiphenyl [2]	74.0	30-150		4/6/23 14:54
Tetrachloro-m-xylene [1]	77.3	30-150		4/6/23 14:54
Tetrachloro-m-xylene [2]	81.4	30-150		4/6/23 14:54

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

Project Location: Incinerator Rd, Utica, NY
Sample Description:
Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: CHA-55-033023
Sampled: 3/30/2023 10:20

Sample ID: 23D0022-02

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	0.073	0.050	0.045	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:31	HNN
Antimony	ND	0.050	0.0082	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:31	HNN
Arsenic	0.0053	0.010	0.0047	mg/L	1	J	SW-846 6010D	4/4/23	4/5/23 16:31	HNN
Barium	0.21	0.050	0.0051	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:31	HNN
Beryllium	ND	0.0040	0.0012	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:31	HNN
Cadmium	ND	0.0040	0.0018	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:31	HNN
Calcium	140	0.50	0.22	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:31	HNN
Chromium	ND	0.010	0.0068	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:31	HNN
Cobalt	ND	0.010	0.0021	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:31	HNN
Copper	ND	0.010	0.0036	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:31	HNN
Iron	65	0.050	0.047	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:31	HNN
Lead	ND	0.010	0.0068	mg/L	1		SW-846 6010D	4/4/23	4/8/23 23:43	ATP
Magnesium	26	0.050	0.0095	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:31	HNN
Manganese	2.5	0.010	0.0033	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:31	HNN
Mercury	ND	0.00020	0.00014	mg/L	1		SW-846 7470A	4/4/23	4/4/23 12:28	AAJ
Nickel	ND	0.010	0.0098	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:31	HNN
Potassium	13	2.0	0.28	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:31	HNN
Selenium	ND	0.050	0.014	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:31	HNN
Silver	ND	0.010	0.0035	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:31	HNN
Sodium	48	2.0	1.2	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:31	HNN
Thallium	ND	0.050	0.021	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:31	HNN
Vanadium	0.036	0.010	0.0038	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:31	HNN
Zinc	ND	0.010	0.0042	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:31	HNN
Boron	0.23	0.10	0.073	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:31	HNN
Hardness	450	1.4		mg/L	1		SW-846 6010	4/4/23	4/5/23 16:31	HNN

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: CHA-55-033023 | Sampled: 3/30/2023 10:20

Sample ID: 23D0022-02

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	22	0.30	0.17	mg/L	1		SM19-23 4500 NH3 C	4/12/23	4/13/23 17:22	EC
Bromide	ND	0.50	0.15	mg/L	1		EPA 300.0	4/19/23	4/19/23 3:27	IS
Chemical Oxygen Demand	ND	15	13	mg/L	1	Z-01	EPA 410.4	4/20/23	4/20/23 15:30	QH
Chloride	31	1.0	0.65	mg/L	1		EPA 300.0	4/19/23	4/19/23 3:27	IS
Sulfate	ND	1.0	0.32	mg/L	1		EPA 300.0	4/19/23	4/19/23 3:27	IS
Total Organic Carbon	87	2.0	1.1	mg/L	2		SM 21-23 5310B	4/19/23	4/19/23 20:03	QH
Alkalinity to pH 4.5	570	1.0	0.70	mg/L	1		SM21-23 2320B	4/12/23	4/12/23 12:38	DET

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: CHA-55-033023 | Sampled: 3/30/2023 10:20

Sample ID: 23D0022-02

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Dissolved)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Dissolved Solids	520	10	4.9	mg/L	1		SM21-23 2540C	4/5/23	4/5/23 14:21	LL

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: CHA-55-033023 | Sampled: 3/30/2023 10:20

Sample ID: 23D0022-02

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached	-	-		ug/L	1		SM4500 CN C			PALI

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-5-033023 | Sampled: 3/30/2023 12:00

Sample ID: 23D0022-03

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	23	50	2.0	µg/L	1	J	SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Acrylonitrile	ND	5.0	0.47	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.13	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Bromochloromethane	ND	1.0	0.28	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Bromoform	ND	1.0	0.41	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Bromomethane	ND	2.0	1.3	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
2-Butanone (MEK)	3.3	20	1.7	µg/L	1	J	SW-846 8260D	4/7/23	4/8/23 1:26	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.3	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
n-Butylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
sec-Butylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
tert-Butylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Carbon Disulfide	ND	5.0	1.6	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Chlorobenzene	0.80	1.0	0.12	µg/L	1	J	SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Chlorodibromomethane	ND	0.50	0.20	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Chloroethane	ND	2.0	0.34	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Chloroform	ND	2.0	0.14	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Chloromethane	ND	2.0	0.50	µg/L	1	V-05	SW-846 8260D	4/7/23	4/8/23 1:26	EEH
2-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
4-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.85	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.16	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Dibromomethane	ND	1.0	0.32	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
1,2-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
1,3-Dichlorobenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
1,4-Dichlorobenzene	0.26	1.0	0.13	µg/L	1	J	SW-846 8260D	4/7/23	4/8/23 1:26	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	1.5	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.16	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
1,1-Dichloroethane	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
1,2-Dichloroethane	ND	1.0	0.30	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
1,1-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
1,2-Dichloropropane	ND	1.0	0.19	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
1,3-Dichloropropane	ND	0.50	0.12	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
2,2-Dichloropropane	ND	1.0	0.35	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
1,1-Dichloropropene	ND	2.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
trans-1,3-Dichloropropene	ND	0.50	0.14	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Diethyl Ether	ND	2.0	0.14	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-5-033023 | Sampled: 3/30/2023 12:00

Sample ID: 23D0022-03

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.20	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
1,4-Dioxane	ND	50	18	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Ethylbenzene	ND	1.0	0.22	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
2-Hexanone (MBK)	ND	10	1.2	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
p-Isopropyltoluene (p-Cymene)	0.34	1.0	0.13	µg/L	1	J	SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Methyl Acetate	ND	1.0	0.61	µg/L	1	L-04, V-05	SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Methyl Cyclohexane	ND	1.0	0.16	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Methylene Chloride	ND	5.0	0.18	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.3	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Naphthalene	ND	2.0	0.38	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
n-Propylbenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.14	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Tetrachloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Tetrahydrofuran	ND	10	0.49	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Toluene	ND	1.0	0.22	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.34	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
1,1,1-Trichloroethane	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
1,1,2-Trichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Trichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
1,2,3-Trichloropropane	ND	2.0	0.28	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.21	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.20	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
Vinyl Chloride	ND	2.0	0.24	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
m+p Xylene	ND	2.0	0.49	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH
o-Xylene	ND	1.0	0.24	µg/L	1		SW-846 8260D	4/7/23	4/8/23 1:26	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	91.5	70-130		4/8/23 1:26
Toluene-d8	98.7	70-130		4/8/23 1:26
4-Bromofluorobenzene	101	70-130		4/8/23 1:26

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-5-033023 | Sampled: 3/30/2023 12:00

Sample ID: 23D0022-03

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	4.9	0.52	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Acenaphthylene	ND	4.9	0.54	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Acetophenone	ND	9.7	0.49	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Aniline	ND	4.9	0.58	µg/L	1	V-05	SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Anthracene	ND	4.9	0.48	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Benzidine	ND	19	10	µg/L	1	L-04, V-04, V-05	SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Benzo(a)anthracene	ND	4.9	0.45	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Benzo(a)pyrene	ND	4.9	0.68	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Benzo(b)fluoranthene	ND	4.9	0.53	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Benzo(g,h,i)perylene	ND	4.9	0.66	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Benzo(k)fluoranthene	ND	4.9	0.61	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Benzoic Acid	11	9.7	8.1	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Bis(2-chloroethoxy)methane	ND	9.7	0.41	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Bis(2-chloroethyl)ether	ND	9.7	0.48	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Bis(2-chloroisopropyl)ether	ND	9.7	0.62	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Bis(2-Ethylhexyl)phthalate	ND	9.7	0.81	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
4-Bromophenylphenylether	ND	9.7	0.51	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Butylbenzylphthalate	ND	9.7	0.64	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Carbazole	ND	9.7	0.44	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
4-Chloroaniline	ND	9.7	0.61	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
4-Chloro-3-methylphenol	ND	9.7	0.51	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
2-Chloronaphthalene	ND	9.7	0.51	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
2-Chlorophenol	ND	9.7	0.44	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
4-Chlorophenylphenylether	ND	9.7	0.53	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Chrysene	ND	4.9	0.43	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Dibenz(a,h)anthracene	ND	4.9	0.72	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Dibenzofuran	ND	4.9	0.55	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Di-n-butylphthalate	ND	9.7	0.48	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
1,2-Dichlorobenzene	ND	4.9	0.62	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
1,3-Dichlorobenzene	ND	4.9	0.62	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
1,4-Dichlorobenzene	ND	4.9	0.60	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
3,3-Dichlorobenzidine	ND	9.7	0.76	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
2,4-Dichlorophenol	ND	9.7	0.48	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Diethylphthalate	ND	9.7	0.40	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
2,4-Dimethylphenol	ND	9.7	0.49	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Dimethylphthalate	ND	9.7	0.37	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
4,6-Dinitro-2-methylphenol	ND	9.7	8.3	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
2,4-Dinitrophenol	ND	9.7	8.2	µg/L	1	V-04, V-06	SW-846 8270E	4/6/23	4/7/23 15:28	AR2
2,4-Dinitrotoluene	ND	9.7	0.65	µg/L	1	V-06	SW-846 8270E	4/6/23	4/7/23 15:28	AR2
2,6-Dinitrotoluene	ND	9.7	0.55	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Di-n-octylphthalate	ND	9.7	3.0	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
1,2-Diphenylhydrazine/Azobenzene	ND	9.7	0.55	µg/L	1	V-05	SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Fluoranthene	ND	4.9	0.47	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Fluorene	ND	4.9	0.52	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-5-033023 | Sampled: 3/30/2023 12:00

Sample ID: 23D0022-03

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	9.7	0.57	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Hexachlorobutadiene	ND	9.7	0.73	µg/L	1	L-04	SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Hexachlorocyclopentadiene	ND	9.7	5.8	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Hexachloroethane	ND	9.7	0.70	µg/L	1	L-04	SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Indeno(1,2,3-cd)pyrene	ND	4.9	0.76	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Isophorone	ND	9.7	0.50	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
1-Methylnaphthalene	ND	4.9	0.56	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
2-Methylnaphthalene	ND	4.9	0.66	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
2-Methylphenol	ND	9.7	0.47	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
3/4-Methylphenol	15	9.7	0.42	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Naphthalene	0.60	4.9	0.58	µg/L	1	J	SW-846 8270E	4/6/23	4/7/23 15:28	AR2
2-Nitroaniline	ND	9.7	0.70	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
3-Nitroaniline	ND	9.7	0.57	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
4-Nitroaniline	ND	9.7	0.66	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Nitrobenzene	ND	9.7	0.56	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
2-Nitrophenol	ND	9.7	0.50	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
4-Nitrophenol	ND	9.7	1.9	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
N-Nitrosodimethylamine	ND	9.7	0.55	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
N-Nitrosodiphenylamine/Diphenylamine	ND	9.7	0.42	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
N-Nitrosodi-n-propylamine	ND	9.7	0.56	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Pentachloronitrobenzene	ND	9.7	0.66	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Pentachlorophenol	ND	9.7	0.65	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Phenanthrene	ND	4.9	0.50	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Phenol	1.9	9.7	0.19	µg/L	1	J	SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Pyrene	ND	4.9	0.64	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
Pyridine	ND	4.9	3.5	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
1,2,4,5-Tetrachlorobenzene	ND	9.7	0.64	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
1,2,4-Trichlorobenzene	ND	4.9	0.64	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
2,4,5-Trichlorophenol	ND	9.7	0.53	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2
2,4,6-Trichlorophenol	ND	9.7	0.46	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:28	AR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	36.0	15-110		4/7/23 15:28
Phenol-d6	25.0	15-110		4/7/23 15:28
Nitrobenzene-d5	76.6	30-130		4/7/23 15:28
2-Fluorobiphenyl	74.6	30-130		4/7/23 15:28
2,4,6-Tribromophenol	89.3	15-110		4/7/23 15:28
p-Terphenyl-d14	85.9	30-130		4/7/23 15:28

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-5-033023 | Sampled: 3/30/2023 12:00

Sample ID: 23D0022-03

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	0.58	0.21	0.034	µg/L	1	L-06	SW-846 8270E	4/4/23	4/6/23 23:41	SPF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,4-Dioxane-d8	20.3	15-110		4/6/23 23:41

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-5-033023 | Sampled: 3/30/2023 12:00

Sample ID: 23D0022-03

Sample Matrix: Ground Water

Sample Flags: D-01

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	97	4.1	1.5	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
Perfluorobutanesulfonic acid (PFBS)	6.4	4.1	1.5	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
Perfluoropentanoic acid (PFPeA)	41	4.1	1.6	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
Perfluorohexanoic acid (PFHxA)	34	4.1	1.7	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
11Cl-PF3OUdS (F53B Major)	ND	4.1	1.5	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
9Cl-PF3ONS (F53B Minor)	ND	4.1	1.5	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.1	2.1	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.1	1.2	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	4.1	2.0	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
Perfluorodecanoic acid (PFDA)	ND	4.1	1.7	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
Perfluorododecanoic acid (PFDoA)	ND	4.1	1.9	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	4.1	1.5	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
Perfluoroheptanesulfonic acid (PFHpS)	9.0	4.1	1.7	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
N-EtFOSAA (NEtFOSAA)	2.6	4.1	1.6	ng/L	1	L-05, J	SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
N-MeFOSAA (NMeFOSAA)	ND	4.1	2.1	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
Perfluorotetradecanoic acid (PFTA)	ND	4.1	1.9	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
Perfluorotridecanoic acid (PFTrDA)	ND	4.1	1.7	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	4.1	1.6	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
Perfluorodecanesulfonic acid (PFDS)	ND	4.1	2.1	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
Perfluorooctanesulfonamide (FOSA)	ND	4.1	2.1	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
Perfluorononanesulfonic acid (PFNS)	ND	4.1	2.1	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	4.1	2.2	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
Perfluoro-1-butanesulfonamide (FBSA)	1.8	4.1	1.6	ng/L	1	J	SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
Perfluorohexanesulfonic acid (PFHxS)	31	4.1	1.5	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	4.1	1.5	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	4.1	1.3	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	4.1	2.5	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
Perfluoropetanesulfonic acid (PFPeS)	7.8	4.1	1.6	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
Perfluoroundecanoic acid (PFUnA)	ND	4.1	1.7	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	4.1	1.6	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
Perfluoroheptanoic acid (PFHpA)	35	4.1	1.7	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
Perfluorooctanoic acid (PFOA)	120	4.1	2.8	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
Perfluorooctanesulfonic acid (PFOS)	220	4.1	1.7	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB
Perfluorononanoic acid (PFNA)	6.5	4.1	1.9	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:34	RRB

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-5-033023 | Sampled: 3/30/2023 12:00

Sample ID: 23D0022-03

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	0.056	µg/L	1		SW-846 8082A	4/4/23	4/6/23 15:12	SFM
Aroclor-1221 [1]	ND	0.20	0.078	µg/L	1		SW-846 8082A	4/4/23	4/6/23 15:12	SFM
Aroclor-1232 [1]	ND	0.20	0.070	µg/L	1		SW-846 8082A	4/4/23	4/6/23 15:12	SFM
Aroclor-1242 [1]	ND	0.20	0.075	µg/L	1		SW-846 8082A	4/4/23	4/6/23 15:12	SFM
Aroclor-1248 [2]	0.097	0.20	0.086	µg/L	1	J	SW-846 8082A	4/4/23	4/6/23 15:12	SFM
Aroclor-1254 [2]	0.11	0.20	0.091	µg/L	1	J	SW-846 8082A	4/4/23	4/6/23 15:12	SFM
Aroclor-1260 [1]	ND	0.20	0.058	µg/L	1		SW-846 8082A	4/4/23	4/6/23 15:12	SFM
Aroclor-1262 [1]	ND	0.20	0.090	µg/L	1		SW-846 8082A	4/4/23	4/6/23 15:12	SFM
Aroclor-1268 [1]	ND	0.20	0.072	µg/L	1		SW-846 8082A	4/4/23	4/6/23 15:12	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	68.2	30-150		4/6/23 15:12
Decachlorobiphenyl [2]	72.6	30-150		4/6/23 15:12
Tetrachloro-m-xylene [1]	62.8	30-150		4/6/23 15:12
Tetrachloro-m-xylene [2]	67.8	30-150		4/6/23 15:12

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-5-033023 | Sampled: 3/30/2023 12:00

Sample ID: 23D0022-03

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	0.074	0.050	0.045	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:37	HNN
Antimony	ND	0.050	0.0082	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:37	HNN
Arsenic	ND	0.010	0.0047	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:37	HNN
Barium	0.33	0.050	0.0051	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:37	HNN
Beryllium	ND	0.0040	0.0012	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:37	HNN
Cadmium	ND	0.0040	0.0018	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:37	HNN
Calcium	180	0.50	0.22	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:37	HNN
Chromium	ND	0.010	0.0068	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:37	HNN
Cobalt	0.0057	0.010	0.0021	mg/L	1	J	SW-846 6010D	4/4/23	4/5/23 16:37	HNN
Copper	0.033	0.010	0.0036	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:37	HNN
Iron	6.4	0.050	0.047	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:37	HNN
Lead	0.011	0.010	0.0068	mg/L	1		SW-846 6010D	4/4/23	4/8/23 23:51	ATP
Magnesium	30	0.050	0.0095	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:37	HNN
Manganese	2.9	0.010	0.0033	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:37	HNN
Mercury	0.00017	0.00020	0.00014	mg/L	1	J	SW-846 7470A	4/4/23	4/4/23 12:30	AAJ
Nickel	ND	0.010	0.0098	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:37	HNN
Potassium	13	2.0	0.28	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:37	HNN
Selenium	ND	0.050	0.014	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:37	HNN
Silver	ND	0.010	0.0035	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:37	HNN
Sodium	18	2.0	1.2	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:37	HNN
Thallium	ND	0.050	0.021	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:37	HNN
Vanadium	0.039	0.010	0.0038	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:37	HNN
Zinc	0.063	0.010	0.0042	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:37	HNN
Boron	0.16	0.10	0.073	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:37	HNN
Hardness	580	1.4		mg/L	1		SW-846 6010	4/4/23	4/5/23 16:37	HNN

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-5-033023 | Sampled: 3/30/2023 12:00

Sample ID: 23D0022-03

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	7.7	0.30	0.17	mg/L	1		SM19-23 4500 NH3 C	4/12/23	4/13/23 17:28	EC
Bromide	ND	0.50	0.15	mg/L	1		EPA 300.0	4/19/23	4/19/23 3:49	IS
Chemical Oxygen Demand	ND	15	13	mg/L	1	Z-01	EPA 410.4	4/20/23	4/20/23 15:30	QH
Chloride	19	1.0	0.65	mg/L	1		EPA 300.0	4/19/23	4/19/23 3:49	IS
Sulfate	19	1.0	0.32	mg/L	1		EPA 300.0	4/19/23	4/19/23 3:49	IS
Total Organic Carbon	32	1.0	0.56	mg/L	1		SM 21-23 5310B	4/19/23	4/19/23 20:32	QH
Alkalinity to pH 4.5	570	1.0	0.70	mg/L	1		SM21-23 2320B	4/12/23	4/12/23 12:38	DET

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-5-033023 | Sampled: 3/30/2023 12:00

Sample ID: 23D0022-03

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Dissolved)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Dissolved Solids	600	10	4.9	mg/L	1		SM21-23 2540C	4/5/23	4/5/23 14:21	LL

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-5-033023 | Sampled: 3/30/2023 12:00

Sample ID: 23D0022-03

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached	-	-		ug/L	1		SM4500 CN C			PALI

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-4-033023 | Sampled: 3/30/2023 13:30

Sample ID: 23D0022-04

Sample Matrix: Ground Water

Sample Flags: DL-01

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	11	100	4.0	µg/L	2	J	SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Acrylonitrile	ND	10	0.93	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
tert-Amyl Methyl Ether (TAME)	ND	1.0	0.26	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Benzene	ND	2.0	0.37	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Bromobenzene	ND	2.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Bromochloromethane	ND	2.0	0.57	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Bromodichloromethane	ND	1.0	0.32	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Bromoform	ND	2.0	0.82	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Bromomethane	ND	4.0	2.6	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
2-Butanone (MEK)	ND	40	3.4	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
tert-Butyl Alcohol (TBA)	ND	40	8.5	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
n-Butylbenzene	ND	2.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
sec-Butylbenzene	ND	2.0	0.25	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
tert-Butylbenzene	ND	2.0	0.28	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	1.0	0.31	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Carbon Disulfide	ND	10	3.1	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Carbon Tetrachloride	ND	10	0.33	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Chlorobenzene	1.4	2.0	0.24	µg/L	2	J	SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Chlorodibromomethane	ND	1.0	0.40	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Chloroethane	ND	4.0	0.68	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Chloroform	ND	4.0	0.28	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Chloromethane	ND	4.0	1.0	µg/L	2	R-06, V-05	SW-846 8260D	4/7/23	4/8/23 1:53	EEH
2-Chlorotoluene	ND	2.0	0.31	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
4-Chlorotoluene	ND	2.0	0.31	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	10	1.7	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
1,2-Dibromoethane (EDB)	ND	1.0	0.32	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Dibromomethane	ND	2.0	0.64	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
1,2-Dichlorobenzene	ND	2.0	0.26	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
1,3-Dichlorobenzene	ND	2.0	0.27	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
1,4-Dichlorobenzene	1.1	2.0	0.26	µg/L	2	J	SW-846 8260D	4/7/23	4/8/23 1:53	EEH
trans-1,4-Dichloro-2-butene	ND	4.0	3.0	µg/L	2	MS-07A	SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Dichlorodifluoromethane (Freon 12)	ND	4.0	0.32	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
1,1-Dichloroethane	ND	2.0	0.27	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
1,2-Dichloroethane	ND	2.0	0.61	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
1,1-Dichloroethylene	ND	2.0	0.28	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
cis-1,2-Dichloroethylene	ND	2.0	0.28	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
trans-1,2-Dichloroethylene	ND	2.0	0.34	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
1,2-Dichloropropane	ND	2.0	0.39	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
1,3-Dichloropropane	ND	1.0	0.23	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
2,2-Dichloropropane	ND	2.0	0.70	µg/L	2	MS-07A	SW-846 8260D	4/7/23	4/8/23 1:53	EEH
1,1-Dichloropropene	ND	4.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
cis-1,3-Dichloropropene	ND	1.0	0.33	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
trans-1,3-Dichloropropene	ND	1.0	0.28	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Diethyl Ether	ND	4.0	0.29	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-4-033023 | Sampled: 3/30/2023 13:30

Sample ID: 23D0022-04

Sample Matrix: Ground Water

Sample Flags: DL-01

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	1.0	0.40	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
1,4-Dioxane	ND	100	36	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Ethylbenzene	ND	2.0	0.44	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Hexachlorobutadiene	ND	1.2	0.94	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
2-Hexanone (MBK)	ND	20	2.4	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Isopropylbenzene (Cumene)	ND	2.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
p-Isopropyltoluene (p-Cymene)	ND	2.0	0.25	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Methyl Acetate	ND	2.0	1.2	µg/L	2	L-04, MS-09, V-05	SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Methyl tert-Butyl Ether (MTBE)	ND	2.0	0.34	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Methyl Cyclohexane	ND	2.0	0.31	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Methylene Chloride	ND	10	0.35	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
4-Methyl-2-pentanone (MIBK)	ND	20	2.6	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Naphthalene	ND	4.0	0.76	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
n-Propylbenzene	ND	2.0	0.25	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Styrene	ND	2.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
1,1,1,2-Tetrachloroethane	ND	2.0	0.32	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
1,1,2,2-Tetrachloroethane	ND	1.0	0.27	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Tetrachloroethylene	ND	2.0	0.34	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Tetrahydrofuran	ND	20	0.98	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Toluene	1.8	2.0	0.45	µg/L	2	J	SW-846 8260D	4/7/23	4/8/23 1:53	EEH
1,2,3-Trichlorobenzene	ND	10	0.68	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
1,2,4-Trichlorobenzene	ND	2.0	0.60	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
1,3,5-Trichlorobenzene	ND	2.0	0.42	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
1,1,1-Trichloroethane	ND	2.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
1,1,2-Trichloroethane	ND	2.0	0.38	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Trichloroethylene	ND	2.0	0.35	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Trichlorofluoromethane (Freon 11)	ND	4.0	0.31	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
1,2,3-Trichloropropane	ND	4.0	0.55	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	2.0	0.42	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
1,2,4-Trimethylbenzene	ND	2.0	0.40	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
1,3,5-Trimethylbenzene	ND	2.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
Vinyl Chloride	ND	4.0	0.47	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
m+p Xylene	ND	4.0	0.98	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH
o-Xylene	ND	2.0	0.49	µg/L	2		SW-846 8260D	4/7/23	4/8/23 1:53	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
1,2-Dichloroethane-d4	91.7	70-130		4/8/23 1:53	
Toluene-d8	97.1	70-130		4/8/23 1:53	
4-Bromofluorobenzene	98.5	70-130		4/8/23 1:53	

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-4-033023 | Sampled: 3/30/2023 13:30

Sample ID: 23D0022-04

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	4.9	0.52	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Acenaphthylene	ND	4.9	0.54	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Acetophenone	ND	9.7	0.49	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Aniline	ND	4.9	0.58	µg/L	1	V-05	SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Anthracene	ND	4.9	0.48	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Benzidine	ND	19	10	µg/L	1	L-04, V-04, V-05	SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Benzo(a)anthracene	ND	4.9	0.45	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Benzo(a)pyrene	ND	4.9	0.68	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Benzo(b)fluoranthene	ND	4.9	0.53	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Benzo(g,h,i)perylene	ND	4.9	0.66	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Benzo(k)fluoranthene	ND	4.9	0.61	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Benzoic Acid	ND	9.7	8.1	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Bis(2-chloroethoxy)methane	ND	9.7	0.41	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Bis(2-chloroethyl)ether	ND	9.7	0.48	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Bis(2-chloroisopropyl)ether	ND	9.7	0.62	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Bis(2-Ethylhexyl)phthalate	ND	9.7	0.81	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
4-Bromophenylphenylether	ND	9.7	0.51	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Butylbenzylphthalate	ND	9.7	0.64	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Carbazole	ND	9.7	0.44	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
4-Chloroaniline	ND	9.7	0.61	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
4-Chloro-3-methylphenol	ND	9.7	0.51	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
2-Chloronaphthalene	ND	9.7	0.51	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
2-Chlorophenol	ND	9.7	0.44	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
4-Chlorophenylphenylether	ND	9.7	0.53	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Chrysene	ND	4.9	0.43	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Dibenz(a,h)anthracene	ND	4.9	0.72	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Dibenzofuran	ND	4.9	0.55	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Di-n-butylphthalate	ND	9.7	0.48	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
1,2-Dichlorobenzene	ND	4.9	0.62	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
1,3-Dichlorobenzene	ND	4.9	0.62	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
1,4-Dichlorobenzene	0.73	4.9	0.60	µg/L	1	J	SW-846 8270E	4/6/23	4/7/23 15:50	AR2
3,3-Dichlorobenzidine	ND	9.7	0.76	µg/L	1	MS-09, R-06	SW-846 8270E	4/6/23	4/7/23 15:50	AR2
2,4-Dichlorophenol	ND	9.7	0.48	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Diethylphthalate	ND	9.7	0.40	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
2,4-Dimethylphenol	ND	9.7	0.49	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Dimethylphthalate	ND	9.7	0.37	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
4,6-Dinitro-2-methylphenol	ND	9.7	8.3	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
2,4-Dinitrophenol	ND	9.7	8.2	µg/L	1	V-04, V-06	SW-846 8270E	4/6/23	4/7/23 15:50	AR2
2,4-Dinitrotoluene	ND	9.7	0.65	µg/L	1	V-06	SW-846 8270E	4/6/23	4/7/23 15:50	AR2
2,6-Dinitrotoluene	ND	9.7	0.55	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Di-n-octylphthalate	ND	9.7	3.0	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
1,2-Diphenylhydrazine/Azobenzene	ND	9.7	0.55	µg/L	1	V-05	SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Fluoranthene	ND	4.9	0.47	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Fluorene	ND	4.9	0.52	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-4-033023 | Sampled: 3/30/2023 13:30

Sample ID: 23D0022-04

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	9.7	0.57	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Hexachlorobutadiene	ND	9.7	0.73	µg/L	1	L-04	SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Hexachlorocyclopentadiene	ND	9.7	5.8	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Hexachloroethane	ND	9.7	0.70	µg/L	1	L-04	SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Indeno(1,2,3-cd)pyrene	ND	4.9	0.76	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Isophorone	ND	9.7	0.50	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
1-Methylnaphthalene	ND	4.9	0.56	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
2-Methylnaphthalene	ND	4.9	0.66	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
2-Methylphenol	ND	9.7	0.47	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
3/4-Methylphenol	ND	9.7	0.42	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Naphthalene	ND	4.9	0.58	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
2-Nitroaniline	ND	9.7	0.70	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
3-Nitroaniline	ND	9.7	0.57	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
4-Nitroaniline	ND	9.7	0.66	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Nitrobenzene	ND	9.7	0.56	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
2-Nitrophenol	ND	9.7	0.50	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
4-Nitrophenol	ND	9.7	1.9	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
N-Nitrosodimethylamine	ND	9.7	0.55	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
N-Nitrosodiphenylamine/Diphenylamine	ND	9.7	0.42	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
N-Nitrosodi-n-propylamine	ND	9.7	0.56	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Pentachloronitrobenzene	ND	9.7	0.66	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Pentachlorophenol	ND	9.7	0.65	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Phenanthrene	ND	4.9	0.50	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Phenol	ND	9.7	0.19	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Pyrene	ND	4.9	0.64	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
Pyridine	ND	4.9	3.5	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
1,2,4,5-Tetrachlorobenzene	ND	9.7	0.64	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
1,2,4-Trichlorobenzene	ND	4.9	0.64	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
2,4,5-Trichlorophenol	ND	9.7	0.53	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2
2,4,6-Trichlorophenol	ND	9.7	0.46	µg/L	1		SW-846 8270E	4/6/23	4/7/23 15:50	AR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	42.9	15-110		4/7/23 15:50
Phenol-d6	29.9	15-110		4/7/23 15:50
Nitrobenzene-d5	83.9	30-130		4/7/23 15:50
2-Fluorobiphenyl	80.4	30-130		4/7/23 15:50
2,4,6-Tribromophenol	97.5	15-110		4/7/23 15:50
p-Terphenyl-d14	93.5	30-130		4/7/23 15:50

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-4-033023 | Sampled: 3/30/2023 13:30

Sample ID: 23D0022-04

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	0.18	0.20	0.032	µg/L	1	L-06, J	SW-846 8270E	4/4/23	4/7/23 0:02	SPF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,4-Dioxane-d8	22.8	15-110		4/7/23 0:02

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-4-033023 | Sampled: 3/30/2023 13:30

Sample ID: 23D0022-04

Sample Matrix: Ground Water

Sample Flags: D-01

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	16	4.1	1.5	ng/L	1	MS-12, PF-20	SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
Perfluorobutanesulfonic acid (PFBS)	12	4.1	1.5	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
Perfluoropentanoic acid (PFPeA)	16	4.1	1.6	ng/L	1	PF-20	SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
Perfluorohexanoic acid (PFHxA)	11	4.1	1.7	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
11Cl-PF3OUdS (F53B Major)	ND	4.1	1.5	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
9Cl-PF3ONS (F53B Minor)	ND	4.1	1.5	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	4.1	2.1	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	4.1	1.2	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	4.1	1.9	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
Perfluorodecanoic acid (PFDA)	ND	4.1	1.7	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
Perfluorododecanoic acid (PFDoA)	ND	4.1	1.9	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	4.1	1.5	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
Perfluoroheptanesulfonic acid (PFHpS)	16	4.1	1.7	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
N-EtFOSAA (NEtFOSAA)	6.0	4.1	1.6	ng/L	1	L-05	SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
N-MeFOSAA (NMeFOSAA)	ND	4.1	2.1	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
Perfluorotetradecanoic acid (PFTA)	ND	4.1	1.9	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
Perfluorotridecanoic acid (PFTrDA)	ND	4.1	1.7	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	4.1	1.6	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
Perfluorodecanesulfonic acid (PFDS)	ND	4.1	2.1	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
Perfluorooctanesulfonamide (FOSA)	ND	4.1	2.1	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
Perfluorononanesulfonic acid (PFNS)	ND	4.1	2.1	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	4.1	2.1	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
Perfluoro-1-butanesulfonamide (FBSA)	2.1	4.1	1.6	ng/L	1	J	SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
Perfluorohexanesulfonic acid (PFHxS)	67	4.1	1.5	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	4.1	1.5	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	4.1	1.3	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	4.1	2.5	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
Perfluoropetanesulfonic acid (PFPeS)	22	4.1	1.5	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
Perfluoroundecanoic acid (PFUnA)	ND	4.1	1.7	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	4.1	1.6	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
Perfluoroheptanoic acid (PFHpA)	15	4.1	1.7	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
Perfluorooctanoic acid (PFOA)	120	4.1	2.8	ng/L	1	MS-19	SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
Perfluorooctanesulfonic acid (PFOS)	260	4.1	1.7	ng/L	1	MS-19	SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB
Perfluorononanoic acid (PFNA)	ND	4.1	1.9	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:41	RRB

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-4-033023 | Sampled: 3/30/2023 13:30

Sample ID: 23D0022-04

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	0.057	µg/L	1		SW-846 8082A	4/4/23	4/6/23 15:30	SFM
Aroclor-1221 [1]	ND	0.20	0.079	µg/L	1		SW-846 8082A	4/4/23	4/6/23 15:30	SFM
Aroclor-1232 [1]	ND	0.20	0.072	µg/L	1		SW-846 8082A	4/4/23	4/6/23 15:30	SFM
Aroclor-1242 [1]	ND	0.20	0.077	µg/L	1		SW-846 8082A	4/4/23	4/6/23 15:30	SFM
Aroclor-1248 [2]	ND	0.20	0.087	µg/L	1		SW-846 8082A	4/4/23	4/6/23 15:30	SFM
Aroclor-1254 [2]	ND	0.20	0.092	µg/L	1		SW-846 8082A	4/4/23	4/6/23 15:30	SFM
Aroclor-1260 [1]	ND	0.20	0.059	µg/L	1		SW-846 8082A	4/4/23	4/6/23 15:30	SFM
Aroclor-1262 [1]	ND	0.20	0.092	µg/L	1		SW-846 8082A	4/4/23	4/6/23 15:30	SFM
Aroclor-1268 [1]	ND	0.20	0.073	µg/L	1		SW-846 8082A	4/4/23	4/6/23 15:30	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	74.9	30-150		4/6/23 15:30
Decachlorobiphenyl [2]	80.5	30-150		4/6/23 15:30
Tetrachloro-m-xylene [1]	70.9	30-150		4/6/23 15:30
Tetrachloro-m-xylene [2]	74.9	30-150		4/6/23 15:30

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-4-033023 | Sampled: 3/30/2023 13:30

Sample ID: 23D0022-04

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	ND	0.050	0.045	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:15	HNN
Antimony	ND	0.050	0.0082	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:15	HNN
Arsenic	ND	0.010	0.0047	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:15	HNN
Barium	0.14	0.050	0.0051	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:15	HNN
Beryllium	ND	0.0040	0.0012	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:15	HNN
Cadmium	ND	0.0040	0.0018	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:15	HNN
Calcium	240	0.50	0.22	mg/L	1	MS-19	SW-846 6010D	4/4/23	4/5/23 16:15	HNN
Chromium	ND	0.010	0.0068	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:15	HNN
Cobalt	0.0038	0.010	0.0021	mg/L	1	J	SW-846 6010D	4/4/23	4/5/23 16:15	HNN
Copper	0.0077	0.010	0.0036	mg/L	1	J	SW-846 6010D	4/4/23	4/5/23 16:15	HNN
Iron	7.9	0.050	0.047	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:15	HNN
Lead	ND	0.010	0.0068	mg/L	1		SW-846 6010D	4/4/23	4/8/23 23:13	ATP
Magnesium	40	0.050	0.0095	mg/L	1	MS-19	SW-846 6010D	4/4/23	4/5/23 16:15	HNN
Manganese	1.1	0.010	0.0033	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:15	HNN
Mercury	ND	0.00020	0.00014	mg/L	1		SW-846 7470A	4/4/23	4/4/23 12:36	AAJ
Nickel	0.017	0.010	0.0098	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:15	HNN
Potassium	12	2.0	0.28	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:15	HNN
Selenium	ND	0.050	0.014	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:15	HNN
Silver	ND	0.010	0.0035	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:15	HNN
Sodium	41	2.0	1.2	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:15	HNN
Thallium	ND	0.050	0.021	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:15	HNN
Vanadium	0.041	0.010	0.0038	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:15	HNN
Zinc	0.11	0.010	0.0042	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:15	HNN
Boron	0.29	0.10	0.073	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:15	HNN
Hardness	770	1.4		mg/L	1	MS-19	SW-846 6010	4/4/23	4/5/23 16:15	HNN

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-4-033023 | Sampled: 3/30/2023 13:30

Sample ID: 23D0022-04

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	3.8	0.30	0.17	mg/L	1		SM19-23 4500 NH3 C	4/12/23	4/13/23 17:31	EC
Bromide	ND	0.50	0.15	mg/L	1		EPA 300.0	4/19/23	4/19/23 4:11	IS
Chemical Oxygen Demand	ND	15	13	mg/L	1	MS-11, Z-01	EPA 410.4	4/20/23	4/20/23 15:30	QH
Chloride	30	1.0	0.65	mg/L	1	MS-07A	EPA 300.0	4/19/23	4/19/23 4:11	IS
Sulfate	100	5.0	1.6	mg/L	5	MS-07	EPA 300.0	4/19/23	4/19/23 21:16	IS
Total Organic Carbon	75	2.0	1.1	mg/L	2		SM 21-23 5310B	4/19/23	4/19/23 20:58	QH
Alkalinity to pH 4.5	680	1.0	0.70	mg/L	1		SM21-23 2320B	4/12/23	4/12/23 12:38	DET

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-4-033023 | Sampled: 3/30/2023 13:30

Sample ID: 23D0022-04

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Dissolved)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Dissolved Solids	840	10	4.9	mg/L	1		SM21-23 2540C	4/5/23	4/5/23 14:21	LL

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: MW-TP-4-033023 | Sampled: 3/30/2023 13:30

Sample ID: 23D0022-04

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached	-	-		ug/L	1		SM4500 CN C			PALI

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: CHA-65-033023 | Sampled: 3/30/2023 14:40

Sample ID: 23D0022-05

Sample Matrix: Ground Water

Sample Flags: DL-01

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	100	4.0	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Acrylonitrile	ND	10	0.93	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
tert-Amyl Methyl Ether (TAME)	ND	1.0	0.26	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Benzene	ND	2.0	0.37	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Bromobenzene	ND	2.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Bromochloromethane	ND	2.0	0.57	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Bromodichloromethane	ND	1.0	0.32	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Bromoform	ND	2.0	0.82	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Bromomethane	ND	4.0	2.6	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
2-Butanone (MEK)	ND	40	3.4	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
tert-Butyl Alcohol (TBA)	ND	40	8.5	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
n-Butylbenzene	ND	2.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
sec-Butylbenzene	ND	2.0	0.25	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
tert-Butylbenzene	ND	2.0	0.28	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	1.0	0.31	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Carbon Disulfide	ND	10	3.1	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Carbon Tetrachloride	ND	10	0.33	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Chlorobenzene	2.0	2.0	0.24	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Chlorodibromomethane	ND	1.0	0.40	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Chloroethane	ND	4.0	0.68	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Chloroform	ND	4.0	0.28	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Chloromethane	ND	4.0	1.0	µg/L	2	V-05	SW-846 8260D	4/7/23	4/8/23 2:20	EEH
2-Chlorotoluene	ND	2.0	0.31	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
4-Chlorotoluene	ND	2.0	0.31	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	10	1.7	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
1,2-Dibromoethane (EDB)	ND	1.0	0.32	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Dibromomethane	ND	2.0	0.64	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
1,2-Dichlorobenzene	ND	2.0	0.26	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
1,3-Dichlorobenzene	ND	2.0	0.27	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
1,4-Dichlorobenzene	0.60	2.0	0.26	µg/L	2	J	SW-846 8260D	4/7/23	4/8/23 2:20	EEH
trans-1,4-Dichloro-2-butene	ND	4.0	3.0	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Dichlorodifluoromethane (Freon 12)	ND	4.0	0.32	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
1,1-Dichloroethane	ND	2.0	0.27	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
1,2-Dichloroethane	ND	2.0	0.61	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
1,1-Dichloroethylene	ND	2.0	0.28	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
cis-1,2-Dichloroethylene	ND	2.0	0.28	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
trans-1,2-Dichloroethylene	ND	2.0	0.34	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
1,2-Dichloropropane	ND	2.0	0.39	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
1,3-Dichloropropane	ND	1.0	0.23	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
2,2-Dichloropropane	ND	2.0	0.70	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
1,1-Dichloropropene	ND	4.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
cis-1,3-Dichloropropene	ND	1.0	0.33	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
trans-1,3-Dichloropropene	ND	1.0	0.28	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Diethyl Ether	ND	4.0	0.29	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: CHA-65-033023 | Sampled: 3/30/2023 14:40

Sample ID: 23D0022-05

Sample Matrix: Ground Water

Sample Flags: DL-01

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	1.0	0.40	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
1,4-Dioxane	ND	100	36	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Ethylbenzene	ND	2.0	0.44	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Hexachlorobutadiene	ND	1.2	0.94	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
2-Hexanone (MBK)	ND	20	2.4	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Isopropylbenzene (Cumene)	ND	2.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
p-Isopropyltoluene (p-Cymene)	ND	2.0	0.25	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Methyl Acetate	ND	2.0	1.2	µg/L	2	L-04, V-05	SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Methyl tert-Butyl Ether (MTBE)	ND	2.0	0.34	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Methyl Cyclohexane	ND	2.0	0.31	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Methylene Chloride	ND	10	0.35	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
4-Methyl-2-pentanone (MIBK)	ND	20	2.6	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Naphthalene	ND	4.0	0.76	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
n-Propylbenzene	ND	2.0	0.25	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Styrene	ND	2.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
1,1,1,2-Tetrachloroethane	ND	2.0	0.32	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
1,1,2,2-Tetrachloroethane	ND	1.0	0.27	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Tetrachloroethylene	ND	2.0	0.34	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Tetrahydrofuran	ND	20	0.98	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Toluene	ND	2.0	0.45	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
1,2,3-Trichlorobenzene	ND	10	0.68	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
1,2,4-Trichlorobenzene	ND	2.0	0.60	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
1,3,5-Trichlorobenzene	ND	2.0	0.42	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
1,1,1-Trichloroethane	ND	2.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
1,1,2-Trichloroethane	ND	2.0	0.38	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Trichloroethylene	ND	2.0	0.35	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Trichlorofluoromethane (Freon 11)	ND	4.0	0.31	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
1,2,3-Trichloropropane	ND	4.0	0.55	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	2.0	0.42	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
1,2,4-Trimethylbenzene	ND	2.0	0.40	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
1,3,5-Trimethylbenzene	ND	2.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
Vinyl Chloride	ND	4.0	0.47	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
m+p Xylene	ND	4.0	0.98	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH
o-Xylene	ND	2.0	0.49	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:20	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	90.8	70-130		4/8/23 2:20
Toluene-d8	98.6	70-130		4/8/23 2:20
4-Bromofluorobenzene	98.2	70-130		4/8/23 2:20

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: CHA-65-033023 | Sampled: 3/30/2023 14:40

Sample ID: 23D0022-05

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	4.9	0.53	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Acenaphthylene	ND	4.9	0.55	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Acetophenone	ND	9.8	0.49	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Aniline	ND	4.9	0.59	µg/L	1	V-05	SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Anthracene	ND	4.9	0.49	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Benzidine	ND	20	10	µg/L	1	L-04, V-04, V-05	SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Benzo(a)anthracene	ND	4.9	0.45	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Benzo(a)pyrene	ND	4.9	0.68	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Benzo(b)fluoranthene	ND	4.9	0.54	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Benzo(g,h,i)perylene	ND	4.9	0.67	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Benzo(k)fluoranthene	ND	4.9	0.62	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Benzoic Acid	ND	9.8	8.2	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Bis(2-chloroethoxy)methane	ND	9.8	0.42	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Bis(2-chloroethyl)ether	ND	9.8	0.49	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Bis(2-chloroisopropyl)ether	ND	9.8	0.63	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Bis(2-Ethylhexyl)phthalate	ND	9.8	0.82	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
4-Bromophenylphenylether	ND	9.8	0.51	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Butylbenzylphthalate	ND	9.8	0.65	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Carbazole	ND	9.8	0.45	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
4-Chloroaniline	ND	9.8	0.61	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
4-Chloro-3-methylphenol	ND	9.8	0.51	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
2-Chloronaphthalene	ND	9.8	0.51	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
2-Chlorophenol	ND	9.8	0.45	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
4-Chlorophenylphenylether	ND	9.8	0.54	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Chrysene	ND	4.9	0.44	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Dibenz(a,h)anthracene	ND	4.9	0.73	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Dibenzofuran	ND	4.9	0.55	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Di-n-butylphthalate	ND	9.8	0.48	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
1,2-Dichlorobenzene	ND	4.9	0.62	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
1,3-Dichlorobenzene	ND	4.9	0.63	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
1,4-Dichlorobenzene	0.66	4.9	0.61	µg/L	1	J	SW-846 8270E	4/6/23	4/7/23 16:11	AR2
3,3-Dichlorobenzidine	ND	9.8	0.76	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
2,4-Dichlorophenol	ND	9.8	0.48	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Diethylphthalate	ND	9.8	0.41	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
2,4-Dimethylphenol	ND	9.8	0.49	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Dimethylphthalate	ND	9.8	0.38	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
4,6-Dinitro-2-methylphenol	ND	9.8	8.3	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
2,4-Dinitrophenol	ND	9.8	8.3	µg/L	1	V-04, V-06	SW-846 8270E	4/6/23	4/7/23 16:11	AR2
2,4-Dinitrotoluene	ND	9.8	0.66	µg/L	1	V-06	SW-846 8270E	4/6/23	4/7/23 16:11	AR2
2,6-Dinitrotoluene	ND	9.8	0.55	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Di-n-octylphthalate	ND	9.8	3.1	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
1,2-Diphenylhydrazine/Azobenzene	ND	9.8	0.56	µg/L	1	V-05	SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Fluoranthene	ND	4.9	0.47	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Fluorene	ND	4.9	0.53	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: CHA-65-033023 | Sampled: 3/30/2023 14:40

Sample ID: 23D0022-05

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	9.8	0.57	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Hexachlorobutadiene	ND	9.8	0.73	µg/L	1	L-04	SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Hexachlorocyclopentadiene	ND	9.8	5.9	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Hexachloroethane	ND	9.8	0.70	µg/L	1	L-04	SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Indeno(1,2,3-cd)pyrene	ND	4.9	0.77	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Isophorone	ND	9.8	0.51	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
1-Methylnaphthalene	ND	4.9	0.57	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
2-Methylnaphthalene	ND	4.9	0.66	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
2-Methylphenol	ND	9.8	0.48	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
3/4-Methylphenol	ND	9.8	0.43	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Naphthalene	ND	4.9	0.59	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
2-Nitroaniline	ND	9.8	0.71	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
3-Nitroaniline	ND	9.8	0.58	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
4-Nitroaniline	ND	9.8	0.67	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Nitrobenzene	ND	9.8	0.57	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
2-Nitrophenol	ND	9.8	0.50	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
4-Nitrophenol	ND	9.8	1.9	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
N-Nitrosodimethylamine	ND	9.8	0.56	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
N-Nitrosodiphenylamine/Diphenylamine	ND	9.8	0.42	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
N-Nitrosodi-n-propylamine	ND	9.8	0.56	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Pentachloronitrobenzene	ND	9.8	0.67	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Pentachlorophenol	ND	9.8	0.65	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Phenanthrene	ND	4.9	0.50	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Phenol	ND	9.8	0.19	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Pyrene	ND	4.9	0.64	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
Pyridine	ND	4.9	3.5	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
1,2,4,5-Tetrachlorobenzene	ND	9.8	0.65	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
1,2,4-Trichlorobenzene	ND	4.9	0.65	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
2,4,5-Trichlorophenol	ND	9.8	0.54	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2
2,4,6-Trichlorophenol	ND	9.8	0.46	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:11	AR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	45.6	15-110		4/7/23 16:11
Phenol-d6	31.5	15-110		4/7/23 16:11
Nitrobenzene-d5	89.2	30-130		4/7/23 16:11
2-Fluorobiphenyl	86.7	30-130		4/7/23 16:11
2,4,6-Tribromophenol	103	15-110		4/7/23 16:11
p-Terphenyl-d14	98.3	30-130		4/7/23 16:11

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: CHA-65-033023 | Sampled: 3/30/2023 14:40

Sample ID: 23D0022-05

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	ND	0.20	0.032	µg/L	1		SW-846 8270E	4/4/23	4/7/23 0:22	SPF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,4-Dioxane-d8	18.4	15-110		4/7/23 0:22

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: CHA-65-033023 | Sampled: 3/30/2023 14:40

Sample ID: 23D0022-05

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	11	1.8	0.68	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
Perfluorobutanesulfonic acid (PFBS)	13	1.8	0.67	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
Perfluoropentanoic acid (PFPeA)	12	1.8	0.72	ng/L	1	PF-20	SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
Perfluorohexanoic acid (PFHxA)	11	1.8	0.74	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
11Cl-PF3OUdS (F53B Major)	ND	1.8	0.69	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
9Cl-PF3ONS (F53B Minor)	ND	1.8	0.68	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8	0.95	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.8	0.54	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.8	0.87	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
Perfluorodecanoic acid (PFDA)	ND	1.8	0.76	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
Perfluorododecanoic acid (PFDoA)	ND	1.8	0.84	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8	0.67	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
Perfluoroheptanesulfonic acid (PFHpS)	16	1.8	0.75	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
N-EtFOSAA (NEtFOSAA)	ND	1.8	0.73	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
N-MeFOSAA (NMeFOSAA)	ND	1.8	0.95	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
Perfluorotetradecanoic acid (PFTA)	ND	1.8	0.87	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	0.75	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.8	0.70	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
Perfluorodecanesulfonic acid (PFDS)	ND	1.8	0.94	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
Perfluorooctanesulfonamide (FOSA)	ND	1.8	0.93	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
Perfluorononanesulfonic acid (PFNS)	ND	1.8	0.93	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.8	0.96	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
Perfluoro-1-butanesulfonamide (FBSA)	2.7	1.8	0.71	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
Perfluorohexanesulfonic acid (PFHxS)	46	1.8	0.65	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.8	0.65	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.8	0.59	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.8	1.1	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
Perfluoropetanesulfonic acid (PFPeS)	17	1.8	0.69	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
Perfluoroundecanoic acid (PFUnA)	ND	1.8	0.78	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8	0.71	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
Perfluoroheptanoic acid (PFHpA)	10	1.8	0.77	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
Perfluorooctanoic acid (PFOA)	110	1.8	1.2	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB
Perfluorooctanesulfonic acid (PFOS)	240	18	7.7	ng/L	10	PF-19	SOP-454 PFAS	4/6/23	4/10/23 15:34	RRB
Perfluorononanoic acid (PFNA)	2.5	1.8	0.84	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:48	RRB

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: CHA-65-033023 | Sampled: 3/30/2023 14:40

Sample ID: 23D0022-05

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	0.056	µg/L	1		SW-846 8082A	4/4/23	4/6/23 15:47	SFM
Aroclor-1221 [1]	ND	0.20	0.078	µg/L	1		SW-846 8082A	4/4/23	4/6/23 15:47	SFM
Aroclor-1232 [1]	ND	0.20	0.070	µg/L	1		SW-846 8082A	4/4/23	4/6/23 15:47	SFM
Aroclor-1242 [1]	ND	0.20	0.075	µg/L	1		SW-846 8082A	4/4/23	4/6/23 15:47	SFM
Aroclor-1248 [1]	ND	0.20	0.079	µg/L	1		SW-846 8082A	4/4/23	4/6/23 15:47	SFM
Aroclor-1254 [1]	ND	0.20	0.078	µg/L	1		SW-846 8082A	4/4/23	4/6/23 15:47	SFM
Aroclor-1260 [1]	ND	0.20	0.058	µg/L	1		SW-846 8082A	4/4/23	4/6/23 15:47	SFM
Aroclor-1262 [1]	ND	0.20	0.090	µg/L	1		SW-846 8082A	4/4/23	4/6/23 15:47	SFM
Aroclor-1268 [1]	ND	0.20	0.072	µg/L	1		SW-846 8082A	4/4/23	4/6/23 15:47	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	72.5	30-150		4/6/23 15:47
Decachlorobiphenyl [2]	75.6	30-150		4/6/23 15:47
Tetrachloro-m-xylene [1]	67.5	30-150		4/6/23 15:47
Tetrachloro-m-xylene [2]	72.7	30-150		4/6/23 15:47

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: CHA-65-033023 | Sampled: 3/30/2023 14:40

Sample ID: 23D0022-05

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	ND	0.050	0.045	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:44	HNN
Antimony	ND	0.050	0.0082	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:44	HNN
Arsenic	ND	0.010	0.0047	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:44	HNN
Barium	0.12	0.050	0.0051	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:44	HNN
Beryllium	ND	0.0040	0.0012	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:44	HNN
Cadmium	0.0018	0.0040	0.0018	mg/L	1	J	SW-846 6010D	4/4/23	4/5/23 16:44	HNN
Calcium	210	0.50	0.22	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:44	HNN
Chromium	ND	0.010	0.0068	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:44	HNN
Cobalt	ND	0.010	0.0021	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:44	HNN
Copper	ND	0.010	0.0036	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:44	HNN
Iron	2.8	0.050	0.047	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:44	HNN
Lead	ND	0.010	0.0068	mg/L	1		SW-846 6010D	4/4/23	4/8/23 23:59	ATP
Magnesium	18	0.050	0.0095	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:44	HNN
Manganese	0.13	0.010	0.0033	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:44	HNN
Mercury	ND	0.00020	0.00014	mg/L	1		SW-846 7470A	4/4/23	4/4/23 12:38	AAJ
Nickel	ND	0.010	0.0098	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:44	HNN
Potassium	11	2.0	0.28	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:44	HNN
Selenium	ND	0.050	0.014	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:44	HNN
Silver	ND	0.010	0.0035	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:44	HNN
Sodium	68	2.0	1.2	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:44	HNN
Thallium	ND	0.050	0.021	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:44	HNN
Vanadium	0.030	0.010	0.0038	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:44	HNN
Zinc	0.22	0.010	0.0042	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:44	HNN
Boron	0.20	0.10	0.073	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:44	HNN
Hardness	610	1.4		mg/L	1		SW-846 6010	4/4/23	4/5/23 16:44	HNN

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: CHA-65-033023 | Sampled: 3/30/2023 14:40

Sample ID: 23D0022-05

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	3.8	0.30	0.17	mg/L	1		SM19-23 4500 NH3 C	4/12/23	4/13/23 17:36	EC
Bromide	ND	0.50	0.15	mg/L	1		EPA 300.0	4/19/23	4/19/23 5:18	IS
Chemical Oxygen Demand	ND	15	13	mg/L	1	Z-01	EPA 410.4	4/20/23	4/20/23 15:30	QH
Chloride	69	5.0	3.3	mg/L	5		EPA 300.0	4/19/23	4/19/23 14:35	is
Sulfate	110	5.0	1.6	mg/L	5		EPA 300.0	4/19/23	4/19/23 14:35	is
Total Organic Carbon	32	1.0	0.56	mg/L	1		SM 21-23 5310B	4/19/23	4/19/23 22:11	QH
Alkalinity to pH 4.5	550	1.0	0.70	mg/L	1		SM21-23 2320B	4/12/23	4/12/23 12:38	DET

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: CHA-65-033023 | Sampled: 3/30/2023 14:40

Sample ID: 23D0022-05

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Dissolved)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Dissolved Solids	770	10	4.9	mg/L	1		SM21-23 2540C	4/5/23	4/5/23 14:21	LL

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: CHA-65-033023 | Sampled: 3/30/2023 14:40

Sample ID: 23D0022-05

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached	-	-		ug/L	1		SM4500 CN C			PALI

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: FD-033023 | Sampled: 3/30/2023 00:00

Sample ID: 23D0022-06

Sample Matrix: Ground Water

Sample Flags: RL-11

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	11	100	4.0	µg/L	2	J	SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Acrylonitrile	ND	10	0.93	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
tert-Amyl Methyl Ether (TAME)	ND	1.0	0.26	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Benzene	ND	2.0	0.37	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Bromobenzene	ND	2.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Bromochloromethane	ND	2.0	0.57	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Bromodichloromethane	ND	1.0	0.32	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Bromoform	ND	2.0	0.82	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Bromomethane	ND	4.0	2.6	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
2-Butanone (MEK)	ND	40	3.4	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
tert-Butyl Alcohol (TBA)	ND	40	8.5	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
n-Butylbenzene	ND	2.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
sec-Butylbenzene	ND	2.0	0.25	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
tert-Butylbenzene	ND	2.0	0.28	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	1.0	0.31	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Carbon Disulfide	ND	10	3.1	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Carbon Tetrachloride	ND	10	0.33	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Chlorobenzene	ND	2.0	0.24	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Chlorodibromomethane	ND	1.0	0.40	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Chloroethane	ND	4.0	0.68	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Chloroform	ND	4.0	0.28	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Chloromethane	ND	4.0	1.0	µg/L	2	V-05	SW-846 8260D	4/7/23	4/8/23 2:48	EEH
2-Chlorotoluene	ND	2.0	0.31	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
4-Chlorotoluene	ND	2.0	0.31	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	10	1.7	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
1,2-Dibromoethane (EDB)	ND	1.0	0.32	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Dibromomethane	ND	2.0	0.64	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
1,2-Dichlorobenzene	ND	2.0	0.26	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
1,3-Dichlorobenzene	ND	2.0	0.27	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
1,4-Dichlorobenzene	ND	2.0	0.26	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
trans-1,4-Dichloro-2-butene	ND	4.0	3.0	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Dichlorodifluoromethane (Freon 12)	ND	4.0	0.32	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
1,1-Dichloroethane	ND	2.0	0.27	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
1,2-Dichloroethane	ND	2.0	0.61	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
1,1-Dichloroethylene	ND	2.0	0.28	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
cis-1,2-Dichloroethylene	ND	2.0	0.28	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
trans-1,2-Dichloroethylene	ND	2.0	0.34	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
1,2-Dichloropropane	ND	2.0	0.39	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
1,3-Dichloropropane	ND	1.0	0.23	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
2,2-Dichloropropane	ND	2.0	0.70	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
1,1-Dichloropropene	ND	4.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
cis-1,3-Dichloropropene	ND	1.0	0.33	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
trans-1,3-Dichloropropene	ND	1.0	0.28	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Diethyl Ether	ND	4.0	0.29	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: FD-033023 | Sampled: 3/30/2023 00:00

Sample ID: 23D0022-06

Sample Matrix: Ground Water

Sample Flags: RL-11

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	1.0	0.40	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
1,4-Dioxane	ND	100	36	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Ethylbenzene	ND	2.0	0.44	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Hexachlorobutadiene	ND	1.2	0.94	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
2-Hexanone (MBK)	ND	20	2.4	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Isopropylbenzene (Cumene)	ND	2.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
p-Isopropyltoluene (p-Cymene)	ND	2.0	0.25	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Methyl Acetate	ND	2.0	1.2	µg/L	2	L-04, V-05	SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Methyl tert-Butyl Ether (MTBE)	ND	2.0	0.34	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Methyl Cyclohexane	ND	2.0	0.31	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Methylene Chloride	ND	10	0.35	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
4-Methyl-2-pentanone (MIBK)	ND	20	2.6	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Naphthalene	120	4.0	0.76	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
n-Propylbenzene	ND	2.0	0.25	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Styrene	ND	2.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
1,1,1,2-Tetrachloroethane	ND	2.0	0.32	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
1,1,2,2-Tetrachloroethane	ND	1.0	0.27	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Tetrachloroethylene	ND	2.0	0.34	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Tetrahydrofuran	ND	20	0.98	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Toluene	ND	2.0	0.45	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
1,2,3-Trichlorobenzene	ND	10	0.68	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
1,2,4-Trichlorobenzene	ND	2.0	0.60	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
1,3,5-Trichlorobenzene	ND	2.0	0.42	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
1,1,1-Trichloroethane	ND	2.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
1,1,2-Trichloroethane	ND	2.0	0.38	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Trichloroethylene	ND	2.0	0.35	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Trichlorofluoromethane (Freon 11)	ND	4.0	0.31	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
1,2,3-Trichloropropane	ND	4.0	0.55	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	2.0	0.42	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
1,2,4-Trimethylbenzene	ND	2.0	0.40	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
1,3,5-Trimethylbenzene	ND	2.0	0.30	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
Vinyl Chloride	ND	4.0	0.47	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
m+p Xylene	ND	4.0	0.98	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH
o-Xylene	ND	2.0	0.49	µg/L	2		SW-846 8260D	4/7/23	4/8/23 2:48	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	78.6	70-130		4/8/23 2:48
Toluene-d8	96.2	70-130		4/8/23 2:48
4-Bromofluorobenzene	100	70-130		4/8/23 2:48

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: FD-033023 | Sampled: 3/30/2023 00:00

Sample ID: 23D0022-06

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	4.9	0.53	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Acenaphthylene	ND	4.9	0.55	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Acetophenone	ND	9.8	0.49	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Aniline	ND	4.9	0.59	µg/L	1	V-05	SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Anthracene	ND	4.9	0.49	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Benzidine	ND	20	10	µg/L	1	L-04, V-04, V-05	SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Benzo(a)anthracene	ND	4.9	0.45	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Benzo(a)pyrene	ND	4.9	0.68	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Benzo(b)fluoranthene	ND	4.9	0.54	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Benzo(g,h,i)perylene	ND	4.9	0.67	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Benzo(k)fluoranthene	ND	4.9	0.62	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Benzoic Acid	ND	9.8	8.2	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Bis(2-chloroethoxy)methane	ND	9.8	0.42	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Bis(2-chloroethyl)ether	ND	9.8	0.49	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Bis(2-chloroisopropyl)ether	ND	9.8	0.63	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Bis(2-Ethylhexyl)phthalate	ND	9.8	0.82	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
4-Bromophenylphenylether	ND	9.8	0.51	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Butylbenzylphthalate	ND	9.8	0.65	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Carbazole	ND	9.8	0.45	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
4-Chloroaniline	ND	9.8	0.61	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
4-Chloro-3-methylphenol	ND	9.8	0.51	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
2-Chloronaphthalene	ND	9.8	0.51	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
2-Chlorophenol	ND	9.8	0.45	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
4-Chlorophenylphenylether	ND	9.8	0.54	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Chrysene	ND	4.9	0.44	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Dibenz(a,h)anthracene	ND	4.9	0.73	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Dibenzofuran	ND	4.9	0.55	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Di-n-butylphthalate	ND	9.8	0.48	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
1,2-Dichlorobenzene	ND	4.9	0.62	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
1,3-Dichlorobenzene	ND	4.9	0.63	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
1,4-Dichlorobenzene	ND	4.9	0.61	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
3,3-Dichlorobenzidine	ND	9.8	0.76	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
2,4-Dichlorophenol	ND	9.8	0.48	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Diethylphthalate	ND	9.8	0.41	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
2,4-Dimethylphenol	ND	9.8	0.49	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Dimethylphthalate	ND	9.8	0.38	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
4,6-Dinitro-2-methylphenol	ND	9.8	8.3	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
2,4-Dinitrophenol	ND	9.8	8.3	µg/L	1	V-04, V-06	SW-846 8270E	4/6/23	4/7/23 16:32	AR2
2,4-Dinitrotoluene	ND	9.8	0.66	µg/L	1	V-06	SW-846 8270E	4/6/23	4/7/23 16:32	AR2
2,6-Dinitrotoluene	ND	9.8	0.55	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Di-n-octylphthalate	ND	9.8	3.1	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
1,2-Diphenylhydrazine/Azobenzene	ND	9.8	0.56	µg/L	1	V-05	SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Fluoranthene	ND	4.9	0.47	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Fluorene	ND	4.9	0.53	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: FD-033023 | Sampled: 3/30/2023 00:00

Sample ID: 23D0022-06

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	9.8	0.57	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Hexachlorobutadiene	ND	9.8	0.73	µg/L	1	L-04	SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Hexachlorocyclopentadiene	ND	9.8	5.9	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Hexachloroethane	ND	9.8	0.70	µg/L	1	L-04	SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Indeno(1,2,3-cd)pyrene	ND	4.9	0.77	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Isophorone	ND	9.8	0.51	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
1-Methylnaphthalene	ND	4.9	0.57	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
2-Methylnaphthalene	ND	4.9	0.66	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
2-Methylphenol	ND	9.8	0.48	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
3/4-Methylphenol	1.0	9.8	0.43	µg/L	1	J	SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Naphthalene	66	4.9	0.59	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
2-Nitroaniline	ND	9.8	0.71	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
3-Nitroaniline	ND	9.8	0.58	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
4-Nitroaniline	ND	9.8	0.67	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Nitrobenzene	ND	9.8	0.57	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
2-Nitrophenol	ND	9.8	0.50	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
4-Nitrophenol	ND	9.8	1.9	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
N-Nitrosodimethylamine	ND	9.8	0.56	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
N-Nitrosodiphenylamine/Diphenylamine	ND	9.8	0.42	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
N-Nitrosodi-n-propylamine	ND	9.8	0.56	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Pentachloronitrobenzene	ND	9.8	0.67	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Pentachlorophenol	ND	9.8	0.65	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Phenanthrene	ND	4.9	0.50	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Phenol	ND	9.8	0.19	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Pyrene	ND	4.9	0.64	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
Pyridine	ND	4.9	3.5	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
1,2,4,5-Tetrachlorobenzene	ND	9.8	0.65	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
1,2,4-Trichlorobenzene	ND	4.9	0.65	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
2,4,5-Trichlorophenol	ND	9.8	0.54	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2
2,4,6-Trichlorophenol	ND	9.8	0.46	µg/L	1		SW-846 8270E	4/6/23	4/7/23 16:32	AR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	36.3	15-110		4/7/23 16:32
Phenol-d6	25.4	15-110		4/7/23 16:32
Nitrobenzene-d5	75.3	30-130		4/7/23 16:32
2-Fluorobiphenyl	74.2	30-130		4/7/23 16:32
2,4,6-Tribromophenol	92.5	15-110		4/7/23 16:32
p-Terphenyl-d14	88.9	30-130		4/7/23 16:32

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: FD-033023 | Sampled: 3/30/2023 00:00

Sample ID: 23D0022-06

Sample Matrix: Ground Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	ND	0.20	0.032	µg/L	1		SW-846 8270E	4/4/23	4/7/23 0:43	SPF

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
1,4-Dioxane-d8	24.4	15-110		4/7/23 0:43	

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: FD-033023 | Sampled: 3/30/2023 00:00

Sample ID: 23D0022-06

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	34	1.8	0.67	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
Perfluorobutanesulfonic acid (PFBS)	3.2	1.8	0.67	ng/L	1	PF-20	SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
Perfluoropentanoic acid (PFPeA)	12	1.8	0.72	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
Perfluorohexanoic acid (PFHxA)	8.3	1.8	0.73	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
11Cl-PF3OUdS (F53B Major)	ND	1.8	0.68	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
9Cl-PF3ONS (F53B Minor)	ND	1.8	0.67	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.8	0.93	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
Hexafluoropropylene oxide dimer acid (HFPO-DA)	0.87	1.8	0.53	ng/L	1	PF-23, J	SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.8	0.86	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
Perfluorodecanoic acid (PFDA)	ND	1.8	0.75	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
Perfluorododecanoic acid (PFDoA)	ND	1.8	0.83	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.8	0.66	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
Perfluoroheptanesulfonic acid (PFHpS)	1.7	1.8	0.74	ng/L	1	PF-20, J	SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
N-EtFOSAA (NEtFOSAA)	0.81	1.8	0.72	ng/L	1	L-05, J	SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
N-MeFOSAA (NMeFOSAA)	ND	1.8	0.94	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
Perfluorotetradecanoic acid (PFTA)	ND	1.8	0.86	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	0.74	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.8	0.69	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
Perfluorodecanesulfonic acid (PFDS)	ND	1.8	0.93	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
Perfluorooctanesulfonamide (FOSA)	ND	1.8	0.92	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
Perfluorononanesulfonic acid (PFNS)	ND	1.8	0.92	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.8	0.95	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
Perfluoro-1-butanesulfonamide (FBSA)	ND	1.8	0.70	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
Perfluorohexanesulfonic acid (PFHxS)	5.2	1.8	0.64	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.8	0.64	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.8	0.59	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.8	1.1	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
Perfluoropetanesulfonic acid (PFPeS)	0.92	1.8	0.68	ng/L	1	J	SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
Perfluoroundecanoic acid (PFUnA)	ND	1.8	0.77	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.8	0.70	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
Perfluoroheptanoic acid (PFHpA)	8.3	1.8	0.76	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
Perfluorooctanoic acid (PFOA)	38	1.8	1.2	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
Perfluorooctanesulfonic acid (PFOS)	65	1.8	0.76	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB
Perfluorononanoic acid (PFNA)	1.9	1.8	0.83	ng/L	1		SOP-454 PFAS	4/6/23	4/8/23 3:55	RRB

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

Project Location: Incinerator Rd, Utica, NY
Sample Description:
Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: FD-033023
Sampled: 3/30/2023 00:00

Sample ID: 23D0022-06

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	0.056	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:05	SFM
Aroclor-1221 [1]	ND	0.20	0.078	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:05	SFM
Aroclor-1232 [1]	ND	0.20	0.070	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:05	SFM
Aroclor-1242 [1]	ND	0.20	0.075	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:05	SFM
Aroclor-1248 [1]	ND	0.20	0.079	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:05	SFM
Aroclor-1254 [1]	ND	0.20	0.078	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:05	SFM
Aroclor-1260 [1]	ND	0.20	0.058	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:05	SFM
Aroclor-1262 [1]	ND	0.20	0.090	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:05	SFM
Aroclor-1268 [1]	ND	0.20	0.072	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:05	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	72.6	30-150		4/6/23 16:05
Decachlorobiphenyl [2]	75.6	30-150		4/6/23 16:05
Tetrachloro-m-xylene [1]	64.2	30-150		4/6/23 16:05
Tetrachloro-m-xylene [2]	69.3	30-150		4/6/23 16:05

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

Project Location: Incinerator Rd, Utica, NY
Sample Description:
Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: FD-033023
Sampled: 3/30/2023 00:00

Sample ID: 23D0022-06

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	0.20	0.050	0.045	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:50	HNN
Antimony	ND	0.050	0.0082	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:50	HNN
Arsenic	ND	0.010	0.0047	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:50	HNN
Barium	0.19	0.050	0.0051	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:50	HNN
Beryllium	ND	0.0040	0.0012	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:50	HNN
Cadmium	ND	0.0040	0.0018	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:50	HNN
Calcium	390	0.50	0.22	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:50	HNN
Chromium	ND	0.010	0.0068	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:50	HNN
Cobalt	0.012	0.010	0.0021	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:50	HNN
Copper	0.0060	0.010	0.0036	mg/L	1	J	SW-846 6010D	4/4/23	4/5/23 16:50	HNN
Iron	4.6	0.050	0.047	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:50	HNN
Lead	0.030	0.010	0.0068	mg/L	1		SW-846 6010D	4/4/23	4/9/23 0:07	ATP
Magnesium	32	0.050	0.0095	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:50	HNN
Manganese	5.2	0.010	0.0033	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:50	HNN
Mercury	ND	0.00020	0.00014	mg/L	1		SW-846 7470A	4/4/23	4/4/23 12:40	AAJ
Nickel	0.011	0.010	0.0098	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:50	HNN
Potassium	16	2.0	0.28	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:50	HNN
Selenium	ND	0.050	0.014	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:50	HNN
Silver	ND	0.010	0.0035	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:50	HNN
Sodium	8.1	2.0	1.2	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:50	HNN
Thallium	ND	0.050	0.021	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:50	HNN
Vanadium	0.040	0.010	0.0038	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:50	HNN
Zinc	0.19	0.010	0.0042	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:50	HNN
Boron	0.17	0.10	0.073	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:50	HNN
Hardness	1100	1.4		mg/L	1		SW-846 6010	4/4/23	4/5/23 16:50	HNN

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: FD-033023 | Sampled: 3/30/2023 00:00

Sample ID: 23D0022-06

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	0.70	0.30	0.17	mg/L	1		SM19-23 4500 NH3 C	4/12/23	4/13/23 17:37	EC
Bromide	ND	0.50	0.15	mg/L	1		EPA 300.0	4/19/23	4/19/23 6:25	IS
Chemical Oxygen Demand	ND	15	13	mg/L	1	Z-01	EPA 410.4	4/20/23	4/20/23 15:30	QH
Chloride	6.7	1.0	0.65	mg/L	1		EPA 300.0	4/19/23	4/19/23 6:25	IS
Sulfate	510	25	7.9	mg/L	25		EPA 300.0	4/19/23	4/19/23 14:58	is
Total Organic Carbon	34	1.0	0.56	mg/L	1		SM 21-23 5310B	4/19/23	4/19/23 22:40	QH
Alkalinity to pH 4.5	600	1.0	0.70	mg/L	1		SM21-23 2320B	4/12/23	4/12/23 12:38	DET

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: FD-033023 | Sampled: 3/30/2023 00:00

Sample ID: 23D0022-06

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Dissolved)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Dissolved Solids	1300	10	4.9	mg/L	1		SM21-23 2540C	4/5/23	4/5/23 14:21	LL

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: FD-033023 | Sampled: 3/30/2023 00:00

Sample ID: 23D0022-06

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached	-	-		ug/L	1		SM4500 CN C			PALI

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: TB-033023 | Sampled: 3/30/2023 00:00

Sample ID: 23D0022-07

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	2.0	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Acrylonitrile	ND	5.0	0.47	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.13	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Bromochloromethane	ND	1.0	0.28	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Bromoform	ND	1.0	0.41	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Bromomethane	ND	2.0	1.3	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
2-Butanone (MEK)	ND	20	1.7	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.3	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
n-Butylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
sec-Butylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
tert-Butylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Carbon Disulfide	ND	5.0	1.6	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Chlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Chlorodibromomethane	ND	0.50	0.20	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Chloroethane	ND	2.0	0.34	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Chloroform	0.17	2.0	0.14	µg/L	1	J	SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Chloromethane	ND	2.0	0.50	µg/L	1	V-05	SW-846 8260D	4/7/23	4/8/23 0:03	EEH
2-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
4-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.85	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.16	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Dibromomethane	ND	1.0	0.32	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
1,2-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
1,3-Dichlorobenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	1.5	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.16	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
1,1-Dichloroethane	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
1,2-Dichloroethane	ND	1.0	0.30	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
1,1-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
1,2-Dichloropropane	ND	1.0	0.19	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
1,3-Dichloropropane	ND	0.50	0.12	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
2,2-Dichloropropane	ND	1.0	0.35	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
1,1-Dichloropropene	ND	2.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
trans-1,3-Dichloropropene	ND	0.50	0.14	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Diethyl Ether	ND	2.0	0.14	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0022

Date Received: 4/1/2023

Field Sample #: TB-033023 | Sampled: 3/30/2023 00:00

Sample ID: 23D0022-07

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.20	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
1,4-Dioxane	ND	50	18	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Ethylbenzene	ND	1.0	0.22	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
2-Hexanone (MBK)	ND	10	1.2	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.13	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Methyl Acetate	ND	1.0	0.61	µg/L	1	L-04, V-05	SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Methyl Cyclohexane	ND	1.0	0.16	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Methylene Chloride	0.77	5.0	0.18	µg/L	1	J	SW-846 8260D	4/7/23	4/8/23 0:03	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.3	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Naphthalene	ND	2.0	0.38	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
n-Propylbenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.14	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Tetrachloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Tetrahydrofuran	ND	10	0.49	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Toluene	ND	1.0	0.22	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.34	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
1,1,1-Trichloroethane	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
1,1,2-Trichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Trichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
1,2,3-Trichloropropane	ND	2.0	0.28	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.21	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.20	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
Vinyl Chloride	ND	2.0	0.24	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
m+p Xylene	ND	2.0	0.49	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH
o-Xylene	ND	1.0	0.24	µg/L	1		SW-846 8260D	4/7/23	4/8/23 0:03	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	88.9	70-130		4/8/23 0:03
Toluene-d8	97.8	70-130		4/8/23 0:03
4-Bromofluorobenzene	97.5	70-130		4/8/23 0:03

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Sample Extraction Data

Prep Method: EPA 300.0 **Analytical Method: EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0022-01 [MW-TP-6-033023]	B337500	10.0	10.0	04/19/23
23D0022-02 [CHA-55-033023]	B337500	10.0	10.0	04/19/23
23D0022-03 [MW-TP-5-033023]	B337500	10.0	10.0	04/19/23
23D0022-04 [MW-TP-4-033023]	B337500	10.0	10.0	04/19/23
23D0022-05 [CHA-65-033023]	B337500	10.0	10.0	04/19/23
23D0022-06 [FD-033023]	B337500	10.0	10.0	04/19/23

Prep Method: EPA 300.0 **Analytical Method: EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0022-02 [CHA-55-033023]	B337502	10.0	10.0	04/19/23
23D0022-03 [MW-TP-5-033023]	B337502	10.0	10.0	04/19/23

Prep Method: EPA 300.0 **Analytical Method: EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0022-01 [MW-TP-6-033023]	B337504	10.0	10.0	04/19/23
23D0022-02 [CHA-55-033023]	B337504	10.0	10.0	04/19/23
23D0022-03 [MW-TP-5-033023]	B337504	10.0	10.0	04/19/23
23D0022-04 [MW-TP-4-033023]	B337504	10.0	10.0	04/19/23
23D0022-06 [FD-033023]	B337504	10.0	10.0	04/19/23

Prep Method: EPA 300.0 **Analytical Method: EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0022-05 [CHA-65-033023]	B337576	10.0	10.0	04/19/23

Prep Method: EPA 300.0 **Analytical Method: EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0022-01 [MW-TP-6-033023]	B337578	10.0	10.0	04/19/23
23D0022-05 [CHA-65-033023]	B337578	10.0	10.0	04/19/23
23D0022-06 [FD-033023]	B337578	10.0	10.0	04/19/23

Prep Method: EPA 300.0 **Analytical Method: EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0022-04 [MW-TP-4-033023]	B337809	10.0	10.0	04/19/23

EPA 410.4

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0022-01 [MW-TP-6-033023]	B337789	2.00	2.00	04/20/23
23D0022-02 [CHA-55-033023]	B337789	2.00	2.00	04/20/23
23D0022-03 [MW-TP-5-033023]	B337789	2.00	2.00	04/20/23
23D0022-04 [MW-TP-4-033023]	B337789	2.00	2.00	04/20/23
23D0022-05 [CHA-65-033023]	B337789	2.00	2.00	04/20/23

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Sample Extraction Data

EPA 410.4

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0022-06 [FD-033023]	B337789	2.00	2.00	04/20/23

SM 21-23 5310B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0022-01 [MW-TP-6-033023]	B337475	50.0	50.0	04/19/23
23D0022-02 [CHA-55-033023]	B337475	50.0	50.0	04/19/23
23D0022-03 [MW-TP-5-033023]	B337475	50.0	50.0	04/19/23
23D0022-04 [MW-TP-4-033023]	B337475	50.0	50.0	04/19/23
23D0022-05 [CHA-65-033023]	B337475	50.0	50.0	04/19/23
23D0022-06 [FD-033023]	B337475	50.0	50.0	04/19/23

Prep Method: SM 4500-NH3 C **Analytical Method: SM19-23 4500 NH3 C**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0022-01 [MW-TP-6-033023]	B336894	100	100	04/12/23
23D0022-02 [CHA-55-033023]	B336894	100	100	04/12/23
23D0022-03 [MW-TP-5-033023]	B336894	100	100	04/12/23
23D0022-04 [MW-TP-4-033023]	B336894	100	100	04/12/23
23D0022-05 [CHA-65-033023]	B336894	100	100	04/12/23
23D0022-06 [FD-033023]	B336894	100	100	04/12/23

SM21-23 2320B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0022-01 [MW-TP-6-033023]	B336899	100	100	04/12/23
23D0022-02 [CHA-55-033023]	B336899	100	100	04/12/23
23D0022-03 [MW-TP-5-033023]	B336899	100	100	04/12/23
23D0022-04 [MW-TP-4-033023]	B336899	100	100	04/12/23
23D0022-05 [CHA-65-033023]	B336899	100	100	04/12/23
23D0022-06 [FD-033023]	B336899	100	100	04/12/23

SM21-23 2540C

Lab Number [Field ID]	Batch	Initial [mL]	Date
23D0022-01 [MW-TP-6-033023]	B336178	50.0	04/05/23
23D0022-02 [CHA-55-033023]	B336178	50.0	04/05/23
23D0022-03 [MW-TP-5-033023]	B336178	50.0	04/05/23
23D0022-04 [MW-TP-4-033023]	B336178	50.0	04/05/23
23D0022-05 [CHA-65-033023]	B336178	50.0	04/05/23
23D0022-06 [FD-033023]	B336178	50.0	04/05/23

Prep Method: SOP 454-PFAAS **Analytical Method: SOP-454 PFAS**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0022-01 [MW-TP-6-033023]	B336060	269	1.00	04/06/23
23D0022-02 [CHA-55-033023]	B336060	25.0	1.00	04/06/23
23D0022-03 [MW-TP-5-033023]	B336060	122	1.00	04/06/23
23D0022-04 [MW-TP-4-033023]	B336060	123	1.00	04/06/23

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Sample Extraction Data

Prep Method: SOP 454-PFAAS **Analytical Method: SOP-454 PFAS**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0022-05 [CHA-65-033023]	B336060	275	1.00	04/06/23
23D0022-05RE1 [CHA-65-033023]	B336060	275	1.00	04/06/23
23D0022-06 [FD-033023]	B336060	278	1.00	04/06/23

Prep Method: SW-846 3005A **Analytical Method: SW-846 6010**

Lab Number [Field ID]	Batch	Initial [mL]	Date
23D0022-01 [MW-TP-6-033023]	B336100	50.0	04/04/23
23D0022-02 [CHA-55-033023]	B336100	50.0	04/04/23
23D0022-03 [MW-TP-5-033023]	B336100	50.0	04/04/23
23D0022-04 [MW-TP-4-033023]	B336100	50.0	04/04/23
23D0022-05 [CHA-65-033023]	B336100	50.0	04/04/23
23D0022-06 [FD-033023]	B336100	50.0	04/04/23

Prep Method: SW-846 3005A **Analytical Method: SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0022-01 [MW-TP-6-033023]	B336100	50.0	50.0	04/04/23
23D0022-02 [CHA-55-033023]	B336100	50.0	50.0	04/04/23
23D0022-03 [MW-TP-5-033023]	B336100	50.0	50.0	04/04/23
23D0022-04 [MW-TP-4-033023]	B336100	50.0	50.0	04/04/23
23D0022-05 [CHA-65-033023]	B336100	50.0	50.0	04/04/23
23D0022-06 [FD-033023]	B336100	50.0	50.0	04/04/23

Prep Method: SW-846 7470A Prep **Analytical Method: SW-846 7470A**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0022-01 [MW-TP-6-033023]	B335977	10.0	10.0	04/04/23
23D0022-02 [CHA-55-033023]	B335977	10.0	10.0	04/04/23
23D0022-03 [MW-TP-5-033023]	B335977	10.0	10.0	04/04/23
23D0022-04 [MW-TP-4-033023]	B335977	10.0	10.0	04/04/23
23D0022-05 [CHA-65-033023]	B335977	10.0	10.0	04/04/23
23D0022-06 [FD-033023]	B335977	10.0	10.0	04/04/23

Prep Method: SW-846 3510C **Analytical Method: SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0022-01 [MW-TP-6-033023]	B336013	1020	10.0	04/04/23
23D0022-02 [CHA-55-033023]	B336013	1020	10.0	04/04/23
23D0022-03 [MW-TP-5-033023]	B336013	1020	10.0	04/04/23
23D0022-04 [MW-TP-4-033023]	B336013	1000	10.0	04/04/23
23D0022-05 [CHA-65-033023]	B336013	1020	10.0	04/04/23
23D0022-06 [FD-033023]	B336013	1020	10.0	04/04/23

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0022-01 [MW-TP-6-033023]	B336476	2.5	5.00	04/07/23
23D0022-02 [CHA-55-033023]	B336476	1	5.00	04/07/23

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Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0022-03 [MW-TP-5-033023]	B336476	5	5.00	04/07/23
23D0022-04 [MW-TP-4-033023]	B336476	2.5	5.00	04/07/23
23D0022-05 [CHA-65-033023]	B336476	2.5	5.00	04/07/23
23D0022-06 [FD-033023]	B336476	2.5	5.00	04/07/23
23D0022-07 [TB-033023]	B336476	5	5.00	04/07/23

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0022-02RE1 [CHA-55-033023]	B336731	1	5.00	04/12/23

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0022-01 [MW-TP-6-033023]	B336016	1020	1.00	04/04/23
23D0022-02 [CHA-55-033023]	B336016	985	1.00	04/04/23
23D0022-03 [MW-TP-5-033023]	B336016	970	1.00	04/04/23
23D0022-04 [MW-TP-4-033023]	B336016	1020	1.00	04/04/23
23D0022-05 [CHA-65-033023]	B336016	1020	1.00	04/04/23
23D0022-06 [FD-033023]	B336016	1010	1.00	04/04/23

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0022-01 [MW-TP-6-033023]	B336331	1030	1.00	04/06/23
23D0022-02 [CHA-55-033023]	B336331	1000	1.00	04/06/23
23D0022-03 [MW-TP-5-033023]	B336331	1030	1.00	04/06/23
23D0022-04 [MW-TP-4-033023]	B336331	1030	1.00	04/06/23
23D0022-05 [CHA-65-033023]	B336331	1020	1.00	04/06/23
23D0022-06 [FD-033023]	B336331	1020	1.00	04/06/23

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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
Batch B336476 - SW-846 5030B										
Blank (B336476-BLK1)				Prepared & Analyzed: 04/07/23						
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							V-05
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							L-04, V-05

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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 B336476 - SW-846 5030B											
Blank (B336476-BLK1)				Prepared & Analyzed: 04/07/23							
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	*19.6*		µg/L	25.0		78.3	70-130				
Surrogate: Toluene-d8	*24.4*		µg/L	25.0		97.4	70-130				
Surrogate: 4-Bromofluorobenzene	*25.9*		µg/L	25.0		104	70-130				
LCS (B336476-BS1)				Prepared & Analyzed: 04/07/23							
Acetone	89.5	50	µg/L	100		89.5	70-160				†
Acrylonitrile	8.39	5.0	µg/L	10.0		83.9	70-130				
tert-Amyl Methyl Ether (TAME)	9.12	0.50	µg/L	10.0		91.2	70-130				
Benzene	9.61	1.0	µg/L	10.0		96.1	70-130				
Bromobenzene	10.3	1.0	µg/L	10.0		103	70-130				
Bromochloromethane	10.6	1.0	µg/L	10.0		106	70-130				
Bromodichloromethane	10.3	0.50	µg/L	10.0		103	70-130				
Bromoform	11.0	1.0	µg/L	10.0		110	70-130				
Bromomethane	10.8	2.0	µg/L	10.0		108	40-160				†
2-Butanone (MEK)	101	20	µg/L	100		101	40-160				†
tert-Butyl Alcohol (TBA)	81.8	20	µg/L	100		81.8	40-160				†
n-Butylbenzene	10.0	1.0	µg/L	10.0		100	70-130				
sec-Butylbenzene	10.3	1.0	µg/L	10.0		103	70-130				
tert-Butylbenzene	10.2	1.0	µg/L	10.0		102	70-130				
tert-Butyl Ethyl Ether (TBEE)	9.61	0.50	µg/L	10.0		96.1	70-130				
Carbon Disulfide	102	5.0	µg/L	100		102	70-130				
Carbon Tetrachloride	11.0	5.0	µg/L	10.0		110	70-130				
Chlorobenzene	10.7	1.0	µg/L	10.0		107	70-130				
Chlorodibromomethane	10.5	0.50	µg/L	10.0		105	70-130				
Chloroethane	12.1	2.0	µg/L	10.0		121	70-130			V-20	
Chloroform	9.60	2.0	µg/L	10.0		96.0	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 B336476 - SW-846 5030B												
LCS (B336476-BS1)				Prepared & Analyzed: 04/07/23								
Chloromethane	8.92	2.0	µg/L	10.0		89.2		40-160			V-05	†
2-Chlorotoluene	9.76	1.0	µg/L	10.0		97.6		70-130				
4-Chlorotoluene	10.5	1.0	µg/L	10.0		105		70-130				
1,2-Dibromo-3-chloropropane (DBCP)	8.69	5.0	µg/L	10.0		86.9		70-130				
1,2-Dibromoethane (EDB)	10.5	0.50	µg/L	10.0		105		70-130				
Dibromomethane	10.2	1.0	µg/L	10.0		102		70-130				
1,2-Dichlorobenzene	10.1	1.0	µg/L	10.0		101		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	8.36	2.0	µg/L	10.0		83.6		70-130				
Dichlorodifluoromethane (Freon 12)	11.1	2.0	µg/L	10.0		111		40-160				†
1,1-Dichloroethane	10.0	1.0	µg/L	10.0		100		70-130				
1,2-Dichloroethane	9.45	1.0	µg/L	10.0		94.5		70-130				
1,1-Dichloroethylene	11.0	1.0	µg/L	10.0		110		70-130				
cis-1,2-Dichloroethylene	10.2	1.0	µg/L	10.0		102		70-130				
trans-1,2-Dichloroethylene	9.90	1.0	µg/L	10.0		99.0		70-130				
1,2-Dichloropropane	9.47	1.0	µg/L	10.0		94.7		70-130				
1,3-Dichloropropane	9.70	0.50	µg/L	10.0		97.0		70-130				
2,2-Dichloropropane	8.47	1.0	µg/L	10.0		84.7		40-130				†
1,1-Dichloropropene	10.4	2.0	µg/L	10.0		104		70-130				
cis-1,3-Dichloropropene	9.73	0.50	µg/L	10.0		97.3		70-130				
trans-1,3-Dichloropropene	9.18	0.50	µg/L	10.0		91.8		70-130				
Diethyl Ether	10.2	2.0	µg/L	10.0		102		70-130				
Diisopropyl Ether (DIPE)	9.92	0.50	µg/L	10.0		99.2		70-130				
1,4-Dioxane	93.9	50	µg/L	100		93.9		40-130				†
Ethylbenzene	10.9	1.0	µg/L	10.0		109		70-130				
Hexachlorobutadiene	10.1	0.60	µg/L	10.0		101		70-130				
2-Hexanone (MBK)	97.1	10	µg/L	100		97.1		70-160				†
Isopropylbenzene (Cumene)	10.8	1.0	µg/L	10.0		108		70-130				
p-Isopropyltoluene (p-Cymene)	10.2	1.0	µg/L	10.0		102		70-130				
Methyl Acetate	5.65	1.0	µg/L	10.0		**56.5**	*	70-130			L-04, V-05	
Methyl tert-Butyl Ether (MTBE)	9.61	1.0	µg/L	10.0		96.1		70-130				
Methyl Cyclohexane	10.3	1.0	µg/L	10.0		103		70-130				
Methylene Chloride	9.04	5.0	µg/L	10.0		90.4		70-130				
4-Methyl-2-pentanone (MIBK)	97.6	10	µg/L	100		97.6		70-160				†
Naphthalene	9.16	2.0	µg/L	10.0		91.6		40-130				†
n-Propylbenzene	10.7	1.0	µg/L	10.0		107		70-130				
Styrene	10.7	1.0	µg/L	10.0		107		70-130				
1,1,1,2-Tetrachloroethane	11.1	1.0	µg/L	10.0		111		70-130				
1,1,2,2-Tetrachloroethane	10.5	0.50	µg/L	10.0		105		70-130				
Tetrachloroethylene	10.6	1.0	µg/L	10.0		106		70-130				
Tetrahydrofuran	9.86	10	µg/L	10.0		98.6		70-130			J	
Toluene	10.3	1.0	µg/L	10.0		103		70-130				
1,2,3-Trichlorobenzene	9.33	5.0	µg/L	10.0		93.3		70-130				
1,2,4-Trichlorobenzene	9.22	1.0	µg/L	10.0		92.2		70-130				
1,3,5-Trichlorobenzene	9.77	1.0	µg/L	10.0		97.7		70-130				
1,1,1-Trichloroethane	10.6	1.0	µg/L	10.0		106		70-130				
1,1,2-Trichloroethane	9.99	1.0	µg/L	10.0		99.9		70-130				
Trichloroethylene	10.5	1.0	µg/L	10.0		105		70-130				
Trichlorofluoromethane (Freon 11)	11.1	2.0	µg/L	10.0		111		70-130				
1,2,3-Trichloropropane	10.3	2.0	µg/L	10.0		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	
Batch B336476 - SW-846 5030B												
LCS (B336476-BS1)				Prepared & Analyzed: 04/07/23								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10.2	1.0	µg/L	10.0		102		70-130				
1,2,4-Trimethylbenzene	10.1	1.0	µg/L	10.0		101		70-130				
1,3,5-Trimethylbenzene	10.5	1.0	µg/L	10.0		105		70-130				
Vinyl Chloride	17.5	2.0	µg/L	10.0		**175**	*	40-160			L-02, V-20	†
m+p Xylene	21.7	2.0	µg/L	20.0		108		70-130				
o-Xylene	10.7	1.0	µg/L	10.0		107		70-130				
Surrogate: 1,2-Dichloroethane-d4	*22.7*		µg/L	25.0		90.7		70-130				
Surrogate: Toluene-d8	*24.2*		µg/L	25.0		96.8		70-130				
Surrogate: 4-Bromofluorobenzene	*25.4*		µg/L	25.0		102		70-130				
LCS Dup (B336476-BSD1)				Prepared & Analyzed: 04/07/23								
Acetone	90.7	50	µg/L	100		90.7		70-160	1.29	25		†
Acrylonitrile	9.44	5.0	µg/L	10.0		94.4		70-130	11.8	25		
tert-Amyl Methyl Ether (TAME)	9.25	0.50	µg/L	10.0		92.5		70-130	1.42	25		
Benzene	9.55	1.0	µg/L	10.0		95.5		70-130	0.626	25		
Bromobenzene	10.4	1.0	µg/L	10.0		104		70-130	0.869	25		
Bromochloromethane	10.2	1.0	µg/L	10.0		102		70-130	4.32	25		
Bromodichloromethane	10.5	0.50	µg/L	10.0		105		70-130	1.93	25		
Bromoform	11.3	1.0	µg/L	10.0		113		70-130	3.14	25		
Bromomethane	10.9	2.0	µg/L	10.0		109		40-160	0.827	25		†
2-Butanone (MEK)	99.4	20	µg/L	100		99.4		40-160	1.87	25		†
tert-Butyl Alcohol (TBA)	97.5	20	µg/L	100		97.5		40-160	17.5	25		†
n-Butylbenzene	10.0	1.0	µg/L	10.0		100		70-130	0.00	25		
sec-Butylbenzene	10.2	1.0	µg/L	10.0		102		70-130	0.681	25		
tert-Butylbenzene	10.2	1.0	µg/L	10.0		102		70-130	0.295	25		
tert-Butyl Ethyl Ether (TBEE)	9.34	0.50	µg/L	10.0		93.4		70-130	2.85	25		
Carbon Disulfide	111	5.0	µg/L	100		111		70-130	8.34	25		
Carbon Tetrachloride	10.8	5.0	µg/L	10.0		108		70-130	1.92	25		
Chlorobenzene	10.9	1.0	µg/L	10.0		109		70-130	1.48	25		
Chlorodibromomethane	10.5	0.50	µg/L	10.0		105		70-130	0.285	25		
Chloroethane	11.9	2.0	µg/L	10.0		119		70-130	1.41	25	V-20	
Chloroform	9.60	2.0	µg/L	10.0		96.0		70-130	0.00	25		
Chloromethane	10.0	2.0	µg/L	10.0		100		40-160	11.7	25	V-05	†
2-Chlorotoluene	9.43	1.0	µg/L	10.0		94.3		70-130	3.44	25		
4-Chlorotoluene	10.2	1.0	µg/L	10.0		102		70-130	2.51	25		
1,2-Dibromo-3-chloropropane (DBCP)	10.1	5.0	µg/L	10.0		101		70-130	14.8	25		
1,2-Dibromoethane (EDB)	10.6	0.50	µg/L	10.0		106		70-130	0.951	25		
Dibromomethane	10.2	1.0	µg/L	10.0		102		70-130	0.490	25		
1,2-Dichlorobenzene	10.4	1.0	µg/L	10.0		104		70-130	2.44	25		
1,3-Dichlorobenzene	10.1	1.0	µg/L	10.0		101		70-130	0.395	25		
1,4-Dichlorobenzene	9.92	1.0	µg/L	10.0		99.2		70-130	1.22	25		
trans-1,4-Dichloro-2-butene	8.03	2.0	µg/L	10.0		80.3		70-130	4.03	25		
Dichlorodifluoromethane (Freon 12)	10.9	2.0	µg/L	10.0		109		40-160	1.27	25		†
1,1-Dichloroethane	9.90	1.0	µg/L	10.0		99.0		70-130	1.10	25		
1,2-Dichloroethane	9.36	1.0	µg/L	10.0		93.6		70-130	0.957	25		
1,1-Dichloroethylene	9.97	1.0	µg/L	10.0		99.7		70-130	10.0	25		
cis-1,2-Dichloroethylene	10.1	1.0	µg/L	10.0		101		70-130	1.48	25		
trans-1,2-Dichloroethylene	9.65	1.0	µg/L	10.0		96.5		70-130	2.56	25		
1,2-Dichloropropane	9.62	1.0	µg/L	10.0		96.2		70-130	1.57	25		
1,3-Dichloropropane	9.94	0.50	µg/L	10.0		99.4		70-130	2.44	25		
2,2-Dichloropropane	8.48	1.0	µg/L	10.0		84.8		40-130	0.118	25		†
1,1-Dichloropropene	10.2	2.0	µg/L	10.0		102		70-130	2.05	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	
Batch B336476 - SW-846 5030B												
LCS Dup (B336476-BSD1)				Prepared & Analyzed: 04/07/23								
cis-1,3-Dichloropropene	9.59	0.50	µg/L	10.0		95.9		70-130	1.45	25		
trans-1,3-Dichloropropene	9.47	0.50	µg/L	10.0		94.7		70-130	3.11	25		
Diethyl Ether	10.2	2.0	µg/L	10.0		102		70-130	0.195	25		
Diisopropyl Ether (DIPE)	9.97	0.50	µg/L	10.0		99.7		70-130	0.503	25		
1,4-Dioxane	98.5	50	µg/L	100		98.5		40-130	4.78	50		† ‡
Ethylbenzene	10.8	1.0	µg/L	10.0		108		70-130	1.02	25		
Hexachlorobutadiene	10.2	0.60	µg/L	10.0		102		70-130	0.692	25		
2-Hexanone (MBK)	103	10	µg/L	100		103		70-160	6.02	25		†
Isopropylbenzene (Cumene)	10.6	1.0	µg/L	10.0		106		70-130	1.68	25		
p-Isopropyltoluene (p-Cymene)	10.2	1.0	µg/L	10.0		102		70-130	0.0985	25		
Methyl Acetate	6.19	1.0	µg/L	10.0		**61.9**	*	70-130	9.12	25	L-04, V-05	
Methyl tert-Butyl Ether (MTBE)	9.45	1.0	µg/L	10.0		94.5		70-130	1.68	25		
Methyl Cyclohexane	10.1	1.0	µg/L	10.0		101		70-130	2.25	25		
Methylene Chloride	10.0	5.0	µg/L	10.0		100		70-130	10.5	25		
4-Methyl-2-pentanone (MIBK)	104	10	µg/L	100		104		70-160	6.62	25		†
Naphthalene	10.1	2.0	µg/L	10.0		101		40-130	9.86	25		†
n-Propylbenzene	10.4	1.0	µg/L	10.0		104		70-130	2.55	25		
Styrene	10.6	1.0	µg/L	10.0		106		70-130	0.752	25		
1,1,1,2-Tetrachloroethane	11.1	1.0	µg/L	10.0		111		70-130	0.270	25		
1,1,2,2-Tetrachloroethane	10.8	0.50	µg/L	10.0		108		70-130	2.90	25		
Tetrachloroethylene	10.9	1.0	µg/L	10.0		109		70-130	2.61	25		
Tetrahydrofuran	10.6	10	µg/L	10.0		106		70-130	6.76	25		
Toluene	10.1	1.0	µg/L	10.0		101		70-130	1.57	25		
1,2,3-Trichlorobenzene	10.3	5.0	µg/L	10.0		103		70-130	9.79	25		
1,2,4-Trichlorobenzene	9.90	1.0	µg/L	10.0		99.0		70-130	7.11	25		
1,3,5-Trichlorobenzene	10.0	1.0	µg/L	10.0		100		70-130	2.53	25		
1,1,1-Trichloroethane	10.4	1.0	µg/L	10.0		104		70-130	2.19	25		
1,1,2-Trichloroethane	10.3	1.0	µg/L	10.0		103		70-130	3.15	25		
Trichloroethylene	10.1	1.0	µg/L	10.0		101		70-130	4.27	25		
Trichlorofluoromethane (Freon 11)	10.9	2.0	µg/L	10.0		109		70-130	2.27	25		
1,2,3-Trichloropropane	10.5	2.0	µg/L	10.0		105		70-130	1.25	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10.8	1.0	µg/L	10.0		108		70-130	5.61	25		
1,2,4-Trimethylbenzene	9.79	1.0	µg/L	10.0		97.9		70-130	3.12	25		
1,3,5-Trimethylbenzene	10.5	1.0	µg/L	10.0		105		70-130	0.0952	25		
Vinyl Chloride	16.5	2.0	µg/L	10.0		**165**	*	40-160	5.70	25	L-02, V-20	†
m+p Xylene	21.5	2.0	µg/L	20.0		108		70-130	0.741	25		
o-Xylene	10.7	1.0	µg/L	10.0		107		70-130	0.280	25		
Surrogate: 1,2-Dichloroethane-d4	*22.6*		µg/L	25.0		90.6		70-130				
Surrogate: Toluene-d8	*24.5*		µg/L	25.0		97.9		70-130				
Surrogate: 4-Bromofluorobenzene	*25.3*		µg/L	25.0		101		70-130				
Matrix Spike (B336476-MS1)		**Source: 23D0022-04**		Prepared: 04/07/23 Analyzed: 04/08/23								
Acetone	154	100	µg/L	200	10.8	71.7		70-130				
Acrylonitrile	15.8	10	µg/L	20.0	ND	79.0		70-130				
tert-Amyl Methyl Ether (TAME)	15.4	1.0	µg/L	20.0	ND	76.9		70-130				
Benzene	17.1	2.0	µg/L	20.0	ND	85.3		70-130				
Bromobenzene	17.6	2.0	µg/L	20.0	ND	87.8		70-130				
Bromochloromethane	18.9	2.0	µg/L	20.0	ND	94.3		70-130				
Bromodichloromethane	17.5	1.0	µg/L	20.0	ND	87.4		70-130				
Bromoform	19.5	2.0	µg/L	20.0	ND	97.5		70-130				
Bromomethane	17.7	4.0	µg/L	20.0	ND	88.3		70-130				
2-Butanone (MEK)	172	40	µg/L	200	ND	86.2		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 B336476 - SW-846 5030B											
Matrix Spike (B336476-MS1)	**Source: 23D0022-04**			Prepared: 04/07/23 Analyzed: 04/08/23							
tert-Butyl Alcohol (TBA)	163	40	µg/L	200	ND	81.5		70-130			
n-Butylbenzene	16.5	2.0	µg/L	20.0	ND	82.4		70-130			
sec-Butylbenzene	17.1	2.0	µg/L	20.0	ND	85.4		70-130			
tert-Butylbenzene	17.5	2.0	µg/L	20.0	ND	87.6		70-130			
tert-Butyl Ethyl Ether (TBEE)	16.1	1.0	µg/L	20.0	ND	80.4		70-130			
Carbon Disulfide	193	10	µg/L	200	ND	96.5		70-130			
Carbon Tetrachloride	19.4	10	µg/L	20.0	ND	97.0		70-130			
Chlorobenzene	21.0	2.0	µg/L	20.0	1.44	97.6		70-130			
Chlorodibromomethane	18.8	1.0	µg/L	20.0	ND	93.9		70-130			
Chloroethane	19.7	4.0	µg/L	20.0	ND	98.3		70-130			V-20
Chloroform	16.8	4.0	µg/L	20.0	ND	83.8		70-130			
Chloromethane	9.74	4.0	µg/L	20.0	ND	**48.7**	*	70-130			MS-23, R-06, V-05
2-Chlorotoluene	16.4	2.0	µg/L	20.0	ND	82.1		70-130			
4-Chlorotoluene	17.7	2.0	µg/L	20.0	ND	88.4		70-130			
1,2-Dibromo-3-chloropropane (DBCP)	15.3	10	µg/L	20.0	ND	76.3		70-130			
1,2-Dibromoethane (EDB)	18.1	1.0	µg/L	20.0	ND	90.5		70-130			
Dibromomethane	18.3	2.0	µg/L	20.0	ND	91.5		70-130			
1,2-Dichlorobenzene	17.9	2.0	µg/L	20.0	ND	89.4		70-130			
1,3-Dichlorobenzene	17.2	2.0	µg/L	20.0	ND	85.9		70-130			
1,4-Dichlorobenzene	18.1	2.0	µg/L	20.0	1.10	85.2		70-130			
trans-1,4-Dichloro-2-butene	12.0	4.0	µg/L	20.0	ND	**59.8**	*	70-130			MS-07A
Dichlorodifluoromethane (Freon 12)	18.7	4.0	µg/L	20.0	ND	93.5		70-130			
1,1-Dichloroethane	17.6	2.0	µg/L	20.0	ND	88.2		70-130			
1,2-Dichloroethane	16.2	2.0	µg/L	20.0	ND	81.2		70-130			
1,1-Dichloroethylene	19.1	2.0	µg/L	20.0	ND	95.5		70-130			
cis-1,2-Dichloroethylene	17.6	2.0	µg/L	20.0	ND	87.9		70-130			
trans-1,2-Dichloroethylene	17.2	2.0	µg/L	20.0	ND	85.9		70-130			
1,2-Dichloropropane	17.0	2.0	µg/L	20.0	ND	84.9		70-130			
1,3-Dichloropropane	17.7	1.0	µg/L	20.0	ND	88.4		70-130			
2,2-Dichloropropane	11.2	2.0	µg/L	20.0	ND	**56.2**	*	70-130			MS-07A
1,1-Dichloropropene	18.1	4.0	µg/L	20.0	ND	90.6		70-130			
cis-1,3-Dichloropropene	16.3	1.0	µg/L	20.0	ND	81.6		70-130			
trans-1,3-Dichloropropene	15.2	1.0	µg/L	20.0	ND	76.2		70-130			
Diethyl Ether	17.3	4.0	µg/L	20.0	ND	86.7		70-130			
Diisopropyl Ether (DIPE)	16.9	1.0	µg/L	20.0	ND	84.5		70-130			
1,4-Dioxane	164	100	µg/L	200	ND	82.2		70-130			
Ethylbenzene	19.1	2.0	µg/L	20.0	ND	95.3		70-130			
Hexachlorobutadiene	16.7	1.2	µg/L	20.0	ND	83.3		70-130			
2-Hexanone (MBK)	178	20	µg/L	200	ND	88.8		70-130			
Isopropylbenzene (Cumene)	18.4	2.0	µg/L	20.0	ND	92.2		70-130			
p-Isopropyltoluene (p-Cymene)	17.3	2.0	µg/L	20.0	ND	86.4		70-130			
Methyl Acetate	10.2	2.0	µg/L	20.0	ND	**51.0**	*	70-130			L-04, MS-09, V-05
Methyl tert-Butyl Ether (MTBE)	16.3	2.0	µg/L	20.0	ND	81.4		70-130			
Methyl Cyclohexane	17.9	2.0	µg/L	20.0	ND	89.3		70-130			
Methylene Chloride	17.6	10	µg/L	20.0	ND	88.0		70-130			
4-Methyl-2-pentanone (MIBK)	175	20	µg/L	200	ND	87.6		70-130			
Naphthalene	16.1	4.0	µg/L	20.0	ND	80.6		70-130			
n-Propylbenzene	17.9	2.0	µg/L	20.0	ND	89.7		70-130			
Styrene	17.9	2.0	µg/L	20.0	ND	89.4		70-130			
1,1,1,2-Tetrachloroethane	19.7	2.0	µg/L	20.0	ND	98.3		70-130			
1,1,2,2-Tetrachloroethane	17.5	1.0	µg/L	20.0	ND	87.5		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 B336476 - SW-846 5030B												
Matrix Spike (B336476-MS1)	**Source: 23D0022-04**			Prepared: 04/07/23 Analyzed: 04/08/23								
Tetrachloroethylene	19.6	2.0	µg/L	20.0	ND	97.9		70-130				
Tetrahydrofuran	17.5	20	µg/L	20.0	ND	87.7		70-130				J
Toluene	20.8	2.0	µg/L	20.0	1.84	94.8		70-130				
1,2,3-Trichlorobenzene	14.9	10	µg/L	20.0	ND	74.7		70-130				
1,2,4-Trichlorobenzene	15.5	2.0	µg/L	20.0	ND	77.7		70-130				
1,3,5-Trichlorobenzene	15.8	2.0	µg/L	20.0	ND	79.0		70-130				
1,1,1-Trichloroethane	18.6	2.0	µg/L	20.0	ND	93.1		70-130				
1,1,2-Trichloroethane	17.9	2.0	µg/L	20.0	ND	89.5		70-130				
Trichloroethylene	19.1	2.0	µg/L	20.0	ND	95.6		70-130				
Trichlorofluoromethane (Freon 11)	19.9	4.0	µg/L	20.0	ND	99.5		70-130				
1,2,3-Trichloropropane	16.5	4.0	µg/L	20.0	ND	82.5		70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	19.2	2.0	µg/L	20.0	ND	95.9		70-130				
1,2,4-Trimethylbenzene	17.8	2.0	µg/L	20.0	ND	89.0		70-130				
1,3,5-Trimethylbenzene	17.9	2.0	µg/L	20.0	ND	89.4		70-130				
Vinyl Chloride	25.8	4.0	µg/L	20.0	ND	129		70-130				L-02, V-20
m+p Xylene	37.3	4.0	µg/L	40.0	ND	93.2		70-130				
o-Xylene	17.8	2.0	µg/L	20.0	ND	88.9		70-130				
Surrogate: 1,2-Dichloroethane-d4	*21.4*		µg/L	25.0		85.7		70-130				
Surrogate: Toluene-d8	*24.5*		µg/L	25.0		98.1		70-130				
Surrogate: 4-Bromofluorobenzene	*24.5*		µg/L	25.0		98.1		70-130				
Matrix Spike Dup (B336476-MSD1)	**Source: 23D0022-04**			Prepared: 04/07/23 Analyzed: 04/08/23								
Acetone	175	100	µg/L	200	10.8	82.2		70-130	12.7		30	
Acrylonitrile	17.7	10	µg/L	20.0	ND	88.3		70-130	11.1		30	
tert-Amyl Methyl Ether (TAME)	16.6	1.0	µg/L	20.0	ND	83.1		70-130	7.75		30	
Benzene	18.7	2.0	µg/L	20.0	ND	93.6		70-130	9.28		30	
Bromobenzene	18.6	2.0	µg/L	20.0	ND	92.8		70-130	5.54		30	
Bromochloromethane	20.3	2.0	µg/L	20.0	ND	102		70-130	7.35		30	
Bromodichloromethane	18.9	1.0	µg/L	20.0	ND	94.3		70-130	7.59		30	
Bromoform	20.4	2.0	µg/L	20.0	ND	102		70-130	4.41		30	
Bromomethane	20.1	4.0	µg/L	20.0	ND	100		70-130	12.8		30	
2-Butanone (MEK)	183	40	µg/L	200	ND	91.3		70-130	5.74		30	
tert-Butyl Alcohol (TBA)	172	40	µg/L	200	ND	86.1		70-130	5.45		30	
n-Butylbenzene	16.6	2.0	µg/L	20.0	ND	83.1		70-130	0.846		30	
sec-Butylbenzene	17.7	2.0	µg/L	20.0	ND	88.4		70-130	3.45		30	
tert-Butylbenzene	18.2	2.0	µg/L	20.0	ND	90.9		70-130	3.70		30	
tert-Butyl Ethyl Ether (TBEE)	17.2	1.0	µg/L	20.0	ND	86.1		70-130	6.85		30	
Carbon Disulfide	219	10	µg/L	200	ND	109		70-130	12.5		30	
Carbon Tetrachloride	21.5	10	µg/L	20.0	ND	108		70-130	10.4		30	
Chlorobenzene	21.9	2.0	µg/L	20.0	1.44	102		70-130	4.30		30	
Chlorodibromomethane	20.1	1.0	µg/L	20.0	ND	101		70-130	6.89		30	
Chloroethane	24.4	4.0	µg/L	20.0	ND	122		70-130	21.4		30	V-20
Chloroform	18.8	4.0	µg/L	20.0	ND	94.1		70-130	11.6		30	
Chloromethane	16.5	4.0	µg/L	20.0	ND	82.3		70-130	**51.3**	*	30	R-06, V-05
2-Chlorotoluene	16.9	2.0	µg/L	20.0	ND	84.4		70-130	2.76		30	
4-Chlorotoluene	18.6	2.0	µg/L	20.0	ND	92.9		70-130	4.96		30	
1,2-Dibromo-3-chloropropane (DBCP)	13.9	10	µg/L	20.0	ND	**69.5**	*	70-130	9.33		30	
1,2-Dibromoethane (EDB)	19.7	1.0	µg/L	20.0	ND	98.3		70-130	8.26		30	
Dibromomethane	19.3	2.0	µg/L	20.0	ND	96.6		70-130	5.42		30	
1,2-Dichlorobenzene	18.3	2.0	µg/L	20.0	ND	91.3		70-130	2.10		30	
1,3-Dichlorobenzene	17.9	2.0	µg/L	20.0	ND	89.7		70-130	4.33		30	
1,4-Dichlorobenzene	18.9	2.0	µg/L	20.0	1.10	88.9		70-130	4.00		30	

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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 B336476 - SW-846 5030B											
Matrix Spike Dup (B336476-MSD1)	**Source: 23D0022-04**			Prepared: 04/07/23 Analyzed: 04/08/23							
trans-1,4-Dichloro-2-butene	11.9	4.0	µg/L	20.0	ND	**59.7**	*	70-130	0.167	30	MS-07A
Dichlorodifluoromethane (Freon 12)	21.9	4.0	µg/L	20.0	ND	110		70-130	15.9	30	
1,1-Dichloroethane	19.4	2.0	µg/L	20.0	ND	97.1		70-130	9.61	30	
1,2-Dichloroethane	18.1	2.0	µg/L	20.0	ND	90.5		70-130	10.8	30	
1,1-Dichloroethylene	20.4	2.0	µg/L	20.0	ND	102		70-130	6.39	30	
cis-1,2-Dichloroethylene	19.6	2.0	µg/L	20.0	ND	98.0		70-130	10.9	30	
trans-1,2-Dichloroethylene	19.3	2.0	µg/L	20.0	ND	96.3		70-130	11.4	30	
1,2-Dichloropropane	18.6	2.0	µg/L	20.0	ND	93.1		70-130	9.21	30	
1,3-Dichloropropane	18.7	1.0	µg/L	20.0	ND	93.6		70-130	5.71	30	
2,2-Dichloropropane	12.7	2.0	µg/L	20.0	ND	**63.5**	*	70-130	12.2	30	MS-07A
1,1-Dichloropropene	19.4	4.0	µg/L	20.0	ND	97.0		70-130	6.82	30	
cis-1,3-Dichloropropene	16.8	1.0	µg/L	20.0	ND	84.2		70-130	3.14	30	
trans-1,3-Dichloropropene	16.6	1.0	µg/L	20.0	ND	82.8		70-130	8.30	30	
Diethyl Ether	18.7	4.0	µg/L	20.0	ND	93.3		70-130	7.33	30	
Diisopropyl Ether (DIPE)	18.7	1.0	µg/L	20.0	ND	93.6		70-130	10.2	30	
1,4-Dioxane	161	100	µg/L	200	ND	80.7		70-130	1.85	30	
Ethylbenzene	19.7	2.0	µg/L	20.0	ND	98.3		70-130	3.10	30	
Hexachlorobutadiene	19.4	1.2	µg/L	20.0	ND	97.1		70-130	15.3	30	
2-Hexanone (MBK)	181	20	µg/L	200	ND	90.5		70-130	1.83	30	
Isopropylbenzene (Cumene)	19.2	2.0	µg/L	20.0	ND	96.2		70-130	4.25	30	
p-Isopropyltoluene (p-Cymene)	17.9	2.0	µg/L	20.0	ND	89.6		70-130	3.64	30	
Methyl Acetate	10.3	2.0	µg/L	20.0	ND	**51.7**	*	70-130	1.36	30	L-04, MS-09, V-05
Methyl tert-Butyl Ether (MTBE)	17.5	2.0	µg/L	20.0	ND	87.3		70-130	6.99	30	
Methyl Cyclohexane	18.9	2.0	µg/L	20.0	ND	94.5		70-130	5.66	30	
Methylene Chloride	19.2	10	µg/L	20.0	ND	95.8		70-130	8.49	30	
4-Methyl-2-pentanone (MIBK)	189	20	µg/L	200	ND	94.4		70-130	7.47	30	
Naphthalene	16.9	4.0	µg/L	20.0	ND	84.4		70-130	4.61	30	
n-Propylbenzene	18.3	2.0	µg/L	20.0	ND	91.4		70-130	1.88	30	
Styrene	19.2	2.0	µg/L	20.0	ND	95.9		70-130	7.02	30	
1,1,1,2-Tetrachloroethane	20.4	2.0	µg/L	20.0	ND	102		70-130	3.79	30	
1,1,2,2-Tetrachloroethane	19.2	1.0	µg/L	20.0	ND	95.9		70-130	9.16	30	
Tetrachloroethylene	20.6	2.0	µg/L	20.0	ND	103		70-130	5.08	30	
Tetrahydrofuran	18.2	20	µg/L	20.0	ND	90.9		70-130	3.58	30	J
Toluene	21.5	2.0	µg/L	20.0	1.84	98.5		70-130	3.50	30	
1,2,3-Trichlorobenzene	17.7	10	µg/L	20.0	ND	88.4		70-130	16.8	30	
1,2,4-Trichlorobenzene	17.5	2.0	µg/L	20.0	ND	87.7		70-130	12.1	30	
1,3,5-Trichlorobenzene	17.7	2.0	µg/L	20.0	ND	88.5		70-130	11.3	30	
1,1,1-Trichloroethane	20.4	2.0	µg/L	20.0	ND	102		70-130	9.03	30	
1,1,2-Trichloroethane	18.9	2.0	µg/L	20.0	ND	94.4		70-130	5.33	30	
Trichloroethylene	20.2	2.0	µg/L	20.0	ND	101		70-130	5.59	30	
Trichlorofluoromethane (Freon 11)	22.0	4.0	µg/L	20.0	ND	110		70-130	10.2	30	
1,2,3-Trichloropropane	18.9	4.0	µg/L	20.0	ND	94.3		70-130	13.3	30	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	20.9	2.0	µg/L	20.0	ND	104		70-130	8.49	30	
1,2,4-Trimethylbenzene	17.2	2.0	µg/L	20.0	ND	85.8		70-130	3.66	30	
1,3,5-Trimethylbenzene	17.6	2.0	µg/L	20.0	ND	88.0		70-130	1.58	30	
Vinyl Chloride	33.2	4.0	µg/L	20.0	ND	**166**	*	70-130	25.2	30	L-02, MS-22, V-20
m+p Xylene	39.1	4.0	µg/L	40.0	ND	97.8		70-130	4.87	20	
o-Xylene	19.5	2.0	µg/L	20.0	ND	97.7		70-130	9.43	30	
Surrogate: 1,2-Dichloroethane-d4	*23.7*		µg/L	25.0		94.6		70-130			
Surrogate: Toluene-d8	*24.6*		µg/L	25.0		98.4		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 B336476 - SW-846 5030B										
Matrix Spike Dup (B336476-MSD1)	**Source: 23D0022-04**			Prepared: 04/07/23 Analyzed: 04/08/23						
Surrogate: 4-Bromofluorobenzene	*24.6*		µg/L	25.0		98.4	70-130			
Batch B336731 - SW-846 5030B										
Blank (B336731-BLK1)				Prepared: 04/11/23 Analyzed: 04/12/23						
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							V-05
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							L-04, V-05
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							

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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 B336731 - SW-846 5030B										
Blank (B336731-BLK1)				Prepared: 04/11/23 Analyzed: 04/12/23						
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							L-04, V-05
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	*21.1*		µg/L	25.0		84.4	70-130			
Surrogate: Toluene-d8	*24.5*		µg/L	25.0		98.1	70-130			
Surrogate: 4-Bromofluorobenzene	*25.0*		µg/L	25.0		99.9	70-130			
LCS (B336731-BS1)				Prepared: 04/11/23 Analyzed: 04/12/23						
Acetone	89.2	50	µg/L	100		89.2	70-160			†
Acrylonitrile	9.28	5.0	µg/L	10.0		92.8	70-130			
tert-Amyl Methyl Ether (TAME)	8.91	0.50	µg/L	10.0		89.1	70-130			
Benzene	9.54	1.0	µg/L	10.0		95.4	70-130			
Bromobenzene	10.5	1.0	µg/L	10.0		105	70-130			
Bromochloromethane	10.5	1.0	µg/L	10.0		105	70-130			
Bromodichloromethane	10.6	0.50	µg/L	10.0		106	70-130			
Bromoform	12.1	1.0	µg/L	10.0		121	70-130			
Bromomethane	11.3	2.0	µg/L	10.0		113	40-160			†
2-Butanone (MEK)	99.5	20	µg/L	100		99.5	40-160			†
tert-Butyl Alcohol (TBA)	94.3	20	µg/L	100		94.3	40-160			†
n-Butylbenzene	9.79	1.0	µg/L	10.0		97.9	70-130			
sec-Butylbenzene	9.88	1.0	µg/L	10.0		98.8	70-130			
tert-Butylbenzene	9.72	1.0	µg/L	10.0		97.2	70-130			
tert-Butyl Ethyl Ether (TBEE)	9.26	0.50	µg/L	10.0		92.6	70-130			
Carbon Disulfide	109	5.0	µg/L	100		109	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 B336731 - SW-846 5030B												
LCS (B336731-BS1)				Prepared: 04/11/23 Analyzed: 04/12/23								
Carbon Tetrachloride	10.7	5.0	µg/L	10.0		107		70-130				
Chlorobenzene	11.2	1.0	µg/L	10.0		112		70-130				
Chlorodibromomethane	11.3	0.50	µg/L	10.0		113		70-130				
Chloroethane	11.5	2.0	µg/L	10.0		115		70-130				
Chloroform	9.16	2.0	µg/L	10.0		91.6		70-130				
Chloromethane	8.45	2.0	µg/L	10.0		84.5		40-160			V-05	†
2-Chlorotoluene	9.68	1.0	µg/L	10.0		96.8		70-130				
4-Chlorotoluene	10.3	1.0	µg/L	10.0		103		70-130				
1,2-Dibromo-3-chloropropane (DBCP)	9.28	5.0	µg/L	10.0		92.8		70-130				
1,2-Dibromoethane (EDB)	10.9	0.50	µg/L	10.0		109		70-130				
Dibromomethane	10.7	1.0	µg/L	10.0		107		70-130				
1,2-Dichlorobenzene	9.97	1.0	µg/L	10.0		99.7		70-130				
1,3-Dichlorobenzene	9.94	1.0	µg/L	10.0		99.4		70-130				
1,4-Dichlorobenzene	9.83	1.0	µg/L	10.0		98.3		70-130				
trans-1,4-Dichloro-2-butene	6.52	2.0	µg/L	10.0		**65.2**	*	70-130			L-04, V-05	
Dichlorodifluoromethane (Freon 12)	11.2	2.0	µg/L	10.0		112		40-160				†
1,1-Dichloroethane	9.68	1.0	µg/L	10.0		96.8		70-130				
1,2-Dichloroethane	9.29	1.0	µg/L	10.0		92.9		70-130				
1,1-Dichloroethylene	10.2	1.0	µg/L	10.0		102		70-130				
cis-1,2-Dichloroethylene	9.82	1.0	µg/L	10.0		98.2		70-130				
trans-1,2-Dichloroethylene	9.73	1.0	µg/L	10.0		97.3		70-130				
1,2-Dichloropropane	9.96	1.0	µg/L	10.0		99.6		70-130				
1,3-Dichloropropane	10.2	0.50	µg/L	10.0		102		70-130				
2,2-Dichloropropane	9.57	1.0	µg/L	10.0		95.7		40-130				†
1,1-Dichloropropene	10.1	2.0	µg/L	10.0		101		70-130				
cis-1,3-Dichloropropene	10.1	0.50	µg/L	10.0		101		70-130				
trans-1,3-Dichloropropene	9.56	0.50	µg/L	10.0		95.6		70-130				
Diethyl Ether	9.96	2.0	µg/L	10.0		99.6		70-130				
Diisopropyl Ether (DIPE)	10.1	0.50	µg/L	10.0		101		70-130				
1,4-Dioxane	103	50	µg/L	100		103		40-130				†
Ethylbenzene	10.7	1.0	µg/L	10.0		107		70-130				
Hexachlorobutadiene	11.0	0.60	µg/L	10.0		110		70-130				
2-Hexanone (MBK)	108	10	µg/L	100		108		70-160				†
Isopropylbenzene (Cumene)	10.8	1.0	µg/L	10.0		108		70-130				
p-Isopropyltoluene (p-Cymene)	10.0	1.0	µg/L	10.0		100		70-130				
Methyl Acetate	6.81	1.0	µg/L	10.0		**68.1**	*	70-130			L-04, V-05	
Methyl tert-Butyl Ether (MTBE)	9.06	1.0	µg/L	10.0		90.6		70-130				
Methyl Cyclohexane	11.0	1.0	µg/L	10.0		110		70-130				
Methylene Chloride	10.1	5.0	µg/L	10.0		101		70-130				
4-Methyl-2-pentanone (MIBK)	110	10	µg/L	100		110		70-160				†
Naphthalene	10.4	2.0	µg/L	10.0		104		40-130				†
n-Propylbenzene	10.7	1.0	µg/L	10.0		107		70-130				
Styrene	10.7	1.0	µg/L	10.0		107		70-130				
1,1,1,2-Tetrachloroethane	11.3	1.0	µg/L	10.0		113		70-130				
1,1,2,2-Tetrachloroethane	10.6	0.50	µg/L	10.0		106		70-130				
Tetrachloroethylene	11.9	1.0	µg/L	10.0		119		70-130				
Tetrahydrofuran	10.5	10	µg/L	10.0		105		70-130				
Toluene	10.7	1.0	µg/L	10.0		107		70-130				
1,2,3-Trichlorobenzene	10.6	5.0	µg/L	10.0		106		70-130				
1,2,4-Trichlorobenzene	10.0	1.0	µg/L	10.0		100		70-130				
1,3,5-Trichlorobenzene	10.1	1.0	µg/L	10.0		101		70-130				
1,1,1-Trichloroethane	10.2	1.0	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 B336731 - SW-846 5030B												
LCS (B336731-BS1)				Prepared: 04/11/23 Analyzed: 04/12/23								
1,1,2-Trichloroethane	11.0	1.0	µg/L	10.0		110		70-130				
Trichloroethylene	10.5	1.0	µg/L	10.0		105		70-130				
Trichlorofluoromethane (Freon 11)	11.0	2.0	µg/L	10.0		110		70-130				
1,2,3-Trichloropropane	10.4	2.0	µg/L	10.0		104		70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	11.0	1.0	µg/L	10.0		110		70-130				
1,2,4-Trimethylbenzene	9.29	1.0	µg/L	10.0		92.9		70-130				
1,3,5-Trimethylbenzene	10.6	1.0	µg/L	10.0		106		70-130				
Vinyl Chloride	16.6	2.0	µg/L	10.0		**166**	*	40-160			L-02, V-20	†
m+p Xylene	21.3	2.0	µg/L	20.0		107		70-130				
o-Xylene	10.7	1.0	µg/L	10.0		107		70-130				
Surrogate: 1,2-Dichloroethane-d4	*20.4*		µg/L	25.0		81.7		70-130				
Surrogate: Toluene-d8	*24.7*		µg/L	25.0		98.8		70-130				
Surrogate: 4-Bromofluorobenzene	*25.3*		µg/L	25.0		101		70-130				
LCS Dup (B336731-BSD1)				Prepared: 04/11/23 Analyzed: 04/12/23								
Acetone	90.9	50	µg/L	100		90.9		70-160	1.89	25		†
Acrylonitrile	9.49	5.0	µg/L	10.0		94.9		70-130	2.24	25		
tert-Amyl Methyl Ether (TAME)	9.02	0.50	µg/L	10.0		90.2		70-130	1.23	25		
Benzene	9.77	1.0	µg/L	10.0		97.7		70-130	2.38	25		
Bromobenzene	10.7	1.0	µg/L	10.0		107		70-130	1.79	25		
Bromochloromethane	11.0	1.0	µg/L	10.0		110		70-130	4.09	25		
Bromodichloromethane	10.4	0.50	µg/L	10.0		104		70-130	1.71	25		
Bromoform	12.4	1.0	µg/L	10.0		124		70-130	2.45	25		
Bromomethane	12.4	2.0	µg/L	10.0		124		40-160	9.22	25		†
2-Butanone (MEK)	102	20	µg/L	100		102		40-160	2.53	25		†
tert-Butyl Alcohol (TBA)	93.8	20	µg/L	100		93.8		40-160	0.542	25		†
n-Butylbenzene	9.90	1.0	µg/L	10.0		99.0		70-130	1.12	25		
sec-Butylbenzene	10.0	1.0	µg/L	10.0		100		70-130	1.51	25		
tert-Butylbenzene	9.92	1.0	µg/L	10.0		99.2		70-130	2.04	25		
tert-Butyl Ethyl Ether (TBEE)	9.44	0.50	µg/L	10.0		94.4		70-130	1.93	25		
Carbon Disulfide	113	5.0	µg/L	100		113		70-130	3.29	25		
Carbon Tetrachloride	10.9	5.0	µg/L	10.0		109		70-130	1.48	25		
Chlorobenzene	11.2	1.0	µg/L	10.0		112		70-130	0.179	25		
Chlorodibromomethane	11.5	0.50	µg/L	10.0		115		70-130	1.14	25		
Chloroethane	11.5	2.0	µg/L	10.0		115		70-130	0.348	25		
Chloroform	9.47	2.0	µg/L	10.0		94.7		70-130	3.33	25		
Chloromethane	9.27	2.0	µg/L	10.0		92.7		40-160	9.26	25	V-05	†
2-Chlorotoluene	9.76	1.0	µg/L	10.0		97.6		70-130	0.823	25		
4-Chlorotoluene	10.8	1.0	µg/L	10.0		108		70-130	4.37	25		
1,2-Dibromo-3-chloropropane (DBCP)	9.43	5.0	µg/L	10.0		94.3		70-130	1.60	25		
1,2-Dibromoethane (EDB)	11.1	0.50	µg/L	10.0		111		70-130	1.92	25		
Dibromomethane	10.6	1.0	µg/L	10.0		106		70-130	1.03	25		
1,2-Dichlorobenzene	10.1	1.0	µg/L	10.0		101		70-130	1.39	25		
1,3-Dichlorobenzene	9.96	1.0	µg/L	10.0		99.6		70-130	0.201	25		
1,4-Dichlorobenzene	9.76	1.0	µg/L	10.0		97.6		70-130	0.715	25		
trans-1,4-Dichloro-2-butene	6.35	2.0	µg/L	10.0		**63.5**	*	70-130	2.64	25	L-04, V-05	
Dichlorodifluoromethane (Freon 12)	11.3	2.0	µg/L	10.0		113		40-160	1.07	25		†
1,1-Dichloroethane	10.0	1.0	µg/L	10.0		100		70-130	3.25	25		
1,2-Dichloroethane	9.24	1.0	µg/L	10.0		92.4		70-130	0.540	25		
1,1-Dichloroethylene	10.3	1.0	µg/L	10.0		103		70-130	1.27	25		
cis-1,2-Dichloroethylene	9.66	1.0	µg/L	10.0		96.6		70-130	1.64	25		
trans-1,2-Dichloroethylene	9.73	1.0	µg/L	10.0		97.3		70-130	0.00	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	
Batch B336731 - SW-846 5030B												
LCS Dup (B336731-BSD1)				Prepared: 04/11/23 Analyzed: 04/12/23								
1,2-Dichloropropane	10.3	1.0	µg/L	10.0		103		70-130	3.36	25		
1,3-Dichloropropane	10.1	0.50	µg/L	10.0		101		70-130	1.08	25		
2,2-Dichloropropane	9.89	1.0	µg/L	10.0		98.9		40-130	3.29	25		†
1,1-Dichloropropene	10.5	2.0	µg/L	10.0		105		70-130	4.09	25		
cis-1,3-Dichloropropene	10.1	0.50	µg/L	10.0		101		70-130	0.198	25		
trans-1,3-Dichloropropene	9.39	0.50	µg/L	10.0		93.9		70-130	1.79	25		
Diethyl Ether	9.85	2.0	µg/L	10.0		98.5		70-130	1.11	25		
Diisopropyl Ether (DIPE)	10.2	0.50	µg/L	10.0		102		70-130	0.786	25		
1,4-Dioxane	99.3	50	µg/L	100		99.3		40-130	3.44	50		† ‡
Ethylbenzene	10.8	1.0	µg/L	10.0		108		70-130	0.934	25		
Hexachlorobutadiene	11.2	0.60	µg/L	10.0		112		70-130	2.07	25		
2-Hexanone (MBK)	107	10	µg/L	100		107		70-160	1.20	25		†
Isopropylbenzene (Cumene)	10.9	1.0	µg/L	10.0		109		70-130	1.66	25		
p-Isopropyltoluene (p-Cymene)	10.1	1.0	µg/L	10.0		101		70-130	1.19	25		
Methyl Acetate	6.81	1.0	µg/L	10.0		**68.1**	*	70-130	0.00	25	L-04, V-05	
Methyl tert-Butyl Ether (MTBE)	9.37	1.0	µg/L	10.0		93.7		70-130	3.36	25		
Methyl Cyclohexane	11.0	1.0	µg/L	10.0		110		70-130	0.274	25		
Methylene Chloride	9.99	5.0	µg/L	10.0		99.9		70-130	0.798	25		
4-Methyl-2-pentanone (MIBK)	106	10	µg/L	100		106		70-160	3.66	25		†
Naphthalene	9.89	2.0	µg/L	10.0		98.9		40-130	4.64	25		†
n-Propylbenzene	10.9	1.0	µg/L	10.0		109		70-130	1.48	25		
Styrene	11.1	1.0	µg/L	10.0		111		70-130	3.95	25		
1,1,1,2-Tetrachloroethane	11.6	1.0	µg/L	10.0		116		70-130	2.53	25		
1,1,2,2-Tetrachloroethane	11.1	0.50	µg/L	10.0		111		70-130	4.23	25		
Tetrachloroethylene	11.9	1.0	µg/L	10.0		119		70-130	0.252	25		
Tetrahydrofuran	11.1	10	µg/L	10.0		111		70-130	5.47	25		
Toluene	10.4	1.0	µg/L	10.0		104		70-130	2.27	25		
1,2,3-Trichlorobenzene	10.5	5.0	µg/L	10.0		105		70-130	1.24	25		
1,2,4-Trichlorobenzene	10.0	1.0	µg/L	10.0		100		70-130	0.399	25		
1,3,5-Trichlorobenzene	10.3	1.0	µg/L	10.0		103		70-130	1.37	25		
1,1,1-Trichloroethane	10.5	1.0	µg/L	10.0		105		70-130	2.51	25		
1,1,2-Trichloroethane	10.5	1.0	µg/L	10.0		105		70-130	4.55	25		
Trichloroethylene	10.4	1.0	µg/L	10.0		104		70-130	1.15	25		
Trichlorofluoromethane (Freon 11)	11.1	2.0	µg/L	10.0		111		70-130	1.63	25		
1,2,3-Trichloropropane	10.9	2.0	µg/L	10.0		109		70-130	4.23	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	11.5	1.0	µg/L	10.0		115		70-130	4.70	25		
1,2,4-Trimethylbenzene	9.42	1.0	µg/L	10.0		94.2		70-130	1.39	25		
1,3,5-Trimethylbenzene	10.8	1.0	µg/L	10.0		108		70-130	1.69	25		
Vinyl Chloride	16.3	2.0	µg/L	10.0		**163**	*	40-160	1.58	25	L-02, V-20	†
m+p Xylene	21.5	2.0	µg/L	20.0		108		70-130	0.980	25		
o-Xylene	10.9	1.0	µg/L	10.0		109		70-130	2.04	25		
Surrogate: 1,2-Dichloroethane-d4	*20.6*		µg/L	25.0		82.6		70-130				
Surrogate: Toluene-d8	*24.2*		µg/L	25.0		97.0		70-130				
Surrogate: 4-Bromofluorobenzene	*25.6*		µg/L	25.0		103		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
Batch B336331 - SW-846 3510C										
Blank (B336331-BLK1)				Prepared: 04/06/23 Analyzed: 04/07/23						
Acenaphthene	ND	5.0	µg/L							
Acenaphthylene	ND	5.0	µg/L							
Acetophenone	ND	10	µg/L							
Aniline	ND	5.0	µg/L							V-05
Anthracene	ND	5.0	µg/L							
Benzidine	ND	20	µg/L							L-04, V-04, V-05
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							V-05
Fluoranthene	ND	5.0	µg/L							
Fluorene	ND	5.0	µg/L							
Hexachlorobenzene	ND	10	µg/L							
Hexachlorobutadiene	ND	10	µg/L							L-04
Hexachlorocyclopentadiene	ND	10	µg/L							
Hexachloroethane	ND	10	µg/L							L-04
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
Batch B336331 - SW-846 3510C										
Blank (B336331-BLK1)				Prepared: 04/06/23 Analyzed: 04/07/23						
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							
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	*78.4*		µg/L	200		39.2	15-110			
Surrogate: Phenol-d6	*56.8*		µg/L	200		28.4	15-110			
Surrogate: Nitrobenzene-d5	*69.8*		µg/L	100		69.8	30-130			
Surrogate: 2-Fluorobiphenyl	*63.3*		µg/L	100		63.3	30-130			
Surrogate: 2,4,6-Tribromophenol	*186*		µg/L	200		93.2	15-110			
Surrogate: p-Terphenyl-d14	*89.6*		µg/L	100		89.6	30-130			
LCS (B336331-BS1)				Prepared: 04/06/23 Analyzed: 04/07/23						
Acenaphthene	38.4	5.0	µg/L	50.0		76.9	40-140			
Acenaphthylene	35.5	5.0	µg/L	50.0		71.0	40-140			
Acetophenone	36.4	10	µg/L	50.0		72.8	40-140			
Aniline	27.6	5.0	µg/L	50.0		55.2	40-140			V-05
Anthracene	39.6	5.0	µg/L	50.0		79.2	40-140			
Benzidine	22.5	20	µg/L	50.0		45.0	40-140			L-04, V-04, V-05
Benzo(a)anthracene	38.2	5.0	µg/L	50.0		76.4	40-140			
Benzo(a)pyrene	36.5	5.0	µg/L	50.0		73.0	40-140			
Benzo(b)fluoranthene	41.8	5.0	µg/L	50.0		83.6	40-140			
Benzo(g,h,i)perylene	45.6	5.0	µg/L	50.0		91.2	40-140			
Benzo(k)fluoranthene	43.8	5.0	µg/L	50.0		87.6	40-140			
Benzoic Acid	20.1	10	µg/L	50.0		40.3	10-130			†
Bis(2-chloroethoxy)methane	34.6	10	µg/L	50.0		69.3	40-140			
Bis(2-chloroethyl)ether	32.2	10	µg/L	50.0		64.3	40-140			
Bis(2-chloroisopropyl)ether	35.6	10	µg/L	50.0		71.2	40-140			
Bis(2-Ethylhexyl)phthalate	33.7	10	µg/L	50.0		67.4	40-140			
4-Bromophenylphenylether	36.2	10	µg/L	50.0		72.4	40-140			
Butylbenzylphthalate	34.7	10	µg/L	50.0		69.3	40-140			
Carbazole	41.2	10	µg/L	50.0		82.3	40-140			
4-Chloroaniline	35.6	10	µg/L	50.0		71.2	40-140			
4-Chloro-3-methylphenol	36.7	10	µg/L	50.0		73.4	30-130			
2-Chloronaphthalene	30.0	10	µg/L	50.0		59.9	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		%REC Limits	RPD	RPD Limit	Notes	
Batch B336331 - SW-846 3510C												
LCS (B336331-BS1)				Prepared: 04/06/23 Analyzed: 04/07/23								
2-Chlorophenol	34.0	10	µg/L	50.0		68.0		30-130				
4-Chlorophenylphenylether	37.0	10	µg/L	50.0		74.0		40-140				
Chrysene	37.1	5.0	µg/L	50.0		74.2		40-140				
Dibenz(a,h)anthracene	40.7	5.0	µg/L	50.0		81.4		40-140				
Dibenzofuran	36.7	5.0	µg/L	50.0		73.4		40-140				
Di-n-butylphthalate	35.9	10	µg/L	50.0		71.8		40-140				
1,2-Dichlorobenzene	24.6	5.0	µg/L	50.0		49.2		40-140				
1,3-Dichlorobenzene	21.5	5.0	µg/L	50.0		43.1		40-140				
1,4-Dichlorobenzene	22.8	5.0	µg/L	50.0		45.6		40-140				
3,3-Dichlorobenzidine	38.6	10	µg/L	50.0		77.2		40-140				
2,4-Dichlorophenol	38.0	10	µg/L	50.0		76.0		30-130				
Diethylphthalate	37.7	10	µg/L	50.0		75.3		40-140				
2,4-Dimethylphenol	37.0	10	µg/L	50.0		73.9		30-130				
Dimethylphthalate	37.6	10	µg/L	50.0		75.2		40-140				
4,6-Dinitro-2-methylphenol	51.3	10	µg/L	50.0		103		30-130				
2,4-Dinitrophenol	54.0	10	µg/L	50.0		108		30-130			V-04, V-06	
2,4-Dinitrotoluene	48.2	10	µg/L	50.0		96.4		40-140			V-06	
2,6-Dinitrotoluene	46.1	10	µg/L	50.0		92.2		40-140				
Di-n-octylphthalate	37.7	10	µg/L	50.0		75.4		40-140				
1,2-Diphenylhydrazine/Azobenzene	32.4	10	µg/L	50.0		64.8		40-140			V-05	
Fluoranthene	42.1	5.0	µg/L	50.0		84.1		40-140				
Fluorene	38.9	5.0	µg/L	50.0		77.7		40-140				
Hexachlorobenzene	41.4	10	µg/L	50.0		82.8		40-140				
Hexachlorobutadiene	19.0	10	µg/L	50.0		**38.0**	*	40-140			L-04	
Hexachlorocyclopentadiene	18.5	10	µg/L	50.0		37.0		30-140				†
Hexachloroethane	17.9	10	µg/L	50.0		**35.8**	*	40-140			L-04	
Indeno(1,2,3-cd)pyrene	41.6	5.0	µg/L	50.0		83.3		40-140				
Isophorone	38.5	10	µg/L	50.0		77.0		40-140				
1-Methylnaphthalene	33.4	5.0	µg/L	50.0		66.9		40-140				
2-Methylnaphthalene	31.4	5.0	µg/L	50.0		62.8		40-140				
2-Methylphenol	30.2	10	µg/L	50.0		60.4		30-130				
3/4-Methylphenol	32.1	10	µg/L	50.0		64.2		30-130				
Naphthalene	32.1	5.0	µg/L	50.0		64.2		40-140				
2-Nitroaniline	36.7	10	µg/L	50.0		73.5		40-140				
3-Nitroaniline	45.2	10	µg/L	50.0		90.4		40-140				
4-Nitroaniline	45.2	10	µg/L	50.0		90.3		40-140				
Nitrobenzene	35.0	10	µg/L	50.0		69.9		40-140				
2-Nitrophenol	38.2	10	µg/L	50.0		76.5		30-130				
4-Nitrophenol	26.8	10	µg/L	50.0		53.7		10-130				†
N-Nitrosodimethylamine	23.5	10	µg/L	50.0		46.9		40-140				
N-Nitrosodiphenylamine/Diphenylamine	38.3	10	µg/L	50.0		76.6		40-140				
N-Nitrosodi-n-propylamine	34.9	10	µg/L	50.0		69.8		40-140				
Pentachloronitrobenzene	46.6	10	µg/L	50.0		93.2		40-140				
Pentachlorophenol	36.8	10	µg/L	50.0		73.5		30-130				
Phenanthrene	39.5	5.0	µg/L	50.0		78.9		40-140				
Phenol	16.5	10	µg/L	50.0		33.0		20-130				†
Pyrene	39.6	5.0	µg/L	50.0		79.3		40-140				
Pyridine	16.8	5.0	µg/L	50.0		33.5		10-140				†
1,2,4,5-Tetrachlorobenzene	31.1	10	µg/L	50.0		62.3		40-140				
1,2,4-Trichlorobenzene	27.1	5.0	µg/L	50.0		54.1		40-140				
2,4,5-Trichlorophenol	41.7	10	µg/L	50.0		83.4		30-130				
2,4,6-Trichlorophenol	38.5	10	µg/L	50.0		76.9		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	
Batch B336331 - SW-846 3510C											
LCS (B336331-BS1)				Prepared: 04/06/23 Analyzed: 04/07/23							
Surrogate: 2-Fluorophenol	*89.7*		µg/L	200		44.9	15-110				
Surrogate: Phenol-d6	*64.2*		µg/L	200		32.1	15-110				
Surrogate: Nitrobenzene-d5	*76.5*		µg/L	100		76.5	30-130				
Surrogate: 2-Fluorobiphenyl	*75.7*		µg/L	100		75.7	30-130				
Surrogate: 2,4,6-Tribromophenol	*186*		µg/L	200		93.2	15-110				
Surrogate: p-Terphenyl-d14	*87.9*		µg/L	100		87.9	30-130				
LCS Dup (B336331-BSD1)				Prepared: 04/06/23 Analyzed: 04/07/23							
Acenaphthene	39.5	5.0	µg/L	50.0		78.9	40-140	2.59	20		
Acenaphthylene	37.0	5.0	µg/L	50.0		74.1	40-140	4.25	20		
Acetophenone	39.3	10	µg/L	50.0		78.6	40-140	7.66	20		
Aniline	27.5	5.0	µg/L	50.0		55.0	40-140	0.327	50	V-05	‡
Anthracene	41.2	5.0	µg/L	50.0		82.5	40-140	4.01	20		
Benzidine	23.9	20	µg/L	50.0		47.9	40-140	6.16	20	L-04, V-04, V-05	
Benzo(a)anthracene	39.8	5.0	µg/L	50.0		79.6	40-140	4.15	20		
Benzo(a)pyrene	38.2	5.0	µg/L	50.0		76.3	40-140	4.45	20		
Benzo(b)fluoranthene	43.5	5.0	µg/L	50.0		87.0	40-140	3.89	20		
Benzo(g,h,i)perylene	46.1	5.0	µg/L	50.0		92.2	40-140	1.07	20		
Benzo(k)fluoranthene	44.8	5.0	µg/L	50.0		89.5	40-140	2.19	20		
Benzoic Acid	20.0	10	µg/L	50.0		40.0	10-130	0.548	50		† ‡
Bis(2-chloroethoxy)methane	36.0	10	µg/L	50.0		72.1	40-140	3.90	20		
Bis(2-chloroethyl)ether	34.7	10	µg/L	50.0		69.4	40-140	7.66	20		
Bis(2-chloroisopropyl)ether	38.0	10	µg/L	50.0		75.9	40-140	6.39	20		
Bis(2-Ethylhexyl)phthalate	34.7	10	µg/L	50.0		69.4	40-140	2.89	20		
4-Bromophenylphenylether	37.8	10	µg/L	50.0		75.5	40-140	4.25	20		
Butylbenzylphthalate	35.6	10	µg/L	50.0		71.2	40-140	2.59	20		
Carbazole	43.3	10	µg/L	50.0		86.5	40-140	4.98	20		
4-Chloroaniline	34.4	10	µg/L	50.0		68.8	40-140	3.40	20		
4-Chloro-3-methylphenol	37.6	10	µg/L	50.0		75.1	30-130	2.34	20		
2-Chloronaphthalene	30.8	10	µg/L	50.0		61.5	40-140	2.67	20		
2-Chlorophenol	37.5	10	µg/L	50.0		75.0	30-130	9.85	20		
4-Chlorophenylphenylether	37.8	10	µg/L	50.0		75.6	40-140	2.22	20		
Chrysene	38.9	5.0	µg/L	50.0		77.8	40-140	4.74	20		
Dibenz(a,h)anthracene	40.8	5.0	µg/L	50.0		81.7	40-140	0.319	20		
Dibenzofuran	37.7	5.0	µg/L	50.0		75.5	40-140	2.74	20		
Di-n-butylphthalate	37.0	10	µg/L	50.0		74.0	40-140	2.96	20		
1,2-Dichlorobenzene	25.4	5.0	µg/L	50.0		50.8	40-140	3.08	20		
1,3-Dichlorobenzene	22.0	5.0	µg/L	50.0		44.1	40-140	2.34	20		
1,4-Dichlorobenzene	23.4	5.0	µg/L	50.0		46.9	40-140	2.81	20		
3,3-Dichlorobenzidine	42.9	10	µg/L	50.0		85.8	40-140	10.6	20		
2,4-Dichlorophenol	39.5	10	µg/L	50.0		79.0	30-130	3.95	20		
Diethylphthalate	38.1	10	µg/L	50.0		76.1	40-140	1.06	20		
2,4-Dimethylphenol	38.6	10	µg/L	50.0		77.3	30-130	4.39	20		
Dimethylphthalate	38.1	10	µg/L	50.0		76.2	40-140	1.37	50		‡
4,6-Dinitro-2-methylphenol	52.4	10	µg/L	50.0		105	30-130	2.05	50		‡
2,4-Dinitrophenol	55.1	10	µg/L	50.0		110	30-130	1.98	50	V-04, V-06	‡
2,4-Dinitrotoluene	49.9	10	µg/L	50.0		99.7	40-140	3.43	20	V-06	
2,6-Dinitrotoluene	47.4	10	µg/L	50.0		94.8	40-140	2.85	20		
Di-n-octylphthalate	36.7	10	µg/L	50.0		73.4	40-140	2.77	20		
1,2-Diphenylhydrazine/Azobenzene	34.3	10	µg/L	50.0		68.5	40-140	5.64	20	V-05	
Fluoranthene	43.6	5.0	µg/L	50.0		87.2	40-140	3.53	20		
Fluorene	39.9	5.0	µg/L	50.0		79.7	40-140	2.54	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 B336331 - SW-846 3510C												
LCS Dup (B336331-BSD1)				Prepared: 04/06/23 Analyzed: 04/07/23								
Hexachlorobenzene	43.3	10	µg/L	50.0		86.6		40-140	4.42	20		
Hexachlorobutadiene	17.4	10	µg/L	50.0		**34.8**	*	40-140	8.80	20	L-04	
Hexachlorocyclopentadiene	16.5	10	µg/L	50.0		33.0		30-140	11.2	50		† ‡
Hexachloroethane	16.6	10	µg/L	50.0		**33.2**	*	40-140	7.42	50	L-04	‡
Indeno(1,2,3-cd)pyrene	42.0	5.0	µg/L	50.0		84.1		40-140	0.932	50		‡
Isophorone	40.2	10	µg/L	50.0		80.5		40-140	4.45	20		
1-Methylnaphthalene	34.2	5.0	µg/L	50.0		68.4		40-140	2.28	20		
2-Methylnaphthalene	31.7	5.0	µg/L	50.0		63.3		40-140	0.920	20		
2-Methylphenol	32.6	10	µg/L	50.0		65.2		30-130	7.74	20		
3/4-Methylphenol	33.3	10	µg/L	50.0		66.6		30-130	3.76	20		
Naphthalene	32.8	5.0	µg/L	50.0		65.5		40-140	2.00	20		
2-Nitroaniline	37.8	10	µg/L	50.0		75.5		40-140	2.74	20		
3-Nitroaniline	45.8	10	µg/L	50.0		91.6		40-140	1.32	20		
4-Nitroaniline	46.7	10	µg/L	50.0		93.5		40-140	3.42	20		
Nitrobenzene	37.4	10	µg/L	50.0		74.7		40-140	6.64	20		
2-Nitrophenol	41.2	10	µg/L	50.0		82.5		30-130	7.58	20		
4-Nitrophenol	27.3	10	µg/L	50.0		54.5		10-130	1.59	50		† ‡
N-Nitrosodimethylamine	25.3	10	µg/L	50.0		50.6		40-140	7.58	20		
N-Nitrosodiphenylamine/Diphenylamine	39.9	10	µg/L	50.0		79.7		40-140	4.02	20		
N-Nitrosodi-n-propylamine	36.9	10	µg/L	50.0		73.9		40-140	5.62	20		
Pentachloronitrobenzene	47.6	10	µg/L	50.0		95.2		40-140	2.14	20		
Pentachlorophenol	37.4	10	µg/L	50.0		74.7		30-130	1.67	50		‡
Phenanthrene	41.2	5.0	µg/L	50.0		82.4		40-140	4.34	20		
Phenol	17.5	10	µg/L	50.0		34.9		20-130	5.59	20		†
Pyrene	40.6	5.0	µg/L	50.0		81.2		40-140	2.44	20		
Pyridine	17.0	5.0	µg/L	50.0		33.9		10-140	1.19	50		† ‡
1,2,4,5-Tetrachlorobenzene	30.5	10	µg/L	50.0		61.0		40-140	2.04	20		
1,2,4-Trichlorobenzene	26.4	5.0	µg/L	50.0		52.7		40-140	2.70	20		
2,4,5-Trichlorophenol	42.3	10	µg/L	50.0		84.5		30-130	1.31	20		
2,4,6-Trichlorophenol	39.7	10	µg/L	50.0		79.3		30-130	3.05	50		‡
Surrogate: 2-Fluorophenol	*98.7*		µg/L	200		49.4		15-110				
Surrogate: Phenol-d6	*67.4*		µg/L	200		33.7		15-110				
Surrogate: Nitrobenzene-d5	*82.4*		µg/L	100		82.4		30-130				
Surrogate: 2-Fluorobiphenyl	*79.7*		µg/L	100		79.7		30-130				
Surrogate: 2,4,6-Tribromophenol	*190*		µg/L	200		95.0		15-110				
Surrogate: p-Terphenyl-d14	*89.3*		µg/L	100		89.3		30-130				
Matrix Spike (B336331-MS1)	**Source: 23D0022-04**			Prepared: 04/06/23 Analyzed: 04/07/23								
Acenaphthene	37.7	4.9	µg/L	48.5	ND	77.7		40-140				
Acenaphthylene	34.8	4.9	µg/L	48.5	ND	71.7		40-140				
Acetophenone	36.2	9.7	µg/L	48.5	ND	74.6		40-140				
Aniline	22.3	4.9	µg/L	48.5	ND	46.0		40-140			V-05	
Anthracene	38.9	4.9	µg/L	48.5	ND	80.1		40-140				
Benzidine	0.0583	19	µg/L	48.5	ND	**0.120**	*	40-140			L-04, V-04, V-05, J	
Benzo(a)anthracene	38.1	4.9	µg/L	48.5	ND	78.5		40-140				
Benzo(a)pyrene	36.7	4.9	µg/L	48.5	ND	75.5		40-140				
Benzo(b)fluoranthene	41.1	4.9	µg/L	48.5	ND	84.7		40-140				
Benzo(g,h,i)perylene	45.8	4.9	µg/L	48.5	ND	94.3		40-140				
Benzo(k)fluoranthene	43.1	4.9	µg/L	48.5	ND	88.8		40-140				
Benzoic Acid	21.0	9.7	µg/L	48.5	ND	43.3		40-140				
Bis(2-chloroethoxy)methane	34.8	9.7	µg/L	48.5	ND	71.7		40-140				
Bis(2-chloroethyl)ether	31.7	9.7	µg/L	48.5	ND	65.4		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		%REC Limits	RPD	RPD Limit	Notes
Batch B336331 - SW-846 3510C											
Matrix Spike (B336331-MS1)		**Source: 23D0022-04**		Prepared: 04/06/23 Analyzed: 04/07/23							
Bis(2-chloroisopropyl)ether	36.7	9.7	µg/L	48.5	ND	75.7		40-140			
Bis(2-Ethylhexyl)phthalate	36.5	9.7	µg/L	48.5	ND	75.1		40-140			
4-Bromophenylphenylether	36.3	9.7	µg/L	48.5	ND	74.7		40-140			
Butylbenzylphthalate	34.8	9.7	µg/L	48.5	ND	71.7		40-140			
Carbazole	40.3	9.7	µg/L	48.5	ND	83.0		40-140			
4-Chloroaniline	25.2	9.7	µg/L	48.5	ND	51.8		40-140			
4-Chloro-3-methylphenol	37.4	9.7	µg/L	48.5	ND	77.0		30-130			
2-Chloronaphthalene	30.7	9.7	µg/L	48.5	ND	63.2		40-140			
2-Chlorophenol	34.0	9.7	µg/L	48.5	ND	70.1		30-130			
4-Chlorophenylphenylether	36.8	9.7	µg/L	48.5	ND	75.9		40-140			
Chrysene	37.4	4.9	µg/L	48.5	ND	77.1		40-140			
Dibenz(a,h)anthracene	40.7	4.9	µg/L	48.5	ND	83.8		40-140			
Dibenzofuran	36.4	4.9	µg/L	48.5	ND	75.0		40-140			
Di-n-butylphthalate	35.2	9.7	µg/L	48.5	ND	72.5		40-140			
1,2-Dichlorobenzene	26.6	4.9	µg/L	48.5	ND	54.8		40-140			
1,3-Dichlorobenzene	23.4	4.9	µg/L	48.5	ND	48.3		40-140			
1,4-Dichlorobenzene	25.1	4.9	µg/L	48.5	0.728	50.1		40-140			
3,3-Dichlorobenzidine	3.42	9.7	µg/L	48.5	ND	**7.04**	*	40-140			MS-09, R-06, J
2,4-Dichlorophenol	37.3	9.7	µg/L	48.5	ND	76.9		30-130			
Diethylphthalate	36.9	9.7	µg/L	48.5	ND	76.0		40-140			
2,4-Dimethylphenol	36.6	9.7	µg/L	48.5	ND	75.3		30-130			
Dimethylphthalate	36.8	9.7	µg/L	48.5	ND	75.9		40-140			
4,6-Dinitro-2-methylphenol	51.4	9.7	µg/L	48.5	ND	106		30-130			
2,4-Dinitrophenol	55.2	9.7	µg/L	48.5	ND	114		30-130			V-04, V-06
2,4-Dinitrotoluene	48.3	9.7	µg/L	48.5	ND	99.5		40-140			V-06
2,6-Dinitrotoluene	44.8	9.7	µg/L	48.5	ND	92.4		40-140			
Di-n-octylphthalate	37.9	9.7	µg/L	48.5	ND	78.1		40-140			
1,2-Diphenylhydrazine/Azobenzene	33.0	9.7	µg/L	48.5	ND	68.0		40-140			V-05
Fluoranthene	39.9	4.9	µg/L	48.5	ND	82.2		40-140			
Fluorene	38.7	4.9	µg/L	48.5	ND	79.7		40-140			
Hexachlorobenzene	39.9	9.7	µg/L	48.5	ND	82.3		40-140			
Hexachlorobutadiene	21.6	9.7	µg/L	48.5	ND	44.5		40-140			
Hexachlorocyclopentadiene	21.3	9.7	µg/L	48.5	ND	43.8		30-130			
Hexachloroethane	20.0	9.7	µg/L	48.5	ND	41.3		40-140			
Indeno(1,2,3-cd)pyrene	41.0	4.9	µg/L	48.5	ND	84.4		40-140			
Isophorone	38.7	9.7	µg/L	48.5	ND	79.6		40-140			
1-Methylnaphthalene	33.9	4.9	µg/L	48.5	ND	69.8		40-140			
2-Methylnaphthalene	31.6	4.9	µg/L	48.5	ND	65.0		40-140			
2-Methylphenol	30.6	9.7	µg/L	48.5	ND	63.1		30-130			
3/4-Methylphenol	30.8	9.7	µg/L	48.5	ND	63.5		30-130			
Naphthalene	32.8	4.9	µg/L	48.5	ND	67.5		40-140			
2-Nitroaniline	25.2	9.7	µg/L	48.5	ND	52.0		40-140			
3-Nitroaniline	34.0	9.7	µg/L	48.5	ND	70.1		40-140			
4-Nitroaniline	25.5	9.7	µg/L	48.5	ND	52.5		40-140			
Nitrobenzene	40.1	9.7	µg/L	48.5	ND	82.7		40-140			
2-Nitrophenol	37.6	9.7	µg/L	48.5	ND	77.5		30-130			
4-Nitrophenol	27.2	9.7	µg/L	48.5	ND	56.0		30-130			
N-Nitrosodimethylamine	24.3	9.7	µg/L	48.5	ND	50.1		40-140			
N-Nitrosodiphenylamine/Diphenylamine	38.0	9.7	µg/L	48.5	ND	78.3		40-140			
N-Nitrosodi-n-propylamine	34.7	9.7	µg/L	48.5	ND	71.5		40-140			
Pentachloronitrobenzene	45.3	9.7	µg/L	48.5	ND	93.4		40-140			
Pentachlorophenol	38.8	9.7	µg/L	48.5	ND	79.9		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
Batch B336331 - SW-846 3510C												
Matrix Spike (B336331-MS1)	**Source: 23D0022-04**			Prepared: 04/06/23 Analyzed: 04/07/23								
Phenanthrene	39.3	4.9	µg/L	48.5	ND	81.0		40-140				
Phenol	15.3	9.7	µg/L	48.5	ND	31.6		30-130				
Pyrene	38.7	4.9	µg/L	48.5	ND	79.7		40-140				
Pyridine	17.3	4.9	µg/L	48.5	ND	**35.7**	*	40-140				MS-07A
1,2,4,5-Tetrachlorobenzene	31.6	9.7	µg/L	48.5	ND	65.2		40-140				
1,2,4-Trichlorobenzene	28.4	4.9	µg/L	48.5	ND	58.5		40-140				
2,4,5-Trichlorophenol	40.9	9.7	µg/L	48.5	ND	84.2		30-130				
2,4,6-Trichlorophenol	37.8	9.7	µg/L	48.5	ND	77.9		30-130				
Surrogate: 2-Fluorophenol	*87.0*		µg/L	194		44.8		15-110				
Surrogate: Phenol-d6	*60.7*		µg/L	194		31.2		15-110				
Surrogate: Nitrobenzene-d5	*78.0*		µg/L	97.1		80.3		30-130				
Surrogate: 2-Fluorobiphenyl	*77.5*		µg/L	97.1		79.8		30-130				
Surrogate: 2,4,6-Tribromophenol	*182*		µg/L	194		93.9		15-110				
Surrogate: p-Terphenyl-d14	*87.7*		µg/L	97.1		90.4		30-130				
Matrix Spike Dup (B336331-MSD1)	**Source: 23D0022-04**			Prepared: 04/06/23 Analyzed: 04/07/23								
Acenaphthene	36.1	4.9	µg/L	48.5	ND	74.5		40-140	4.23		30	
Acenaphthylene	33.2	4.9	µg/L	48.5	ND	68.4		40-140	4.63		30	
Acetophenone	34.0	9.7	µg/L	48.5	ND	70.1		40-140	6.11		30	
Aniline	20.6	4.9	µg/L	48.5	ND	42.5		40-140	8.00		30	V-05
Anthracene	37.1	4.9	µg/L	48.5	ND	76.4		40-140	4.80		30	
Benzidine	0.0194	19	µg/L	48.5	ND	**0.0400**	*	40-140			30	L-04, V-04, V-05, J
Benzo(a)anthracene	36.2	4.9	µg/L	48.5	ND	74.6		40-140	5.07		30	
Benzo(a)pyrene	34.6	4.9	µg/L	48.5	ND	71.3		40-140	5.67		30	
Benzo(b)fluoranthene	38.5	4.9	µg/L	48.5	ND	79.3		40-140	6.56		30	
Benzo(g,h,i)perylene	40.9	4.9	µg/L	48.5	ND	84.2		40-140	11.3		30	
Benzo(k)fluoranthene	41.2	4.9	µg/L	48.5	ND	84.9		40-140	4.49		30	
Benzoic Acid	19.3	9.7	µg/L	48.5	ND	**39.7**	*	40-140	8.72		30	MS-22
Bis(2-chloroethoxy)methane	33.4	9.7	µg/L	48.5	ND	68.8		40-140	4.19		30	
Bis(2-chloroethyl)ether	29.9	9.7	µg/L	48.5	ND	61.5		40-140	6.08		30	
Bis(2-chloroisopropyl)ether	33.8	9.7	µg/L	48.5	ND	69.6		40-140	8.37		30	
Bis(2-Ethylhexyl)phthalate	33.5	9.7	µg/L	48.5	ND	69.1		40-140	8.35		30	
4-Bromophenylphenylether	34.6	9.7	µg/L	48.5	ND	71.3		40-140	4.69		30	
Butylbenzylphthalate	32.6	9.7	µg/L	48.5	ND	67.2		40-140	6.45		30	
Carbazole	38.6	9.7	µg/L	48.5	ND	79.5		40-140	4.41		30	
4-Chloroaniline	23.2	9.7	µg/L	48.5	ND	47.9		40-140	7.90		30	
4-Chloro-3-methylphenol	35.0	9.7	µg/L	48.5	ND	72.2		30-130	6.44		30	
2-Chloronaphthalene	29.9	9.7	µg/L	48.5	ND	61.5		40-140	2.66		30	
2-Chlorophenol	31.7	9.7	µg/L	48.5	ND	65.2		30-130	7.30		30	
4-Chlorophenylphenylether	35.2	9.7	µg/L	48.5	ND	72.5		40-140	4.55		30	
Chrysene	35.1	4.9	µg/L	48.5	ND	72.4		40-140	6.31		30	
Dibenz(a,h)anthracene	36.8	4.9	µg/L	48.5	ND	75.7		40-140	10.1		30	
Dibenzofuran	35.0	4.9	µg/L	48.5	ND	72.1		40-140	4.00		30	
Di-n-butylphthalate	33.1	9.7	µg/L	48.5	ND	68.2		40-140	6.20		30	
1,2-Dichlorobenzene	26.3	4.9	µg/L	48.5	ND	54.1		40-140	1.29		30	
1,3-Dichlorobenzene	24.3	4.9	µg/L	48.5	ND	50.0		40-140	3.58		30	
1,4-Dichlorobenzene	25.6	4.9	µg/L	48.5	0.728	51.3		40-140	2.26		30	
3,3-Dichlorobenzidine	2.36	9.7	µg/L	48.5	ND	**4.86**	*	40-140	**36.6**	*	30	MS-09, R-06, J
2,4-Dichlorophenol	35.3	9.7	µg/L	48.5	ND	72.8		30-130	5.45		30	
Diethylphthalate	35.3	9.7	µg/L	48.5	ND	72.7		40-140	4.44		30	
2,4-Dimethylphenol	33.7	9.7	µg/L	48.5	ND	69.4		30-130	8.21		30	
Dimethylphthalate	35.2	9.7	µg/L	48.5	ND	72.5		40-140	4.53		30	

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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 B336331 - SW-846 3510C											
Matrix Spike Dup (B336331-MSD1)	**Source: 23D0022-04**			Prepared: 04/06/23 Analyzed: 04/07/23							
4,6-Dinitro-2-methylphenol	49.0	9.7	µg/L	48.5	ND	101		30-130	4.66	30	
2,4-Dinitrophenol	55.0	9.7	µg/L	48.5	ND	113		30-130	0.476	30	V-04, V-06
2,4-Dinitrotoluene	45.9	9.7	µg/L	48.5	ND	94.5		40-140	5.07	30	V-06
2,6-Dinitrotoluene	42.3	9.7	µg/L	48.5	ND	87.2		40-140	5.81	30	
Di-n-octylphthalate	35.0	9.7	µg/L	48.5	ND	72.0		40-140	8.02	30	
1,2-Diphenylhydrazine/Azobenzene	31.2	9.7	µg/L	48.5	ND	64.3		40-140	5.62	30	V-05
Fluoranthene	38.0	4.9	µg/L	48.5	ND	78.2		40-140	5.01	30	
Fluorene	36.6	4.9	µg/L	48.5	ND	75.3		40-140	5.70	30	
Hexachlorobenzene	39.4	9.7	µg/L	48.5	ND	81.1		40-140	1.42	30	
Hexachlorobutadiene	23.7	9.7	µg/L	48.5	ND	48.9		40-140	9.33	30	
Hexachlorocyclopentadiene	23.2	9.7	µg/L	48.5	ND	47.9		30-130	8.86	30	
Hexachloroethane	21.0	9.7	µg/L	48.5	ND	43.3		40-140	4.82	30	
Indeno(1,2,3-cd)pyrene	36.8	4.9	µg/L	48.5	ND	75.9		40-140	10.6	30	
Isophorone	35.7	9.7	µg/L	48.5	ND	73.5		40-140	7.99	30	
1-Methylnaphthalene	32.7	4.9	µg/L	48.5	ND	67.4		40-140	3.50	30	
2-Methylnaphthalene	30.5	4.9	µg/L	48.5	ND	62.9		40-140	3.35	30	
2-Methylphenol	28.8	9.7	µg/L	48.5	ND	59.4		30-130	6.04	30	
3/4-Methylphenol	28.8	9.7	µg/L	48.5	ND	59.4		30-130	6.64	30	
Naphthalene	31.5	4.9	µg/L	48.5	ND	65.0		40-140	3.86	30	
2-Nitroaniline	21.7	9.7	µg/L	48.5	ND	44.6		40-140	15.2	30	
3-Nitroaniline	31.4	9.7	µg/L	48.5	ND	64.7		40-140	7.99	30	
4-Nitroaniline	22.7	9.7	µg/L	48.5	ND	46.7		40-140	11.6	30	
Nitrobenzene	37.8	9.7	µg/L	48.5	ND	77.8		40-140	6.03	30	
2-Nitrophenol	36.3	9.7	µg/L	48.5	ND	74.9		30-130	3.47	30	
4-Nitrophenol	26.2	9.7	µg/L	48.5	ND	54.0		30-130	3.64	30	
N-Nitrosodimethylamine	22.3	9.7	µg/L	48.5	ND	45.9		40-140	8.67	30	
N-Nitrosodiphenylamine/Diphenylamine	36.5	9.7	µg/L	48.5	ND	75.2		40-140	4.01	30	
N-Nitrosodi-n-propylamine	32.0	9.7	µg/L	48.5	ND	66.0		40-140	8.00	30	
Pentachloronitrobenzene	41.3	9.7	µg/L	48.5	ND	85.0		40-140	9.41	30	
Pentachlorophenol	36.4	9.7	µg/L	48.5	ND	74.9		30-130	6.41	30	
Phenanthrene	37.4	4.9	µg/L	48.5	ND	77.0		40-140	5.09	30	
Phenol	14.7	9.7	µg/L	48.5	ND	30.2		30-130	4.46	30	
Pyrene	36.4	4.9	µg/L	48.5	ND	74.9		40-140	6.16	30	
Pyridine	16.0	4.9	µg/L	48.5	ND	**33.0**	*	40-140	7.74	30	MS-07A
1,2,4,5-Tetrachlorobenzene	31.5	9.7	µg/L	48.5	ND	64.9		40-140	0.400	30	
1,2,4-Trichlorobenzene	28.5	4.9	µg/L	48.5	ND	58.7		40-140	0.409	30	
2,4,5-Trichlorophenol	38.9	9.7	µg/L	48.5	ND	80.2		30-130	4.89	30	
2,4,6-Trichlorophenol	36.6	9.7	µg/L	48.5	ND	75.4		30-130	3.31	30	
Surrogate: 2-Fluorophenol	*81.2*		µg/L	194		41.8		15-110			
Surrogate: Phenol-d6	*56.3*		µg/L	194		29.0		15-110			
Surrogate: Nitrobenzene-d5	*73.2*		µg/L	97.1		75.4		30-130			
Surrogate: 2-Fluorobiphenyl	*75.7*		µg/L	97.1		78.0		30-130			
Surrogate: 2,4,6-Tribromophenol	*176*		µg/L	194		90.4		15-110			
Surrogate: p-Terphenyl-d14	*83.7*		µg/L	97.1		86.2		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 B336016 - SW-846 3510C											
Blank (B336016-BLK1)				Prepared: 04/04/23 Analyzed: 04/06/23							
1,4-Dioxane	ND	0.20	µg/L								
Surrogate: 1,4-Dioxane-d8	*2.51*		µg/L	10.0		25.1		15-110			
LCS (B336016-BS1)				Prepared: 04/04/23 Analyzed: 04/06/23							
1,4-Dioxane	14.3	0.20	µg/L	10.0		**143**	*	40-140			L-06
Surrogate: 1,4-Dioxane-d8	*2.83*		µg/L	10.0		28.3		15-110			
LCS Dup (B336016-BSD1)				Prepared: 04/04/23 Analyzed: 04/06/23							
1,4-Dioxane	15.7	0.20	µg/L	10.0		**157**	*	40-140	9.32	30	L-06
Surrogate: 1,4-Dioxane-d8	*2.58*		µg/L	10.0		25.8		15-110			
Matrix Spike (B336016-MS1)	**Source: 23D0022-04**			Prepared: 04/04/23 Analyzed: 04/06/23							
1,4-Dioxane	15.1	0.20	µg/L	10.0	0.175	**149**	*	40-140			L-06, MS-12A
Surrogate: 1,4-Dioxane-d8	*2.62*		µg/L	10.0		26.2		15-110			
Matrix Spike Dup (B336016-MSD1)	**Source: 23D0022-04**			Prepared: 04/04/23 Analyzed: 04/06/23							
1,4-Dioxane	15.0	0.20	µg/L	9.80	0.175	**152**	*	40-140	0.210	20	L-06, MS-12A
Surrogate: 1,4-Dioxane-d8	*2.41*		µg/L	9.80		24.6		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 B336060 - SOP 454-PFAAS										
Blank (B336060-BLK1)				Prepared: 04/06/23 Analyzed: 04/08/23						
Perfluorobutanoic acid (PFBA)	ND	1.9	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	1.9	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	1.9	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	1.9	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	1.9	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	1.9	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	1.9	ng/L							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	1.9	ng/L							
Perfluorodecanoic acid (PFDA)	ND	1.9	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	1.9	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	1.9	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	1.9	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	1.9	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	1.9	ng/L							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	1.9	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	1.9	ng/L							
Perfluorooctanesulfonamide (FOSA)	ND	1.9	ng/L							
Perfluorononanesulfonic acid (PFNS)	ND	1.9	ng/L							
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	1.9	ng/L							
Perfluoro-1-butanesulfonamide (FBSA)	ND	1.9	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	ng/L							
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	1.9	ng/L							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	1.9	ng/L							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	1.9	ng/L							
Perfluoropetanesulfonic acid (PFPeS)	ND	1.9	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	1.9	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	1.9	ng/L							
Perfluorooctanoic acid (PFOA)	ND	1.9	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	ng/L							
Perfluorononanoic acid (PFNA)	ND	1.9	ng/L							
LCS (B336060-BS1)				Prepared: 04/06/23 Analyzed: 04/08/23						
Perfluorobutanoic acid (PFBA)	11.8	1.9	ng/L	9.57		123	73-129			
Perfluorobutanesulfonic acid (PFBS)	10.5	1.9	ng/L	8.47		124	72-130			
Perfluoropentanoic acid (PFPeA)	11.7	1.9	ng/L	9.57		122	72-129			
Perfluorohexanoic acid (PFHxA)	11.7	1.9	ng/L	9.57		122	72-129			
11Cl-PF3OUdS (F53B Major)	9.28	1.9	ng/L	9.02		103	55.1-141			
9Cl-PF3ONS (F53B Minor)	9.06	1.9	ng/L	8.92		102	59.6-146			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	10.6	1.9	ng/L	9.02		118	60.3-131			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	9.78	1.9	ng/L	9.57		102	37.6-167			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	12.6	1.9	ng/L	9.19		137	67-138			
Perfluorodecanoic acid (PFDA)	11.9	1.9	ng/L	9.57		124	71-129			
Perfluorododecanoic acid (PFDoA)	11.7	1.9	ng/L	9.57		122	72-134			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	10.4	1.9	ng/L	8.52		122	49.4-154			

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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 B336060 - SOP 454-PFAAS											
LCS (B336060-BS1)				Prepared: 04/06/23 Analyzed: 04/08/23							
Perfluoroheptanesulfonic acid (PFHpS)	11.5	1.9	ng/L	9.14		125		69-134			
N-EtFOSAA (NEtFOSAA)	13.2	1.9	ng/L	9.57		**138**	*	61-135			L-05
N-MeFOSAA (NMeFOSAA)	12.9	1.9	ng/L	9.57		135		65-136			
Perfluorotetradecanoic acid (PFTA)	12.0	1.9	ng/L	9.57		125		71-132			
Perfluorotridecanoic acid (PFTrDA)	13.0	1.9	ng/L	9.57		136		65-144			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	10.1	1.9	ng/L	8.95		113		63-143			
Perfluorodecanesulfonic acid (PFDS)	9.82	1.9	ng/L	9.24		106		53-142			
Perfluorooctanesulfonamide (FOSA)	11.8	1.9	ng/L	9.57		123		67-137			
Perfluorononanesulfonic acid (PFNS)	10.5	1.9	ng/L	9.19		114		69-127			
Perfluoro-1-hexanesulfonamide (FHxSA)	9.63	1.9	ng/L	9.57		101		61.7-156			
Perfluoro-1-butanesulfonamide (FBSA)	10.1	1.9	ng/L	9.57		105		61.3-145			
Perfluorohexanesulfonic acid (PFHxS)	9.80	1.9	ng/L	8.76		112		68-131			
Perfluoro-4-oxapentanoic acid (PFMPA)	12.6	1.9	ng/L	9.57		132		59.8-147			
Perfluoro-5-oxahexanoic acid (PFMBA)	12.0	1.9	ng/L	9.57		125		59.5-146			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	10.4	1.9	ng/L	9.10		115		64-140			
Perfluoropetanesulfonic acid (PFPeS)	10.3	1.9	ng/L	9.00		115		71-127			
Perfluoroundecanoic acid (PFUnA)	12.1	1.9	ng/L	9.57		126		69-133			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	11.7	1.9	ng/L	9.57		122		58.5-143			
Perfluoroheptanoic acid (PFHpA)	11.9	1.9	ng/L	9.57		124		72-130			
Perfluorooctanoic acid (PFOA)	11.1	1.9	ng/L	9.57		116		71-133			
Perfluorooctanesulfonic acid (PFOS)	10.3	1.9	ng/L	8.86		117		65-140			
Perfluorononanoic acid (PFNA)	11.3	1.9	ng/L	9.57		118		69-130			
Matrix Spike (B336060-MS1)	**Source: 23D0022-04**			Prepared: 04/06/23 Analyzed: 04/08/23							**D-01**
Perfluorobutanoic acid (PFBA)	57.8	4.1	ng/L	20.4	16.4	**203**	*	73-129			MS-12
Perfluorobutanesulfonic acid (PFBS)	33.8	4.1	ng/L	18.0	12.5	119		72-130			
Perfluoropentanoic acid (PFPeA)	36.0	4.1	ng/L	20.4	15.6	100		72-129			
Perfluorohexanoic acid (PFHxA)	35.0	4.1	ng/L	20.4	11.5	115		72-129			
11Cl-PF3OUdS (F53B Major)	19.1	4.1	ng/L	19.2	ND	99.7		58.3-140			
9Cl-PF3ONS (F53B Minor)	18.0	4.1	ng/L	19.0	ND	94.7		61.4-144			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	18.9	4.1	ng/L	19.2	ND	98.8		62.4-128			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	20.9	4.1	ng/L	20.4	ND	103		36.7-171			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	21.4	4.1	ng/L	19.5	ND	110		67-138			
Perfluorodecanoic acid (PFDA)	25.3	4.1	ng/L	20.4	ND	124		71-129			
Perfluorododecanoic acid (PFDoA)	24.4	4.1	ng/L	20.4	ND	120		72-134			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	20.9	4.1	ng/L	18.1	ND	115		54.3-149			
Perfluoroheptanesulfonic acid (PFHpS)	40.5	4.1	ng/L	19.4	16.3	125		69-134			
N-EtFOSAA (NEtFOSAA)	32.9	4.1	ng/L	20.4	5.96	132		61-135			
N-MeFOSAA (NMeFOSAA)	27.6	4.1	ng/L	20.4	ND	136		65-136			
Perfluorotetradecanoic acid (PFTA)	24.2	4.1	ng/L	20.4	ND	119		71-132			
Perfluorotridecanoic acid (PFTrDA)	25.6	4.1	ng/L	20.4	ND	126		65-144			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	21.9	4.1	ng/L	19.0	ND	115		63-143			
Perfluorodecanesulfonic acid (PFDS)	20.4	4.1	ng/L	19.6	ND	104		53-142			
Perfluorooctanesulfonamide (FOSA)	25.8	4.1	ng/L	20.4	ND	127		67-137			
Perfluorononanesulfonic acid (PFNS)	19.2	4.1	ng/L	19.5	ND	98.0		69-127			
Perfluoro-1-hexanesulfonamide (FHxSA)	19.3	4.1	ng/L	20.4	ND	94.9		64.2-154			
Perfluoro-1-butanesulfonamide (FBSA)	22.0	4.1	ng/L	20.4	2.07	97.7		65.9-140			
Perfluorohexanesulfonic acid (PFHxS)	89.8	4.1	ng/L	18.6	66.8	124		68-131			
Perfluoro-4-oxapentanoic acid (PFMPA)	47.1	4.1	ng/L	20.4	ND	**232**	*	61.9-143			MS-12
Perfluoro-5-oxahexanoic acid (PFMBA)	28.7	4.1	ng/L	20.4	ND	141		61.4-142			

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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 B336060 - SOP 454-PFAAS											
Matrix Spike (B336060-MS1)	**Source: 23D0022-04**			Prepared: 04/06/23 Analyzed: 04/08/23							**D-01**
6:2 Fluorotelomersulfonic acid (6:2FTS A)	24.0	4.1	ng/L	19.3	ND	124		64-140			
Perfluoropetanesulfonic acid (PFPeS)	45.6	4.1	ng/L	19.1	21.6	125		71-127			
Perfluoroundecanoic acid (PFUnA)	26.5	4.1	ng/L	20.4	ND	130		69-133			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	21.2	4.1	ng/L	20.4	ND	104		62-138			
Perfluoroheptanoic acid (PFHpA)	35.8	4.1	ng/L	20.4	14.8	103		72-130			
Perfluorooctanoic acid (PFOA)	129	4.1	ng/L	20.4	115	**68.9**	*	71-133			MS-19
Perfluorooctanesulfonic acid (PFOS)	265	4.1	ng/L	18.8	258	**36.0**	*	65-140			MS-19
Perfluorononanoic acid (PFNA)	27.2	4.1	ng/L	20.4	ND	**134**	*	69-130			MS-22
Matrix Spike Dup (B336060-MSD1)	**Source: 23D0022-04**			Prepared: 04/06/23 Analyzed: 04/08/23							**D-01**
Perfluorobutanoic acid (PFBA)	57.0	4.1	ng/L	20.6	16.4	**197**	*	73-129	1.38	30	MS-12
Perfluorobutanesulfonic acid (PFBS)	32.1	4.1	ng/L	18.2	12.5	108		72-130	5.24	30	
Perfluoropentanoic acid (PFPeA)	34.9	4.1	ng/L	20.6	15.6	93.8		72-129	3.15	30	
Perfluorohexanoic acid (PFHxA)	33.1	4.1	ng/L	20.6	11.5	105		72-129	5.62	30	
11Cl-PF3OUdS (F53B Major)	19.2	4.1	ng/L	19.4	ND	99.4		58.3-140	0.695	30	
9Cl-PF3ONS (F53B Minor)	19.7	4.1	ng/L	19.2	ND	103		61.4-144	9.43	30	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	18.6	4.1	ng/L	19.4	ND	96.3		62.4-128	1.59	30	
Hexafluoropropylene oxide dimer acid (HFPO-DA)	20.4	4.1	ng/L	20.6	ND	99.5		36.7-171	2.12	30	
8:2 Fluorotelomersulfonic acid (8:2FTS A)	25.2	4.1	ng/L	19.7	ND	128		67-138	16.4	30	
Perfluorodecanoic acid (PFDA)	24.4	4.1	ng/L	20.6	ND	119		71-129	3.72	30	
Perfluorododecanoic acid (PFDoA)	22.4	4.1	ng/L	20.6	ND	109		72-134	8.41	30	
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	19.5	4.1	ng/L	18.3	ND	107		54.3-149	6.91	30	
Perfluoroheptanesulfonic acid (PFHpS)	35.8	4.1	ng/L	19.6	16.3	99.4		69-134	12.4	30	
N-EtFOSAA (NEtFOSAA)	32.0	4.1	ng/L	20.6	5.96	127		61-135	2.88	30	
N-MeFOSAA (NMeFOSAA)	27.6	4.1	ng/L	20.6	ND	134		65-136	0.149	30	
Perfluorotetradecanoic acid (PFTA)	24.2	4.1	ng/L	20.6	ND	118		71-132	0.0512	30	
Perfluorotridecanoic acid (PFTrDA)	26.8	4.1	ng/L	20.6	ND	130		65-144	4.49	30	
4:2 Fluorotelomersulfonic acid (4:2FTS A)	20.6	4.1	ng/L	19.2	ND	107		63-143	6.00	30	
Perfluorodecanesulfonic acid (PFDS)	20.1	4.1	ng/L	19.8	ND	101		53-142	1.59	30	
Perfluorooctanesulfonamide (FOSA)	23.5	4.1	ng/L	20.6	ND	114		67-137	9.07	30	
Perfluorononanesulfonic acid (PFNS)	18.4	4.1	ng/L	19.7	ND	93.3		69-127	4.01	30	
Perfluoro-1-hexanesulfonamide (FHxSA)	19.2	4.1	ng/L	20.6	ND	93.2		64.2-154	0.852	30	
Perfluoro-1-butanesulfonamide (FBSA)	21.5	4.1	ng/L	20.6	2.07	94.4		65.9-140	2.25	30	
Perfluorohexanesulfonic acid (PFHxS)	81.6	4.1	ng/L	18.8	66.8	78.8		68-131	9.58	30	
Perfluoro-4-oxapentanoic acid (PFMPA)	44.9	4.1	ng/L	20.6	ND	**218**	*	61.9-143	4.84	30	MS-12
Perfluoro-5-oxahexanoic acid (PFMBA)	28.0	4.1	ng/L	20.6	ND	136		61.4-142	2.63	30	
6:2 Fluorotelomersulfonic acid (6:2FTS A)	26.2	4.1	ng/L	19.5	ND	134		64-140	8.92	30	
Perfluoropetanesulfonic acid (PFPeS)	41.9	4.1	ng/L	19.3	21.6	105		71-127	8.30	30	
Perfluoroundecanoic acid (PFUnA)	26.0	4.1	ng/L	20.6	ND	126		69-133	2.10	30	
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	20.7	4.1	ng/L	20.6	ND	101		62-138	2.70	30	
Perfluoroheptanoic acid (PFHpA)	35.8	4.1	ng/L	20.6	14.8	102		72-130	0.251	30	
Perfluorooctanoic acid (PFOA)	126	4.1	ng/L	20.6	115	**53.1**	*	71-133	2.45	30	MS-19
Perfluorooctanesulfonic acid (PFOS)	248	4.1	ng/L	19.0	258	**-54.8**	*	65-140	6.71	30	MS-19
Perfluorononanoic acid (PFNA)	26.8	4.1	ng/L	20.6	ND	130		69-130	1.46	30	

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B336013 - SW-846 3510C										
Blank (B336013-BLK1)				Prepared: 04/04/23 Analyzed: 04/06/23						
Aroclor-1016	ND	0.20	µg/L							
Aroclor-1016 [2C]	ND	0.20	µg/L							
Aroclor-1221	ND	0.20	µg/L							
Aroclor-1221 [2C]	ND	0.20	µg/L							
Aroclor-1232	ND	0.20	µg/L							
Aroclor-1232 [2C]	ND	0.20	µg/L							
Aroclor-1242	ND	0.20	µg/L							
Aroclor-1242 [2C]	ND	0.20	µg/L							
Aroclor-1248	ND	0.20	µg/L							
Aroclor-1248 [2C]	ND	0.20	µg/L							
Aroclor-1254	ND	0.20	µg/L							
Aroclor-1254 [2C]	ND	0.20	µg/L							
Aroclor-1260	ND	0.20	µg/L							
Aroclor-1260 [2C]	ND	0.20	µg/L							
Aroclor-1262	ND	0.20	µg/L							
Aroclor-1262 [2C]	ND	0.20	µg/L							
Aroclor-1268	ND	0.20	µg/L							
Aroclor-1268 [2C]	ND	0.20	µg/L							
Surrogate: Decachlorobiphenyl	*1.82*		µg/L	2.00		90.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.89*		µg/L	2.00		94.4	30-150			
Surrogate: Tetrachloro-m-xylene	*1.44*		µg/L	2.00		71.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.47*		µg/L	2.00		73.4	30-150			
LCS (B336013-BS1)				Prepared: 04/04/23 Analyzed: 04/06/23						
Aroclor-1016	0.47	0.20	µg/L	0.500		93.7	40-140			
Aroclor-1016 [2C]	0.51	0.20	µg/L	0.500		102	40-140			
Aroclor-1260	0.42	0.20	µg/L	0.500		84.1	40-140			
Aroclor-1260 [2C]	0.44	0.20	µg/L	0.500		88.4	40-140			
Surrogate: Decachlorobiphenyl	*2.00*		µg/L	2.00		100	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.99*		µg/L	2.00		99.6	30-150			
Surrogate: Tetrachloro-m-xylene	*1.64*		µg/L	2.00		81.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.67*		µg/L	2.00		83.7	30-150			
LCS Dup (B336013-BSD1)				Prepared: 04/04/23 Analyzed: 04/06/23						
Aroclor-1016	0.46	0.20	µg/L	0.500		92.8	40-140	0.922	20	
Aroclor-1016 [2C]	0.51	0.20	µg/L	0.500		102	40-140	0.495	20	
Aroclor-1260	0.44	0.20	µg/L	0.500		87.4	40-140	3.87	20	
Aroclor-1260 [2C]	0.46	0.20	µg/L	0.500		92.7	40-140	4.76	20	
Surrogate: Decachlorobiphenyl	*2.00*		µg/L	2.00		100	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.99*		µg/L	2.00		99.6	30-150			
Surrogate: Tetrachloro-m-xylene	*1.64*		µg/L	2.00		82.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.70*		µg/L	2.00		84.9	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B336013 - SW-846 3510C										
Matrix Spike (B336013-MS1)		**Source: 23D0022-04**		Prepared: 04/04/23 Analyzed: 04/06/23						
Aroclor-1016	0.46	0.20	µg/L	0.490	ND	94.2	40-140			
Aroclor-1016 [2C]	0.57	0.20	µg/L	0.490	ND	115	40-140			
Aroclor-1260	0.42	0.20	µg/L	0.490	ND	84.9	40-140			
Aroclor-1260 [2C]	0.45	0.20	µg/L	0.490	ND	91.0	40-140			
Surrogate: Decachlorobiphenyl	*1.59*		µg/L	1.96		80.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.69*		µg/L	1.96		86.1	30-150			
Surrogate: Tetrachloro-m-xylene	*1.44*		µg/L	1.96		73.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.52*		µg/L	1.96		77.6	30-150			
Matrix Spike Dup (B336013-MSD1)		**Source: 23D0022-04**		Prepared: 04/04/23 Analyzed: 04/06/23						
Aroclor-1016	0.47	0.20	µg/L	0.490	ND	96.2	40-140	2.18	50	
Aroclor-1016 [2C]	0.57	0.20	µg/L	0.490	ND	117	40-140	1.28	50	
Aroclor-1260	0.42	0.20	µg/L	0.490	ND	86.4	40-140	1.85	50	
Aroclor-1260 [2C]	0.45	0.20	µg/L	0.490	ND	92.8	40-140	1.85	50	
Surrogate: Decachlorobiphenyl	*1.65*		µg/L	1.96		84.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.73*		µg/L	1.96		88.3	30-150			
Surrogate: Tetrachloro-m-xylene	*1.52*		µg/L	1.96		77.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.59*		µg/L	1.96		81.2	30-150			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B335977 - SW-846 7470A Prep										
Blank (B335977-BLK1)				Prepared & Analyzed: 04/04/23						
Mercury	ND	0.00020	mg/L							
LCS (B335977-BS1)				Prepared & Analyzed: 04/04/23						
Mercury	0.00380	0.00020	mg/L	0.00402		94.4	80-120			
LCS Dup (B335977-BSD1)				Prepared & Analyzed: 04/04/23						
Mercury	0.00407	0.00020	mg/L	0.00402		101	80-120	6.90	20	
Matrix Spike (B335977-MS1)		**Source: 23D0022-04**		Prepared & Analyzed: 04/04/23						
Mercury	0.00424	0.00020	mg/L	0.00402	ND	105	75-125			
Matrix Spike Dup (B335977-MSD1)		**Source: 23D0022-04**		Prepared & Analyzed: 04/04/23						
Mercury	0.00406	0.00020	mg/L	0.00402	ND	101	75-125	4.28	20	
Batch B336100 - SW-846 3005A										
Blank (B336100-BLK1)				Prepared: 04/04/23 Analyzed: 04/05/23						
Aluminum	ND	0.050	mg/L							
Antimony	ND	0.050	mg/L							
Arsenic	ND	0.010	mg/L							
Barium	ND	0.050	mg/L							
Beryllium	ND	0.0040	mg/L							
Cadmium	ND	0.0040	mg/L							
Calcium	ND	0.50	mg/L							
Chromium	ND	0.010	mg/L							
Cobalt	ND	0.010	mg/L							
Copper	ND	0.010	mg/L							
Iron	ND	0.050	mg/L							
Lead	ND	0.010	mg/L							
Magnesium	ND	0.050	mg/L							
Manganese	ND	0.010	mg/L							
Nickel	ND	0.010	mg/L							
Potassium	ND	2.0	mg/L							
Selenium	ND	0.050	mg/L							
Silver	ND	0.010	mg/L							
Sodium	ND	2.0	mg/L							
Thallium	ND	0.050	mg/L							
Vanadium	ND	0.010	mg/L							
Zinc	ND	0.010	mg/L							
Boron	ND	0.10	mg/L							
Hardness	0.060	1.4	mg/L							J

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B336100 - SW-846 3005A										
Blank (B336100-BLK2)				Prepared: 04/04/23 Analyzed: 04/08/23						
Lead	ND	0.010	mg/L							
LCS (B336100-BS1)				Prepared: 04/04/23 Analyzed: 04/05/23						
Aluminum	0.515	0.050	mg/L	0.500		103	45.3-154.7			
Antimony	0.502	0.050	mg/L	0.500		100	80-120			
Arsenic	0.492	0.010	mg/L	0.500		98.4	80-120			
Barium	0.525	0.050	mg/L	0.500		105	80-120			
Beryllium	0.532	0.0040	mg/L	0.500		106	80-120			
Cadmium	0.518	0.0040	mg/L	0.500		104	80-120			
Calcium	4.06	0.50	mg/L	4.00		102	80-120			
Chromium	0.514	0.010	mg/L	0.500		103	80-120			
Cobalt	0.511	0.010	mg/L	0.500		102	80-120			
Copper	1.00	0.010	mg/L	1.00		100	80-120			
Iron	4.13	0.050	mg/L	4.00		103	80-120			
Magnesium	3.97	0.050	mg/L	4.00		99.1	80-120			
Manganese	0.532	0.010	mg/L	0.500		106	80-120			
Nickel	0.518	0.010	mg/L	0.500		104	80-120			
Potassium	4.04	2.0	mg/L	4.00		101	80-120			
Selenium	0.522	0.050	mg/L	0.500		104	80-120			
Silver	0.523	0.010	mg/L	0.500		105	80-120			
Sodium	4.18	2.0	mg/L	4.00		104	80-120			
Thallium	0.515	0.050	mg/L	0.500		103	80-120			
Vanadium	0.567	0.010	mg/L	0.500		113	80-120			
Zinc	1.06	0.010	mg/L	1.00		106	80-120			
Boron	0.989	0.10	mg/L	1.00		98.9	80-120			
Hardness	26	1.4	mg/L	26.4		100	80-120			
LCS (B336100-BS2)				Prepared: 04/04/23 Analyzed: 04/08/23						
Lead	0.529	0.010	mg/L	0.500		106	80-120			
LCS Dup (B336100-BSD1)				Prepared: 04/04/23 Analyzed: 04/05/23						
Aluminum	0.507	0.050	mg/L	0.500		101	45.3-154.7	1.52	30	
Antimony	0.501	0.050	mg/L	0.500		100	80-120	0.277	20	
Arsenic	0.493	0.010	mg/L	0.500		98.5	80-120	0.152	20	
Barium	0.522	0.050	mg/L	0.500		104	80-120	0.549	20	
Beryllium	0.528	0.0040	mg/L	0.500		106	80-120	0.835	20	
Cadmium	0.514	0.0040	mg/L	0.500		103	80-120	0.800	20	
Calcium	4.03	0.50	mg/L	4.00		101	80-120	0.781	20	
Chromium	0.510	0.010	mg/L	0.500		102	80-120	0.686	20	
Cobalt	0.508	0.010	mg/L	0.500		102	80-120	0.679	20	
Copper	0.995	0.010	mg/L	1.00		99.5	80-120	0.903	20	
Iron	4.11	0.050	mg/L	4.00		103	80-120	0.618	20	
Lead	0.516	0.010	mg/L	0.500		103	80-120	0.473	20	
Magnesium	3.93	0.050	mg/L	4.00		98.1	80-120	1.01	20	
Manganese	0.527	0.010	mg/L	0.500		105	80-120	0.835	20	
Nickel	0.515	0.010	mg/L	0.500		103	80-120	0.584	30	
Potassium	3.98	2.0	mg/L	4.00		99.5	80-120	1.59	20	
Selenium	0.516	0.050	mg/L	0.500		103	80-120	1.31	20	
Silver	0.529	0.010	mg/L	0.500		106	80-120	1.08	20	
Sodium	4.15	2.0	mg/L	4.00		104	80-120	0.662	20	
Thallium	0.511	0.050	mg/L	0.500		102	80-120	0.679	20	
Vanadium	0.565	0.010	mg/L	0.500		113	80-120	0.471	20	
Zinc	1.06	0.010	mg/L	1.00		106	80-120	0.612	20	

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B336100 - SW-846 3005A											
LCS Dup (B336100-BSD1)				Prepared: 04/04/23 Analyzed: 04/05/23							
Boron	0.986	0.10	mg/L	1.00		98.6		80-120	0.342	20	
Hardness	26	1.4	mg/L	26.4		99.2		80-120	0.920	20	
LCS Dup (B336100-BSD2)				Prepared: 04/04/23 Analyzed: 04/08/23							
Lead	0.525	0.010	mg/L	0.500		105		80-120	0.662	20	
Matrix Spike (B336100-MS1)		**Source: 23D0022-04**		Prepared: 04/04/23 Analyzed: 04/05/23							
Aluminum	0.539	0.050	mg/L	0.500	ND	108		75-125			
Antimony	0.527	0.050	mg/L	0.500	ND	105		75-125			
Arsenic	0.517	0.010	mg/L	0.500	ND	103		75-125			
Barium	0.655	0.050	mg/L	0.500	0.141	103		75-125			
Beryllium	0.527	0.0040	mg/L	0.500	ND	105		75-125			
Cadmium	0.526	0.0040	mg/L	0.500	ND	105		75-125			
Calcium	244	0.50	mg/L	4.00	241	**60.6**	*	75-125			MS-19
Chromium	0.505	0.010	mg/L	0.500	ND	101		75-125			
Cobalt	0.492	0.010	mg/L	0.500	0.00376	97.7		75-125			
Copper	1.04	0.010	mg/L	1.00	0.00766	103		75-125			
Iron	12.0	0.050	mg/L	4.00	7.88	103		75-125			
Magnesium	43.7	0.050	mg/L	4.00	40.0	94.3		75-125			
Manganese	1.58	0.010	mg/L	0.500	1.06	104		75-125			
Nickel	0.509	0.010	mg/L	0.500	0.0167	98.5		75-125			
Potassium	16.0	2.0	mg/L	4.00	11.7	107		75-125			
Selenium	0.537	0.050	mg/L	0.500	ND	107		75-125			
Silver	0.533	0.010	mg/L	0.500	ND	107		75-125			
Sodium	44.8	2.0	mg/L	4.00	40.6	103		75-125			
Thallium	0.516	0.050	mg/L	0.500	ND	103		75-125			
Vanadium	0.607	0.010	mg/L	0.500	0.0409	113		75-125			
Zinc	1.13	0.010	mg/L	1.00	0.111	101		75-125			
Boron	1.29	0.10	mg/L	1.00	0.290	100		75-125			
Hardness	790	1.4	mg/L	26.4	770	81.6		75-125			
Matrix Spike (B336100-MS2)		**Source: 23D0022-04**		Prepared: 04/04/23 Analyzed: 04/08/23							
Lead	0.506	0.010	mg/L	0.500	ND	101		75-125			
Matrix Spike Dup (B336100-MSD1)		**Source: 23D0022-04**		Prepared: 04/04/23 Analyzed: 04/05/23							
Aluminum	0.525	0.050	mg/L	0.500	ND	105		75-125	2.56	20	
Antimony	0.522	0.050	mg/L	0.500	ND	104		75-125	0.983	20	
Arsenic	0.510	0.010	mg/L	0.500	ND	102		75-125	1.33	20	
Barium	0.648	0.050	mg/L	0.500	0.141	101		75-125	1.13	20	
Beryllium	0.518	0.0040	mg/L	0.500	ND	104		75-125	1.87	20	
Cadmium	0.519	0.0040	mg/L	0.500	ND	104		75-125	1.29	20	
Calcium	240	0.50	mg/L	4.00	241	**-47.1**	*	75-125	1.78	20	MS-19
Chromium	0.500	0.010	mg/L	0.500	ND	100		75-125	1.07	20	
Cobalt	0.486	0.010	mg/L	0.500	0.00376	96.4		75-125	1.33	20	
Copper	1.02	0.010	mg/L	1.00	0.00766	102		75-125	1.37	20	
Iron	11.8	0.050	mg/L	4.00	7.88	97.2		75-125	1.91	20	
Lead	0.486	0.010	mg/L	0.500	ND	97.2		75-125	2.08	20	
Magnesium	42.6	0.050	mg/L	4.00	40.0	**66.9**	*	75-125	2.54	20	MS-19
Manganese	1.55	0.010	mg/L	0.500	1.06	98.1		75-125	1.83	20	
Nickel	0.503	0.010	mg/L	0.500	0.0167	97.2		75-125	1.22	20	
Potassium	15.6	2.0	mg/L	4.00	11.7	97.9		75-125	2.37	20	
Selenium	0.535	0.050	mg/L	0.500	ND	107		75-125	0.365	20	
Silver	0.522	0.010	mg/L	0.500	ND	104		75-125	2.09	20	

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B336100 - SW-846 3005A											
Matrix Spike Dup (B336100-MSD1)	**Source: 23D0022-04**			Prepared: 04/04/23 Analyzed: 04/05/23							
Sodium	43.8	2.0	mg/L	4.00	40.6	78.0		75-125	2.29	20	
Thallium	0.510	0.050	mg/L	0.500	ND	102		75-125	1.04	20	
Vanadium	0.603	0.010	mg/L	0.500	0.0409	112		75-125	0.723	20	
Zinc	1.12	0.010	mg/L	1.00	0.111	101		75-125	0.472	20	
Boron	1.28	0.10	mg/L	1.00	0.290	99.0		75-125	0.862	20	
Hardness	770	1.4	mg/L	26.4	770	**23.9**	*	75-125	1.95	20	MS-19
Matrix Spike Dup (B336100-MSD2)	**Source: 23D0022-04**			Prepared: 04/04/23 Analyzed: 04/08/23							
Lead	0.496	0.010	mg/L	0.500	ND	99.2		75-125	2.02	20	

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B336894 - SM 4500-NH3 C										
Blank (B336894-BLK1)				Prepared: 04/12/23 Analyzed: 04/13/23						
Ammonia as N	ND	0.30	mg/L							
LCS (B336894-BS1)				Prepared: 04/12/23 Analyzed: 04/13/23						
Ammonia as N	4.9	0.30	mg/L	5.00		98.0	85.6-110			
LCS Dup (B336894-BSD1)				Prepared: 04/12/23 Analyzed: 04/13/23						
Ammonia as N	4.9	0.30	mg/L	5.00		98.0	85.6-110	0.00	9.25	
Matrix Spike (B336894-MS1)	**Source: 23D0022-04**			Prepared: 04/12/23 Analyzed: 04/13/23						
Ammonia as N	5.7	0.30	mg/L	2.00	3.8	98.0	50.9-142			
Matrix Spike Dup (B336894-MSD1)	**Source: 23D0022-04**			Prepared: 04/12/23 Analyzed: 04/13/23						
Ammonia as N	5.6	0.30	mg/L	2.00	3.8	91.0	50.9-142	2.47	20	
Batch B336899 - SM21-23 2320B										
Blank (B336899-BLK1)				Prepared & Analyzed: 04/12/23						
Alkalinity to pH 4.2	ND	1.0	mg/L							
LCS (B336899-BS1)				Prepared & Analyzed: 04/12/23						
Alkalinity to pH 4.5	57	1.0	mg/L	61.2		93.1	85.8-110			
LCS Dup (B336899-BSD1)				Prepared & Analyzed: 04/12/23						
Alkalinity to pH 4.5	58	1.0	mg/L	61.2		94.8	85.8-110	1.74	6.91	
Matrix Spike (B336899-MS1)	**Source: 23D0022-04**			Prepared & Analyzed: 04/12/23						
Alkalinity to pH 4.5	720	1.0	mg/L	50.0	680	84.0	81.4-115			
Matrix Spike Dup (B336899-MSD1)	**Source: 23D0022-04**			Prepared & Analyzed: 04/12/23						
Alkalinity to pH 4.5	730	1.0	mg/L	50.0	680	92.0	81.4-115	0.552	20	
Batch B337475 - SM 21-23 5310B										
Blank (B337475-BLK1)				Prepared & Analyzed: 04/19/23						
Total Organic Carbon	ND	1.0	mg/L							
LCS (B337475-BS1)				Prepared & Analyzed: 04/19/23						
Total Organic Carbon	10.3	1.0	mg/L	10.0		103	90-110			
LCS Dup (B337475-BSD1)				Prepared & Analyzed: 04/19/23						
Total Organic Carbon	10.4	1.0	mg/L	10.0		104	90-110	0.492	15	

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B337475 - SM 21-23 5310B											
Matrix Spike (B337475-MS2)		**Source: 23D0022-04**		Prepared & Analyzed: 04/19/23							
Total Organic Carbon	81.8	2.0	mg/L	5.00	74.7	**142**	*	85-115			MS-11
Matrix Spike Dup (B337475-MSD2)		**Source: 23D0022-04**		Prepared & Analyzed: 04/19/23							
Total Organic Carbon	80.0	2.0	mg/L	5.00	74.7	106		85-115	2.21	15	
Batch B337500 - EPA 300.0											
Blank (B337500-BLK1)				Prepared & Analyzed: 04/19/23							
Bromide	ND	0.50	mg/L								
LCS (B337500-BS1)				Prepared & Analyzed: 04/19/23							
Bromide	0.958	0.50	mg/L	1.00		95.8		90-110			
LCS Dup (B337500-BSD1)				Prepared & Analyzed: 04/19/23							
Bromide	0.960	0.50	mg/L	1.00		96.0		90-110	0.188	20	
Matrix Spike (B337500-MS1)		**Source: 23D0022-04**		Prepared & Analyzed: 04/19/23							
Bromide	1.13	0.50	mg/L	1.00	ND	113		80-120			
Matrix Spike Dup (B337500-MSD1)		**Source: 23D0022-04**		Prepared & Analyzed: 04/19/23							
Bromide	1.10	0.50	mg/L	1.00	ND	110		80-120	2.88	20	
Batch B337502 - EPA 300.0											
Blank (B337502-BLK1)				Prepared & Analyzed: 04/19/23							
Sulfate	ND	1.0	mg/L								
LCS (B337502-BS1)				Prepared & Analyzed: 04/19/23							
Sulfate	10	1.0	mg/L	10.0		101		90-110			
LCS Dup (B337502-BSD1)				Prepared & Analyzed: 04/19/23							
Sulfate	10	1.0	mg/L	10.0		102		90-110	0.395	20	
Batch B337504 - EPA 300.0											
Blank (B337504-BLK1)				Prepared & Analyzed: 04/19/23							
Chloride	ND	1.0	mg/L								
LCS (B337504-BS1)				Prepared & Analyzed: 04/19/23							
Chloride	10	1.0	mg/L	10.0		101		90-110			

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B337504 - EPA 300.0											
LCS Dup (B337504-BSD1)				Prepared & Analyzed: 04/19/23							
Chloride	10	1.0	mg/L	10.0		101		90-110	0.187	20	
Matrix Spike (B337504-MS1)	**Source: 23D0022-04**			Prepared & Analyzed: 04/19/23							
Chloride	37	1.0	mg/L	10.0	30	**72.2**	*	80-120			MS-07A
Matrix Spike Dup (B337504-MSD1)	**Source: 23D0022-04**			Prepared & Analyzed: 04/19/23							
Chloride	37	1.0	mg/L	10.0	30	**73.5**	*	80-120	0.357	20	MS-07A
Batch B337576 - EPA 300.0											
Blank (B337576-BLK1)				Prepared & Analyzed: 04/19/23							
Chloride	ND	1.0	mg/L								
LCS (B337576-BS1)				Prepared & Analyzed: 04/19/23							
Chloride	10	1.0	mg/L	10.0		101		90-110			
LCS Dup (B337576-BSD1)				Prepared & Analyzed: 04/19/23							
Chloride	10	1.0	mg/L	10.0		101		90-110	0.0396	20	
Batch B337578 - EPA 300.0											
Blank (B337578-BLK1)				Prepared & Analyzed: 04/19/23							
Sulfate	ND	1.0	mg/L								
LCS (B337578-BS1)				Prepared & Analyzed: 04/19/23							
Sulfate	10	1.0	mg/L	10.0		101		90-110			
LCS Dup (B337578-BSD1)				Prepared & Analyzed: 04/19/23							
Sulfate	10	1.0	mg/L	10.0		101		90-110	0.0721	20	
Batch B337789 - EPA 410.4											
Blank (B337789-BLK1)				Prepared & Analyzed: 04/20/23							
Chemical Oxygen Demand	ND	15	mg/L								
LCS (B337789-BS1)				Prepared & Analyzed: 04/20/23							
Chemical Oxygen Demand	200	15	mg/L	200		101		90-110			
LCS Dup (B337789-BSD1)				Prepared & Analyzed: 04/20/23							
Chemical Oxygen Demand	190	15	mg/L	200		93.2		90-110	**8.33**	* 6.71	R-05

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B337789 - EPA 410.4											
Matrix Spike (B337789-MS1)	**Source: 23D0022-04**			Prepared & Analyzed: 04/20/23							
Chemical Oxygen Demand	130	15	mg/L	100	ND	**127**	*	90-110			MS-11
Matrix Spike Dup (B337789-MSD1)	**Source: 23D0022-04**			Prepared & Analyzed: 04/20/23							
Chemical Oxygen Demand	140	15	mg/L	100	ND	**138**	*	90-110	8.16	20	MS-11
Batch B337809 - EPA 300.0											
Blank (B337809-BLK1)				Prepared & Analyzed: 04/19/23							
Sulfate	ND	1.0	mg/L								
LCS (B337809-BS1)				Prepared & Analyzed: 04/19/23							
Sulfate	10	1.0	mg/L	10.0		101		90-110			
LCS Dup (B337809-BSD1)				Prepared & Analyzed: 04/19/23							
Sulfate	10	1.0	mg/L	10.0		101		90-110	0.0721	20	
Matrix Spike (B337809-MS1)	**Source: 23D0022-04**			Prepared & Analyzed: 04/19/23							
Sulfate	140	5.0	mg/L	50.0	100	80.0		80-120			
Matrix Spike Dup (B337809-MSD1)	**Source: 23D0022-04**			Prepared & Analyzed: 04/19/23							
Sulfate	140	5.0	mg/L	50.0	100	**79.7**	*	80-120	0.0856	20	MS-07

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Dissolved) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B336178 - SM21-23 2540C										
Blank (B336178-BLK1)				Prepared & Analyzed: 04/05/23						
Total Dissolved Solids	ND	10	mg/L							
LCS (B336178-BS1)				Prepared & Analyzed: 04/05/23						
Total Dissolved Solids	250	10	mg/L	293		84.6	64.9-119			

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

MW-TP-5-033023

Lab Sample ID: 23D0022-03 Date(s) Analyzed: 04/06/2023 04/06/2023

Instrument ID (1): ECD1 Instrument ID (2): ECD1

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1248	1	0.000	0.000	0.000	0.084	
	2	0.000	0.000	0.000	0.097	14.4
Aroclor-1254	1	0.000	0.000	0.000	0.082	
	2	0.000	0.000	0.000	0.11	29.2

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B336013-BS1 Date(s) Analyzed: 04/06/2023 04/06/2023

Instrument ID (1): ECD1 Instrument ID (2): ECD1

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.47	
	2	0.000	0.000	0.000	0.51	8.2
Aroclor-1260	1	0.000	0.000	0.000	0.42	
	2	0.000	0.000	0.000	0.44	4.7

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B336013-BSD1 Date(s) Analyzed: 04/06/2023 04/06/2023

Instrument ID (1): ECD1 Instrument ID (2): ECD1

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.46	
	2	0.000	0.000	0.000	0.51	10.3
Aroclor-1260	1	0.000	0.000	0.000	0.44	
	2	0.000	0.000	0.000	0.46	4.4

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B336013-MS1 Date(s) Analyzed: 04/06/2023 04/06/2023

Instrument ID (1): ECD1 Instrument ID (2): ECD1

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.46	
	2	0.000	0.000	0.000	0.57	21.4
Aroclor-1260	1	0.000	0.000	0.000	0.42	
	2	0.000	0.000	0.000	0.45	6.9

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B336013-MSD1 Date(s) Analyzed: 04/06/2023 04/06/2023

Instrument ID (1): ECD1 Instrument ID (2): ECD1

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.47	
	2	0.000	0.000	0.000	0.57	19.2
Aroclor-1260	1	0.000	0.000	0.000	0.42	
	2	0.000	0.000	0.000	0.45	6.9

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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.
D-01	Sample extracted/prepared at a dilution due to sample matrix interference.
DL-01	Elevated reporting limits for all volatile compounds due to foaming sample matrix.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-02	Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
L-05	Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the high side.
L-06	Laboratory fortified blank/laboratory control sample recovery and/or duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the high side.
MS-07	Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery.Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.
MS-07A	Matrix spike and spike duplicate recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery. Possibility of matrix effects that lead to low bias or non-homogeneous sample aliquot cannot be eliminated.
MS-09	Matrix spike recovery and/or matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a low bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
MS-11	Matrix spike recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
MS-12	Matrix spike recovery and matrix spike duplicate recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
MS-12A	Matrix spike and spike duplicate recovery is outside of control limits on the high side.
MS-19	Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.
MS-22	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 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-17	Extracted Internal Standard recovery is outside of control limits. Data is not significantly affected since associated analyte is not detected and bias is on the high side.
PF-18	Duplicate analysis confirmed Extracted Internal Standard failure due to matrix effects.
PF-19	Sample re-analyzed at a dilution that was re-fortified with internal standard.
PF-20	Quantifying ion signal to noise ratio is <10. Detection is suspect.
PF-22	Qualifier ion ratio >150% of associated calibration. Detection is suspect.
PF-23	Qualifier ion ratio <50% of associated calibration. Detection is suspect.
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.
RL-11	Elevated reporting limit due to high concentration of target compounds.

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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.
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.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.
Z-01	EPA 410.4 test had a calibration point outside acceptable back calculated recoveries.
Z-01a	Hit is possible carryover from previous sample. Rerun for this compound.

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
MW-TP-6-033023 (23D0022-01)			Lab File ID: 23D0022-01.d			Analyzed: 04/08/23 03:19			
M8FOSA	109434.3	3.99655	268,218.00	3.99655	41	50 - 150	0.0000	+/-0.50	*
M2-4:2FTS	256244.6	2.505033	70,604.00	2.529667	363	50 - 150	-0.0246	+/-0.50	*
M2PFTA	166539.6	4.297266	509,875.00	4.297266	33	50 - 150	0.0000	+/-0.50	*
M2-8:2FTS	200804.7	3.778883	43,132.00	3.778883	466	50 - 150	0.0000	+/-0.50	*
MPFBA	52686.31	1.050167	290,328.00	1.058467	18	50 - 150	-0.0083	+/-0.50	*
M3HFPO-DA	72939.33	2.8393	95,416.00	2.855667	76	50 - 150	-0.0164	+/-0.50	
M6PFDA	322493.9	3.7794	416,071.00	3.7794	78	50 - 150	0.0000	+/-0.50	
M3PFBS	102307.1	1.886667	117,612.00	1.911533	87	50 - 150	-0.0249	+/-0.50	
M7PFUnA	325009.1	3.92205	426,970.00	3.92205	76	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	189264.3	3.4205	39,901.00	3.4293	474	50 - 150	-0.0088	+/-0.50	*
M5PFPeA	162031.1	1.706567	284,204.00	1.731383	57	50 - 150	-0.0248	+/-0.50	
M5PFHxA	367602.1	2.588767	404,804.00	2.6134	91	50 - 150	-0.0246	+/-0.50	
M3PFHxS	70781.66	3.193817	75,692.00	3.201883	94	50 - 150	-0.0081	+/-0.50	
M4PFHpA	361747.7	3.1627	421,998.00	3.170783	86	50 - 150	-0.0081	+/-0.50	
M8PFOA	390007	3.437833	471,571.00	3.437833	83	50 - 150	0.0000	+/-0.50	
M8PFOS	71356.13	3.620217	85,233.00	3.6202	84	50 - 150	0.0000	+/-0.50	
M9PFNA	347339.1	3.62125	458,139.00	3.629233	76	50 - 150	-0.0080	+/-0.50	
MPFDoA	282545	4.056667	401,533.00	4.056667	70	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	165260.5	3.929517	152,760.00	3.929517	108	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	187466.7	3.8497	176,601.00	3.849683	106	50 - 150	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	100996	3.328	111,110.00	3.331	91	50 - 200	-0.0030	+/-0.50	
Pentafluorobenzene	312229	4.097	314,565.00	4.097	99	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	902979	11.049	914,687.00	11.052	99	50 - 200	-0.0030	+/-0.50	
Naphthalene-d8	359862	4.067	364,337.00	4.067	99	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	458631	4.864	460,496.00	4.864	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	215087	7.75	212,420.00	7.75	101	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	206913	5.141	220,911.00	5.141	94	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	406626	6.073	457,874.00	6.073	89	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	186235	10.02	195,693.00	10.023	95	50 - 200	-0.0030	+/-0.50	
Chrysene-d12	362130	8.599	433,885.00	8.604	83	50 - 200	-0.0050	+/-0.50	
Perylene-d12	334749	11.184	408,731.00	11.189	82	50 - 200	-0.0050	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
CHA-55-033023 (23D0022-02)			Lab File ID: 23D0022-02.d			Analyzed: 04/08/23 03:26			
M8FOSA	225734	3.99655	268,218.00	3.99655	84	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	98874.69	2.52145	70,604.00	2.529667	140	50 - 150	-0.0082	+/-0.50	
M2PFTA	330533.8	4.297266	509,875.00	4.297266	65	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	85744.17	3.778883	43,132.00	3.778883	199	50 - 150	0.0000	+/-0.50	*
MPFBA	172875.6	1.058467	290,328.00	1.058467	60	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	90709.47	2.855667	95,416.00	2.855667	95	50 - 150	0.0000	+/-0.50	
M6PFDA	394683.4	3.7794	416,071.00	3.7794	95	50 - 150	0.0000	+/-0.50	
M3PFBS	108339.1	1.911533	117,612.00	1.911533	92	50 - 150	0.0000	+/-0.50	
M7PFUnA	395390.5	3.92205	426,970.00	3.92205	93	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	103669	3.4293	39,901.00	3.4293	260	50 - 150	0.0000	+/-0.50	*
M5PFPeA	246613.1	1.731383	284,204.00	1.731383	87	50 - 150	0.0000	+/-0.50	
M5PFHxA	374203.2	2.6134	404,804.00	2.6134	92	50 - 150	0.0000	+/-0.50	
M3PFHxS	74841.41	3.201883	75,692.00	3.201883	99	50 - 150	0.0000	+/-0.50	
M4PFHpA	385790.9	3.170783	421,998.00	3.170783	91	50 - 150	0.0000	+/-0.50	
M8PFOA	430134.1	3.437833	471,571.00	3.437833	91	50 - 150	0.0000	+/-0.50	
M8PFOS	76453.73	3.6202	85,233.00	3.6202	90	50 - 150	0.0000	+/-0.50	
M9PFNA	389951.8	3.62125	458,139.00	3.629233	85	50 - 150	-0.0080	+/-0.50	
MPFDoA	304152.8	4.056667	401,533.00	4.056667	76	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	129398.6	3.929517	152,760.00	3.929517	85	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	166287.4	3.849683	176,601.00	3.849683	94	50 - 150	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	853089	11.052	914,687.00	11.052	93	50 - 200	0.0000	+/-0.50	
Pentafluorobenzene	311516	4.097	314,565.00	4.097	99	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	96367	3.331	111,110.00	3.331	87	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	451334	4.864	460,496.00	4.864	98	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	345371	4.064	364,337.00	4.067	95	50 - 200	-0.0030	+/-0.50	
Chlorobenzene-d5	212546	7.75	212,420.00	7.75	100	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	202928	5.141	220,911.00	5.141	92	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	398829	6.073	457,874.00	6.073	87	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	192700	10.02	195,693.00	10.023	98	50 - 200	-0.0030	+/-0.50	
Chrysene-d12	350440	8.596	433,885.00	8.604	81	50 - 200	-0.0080	+/-0.50	
Perylene-d12	334660	11.184	408,731.00	11.189	82	50 - 200	-0.0050	+/-0.50	
CHA-55-033023 (23D0022-02RE1)			Lab File ID: E23V10221.D			Analyzed: 04/12/23 17:54			
Pentafluorobenzene	272913	4.102	290,520.00	4.097	94	50 - 200	0.0050	+/-0.50	
1,4-Difluorobenzene	385302	4.869	413,713.00	4.864	93	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5	182952	7.753	195,929.00	7.747	93	50 - 200	0.0060	+/-0.50	
1,4-Dichlorobenzene-d4	177210	10.022	189,584.00	10.02	93	50 - 200	0.0020	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
MW-TP-5-033023 (23D0022-03)			Lab File ID: 23D0022-03.d			Analyzed: 04/08/23 03:34			
M8FOSA	191320.1	3.99655	268,218.00	3.99655	71	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	219772.2	2.51325	70,604.00	2.529667	311	50 - 150	-0.0164	+/-0.50	*
M2PFTA	353869.2	4.297266	509,875.00	4.297266	69	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	150540.2	3.778883	43,132.00	3.778883	349	50 - 150	0.0000	+/-0.50	*
MPFBA	117607.4	1.058467	290,328.00	1.058467	41	50 - 150	0.0000	+/-0.50	*
M3HFPO-DA	75148.41	2.847483	95,416.00	2.855667	79	50 - 150	-0.0082	+/-0.50	
M6PFDA	353493.5	3.7794	416,071.00	3.7794	85	50 - 150	0.0000	+/-0.50	
M3PFBS	114259.5	1.90325	117,612.00	1.911533	97	50 - 150	-0.0083	+/-0.50	
M7PFUnA	384586.3	3.92205	426,970.00	3.92205	90	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	188115.9	3.4205	39,901.00	3.4293	471	50 - 150	-0.0088	+/-0.50	*
M5PFPeA	225383.3	1.7231	284,204.00	1.731383	79	50 - 150	-0.0083	+/-0.50	
M5PFHxA	412470.1	2.605183	404,804.00	2.6134	102	50 - 150	-0.0082	+/-0.50	
M3PFHxS	78487.33	3.201883	75,692.00	3.201883	104	50 - 150	0.0000	+/-0.50	
M4PFHpA	425461.1	3.170783	421,998.00	3.170783	101	50 - 150	0.0000	+/-0.50	
M8PFOA	412360.9	3.437833	471,571.00	3.437833	87	50 - 150	0.0000	+/-0.50	
M8PFOS	69661.52	3.620217	85,233.00	3.6202	82	50 - 150	0.0000	+/-0.50	
M9PFNA	395183.2	3.62125	458,139.00	3.629233	86	50 - 150	-0.0080	+/-0.50	
MPFDoA	359198.3	4.056667	401,533.00	4.056667	89	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	163410.7	3.929517	152,760.00	3.929517	107	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	190279.6	3.8497	176,601.00	3.849683	108	50 - 150	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	93569	3.331	111,110.00	3.331	84	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	791578	11.052	914,687.00	11.052	87	50 - 200	0.0000	+/-0.50	
Pentafluorobenzene	315604	4.097	314,565.00	4.097	100	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	323815	4.064	364,337.00	4.067	89	50 - 200	-0.0030	+/-0.50	
1,4-Difluorobenzene	461805	4.864	460,496.00	4.864	100	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	188542	5.141	220,911.00	5.141	85	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	215159	7.75	212,420.00	7.75	101	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	376674	6.073	457,874.00	6.073	82	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	197022	10.02	195,693.00	10.023	101	50 - 200	-0.0030	+/-0.50	
Chrysene-d12	333212	8.599	433,885.00	8.604	77	50 - 200	-0.0050	+/-0.50	
Perylene-d12	302589	11.184	408,731.00	11.189	74	50 - 200	-0.0050	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
MW-TP-4-033023 (23D0022-04)			Lab File ID: 23D0022-04.d			Analyzed: 04/08/23 03:41			
M8FOSA	163186.5	3.99655	268,218.00	3.99655	61	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	234841.7	2.505033	70,604.00	2.529667	333	50 - 150	-0.0246	+/-0.50	*
M2PFTA	381064.6	4.297266	509,875.00	4.297266	75	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	163670.6	3.778883	43,132.00	3.778883	379	50 - 150	0.0000	+/-0.50	*
MPFBA	79996.67	1.050167	290,328.00	1.058467	28	50 - 150	-0.0083	+/-0.50	*
M3HFPO-DA	72616.03	2.8393	95,416.00	2.855667	76	50 - 150	-0.0164	+/-0.50	
M6PFDA	325239	3.7794	416,071.00	3.7794	78	50 - 150	0.0000	+/-0.50	
M3PFBS	103763.7	1.894967	117,612.00	1.911533	88	50 - 150	-0.0166	+/-0.50	
M7PFUnA	349824.8	3.92205	426,970.00	3.92205	82	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	157853.4	3.4205	39,901.00	3.4293	396	50 - 150	-0.0088	+/-0.50	*
M5PFPeA	183529.8	1.714833	284,204.00	1.731383	65	50 - 150	-0.0165	+/-0.50	
M5PFHxA	367839.1	2.596983	404,804.00	2.6134	91	50 - 150	-0.0164	+/-0.50	
M3PFHxS	75617.78	3.201883	75,692.00	3.201883	100	50 - 150	0.0000	+/-0.50	
M4PFHpA	366884.9	3.1627	421,998.00	3.170783	87	50 - 150	-0.0081	+/-0.50	
M8PFOA	373842.6	3.437833	471,571.00	3.437833	79	50 - 150	0.0000	+/-0.50	
M8PFOS	72109.11	3.620217	85,233.00	3.6202	85	50 - 150	0.0000	+/-0.50	
M9PFNA	338528.7	3.62125	458,139.00	3.629233	74	50 - 150	-0.0080	+/-0.50	
MPFDoA	317914.9	4.056667	401,533.00	4.056667	79	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	168159.4	3.929517	152,760.00	3.929517	110	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	175933.5	3.8497	176,601.00	3.849683	100	50 - 150	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	638197	11.052	914,687.00	11.052	70	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	88526	3.331	111,110.00	3.331	80	50 - 200	0.0000	+/-0.50	
Pentafluorobenzene	321096	4.097	314,565.00	4.097	102	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	313635	4.065	364,337.00	4.067	86	50 - 200	-0.0020	+/-0.50	
1,4-Difluorobenzene	470999	4.864	460,496.00	4.864	102	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	186510	5.141	220,911.00	5.141	84	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	218421	7.75	212,420.00	7.75	103	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	371691	6.073	457,874.00	6.073	81	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	192787	10.023	195,693.00	10.023	99	50 - 200	0.0000	+/-0.50	
Chrysene-d12	323778	8.599	433,885.00	8.604	75	50 - 200	-0.0050	+/-0.50	
Perylene-d12	302393	11.186	408,731.00	11.189	74	50 - 200	-0.0030	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
CHA-65-033023 (23D0022-05)			Lab File ID: 23D0022-05.d			Analyzed: 04/08/23 03:48			
M8FOSA	123202	3.99655	268,218.00	3.99655	46	50 - 150	0.0000	+/-0.50	*
M2-4:2FTS	260439.5	2.496817	70,604.00	2.529667	369	50 - 150	-0.0328	+/-0.50	*
M2PFTA	205410.8	4.297266	509,875.00	4.297266	40	50 - 150	0.0000	+/-0.50	*
M2-8:2FTS	170554.2	3.778883	43,132.00	3.778883	395	50 - 150	0.0000	+/-0.50	*
MPFBA	54393.24	1.050167	290,328.00	1.058467	19	50 - 150	-0.0083	+/-0.50	*
M3HFPO-DA	74440.55	2.831117	95,416.00	2.855667	78	50 - 150	-0.0246	+/-0.50	
M6PFDA	307153.7	3.7794	416,071.00	3.7794	74	50 - 150	0.0000	+/-0.50	
M3PFBS	100746.1	1.886667	117,612.00	1.911533	86	50 - 150	-0.0249	+/-0.50	
M7PFUnA	318451.5	3.92205	426,970.00	3.92205	75	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	180166.5	3.4205	39,901.00	3.4293	452	50 - 150	-0.0088	+/-0.50	*
M5PFPeA	157263.3	1.706567	284,204.00	1.731383	55	50 - 150	-0.0248	+/-0.50	
M5PFHxA	345928	2.588767	404,804.00	2.6134	85	50 - 150	-0.0246	+/-0.50	
M3PFHxS	72879.52	3.193817	75,692.00	3.201883	96	50 - 150	-0.0081	+/-0.50	
M4PFHpA	340147.3	3.1627	421,998.00	3.170783	81	50 - 150	-0.0081	+/-0.50	
M8PFOA	325455	3.437833	471,571.00	3.437833	69	50 - 150	0.0000	+/-0.50	
M8PFOS	64434.75	3.620217	85,233.00	3.6202	76	50 - 150	0.0000	+/-0.50	
M9PFNA	330342	3.62125	458,139.00	3.629233	72	50 - 150	-0.0080	+/-0.50	
MPFDoA	311397.3	4.056667	401,533.00	4.056667	78	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	161694	3.929517	152,760.00	3.929517	106	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	180825.1	3.8497	176,601.00	3.849683	102	50 - 150	0.0000	+/-0.50	
Pentafluorobenzene	321866	4.097	314,565.00	4.097	102	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	867209	11.049	914,687.00	11.052	95	50 - 200	-0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	90719	3.331	111,110.00	3.331	82	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	464838	4.864	460,496.00	4.864	101	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	332313	4.064	364,337.00	4.067	91	50 - 200	-0.0030	+/-0.50	
Chlorobenzene-d5	219510	7.75	212,420.00	7.75	103	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	193340	5.141	220,911.00	5.141	88	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	194686	10.02	195,693.00	10.023	99	50 - 200	-0.0030	+/-0.50	
Phenanthrene-d10	383182	6.073	457,874.00	6.073	84	50 - 200	0.0000	+/-0.50	
Chrysene-d12	323723	8.599	433,885.00	8.604	75	50 - 200	-0.0050	+/-0.50	
Perylene-d12	334222	11.186	408,731.00	11.189	82	50 - 200	-0.0030	+/-0.50	
CHA-65-033023 (23D0022-05RE1)			Lab File ID: 23D0022-05RE1.d			Analyzed: 04/10/23 15:34			
M8PFOS	79285.23	3.620217	82,209.00	3.6202	96	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
FD-033023 (23D0022-06)			Lab File ID: 23D0022-06.d			Analyzed: 04/08/23 03:55			
M8FOSA	101336	3.99655	268,218.00	3.99655	38	50 - 150	0.0000	+/-0.50	*
M2-4:2FTS	224096.8	2.505033	70,604.00	2.529667	317	50 - 150	-0.0246	+/-0.50	*
M2PFTA	334035.4	4.297266	509,875.00	4.297266	66	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	184923.4	3.778883	43,132.00	3.778883	429	50 - 150	0.0000	+/-0.50	*
MPFBA	47608.3	1.050167	290,328.00	1.058467	16	50 - 150	-0.0083	+/-0.50	*
M3HFPO-DA	55554.47	2.8393	95,416.00	2.855667	58	50 - 150	-0.0164	+/-0.50	
M6PFDA	305336.8	3.7794	416,071.00	3.7794	73	50 - 150	0.0000	+/-0.50	
M3PFBS	79166.04	1.886667	117,612.00	1.911533	67	50 - 150	-0.0249	+/-0.50	
M7PFUnA	297752.2	3.92205	426,970.00	3.92205	70	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	177568.5	3.4205	39,901.00	3.4293	445	50 - 150	-0.0088	+/-0.50	*
M5PFPeA	145347.9	1.706567	284,204.00	1.731383	51	50 - 150	-0.0248	+/-0.50	
M5PFHxA	321300.2	2.588767	404,804.00	2.6134	79	50 - 150	-0.0246	+/-0.50	
M3PFHxS	59490.52	3.193817	75,692.00	3.201883	79	50 - 150	-0.0081	+/-0.50	
M4PFHpA	305627.3	3.1627	421,998.00	3.170783	72	50 - 150	-0.0081	+/-0.50	
M8PFOA	332599.1	3.437833	471,571.00	3.437833	71	50 - 150	0.0000	+/-0.50	
M8PFOS	54282.53	3.620217	85,233.00	3.6202	64	50 - 150	0.0000	+/-0.50	
M9PFNA	290559.6	3.62125	458,139.00	3.629233	63	50 - 150	-0.0080	+/-0.50	
MPFDoA	246973	4.056667	401,533.00	4.056667	62	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	145386.5	3.929517	152,760.00	3.929517	95	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	157981.4	3.8497	176,601.00	3.849683	89	50 - 150	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	656786	11.049	914,687.00	11.052	72	50 - 200	-0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	98571	3.331	111,110.00	3.331	89	50 - 200	0.0000	+/-0.50	
Pentafluorobenzene	324639	4.099	314,565.00	4.097	103	50 - 200	0.0020	+/-0.50	
Naphthalene-d8	347065	4.067	364,337.00	4.067	95	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	451145	4.866	460,496.00	4.864	98	50 - 200	0.0020	+/-0.50	
Acenaphthene-d10	201373	5.141	220,911.00	5.141	91	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	202038	7.75	212,420.00	7.75	95	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	402879	6.073	457,874.00	6.073	88	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	194804	10.023	195,693.00	10.023	100	50 - 200	0.0000	+/-0.50	
Chrysene-d12	355054	8.599	433,885.00	8.604	82	50 - 200	-0.0050	+/-0.50	
Perylene-d12	319221	11.186	408,731.00	11.189	78	50 - 200	-0.0030	+/-0.50	
TB-033023 (23D0022-07)			Lab File ID: E23V09734.D			Analyzed: 04/08/23 00:03			
Pentafluorobenzene	316224	4.097	314,565.00	4.097	101	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	457164	4.864	460,496.00	4.864	99	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	212340	7.75	212,420.00	7.75	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	191932	10.02	195,693.00	10.023	98	50 - 200	-0.0030	+/-0.50	
Blank (B336016-BLK1)			Lab File ID: F23S096017.D			Analyzed: 04/06/23 16:17			
1,4-Dichlorobenzene-d4	668510	11.052	713,076.00	11.052	94	50 - 200	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SW-846 8270E

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B336016-BS1)			Lab File ID: F23S096018.D			Analyzed: 04/06/23 16:37			
1,4-Dichlorobenzene-d4	665615	11.052	713,076.00	11.052	93	50 - 200	0.0000	+/-0.50	
LCS Dup (B336016-BSD1)			Lab File ID: F23S096019.D			Analyzed: 04/06/23 16:57			
1,4-Dichlorobenzene-d4	745261	11.048	713,076.00	11.052	105	50 - 200	-0.0040	+/-0.50	
Matrix Spike (B336016-MS1)			Lab File ID: F23S096020.D			Analyzed: 04/06/23 17:17			
1,4-Dichlorobenzene-d4	688669	11.049	713,076.00	11.052	97	50 - 200	-0.0030	+/-0.50	
Matrix Spike Dup (B336016-MSD1)			Lab File ID: F23S096021.D			Analyzed: 04/06/23 17:37			
1,4-Dichlorobenzene-d4	691733	11.048	713,076.00	11.052	97	50 - 200	-0.0040	+/-0.50	
Blank (B336060-BLK1)			Lab File ID: B336060-BLK1.d			Analyzed: 04/08/23 02:43			
M8FOSA	183865.1	3.99655	268,218.00	3.99655	69	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	48388.87	2.529667	70,604.00	2.529667	69	50 - 150	0.0000	+/-0.50	
M2PFTA	308954.8	4.29725	509,875.00	4.297266	61	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	73722.21	3.770917	43,132.00	3.778883	171	50 - 150	-0.0080	+/-0.50	*
MPFBA	222062	1.066783	290,328.00	1.058467	76	50 - 150	0.0083	+/-0.50	
M3HFPO-DA	95665.95	2.855667	95,416.00	2.855667	100	50 - 150	0.0000	+/-0.50	
M6PFDA	343976.7	3.7794	416,071.00	3.7794	83	50 - 150	0.0000	+/-0.50	
M3PFBS	94662.05	1.919817	117,612.00	1.911533	80	50 - 150	0.0083	+/-0.50	
M7PFUnA	314387.8	3.92205	426,970.00	3.92205	74	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	32829.74	3.4293	39,901.00	3.4293	82	50 - 150	0.0000	+/-0.50	
M5PFPeA	217611.4	1.741117	284,204.00	1.731383	77	50 - 150	0.0097	+/-0.50	
M5PFHxA	334772.9	2.6134	404,804.00	2.6134	83	50 - 150	0.0000	+/-0.50	
M3PFHxS	64886.91	3.201883	75,692.00	3.201883	86	50 - 150	0.0000	+/-0.50	
M4PFHpA	337647.5	3.170783	421,998.00	3.170783	80	50 - 150	0.0000	+/-0.50	
M8PFOA	380894.7	3.437833	471,571.00	3.437833	81	50 - 150	0.0000	+/-0.50	
M8PFOS	62684.31	3.6282	85,233.00	3.6202	74	50 - 150	0.0080	+/-0.50	
M9PFNA	356763.8	3.629233	458,139.00	3.629233	78	50 - 150	0.0000	+/-0.50	
MPFDoA	265254.5	4.056667	401,533.00	4.056667	66	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	97194.3	3.929517	152,760.00	3.929517	64	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	120316.4	3.849683	176,601.00	3.849683	68	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B336060-BS1)			Lab File ID: B336060-BS1.d			Analyzed: 04/08/23 02:35			
M8FOSA	212970.3	3.99655	268,218.00	3.99655	79	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	52067.59	2.529667	70,604.00	2.529667	74	50 - 150	0.0000	+/-0.50	
M2PFTA	389793.7	4.297266	509,875.00	4.297266	76	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	68583.88	3.770917	43,132.00	3.778883	159	50 - 150	-0.0080	+/-0.50	*
MPFBA	249465.5	1.058467	290,328.00	1.058467	86	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	95229.09	2.855667	95,416.00	2.855667	100	50 - 150	0.0000	+/-0.50	
M6PFDA	379335.2	3.7794	416,071.00	3.7794	91	50 - 150	0.0000	+/-0.50	
M3PFBS	106835.9	1.919817	117,612.00	1.911533	91	50 - 150	0.0083	+/-0.50	
M7PFUnA	393257.7	3.92205	426,970.00	3.92205	92	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	36865.62	3.4293	39,901.00	3.4293	92	50 - 150	0.0000	+/-0.50	
M5PFPeA	246843.3	1.741117	284,204.00	1.731383	87	50 - 150	0.0097	+/-0.50	
M5PFHxA	368455.3	2.6134	404,804.00	2.6134	91	50 - 150	0.0000	+/-0.50	
M3PFHxS	78482.41	3.201883	75,692.00	3.201883	104	50 - 150	0.0000	+/-0.50	
M4PFHpA	373068	3.170783	421,998.00	3.170783	88	50 - 150	0.0000	+/-0.50	
M8PFOA	442232.8	3.437833	471,571.00	3.437833	94	50 - 150	0.0000	+/-0.50	
M8PFOS	76910.73	3.6282	85,233.00	3.6202	90	50 - 150	0.0080	+/-0.50	
M9PFNA	413281.4	3.629233	458,139.00	3.629233	90	50 - 150	0.0000	+/-0.50	
MPFDoA	327974.1	4.056667	401,533.00	4.056667	82	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	122557.2	3.929517	152,760.00	3.929517	80	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	144170.5	3.849683	176,601.00	3.849683	82	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike (B336060-MS1)			Lab File ID: B336060-MS1.d			Analyzed: 04/08/23 02:50			
M8FOSA	191310.3	3.99655	268,218.00	3.99655	71	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	247027.7	2.51325	70,604.00	2.529667	350	50 - 150	-0.0164	+/-0.50	*
M2PFTA	459554.9	4.297266	509,875.00	4.297266	90	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	174598	3.778883	43,132.00	3.778883	405	50 - 150	0.0000	+/-0.50	*
MPFBA	82399.69	1.050167	290,328.00	1.058467	28	50 - 150	-0.0083	+/-0.50	*
M3HFPO-DA	63576.36	2.847483	95,416.00	2.855667	67	50 - 150	-0.0082	+/-0.50	
M6PFDA	331580.7	3.7794	416,071.00	3.7794	80	50 - 150	0.0000	+/-0.50	
M3PFBS	109606.4	1.90325	117,612.00	1.911533	93	50 - 150	-0.0083	+/-0.50	
M7PFUnA	357042.7	3.92205	426,970.00	3.92205	84	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	176802.9	3.4205	39,901.00	3.4293	443	50 - 150	-0.0088	+/-0.50	*
M5PFPeA	195879.5	1.7231	284,204.00	1.731383	69	50 - 150	-0.0083	+/-0.50	
M5PFHxA	391468	2.596983	404,804.00	2.6134	97	50 - 150	-0.0164	+/-0.50	
M3PFHxS	77033.05	3.201883	75,692.00	3.201883	102	50 - 150	0.0000	+/-0.50	
M4PFHpA	390409.2	3.170783	421,998.00	3.170783	93	50 - 150	0.0000	+/-0.50	
M8PFOA	395790.3	3.437833	471,571.00	3.437833	84	50 - 150	0.0000	+/-0.50	
M8PFOS	74589.28	3.620217	85,233.00	3.6202	88	50 - 150	0.0000	+/-0.50	
M9PFNA	358935.7	3.62125	458,139.00	3.629233	78	50 - 150	-0.0080	+/-0.50	
MPFDoA	330863.3	4.056667	401,533.00	4.056667	82	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	169667.3	3.929517	152,760.00	3.929517	111	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	191950.4	3.8497	176,601.00	3.849683	109	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike Dup (B336060-MSD1)			Lab File ID: B336060-MSD1.d			Analyzed: 04/08/23 03:04			
M8FOSA	245282.5	3.99655	268,218.00	3.99655	91	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	272753.6	2.51325	70,604.00	2.529667	386	50 - 150	-0.0164	+/-0.50	*
M2PFTA	455495	4.297266	509,875.00	4.297266	89	50 - 150	0.0000	+/-0.50	
M2-8:2FTS	197715.6	3.778883	43,132.00	3.778883	458	50 - 150	0.0000	+/-0.50	*
MPFBA	86099.05	1.050167	290,328.00	1.058467	30	50 - 150	-0.0083	+/-0.50	*
M3HFPO-DA	65932.44	2.8393	95,416.00	2.855667	69	50 - 150	-0.0164	+/-0.50	
M6PFDA	350162.2	3.7794	416,071.00	3.7794	84	50 - 150	0.0000	+/-0.50	
M3PFBS	119997.6	1.894967	117,612.00	1.911533	102	50 - 150	-0.0166	+/-0.50	
M7PFUnA	364620.6	3.92205	426,970.00	3.92205	85	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	194553.5	3.4205	39,901.00	3.4293	488	50 - 150	-0.0088	+/-0.50	*
M5PFPeA	202555.2	1.714833	284,204.00	1.731383	71	50 - 150	-0.0165	+/-0.50	
M5PFHxA	410880.2	2.596983	404,804.00	2.6134	102	50 - 150	-0.0164	+/-0.50	
M3PFHxS	83141.59	3.201883	75,692.00	3.201883	110	50 - 150	0.0000	+/-0.50	
M4PFHpA	410178.6	3.170783	421,998.00	3.170783	97	50 - 150	0.0000	+/-0.50	
M8PFOA	428369	3.437833	471,571.00	3.437833	91	50 - 150	0.0000	+/-0.50	
M8PFOS	81592.03	3.620217	85,233.00	3.6202	96	50 - 150	0.0000	+/-0.50	
M9PFNA	378029.5	3.62125	458,139.00	3.629233	83	50 - 150	-0.0080	+/-0.50	
MPFDoA	360686.5	4.056667	401,533.00	4.056667	90	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	189391.9	3.929517	152,760.00	3.929517	124	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	195796.1	3.8497	176,601.00	3.849683	111	50 - 150	0.0000	+/-0.50	
Blank (B336331-BLK1)			Lab File ID: D23S097016.D			Analyzed: 04/07/23 14:25			
1,4-Dichlorobenzene-d4	97395	3.331	111,110.00	3.331	88	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	371419	4.065	364,337.00	4.067	102	50 - 200	-0.0020	+/-0.50	
Acenaphthene-d10	229913	5.141	220,911.00	5.141	104	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	468612	6.073	457,874.00	6.073	102	50 - 200	0.0000	+/-0.50	
Chrysene-d12	416572	8.599	433,885.00	8.604	96	50 - 200	-0.0050	+/-0.50	
Perylene-d12	408900	11.184	408,731.00	11.189	100	50 - 200	-0.0050	+/-0.50	
LCS (B336331-BS1)			Lab File ID: D23S097012.D			Analyzed: 04/07/23 13:01			
1,4-Dichlorobenzene-d4	101195	3.331	111,110.00	3.331	91	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	353768	4.067	364,337.00	4.067	97	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	206091	5.146	220,911.00	5.141	93	50 - 200	0.0050	+/-0.50	
Phenanthrene-d10	418182	6.078	457,874.00	6.073	91	50 - 200	0.0050	+/-0.50	
Chrysene-d12	385099	8.614	433,885.00	8.604	89	50 - 200	0.0100	+/-0.50	
Perylene-d12	350941	11.209	408,731.00	11.189	86	50 - 200	0.0200	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SW-846 8270E

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS Dup (B336331-BSD1)			Lab File ID: D23S097013.D			Analyzed: 04/07/23 13:23			
1,4-Dichlorobenzene-d4	95188	3.331	111,110.00	3.331	86	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	333471	4.067	364,337.00	4.067	92	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	192883	5.141	220,911.00	5.141	87	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	387451	6.073	457,874.00	6.073	85	50 - 200	0.0000	+/-0.50	
Chrysene-d12	361524	8.601	433,885.00	8.604	83	50 - 200	-0.0030	+/-0.50	
Perylene-d12	356602	11.189	408,731.00	11.189	87	50 - 200	0.0000	+/-0.50	
Matrix Spike (B336331-MS1)			Lab File ID: D23S097014.D			Analyzed: 04/07/23 13:43			
1,4-Dichlorobenzene-d4	91619	3.331	111,110.00	3.331	82	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	318856	4.067	364,337.00	4.067	88	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	186565	5.143	220,911.00	5.141	84	50 - 200	0.0020	+/-0.50	
Phenanthrene-d10	376847	6.073	457,874.00	6.073	82	50 - 200	0.0000	+/-0.50	
Chrysene-d12	333782	8.604	433,885.00	8.604	77	50 - 200	0.0000	+/-0.50	
Perylene-d12	309922	11.186	408,731.00	11.189	76	50 - 200	-0.0030	+/-0.50	
Matrix Spike Dup (B336331-MSD1)			Lab File ID: D23S097015.D			Analyzed: 04/07/23 14:04			
1,4-Dichlorobenzene-d4	99282	3.328	111,110.00	3.331	89	50 - 200	-0.0030	+/-0.50	
Naphthalene-d8	338843	4.067	364,337.00	4.067	93	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	194789	5.141	220,911.00	5.141	88	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	388870	6.073	457,874.00	6.073	85	50 - 200	0.0000	+/-0.50	
Chrysene-d12	351511	8.599	433,885.00	8.604	81	50 - 200	-0.0050	+/-0.50	
Perylene-d12	329685	11.184	408,731.00	11.189	81	50 - 200	-0.0050	+/-0.50	
Blank (B336476-BLK1)			Lab File ID: E23V09733.D			Analyzed: 04/07/23 23:35			
Pentafluorobenzene	321997	4.094	314,565.00	4.097	102	50 - 200	-0.0030	+/-0.50	
1,4-Difluorobenzene	444922	4.864	460,496.00	4.864	97	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	200110	7.75	212,420.00	7.75	94	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	190892	10.02	195,693.00	10.023	98	50 - 200	-0.0030	+/-0.50	
LCS (B336476-BS1)			Lab File ID: E23V09730.D			Analyzed: 04/07/23 22:14			
Pentafluorobenzene	315567	4.094	314,565.00	4.097	100	50 - 200	-0.0030	+/-0.50	
1,4-Difluorobenzene	462981	4.864	460,496.00	4.864	101	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	213125	7.75	212,420.00	7.75	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	195463	10.02	195,693.00	10.023	100	50 - 200	-0.0030	+/-0.50	
LCS Dup (B336476-BSD1)			Lab File ID: E23V09731.D			Analyzed: 04/07/23 22:41			
Pentafluorobenzene	315000	4.097	314,565.00	4.097	100	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	458841	4.866	460,496.00	4.864	100	50 - 200	0.0020	+/-0.50	
Chlorobenzene-d5	211122	7.75	212,420.00	7.75	99	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	192493	10.022	195,693.00	10.023	98	50 - 200	-0.0010	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SW-846 8260D

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike (B336476-MS1)			Lab File ID: E23V09753.D			Analyzed: 04/08/23 08:42			
Pentafluorobenzene	319974	4.097	314,565.00	4.097	102	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	460487	4.863	460,496.00	4.864	100	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5	216249	7.75	212,420.00	7.75	102	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	199260	10.022	195,693.00	10.023	102	50 - 200	-0.0010	+/-0.50	
Matrix Spike Dup (B336476-MSD1)			Lab File ID: E23V09754.D			Analyzed: 04/08/23 09:09			
Pentafluorobenzene	308734	4.1	314,565.00	4.097	98	50 - 200	0.0030	+/-0.50	
1,4-Difluorobenzene	454240	4.864	460,496.00	4.864	99	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	216441	7.75	212,420.00	7.75	102	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	193937	10.02	195,693.00	10.023	99	50 - 200	-0.0030	+/-0.50	
Blank (B336731-BLK1)			Lab File ID: E23V10206.D			Analyzed: 04/12/23 11:06			
Pentafluorobenzene	282076	4.097	290,520.00	4.097	97	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	402923	4.864	413,713.00	4.864	97	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	194738	7.75	195,929.00	7.747	99	50 - 200	0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	182213	10.02	189,584.00	10.02	96	50 - 200	0.0000	+/-0.50	
LCS (B336731-BS1)			Lab File ID: E23V10203.D			Analyzed: 04/12/23 09:44			
Pentafluorobenzene	287486	4.094	290,520.00	4.097	99	50 - 200	-0.0030	+/-0.50	
1,4-Difluorobenzene	403821	4.861	413,713.00	4.864	98	50 - 200	-0.0030	+/-0.50	
Chlorobenzene-d5	194963	7.75	195,929.00	7.747	100	50 - 200	0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	189433	10.02	189,584.00	10.02	100	50 - 200	0.0000	+/-0.50	
LCS Dup (B336731-BSD1)			Lab File ID: E23V10204.D			Analyzed: 04/12/23 10:12			
Pentafluorobenzene	286340	4.097	290,520.00	4.097	99	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	414795	4.864	413,713.00	4.864	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	193606	7.747	195,929.00	7.747	99	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	189414	10.02	189,584.00	10.02	100	50 - 200	0.0000	+/-0.50	

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 300.0 in Water	
Bromide	ME,NY,NC,NH
Chloride	NC,NY,MA,VA,ME,NH,CT,RI
Sulfate	NC,NY,MA,VA,ME,NH,CT,RI
EPA 410.4 in Water	
Chemical Oxygen Demand	CT,MA,NH,NY,RI,NC,ME,VA
SM 21-23 5310B in Water	
Total Organic Carbon	CT,NH,NY,RI,NC,MA,VA
SM19-23 4500 NH3 C in Water	
Ammonia as N	NY,MA,CT,RI,VA,NC,ME
SM21-23 2320B in Water	
Alkalinity to pH 4.5	CT
SM21-23 2540C in Water	
Total Dissolved Solids	CT,MA,NH,NY,RI,NC,ME,VA
SOP-454 PFAS in Water	
Perfluorobutanoic acid (PFBA)	NH-P
Perfluorobutanesulfonic acid (PFBS)	NH-P
Perfluoropentanoic acid (PFPeA)	NH-P
Perfluorohexanoic acid (PFHxA)	NH-P
11Cl-PF3OUdS (F53B Major)	NH-P
9Cl-PF3ONS (F53B Minor)	NH-P
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NH-P
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P
8:2 Fluorotelomersulfonic acid (8:2FTS A)	NH-P
Perfluorodecanoic acid (PFDA)	NH-P
Perfluorododecanoic acid (PFDoA)	NH-P
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NH-P
Perfluoroheptanesulfonic acid (PFHpS)	NH-P
N-EtFOSAA (NEtFOSAA)	NH-P
N-MeFOSAA (NMeFOSAA)	NH-P
Perfluorotetradecanoic acid (PFTA)	NH-P
Perfluorotridecanoic acid (PFTrDA)	NH-P
4:2 Fluorotelomersulfonic acid (4:2FTS A)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P
Perfluorooctanesulfonamide (FOSA)	NH-P
Perfluorononanesulfonic acid (PFNS)	NH-P
Perfluoro-1-hexanesulfonamide (FHxSA)	NH-P
Perfluoro-1-butanesulfonamide (FBSA)	NH-P
Perfluorohexanesulfonic acid (PFHxS)	NH-P
Perfluoro-4-oxapentanoic acid (PFMPA)	NH-P
Perfluoro-5-oxahexanoic acid (PFMBA)	NH-P
6:2 Fluorotelomersulfonic acid (6:2FTS A)	NH-P
Perfluoropetanesulfonic acid (PFPeS)	NH-P
Perfluoroundecanoic acid (PFUnA)	NH-P
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P
Perfluoroheptanoic acid (PFHpA)	NH-P

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CERTIFICATIONS

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Analyte	Certifications
SOP-454 PFAS in Water	
Perfluorooctanoic acid (PFOA)	NH-P
Perfluorooctanesulfonic acid (PFOS)	NH-P
Perfluorononanoic acid (PFNA)	NH-P
SW-846 6010 in Water	
Hardness	CT,MA,NH,NY
SW-846 6010D in Water	
Aluminum	CT,NH,NY,ME,VA,NC
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,VA,RI,NC
Barium	CT,NH,NY,ME,VA,NC
Beryllium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Calcium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Cobalt	CT,NH,NY,ME,VA,NC
Copper	CT,NH,NY,ME,VA,NC
Iron	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,ME,VA,NC
Magnesium	CT,NH,NY,ME,VA,NC
Manganese	CT,NH,NY,ME,VA,NC
Nickel	CT,NH,NY,ME,VA,NC
Potassium	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Sodium	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,VA,NC
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
Boron	CT,NH,NY,ME,VA,NC
SW-846 7470A in Water	
Mercury	CT,NH,NY,NC,ME,VA
SW-846 8082A in Water	
Aroclor-1016	CT,NH,NY,NC,ME,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260	CT,NH,NY,NC,ME,VA,PA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Water	
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1262	NH,NY,NC,ME,VA,PA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA,PA
Aroclor-1268	NH,NY,NC,ME,VA,PA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA,PA
SW-846 8260D in Water	
Acetone	CT,ME,NH,VA,NY
Acrylonitrile	CT,ME,NH,VA,NY
tert-Amyl Methyl Ether (TAME)	ME,NH,VA,NY
Benzene	CT,ME,NH,VA,NY
Bromobenzene	ME,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
n-Butylbenzene	ME,VA,NY
sec-Butylbenzene	ME,VA,NY
tert-Butylbenzene	ME,VA,NY
tert-Butyl Ethyl Ether (TBEE)	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
2-Chlorotoluene	ME,NH,VA,NY
4-Chlorotoluene	ME,NH,VA,NY
1,2-Dibromo-3-chloropropane (DBCP)	ME,NY
1,2-Dibromoethane (EDB)	ME,NY
Dibromomethane	ME,NH,VA,NY
1,2-Dichlorobenzene	CT,ME,NH,VA,NY
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
1,3-Dichloropropane	ME,VA,NY
2,2-Dichloropropane	ME,NH,VA,NY

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260D in Water	
1,1-Dichloropropene	ME,NH,VA,NY
cis-1,3-Dichloropropene	CT,ME,NH,VA,NY
trans-1,3-Dichloropropene	CT,ME,NH,VA,NY
Diethyl Ether	ME,NY
Diisopropyl Ether (DIPE)	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
p-Isopropyltoluene (p-Cymene)	CT,ME,NH,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
n-Propylbenzene	CT,ME,NH,VA,NY
Styrene	CT,ME,NH,VA,NY
1,1,1,2-Tetrachloroethane	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
1,3,5-Trichlorobenzene	ME
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
1,2,3-Trichloropropane	ME,NH,VA,NY
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	VA,NY
1,2,4-Trimethylbenzene	ME,VA,NY
1,3,5-Trimethylbenzene	ME,VA,NY
Vinyl Chloride	CT,ME,NH,VA,NY
m+p Xylene	CT,ME,NH,VA,NY
o-Xylene	CT,ME,NH,VA,NY
SW-846 8270E in Water	
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
Benzidine	CT,NY,NC,ME,NH,VA
Benzo(a)anthracene	CT,NY,NC,ME,NH,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270E in Water	
Benzo(a)pyrene	CT,NY,NC,ME,NH,VA
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

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Analyte	Certifications
SW-846 8270E in Water	
Naphthalene	CT,NY,NC,ME,NH,VA
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-Nitrosodiphenylamine/Diphenylamine	NY
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	06/30/2024
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
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023

Chain of Custody / Analysis Report

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Page (of)

Sampler(s): Sara Hahne, Liam Blake (Signature)

HM 23D0092

Laboratory Use Only

Project Number: 1940101207

Job Number:

Laboratory ID:

Lab Sample ID:

Contact:	Samantha Salotto (NYSDEC)
Address:	625 Broadway, 12th Floor Albany, NY 12233-7012
Phone:	(518) 402-9764
E-mail:	Samantha.Salotto@dec.ny.gov
Project:	NYSDEC Utica City Dump, Site #633015 Groundwater Sampling
Location:	Incinerator Rd, Utica, NY 13502 CO# 144354

Laboratory: Pace Analytical Laboratories (Con-Test), 39 Spruce Street, East Longmeadow, MA 01028
Attn: Mike Buttrick
Phone: 860-999-3563

Holding Time:

Package Requirement: NYS Cat B. Deliverable. w/ EDD

EDD Format: NYSDEC 4-file

Analysis Required

Preservatives: (see key at bottom)

	Sample Identification: Unique Field Sample ID (sys_sample_code)	Sample Location	Date	Time	Sample Type (See Key)	Sample Matrix (See Key)	Number of Containers	Grab [G] or Composite [C]	Field Filtered? (Y / N)	VOCs by 8260 (1)	SVOCs by 8270 (0)	PCBs by 8082 (0)	1,4-Dioxane by 8270 SIM (0)	PFAS by 537.1 Modified (0)	Metals, Hardness, Boron by calc (2)	Cyanide, Total by SM4500 CNE (4)	Mercury by EPA 7471A (2)	COD, Ammonia by Multiple Methods (3)	TOC (8)	Alkalinity (0)	TDS, Sulfate, Bromide, Chloride (0)
1	MW-TP-6-033023	MW-TP-6	3/30/23	10:10	N	WG	16	G	N	X	X	X	X	X	X	X	X	X	X	X	X
2	CHA-SS-033023	CHA-SS	3/30/23	10:20	N	WG	16	G	N	X	X	X	X	X	X	X	X	X	X	X	X
3	MW-TP-5-033023	MW-TP-5	3/30/23	12:00	N	WG	16	G	N	X	X	X	X	X	X	X	X	X	X	X	X
4	MW-TP-4-033023	MW-TP-4	3/30/23	13:30	N	WG	16	G	N	X	X	X	X	X	X	X	X	X	X	X	X
5	MW-TP-4-033023-MS	MW-TP-4	3/30/23	13:30	N MS	WG	16	G	N	X	X	X	X	X	X	X	X	X	X	X	X
6	MW-TP-4-033023-MSD	MW-TP-4	3/30/23	13:30	N MS	WG	16	G	N	X	X	X	X	X	X	X	X	X	X	X	X
7	CHA-GS-033023	CHA-GS	3/30/23	14:40	N	WG	16	G	N	X	X	X	X	X	X	X	X	X	X	X	X
8	FD-033023		3/30/23		FD	WG	16	G	N	X	X	X	X	X	X	X	X	X	X	X	X
9	TB-033023		3/30/23		TB	WQ	1	G	N	X											
10																					
11																					
12																					
13																					
14																					
15																					
16																					
17																					

PFAS by 537.1 Modified

Special Instructions: 1) Report detections above MDL, but below PQL with a "J" flags. Deliverables include: 1 PDF copy of full package and pdf of summary package, a New York State DEC compliant EDD. Please copy Deborah Wright (Deborah.Wright@ramboll.com) on each data transmittal.

Use the top boxes if the samples are to be shipped via courier (e.g., Fed Ex)

Relinquished by: Sara Hahne	Date: 3/30/23	Received By:	Date: 3/31 8:15
Of: Ramboll Americas Engineering Solutions, Inc.	Time: 16:30	Of: Pace Analytical - Con-Test	Time:
Relinquished by:	Date: 3/31 17:00	Received By: 3.4/2.4/2.5/5.3 1,4-10.2/2.6/2.8/10.8	Date: 4/1/23
Of:	Time:	Of: Pace Analytical - Con-Test	Time: 8:57
Courier Name:	Date:	Received By:	Date:
Tracking #:	Time:	Of:	Time:

Condition:

PFAS 537.1 Modified per client. KAM 4/3/23

Custody Seals Intact? (if so, indicate the #, date, and time of the seal)

Cooler Temperature:

Other comments or notes regarding condition of samples as received:

Sample Type: N = Normal env. sample, FD = field duplicate, EB = Equipment Blank, TB = Trip Blank, MS = Lab Matrix Spike, Other (Specify):

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 = HNO_3, 3 = H_2SO_4, 4 = NaOH, 5 = Zn Acetate, 6 = MeOH, 7 = $NaHSO_4$, 8 = Na_3PO_4, 9 = BenzalkoniumCl, 10 = other

Table of Contents

[redacted]

FedEx® Tracking

DELIVERED

Saturday

4/1/2023 at 9:57 am

Signed for by: M.RODRIGUEZ

Obtain Proof of delivery

DELIVERY STATUS

Delivered

Shipment is 1 of 10 pieces

signature proof

TRACKING ID

771726067630

FROM
Pace Analytical
10 Adler Drive
East Syracuse, NY US 13057
5188609724

Label Created
3/31/2023 2:01 PM

PACKAGE RECEIVED BY FEDEX
NORTH SYRACUSE, NY
3/31/2023 3:26 PM

IN TRANSIT
WINDSOR LOCKS, CT
4/1/2023 8:47 AM

OUT FOR DELIVERY
WINDSOR LOCKS, CT
4/1/2023 9:02 AM

DELIVERED
Sample Receiving
Pace NE Lab
39 Spruce St. Building #1
EAST LONGMEADOW, MA US 01028
3154472554

Delivered

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

Pace® PEOPLE ADVANCING SCIENCE

Client Rumball

Project Utica City Dump

MCP/RCP Required N/A

Deliverable Package Req. CAT B

Location Incinerator Rd, Utica, NY

PWSID# (When Applicable) N/A

Arrival Method:

Courier ☐ Fed Ex ☑ Walk In ☐ Other ☐ _____

Received By / Date / Time LA 4/1/23 957

Back-Sheet By / Date / Time LA 4/8/23 951

Temperature Method Gun # 5

Temp ☑ < 6° C Actual Temperature 3.4/2.9/2.5/3.3/3.9/0.2/2.6 2.5/2.6 3.0.9

Rush Samples: Yes / (No) Notify _____

Short Hold: Yes / (No) Notify _____

	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	☑	☐

Notes regarding Samples/COC outside of SOP:

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	1A 8P							
500 mL Amber Plastic				8				
250 mL Amber Plastic								7A 35P
Other Amber Clear Plastic								
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		15						

575 Broad Hollow Road
Melville, NY 11747
516-370-6000

April 12, 2023

Kyle Murray

39 Spruce St
East Longmeadow, MA 01028

RE: Project: 23D0022
Pace Project No.: 70251432

Dear Kyle Murray:

Enclosed are the analytical results for sample(s) received by the laboratory on April 04, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Melville

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Matthew T. Nemeth
matthew.nemeth@pacelabs.com
(631)694-3040
Project Manager

Enclosures

cc: Jessica Hoffman, Con-Test
Raymond McCarthy, Pace Analytical Services - New England

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575 Broad Hollow Road
Melville, NY 11747
516-370-6000

CERTIFICATIONS

Project: 23D0022
Pace Project No.: 70251432

Pace Analytical Services Long Island
575 Broad Hollow Rd, Melville, NY 11747
Connecticut Certification #: PH-0435
Delaware Certification # NY 10478
Maryland Certification #: 208
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987
New Jersey Certification #: NY158
New York Certification #: 10478 Primary Accrediting Body
Pennsylvania Certification #: 68-00350
Rhode Island Certification #: LAO00340
Virginia Certification # 460302

REPORT OF LABORATORY ANALYSIS

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Pace A
575 Broad Hollow Road
Melville, NY 11747
516-370-6000

ANALYTICAL RESULTS

Project: 23D0022
Pace Project No.: 70251432

Sample: 23D0022-01 **Lab ID: 70251432001** Collected: 03/30/23 10:10 Received: 04/04/23 11:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
SM 4500 CNE Cyanide, Total	Analytical Method: SM22 4500-CN-E Preparation Method: SM20/22 4500-CN-C Pace Analytical Services - Melville							
Cyanide	**<10.0**	ug/L	10.0	1	04/11/23 15:30	04/11/23 18:32	57-12-5	

REPORT OF LABORATORY ANALYSIS

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575 Broad Hollow Road
Melville, NY 11747
516-370-6000

ANALYTICAL RESULTS

Project: 23D0022
Pace Project No.: 70251432

Sample: 23D0022-02 **Lab ID: 70251432002** Collected: 03/30/23 10:20 Received: 04/04/23 11:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
SM 4500 CNE Cyanide, Total	Analytical Method: SM22 4500-CN-E Preparation Method: SM20/22 4500-CN-C Pace Analytical Services - Melville							
Cyanide	**<10.0**	ug/L	10.0	1	04/11/23 15:30	04/11/23 18:33	57-12-5	

REPORT OF LABORATORY ANALYSIS

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Melville, NY 11747
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ANALYTICAL RESULTS

Project: 23D0022
Pace Project No.: 70251432

Sample: 23D0022-03 **Lab ID: 70251432003** Collected: 03/30/23 12:00 Received: 04/04/23 11:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
SM 4500 CNE Cyanide, Total	Analytical Method: SM22 4500-CN-E Preparation Method: SM20/22 4500-CN-C Pace Analytical Services - Melville							
Cyanide	**<10.0**	ug/L	10.0	1	04/11/23 15:30	04/11/23 18:34	57-12-5	

REPORT OF LABORATORY ANALYSIS

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516-370-6000

ANALYTICAL RESULTS

Project: 23D0022
Pace Project No.: 70251432

Sample: 23D0022-04 **Lab ID: 70251432004** Collected: 03/30/23 13:30 Received: 04/04/23 11:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
SM 4500 CNE Cyanide, Total	Analytical Method: SM22 4500-CN-E Preparation Method: SM20/22 4500-CN-C Pace Analytical Services - Melville							
Cyanide	**<10.0**	ug/L	10.0	1	04/11/23 15:30	04/11/23 18:35	57-12-5	

REPORT OF LABORATORY ANALYSIS

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Melville, NY 11747
516-370-6000

ANALYTICAL RESULTS

Project: 23D0022
Pace Project No.: 70251432

Sample: 23D0022-05 **Lab ID: 70251432005** Collected: 03/30/23 14:40 Received: 04/04/23 11:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
SM 4500 CNE Cyanide, Total	Analytical Method: SM22 4500-CN-E Preparation Method: SM20/22 4500-CN-C Pace Analytical Services - Melville							
Cyanide	**<10.0**	ug/L	10.0	1	04/11/23 15:30	04/11/23 18:37	57-12-5	

REPORT OF LABORATORY ANALYSIS

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Pace A
575 Broad Hollow Road
Melville, NY 11747
516-370-6000

ANALYTICAL RESULTS

Project: 23D0022
Pace Project No.: 70251432

Sample: 23D0022-06 **Lab ID: 70251432006** Collected: 03/30/23 00:00 Received: 04/04/23 11:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
SM 4500 CNE Cyanide, Total	Analytical Method: SM22 4500-CN-E Preparation Method: SM20/22 4500-CN-C Pace Analytical Services - Melville							
Cyanide	**<10.0**	ug/L	10.0	1	04/11/23 15:30	04/11/23 18:38	57-12-5	

REPORT OF LABORATORY ANALYSIS

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575 Broad Hollow Road
Melville, NY 11747
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QUALITY CONTROL DATA

Project: 23D0022
Pace Project No.: 70251432

QC Batch: 300602 | Analysis Method: SM22 4500-CN-E
QC Batch Method: SM20/22 4500-CN-C | Analysis Description: 4500 CNE Cyanide, Total
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70251432001, 70251432002, 70251432003, 70251432004, 70251432005, 70251432006

METHOD BLANK: 1522649 Matrix: Water
Associated Lab Samples: 70251432001, 70251432002, 70251432003, 70251432004, 70251432005, 70251432006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	ug/L	ND	10.0	04/11/23 18:20	

LABORATORY CONTROL SAMPLE: 1522650

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	ug/L	75	75.5	101	85-115	

MATRIX SPIKE SAMPLE: 1522651

Parameter	Units	70251432004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cyanide	ug/L	<10.0	100	104	97	75-125	

MATRIX SPIKE SAMPLE: 1522838

Parameter	Units	70251877001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cyanide	ug/L	47.0	100	113	66	75-125	M1

SAMPLE DUPLICATE: 1522652

Parameter	Units	70251432004 Result	Dup Result	RPD	Qualifiers
Cyanide	ug/L	<10.0	<10.0		

SAMPLE DUPLICATE: 1522839

Parameter	Units	70251877001 Result	Dup Result	RPD	Qualifiers
Cyanide	ug/L	47.0	47.7	1	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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575 Broad Hollow Road
Melville, NY 11747
516-370-6000

QUALIFIERS

Project: 23D0022
Pace Project No.: 70251432

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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575 Broad Hollow Road
Melville, NY 11747
516-370-6000

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 23D0022
Pace Project No.: 70251432

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70251432001	**23D0022-01**	SM20/22 4500-CN-C	300602	SM22 4500-CN-E	300666
70251432002	**23D0022-02**	SM20/22 4500-CN-C	300602	SM22 4500-CN-E	300666
70251432003	**23D0022-03**	SM20/22 4500-CN-C	300602	SM22 4500-CN-E	300666
70251432004	**23D0022-04**	SM20/22 4500-CN-C	300602	SM22 4500-CN-E	300666
70251432005	**23D0022-05**	SM20/22 4500-CN-C	300602	SM22 4500-CN-E	300666
70251432006	**23D0022-06**	SM20/22 4500-CN-C	300602	SM22 4500-CN-E	300666

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SUBCONTRACT CHAIN OF CUSTOD

WO# : 70251432

70251432

Pace New England

23D0022

SENDING LABORATORY:

Pace New England
39 Spruce Street
East Longmeadow, MA 01028
Phone: 413.525.2332
Fax: 413.525.6405
Project Manager: Kyle A. Murray

RECEIVING LABOR

Pace Analytical Services - Long Island, NY
575 Broad Hollow Road
Melville, NY 11747
Phone :(516) 370-6000
Fax: -

Analysis	Sample Name	Due	Expires	Comments
Sample ID: 23D0022-01	**MA-TP-6-033023**	**Water** **Sampled:**	**03/30/23 10:10**	**CAT B**
S-Cyanide, Total		04/17/23 15:30	04/13/23 10:10	
Containers Supplied:				
250 mL plastic + NaOH (J				
Sample ID: 23D0022-02	**CHA-55-033023**	**Water** **Sampled:**	**03/30/23 10:20**	**CAT B**
S-Cyanide, Total		04/17/23 15:30	04/13/23 10:20	
Containers Supplied:				
250 mL plastic + NaOH (J				
Sample ID: 23D0022-03	**MA-TP-5-033023**	**Water** **Sampled:**	**03/30/23 12:00**	**CAT B**
S-Cyanide, Total		04/17/23 15:30	04/13/23 12:00	
Containers Supplied:				
250 mL plastic + NaOH (J				
Sample ID: 23D0022-04	**MA-TP-4-033023**	**Water** **Sampled:**	**03/30/23 13:30**	**MS/MSD CAT B**
S-Cyanide, Total		04/17/23 15:30	04/13/23 13:30	
Containers Supplied:				
250 mL plastic + NaOH (A	250 mL plastic + NaOH (A	250 mL plastic + NaOH (A		
Sample ID: 23D0022-05	**CHA-65-033023**	**Water** **Sampled:**	**03/30/23 14:40**	**CAT B**
S-Cyanide, Total		04/17/23 15:30	04/13/23 14:40	
Containers Supplied:				
250 mL plastic + NaOH (J				
Sample ID: 23D0022-06	**FD-033023**	**Water** **Sampled:**	**03/30/23 00:00**	**CAT B**
S-Cyanide, Total		04/17/23 15:30	04/13/23 00:00	
Containers Supplied:				
250 mL plastic + NaOH (J				

Released By	Date	Received By	Date
	4/3/23 17:00		4/4/23 11:00
Released By	Date	Received By	Date

SUBCONTRACT CHAIN OF CUSTODY

Pace New England

23D0022

Analysis	Sample Name	Due		Expires	Comments
Sample ID: 23D0022-07	**TB-033023**	**Water**	**Sampled:**	**03/30/23 00:00**	**CAT B**
S-Cyanide, Total		04/17/23 15:30		04/13/23 00:00	
Containers Supplied:					
250 mL plastic + NaOH (J					

Released By	Date	Received By	Date
	4/3/23 17:00	PALOLA	4/4/23 11:00
Released By	Date	Received By	Date

Chain of Custody / Analysis Report

RAMBOLL

Page (of)

Sampler(s): Sara Hahne, Liam Blake (Signature)

HM 23000122

Laboratory Use Only
Project Number: 1940101207
Job Number:
Laboratory ID:
Lab Sample ID:

Contact:	Samantha Salotto (NYSDEC)
Address:	625 Broadway, 12th Floor Albany, NY 12233-7012
Phone:	(518) 402-9764
E-mail:	Samantha.Salotto@dec.ny.gov
Project:	NYSDEC Utica City Dump, Site #633015 Groundwater Sampling
Location:	Incinerator Rd, Utica, NY 13502 COC 144354

Laboratory:
Pace Analytical Laboratories (Con-Test)
39 Spruce Street
East Longmeadow, MA 01028
Attn: Mike Buttrick
Phone: 860-999-3563

Holding Time:

Package Requirement: NYS Cat B. Deliverable. w/ EDD

EDD Format: NYSDEC 4-file

Analysis Required

Preservatives: (see key at bottom)

	Sample Identification: Unique Field Sample ID (sys_sample_code)	Sample Location	Date	Time	Sample Type (See Key)	Sample Matrix (See Key)	Number of Containers	Grab [G] or Composite [C]	Field Filtered? (Y / N)	1 VOCs by 8260	0 SVOCs by 8270	0 PCBs by 8082	0 1,4-Dioxane by 8270 SIM	0 PFAS by 537.1	2 Metals, Hardness, Boron by calc	4 Cyanide, Total by SM4500 CNE	2 Mercury by EPA 7471A	3 COD, Ammonia by Multiple Methods	8 TOC	0 Alkalinity	0 TDS, Sulfate, Bromide, Chloride
1	MW-TP-6-033023	MW-TP-6	3/30/23	10:10	N	WG	16	G	N	X	X	X	X	X	X	X	X	X	X	X	X
2	CHA-SS-033023	CHA-SS	3/30/23	10:20	N	WG	16	G	N	X	X	X	X	X	X	X	X	X	X	X	X
3	MW-TP-5-033023	MW-TP-5	3/30/23	12:00	N	WG	16	G	N	X	X	X	X	X	X	X	X	X	X	X	X
4	MW-TP-4-033023	MW-TP-4	3/30/23	13:30	N	WG	16	G	N	X	X	X	X	X	X	X	X	X	X	X	X
5	MW-TP-4-033023-MS	MW-TP-4	3/30/23	13:30	~~SE~~ N MS	WG	16	G	N	X	X	X	X	X	X	X	X	X	X	X	X
6	MW-TP-4-033023-MSD	MW-TP-4	3/30/23	13:30	~~SE~~ N MS	WG	16	G	N	X	X	X	X	X	X	X	X	X	X	X	X
7	CHA-GS-033023	CHA-GS	3/30/23	14:40	N	WG	16	G	N	X	X	X	X	X	X	X	X	X	X	X	X
8	FD-033023		3/30/23		FD	WG	16	G	N	X	X	X	X	X	X	X	X	X	X	X	X
9	TB-033023		3/30/23		TB	WQ	1	G	N	X											
10																					
11																					
12																					
13																					
14																					
15																					
16																					
17																					

Special Instructions: 1) Report detections above MDL, but below PQL with a "J" flags. Deliverables include: 1 PDF copy of full package and pdf of summary package, a New York State DEC compliant EDD. Please copy Deborah Wright (Deborah.Wright@ramboll.com) on each data transmittal.

Use the top boxes if the samples are to be shipped via courier (e.g., Fed Ex)

Relinquished by: Sara Hahne	Date: 3/30/23	Received By:	Date: 3/31 8:15
Of: Ramboll Americas Engineering Solutions, Inc.	Time: 16:30	Of: Pace Analytical - Con-Test	Time:
Relinquished by:	Date: 3/31 17:00	Received By: 3.4/2.9/2.5/3.3	Date: 4/1/23
Of:	Time:	Of: Pace Analytical - Con-Test 1.9/10.2/12.6/2.9/10.8	Time: 8:57
Courier Name:	Date:	Received By:	Date:
Tracking #:	Time:	Of:	Time:

Condition:

Custody Seals Intact? *(If so, indicate the #, date, and time of the seal)*

Cooler Temperature:

Other comments or notes regarding condition of samples as received:

Sample Type: N = Normal env. sample, FD = field duplicate, EB = Equipment Blank, TB = Trip Blank, MS = Lab Matrix Spike, Other (Specify):
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 = HNO_3, 3 = H_2SO_4, 4 = NaOH, 5 = Zn Acetate, 6 = MeOH, 7 = $NaHSO_4$, 8 = Na_2PO_4, 9 = BenzalkoniumCl, 10 = other

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Pace Analytical

Client Name: Pace New England

WO# : 70251

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PM: MN2 **Due Date: 04/18/23**

CLIENT: Pace-CON

Courier: ☐ Fed Ex ☑ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #: 771739772710

Custody Seal on Cooler/Box Present: ☐ Yes ☐ No Seals intact: ☐ Yes ☐ No ☐

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ Ziploc ☐ None ☐ Other

Type of Ice: (Wet) Blue None

Thermometer Used: TH091 #149 Correction Factor: -0.3

☐ Samples on ice, cooling process has begun

Cooler Temperature(°C): 0.6 Cooler Temperature Corrected(°C): 0.3

Date/Time 5035A kits placed in freezer

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☐ N/A, water sample)

Date and Initials of person examining contents: DO 4/4/23

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ Yes ☑ No

Did samples originate from a foreign source including Hawaii and Puerto Rico)? ☐ Yes ☑ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork

				COMMENTS:
Chain of Custody Present:	☑ Yes	☐ No		1.
Chain of Custody Filled Out:	☑ Yes	☐ No		2.
Chain of Custody Relinquished:	☐ Yes	☐ No		3.
Sampler Name & Signature on COC:	☑ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time:	☑ Yes	☐ No		5.
Short Hold Time Analysis (<72hr):	☐ Yes	☑ No		6.
Rush Turn Around Time Requested:	☐ Yes	☑ No		7.
Sufficient Volume: (Triple volume provided for TOC)	☑ Yes	☐ No		8.
Correct Containers Used:	☑ Yes	☐ No		9.
-Pace Containers Used:	☑ Yes	☐ No		
Containers Intact:	☑ Yes	☐ No		10.
Filtered volume received for Dissolved tests	☐ Yes	☐ No	☑ N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC: -Includes date/time/ID/Matrix: SL WT OIL	☑ Yes	☐ No		12. Sample 7 does not exist, only 6
All containers needing preservation have been checked?	☐ Yes	☐ No	☑ N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ HCl
pH paper Lot # HC293085				Sample #
All containers needing preservation are found to be in compliance with method recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NAOH>12 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis	☑ Yes	☐ No	☐ N/A	Initial when completed: / Lot # of added preservative: / Date/Time preservative added:
Samples checked for dechlorination:	☑ Yes	☐ No	☐ N/A	14.
KI starch test strips Lot #: 14-860				Positive for Res. Chlorine? Y N
Residual chlorine strips Lot #				
SM 4500 CN samples checked for sulfide?	☑ Yes	☐ No	☐ N/A	15.
Lead Acetate Strips Lot # 14-862				Positive for Sulfide? Y (N)
Headspace in VOA Vials (>6mm):	☐ Yes	☐ No	☑ N/A	16.
Trip Blank Present:	☐ Yes	☐ No	☑ N/A	17.
Trip Blank Custody Seals Present	☐ Yes	☐ No	☑ N/A	
Pace Trip Blank Lot # (if applicable):				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

PM (Project Manager) review is documented electronically in LIMS

GNV-FRM-MELV-0024 01

con-test®
A Pace Analytical® Laboratory

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

May 10, 2023

Deborah Y. Wright
NYDEC_Ramboll US Consulting, Inc. - Syracuse
333 West Washington Street, PO Box 4873
Syracuse, NY 13221

Project Location: Incinerator Rd, Utica, NY
Client Job Number:
Project Number: 633015
Laboratory Work Order Number: 23D0043

Enclosed are results of analyses for samples as received by the laboratory on April 1, 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. 413/525-2332

NYDEC_Ramboll US Consulting, Inc. - Syracuse
333 West Washington Street, PO Box 4873
Syracuse, NY 13221
ATTN: Deborah Y. Wright

REPORT DATE: 5/10/2023

PURCHASE ORDER NUMBER: 144354

PROJECT NUMBER: 633015

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23D0043

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

PROJECT LOCATION: Incinerator Rd, Utica, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-TP-1-033123	23D0043-01	Water		-	New York Certification# NY10478
				EPA 300.0	
				EPA 410.4	
				SM 21-23 5310B	
				SM19-23 4500 NH3 C	
				SM21-23 2320B	
				SM21-23 2540C	
				SM4500 CN C	New York Certification# NY10478
				SOP-454 PFAS	
				SW-846 6010	
				SW-846 6010D	
				SW-846 7470A	
				SW-846 8082A	
				SW-846 8260D	
				SW-846 8270E	
MW-TP-2-033123	23D0043-02	Water		-	New York Certification# NY10478
				EPA 300.0	
				EPA 410.4	
				SM 21-23 5310B	
				SM19-23 4500 NH3 C	
				SM21-23 2320B	
				SM21-23 2540C	
				SM4500 CN C	New York Certification# NY10478
				SOP-454 PFAS	
				SW-846 6010	
				SW-846 6010D	
				SW-846 7470A	
				SW-846 8082A	
				SW-846 8260D	
				SW-846 8270E	
TB-033123	23D0043-03	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

SOP-454 PFAS

Qualifications:

PF-17

Extracted Internal Standard recovery is outside of control limits. Data is not significantly affected since associated analyte is not detected and bias is on the high side.

Analyte & Samples(s) Qualified:

M2-4:2FTS
23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123]

M2-6:2FTS
23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123]

M2-8:2FTS
23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123], B336059-BLK1

PF-20

Quantifying ion signal to noise ratio is <10. Detection is suspect.

Analyte & Samples(s) Qualified:

Perfluoro-4-oxapentanoic acid (PFMPA)
23D0043-01[MW-TP-1-033123]

Perfluorobutanoic acid (PFBA)
23D0043-01[MW-TP-1-033123]

Perfluoroheptanesulfonic acid (PFHpS)
23D0043-01[MW-TP-1-033123]

Perfluoroheptanoic acid (PFHpA)
23D0043-02[MW-TP-2-033123]

Perfluorohexanoic acid (PFHxA)
23D0043-02[MW-TP-2-033123]

Perfluoropetanesulfonic acid (PFPeS)
23D0043-02[MW-TP-2-033123]

PF-23

Qualifier ion ratio <50% of associated calibration. Detection is suspect.

Analyte & Samples(s) Qualified:

Perfluorobutanesulfonic acid (PFBS)
23D0043-01[MW-TP-1-033123]

Perfluorohexanoic acid (PFHxA)
23D0043-02[MW-TP-2-033123]

S-29

Extracted Internal Standard is outside of control limits.

Analyte & Samples(s) Qualified:

M2-8:2FTS
B336059-BS1

M2PFTA
23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123]

M3HFPO-DA
23D0043-02[MW-TP-2-033123]

M8FOSA
23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123]

MPFBA
23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123]

SW-846 8260D

Qualifications:

L-02

Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.

Analyte & Samples(s) Qualified:

Chloroethane
B336478-BS1, B336478-BSD1, S085794-CCV1

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

L-04

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Methyl Acetate

23D0043-03[TB-033123], B336477-BLK1, B336477-BS1, B336477-BSD1, S085765-CCV1

trans-1,4-Dichloro-2-butene

23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123], B336478-BLK1, B336478-BS1, B336478-BSD1, S085794-CCV1

L-06

Laboratory fortified blank/laboratory control sample recovery and/or duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

Vinyl Chloride

B336477-BS1, B336477-BSD1, B336478-BS1, B336478-BSD1, S085765-CCV1, S085794-CCV1

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:

Methyl Acetate

B336478-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:

Chloromethane

23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123], B336478-BLK1, B336478-BS1, B336478-BSD1, S085794-CCV1

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:

Methyl Acetate

23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123], 23D0043-03[TB-033123], B336477-BLK1, B336477-BS1, B336477-BSD1, B336478-BLK1, B336478-BS1, B336478-BSD1, S085765-CCV1, S085794-CCV1

trans-1,4-Dichloro-2-butene

23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123], B336478-BLK1, B336478-BS1, B336478-BSD1, S085794-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:

Vinyl Chloride

B336477-BS1, B336477-BSD1, B336478-BS1, B336478-BSD1, S085765-CCV1, S085794-CCV1

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Bromomethane

B336478-BS1, B336478-BSD1, S085794-CCV1

Chloroethane

B336477-BS1, B336477-BSD1, B336478-BS1, B336478-BSD1, S085765-CCV1, S085794-CCV1

SW-846 8270E

Qualifications:

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

L-04

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

1,2,4,5-Tetrachlorobenzene
23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123], B336097-BLK1, B336097-BS1, B336097-BSD1

1,2,4-Trichlorobenzene
23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123], B336097-BLK1, B336097-BS1, B336097-BSD1

1,2-Dichlorobenzene
23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123], B336097-BLK1, B336097-BS1, B336097-BSD1

1,3-Dichlorobenzene
23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123], B336097-BLK1, B336097-BS1, B336097-BSD1

1,4-Dichlorobenzene
23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123], B336097-BLK1, B336097-BS1, B336097-BSD1

1-Methylnaphthalene
23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123], B336097-BLK1, B336097-BS1, B336097-BSD1

2-Chloronaphthalene
23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123], B336097-BLK1, B336097-BS1, B336097-BSD1

2-Methylnaphthalene
23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123], B336097-BLK1, B336097-BS1, B336097-BSD1

Benzidine
23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123], B336097-BLK1, B336097-BS1, B336097-BSD1

Hexachlorobutadiene
23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123], B336097-BLK1, B336097-BS1, B336097-BSD1

Hexachlorocyclopentadiene
23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123], B336097-BLK1, B336097-BS1, B336097-BSD1

Hexachloroethane
23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123], B336097-BLK1, B336097-BS1, B336097-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
23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123], B336097-BLK1, B336097-BS1, B336097-BSD1, S085615-CCV1, S085757-CCV1

Benzidine
23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123], B336097-BLK1, B336097-BS1, B336097-BSD1, S085615-CCV1, S085757-CCV1

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
23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123], B336097-BLK1, B336097-BS1, B336097-BSD1, S085615-CCV1, S085757-CCV1

Benzidine
23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123], B336097-BLK1, B336097-BS1, B336097-BSD1, S085615-CCV1, S085757-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
23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123], B336097-BLK1, B336097-BS1, B336097-BSD1, S085615-CCV1, S085757-CCV1

2,4-Dinitrotoluene
23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123], B336097-BLK1, B336097-BS1, B336097-BSD1, S085615-CCV1, S085757-CCV1

2,6-Dinitrotoluene
B336097-BLK1, B336097-BSD1, S085615-CCV1

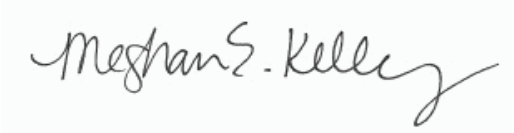
3-Nitroaniline
B336097-BLK1, B336097-BS1, B336097-BSD1, S085615-CCV1

Benzo(g,h,i)perylene
23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123], B336097-BS1, S085757-CCV1

Pentachloronitrobenzene
23D0043-01[MW-TP-1-033123], 23D0043-02[MW-TP-2-033123], B336097-BS1, S085757-CCV1

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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

con-test® A Pace Analytical® Laboratory

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0043

Date Received: 4/1/2023

Field Sample #: MW-TP-1-033123 | Sampled: 3/31/2023 11:00

Sample ID: 23D0043-01

Sample Matrix: Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	92	50	2.0	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Acrylonitrile	ND	5.0	0.47	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.13	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Benzene	4.8	1.0	0.18	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Bromochloromethane	ND	1.0	0.28	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Bromoform	ND	1.0	0.41	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Bromomethane	ND	2.0	1.3	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
2-Butanone (MEK)	19	20	1.7	µg/L	1	J	SW-846 8260D	4/10/23	4/10/23 13:23	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.3	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
n-Butylbenzene	3.1	1.0	0.15	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
sec-Butylbenzene	3.4	1.0	0.13	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
tert-Butylbenzene	0.74	1.0	0.14	µg/L	1	J	SW-846 8260D	4/10/23	4/10/23 13:23	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.15	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Carbon Disulfide	2.9	5.0	1.6	µg/L	1	J	SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Chlorobenzene	10	1.0	0.12	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Chlorodibromomethane	ND	0.50	0.20	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Chloroethane	ND	2.0	0.34	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Chloroform	ND	2.0	0.14	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Chloromethane	ND	2.0	0.50	µg/L	1	R-05	SW-846 8260D	4/10/23	4/10/23 13:23	EEH
2-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
4-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.85	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.16	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Dibromomethane	ND	1.0	0.32	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
1,2-Dichlorobenzene	0.31	1.0	0.13	µg/L	1	J	SW-846 8260D	4/10/23	4/10/23 13:23	EEH
1,3-Dichlorobenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
1,4-Dichlorobenzene	2.4	1.0	0.13	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	1.5	µg/L	1	L-04, V-05	SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.16	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
1,1-Dichloroethane	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
1,2-Dichloroethane	ND	1.0	0.30	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
1,1-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
1,2-Dichloropropane	ND	1.0	0.19	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
1,3-Dichloropropane	ND	0.50	0.12	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
2,2-Dichloropropane	ND	1.0	0.35	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
1,1-Dichloropropene	ND	2.0	0.15	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
trans-1,3-Dichloropropene	ND	0.50	0.14	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Diethyl Ether	ND	2.0	0.14	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0043

Date Received: 4/1/2023

Field Sample #: MW-TP-1-033123 | Sampled: 3/31/2023 11:00

Sample ID: 23D0043-01

Sample Matrix: Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.20	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
1,4-Dioxane	ND	50	18	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Ethylbenzene	0.53	1.0	0.22	µg/L	1	J	SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
2-Hexanone (MBK)	ND	10	1.2	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Isopropylbenzene (Cumene)	7.9	1.0	0.15	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
p-Isopropyltoluene (p-Cymene)	1.4	1.0	0.13	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Methyl Acetate	ND	1.0	0.61	µg/L	1	V-05	SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Methyl Cyclohexane	0.87	1.0	0.16	µg/L	1	J	SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Methylene Chloride	ND	5.0	0.18	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
4-Methyl-2-pentanone (MIBK)	2.7	10	1.3	µg/L	1	J	SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Naphthalene	9.9	2.0	0.38	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
n-Propylbenzene	12	1.0	0.12	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.14	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Tetrachloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Tetrahydrofuran	ND	10	0.49	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Toluene	0.46	1.0	0.22	µg/L	1	J	SW-846 8260D	4/10/23	4/10/23 13:23	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.34	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
1,1,1-Trichloroethane	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
1,1,2-Trichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Trichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
1,2,3-Trichloropropane	ND	2.0	0.28	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.21	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
1,2,4-Trimethylbenzene	27	1.0	0.20	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
1,3,5-Trimethylbenzene	0.80	1.0	0.15	µg/L	1	J	SW-846 8260D	4/10/23	4/10/23 13:23	EEH
Vinyl Chloride	ND	2.0	0.24	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:23	EEH
m+p Xylene	0.87	2.0	0.49	µg/L	1	J	SW-846 8260D	4/10/23	4/10/23 13:23	EEH
o-Xylene	0.96	1.0	0.24	µg/L	1	J	SW-846 8260D	4/10/23	4/10/23 13:23	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	81.4	70-130		4/10/23 13:23
Toluene-d8	97.7	70-130		4/10/23 13:23
4-Bromofluorobenzene	101	70-130		4/10/23 13:23

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0043

Date Received: 4/1/2023

Field Sample #: MW-TP-1-033123 | Sampled: 3/31/2023 11:00

Sample ID: 23D0043-01

Sample Matrix: Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	4.9	0.53	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Acenaphthylene	ND	4.9	0.55	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Acetophenone	1.5	9.8	0.49	µg/L	1	J	SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Aniline	ND	4.9	0.59	µg/L	1	V-05	SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Anthracene	ND	4.9	0.49	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Benzidine	ND	20	10	µg/L	1	L-04, V-04, V-05	SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Benzo(a)anthracene	ND	4.9	0.45	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Benzo(a)pyrene	ND	4.9	0.68	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Benzo(b)fluoranthene	ND	4.9	0.54	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Benzo(g,h,i)perylene	ND	4.9	0.67	µg/L	1	V-06	SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Benzo(k)fluoranthene	ND	4.9	0.62	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Benzoic Acid	ND	9.8	8.2	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Bis(2-chloroethoxy)methane	ND	9.8	0.42	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Bis(2-chloroethyl)ether	ND	9.8	0.49	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Bis(2-chloroisopropyl)ether	ND	9.8	0.63	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Bis(2-Ethylhexyl)phthalate	1.5	9.8	0.82	µg/L	1	J	SW-846 8270E	4/5/23	4/10/23 12:06	AR2
4-Bromophenylphenylether	ND	9.8	0.51	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Butylbenzylphthalate	ND	9.8	0.65	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Carbazole	ND	9.8	0.45	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
4-Chloroaniline	ND	9.8	0.61	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
4-Chloro-3-methylphenol	ND	9.8	0.51	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
2-Chloronaphthalene	ND	9.8	0.51	µg/L	1	L-04	SW-846 8270E	4/5/23	4/10/23 12:06	AR2
2-Chlorophenol	ND	9.8	0.45	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
4-Chlorophenylphenylether	ND	9.8	0.54	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Chrysene	ND	4.9	0.44	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Dibenz(a,h)anthracene	ND	4.9	0.73	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Dibenzofuran	ND	4.9	0.55	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Di-n-butylphthalate	ND	9.8	0.48	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
1,2-Dichlorobenzene	ND	4.9	0.62	µg/L	1	L-04	SW-846 8270E	4/5/23	4/10/23 12:06	AR2
1,3-Dichlorobenzene	ND	4.9	0.63	µg/L	1	L-04	SW-846 8270E	4/5/23	4/10/23 12:06	AR2
1,4-Dichlorobenzene	0.90	4.9	0.61	µg/L	1	L-04, J	SW-846 8270E	4/5/23	4/10/23 12:06	AR2
3,3-Dichlorobenzidine	ND	9.8	0.76	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
2,4-Dichlorophenol	ND	9.8	0.48	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Diethylphthalate	0.43	9.8	0.41	µg/L	1	J	SW-846 8270E	4/5/23	4/10/23 12:06	AR2
2,4-Dimethylphenol	ND	9.8	0.49	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Dimethylphthalate	ND	9.8	0.38	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
4,6-Dinitro-2-methylphenol	ND	9.8	8.3	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
2,4-Dinitrophenol	ND	9.8	8.3	µg/L	1	V-04, V-06	SW-846 8270E	4/5/23	4/10/23 12:06	AR2
2,4-Dinitrotoluene	ND	9.8	0.66	µg/L	1	V-06	SW-846 8270E	4/5/23	4/10/23 12:06	AR2
2,6-Dinitrotoluene	ND	9.8	0.55	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Di-n-octylphthalate	ND	9.8	3.1	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
1,2-Diphenylhydrazine/Azobenzene	ND	9.8	0.56	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Fluoranthene	ND	4.9	0.47	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Fluorene	ND	4.9	0.53	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0043

Date Received: 4/1/2023

Field Sample #: MW-TP-1-033123 | Sampled: 3/31/2023 11:00

Sample ID: 23D0043-01

Sample Matrix: Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	9.8	0.57	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Hexachlorobutadiene	ND	9.8	0.73	µg/L	1	L-04	SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Hexachlorocyclopentadiene	ND	9.8	5.9	µg/L	1	L-04	SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Hexachloroethane	ND	9.8	0.70	µg/L	1	L-04	SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Indeno(1,2,3-cd)pyrene	ND	4.9	0.77	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Isophorone	ND	9.8	0.51	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
1-Methylnaphthalene	5.0	4.9	0.57	µg/L	1	L-04	SW-846 8270E	4/5/23	4/10/23 12:06	AR2
2-Methylnaphthalene	6.0	4.9	0.66	µg/L	1	L-04	SW-846 8270E	4/5/23	4/10/23 12:06	AR2
2-Methylphenol	ND	9.8	0.48	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
3/4-Methylphenol	ND	9.8	0.43	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Naphthalene	3.8	4.9	0.59	µg/L	1	J	SW-846 8270E	4/5/23	4/10/23 12:06	AR2
2-Nitroaniline	ND	9.8	0.71	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
3-Nitroaniline	ND	9.8	0.58	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
4-Nitroaniline	ND	9.8	0.67	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Nitrobenzene	ND	9.8	0.57	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
2-Nitrophenol	ND	9.8	0.50	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
4-Nitrophenol	ND	9.8	1.9	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
N-Nitrosodimethylamine	ND	9.8	0.56	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
N-Nitrosodiphenylamine/Diphenylamine	ND	9.8	0.42	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
N-Nitrosodi-n-propylamine	ND	9.8	0.56	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Pentachloronitrobenzene	ND	9.8	0.67	µg/L	1	V-06	SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Pentachlorophenol	ND	9.8	0.65	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Phenanthrene	ND	4.9	0.50	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Phenol	ND	9.8	0.19	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Pyrene	ND	4.9	0.64	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
Pyridine	ND	4.9	3.5	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
1,2,4,5-Tetrachlorobenzene	ND	9.8	0.65	µg/L	1	L-04	SW-846 8270E	4/5/23	4/10/23 12:06	AR2
1,2,4-Trichlorobenzene	ND	4.9	0.65	µg/L	1	L-04	SW-846 8270E	4/5/23	4/10/23 12:06	AR2
2,4,5-Trichlorophenol	ND	9.8	0.54	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2
2,4,6-Trichlorophenol	ND	9.8	0.46	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:06	AR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	25.1	15-110		4/10/23 12:06
Phenol-d6	17.6	15-110		4/10/23 12:06
Nitrobenzene-d5	51.0	30-130		4/10/23 12:06
2-Fluorobiphenyl	39.3	30-130		4/10/23 12:06
2,4,6-Tribromophenol	56.4	15-110		4/10/23 12:06
p-Terphenyl-d14	54.3	30-130		4/10/23 12:06

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0043

Date Received: 4/1/2023

Field Sample #: MW-TP-1-033123 | Sampled: 3/31/2023 11:00

Sample ID: 23D0043-01

Sample Matrix: Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	ND	0.19	0.032	µg/L	1		SW-846 8270E	4/7/23	4/13/23 17:51	SPF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,4-Dioxane-d8	24.2	15-110		4/13/23 17:51

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0043

Date Received: 4/1/2023

Field Sample #: MW-TP-1-033123 | Sampled: 3/31/2023 11:00

Sample ID: 23D0043-01

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	33	2.2	0.81	ng/L	1	PF-20	SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
Perfluorobutanesulfonic acid (PFBS)	12	2.2	0.81	ng/L	1	PF-23	SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
Perfluoropentanoic acid (PFPeA)	7.8	2.2	0.87	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
Perfluorohexanoic acid (PFHxA)	16	2.2	0.89	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
11Cl-PF3OUdS (F53B Major)	ND	2.2	0.83	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
9Cl-PF3ONS (F53B Minor)	ND	2.2	0.81	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.2	1.1	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.2	0.64	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.2	1.0	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
Perfluorodecanoic acid (PFDA)	ND	2.2	0.91	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
Perfluorododecanoic acid (PFDoA)	ND	2.2	1.0	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.2	0.80	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
Perfluoroheptanesulfonic acid (PFHpS)	3.8	2.2	0.90	ng/L	1	PF-20	SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
N-EtFOSAA (NEtFOSAA)	9.7	2.2	0.88	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
N-MeFOSAA (NMeFOSAA)	ND	2.2	1.1	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
Perfluorotetradecanoic acid (PFTA)	ND	2.2	1.0	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
Perfluorotridecanoic acid (PFTrDA)	ND	2.2	0.90	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.2	0.84	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
Perfluorodecanesulfonic acid (PFDS)	ND	2.2	1.1	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
Perfluorooctanesulfonamide (FOSA)	ND	2.2	1.1	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
Perfluorononanesulfonic acid (PFNS)	ND	2.2	1.1	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	2.2	1.2	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
Perfluoro-1-butanesulfonamide (FBSA)	ND	2.2	0.85	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
Perfluorohexanesulfonic acid (PFHxS)	13	2.2	0.78	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
Perfluoro-4-oxapentanoic acid (PFMPA)	1.0	2.2	0.78	ng/L	1	PF-20, J	SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.2	0.71	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.2	1.3	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
Perfluoropetanesulfonic acid (PFPeS)	5.0	2.2	0.83	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
Perfluoroundecanoic acid (PFUnA)	ND	2.2	0.93	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.2	0.85	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
Perfluoroheptanoic acid (PFHpA)	11	2.2	0.92	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
Perfluorooctanoic acid (PFOA)	34	2.2	1.5	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
Perfluorooctanesulfonic acid (PFOS)	76	2.2	0.93	ng/L	1		SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB
Perfluorononanoic acid (PFNA)	1.1	2.2	1.0	ng/L	1	J	SOP-454 PFAS	4/18/23	5/10/23 9:24	RRB

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0043

Date Received: 4/1/2023

Field Sample #: MW-TP-1-033123 | Sampled: 3/31/2023 11:00

Sample ID: 23D0043-01

Sample Matrix: Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	0.056	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:23	SFM
Aroclor-1221 [1]	ND	0.20	0.078	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:23	SFM
Aroclor-1232 [1]	ND	0.20	0.070	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:23	SFM
Aroclor-1242 [1]	ND	0.20	0.075	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:23	SFM
Aroclor-1248 [1]	ND	0.20	0.079	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:23	SFM
Aroclor-1254 [2]	ND	0.20	0.091	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:23	SFM
Aroclor-1260 [2]	ND	0.20	0.071	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:23	SFM
Aroclor-1262 [1]	ND	0.20	0.090	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:23	SFM
Aroclor-1268 [1]	ND	0.20	0.072	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:23	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	57.1	30-150		4/6/23 16:23
Decachlorobiphenyl [2]	60.2	30-150		4/6/23 16:23
Tetrachloro-m-xylene [1]	67.9	30-150		4/6/23 16:23
Tetrachloro-m-xylene [2]	70.9	30-150		4/6/23 16:23

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Project Location: Incinerator Rd, Utica, NY Sample Description: Work Order: 23D0043

Date Received: 4/1/2023

Field Sample #: MW-TP-1-033123 Sampled: 3/31/2023 11:00

Sample ID: 23D0043-01

Sample Matrix: Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	ND	0.050	0.045	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:58	HNN
Antimony	ND	0.050	0.0082	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:58	HNN
Arsenic	ND	0.010	0.0047	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:58	HNN
Barium	0.28	0.050	0.0051	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:58	HNN
Beryllium	ND	0.0040	0.0012	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:58	HNN
Cadmium	ND	0.0040	0.0018	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:58	HNN
Calcium	100	0.50	0.22	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:58	HNN
Chromium	ND	0.010	0.0068	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:58	HNN
Cobalt	0.0040	0.010	0.0021	mg/L	1	J	SW-846 6010D	4/4/23	4/5/23 16:58	HNN
Copper	ND	0.010	0.0036	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:58	HNN
Iron	13	0.050	0.047	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:58	HNN
Lead	ND	0.010	0.0068	mg/L	1		SW-846 6010D	4/4/23	4/9/23 0:14	ATP
Magnesium	12	0.050	0.0095	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:58	HNN
Manganese	1.2	0.010	0.0033	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:58	HNN
Mercury	ND	0.00020	0.00014	mg/L	1		SW-846 7470A	4/4/23	4/4/23 12:42	AAJ
Nickel	0.0099	0.010	0.0098	mg/L	1	J	SW-846 6010D	4/4/23	4/5/23 16:58	HNN
Potassium	10	2.0	0.28	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:58	HNN
Selenium	ND	0.050	0.014	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:58	HNN
Silver	ND	0.010	0.0035	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:58	HNN
Sodium	320	2.0	1.2	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:58	HNN
Thallium	ND	0.050	0.021	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:58	HNN
Vanadium	0.023	0.010	0.0038	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:58	HNN
Zinc	0.048	0.010	0.0042	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:58	HNN
Boron	0.21	0.10	0.073	mg/L	1		SW-846 6010D	4/4/23	4/5/23 16:58	HNN
Hardness	310	1.4		mg/L	1		SW-846 6010	4/4/23	4/5/23 16:58	HNN

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0043

Date Received: 4/1/2023

Field Sample #: MW-TP-1-033123 | Sampled: 3/31/2023 11:00

Sample ID: 23D0043-01

Sample Matrix: Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	16	0.30	0.17	mg/L	1		SM19-23 4500 NH3 C	4/19/23	4/20/23 11:23	EC
Bromide	ND	0.50	0.15	mg/L	1		EPA 300.0	4/19/23	4/19/23 6:47	IS
Chemical Oxygen Demand	75	15	13	mg/L	1		EPA 410.4	4/14/23	4/18/23 12:33	is
Chloride	320	10	6.5	mg/L	10		EPA 300.0	4/19/23	4/19/23 15:20	is
Sulfate	61	10	3.2	mg/L	10		EPA 300.0	4/19/23	4/19/23 15:20	is
Total Organic Carbon	60	2.0	1.1	mg/L	2		SM 21-23 5310B	4/19/23	4/19/23 23:06	QH
Alkalinity to pH 4.5	550	1.0	0.70	mg/L	1		SM21-23 2320B	4/12/23	4/12/23 12:38	DET

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0043

Date Received: 4/1/2023

Field Sample #: MW-TP-1-033123 | Sampled: 3/31/2023 11:00

Sample ID: 23D0043-01

Sample Matrix: Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Dissolved)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Dissolved Solids	1000	10	4.9	mg/L	1		SM21-23 2540C	4/5/23	4/5/23 14:21	LL

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0043

Date Received: 4/1/2023

Field Sample #: MW-TP-1-033123 | Sampled: 3/31/2023 11:00

Sample ID: 23D0043-01

Sample Matrix: Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached	-	-		ug/L	1		SM4500 CN C			PALI

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0043

Date Received: 4/1/2023

Field Sample #: MW-TP-2-033123 | Sampled: 3/31/2023 11:10

Sample ID: 23D0043-02

Sample Matrix: Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	31	50	2.0	µg/L	1	J	SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Acrylonitrile	ND	5.0	0.47	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.13	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Benzene	1.3	1.0	0.18	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Bromochloromethane	ND	1.0	0.28	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Bromoform	ND	1.0	0.41	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Bromomethane	ND	2.0	1.3	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
2-Butanone (MEK)	ND	20	1.7	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.3	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
n-Butylbenzene	0.58	1.0	0.15	µg/L	1	J	SW-846 8260D	4/10/23	4/10/23 13:50	EEH
sec-Butylbenzene	1.1	1.0	0.13	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
tert-Butylbenzene	0.34	1.0	0.14	µg/L	1	J	SW-846 8260D	4/10/23	4/10/23 13:50	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.15	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Carbon Disulfide	ND	5.0	1.6	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Chlorobenzene	12	1.0	0.12	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Chlorodibromomethane	ND	0.50	0.20	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Chloroethane	ND	2.0	0.34	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Chloroform	ND	2.0	0.14	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Chloromethane	ND	2.0	0.50	µg/L	1	R-05	SW-846 8260D	4/10/23	4/10/23 13:50	EEH
2-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
4-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.85	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.16	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Dibromomethane	ND	1.0	0.32	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
1,2-Dichlorobenzene	0.73	1.0	0.13	µg/L	1	J	SW-846 8260D	4/10/23	4/10/23 13:50	EEH
1,3-Dichlorobenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
1,4-Dichlorobenzene	2.3	1.0	0.13	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	1.5	µg/L	1	L-04, V-05	SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.16	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
1,1-Dichloroethane	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
1,2-Dichloroethane	ND	1.0	0.30	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
1,1-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
1,2-Dichloropropane	ND	1.0	0.19	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
1,3-Dichloropropane	ND	0.50	0.12	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
2,2-Dichloropropane	ND	1.0	0.35	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
1,1-Dichloropropene	ND	2.0	0.15	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
trans-1,3-Dichloropropene	ND	0.50	0.14	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Diethyl Ether	0.60	2.0	0.14	µg/L	1	J	SW-846 8260D	4/10/23	4/10/23 13:50	EEH

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0043

Date Received: 4/1/2023

Field Sample #: MW-TP-2-033123 | Sampled: 3/31/2023 11:10

Sample ID: 23D0043-02

Sample Matrix: Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.20	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
1,4-Dioxane	ND	50	18	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Ethylbenzene	0.23	1.0	0.22	µg/L	1	J	SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
2-Hexanone (MBK)	ND	10	1.2	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Isopropylbenzene (Cumene)	2.8	1.0	0.15	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
p-Isopropyltoluene (p-Cymene)	0.13	1.0	0.13	µg/L	1	J	SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Methyl Acetate	ND	1.0	0.61	µg/L	1	V-05	SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Methyl Cyclohexane	ND	1.0	0.16	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Methylene Chloride	ND	5.0	0.18	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.3	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Naphthalene	2.0	2.0	0.38	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
n-Propylbenzene	0.25	1.0	0.12	µg/L	1	J	SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.14	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Tetrachloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Tetrahydrofuran	ND	10	0.49	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Toluene	ND	1.0	0.22	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.34	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
1,1,1-Trichloroethane	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
1,1,2-Trichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Trichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
1,2,3-Trichloropropane	ND	2.0	0.28	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.21	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
1,2,4-Trimethylbenzene	1.5	1.0	0.20	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
1,3,5-Trimethylbenzene	0.17	1.0	0.15	µg/L	1	J	SW-846 8260D	4/10/23	4/10/23 13:50	EEH
Vinyl Chloride	ND	2.0	0.24	µg/L	1		SW-846 8260D	4/10/23	4/10/23 13:50	EEH
m+p Xylene	0.68	2.0	0.49	µg/L	1	J	SW-846 8260D	4/10/23	4/10/23 13:50	EEH
o-Xylene	0.34	1.0	0.24	µg/L	1	J	SW-846 8260D	4/10/23	4/10/23 13:50	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
1,2-Dichloroethane-d4	90.8	70-130		4/10/23 13:50	
Toluene-d8	95.4	70-130		4/10/23 13:50	
4-Bromofluorobenzene	97.2	70-130		4/10/23 13:50	

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0043

Date Received: 4/1/2023

Field Sample #: MW-TP-2-033123 | Sampled: 3/31/2023 11:10

Sample ID: 23D0043-02

Sample Matrix: Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	4.9	0.53	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Acenaphthylene	ND	4.9	0.55	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Acetophenone	ND	9.8	0.49	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Aniline	ND	4.9	0.59	µg/L	1	V-05	SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Anthracene	ND	4.9	0.49	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Benzidine	ND	20	10	µg/L	1	L-04, V-04, V-05	SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Benzo(a)anthracene	ND	4.9	0.45	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Benzo(a)pyrene	ND	4.9	0.68	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Benzo(b)fluoranthene	ND	4.9	0.54	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Benzo(g,h,i)perylene	ND	4.9	0.67	µg/L	1	V-06	SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Benzo(k)fluoranthene	ND	4.9	0.62	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Benzoic Acid	ND	9.8	8.2	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Bis(2-chloroethoxy)methane	ND	9.8	0.42	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Bis(2-chloroethyl)ether	ND	9.8	0.49	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Bis(2-chloroisopropyl)ether	ND	9.8	0.63	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Bis(2-Ethylhexyl)phthalate	2.2	9.8	0.82	µg/L	1	J	SW-846 8270E	4/5/23	4/10/23 12:27	AR2
4-Bromophenylphenylether	ND	9.8	0.51	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Butylbenzylphthalate	ND	9.8	0.65	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Carbazole	ND	9.8	0.45	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
4-Chloroaniline	ND	9.8	0.61	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
4-Chloro-3-methylphenol	ND	9.8	0.51	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
2-Chloronaphthalene	ND	9.8	0.51	µg/L	1	L-04	SW-846 8270E	4/5/23	4/10/23 12:27	AR2
2-Chlorophenol	ND	9.8	0.45	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
4-Chlorophenylphenylether	ND	9.8	0.54	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Chrysene	ND	4.9	0.44	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Dibenz(a,h)anthracene	ND	4.9	0.73	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Dibenzofuran	ND	4.9	0.55	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Di-n-butylphthalate	ND	9.8	0.48	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
1,2-Dichlorobenzene	ND	4.9	0.62	µg/L	1	L-04	SW-846 8270E	4/5/23	4/10/23 12:27	AR2
1,3-Dichlorobenzene	ND	4.9	0.63	µg/L	1	L-04	SW-846 8270E	4/5/23	4/10/23 12:27	AR2
1,4-Dichlorobenzene	1.0	4.9	0.61	µg/L	1	L-04, J	SW-846 8270E	4/5/23	4/10/23 12:27	AR2
3,3-Dichlorobenzidine	ND	9.8	0.76	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
2,4-Dichlorophenol	ND	9.8	0.48	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Diethylphthalate	5.5	9.8	0.41	µg/L	1	J	SW-846 8270E	4/5/23	4/10/23 12:27	AR2
2,4-Dimethylphenol	ND	9.8	0.49	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Dimethylphthalate	ND	9.8	0.38	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
4,6-Dinitro-2-methylphenol	ND	9.8	8.3	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
2,4-Dinitrophenol	ND	9.8	8.3	µg/L	1	V-04, V-06	SW-846 8270E	4/5/23	4/10/23 12:27	AR2
2,4-Dinitrotoluene	ND	9.8	0.66	µg/L	1	V-06	SW-846 8270E	4/5/23	4/10/23 12:27	AR2
2,6-Dinitrotoluene	ND	9.8	0.55	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Di-n-octylphthalate	ND	9.8	3.1	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
1,2-Diphenylhydrazine/Azobenzene	ND	9.8	0.56	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Fluoranthene	ND	4.9	0.47	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Fluorene	ND	4.9	0.53	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0043

Date Received: 4/1/2023

Field Sample #: MW-TP-2-033123 | Sampled: 3/31/2023 11:10

Sample ID: 23D0043-02

Sample Matrix: Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	9.8	0.57	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Hexachlorobutadiene	ND	9.8	0.73	µg/L	1	L-04	SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Hexachlorocyclopentadiene	ND	9.8	5.9	µg/L	1	L-04	SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Hexachloroethane	ND	9.8	0.70	µg/L	1	L-04	SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Indeno(1,2,3-cd)pyrene	ND	4.9	0.77	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Isophorone	ND	9.8	0.51	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
1-Methylnaphthalene	1.3	4.9	0.57	µg/L	1	L-04, J	SW-846 8270E	4/5/23	4/10/23 12:27	AR2
2-Methylnaphthalene	ND	4.9	0.66	µg/L	1	L-04	SW-846 8270E	4/5/23	4/10/23 12:27	AR2
2-Methylphenol	ND	9.8	0.48	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
3/4-Methylphenol	0.98	9.8	0.43	µg/L	1	J	SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Naphthalene	ND	4.9	0.59	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
2-Nitroaniline	ND	9.8	0.71	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
3-Nitroaniline	ND	9.8	0.58	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
4-Nitroaniline	ND	9.8	0.67	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Nitrobenzene	ND	9.8	0.57	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
2-Nitrophenol	ND	9.8	0.50	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
4-Nitrophenol	ND	9.8	1.9	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
N-Nitrosodimethylamine	ND	9.8	0.56	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
N-Nitrosodiphenylamine/Diphenylamine	ND	9.8	0.42	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
N-Nitrosodi-n-propylamine	ND	9.8	0.56	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Pentachloronitrobenzene	ND	9.8	0.67	µg/L	1	V-06	SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Pentachlorophenol	ND	9.8	0.65	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Phenanthrene	ND	4.9	0.50	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Phenol	ND	9.8	0.19	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Pyrene	ND	4.9	0.64	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
Pyridine	ND	4.9	3.5	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
1,2,4,5-Tetrachlorobenzene	ND	9.8	0.65	µg/L	1	L-04	SW-846 8270E	4/5/23	4/10/23 12:27	AR2
1,2,4-Trichlorobenzene	ND	4.9	0.65	µg/L	1	L-04	SW-846 8270E	4/5/23	4/10/23 12:27	AR2
2,4,5-Trichlorophenol	ND	9.8	0.54	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2
2,4,6-Trichlorophenol	ND	9.8	0.46	µg/L	1		SW-846 8270E	4/5/23	4/10/23 12:27	AR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	37.2	15-110		4/10/23 12:27
Phenol-d6	26.8	15-110		4/10/23 12:27
Nitrobenzene-d5	71.6	30-130		4/10/23 12:27
2-Fluorobiphenyl	57.9	30-130		4/10/23 12:27
2,4,6-Tribromophenol	84.5	15-110		4/10/23 12:27
p-Terphenyl-d14	84.4	30-130		4/10/23 12:27

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0043

Date Received: 4/1/2023

Field Sample #: MW-TP-2-033123 | Sampled: 3/31/2023 11:10

Sample ID: 23D0043-02

Sample Matrix: Water

1,4-Dioxane by isotope dilution GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,4-Dioxane	ND	0.19	0.032	µg/L	1		SW-846 8270E	4/7/23	4/13/23 18:11	SPF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,4-Dioxane-d8	26.2	15-110		4/13/23 18:11

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0043

Date Received: 4/1/2023

Field Sample #: MW-TP-2-033123 | Sampled: 3/31/2023 11:10

Sample ID: 23D0043-02

Sample Matrix: Water

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	54	5.6	2.1	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
Perfluorobutanesulfonic acid (PFBS)	15	5.6	2.1	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
Perfluoropentanoic acid (PFPeA)	45	5.6	2.2	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
Perfluorohexanoic acid (PFHxA)	17	5.6	2.3	ng/L	1	PF-20, PF-23	SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
11Cl-PF3OUdS (F53B Major)	ND	5.6	2.1	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
9Cl-PF3ONS (F53B Minor)	ND	5.6	2.1	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	5.6	2.9	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	5.6	1.6	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	5.6	2.7	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
Perfluorodecanoic acid (PFDA)	ND	5.6	2.3	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
Perfluorododecanoic acid (PFDoA)	ND	5.6	2.6	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	5.6	2.0	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
Perfluoroheptanesulfonic acid (PFHpS)	10	5.6	2.3	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
N-EtFOSAA (NEtFOSAA)	12	5.6	2.2	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
N-MeFOSAA (NMeFOSAA)	ND	5.6	2.9	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
Perfluorotetradecanoic acid (PFTA)	ND	5.6	2.7	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
Perfluorotridecanoic acid (PFTrDA)	ND	5.6	2.3	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	5.6	2.1	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
Perfluorodecanesulfonic acid (PFDS)	ND	5.6	2.9	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
Perfluorooctanesulfonamide (FOSA)	ND	5.6	2.8	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
Perfluorononanesulfonic acid (PFNS)	ND	5.6	2.9	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	5.6	2.9	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
Perfluoro-1-butanesulfonamide (FBSA)	2.5	5.6	2.2	ng/L	1	J	SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
Perfluorohexanesulfonic acid (PFHxS)	43	5.6	2.0	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	5.6	2.0	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	5.6	1.8	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	5.6	3.4	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
Perfluoropetanesulfonic acid (PFPeS)	12	5.6	2.1	ng/L	1	PF-20	SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
Perfluoroundecanoic acid (PFUnA)	ND	5.6	2.4	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	5.6	2.2	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
Perfluoroheptanoic acid (PFHpA)	11	5.6	2.3	ng/L	1	PF-20	SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
Perfluorooctanoic acid (PFOA)	94	5.6	3.8	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
Perfluorooctanesulfonic acid (PFOS)	250	5.6	2.4	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB
Perfluorononanoic acid (PFNA)	ND	5.6	2.6	ng/L	1		SOP-454 PFAS	4/18/23	5/9/23 19:31	RRB

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0043

Date Received: 4/1/2023

Field Sample #: MW-TP-2-033123 | Sampled: 3/31/2023 11:10

Sample ID: 23D0043-02

Sample Matrix: Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	0.057	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:40	SFM
Aroclor-1221 [1]	ND	0.20	0.079	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:40	SFM
Aroclor-1232 [1]	ND	0.20	0.072	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:40	SFM
Aroclor-1242 [1]	ND	0.20	0.077	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:40	SFM
Aroclor-1248 [2]	ND	0.20	0.087	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:40	SFM
Aroclor-1254 [2]	ND	0.20	0.092	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:40	SFM
Aroclor-1260 [1]	ND	0.20	0.059	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:40	SFM
Aroclor-1262 [1]	ND	0.20	0.092	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:40	SFM
Aroclor-1268 [1]	ND	0.20	0.073	µg/L	1		SW-846 8082A	4/4/23	4/6/23 16:40	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	65.8	30-150		4/6/23 16:40
Decachlorobiphenyl [2]	69.0	30-150		4/6/23 16:40
Tetrachloro-m-xylene [1]	74.1	30-150		4/6/23 16:40
Tetrachloro-m-xylene [2]	77.1	30-150		4/6/23 16:40

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0043

Date Received: 4/1/2023

Field Sample #: MW-TP-2-033123 | Sampled: 3/31/2023 11:10

Sample ID: 23D0043-02

Sample Matrix: Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	0.11	0.050	0.045	mg/L	1		SW-846 6010D	4/4/23	4/5/23 17:04	HNN
Antimony	ND	0.050	0.0082	mg/L	1		SW-846 6010D	4/4/23	4/5/23 17:04	HNN
Arsenic	ND	0.010	0.0047	mg/L	1		SW-846 6010D	4/4/23	4/5/23 17:04	HNN
Barium	0.22	0.050	0.0051	mg/L	1		SW-846 6010D	4/4/23	4/5/23 17:04	HNN
Beryllium	ND	0.0040	0.0012	mg/L	1		SW-846 6010D	4/4/23	4/5/23 17:04	HNN
Cadmium	ND	0.0040	0.0018	mg/L	1		SW-846 6010D	4/4/23	4/5/23 17:04	HNN
Calcium	230	0.50	0.22	mg/L	1		SW-846 6010D	4/4/23	4/5/23 17:04	HNN
Chromium	ND	0.010	0.0068	mg/L	1		SW-846 6010D	4/4/23	4/5/23 17:04	HNN
Cobalt	0.0066	0.010	0.0021	mg/L	1	J	SW-846 6010D	4/4/23	4/5/23 17:04	HNN
Copper	0.016	0.010	0.0036	mg/L	1		SW-846 6010D	4/4/23	4/5/23 17:04	HNN
Iron	38	0.050	0.047	mg/L	1		SW-846 6010D	4/4/23	4/5/23 17:04	HNN
Lead	0.0071	0.010	0.0068	mg/L	1	J	SW-846 6010D	4/4/23	4/9/23 0:20	ATP
Magnesium	37	0.050	0.0095	mg/L	1		SW-846 6010D	4/4/23	4/5/23 17:04	HNN
Manganese	2.4	0.010	0.0033	mg/L	1		SW-846 6010D	4/4/23	4/5/23 17:04	HNN
Mercury	0.00015	0.00020	0.00014	mg/L	1	J	SW-846 7470A	4/4/23	4/4/23 12:43	AAJ
Nickel	0.010	0.010	0.0098	mg/L	1		SW-846 6010D	4/4/23	4/5/23 17:04	HNN
Potassium	22	2.0	0.28	mg/L	1		SW-846 6010D	4/4/23	4/5/23 17:04	HNN
Selenium	ND	0.050	0.014	mg/L	1		SW-846 6010D	4/4/23	4/5/23 17:04	HNN
Silver	ND	0.010	0.0035	mg/L	1		SW-846 6010D	4/4/23	4/5/23 17:04	HNN
Sodium	14	2.0	1.2	mg/L	1		SW-846 6010D	4/4/23	4/5/23 17:04	HNN
Thallium	ND	0.050	0.021	mg/L	1		SW-846 6010D	4/4/23	4/5/23 17:04	HNN
Vanadium	0.041	0.010	0.0038	mg/L	1		SW-846 6010D	4/4/23	4/5/23 17:04	HNN
Zinc	0.11	0.010	0.0042	mg/L	1		SW-846 6010D	4/4/23	4/5/23 17:04	HNN
Boron	0.44	0.10	0.073	mg/L	1		SW-846 6010D	4/4/23	4/5/23 17:04	HNN
Hardness	730	1.4		mg/L	1		SW-846 6010	4/4/23	4/5/23 17:04	HNN

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0043

Date Received: 4/1/2023

Field Sample #: MW-TP-2-033123 | Sampled: 3/31/2023 11:10

Sample ID: 23D0043-02

Sample Matrix: Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	38	0.30	0.17	mg/L	1		SM19-23 4500 NH3 C	4/19/23	4/20/23 11:24	EC
Bromide	ND	0.50	0.15	mg/L	1		EPA 300.0	4/19/23	4/19/23 7:10	IS
Chemical Oxygen Demand	63	15	13	mg/L	1		EPA 410.4	4/14/23	4/18/23 12:33	is
Chloride	7.3	1.0	0.65	mg/L	1		EPA 300.0	4/19/23	4/19/23 7:10	IS
Sulfate	50	1.0	0.32	mg/L	1		EPA 300.0	4/19/23	4/19/23 7:10	IS
Total Organic Carbon	130	5.0	2.8	mg/L	5		SM 21-23 5310B	4/24/23	4/24/23 13:46	IS
Alkalinity to pH 4.5	790	1.0	0.70	mg/L	1		SM21-23 2320B	4/12/23	4/12/23 12:38	DET

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0043

Date Received: 4/1/2023

Field Sample #: MW-TP-2-033123 | Sampled: 3/31/2023 11:10

Sample ID: 23D0043-02

Sample Matrix: Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Dissolved)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Total Dissolved Solids	650	10	4.9	mg/L	1		SM21-23 2540C	4/5/23	4/5/23 14:21	LL

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0043

Date Received: 4/1/2023

Field Sample #: MW-TP-2-033123 | Sampled: 3/31/2023 11:10

Sample ID: 23D0043-02

Sample Matrix: Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
See Attached	-	-		ug/L	1		SM4500 CN C			PALI

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Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0043

Date Received: 4/1/2023

Field Sample #: TB-033123 | Sampled: 3/31/2023 00:00

Sample ID: 23D0043-03

Sample Matrix: Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	2.0	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Acrylonitrile	ND	5.0	0.47	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.13	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Benzene	ND	1.0	0.18	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Bromochloromethane	ND	1.0	0.28	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Bromoform	ND	1.0	0.41	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Bromomethane	ND	2.0	1.3	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
2-Butanone (MEK)	ND	20	1.7	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
tert-Butyl Alcohol (TBA)	ND	20	4.3	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
n-Butylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
sec-Butylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
tert-Butylbenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Carbon Disulfide	ND	5.0	1.6	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Chlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Chlorodibromomethane	ND	0.50	0.20	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Chloroethane	ND	2.0	0.34	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Chloroform	ND	2.0	0.14	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Chloromethane	ND	2.0	0.50	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
2-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
4-Chlorotoluene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.85	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.16	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Dibromomethane	ND	1.0	0.32	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
1,2-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
1,3-Dichlorobenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	1.5	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.16	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
1,1-Dichloroethane	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
1,2-Dichloroethane	ND	1.0	0.30	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
1,1-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
1,2-Dichloropropane	ND	1.0	0.19	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
1,3-Dichloropropane	ND	0.50	0.12	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
2,2-Dichloropropane	ND	1.0	0.35	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
1,1-Dichloropropene	ND	2.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
trans-1,3-Dichloropropene	ND	0.50	0.14	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Diethyl Ether	ND	2.0	0.14	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH

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

Project Location: Incinerator Rd, Utica, NY | Sample Description: | Work Order: 23D0043

Date Received: 4/1/2023

Field Sample #: TB-033123 | Sampled: 3/31/2023 00:00

Sample ID: 23D0043-03

Sample Matrix: Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.20	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
1,4-Dioxane	ND	50	18	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Ethylbenzene	ND	1.0	0.22	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Hexachlorobutadiene	ND	0.60	0.47	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
2-Hexanone (MBK)	ND	10	1.2	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.13	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Methyl Acetate	ND	1.0	0.61	µg/L	1	L-04, V-05	SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Methyl Cyclohexane	ND	1.0	0.16	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Methylene Chloride	ND	5.0	0.18	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.3	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Naphthalene	ND	2.0	0.38	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
n-Propylbenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.14	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Tetrachloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Tetrahydrofuran	ND	10	0.49	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Toluene	ND	1.0	0.22	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.34	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.30	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
1,1,1-Trichloroethane	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
1,1,2-Trichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Trichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
1,2,3-Trichloropropane	ND	2.0	0.28	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.21	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.20	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
Vinyl Chloride	ND	2.0	0.24	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
m+p Xylene	ND	2.0	0.49	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH
o-Xylene	ND	1.0	0.24	µg/L	1		SW-846 8260D	4/7/23	4/8/23 12:46	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	91.4	70-130		4/8/23 12:46
Toluene-d8	97.6	70-130		4/8/23 12:46
4-Bromofluorobenzene	99.2	70-130		4/8/23 12:46

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Sample Extraction Data

Prep Method: EPA 300.0 **Analytical Method: EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0043-01 [MW-TP-1-033123]	B337500	10.0	10.0	04/19/23
23D0043-02 [MW-TP-2-033123]	B337500	10.0	10.0	04/19/23

Prep Method: EPA 300.0 **Analytical Method: EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0043-02 [MW-TP-2-033123]	B337502	10.0	10.0	04/19/23

Prep Method: EPA 300.0 **Analytical Method: EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0043-02 [MW-TP-2-033123]	B337504	10.0	10.0	04/19/23

Prep Method: EPA 300.0 **Analytical Method: EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0043-01 [MW-TP-1-033123]	B337576	10.0	10.0	04/19/23

Prep Method: EPA 300.0 **Analytical Method: EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0043-01 [MW-TP-1-033123]	B337578	10.0	10.0	04/19/23

EPA 410.4

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0043-01 [MW-TP-1-033123]	B337262	2.00	2.00	04/14/23
23D0043-02 [MW-TP-2-033123]	B337262	2.00	2.00	04/14/23

SM 21-23 5310B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0043-01 [MW-TP-1-033123]	B337475	50.0	50.0	04/19/23

SM 21-23 5310B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0043-02 [MW-TP-2-033123]	B337844	50.0	50.0	04/24/23

Prep Method: SM 4500-NH3 C **Analytical Method: SM19-23 4500 NH3 C**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0043-01 [MW-TP-1-033123]	B337624	100	100	04/19/23
23D0043-02 [MW-TP-2-033123]	B337624	100	100	04/19/23

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Sample Extraction Data

SM21-23 2320B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0043-01 [MW-TP-1-033123]	B336899	100	100	04/12/23
23D0043-02 [MW-TP-2-033123]	B336899	100	100	04/12/23

SM21-23 2540C

Lab Number [Field ID]	Batch	Initial [mL]	Date
23D0043-01 [MW-TP-1-033123]	B336178	50.0	04/05/23
23D0043-02 [MW-TP-2-033123]	B336178	50.0	04/05/23

Prep Method: SOP 454-PFAAS **Analytical Method: SOP-454 PFAS**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0043-01 [MW-TP-1-033123]	B336059	229	1.00	04/18/23
23D0043-02 [MW-TP-2-033123]	B336059	89.8	1.00	04/18/23

Prep Method: SW-846 3005A **Analytical Method: SW-846 6010**

Lab Number [Field ID]	Batch	Initial [mL]	Date
23D0043-01 [MW-TP-1-033123]	B336100	50.0	04/04/23
23D0043-02 [MW-TP-2-033123]	B336100	50.0	04/04/23

Prep Method: SW-846 3005A **Analytical Method: SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0043-01 [MW-TP-1-033123]	B336100	50.0	50.0	04/04/23
23D0043-02 [MW-TP-2-033123]	B336100	50.0	50.0	04/04/23

Prep Method: SW-846 7470A Prep **Analytical Method: SW-846 7470A**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0043-01 [MW-TP-1-033123]	B335977	10.0	10.0	04/04/23
23D0043-02 [MW-TP-2-033123]	B335977	10.0	10.0	04/04/23

Prep Method: SW-846 3510C **Analytical Method: SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0043-01 [MW-TP-1-033123]	B336013	1020	10.0	04/04/23
23D0043-02 [MW-TP-2-033123]	B336013	1000	10.0	04/04/23

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0043-03 [TB-033123]	B336477	5	5.00	04/07/23

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Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0043-01 [MW-TP-1-033123]	B336478	5	5.00	04/10/23
23D0043-02 [MW-TP-2-033123]	B336478	5	5.00	04/10/23

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0043-01 [MW-TP-1-033123]	B336097	1020	1.00	04/05/23
23D0043-02 [MW-TP-2-033123]	B336097	1020	1.00	04/05/23

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23D0043-01 [MW-TP-1-033123]	B336473	1030	1.00	04/07/23
23D0043-02 [MW-TP-2-033123]	B336473	1030	1.00	04/07/23

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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
Batch B336477 - SW-846 5030B										
Blank (B336477-BLK1)				Prepared: 04/07/23 Analyzed: 04/08/23						
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							L-04, V-05

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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 B336477 - SW-846 5030B											
Blank (B336477-BLK1)				Prepared: 04/07/23 Analyzed: 04/08/23							
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	*20.4*		µg/L	25.0		81.7	70-130				
Surrogate: Toluene-d8	*24.5*		µg/L	25.0		98.0	70-130				
Surrogate: 4-Bromofluorobenzene	*25.2*		µg/L	25.0		101	70-130				
LCS (B336477-BS1)				Prepared: 04/07/23 Analyzed: 04/08/23							
Acetone	89.7	50	µg/L	100		89.7	70-160				†
Acrylonitrile	9.41	5.0	µg/L	10.0		94.1	70-130				
tert-Amyl Methyl Ether (TAME)	9.06	0.50	µg/L	10.0		90.6	70-130				
Benzene	9.42	1.0	µg/L	10.0		94.2	70-130				
Bromobenzene	10.3	1.0	µg/L	10.0		103	70-130				
Bromochloromethane	10.5	1.0	µg/L	10.0		105	70-130				
Bromodichloromethane	10.4	0.50	µg/L	10.0		104	70-130				
Bromoform	11.5	1.0	µg/L	10.0		115	70-130				
Bromomethane	11.8	2.0	µg/L	10.0		118	40-160				†
2-Butanone (MEK)	106	20	µg/L	100		106	40-160				†
tert-Butyl Alcohol (TBA)	98.6	20	µg/L	100		98.6	40-160				†
n-Butylbenzene	9.63	1.0	µg/L	10.0		96.3	70-130				
sec-Butylbenzene	9.99	1.0	µg/L	10.0		99.9	70-130				
tert-Butylbenzene	9.79	1.0	µg/L	10.0		97.9	70-130				
tert-Butyl Ethyl Ether (TBEE)	9.33	0.50	µg/L	10.0		93.3	70-130				
Carbon Disulfide	110	5.0	µg/L	100		110	70-130				
Carbon Tetrachloride	10.7	5.0	µg/L	10.0		107	70-130				
Chlorobenzene	10.8	1.0	µg/L	10.0		108	70-130				
Chlorodibromomethane	11.1	0.50	µg/L	10.0		111	70-130				
Chloroethane	11.9	2.0	µg/L	10.0		119	70-130			V-20	
Chloroform	9.49	2.0	µg/L	10.0		94.9	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 B336477 - SW-846 5030B											
LCS (B336477-BS1)				Prepared: 04/07/23 Analyzed: 04/08/23							
Chloromethane	10.1	2.0	µg/L	10.0		101	40-160				†
2-Chlorotoluene	9.42	1.0	µg/L	10.0		94.2	70-130				
4-Chlorotoluene	10.2	1.0	µg/L	10.0		102	70-130				
1,2-Dibromo-3-chloropropane (DBCP)	9.67	5.0	µg/L	10.0		96.7	70-130				
1,2-Dibromoethane (EDB)	10.8	0.50	µg/L	10.0		108	70-130				
Dibromomethane	10.3	1.0	µg/L	10.0		103	70-130				
1,2-Dichlorobenzene	10.2	1.0	µg/L	10.0		102	70-130				
1,3-Dichlorobenzene	10.0	1.0	µg/L	10.0		100	70-130				
1,4-Dichlorobenzene	9.79	1.0	µg/L	10.0		97.9	70-130				
trans-1,4-Dichloro-2-butene	8.81	2.0	µg/L	10.0		88.1	70-130				
Dichlorodifluoromethane (Freon 12)	10.6	2.0	µg/L	10.0		106	40-160				†
1,1-Dichloroethane	9.94	1.0	µg/L	10.0		99.4	70-130				
1,2-Dichloroethane	9.67	1.0	µg/L	10.0		96.7	70-130				
1,1-Dichloroethylene	10.2	1.0	µg/L	10.0		102	70-130				
cis-1,2-Dichloroethylene	9.85	1.0	µg/L	10.0		98.5	70-130				
trans-1,2-Dichloroethylene	9.66	1.0	µg/L	10.0		96.6	70-130				
1,2-Dichloropropane	9.77	1.0	µg/L	10.0		97.7	70-130				
1,3-Dichloropropane	10.2	0.50	µg/L	10.0		102	70-130				
2,2-Dichloropropane	9.63	1.0	µg/L	10.0		96.3	40-130				†
1,1-Dichloropropene	10.0	2.0	µg/L	10.0		100	70-130				
cis-1,3-Dichloropropene	10.0	0.50	µg/L	10.0		100	70-130				
trans-1,3-Dichloropropene	9.62	0.50	µg/L	10.0		96.2	70-130				
Diethyl Ether	10.2	2.0	µg/L	10.0		102	70-130				
Diisopropyl Ether (DIPE)	9.91	0.50	µg/L	10.0		99.1	70-130				
1,4-Dioxane	105	50	µg/L	100		105	40-130				†
Ethylbenzene	10.6	1.0	µg/L	10.0		106	70-130				
Hexachlorobutadiene	10.3	0.60	µg/L	10.0		103	70-130				
2-Hexanone (MBK)	103	10	µg/L	100		103	70-160				†
Isopropylbenzene (Cumene)	10.4	1.0	µg/L	10.0		104	70-130				
p-Isopropyltoluene (p-Cymene)	9.77	1.0	µg/L	10.0		97.7	70-130				
Methyl Acetate	6.65	1.0	µg/L	10.0		**66.5**	70-130	*		L-04, V-05	
Methyl tert-Butyl Ether (MTBE)	9.71	1.0	µg/L	10.0		97.1	70-130				
Methyl Cyclohexane	9.92	1.0	µg/L	10.0		99.2	70-130				
Methylene Chloride	10.0	5.0	µg/L	10.0		100	70-130				
4-Methyl-2-pentanone (MIBK)	104	10	µg/L	100		104	70-160				†
Naphthalene	9.64	2.0	µg/L	10.0		96.4	40-130				†
n-Propylbenzene	10.3	1.0	µg/L	10.0		103	70-130				
Styrene	10.6	1.0	µg/L	10.0		106	70-130				
1,1,1,2-Tetrachloroethane	11.1	1.0	µg/L	10.0		111	70-130				
1,1,2,2-Tetrachloroethane	10.8	0.50	µg/L	10.0		108	70-130				
Tetrachloroethylene	10.6	1.0	µg/L	10.0		106	70-130				
Tetrahydrofuran	9.89	10	µg/L	10.0		98.9	70-130			J	
Toluene	10.1	1.0	µg/L	10.0		101	70-130				
1,2,3-Trichlorobenzene	10.2	5.0	µg/L	10.0		102	70-130				
1,2,4-Trichlorobenzene	9.51	1.0	µg/L	10.0		95.1	70-130				
1,3,5-Trichlorobenzene	9.92	1.0	µg/L	10.0		99.2	70-130				
1,1,1-Trichloroethane	10.4	1.0	µg/L	10.0		104	70-130				
1,1,2-Trichloroethane	10.6	1.0	µg/L	10.0		106	70-130				
Trichloroethylene	10.5	1.0	µg/L	10.0		105	70-130				
Trichlorofluoromethane (Freon 11)	10.9	2.0	µg/L	10.0		109	70-130				
1,2,3-Trichloropropane	10.6	2.0	µg/L	10.0		106	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 B336477 - SW-846 5030B												
LCS (B336477-BS1)				Prepared: 04/07/23 Analyzed: 04/08/23								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10.6	1.0	µg/L	10.0		106		70-130				
1,2,4-Trimethylbenzene	9.77	1.0	µg/L	10.0		97.7		70-130				
1,3,5-Trimethylbenzene	10.2	1.0	µg/L	10.0		102		70-130				
Vinyl Chloride	16.2	2.0	µg/L	10.0		**162**	*	40-160			L-06, V-06	†
m+p Xylene	20.9	2.0	µg/L	20.0		104		70-130				
o-Xylene	10.6	1.0	µg/L	10.0		106		70-130				
Surrogate: 1,2-Dichloroethane-d4	*22.8*		µg/L	25.0		91.3		70-130				
Surrogate: Toluene-d8	*24.6*		µg/L	25.0		98.3		70-130				
Surrogate: 4-Bromofluorobenzene	*25.4*		µg/L	25.0		102		70-130				
LCS Dup (B336477-BSD1)				Prepared: 04/07/23 Analyzed: 04/08/23								
Acetone	90.6	50	µg/L	100		90.6		70-160	1.01	25		†
Acrylonitrile	9.88	5.0	µg/L	10.0		98.8		70-130	4.87	25		
tert-Amyl Methyl Ether (TAME)	8.99	0.50	µg/L	10.0		89.9		70-130	0.776	25		
Benzene	9.76	1.0	µg/L	10.0		97.6		70-130	3.55	25		
Bromobenzene	10.0	1.0	µg/L	10.0		100		70-130	2.65	25		
Bromochloromethane	10.2	1.0	µg/L	10.0		102		70-130	2.80	25		
Bromodichloromethane	10.3	0.50	µg/L	10.0		103		70-130	0.867	25		
Bromoform	11.2	1.0	µg/L	10.0		112		70-130	2.47	25		
Bromomethane	11.8	2.0	µg/L	10.0		118		40-160	0.423	25		†
2-Butanone (MEK)	101	20	µg/L	100		101		40-160	4.40	25		†
tert-Butyl Alcohol (TBA)	104	20	µg/L	100		104		40-160	5.33	25		†
n-Butylbenzene	9.64	1.0	µg/L	10.0		96.4		70-130	0.104	25		
sec-Butylbenzene	10.2	1.0	µg/L	10.0		102		70-130	2.57	25		
tert-Butylbenzene	10.2	1.0	µg/L	10.0		102		70-130	4.10	25		
tert-Butyl Ethyl Ether (TBEE)	9.25	0.50	µg/L	10.0		92.5		70-130	0.861	25		
Carbon Disulfide	113	5.0	µg/L	100		113		70-130	3.26	25		
Carbon Tetrachloride	11.1	5.0	µg/L	10.0		111		70-130	3.59	25		
Chlorobenzene	10.8	1.0	µg/L	10.0		108		70-130	0.0929	25		
Chlorodibromomethane	10.7	0.50	µg/L	10.0		107		70-130	3.95	25		
Chloroethane	12.1	2.0	µg/L	10.0		121		70-130	1.59	25	V-20	
Chloroform	9.40	2.0	µg/L	10.0		94.0		70-130	0.953	25		
Chloromethane	10.3	2.0	µg/L	10.0		103		40-160	1.86	25		†
2-Chlorotoluene	9.67	1.0	µg/L	10.0		96.7		70-130	2.62	25		
4-Chlorotoluene	10.2	1.0	µg/L	10.0		102		70-130	0.687	25		
1,2-Dibromo-3-chloropropane (DBCP)	9.83	5.0	µg/L	10.0		98.3		70-130	1.64	25		
1,2-Dibromoethane (EDB)	10.6	0.50	µg/L	10.0		106		70-130	2.71	25		
Dibromomethane	10.2	1.0	µg/L	10.0		102		70-130	1.07	25		
1,2-Dichlorobenzene	10.1	1.0	µg/L	10.0		101		70-130	0.888	25		
1,3-Dichlorobenzene	9.99	1.0	µg/L	10.0		99.9		70-130	0.400	25		
1,4-Dichlorobenzene	9.64	1.0	µg/L	10.0		96.4		70-130	1.54	25		
trans-1,4-Dichloro-2-butene	9.07	2.0	µg/L	10.0		90.7		70-130	2.91	25		
Dichlorodifluoromethane (Freon 12)	11.2	2.0	µg/L	10.0		112		40-160	5.86	25		†
1,1-Dichloroethane	9.88	1.0	µg/L	10.0		98.8		70-130	0.605	25		
1,2-Dichloroethane	9.39	1.0	µg/L	10.0		93.9		70-130	2.94	25		
1,1-Dichloroethylene	10.9	1.0	µg/L	10.0		109		70-130	6.54	25		
cis-1,2-Dichloroethylene	9.78	1.0	µg/L	10.0		97.8		70-130	0.713	25		
trans-1,2-Dichloroethylene	10.0	1.0	µg/L	10.0		100		70-130	3.66	25		
1,2-Dichloropropane	9.70	1.0	µg/L	10.0		97.0		70-130	0.719	25		
1,3-Dichloropropane	10.1	0.50	µg/L	10.0		101		70-130	1.09	25		
2,2-Dichloropropane	10.1	1.0	µg/L	10.0		101		40-130	4.47	25		†
1,1-Dichloropropene	10.2	2.0	µg/L	10.0		102		70-130	2.17	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	
Batch B336477 - SW-846 5030B												
LCS Dup (B336477-BSD1)				Prepared: 04/07/23 Analyzed: 04/08/23								
cis-1,3-Dichloropropene	9.94	0.50	µg/L	10.0		99.4		70-130	0.802	25		
trans-1,3-Dichloropropene	9.66	0.50	µg/L	10.0		96.6		70-130	0.415	25		
Diethyl Ether	10.1	2.0	µg/L	10.0		101		70-130	0.394	25		
Diisopropyl Ether (DIPE)	9.92	0.50	µg/L	10.0		99.2		70-130	0.101	25		
1,4-Dioxane	99.4	50	µg/L	100		99.4		40-130	5.92	50		† ‡
Ethylbenzene	10.6	1.0	µg/L	10.0		106		70-130	0.755	25		
Hexachlorobutadiene	10.7	0.60	µg/L	10.0		107		70-130	3.90	25		
2-Hexanone (MBK)	102	10	µg/L	100		102		70-160	1.11	25		†
Isopropylbenzene (Cumene)	10.6	1.0	µg/L	10.0		106		70-130	1.14	25		
p-Isopropyltoluene (p-Cymene)	10.1	1.0	µg/L	10.0		101		70-130	3.62	25		
Methyl Acetate	6.61	1.0	µg/L	10.0		**66.1**	*	70-130	0.603	25	L-04, V-05	
Methyl tert-Butyl Ether (MTBE)	9.12	1.0	µg/L	10.0		91.2		70-130	6.27	25		
Methyl Cyclohexane	10.4	1.0	µg/L	10.0		104		70-130	5.11	25		
Methylene Chloride	10.2	5.0	µg/L	10.0		102		70-130	1.19	25		
4-Methyl-2-pentanone (MIBK)	102	10	µg/L	100		102		70-160	1.08	25		†
Naphthalene	9.76	2.0	µg/L	10.0		97.6		40-130	1.24	25		†
n-Propylbenzene	10.5	1.0	µg/L	10.0		105		70-130	1.93	25		
Styrene	10.6	1.0	µg/L	10.0		106		70-130	0.0944	25		
1,1,1,2-Tetrachloroethane	11.0	1.0	µg/L	10.0		110		70-130	0.544	25		
1,1,2,2-Tetrachloroethane	10.8	0.50	µg/L	10.0		108		70-130	0.185	25		
Tetrachloroethylene	10.6	1.0	µg/L	10.0		106		70-130	0.282	25		
Tetrahydrofuran	10.6	10	µg/L	10.0		106		70-130	6.55	25		
Toluene	10.2	1.0	µg/L	10.0		102		70-130	1.57	25		
1,2,3-Trichlorobenzene	10.2	5.0	µg/L	10.0		102		70-130	0.0979	25		
1,2,4-Trichlorobenzene	9.66	1.0	µg/L	10.0		96.6		70-130	1.56	25		
1,3,5-Trichlorobenzene	9.94	1.0	µg/L	10.0		99.4		70-130	0.201	25		
1,1,1-Trichloroethane	10.6	1.0	µg/L	10.0		106		70-130	2.57	25		
1,1,2-Trichloroethane	10.1	1.0	µg/L	10.0		101		70-130	5.40	25		
Trichloroethylene	10.1	1.0	µg/L	10.0		101		70-130	3.88	25		
Trichlorofluoromethane (Freon 11)	11.1	2.0	µg/L	10.0		111		70-130	1.63	25		
1,2,3-Trichloropropane	10.4	2.0	µg/L	10.0		104		70-130	1.53	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	11.4	1.0	µg/L	10.0		114		70-130	7.28	25		
1,2,4-Trimethylbenzene	9.88	1.0	µg/L	10.0		98.8		70-130	1.12	25		
1,3,5-Trimethylbenzene	10.2	1.0	µg/L	10.0		102		70-130	0.784	25		
Vinyl Chloride	16.3	2.0	µg/L	10.0		**163**	*	40-160	0.552	25	L-06, V-06	†
m+p Xylene	21.0	2.0	µg/L	20.0		105		70-130	0.715	25		
o-Xylene	10.6	1.0	µg/L	10.0		106		70-130	0.755	25		
Surrogate: 1,2-Dichloroethane-d4	*22.9*		µg/L	25.0		91.5		70-130				
Surrogate: Toluene-d8	*24.8*		µg/L	25.0		99.4		70-130				
Surrogate: 4-Bromofluorobenzene	*25.4*		µg/L	25.0		102		70-130				
Batch B336478 - SW-846 5030B												
Blank (B336478-BLK1)				Prepared: 04/07/23 Analyzed: 04/10/23								
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									

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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 B336478 - SW-846 5030B										
Blank (B336478-BLK1)				Prepared: 04/07/23 Analyzed: 04/10/23						
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							R-05
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							L-04, V-05
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							V-05
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							

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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 B336478 - SW-846 5030B												
Blank (B336478-BLK1)				Prepared: 04/07/23 Analyzed: 04/10/23								
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	*20.6*		µg/L	25.0		82.2		70-130				
Surrogate: Toluene-d8	*24.4*		µg/L	25.0		97.7		70-130				
Surrogate: 4-Bromofluorobenzene	*25.4*		µg/L	25.0		101		70-130				
LCS (B336478-BS1)				Prepared: 04/07/23 Analyzed: 04/10/23								
Acetone	93.8	50	µg/L	100		93.8		70-160				†
Acrylonitrile	9.92	5.0	µg/L	10.0		99.2		70-130				
tert-Amyl Methyl Ether (TAME)	10.1	0.50	µg/L	10.0		101		70-130				
Benzene	10.0	1.0	µg/L	10.0		100		70-130				
Bromobenzene	10.7	1.0	µg/L	10.0		107		70-130				
Bromochloromethane	11.2	1.0	µg/L	10.0		112		70-130				
Bromodichloromethane	11.1	0.50	µg/L	10.0		111		70-130				
Bromoform	12.1	1.0	µg/L	10.0		121		70-130				
Bromomethane	13.8	2.0	µg/L	10.0		138		40-160			V-20	†
2-Butanone (MEK)	101	20	µg/L	100		101		40-160				†
tert-Butyl Alcohol (TBA)	103	20	µg/L	100		103		40-160				†
n-Butylbenzene	10.3	1.0	µg/L	10.0		103		70-130				
sec-Butylbenzene	10.2	1.0	µg/L	10.0		102		70-130				
tert-Butylbenzene	9.91	1.0	µg/L	10.0		99.1		70-130				
tert-Butyl Ethyl Ether (TBEE)	10.3	0.50	µg/L	10.0		103		70-130				
Carbon Disulfide	117	5.0	µg/L	100		117		70-130				
Carbon Tetrachloride	11.7	5.0	µg/L	10.0		117		70-130				
Chlorobenzene	10.8	1.0	µg/L	10.0		108		70-130				
Chlorodibromomethane	11.6	0.50	µg/L	10.0		116		70-130				
Chloroethane	13.1	2.0	µg/L	10.0		**131**	*	70-130			L-02, V-20	
Chloroform	10.1	2.0	µg/L	10.0		101		70-130				
Chloromethane	9.99	2.0	µg/L	10.0		99.9		40-160			R-05	†
2-Chlorotoluene	9.71	1.0	µg/L	10.0		97.1		70-130				
4-Chlorotoluene	10.6	1.0	µg/L	10.0		106		70-130				
1,2-Dibromo-3-chloropropane (DBCP)	10.1	5.0	µg/L	10.0		101		70-130				
1,2-Dibromoethane (EDB)	10.7	0.50	µg/L	10.0		107		70-130				
Dibromomethane	10.6	1.0	µg/L	10.0		106		70-130				
1,2-Dichlorobenzene	10.1	1.0	µg/L	10.0		101		70-130				
1,3-Dichlorobenzene	9.99	1.0	µg/L	10.0		99.9		70-130				

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QUALITY CONTROL

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B336478 - SW-846 5030B												
LCS (B336478-BS1)				Prepared: 04/07/23 Analyzed: 04/10/23								
1,4-Dichlorobenzene	9.93	1.0	µg/L	10.0		99.3		70-130				
trans-1,4-Dichloro-2-butene	6.47	2.0	µg/L	10.0		**64.7**	*	70-130			L-04, V-05	
Dichlorodifluoromethane (Freon 12)	11.9	2.0	µg/L	10.0		119		40-160				†
1,1-Dichloroethane	10.5	1.0	µg/L	10.0		105		70-130				
1,2-Dichloroethane	10.0	1.0	µg/L	10.0		100		70-130				
1,1-Dichloroethylene	11.1	1.0	µg/L	10.0		111		70-130				
cis-1,2-Dichloroethylene	10.5	1.0	µg/L	10.0		105		70-130				
trans-1,2-Dichloroethylene	10.4	1.0	µg/L	10.0		104		70-130				
1,2-Dichloropropane	9.99	1.0	µg/L	10.0		99.9		70-130				
1,3-Dichloropropane	10.4	0.50	µg/L	10.0		104		70-130				
2,2-Dichloropropane	10.9	1.0	µg/L	10.0		109		40-130				†
1,1-Dichloropropene	10.8	2.0	µg/L	10.0		108		70-130				
cis-1,3-Dichloropropene	10.8	0.50	µg/L	10.0		108		70-130				
trans-1,3-Dichloropropene	10.3	0.50	µg/L	10.0		103		70-130				
Diethyl Ether	11.0	2.0	µg/L	10.0		110		70-130				
Diisopropyl Ether (DIPE)	11.1	0.50	µg/L	10.0		111		70-130				
1,4-Dioxane	93.0	50	µg/L	100		93.0		40-130				†
Ethylbenzene	10.6	1.0	µg/L	10.0		106		70-130				
Hexachlorobutadiene	10.8	0.60	µg/L	10.0		108		70-130				
2-Hexanone (MBK)	107	10	µg/L	100		107		70-160				†
Isopropylbenzene (Cumene)	10.6	1.0	µg/L	10.0		106		70-130				
p-Isopropyltoluene (p-Cymene)	10.2	1.0	µg/L	10.0		102		70-130				
Methyl Acetate	7.74	1.0	µg/L	10.0		77.4		70-130			V-05	
Methyl tert-Butyl Ether (MTBE)	10.3	1.0	µg/L	10.0		103		70-130				
Methyl Cyclohexane	10.8	1.0	µg/L	10.0		108		70-130				
Methylene Chloride	10.6	5.0	µg/L	10.0		106		70-130				
4-Methyl-2-pentanone (MIBK)	108	10	µg/L	100		108		70-160				†
Naphthalene	9.86	2.0	µg/L	10.0		98.6		40-130				†
n-Propylbenzene	10.6	1.0	µg/L	10.0		106		70-130				
Styrene	10.8	1.0	µg/L	10.0		108		70-130				
1,1,1,2-Tetrachloroethane	11.4	1.0	µg/L	10.0		114		70-130				
1,1,2,2-Tetrachloroethane	9.14	0.50	µg/L	10.0		91.4		70-130				
Tetrachloroethylene	11.2	1.0	µg/L	10.0		112		70-130				
Tetrahydrofuran	11.0	10	µg/L	10.0		110		70-130				
Toluene	10.3	1.0	µg/L	10.0		103		70-130				
1,2,3-Trichlorobenzene	10.8	5.0	µg/L	10.0		108		70-130				
1,2,4-Trichlorobenzene	9.98	1.0	µg/L	10.0		99.8		70-130				
1,3,5-Trichlorobenzene	9.94	1.0	µg/L	10.0		99.4		70-130				
1,1,1-Trichloroethane	11.1	1.0	µg/L	10.0		111		70-130				
1,1,2-Trichloroethane	10.8	1.0	µg/L	10.0		108		70-130				
Trichloroethylene	11.6	1.0	µg/L	10.0		116		70-130				
Trichlorofluoromethane (Freon 11)	11.5	2.0	µg/L	10.0		115		70-130				
1,2,3-Trichloropropane	10.5	2.0	µg/L	10.0		105		70-130				
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	9.73	1.0	µg/L	10.0		97.3		70-130				
1,3,5-Trimethylbenzene	10.4	1.0	µg/L	10.0		104		70-130				
Vinyl Chloride	18.4	2.0	µg/L	10.0		**184**	*	40-160			L-06, V-06	†
m+p Xylene	21.2	2.0	µg/L	20.0		106		70-130				
o-Xylene	10.6	1.0	µg/L	10.0		106		70-130				
Surrogate: 1,2-Dichloroethane-d4	*24.2*		µg/L	25.0		96.8		70-130				
Surrogate: Toluene-d8	*24.7*		µg/L	25.0		98.9		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 B336478 - SW-846 5030B													
LCS (B336478-BS1)				Prepared: 04/07/23 Analyzed: 04/10/23									
Surrogate: 4-Bromofluorobenzene	*25.6*		µg/L	25.0		103		70-130					
LCS Dup (B336478-BSD1)				Prepared: 04/07/23 Analyzed: 04/10/23									
Acetone	93.8	50	µg/L	100		93.8		70-160	0.0107		25		†
Acrylonitrile	9.90	5.0	µg/L	10.0		99.0		70-130	0.202		25		
tert-Amyl Methyl Ether (TAME)	9.96	0.50	µg/L	10.0		99.6		70-130	1.59		25		
Benzene	10.7	1.0	µg/L	10.0		107		70-130	6.58		25		
Bromobenzene	10.6	1.0	µg/L	10.0		106		70-130	1.32		25		
Bromochloromethane	11.7	1.0	µg/L	10.0		117		70-130	4.46		25		
Bromodichloromethane	11.3	0.50	µg/L	10.0		113		70-130	1.96		25		
Bromoform	11.9	1.0	µg/L	10.0		119		70-130	1.67		25		
Bromomethane	14.9	2.0	µg/L	10.0		149		40-160	7.82		25	V-20	†
2-Butanone (MEK)	99.0	20	µg/L	100		99.0		40-160	1.82		25		†
tert-Butyl Alcohol (TBA)	96.2	20	µg/L	100		96.2		40-160	6.60		25		†
n-Butylbenzene	10.9	1.0	µg/L	10.0		109		70-130	6.32		25		
sec-Butylbenzene	10.8	1.0	µg/L	10.0		108		70-130	6.19		25		
tert-Butylbenzene	10.6	1.0	µg/L	10.0		106		70-130	6.26		25		
tert-Butyl Ethyl Ether (TBEE)	10.4	0.50	µg/L	10.0		104		70-130	0.675		25		
Carbon Disulfide	123	5.0	µg/L	100		123		70-130	4.39		25		
Carbon Tetrachloride	12.5	5.0	µg/L	10.0		125		70-130	6.63		25		
Chlorobenzene	11.1	1.0	µg/L	10.0		111		70-130	2.84		25		
Chlorodibromomethane	12.1	0.50	µg/L	10.0		121		70-130	3.54		25		
Chloroethane	14.6	2.0	µg/L	10.0		**146**	*	70-130	10.8		25	L-02, V-20	
Chloroform	10.6	2.0	µg/L	10.0		106		70-130	5.31		25		
Chloromethane	14.0	2.0	µg/L	10.0		140		40-160	**33.4**	*	25	R-05	†
2-Chlorotoluene	9.66	1.0	µg/L	10.0		96.6		70-130	0.516		25		
4-Chlorotoluene	10.8	1.0	µg/L	10.0		108		70-130	1.41		25		
1,2-Dibromo-3-chloropropane (DBCP)	9.61	5.0	µg/L	10.0		96.1		70-130	4.97		25		
1,2-Dibromoethane (EDB)	10.8	0.50	µg/L	10.0		108		70-130	0.651		25		
Dibromomethane	11.0	1.0	µg/L	10.0		110		70-130	3.97		25		
1,2-Dichlorobenzene	10.4	1.0	µg/L	10.0		104		70-130	3.32		25		
1,3-Dichlorobenzene	10.4	1.0	µg/L	10.0		104		70-130	4.21		25		
1,4-Dichlorobenzene	10.3	1.0	µg/L	10.0		103		70-130	4.05		25		
trans-1,4-Dichloro-2-butene	5.57	2.0	µg/L	10.0		**55.7**	*	70-130	15.0		25	L-04, V-05	
Dichlorodifluoromethane (Freon 12)	13.2	2.0	µg/L	10.0		132		40-160	10.3		25		†
1,1-Dichloroethane	11.0	1.0	µg/L	10.0		110		70-130	4.76		25		
1,2-Dichloroethane	9.97	1.0	µg/L	10.0		99.7		70-130	0.500		25		
1,1-Dichloroethylene	11.6	1.0	µg/L	10.0		116		70-130	4.58		25		
cis-1,2-Dichloroethylene	11.1	1.0	µg/L	10.0		111		70-130	5.27		25		
trans-1,2-Dichloroethylene	11.3	1.0	µg/L	10.0		113		70-130	8.31		25		
1,2-Dichloropropane	10.2	1.0	µg/L	10.0		102		70-130	2.28		25		
1,3-Dichloropropane	10.3	0.50	µg/L	10.0		103		70-130	0.867		25		
2,2-Dichloropropane	11.8	1.0	µg/L	10.0		118		40-130	7.39		25		†
1,1-Dichloropropene	11.6	2.0	µg/L	10.0		116		70-130	7.60		25		
cis-1,3-Dichloropropene	10.7	0.50	µg/L	10.0		107		70-130	0.930		25		
trans-1,3-Dichloropropene	10.3	0.50	µg/L	10.0		103		70-130	0.583		25		
Diethyl Ether	10.7	2.0	µg/L	10.0		107		70-130	2.30		25		
Diisopropyl Ether (DIPE)	11.1	0.50	µg/L	10.0		111		70-130	0.630		25		
1,4-Dioxane	87.9	50	µg/L	100		87.9		40-130	5.64		50		† ‡
Ethylbenzene	11.0	1.0	µg/L	10.0		110		70-130	2.96		25		
Hexachlorobutadiene	12.0	0.60	µg/L	10.0		120		70-130	9.82		25		
2-Hexanone (MBK)	102	10	µg/L	100		102		70-160	4.87		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	
Batch B336478 - SW-846 5030B												
LCS Dup (B336478-BSD1)				Prepared: 04/07/23 Analyzed: 04/10/23								
Isopropylbenzene (Cumene)	11.1	1.0	µg/L	10.0		111		70-130	4.62	25		
p-Isopropyltoluene (p-Cymene)	10.8	1.0	µg/L	10.0		108		70-130	6.08	25		
Methyl Acetate	6.90	1.0	µg/L	10.0		**69.0**	*	70-130	11.5	25	L-07, V-05	
Methyl tert-Butyl Ether (MTBE)	10.3	1.0	µg/L	10.0		103		70-130	0.777	25		
Methyl Cyclohexane	11.4	1.0	µg/L	10.0		114		70-130	5.22	25		
Methylene Chloride	11.6	5.0	µg/L	10.0		116		70-130	8.83	25		
4-Methyl-2-pentanone (MIBK)	105	10	µg/L	100		105		70-160	3.15	25		†
Naphthalene	9.72	2.0	µg/L	10.0		97.2		40-130	1.43	25		†
n-Propylbenzene	11.2	1.0	µg/L	10.0		112		70-130	5.32	25		
Styrene	11.0	1.0	µg/L	10.0		110		70-130	1.75	25		
1,1,1,2-Tetrachloroethane	11.4	1.0	µg/L	10.0		114		70-130	0.175	25		
1,1,2,2-Tetrachloroethane	9.37	0.50	µg/L	10.0		93.7		70-130	2.49	25		
Tetrachloroethylene	11.6	1.0	µg/L	10.0		116		70-130	4.13	25		
Tetrahydrofuran	11.0	10	µg/L	10.0		110		70-130	0.00	25		
Toluene	10.9	1.0	µg/L	10.0		109		70-130	5.36	25		
1,2,3-Trichlorobenzene	10.7	5.0	µg/L	10.0		107		70-130	1.49	25		
1,2,4-Trichlorobenzene	10.1	1.0	µg/L	10.0		101		70-130	0.997	25		
1,3,5-Trichlorobenzene	10.5	1.0	µg/L	10.0		105		70-130	5.57	25		
1,1,1-Trichloroethane	11.7	1.0	µg/L	10.0		117		70-130	5.54	25		
1,1,2-Trichloroethane	10.6	1.0	µg/L	10.0		106		70-130	2.24	25		
Trichloroethylene	11.9	1.0	µg/L	10.0		119		70-130	2.56	25		
Trichlorofluoromethane (Freon 11)	12.5	2.0	µg/L	10.0		125		70-130	8.49	25		
1,2,3-Trichloropropane	10.2	2.0	µg/L	10.0		102		70-130	3.09	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	12.0	1.0	µg/L	10.0		120		70-130	3.29	25		
1,2,4-Trimethylbenzene	10.3	1.0	µg/L	10.0		103		70-130	5.79	25		
1,3,5-Trimethylbenzene	10.9	1.0	µg/L	10.0		109		70-130	4.49	25		
Vinyl Chloride	19.8	2.0	µg/L	10.0		**198**	*	40-160	7.65	25	L-06, V-06	†
m+p Xylene	22.3	2.0	µg/L	20.0		112		70-130	5.00	25		
o-Xylene	11.1	1.0	µg/L	10.0		111		70-130	4.06	25		
Surrogate: 1,2-Dichloroethane-d4	*24.3*		µg/L	25.0		97.3		70-130				
Surrogate: Toluene-d8	*24.8*		µg/L	25.0		99.0		70-130				
Surrogate: 4-Bromofluorobenzene	*25.7*		µg/L	25.0		103		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
Batch B336097 - SW-846 3510C										
Blank (B336097-BLK1)				Prepared & Analyzed: 04/05/23						
Acenaphthene	ND	5.0	µg/L							
Acenaphthylene	ND	5.0	µg/L							
Acetophenone	ND	10	µg/L							
Aniline	ND	5.0	µg/L							V-05
Anthracene	ND	5.0	µg/L							
Benzidine	ND	20	µg/L							L-04, V-04, V-05
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							L-04
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							L-04
1,3-Dichlorobenzene	ND	5.0	µg/L							L-04
1,4-Dichlorobenzene	ND	5.0	µg/L							L-04
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							V-06
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							L-04
Hexachlorocyclopentadiene	ND	10	µg/L							L-04
Hexachloroethane	ND	10	µg/L							L-04
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L							
Isophorone	ND	10	µg/L							
1-Methylnaphthalene	ND	5.0	µg/L							L-04
2-Methylnaphthalene	ND	5.0	µg/L							L-04

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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 B336097 - SW-846 3510C											
Blank (B336097-BLK1)				Prepared & Analyzed: 04/05/23							
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								V-06
4-Nitroaniline	ND	10	µg/L								
Nitrobenzene	ND	10	µg/L								
2-Nitrophenol	ND	10	µg/L								
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								L-04
1,2,4-Trichlorobenzene	ND	5.0	µg/L								L-04
2,4,5-Trichlorophenol	ND	10	µg/L								
2,4,6-Trichlorophenol	ND	10	µg/L								
Surrogate: 2-Fluorophenol	*88.6*		µg/L	200		44.3		15-110			
Surrogate: Phenol-d6	*64.5*		µg/L	200		32.3		15-110			
Surrogate: Nitrobenzene-d5	*78.9*		µg/L	100		78.9		30-130			
Surrogate: 2-Fluorobiphenyl	*56.9*		µg/L	100		56.9		30-130			
Surrogate: 2,4,6-Tribromophenol	*187*		µg/L	200		93.5		15-110			
Surrogate: p-Terphenyl-d14	*98.2*		µg/L	100		98.2		30-130			
LCS (B336097-BS1)				Prepared & Analyzed: 04/05/23							
Acenaphthene	28.2	5.0	µg/L	50.0		56.5		40-140			
Acenaphthylene	26.4	5.0	µg/L	50.0		52.8		40-140			
Acetophenone	34.3	10	µg/L	50.0		68.6		40-140			
Aniline	27.1	5.0	µg/L	50.0		54.2		40-140			V-05
Anthracene	37.7	5.0	µg/L	50.0		75.5		40-140			
Benzidine	15.0	20	µg/L	50.0		**29.9**	*	40-140			L-04, V-04, V-05, J
Benzo(a)anthracene	37.7	5.0	µg/L	50.0		75.5		40-140			
Benzo(a)pyrene	36.3	5.0	µg/L	50.0		72.7		40-140			
Benzo(b)fluoranthene	40.2	5.0	µg/L	50.0		80.5		40-140			
Benzo(g,h,i)perylene	39.3	5.0	µg/L	50.0		78.6		40-140			V-06
Benzo(k)fluoranthene	42.6	5.0	µg/L	50.0		85.2		40-140			
Benzoic Acid	19.1	10	µg/L	50.0		38.2		10-130			†
Bis(2-chloroethoxy)methane	32.6	10	µg/L	50.0		65.2		40-140			
Bis(2-chloroethyl)ether	30.0	10	µg/L	50.0		59.9		40-140			
Bis(2-chloroisopropyl)ether	31.0	10	µg/L	50.0		61.9		40-140			
Bis(2-Ethylhexyl)phthalate	31.4	10	µg/L	50.0		62.7		40-140			
4-Bromophenylphenylether	31.1	10	µg/L	50.0		62.2		40-140			
Butylbenzylphthalate	33.5	10	µg/L	50.0		67.1		40-140			
Carbazole	39.3	10	µg/L	50.0		78.5		40-140			
4-Chloroaniline	35.3	10	µg/L	50.0		70.6		40-140			
4-Chloro-3-methylphenol	35.7	10	µg/L	50.0		71.4		30-130			
2-Chloronaphthalene	18.2	10	µg/L	50.0		**36.5**	*	40-140			L-04

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B336097 - SW-846 3510C												
LCS (B336097-BS1)				Prepared & Analyzed: 04/05/23								
2-Chlorophenol	31.4	10	µg/L	50.0		62.8		30-130				
4-Chlorophenylphenylether	29.7	10	µg/L	50.0		59.5		40-140				
Chrysene	37.1	5.0	µg/L	50.0		74.1		40-140				
Dibenz(a,h)anthracene	36.9	5.0	µg/L	50.0		73.8		40-140				
Dibenzofuran	29.2	5.0	µg/L	50.0		58.5		40-140				
Di-n-butylphthalate	34.0	10	µg/L	50.0		68.0		40-140				
1,2-Dichlorobenzene	16.0	5.0	µg/L	50.0		**32.1**	*	40-140			L-04	
1,3-Dichlorobenzene	14.6	5.0	µg/L	50.0		**29.2**	*	40-140			L-04	
1,4-Dichlorobenzene	14.8	5.0	µg/L	50.0		**29.7**	*	40-140			L-04	
3,3-Dichlorobenzidine	41.4	10	µg/L	50.0		82.8		40-140				
2,4-Dichlorophenol	35.5	10	µg/L	50.0		71.0		30-130				
Diethylphthalate	37.1	10	µg/L	50.0		74.2		40-140				
2,4-Dimethylphenol	35.6	10	µg/L	50.0		71.1		30-130				
Dimethylphthalate	37.0	10	µg/L	50.0		74.0		40-140				
4,6-Dinitro-2-methylphenol	50.6	10	µg/L	50.0		101		30-130				
2,4-Dinitrophenol	53.5	10	µg/L	50.0		107		30-130			V-04, V-06	
2,4-Dinitrotoluene	48.7	10	µg/L	50.0		97.3		40-140			V-06	
2,6-Dinitrotoluene	45.3	10	µg/L	50.0		90.5		40-140				
Di-n-octylphthalate	31.1	10	µg/L	50.0		62.2		40-140				
1,2-Diphenylhydrazine/Azobenzene	30.5	10	µg/L	50.0		61.0		40-140				
Fluoranthene	40.4	5.0	µg/L	50.0		80.7		40-140				
Fluorene	33.3	5.0	µg/L	50.0		66.6		40-140				
Hexachlorobenzene	37.6	10	µg/L	50.0		75.2		40-140				
Hexachlorobutadiene	13.8	10	µg/L	50.0		**27.7**	*	40-140			L-04	
Hexachlorocyclopentadiene	9.74	10	µg/L	50.0		**19.5**	*	30-140			L-04, J	†
Hexachloroethane	12.5	10	µg/L	50.0		**24.9**	*	40-140			L-04	
Indeno(1,2,3-cd)pyrene	37.4	5.0	µg/L	50.0		74.8		40-140				
Isophorone	38.0	10	µg/L	50.0		75.9		40-140				
1-Methylnaphthalene	19.3	5.0	µg/L	50.0		**38.6**	*	40-140			L-04	
2-Methylnaphthalene	17.9	5.0	µg/L	50.0		**35.8**	*	40-140			L-04	
2-Methylphenol	28.8	10	µg/L	50.0		57.6		30-130				
3/4-Methylphenol	30.4	10	µg/L	50.0		60.9		30-130				
Naphthalene	20.3	5.0	µg/L	50.0		40.5		40-140				
2-Nitroaniline	37.0	10	µg/L	50.0		74.0		40-140				
3-Nitroaniline	44.1	10	µg/L	50.0		88.2		40-140			V-06	
4-Nitroaniline	43.5	10	µg/L	50.0		87.0		40-140				
Nitrobenzene	33.4	10	µg/L	50.0		66.7		40-140				
2-Nitrophenol	36.4	10	µg/L	50.0		72.9		30-130				
4-Nitrophenol	20.8	10	µg/L	50.0		41.5		10-130				†
N-Nitrosodimethylamine	22.8	10	µg/L	50.0		45.5		40-140				
N-Nitrosodiphenylamine/Diphenylamine	36.1	10	µg/L	50.0		72.3		40-140				
N-Nitrosodi-n-propylamine	32.7	10	µg/L	50.0		65.4		40-140				
Pentachloronitrobenzene	43.2	10	µg/L	50.0		86.5		40-140			V-06	
Pentachlorophenol	35.2	10	µg/L	50.0		70.4		30-130				
Phenanthrene	37.5	5.0	µg/L	50.0		74.9		40-140				
Phenol	15.8	10	µg/L	50.0		31.5		20-130				†
Pyrene	39.2	5.0	µg/L	50.0		78.3		40-140				
Pyridine	14.8	5.0	µg/L	50.0		29.5		10-140				†
1,2,4,5-Tetrachlorobenzene	17.2	10	µg/L	50.0		**34.3**	*	40-140			L-04	
1,2,4-Trichlorobenzene	15.9	5.0	µg/L	50.0		**31.8**	*	40-140			L-04	
2,4,5-Trichlorophenol	40.0	10	µg/L	50.0		79.9		30-130				
2,4,6-Trichlorophenol	36.7	10	µg/L	50.0		73.5		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	
Batch B336097 - SW-846 3510C												
LCS (B336097-BS1)				Prepared & Analyzed: 04/05/23								
Surrogate: 2-Fluorophenol	*86.5*		µg/L	200		43.3		15-110				
Surrogate: Phenol-d6	*62.9*		µg/L	200		31.4		15-110				
Surrogate: Nitrobenzene-d5	*73.7*		µg/L	100		73.7		30-130				
Surrogate: 2-Fluorobiphenyl	*59.7*		µg/L	100		59.7		30-130				
Surrogate: 2,4,6-Tribromophenol	*185*		µg/L	200		92.5		15-110				
Surrogate: p-Terphenyl-d14	*89.5*		µg/L	100		89.5		30-130				
LCS Dup (B336097-BSD1)				Prepared & Analyzed: 04/05/23								
Acenaphthene	25.6	5.0	µg/L	50.0		51.1		40-140	9.97	20		
Acenaphthylene	24.2	5.0	µg/L	50.0		48.4		40-140	8.77	20		
Acetophenone	36.7	10	µg/L	50.0		73.4		40-140	6.79	20		
Aniline	31.9	5.0	µg/L	50.0		63.9		40-140	16.3	50	V-05	‡
Anthracene	38.1	5.0	µg/L	50.0		76.2		40-140	1.00	20		
Benzidine	15.0	20	µg/L	50.0		**30.1**	*	40-140	0.600	20	L-04, V-04, V-05, J	
Benzo(a)anthracene	38.4	5.0	µg/L	50.0		76.7		40-140	1.63	20		
Benzo(a)pyrene	35.8	5.0	µg/L	50.0		71.5		40-140	1.58	20		
Benzo(b)fluoranthene	39.6	5.0	µg/L	50.0		79.1		40-140	1.70	20		
Benzo(g,h,i)perylene	40.0	5.0	µg/L	50.0		80.1		40-140	1.84	20		
Benzo(k)fluoranthene	41.9	5.0	µg/L	50.0		83.8		40-140	1.56	20		
Benzoic Acid	19.8	10	µg/L	50.0		39.6		10-130	3.45	50		† ‡
Bis(2-chloroethoxy)methane	34.5	10	µg/L	50.0		68.9		40-140	5.58	20		
Bis(2-chloroethyl)ether	32.5	10	µg/L	50.0		65.0		40-140	8.17	20		
Bis(2-chloroisopropyl)ether	32.7	10	µg/L	50.0		65.3		40-140	5.31	20		
Bis(2-Ethylhexyl)phthalate	32.3	10	µg/L	50.0		64.5		40-140	2.86	20		
4-Bromophenylphenylether	30.0	10	µg/L	50.0		60.0		40-140	3.70	20		
Butylbenzylphthalate	34.4	10	µg/L	50.0		68.9		40-140	2.71	20		
Carbazole	40.4	10	µg/L	50.0		80.9		40-140	2.94	20		
4-Chloroaniline	35.1	10	µg/L	50.0		70.1		40-140	0.597	20		
4-Chloro-3-methylphenol	37.1	10	µg/L	50.0		74.2		30-130	3.76	20		
2-Chloronaphthalene	15.5	10	µg/L	50.0		**31.0**	*	40-140	16.2	20	L-04	
2-Chlorophenol	34.1	10	µg/L	50.0		68.1		30-130	8.13	20		
4-Chlorophenylphenylether	26.0	10	µg/L	50.0		52.0		40-140	13.4	20		
Chrysene	37.4	5.0	µg/L	50.0		74.9		40-140	1.02	20		
Dibenz(a,h)anthracene	37.6	5.0	µg/L	50.0		75.3		40-140	2.04	20		
Dibenzofuran	25.7	5.0	µg/L	50.0		51.3		40-140	13.0	20		
Di-n-butylphthalate	34.8	10	µg/L	50.0		69.7		40-140	2.50	20		
1,2-Dichlorobenzene	17.4	5.0	µg/L	50.0		**34.7**	*	40-140	7.90	20	L-04	
1,3-Dichlorobenzene	15.6	5.0	µg/L	50.0		**31.2**	*	40-140	6.89	20	L-04	
1,4-Dichlorobenzene	16.4	5.0	µg/L	50.0		**32.7**	*	40-140	9.74	20	L-04	
3,3-Dichlorobenzidine	43.2	10	µg/L	50.0		86.4		40-140	4.23	20		
2,4-Dichlorophenol	37.0	10	µg/L	50.0		73.9		30-130	4.11	20		
Diethylphthalate	37.2	10	µg/L	50.0		74.5		40-140	0.350	20		
2,4-Dimethylphenol	36.5	10	µg/L	50.0		73.0		30-130	2.66	20		
Dimethylphthalate	36.8	10	µg/L	50.0		73.6		40-140	0.515	50		‡
4,6-Dinitro-2-methylphenol	51.6	10	µg/L	50.0		103		30-130	1.82	50		‡
2,4-Dinitrophenol	53.6	10	µg/L	50.0		107		30-130	0.0374	50	V-04, V-06	‡
2,4-Dinitrotoluene	49.1	10	µg/L	50.0		98.2		40-140	0.839	20	V-06	
2,6-Dinitrotoluene	46.1	10	µg/L	50.0		92.3		40-140	1.90	20	V-06	
Di-n-octylphthalate	30.5	10	µg/L	50.0		61.0		40-140	2.01	20		
1,2-Diphenylhydrazine/Azobenzene	30.0	10	µg/L	50.0		60.0		40-140	1.62	20		
Fluoranthene	41.3	5.0	µg/L	50.0		82.6		40-140	2.33	20		
Fluorene	30.1	5.0	µg/L	50.0		60.2		40-140	10.0	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 B336097 - SW-846 3510C												
LCS Dup (B336097-BSD1)				Prepared & Analyzed: 04/05/23								
Hexachlorobenzene	37.3	10	µg/L	50.0		74.6		40-140	0.802	20		
Hexachlorobutadiene	14.2	10	µg/L	50.0		**28.3**	*	40-140	2.29	20	L-04	
Hexachlorocyclopentadiene	9.27	10	µg/L	50.0		**18.5**	*	30-140	4.94	50	L-04, J	† ‡
Hexachloroethane	13.5	10	µg/L	50.0		**26.9**	*	40-140	7.79	50	L-04	‡
Indeno(1,2,3-cd)pyrene	38.7	5.0	µg/L	50.0		77.3		40-140	3.39	50		‡
Isophorone	39.4	10	µg/L	50.0		78.7		40-140	3.62	20		
1-Methylnaphthalene	18.9	5.0	µg/L	50.0		**37.8**	*	40-140	2.04	20	L-04	
2-Methylnaphthalene	17.3	5.0	µg/L	50.0		**34.7**	*	40-140	3.24	20	L-04	
2-Methylphenol	31.0	10	µg/L	50.0		62.0		30-130	7.26	20		
3/4-Methylphenol	32.3	10	µg/L	50.0		64.7		30-130	6.05	20		
Naphthalene	20.3	5.0	µg/L	50.0		40.5		40-140	0.00	20		
2-Nitroaniline	39.8	10	µg/L	50.0		79.7		40-140	7.34	20		
3-Nitroaniline	44.2	10	µg/L	50.0		88.4		40-140	0.227	20	V-06	
4-Nitroaniline	44.0	10	µg/L	50.0		88.0		40-140	1.10	20		
Nitrobenzene	34.6	10	µg/L	50.0		69.1		40-140	3.50	20		
2-Nitrophenol	37.7	10	µg/L	50.0		75.3		30-130	3.29	20		
4-Nitrophenol	22.2	10	µg/L	50.0		44.5		10-130	6.84	50		† ‡
N-Nitrosodimethylamine	24.2	10	µg/L	50.0		48.5		40-140	6.34	20		
N-Nitrosodiphenylamine/Diphenylamine	36.4	10	µg/L	50.0		72.8		40-140	0.744	20		
N-Nitrosodi-n-propylamine	35.1	10	µg/L	50.0		70.2		40-140	6.96	20		
Pentachloronitrobenzene	41.9	10	µg/L	50.0		83.8		40-140	3.12	20		
Pentachlorophenol	35.7	10	µg/L	50.0		71.4		30-130	1.35	50		‡
Phenanthrene	37.2	5.0	µg/L	50.0		74.4		40-140	0.723	20		
Phenol	16.9	10	µg/L	50.0		33.8		20-130	6.99	20		†
Pyrene	40.0	5.0	µg/L	50.0		80.0		40-140	2.07	20		
Pyridine	15.9	5.0	µg/L	50.0		31.8		10-140	7.37	50		† ‡
1,2,4,5-Tetrachlorobenzene	15.1	10	µg/L	50.0		**30.3**	*	40-140	12.6	20	L-04	
1,2,4-Trichlorobenzene	15.9	5.0	µg/L	50.0		**31.9**	*	40-140	0.251	20	L-04	
2,4,5-Trichlorophenol	39.2	10	µg/L	50.0		78.3		30-130	2.02	20		
2,4,6-Trichlorophenol	36.7	10	µg/L	50.0		73.4		30-130	0.109	50		‡
Surrogate: 2-Fluorophenol	*89.6*		µg/L	200		44.8		15-110				
Surrogate: Phenol-d6	*66.2*		µg/L	200		33.1		15-110				
Surrogate: Nitrobenzene-d5	*76.1*		µg/L	100		76.1		30-130				
Surrogate: 2-Fluorobiphenyl	*57.3*		µg/L	100		57.3		30-130				
Surrogate: 2,4,6-Tribromophenol	*183*		µg/L	200		91.4		15-110				
Surrogate: p-Terphenyl-d14	*89.2*		µg/L	100		89.2		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 B336473 - SW-846 3510C										
Blank (B336473-BLK1)				Prepared: 04/07/23 Analyzed: 04/13/23						
1,4-Dioxane	ND	0.20	µg/L							
Surrogate: 1,4-Dioxane-d8	*2.59*		µg/L	10.0		25.9	15-110			
LCS (B336473-BS1)				Prepared: 04/07/23 Analyzed: 04/13/23						
1,4-Dioxane	11.2	0.20	µg/L	10.0		112	40-140			
Surrogate: 1,4-Dioxane-d8	*2.94*		µg/L	10.0		29.4	15-110			
LCS Dup (B336473-BSD1)				Prepared: 04/07/23 Analyzed: 04/13/23						
1,4-Dioxane	12.0	0.20	µg/L	10.0		120	40-140	6.90	30	
Surrogate: 1,4-Dioxane-d8	*2.48*		µg/L	10.0		24.8	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 B336059 - SOP 454-PFAAS										
Blank (B336059-BLK1)				Prepared: 04/18/23 Analyzed: 05/09/23						
Perfluorobutanoic acid (PFBA)	ND	2.1	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	2.1	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	2.1	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	2.1	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	2.1	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	2.1	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	2.1	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	2.1	ng/L							
8:2 Fluorotelomersulfonic acid (8:2FTS A)	ND	2.1	ng/L							
Perfluorodecanoic acid (PFDA)	ND	2.1	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	2.1	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	2.1	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.1	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	2.1	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	2.1	ng/L							
Perfluorotetradecanoic acid (PFTA)	ND	2.1	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	2.1	ng/L							
4:2 Fluorotelomersulfonic acid (4:2FTS A)	ND	2.1	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	2.1	ng/L							
Perfluorooctanesulfonamide (FOSA)	ND	2.1	ng/L							
Perfluorononanesulfonic acid (PFNS)	ND	2.1	ng/L							
Perfluoro-1-hexanesulfonamide (FHxSA)	ND	2.1	ng/L							
Perfluoro-1-butanesulfonamide (FBSA)	ND	2.1	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	2.1	ng/L							
Perfluoro-4-oxapentanoic acid (PFMPA)	ND	2.1	ng/L							
Perfluoro-5-oxahexanoic acid (PFMBA)	ND	2.1	ng/L							
6:2 Fluorotelomersulfonic acid (6:2FTS A)	ND	2.1	ng/L							
Perfluoropetanesulfonic acid (PFPeS)	ND	2.1	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	2.1	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	2.1	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	2.1	ng/L							
Perfluorooctanoic acid (PFOA)	ND	2.1	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	2.1	ng/L							
Perfluorononanoic acid (PFNA)	ND	2.1	ng/L							
LCS (B336059-BS1)				Prepared: 04/18/23 Analyzed: 05/09/23						
Perfluorobutanoic acid (PFBA)	9.20	2.2	ng/L	10.8		85.4	73-129			
Perfluorobutanesulfonic acid (PFBS)	8.05	2.2	ng/L	9.52		84.5	72-130			
Perfluoropentanoic acid (PFPeA)	8.92	2.2	ng/L	10.8		82.9	72-129			
Perfluorohexanoic acid (PFHxA)	9.06	2.2	ng/L	10.8		84.1	72-129			
11Cl-PF3OUdS (F53B Major)	8.01	2.2	ng/L	10.1		79.0	55.1-141			
9Cl-PF3ONS (F53B Minor)	8.56	2.2	ng/L	10.0		85.3	59.6-146			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	8.36	2.2	ng/L	10.1		82.5	60.3-131			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	8.59	2.2	ng/L	10.8		79.8	37.6-167			
8:2 Fluorotelomersulfonic acid (8:2FTS A)	10.2	2.2	ng/L	10.3		98.3	67-138			
Perfluorodecanoic acid (PFDA)	9.51	2.2	ng/L	10.8		88.4	71-129			
Perfluorododecanoic acid (PFDoA)	11.9	2.2	ng/L	10.8		110	72-134			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	7.42	2.2	ng/L	9.58		77.5	49.4-154			

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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 B336059 - SOP 454-PFAAS										
LCS (B336059-BS1)				Prepared: 04/18/23 Analyzed: 05/09/23						
Perfluoroheptanesulfonic acid (PFHpS)	8.88	2.2	ng/L	10.3		86.4	69-134			
N-EtFOSAA (NEtFOSAA)	10.1	2.2	ng/L	10.8		93.8	61-135			
N-MeFOSAA (NMeFOSAA)	12.0	2.2	ng/L	10.8		112	65-136			
Perfluorotetradecanoic acid (PFTA)	9.48	2.2	ng/L	10.8		88.1	71-132			
Perfluorotridecanoic acid (PFTrDA)	9.06	2.2	ng/L	10.8		84.2	65-144			
4:2 Fluorotelomersulfonic acid (4:2FTS A)	8.43	2.2	ng/L	10.1		83.8	63-143			
Perfluorodecanesulfonic acid (PFDS)	7.49	2.2	ng/L	10.4		72.1	53-142			
Perfluorooctanesulfonamide (FOSA)	10.7	2.2	ng/L	10.8		99.1	67-137			
Perfluorononanesulfonic acid (PFNS)	8.72	2.2	ng/L	10.3		84.4	69-127			
Perfluoro-1-hexanesulfonamide (FHxSA)	8.76	2.2	ng/L	10.8		81.4	61.7-156			
Perfluoro-1-butanesulfonamide (FBSA)	9.28	2.2	ng/L	10.8		86.3	61.3-145			
Perfluorohexanesulfonic acid (PFHxS)	8.41	2.2	ng/L	9.85		85.4	68-131			
Perfluoro-4-oxapentanoic acid (PFMPA)	8.57	2.2	ng/L	10.8		79.6	59.8-147			
Perfluoro-5-oxahexanoic acid (PFMBA)	8.46	2.2	ng/L	10.8		78.6	59.5-146			
6:2 Fluorotelomersulfonic acid (6:2FTS A)	8.60	2.2	ng/L	10.2		84.1	64-140			
Perfluoropetanesulfonic acid (PFPeS)	8.78	2.2	ng/L	10.1		86.8	71-127			
Perfluoroundecanoic acid (PFUnA)	8.55	2.2	ng/L	10.8		79.4	69-133			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	8.52	2.2	ng/L	10.8		79.2	58.5-143			
Perfluoroheptanoic acid (PFHpA)	9.32	2.2	ng/L	10.8		86.6	72-130			
Perfluorooctanoic acid (PFOA)	9.40	2.2	ng/L	10.8		87.3	71-133			
Perfluorooctanesulfonic acid (PFOS)	9.59	2.2	ng/L	9.96		96.3	65-140			
Perfluorononanoic acid (PFNA)	9.16	2.2	ng/L	10.8		85.2	69-130			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B336013 - SW-846 3510C										
Blank (B336013-BLK1)				Prepared: 04/04/23 Analyzed: 04/06/23						
Aroclor-1016	ND	0.20	µg/L							
Aroclor-1016 [2C]	ND	0.20	µg/L							
Aroclor-1221	ND	0.20	µg/L							
Aroclor-1221 [2C]	ND	0.20	µg/L							
Aroclor-1232	ND	0.20	µg/L							
Aroclor-1232 [2C]	ND	0.20	µg/L							
Aroclor-1242	ND	0.20	µg/L							
Aroclor-1242 [2C]	ND	0.20	µg/L							
Aroclor-1248	ND	0.20	µg/L							
Aroclor-1248 [2C]	ND	0.20	µg/L							
Aroclor-1254	ND	0.20	µg/L							
Aroclor-1254 [2C]	ND	0.20	µg/L							
Aroclor-1260	ND	0.20	µg/L							
Aroclor-1260 [2C]	ND	0.20	µg/L							
Aroclor-1262	ND	0.20	µg/L							
Aroclor-1262 [2C]	ND	0.20	µg/L							
Aroclor-1268	ND	0.20	µg/L							
Aroclor-1268 [2C]	ND	0.20	µg/L							
Surrogate: Decachlorobiphenyl	*1.82*		µg/L	2.00		90.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.89*		µg/L	2.00		94.4	30-150			
Surrogate: Tetrachloro-m-xylene	*1.44*		µg/L	2.00		71.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.47*		µg/L	2.00		73.4	30-150			
LCS (B336013-BS1)				Prepared: 04/04/23 Analyzed: 04/06/23						
Aroclor-1016	0.47	0.20	µg/L	0.500		93.7	40-140			
Aroclor-1016 [2C]	0.51	0.20	µg/L	0.500		102	40-140			
Aroclor-1260	0.42	0.20	µg/L	0.500		84.1	40-140			
Aroclor-1260 [2C]	0.44	0.20	µg/L	0.500		88.4	40-140			
Surrogate: Decachlorobiphenyl	*2.00*		µg/L	2.00		100	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.99*		µg/L	2.00		99.6	30-150			
Surrogate: Tetrachloro-m-xylene	*1.64*		µg/L	2.00		81.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.67*		µg/L	2.00		83.7	30-150			
LCS Dup (B336013-BSD1)				Prepared: 04/04/23 Analyzed: 04/06/23						
Aroclor-1016	0.46	0.20	µg/L	0.500		92.8	40-140	0.922	20	
Aroclor-1016 [2C]	0.51	0.20	µg/L	0.500		102	40-140	0.495	20	
Aroclor-1260	0.44	0.20	µg/L	0.500		87.4	40-140	3.87	20	
Aroclor-1260 [2C]	0.46	0.20	µg/L	0.500		92.7	40-140	4.76	20	
Surrogate: Decachlorobiphenyl	*2.00*		µg/L	2.00		100	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.99*		µg/L	2.00		99.6	30-150			
Surrogate: Tetrachloro-m-xylene	*1.64*		µg/L	2.00		82.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.70*		µg/L	2.00		84.9	30-150			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B335977 - SW-846 7470A Prep										
Blank (B335977-BLK1)				Prepared & Analyzed: 04/04/23						
Mercury	ND	0.00020	mg/L							
LCS (B335977-BS1)				Prepared & Analyzed: 04/04/23						
Mercury	0.00380	0.00020	mg/L	0.00402		94.4	80-120			
LCS Dup (B335977-BSD1)				Prepared & Analyzed: 04/04/23						
Mercury	0.00407	0.00020	mg/L	0.00402		101	80-120	6.90	20	
Batch B336100 - SW-846 3005A										
Blank (B336100-BLK1)				Prepared: 04/04/23 Analyzed: 04/05/23						
Aluminum	ND	0.050	mg/L							
Antimony	ND	0.050	mg/L							
Arsenic	ND	0.010	mg/L							
Barium	ND	0.050	mg/L							
Beryllium	ND	0.0040	mg/L							
Cadmium	ND	0.0040	mg/L							
Calcium	ND	0.50	mg/L							
Chromium	ND	0.010	mg/L							
Cobalt	ND	0.010	mg/L							
Copper	ND	0.010	mg/L							
Iron	ND	0.050	mg/L							
Lead	ND	0.010	mg/L							
Magnesium	ND	0.050	mg/L							
Manganese	ND	0.010	mg/L							
Nickel	ND	0.010	mg/L							
Potassium	ND	2.0	mg/L							
Selenium	ND	0.050	mg/L							
Silver	ND	0.010	mg/L							
Sodium	ND	2.0	mg/L							
Thallium	ND	0.050	mg/L							
Vanadium	ND	0.010	mg/L							
Zinc	ND	0.010	mg/L							
Boron	ND	0.10	mg/L							
Hardness	0.060	1.4	mg/L							J
Blank (B336100-BLK2)				Prepared: 04/04/23 Analyzed: 04/08/23						
Lead	ND	0.010	mg/L							
LCS (B336100-BS1)				Prepared: 04/04/23 Analyzed: 04/05/23						
Aluminum	0.515	0.050	mg/L	0.500		103	45.3-154.7			
Antimony	0.502	0.050	mg/L	0.500		100	80-120			
Arsenic	0.492	0.010	mg/L	0.500		98.4	80-120			
Barium	0.525	0.050	mg/L	0.500		105	80-120			
Beryllium	0.532	0.0040	mg/L	0.500		106	80-120			
Cadmium	0.518	0.0040	mg/L	0.500		104	80-120			
Calcium	4.06	0.50	mg/L	4.00		102	80-120			
Chromium	0.514	0.010	mg/L	0.500		103	80-120			
Cobalt	0.511	0.010	mg/L	0.500		102	80-120			
Copper	1.00	0.010	mg/L	1.00		100	80-120			
Iron	4.13	0.050	mg/L	4.00		103	80-120			
Magnesium	3.97	0.050	mg/L	4.00		99.1	80-120			
Manganese	0.532	0.010	mg/L	0.500		106	80-120			
Nickel	0.518	0.010	mg/L	0.500		104	80-120			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B336100 - SW-846 3005A										
LCS (B336100-BS1)				Prepared: 04/04/23 Analyzed: 04/05/23						
Potassium	4.04	2.0	mg/L	4.00		101	80-120			
Selenium	0.522	0.050	mg/L	0.500		104	80-120			
Silver	0.523	0.010	mg/L	0.500		105	80-120			
Sodium	4.18	2.0	mg/L	4.00		104	80-120			
Thallium	0.515	0.050	mg/L	0.500		103	80-120			
Vanadium	0.567	0.010	mg/L	0.500		113	80-120			
Zinc	1.06	0.010	mg/L	1.00		106	80-120			
Boron	0.989	0.10	mg/L	1.00		98.9	80-120			
Hardness	26	1.4	mg/L	26.4		100	80-120			
LCS (B336100-BS2)				Prepared: 04/04/23 Analyzed: 04/08/23						
Lead	0.529	0.010	mg/L	0.500		106	80-120			
LCS Dup (B336100-BSD1)				Prepared: 04/04/23 Analyzed: 04/05/23						
Aluminum	0.507	0.050	mg/L	0.500		101	45.3-154.7	1.52	30	
Antimony	0.501	0.050	mg/L	0.500		100	80-120	0.277	20	
Arsenic	0.493	0.010	mg/L	0.500		98.5	80-120	0.152	20	
Barium	0.522	0.050	mg/L	0.500		104	80-120	0.549	20	
Beryllium	0.528	0.0040	mg/L	0.500		106	80-120	0.835	20	
Cadmium	0.514	0.0040	mg/L	0.500		103	80-120	0.800	20	
Calcium	4.03	0.50	mg/L	4.00		101	80-120	0.781	20	
Chromium	0.510	0.010	mg/L	0.500		102	80-120	0.686	20	
Cobalt	0.508	0.010	mg/L	0.500		102	80-120	0.679	20	
Copper	0.995	0.010	mg/L	1.00		99.5	80-120	0.903	20	
Iron	4.11	0.050	mg/L	4.00		103	80-120	0.618	20	
Lead	0.516	0.010	mg/L	0.500		103	80-120	0.473	20	
Magnesium	3.93	0.050	mg/L	4.00		98.1	80-120	1.01	20	
Manganese	0.527	0.010	mg/L	0.500		105	80-120	0.835	20	
Nickel	0.515	0.010	mg/L	0.500		103	80-120	0.584	30	
Potassium	3.98	2.0	mg/L	4.00		99.5	80-120	1.59	20	
Selenium	0.516	0.050	mg/L	0.500		103	80-120	1.31	20	
Silver	0.529	0.010	mg/L	0.500		106	80-120	1.08	20	
Sodium	4.15	2.0	mg/L	4.00		104	80-120	0.662	20	
Thallium	0.511	0.050	mg/L	0.500		102	80-120	0.679	20	
Vanadium	0.565	0.010	mg/L	0.500		113	80-120	0.471	20	
Zinc	1.06	0.010	mg/L	1.00		106	80-120	0.612	20	
Boron	0.986	0.10	mg/L	1.00		98.6	80-120	0.342	20	
Hardness	26	1.4	mg/L	26.4		99.2	80-120	0.920	20	
LCS Dup (B336100-BSD2)				Prepared: 04/04/23 Analyzed: 04/08/23						
Lead	0.525	0.010	mg/L	0.500		105	80-120	0.662	20	

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B336899 - SM21-23 2320B										
Blank (B336899-BLK1)				Prepared & Analyzed: 04/12/23						
Alkalinity to pH 4.2	ND	1.0	mg/L							
LCS (B336899-BS1)				Prepared & Analyzed: 04/12/23						
Alkalinity to pH 4.5	57	1.0	mg/L	61.2		93.1	85.8-110			
LCS Dup (B336899-BSD1)				Prepared & Analyzed: 04/12/23						
Alkalinity to pH 4.5	58	1.0	mg/L	61.2		94.8	85.8-110	1.74	6.91	
Batch B337262 - EPA 410.4										
Blank (B337262-BLK1)				Prepared: 04/14/23 Analyzed: 04/18/23						
Chemical Oxygen Demand	ND	15	mg/L							
LCS (B337262-BS1)				Prepared: 04/14/23 Analyzed: 04/18/23						
Chemical Oxygen Demand	200	15	mg/L	200		100	90-110			
LCS Dup (B337262-BSD1)				Prepared: 04/14/23 Analyzed: 04/18/23						
Chemical Oxygen Demand	190	15	mg/L	200		97.5	90-110	3.02	5	
Batch B337475 - SM 21-23 5310B										
Blank (B337475-BLK1)				Prepared & Analyzed: 04/19/23						
Total Organic Carbon	ND	1.0	mg/L							
LCS (B337475-BS1)				Prepared & Analyzed: 04/19/23						
Total Organic Carbon	10.3	1.0	mg/L	10.0		103	90-110			
LCS Dup (B337475-BSD1)				Prepared & Analyzed: 04/19/23						
Total Organic Carbon	10.4	1.0	mg/L	10.0		104	90-110	0.492	15	
Batch B337500 - EPA 300.0										
Blank (B337500-BLK1)				Prepared & Analyzed: 04/19/23						
Bromide	ND	0.50	mg/L							
LCS (B337500-BS1)				Prepared & Analyzed: 04/19/23						
Bromide	0.958	0.50	mg/L	1.00		95.8	90-110			
LCS Dup (B337500-BSD1)				Prepared & Analyzed: 04/19/23						
Bromide	0.960	0.50	mg/L	1.00		96.0	90-110	0.188	20	

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B337502 - EPA 300.0										
Blank (B337502-BLK1)				Prepared & Analyzed: 04/19/23						
Sulfate	ND	1.0	mg/L							
LCS (B337502-BS1)				Prepared & Analyzed: 04/19/23						
Sulfate	10	1.0	mg/L	10.0		101	90-110			
LCS Dup (B337502-BSD1)				Prepared & Analyzed: 04/19/23						
Sulfate	10	1.0	mg/L	10.0		102	90-110	0.395	20	
Batch B337504 - EPA 300.0										
Blank (B337504-BLK1)				Prepared & Analyzed: 04/19/23						
Chloride	ND	1.0	mg/L							
LCS (B337504-BS1)				Prepared & Analyzed: 04/19/23						
Chloride	10	1.0	mg/L	10.0		101	90-110			
LCS Dup (B337504-BSD1)				Prepared & Analyzed: 04/19/23						
Chloride	10	1.0	mg/L	10.0		101	90-110	0.187	20	
Batch B337576 - EPA 300.0										
Blank (B337576-BLK1)				Prepared & Analyzed: 04/19/23						
Chloride	ND	1.0	mg/L							
LCS (B337576-BS1)				Prepared & Analyzed: 04/19/23						
Chloride	10	1.0	mg/L	10.0		101	90-110			
LCS Dup (B337576-BSD1)				Prepared & Analyzed: 04/19/23						
Chloride	10	1.0	mg/L	10.0		101	90-110	0.0396	20	
Batch B337578 - EPA 300.0										
Blank (B337578-BLK1)				Prepared & Analyzed: 04/19/23						
Sulfate	ND	1.0	mg/L							
LCS (B337578-BS1)				Prepared & Analyzed: 04/19/23						
Sulfate	10	1.0	mg/L	10.0		101	90-110			
LCS Dup (B337578-BSD1)				Prepared & Analyzed: 04/19/23						
Sulfate	10	1.0	mg/L	10.0		101	90-110	0.0721	20	

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B337624 - SM 4500-NH3 C										
Blank (B337624-BLK1)				Prepared: 04/19/23 Analyzed: 04/20/23						
Ammonia as N	ND	0.30	mg/L							
LCS (B337624-BS1)				Prepared: 04/19/23 Analyzed: 04/20/23						
Ammonia as N	4.8	0.30	mg/L	5.00		95.2	85.3-112			
LCS Dup (B337624-BSD1)				Prepared: 04/19/23 Analyzed: 04/20/23						
Ammonia as N	4.9	0.30	mg/L	5.00		98.0	85.3-112	2.90	8.35	
Batch B337844 - SM 21-23 5310B										
Blank (B337844-BLK1)				Prepared & Analyzed: 04/24/23						
Total Organic Carbon	ND	1.0	mg/L							
LCS (B337844-BS1)				Prepared & Analyzed: 04/24/23						
Total Organic Carbon	10.5	1.0	mg/L	10.0		105	90-110			
LCS Dup (B337844-BSD1)				Prepared & Analyzed: 04/24/23						
Total Organic Carbon	10.3	1.0	mg/L	10.0		103	90-110	1.29	15	
MRL Check (B337844-MRL1)				Prepared & Analyzed: 04/24/23						
Total Organic Carbon	0.912	1.0	mg/L	1.00		91.2	0-200			J

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Dissolved) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B336178 - SM21-23 2540C										
Blank (B336178-BLK1)				Prepared & Analyzed: 04/05/23						
Total Dissolved Solids	ND	10	mg/L							
LCS (B336178-BS1)				Prepared & Analyzed: 04/05/23						
Total Dissolved Solids	250	10	mg/L	293		84.6	64.9-119			

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B336013-BS1 Date(s) Analyzed: 04/06/2023 04/06/2023

Instrument ID (1): ECD1 Instrument ID (2): ECD1

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.47	
	2	0.000	0.000	0.000	0.51	8.2
Aroclor-1260	1	0.000	0.000	0.000	0.42	
	2	0.000	0.000	0.000	0.44	4.7

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B336013-BSD1 Date(s) Analyzed: 04/06/2023 04/06/2023

Instrument ID (1): ECD1 Instrument ID (2): ECD1

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.46	
	2	0.000	0.000	0.000	0.51	10.3
Aroclor-1260	1	0.000	0.000	0.000	0.44	
	2	0.000	0.000	0.000	0.46	4.4

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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.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-02	Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
L-06	Laboratory fortified blank/laboratory control sample recovery and/or duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the high side.
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.
PF-17	Extracted Internal Standard recovery is outside of control limits. Data is not significantly affected since associated analyte is not detected and bias is on the high side.
PF-20	Quantifying ion signal to noise ratio is <10. Detection is suspect.
PF-23	Qualifier ion ratio <50% of associated calibration. Detection is suspect.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
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.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
MW-TP-1-033123 (23D0043-01)			Lab File ID: 23D0043-01R.d			Analyzed: 05/10/23 09:24			
M8FOSA	58285.38	4.044533	238,694.00	4.044533	24	50 - 150	0.0000	+/-0.50	*
M2-4:2FTS	192568	2.439333	61,329.00	2.496817	314	50 - 150	-0.0575	+/-0.50	*
M2PFTA	32797.67	4.281133	471,133.00	4.281133	07	50 - 150	0.0000	+/-0.50	*
M2-8:2FTS	100873.9	3.7789	40,150.00	3.786867	251	50 - 150	-0.0080	+/-0.50	*
MPFBA	129215.2	1.066783	442,652.00	1.0834	29	50 - 150	-0.0166	+/-0.50	*
M3HFPO-DA	67024.48	2.7902	119,328.00	2.8393	56	50 - 150	-0.0491	+/-0.50	
M6PFDA	265308.3	3.779417	393,323.00	3.787383	67	50 - 150	-0.0080	+/-0.50	
M3PFBS	100596.6	1.853533	127,633.00	1.90325	79	50 - 150	-0.0497	+/-0.50	
M7PFUnA	274751	3.922067	368,504.00	3.92205	75	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	89037.12	3.420517	32,535.00	3.445283	274	50 - 150	-0.0248	+/-0.50	*
M5PFPeA	213233.7	1.68175	345,458.00	1.7231	62	50 - 150	-0.0414	+/-0.50	
M5PFHxA	437879.7	2.523067	570,567.00	2.58055	77	50 - 150	-0.0575	+/-0.50	
M3PFHxS	79485.84	3.193817	89,083.00	3.218333	89	50 - 150	-0.0245	+/-0.50	
M4PFHpA	397013.7	3.162717	587,200.00	3.186933	68	50 - 150	-0.0242	+/-0.50	
M8PFOA	284714.7	3.43785	536,603.00	3.453817	53	50 - 150	-0.0160	+/-0.50	
M8PFOS	49319.66	3.628217	67,719.00	3.636183	73	50 - 150	-0.0080	+/-0.50	
M9PFNA	250892.2	3.62925	375,001.00	3.637233	67	50 - 150	-0.0080	+/-0.50	
MPFDoA	192717.4	4.048683	347,389.00	4.056684	55	50 - 150	-0.0080	+/-0.50	
D5-NEtFOSAA	62495.25	3.921533	86,761.00	3.929533	72	50 - 150	-0.0080	+/-0.50	
D3-NMeFOSAA	57021.28	3.849717	94,164.00	3.857667	61	50 - 150	-0.0080	+/-0.50	
Pentafluorobenzene	276146	4.094	279,408.00	4.099	99	50 - 200	-0.0050	+/-0.50	
1,4-Dichlorobenzene-d4	596524	10.986	637,589.00	10.986	94	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	93169	3.331	109,055.00	3.331	85	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	392228	4.861	414,711.00	4.866	95	50 - 200	-0.0050	+/-0.50	
Naphthalene-d8	333391	4.067	356,251.00	4.067	94	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	180177	7.75	199,762.00	7.75	90	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	198219	5.146	214,577.00	5.143	92	50 - 200	0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	174939	10.02	179,208.00	10.022	98	50 - 200	-0.0020	+/-0.50	
Phenanthrene-d10	392360	6.078	444,255.00	6.075	88	50 - 200	0.0030	+/-0.50	
Chrysene-d12	352519	8.614	417,457.00	8.606	84	50 - 200	0.0080	+/-0.50	
Perylene-d12	386804	11.209	430,201.00	11.194	90	50 - 200	0.0150	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
MW-TP-2-033123 (23D0043-02)			Lab File ID: 23D0043-02.d			Analyzed: 05/09/23 19:31			
M8FOSA	106897	4.044533	238,694.00	4.044533	45	50 - 150	0.0000	+/-0.50	*
M2-4:2FTS	117978.7	2.5543	61,329.00	2.57895	192	50 - 150	-0.0246	+/-0.50	*
M2PFTA	106316.1	4.3297	471,133.00	4.337817	23	50 - 150	-0.0081	+/-0.50	*
M2-8:2FTS	97903.69	3.818733	40,150.00	3.827067	244	50 - 150	-0.0083	+/-0.50	*
MPFBA	136941.4	1.100017	442,652.00	1.108317	31	50 - 150	-0.0083	+/-0.50	*
M3HFPO-DA	38719.02	2.8884	119,328.00	2.904767	32	50 - 150	-0.0164	+/-0.50	*
M6PFDA	278732.3	3.819267	393,323.00	3.819267	71	50 - 150	0.0000	+/-0.50	
M3PFBS	77412.73	1.944683	127,633.00	1.96145	61	50 - 150	-0.0168	+/-0.50	
M7PFUnA	281941.5	3.962033	368,504.00	3.962033	77	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	80577.84	3.4694	32,535.00	3.477383	248	50 - 150	-0.0080	+/-0.50	*
M5PFPeA	192062.7	1.766017	345,458.00	1.7826	56	50 - 150	-0.0166	+/-0.50	
M5PFHxA	385069.6	2.638533	570,567.00	2.663233	67	50 - 150	-0.0247	+/-0.50	
M3PFHxS	58739.05	3.250667	89,083.00	3.25875	66	50 - 150	-0.0081	+/-0.50	
M4PFHpA	370519.1	3.219533	587,200.00	3.227617	63	50 - 150	-0.0081	+/-0.50	
M8PFOA	299992.8	3.4859	536,603.00	3.4859	56	50 - 150	0.0000	+/-0.50	
M8PFOS	50925.47	3.668133	67,719.00	3.676117	75	50 - 150	-0.0080	+/-0.50	
M9PFNA	245768.3	3.669167	375,001.00	3.67715	66	50 - 150	-0.0080	+/-0.50	
MPFDoA	221050.1	4.09665	347,389.00	4.09665	64	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	67348.56	3.9695	86,761.00	3.9695	78	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	72993.03	3.897733	94,164.00	3.897733	78	50 - 150	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	102719	3.328	109,055.00	3.331	94	50 - 200	-0.0030	+/-0.50	
Pentafluorobenzene	280562	4.097	279,408.00	4.099	100	50 - 200	-0.0020	+/-0.50	
1,4-Dichlorobenzene-d4	607479	10.986	637,589.00	10.986	95	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	422137	4.864	414,711.00	4.866	102	50 - 200	-0.0020	+/-0.50	
Naphthalene-d8	365811	4.064	356,251.00	4.067	103	50 - 200	-0.0030	+/-0.50	
Acenaphthene-d10	217907	5.141	214,577.00	5.143	102	50 - 200	-0.0020	+/-0.50	
Chlorobenzene-d5	199178	7.75	199,762.00	7.75	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	179789	10.023	179,208.00	10.022	100	50 - 200	0.0010	+/-0.50	
Phenanthrene-d10	405333	6.073	444,255.00	6.075	91	50 - 200	-0.0020	+/-0.50	
Chrysene-d12	342623	8.599	417,457.00	8.606	82	50 - 200	-0.0070	+/-0.50	
Perylene-d12	377203	11.186	430,201.00	11.194	88	50 - 200	-0.0080	+/-0.50	
TB-033123 (23D0043-03)			Lab File ID: E23V09762.D			Analyzed: 04/08/23 12:46			
Pentafluorobenzene	313935	4.097	305,337.00	4.097	103	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	457152	4.864	442,321.00	4.864	103	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	213133	7.75	207,312.00	7.75	103	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	193933	10.023	192,756.00	10.023	101	50 - 200	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Blank (B336059-BLK1)			Lab File ID: B336059-BLK1.d			Analyzed: 05/09/23 19:17			
M8FOSA	150289	4.04455	238,694.00	4.044533	63	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	51812.66	2.57895	61,329.00	2.57895	84	50 - 150	0.0000	+/-0.50	
M2PFTA	341796.2	4.3297	471,133.00	4.337817	73	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	128057.2	3.81875	40,150.00	3.827067	319	50 - 150	-0.0083	+/-0.50	*
MPFBA	367518.8	1.108333	442,652.00	1.108317	83	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	94637.55	2.904767	119,328.00	2.904767	79	50 - 150	0.0000	+/-0.50	
M6PFDA	326453.2	3.819267	393,323.00	3.819267	83	50 - 150	0.0000	+/-0.50	
M3PFBS	110440.8	1.96145	127,633.00	1.96145	87	50 - 150	0.0000	+/-0.50	
M7PFUnA	290794.8	3.96205	368,504.00	3.962033	79	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	25163.01	3.477383	32,535.00	3.477383	77	50 - 150	0.0000	+/-0.50	
M5PFPeA	292912.5	1.7826	345,458.00	1.7826	85	50 - 150	0.0000	+/-0.50	
M5PFHxA	498311.2	2.66325	570,567.00	2.663233	87	50 - 150	0.0000	+/-0.50	
M3PFHxS	71240.31	3.258767	89,083.00	3.25875	80	50 - 150	0.0000	+/-0.50	
M4PFHpA	517634.2	3.227633	587,200.00	3.227617	88	50 - 150	0.0000	+/-0.50	
M8PFOA	430533.8	3.4859	536,603.00	3.4859	80	50 - 150	0.0000	+/-0.50	
M8PFOS	53771.01	3.676133	67,719.00	3.676117	79	50 - 150	0.0000	+/-0.50	
M9PFNA	311471.1	3.677167	375,001.00	3.67715	83	50 - 150	0.0000	+/-0.50	
MPFDoA	257199.6	4.096667	347,389.00	4.09665	74	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	56888.17	3.977517	86,761.00	3.9695	66	50 - 150	0.0080	+/-0.50	
D3-NMeFOSAA	62859.26	3.897733	94,164.00	3.897733	67	50 - 150	0.0000	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SOP-454 PFAS

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (B336059-BS1)			Lab File ID: B336059-BS1.d			Analyzed: 05/09/23 19:10			
M8FOSA	150879.1	4.044533	238,694.00	4.044533	63	50 - 150	0.0000	+/-0.50	
M2-4:2FTS	59472.67	2.57895	61,329.00	2.57895	97	50 - 150	0.0000	+/-0.50	
M2PFTA	394937.4	4.329683	471,133.00	4.337817	84	50 - 150	-0.0081	+/-0.50	
M2-8:2FTS	102954.6	3.818733	40,150.00	3.827067	256	50 - 150	-0.0083	+/-0.50	*
MPFBA	403205.9	1.108333	442,652.00	1.108317	91	50 - 150	0.0000	+/-0.50	
M3HFPO-DA	103655.8	2.904767	119,328.00	2.904767	87	50 - 150	0.0000	+/-0.50	
M6PFDA	336291.5	3.819267	393,323.00	3.819267	86	50 - 150	0.0000	+/-0.50	
M3PFBS	121413.2	1.96145	127,633.00	1.96145	95	50 - 150	0.0000	+/-0.50	
M7PFUnA	338389.8	3.962033	368,504.00	3.962033	92	50 - 150	0.0000	+/-0.50	
M2-6:2FTS	28564.77	3.477383	32,535.00	3.477383	88	50 - 150	0.0000	+/-0.50	
M5PFPeA	317983.5	1.7826	345,458.00	1.7826	92	50 - 150	0.0000	+/-0.50	
M5PFHxA	533778.1	2.66325	570,567.00	2.663233	94	50 - 150	0.0000	+/-0.50	
M3PFHxS	80038.29	3.25875	89,083.00	3.25875	90	50 - 150	0.0000	+/-0.50	
M4PFHpA	560133.6	3.227617	587,200.00	3.227617	95	50 - 150	0.0000	+/-0.50	
M8PFOA	489370.3	3.4859	536,603.00	3.4859	91	50 - 150	0.0000	+/-0.50	
M8PFOS	59631.01	3.668133	67,719.00	3.676117	88	50 - 150	-0.0080	+/-0.50	
M9PFNA	336910.8	3.67715	375,001.00	3.67715	90	50 - 150	0.0000	+/-0.50	
MPFDoA	273701.7	4.09665	347,389.00	4.09665	79	50 - 150	0.0000	+/-0.50	
D5-NEtFOSAA	66996.44	3.9695	86,761.00	3.9695	77	50 - 150	0.0000	+/-0.50	
D3-NMeFOSAA	67807.76	3.897733	94,164.00	3.897733	72	50 - 150	0.0000	+/-0.50	
Blank (B336097-BLK1)			Lab File ID: D23S095007.D			Analyzed: 04/05/23 15:58			
1,4-Dichlorobenzene-d4	90828	3.328	85,074.00	3.331	107	50 - 200	-0.0030	+/-0.50	
Naphthalene-d8	324475	4.064	288,551.00	4.067	112	50 - 200	-0.0030	+/-0.50	
Acenaphthene-d10	197835	5.141	178,685.00	5.143	111	50 - 200	-0.0020	+/-0.50	
Phenanthrene-d10	398659	6.07	377,494.00	6.075	106	50 - 200	-0.0050	+/-0.50	
Chrysene-d12	347038	8.594	340,144.00	8.606	102	50 - 200	-0.0120	+/-0.50	
Perylene-d12	373183	11.181	330,874.00	11.197	113	50 - 200	-0.0160	+/-0.50	
LCS (B336097-BS1)			Lab File ID: D23S095005.D			Analyzed: 04/05/23 15:16			
1,4-Dichlorobenzene-d4	103539	3.331	85,074.00	3.331	122	50 - 200	0.0000	+/-0.50	
Naphthalene-d8	350163	4.067	288,551.00	4.067	121	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	205423	5.146	178,685.00	5.143	115	50 - 200	0.0030	+/-0.50	
Phenanthrene-d10	423818	6.08	377,494.00	6.075	112	50 - 200	0.0050	+/-0.50	
Chrysene-d12	374123	8.614	340,144.00	8.606	110	50 - 200	0.0080	+/-0.50	
Perylene-d12	376946	11.207	330,874.00	11.197	114	50 - 200	0.0100	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SW-846 8270E

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS Dup (B336097-BSD1)			Lab File ID: D23S095006.D			Analyzed: 04/05/23 15:37			
1,4-Dichlorobenzene-d4	93407	3.328	85,074.00	3.331	110	50 - 200	-0.0030	+/-0.50	
Naphthalene-d8	326500	4.064	288,551.00	4.067	113	50 - 200	-0.0030	+/-0.50	
Acenaphthene-d10	196872	5.141	178,685.00	5.143	110	50 - 200	-0.0020	+/-0.50	
Phenanthrene-d10	403256	6.073	377,494.00	6.075	107	50 - 200	-0.0020	+/-0.50	
Chrysene-d12	358549	8.599	340,144.00	8.606	105	50 - 200	-0.0070	+/-0.50	
Perylene-d12	378502	11.181	330,874.00	11.197	114	50 - 200	-0.0160	+/-0.50	
Blank (B336473-BLK1)			Lab File ID: F23S103023.D			Analyzed: 04/13/23 16:11			
1,4-Dichlorobenzene-d4	615939	10.986	637,589.00	10.986	97	50 - 200	0.0000	+/-0.50	
LCS (B336473-BS1)			Lab File ID: F23S103024.D			Analyzed: 04/13/23 16:31			
1,4-Dichlorobenzene-d4	636522	10.983	637,589.00	10.986	100	50 - 200	-0.0030	+/-0.50	
LCS Dup (B336473-BSD1)			Lab File ID: F23S103025.D			Analyzed: 04/13/23 16:51			
1,4-Dichlorobenzene-d4	662346	10.986	637,589.00	10.986	104	50 - 200	0.0000	+/-0.50	
Blank (B336477-BLK1)			Lab File ID: E23V09759.D			Analyzed: 04/08/23 11:24			
Pentafluorobenzene	320577	4.097	305,337.00	4.097	105	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	456747	4.864	442,321.00	4.864	103	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	206200	7.75	207,312.00	7.75	99	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	193620	10.02	192,756.00	10.023	100	50 - 200	-0.0030	+/-0.50	
LCS (B336477-BS1)			Lab File ID: E23V09756.D			Analyzed: 04/08/23 10:03			
Pentafluorobenzene	308022	4.097	305,337.00	4.097	101	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	449488	4.863	442,321.00	4.864	102	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5	210633	7.75	207,312.00	7.75	102	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	195327	10.02	192,756.00	10.023	101	50 - 200	-0.0030	+/-0.50	
LCS Dup (B336477-BSD1)			Lab File ID: E23V09757.D			Analyzed: 04/08/23 10:30			
Pentafluorobenzene	313510	4.097	305,337.00	4.097	103	50 - 200	0.0000	+/-0.50	
1,4-Difluorobenzene	456435	4.864	442,321.00	4.864	103	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	213518	7.75	207,312.00	7.75	103	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	192989	10.02	192,756.00	10.023	100	50 - 200	-0.0030	+/-0.50	
Blank (B336478-BLK1)			Lab File ID: E23V10009.D			Analyzed: 04/10/23 09:45			
Pentafluorobenzene	279856	4.1	279,408.00	4.099	100	50 - 200	0.0010	+/-0.50	
1,4-Difluorobenzene	403845	4.867	414,711.00	4.866	97	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5	182512	7.753	199,762.00	7.75	91	50 - 200	0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	178049	10.023	179,208.00	10.022	99	50 - 200	0.0010	+/-0.50	
LCS (B336478-BS1)			Lab File ID: E23V10006.D			Analyzed: 04/10/23 08:23			
Pentafluorobenzene	281703	4.1	279,408.00	4.099	101	50 - 200	0.0010	+/-0.50	
1,4-Difluorobenzene	424374	4.864	414,711.00	4.866	102	50 - 200	-0.0020	+/-0.50	
Chlorobenzene-d5	202977	7.75	199,762.00	7.75	102	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	186748	10.02	179,208.00	10.022	104	50 - 200	-0.0020	+/-0.50	

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INTERNAL STANDARD AREA AND RT SUMMARY

SW-846 8260D

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS Dup (B336478-BSD1)			Lab File ID: E23V10007.D			Analyzed: 04/10/23 08:50			
Pentafluorobenzene	269911	4.102	279,408.00	4.099	97	50 - 200	0.0030	+/-0.50	
1,4-Difluorobenzene	410512	4.869	414,711.00	4.866	99	50 - 200	0.0030	+/-0.50	
Chlorobenzene-d5	196750	7.753	199,762.00	7.75	98	50 - 200	0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	180182	10.022	179,208.00	10.022	101	50 - 200	0.0000	+/-0.50	

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 300.0 in Water	
Bromide	ME,NY,NC,NH
Chloride	NC,NY,MA,VA,ME,NH,CT,RI
Sulfate	NC,NY,MA,VA,ME,NH,CT,RI
EPA 410.4 in Water	
Chemical Oxygen Demand	CT,MA,NH,NY,RI,NC,ME,VA
SM 21-23 5310B in Water	
Total Organic Carbon	CT,NH,NY,RI,NC,MA,VA
SM19-23 4500 NH3 C in Water	
Ammonia as N	NY,MA,CT,RI,VA,NC,ME
SM21-23 2320B in Water	
Alkalinity to pH 4.5	CT
SM21-23 2540C in Water	
Total Dissolved Solids	CT,MA,NH,NY,RI,NC,ME,VA
SOP-454 PFAS in Water	
Perfluorobutanoic acid (PFBA)	NH-P
Perfluorobutanesulfonic acid (PFBS)	NH-P
Perfluoropentanoic acid (PFPeA)	NH-P
Perfluorohexanoic acid (PFHxA)	NH-P
11Cl-PF3OUdS (F53B Major)	NH-P
9Cl-PF3ONS (F53B Minor)	NH-P
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NH-P
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P
8:2 Fluorotelomersulfonic acid (8:2FTS A)	NH-P
Perfluorodecanoic acid (PFDA)	NH-P
Perfluorododecanoic acid (PFDoA)	NH-P
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NH-P
Perfluoroheptanesulfonic acid (PFHpS)	NH-P
N-EtFOSAA (NEtFOSAA)	NH-P
N-MeFOSAA (NMeFOSAA)	NH-P
Perfluorotetradecanoic acid (PFTA)	NH-P
Perfluorotridecanoic acid (PFTrDA)	NH-P
4:2 Fluorotelomersulfonic acid (4:2FTS A)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P
Perfluorooctanesulfonamide (FOSA)	NH-P
Perfluorononanesulfonic acid (PFNS)	NH-P
Perfluoro-1-hexanesulfonamide (FHxSA)	NH-P
Perfluoro-1-butanesulfonamide (FBSA)	NH-P
Perfluorohexanesulfonic acid (PFHxS)	NH-P
Perfluoro-4-oxapentanoic acid (PFMPA)	NH-P
Perfluoro-5-oxahexanoic acid (PFMBA)	NH-P
6:2 Fluorotelomersulfonic acid (6:2FTS A)	NH-P
Perfluoropetanesulfonic acid (PFPeS)	NH-P
Perfluoroundecanoic acid (PFUnA)	NH-P
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P
Perfluoroheptanoic acid (PFHpA)	NH-P

con-test® A Pace Analytical® Laboratory

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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SOP-454 PFAS in Water	
Perfluorooctanoic acid (PFOA)	NH-P
Perfluorooctanesulfonic acid (PFOS)	NH-P
Perfluorononanoic acid (PFNA)	NH-P
SW-846 6010 in Water	
Hardness	CT,MA,NH,NY
SW-846 6010D in Water	
Aluminum	CT,NH,NY,ME,VA,NC
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,VA,RI,NC
Barium	CT,NH,NY,ME,VA,NC
Beryllium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Calcium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Cobalt	CT,NH,NY,ME,VA,NC
Copper	CT,NH,NY,ME,VA,NC
Iron	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,ME,VA,NC
Magnesium	CT,NH,NY,ME,VA,NC
Manganese	CT,NH,NY,ME,VA,NC
Nickel	CT,NH,NY,ME,VA,NC
Potassium	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Sodium	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,VA,NC
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
Boron	CT,NH,NY,ME,VA,NC
SW-846 7470A in Water	
Mercury	CT,NH,NY,NC,ME,VA
SW-846 8082A in Water	
Aroclor-1016	CT,NH,NY,NC,ME,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260	CT,NH,NY,NC,ME,VA,PA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Water	
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1262	NH,NY,NC,ME,VA,PA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA,PA
Aroclor-1268	NH,NY,NC,ME,VA,PA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA,PA
SW-846 8260D in Water	
Acetone	CT,ME,NH,VA,NY
Acrylonitrile	CT,ME,NH,VA,NY
tert-Amyl Methyl Ether (TAME)	ME,NH,VA,NY
Benzene	CT,ME,NH,VA,NY
Bromobenzene	ME,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
n-Butylbenzene	ME,VA,NY
sec-Butylbenzene	ME,VA,NY
tert-Butylbenzene	ME,VA,NY
tert-Butyl Ethyl Ether (TBEE)	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
2-Chlorotoluene	ME,NH,VA,NY
4-Chlorotoluene	ME,NH,VA,NY
1,2-Dibromo-3-chloropropane (DBCP)	ME,NY
1,2-Dibromoethane (EDB)	ME,NY
Dibromomethane	ME,NH,VA,NY
1,2-Dichlorobenzene	CT,ME,NH,VA,NY
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
1,3-Dichloropropane	ME,VA,NY
2,2-Dichloropropane	ME,NH,VA,NY

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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260D in Water	
1,1-Dichloropropene	ME,NH,VA,NY
cis-1,3-Dichloropropene	CT,ME,NH,VA,NY
trans-1,3-Dichloropropene	CT,ME,NH,VA,NY
Diethyl Ether	ME,NY
Diisopropyl Ether (DIPE)	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
p-Isopropyltoluene (p-Cymene)	CT,ME,NH,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
n-Propylbenzene	CT,ME,NH,VA,NY
Styrene	CT,ME,NH,VA,NY
1,1,1,2-Tetrachloroethane	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
1,3,5-Trichlorobenzene	ME
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
1,2,3-Trichloropropane	ME,NH,VA,NY
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	VA,NY
1,2,4-Trimethylbenzene	ME,VA,NY
1,3,5-Trimethylbenzene	ME,VA,NY
Vinyl Chloride	CT,ME,NH,VA,NY
m+p Xylene	CT,ME,NH,VA,NY
o-Xylene	CT,ME,NH,VA,NY
SW-846 8270E in Water	
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
Benzidine	CT,NY,NC,ME,NH,VA
Benzo(a)anthracene	CT,NY,NC,ME,NH,VA

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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270E in Water	
Benzo(a)pyrene	CT,NY,NC,ME,NH,VA
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

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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270E in Water	
Naphthalene	CT,NY,NC,ME,NH,VA
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-Nitrosodiphenylamine/Diphenylamine	NY
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	06/30/2024
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
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023

Chain of Custody / Analysis Report

RAMBOLL

Page 1 of 1

Sampler(s): (Signature) Sara Hahne, Liam Blake

2310043

Laboratory Use Only

Project Number: 1940101207

Job Number:

Laboratory ID:

Lab Sample ID:

Contact:	Samantha Salotto (NYSDEC)
Address:	625 Broadway, 12th Floor Albany, NY 12233-7012
Phone:	(518) 402-9764
E-mail:	Samantha.Salotto@dec.ny.gov
Project:	NYSDEC Utica City Dump, Site #633015 Groundwater Sampling CoC 144354
Location:	Incinerator Rd, Utica, NY 13502

Laboratory: Pace Analytical Laboratories (Con-Test)
39 Spruce Street
East Longmeadow, MA 01028
Attn: Mike Buttrick
Phone: 860-999-3563

Holding Time:

Package Requirement: NYS Cat B. Deliverable. w/ EDD

EDD Format: NYSDEC 4-file

Analysis Required

Preservatives: (see key at bottom) — 1 0 0 0 0 2 4 2 3 8 0 0

	Sample Identification: Unique Field Sample ID (sys_sample_code)	Sample Location	Date	Time	Sample Type (See Key)	Sample Matrix (See Key)	Number of Containers	Grab [G] or Composite [C]	Field Filtered? (Y / N)	VOCs by 8260	SVOCs by 8270	PCBs by 8082	1,4-Dioxane by 8270 SIM	PFAS by 537.1	Metals, Hardness, Boron by calc	Cyanide, Total by SM4500 CNE	Mercury by EPA 7471A	COD, Ammonia by Multiple Methods	TOC	Alkalinity	TDS, Sulfate, Bromide, Chloride
1	MW-TP-1 - 033123	MW-TP-1	3/31/23	11:40	N	WG	16	G	N	X	X	X	X	X	X	X	X	X	X	X	X
2	MW-TP-2 - 033123	MW-TP-2	3/31/23	12:10	N	WG	16	G	N	X	X	X	X	X	X	X	X	X	X	X	X
3	TB - 033123		3/31/23		TB	WQ	1	G	N	X											
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					
16																					
17																					

SW

Special Instructions: 1) Report detections above MDL, but below PQL with a "J" flags. Deliverables include: 1 PDF copy of full package and pdf of summary package, a New York State DEC compliant EDD. Please copy Deborah Wright (Deborah.Wright@ramboll.com) on each data transmittal.

Circle the top boxes if the samples are to be shipped via courier (e.g., Fed Ex)

Relinquished by: Sara Hahne	Date: 3/31/23	Received By:	Date: 3/31/23	Condition:
Of: Ramboll Americas Engineering Solutions, Inc.	Time: 13:42	Of: Pace Analytical - Con-Test	Time: 1351	Other comments or notes regarding condition of samples as received:
Relinquished by:	Date: 3/31/23	Received By: 2.0	Date: 4/1/23	Custody Seals Intact? (if so, indicate the #, date, and time of the seal)
Of:	Time: 1700	Of: Pace Analytical - Con-Test	Time:	
Relinquished by:	Date:	Received By:	Date:	Cooler Temperature:
Of:	Time:	Of:	Time:	

Sample Type: N = Normal env. sample, FD = field duplicate, EB = Equipment Blank, TB = Trip Blank, MS = Lab Matrix Spike, Other (Specify):

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 = HNO_3, 3 = H_2SO_4, 4 = NaOH, 5 = Zn Acetate, 6 = MeOH, 7 = $NaHSO_4$, 8 = Na_3PO_4, 9 = BenzalkoniumCl, 10 = other

Table of Contents

FedEx® Tracking

DELIVERED

Saturday

4/1/2023 at 9:57 am

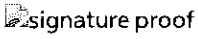
Signed for by: M.RODRIGUEZ

Obtain Proof of delivery

DELIVERY STATUS

Delivered

Shipment is 1 of 10 pieces



TRACKING ID

771726067630

FROM
Pace Analytical
10 Adler Drive
East Syracuse, NY US 13057
5188609724

Label Created
3/31/2023 2:01 PM

PACKAGE RECEIVED BY FEDEX
NORTH SYRACUSE, NY
3/31/2023 3:26 PM

IN TRANSIT
WINDSOR LOCKS, CT
4/1/2023 8:47 AM

OUT FOR DELIVERY
WINDSOR LOCKS, CT
4/1/2023 9:02 AM

DELIVERED
Sample Receiving
Pace NE Lab
39 Spruce St. Building #1
EAST LONGMEADOW, MA US 01028
31S4472554

Delivered

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

Pace® PEOPLE ADVANCING SCIENCE

Client Rumball

Project Utica City Dump

MCP/RCP Required N/A

Deliverable Package Req. N/A

Location Incinerator Rd, Utica, NY

PWSID# (When Applicable) N/A

Arrival Method:

Courier ☐ Fed Ex ☑ Walk In ☐ Other ☐ _____

Received By / Date / Time LA 4/18/23 957

Back-Sheet By / Date / Time LA 4/18/23 1123

Temperature Method Gun # 5

Temp ☑ < 6° C Actual Temperature 2.6

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	1 ZAP							
500 mL Amber Plastic			1 (a) 2					
250 mL Amber Plastic								1 @ 2A
Other Amber Clear Plastic								
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		5						

575 Broad Hollow Road
Melville, NY 11747
516-370-6000

April 12, 2023

Kyle Murray

39 Spruce St
East Longmeadow, MA 01028

RE: Project: 23D0043
Pace Project No.: 70251436

Dear Kyle Murray:

Enclosed are the analytical results for sample(s) received by the laboratory on April 04, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Melville

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Matthew T. Nemeth
matthew.nemeth@pacelabs.com
(631)694-3040
Project Manager

Enclosures

cc: Jessica Hoffman, Con-Test
Raymond McCarthy, Pace Analytical Services - New England

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575 Broad Hollow Road
Melville, NY 11747
516-370-6000

CERTIFICATIONS

Project: 23D0043
Pace Project No.: 70251436

Pace Analytical Services Long Island
575 Broad Hollow Rd, Melville, NY 11747
Connecticut Certification #: PH-0435
Delaware Certification # NY 10478
Maryland Certification #: 208
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987
New Jersey Certification #: NY158
New York Certification #: 10478 Primary Accrediting Body
Pennsylvania Certification #: 68-00350
Rhode Island Certification #: LAO00340
Virginia Certification # 460302

REPORT OF LABORATORY ANALYSIS

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Pace A
575 Broad Hollow Road
Melville, NY 11747
516-370-6000

ANALYTICAL RESULTS

Project: 23D0043
Pace Project No.: 70251436

Sample: 23D0043-01 **Lab ID: 70251436001** Collected: 03/31/23 11:00 Received: 04/04/23 11:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
SM 4500 CNE Cyanide, Total	Analytical Method: SM22 4500-CN-E Preparation Method: SM20/22 4500-CN-C Pace Analytical Services - Melville							
Cyanide	**<10.0**	ug/L	10.0	1	04/11/23 15:30	04/11/23 18:43	57-12-5	

REPORT OF LABORATORY ANALYSIS

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575 Broad Hollow Road
Melville, NY 11747
516-370-6000

ANALYTICAL RESULTS

Project: 23D0043
Pace Project No.: 70251436

Sample: 23D0043-02 **Lab ID: 70251436002** Collected: 03/31/23 11:10 Received: 04/04/23 11:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
SM 4500 CNE Cyanide, Total	Analytical Method: SM22 4500-CN-E Preparation Method: SM20/22 4500-CN-C Pace Analytical Services - Melville							
Cyanide	**<10.0**	ug/L	10.0	1	04/11/23 15:30	04/11/23 18:44	57-12-5	

REPORT OF LABORATORY ANALYSIS

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575 Broad Hollow Road
Melville, NY 11747
516-370-6000

QUALITY CONTROL DATA

Project: 23D0043
Pace Project No.: 70251436

QC Batch: 300602
QC Batch Method: SM20/22 4500-CN-C
Analysis Method: SM22 4500-CN-E
Analysis Description: 4500 CNE Cyanide, Total
Laboratory: Pace Analytical Services - Melville
Associated Lab Samples: 70251436001, 70251436002

METHOD BLANK: 1522649 Matrix: Water
Associated Lab Samples: 70251436001, 70251436002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	ug/L	ND	10.0	04/11/23 18:20	

LABORATORY CONTROL SAMPLE: 1522650

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	ug/L	75	75.5	101	85-115	

MATRIX SPIKE SAMPLE: 1522651

Parameter	Units	70251432004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cyanide	ug/L	<10.0	100	104	97	75-125	

MATRIX SPIKE SAMPLE: 1522838

Parameter	Units	70251877001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cyanide	ug/L	47.0	100	113	66	75-125	M1

SAMPLE DUPLICATE: 1522652

Parameter	Units	70251432004 Result	Dup Result	RPD	Qualifiers
Cyanide	ug/L	<10.0	<10.0		

SAMPLE DUPLICATE: 1522839

Parameter	Units	70251877001 Result	Dup Result	RPD	Qualifiers
Cyanide	ug/L	47.0	47.7	1	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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575 Broad Hollow Road
Melville, NY 11747
516-370-6000

QUALIFIERS

Project: 23D0043
Pace Project No.: 70251436

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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Melville, NY 11747
516-370-6000

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 23D0043
Pace Project No.: 70251436

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70251436001	**23D0043-01**	SM20/22 4500-CN-C	300602	SM22 4500-CN-E	300666
70251436002	**23D0043-02**	SM20/22 4500-CN-C	300602	SM22 4500-CN-E	300666

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SUBCONTRACT CHAIN OF CUS

WO# : 7025143

70251436

Pace New England

23D0043

SENDING LABORATORY:

Pace New England
39 Spruce Street
East Longmeadow, MA 01028
Phone: 413.525.2332
Fax: 413.525.6405
Project Manager: Kyle A. Murray

RECEIVING LABORATORY:

Pace Analytical Services - Long Island, NY
575 Broad Hollow Road
Melville, NY 11747
Phone :(516) 370-6000
Fax: -

Analysis	Sample Name	Due		Expires	Comments
Sample ID: 23D0043-01	**MW-TP-1-033123**	**Water**	**Sampled:**	**03/31/23 11:00**	**CAT B**
S-Cyanide, Total		04/17/23 15:30		04/14/23 11:00	
Containers Supplied:					
250 mL plastic + NaOH (J					
Sample ID: 23D0043-02	**MW-TP-2-033123**	**Water**	**Sampled:**	**03/31/23 11:10**	**CAT B**
S-Cyanide, Total		04/17/23 15:30		04/14/23 11:10	
Containers Supplied:					
250 mL plastic + NaOH (J					

Released By	Date	Received By	Date
	4/3/23 17:00		4/4/23 11:00
Released By	Date	Received By	Date

Chain of Custody / Analysis Report

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Page / of /

Sampler(s): Sara Hahne, Liam Blake (Signature)

23D0043

Laboratory Use Only

Project Number: 1940101207

Job Number:

Contact:	Samantha Salotto (NYSDEC)
Address:	625 Broadway, 12th Floor Albany, NY 12233-7012
Phone:	(518) 402-9764
E-mail:	Samantha.Salotto@dec.ny.gov
Project:	NYSDEC Utica City Dump, Site #633015 Groundwater Sampling Co# 144354
Location:	Incinerator Rd, Utica, NY 13502

Laboratory: Pace Analytical Laboratories (Con-Test)
39 Spruce Street
East Longmeadow, MA 01028
Attn: Mike Buttrick
Phone: 860-999-3563

Holding Time:

Package Requirement: NYS Cat B. Deliverable. w/ EDD

EDD Format: NYSDEC 4-file

Analysis Required

Preservatives: (see key at bottom)

	Sample Identification: Unique Field Sample ID (sys_sample_code)	Sample Location	Date	Time	Sample Type (See Key)	Sample Matrix (See Key)	Number of Containers	Grab [G] or Composite [C]	Field Filtered? (Y / N)	1 VOCs by 8260	0 SVOCs by 8270	0 PCBs by 8082	0 1,4-Dioxane by 8270 SIM	0 PFAS by 537.1	2 Metals, Hardness, Boron by calc	4 Cyanide, Total by SM4500 CNE	2 Mercury by EPA 7471A	3 COD, Ammonia by Multiple Methods	8 TOC	0 Alkalinity	0 TDS, Sulfate, Bromide, Chloride	Laboratory ID: / Lab Sample ID:
1	MW-TP-1-033123	MW-TP-1	3/31/23	11:00	N	WG	16	G	N	X	X	X	X	X	X	X	X	X	X	X	X	
2	MW-TP-2-033123	MW-TP-2	3/31/23	11:10	N	WG	16	G	N	X	X	X	X	X	X	X	X	X	X	X	X	
3	TB-033123		3/31/23		TB	WQ	1	G	N	X												
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15																						
16																						
17																						

SW

Special Instructions: 1) Report detections above MDL, but below PQL with a "J" flags. Deliverables include: 1 PDF copy of full package and pdf of summary package, a New York State DEC compliant EDD. Please copy Deborah Wright (Deborah.Wright@ramboll.com) on each data transmittal.

Circle the top boxes if the samples are to be shipped via courier (e.g., Fed Ex)

Relinquished by: Sara Hahne	Date: 3/31/23	Received By: Tom Price	Date: 3/31/23	Condition:
Company: Ramboll Americas Engineering Solutions, Inc.	Time: 1342	Of: Pace Analytical - Con-Test	Time: 1350	Other comments or notes regarding condition of samples as received:
Relinquished by: Tom Price	Date: 3/31/23	Received By: Cesar Y.D. 2.6	Date: 4/1/23 9:5	Custody Seals Intact? (if so, indicate the #, date, and time of the seal)
Courier Name:	Time: 1700	Of: Pace Analytical - Con-Test	Time:	
Tracking #:	Date:	Received By:	Date:	Cooler Temperature:
	Time:	Of:	Time:	

Sample Type: N = Normal env. sample, FD = Field duplicate, EB = Equipment Blank, TB = Trip Blank, MS = Lab Matrix Spike, Other (Specify):

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 = HNO_3, 3 = H_2SO_4, 4 = NaOH, 5 = Zn Acetate, 6 = MeOH, 7 = $NaHSO_4$, 8 = Na_2PO_4 9 = BenzalkoniumCl, 10 = other

Table of Contents

Pace Analytical®

Client Name: Pace New England

WO# : 70251

Table of Contents

PM: MN2 Due Date: 04/18/23

CLIENT: Pace-CON

Courier: ☐ Fed Ex ☑ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #: 771739772710

Custody Seal on Cooler/Box Present: ☐ Yes ☐ No Seals intact: ☐ Yes ☐ No ☐ N

Temperature Blank Present: ☐ Yes ☐ No

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ Ziploc ☐ None ☐ Other

Type of Ice: (Wet) Blue None

Thermometer Used: TH091 Type of Ice: Wet Blue None

Correction Factor:

☐ Samples on ice, cooling process has begun

Cooler Temperature(°C): 0.6 Cooler Temperature Corrected(°C): 0.7

Date/Time 5035A kits placed in freezer

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☐ N/A, water sample)

Date and Initials of person examining contents: MJ 4/4/23

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ Yes ☑ No

Did samples originate from a foreign source including Hawaii and Puerto Rico)? ☐ Yes ☑ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	☑Yes	☐No		1.
Chain of Custody Filled Out:	☑Yes	☐No		2.
Chain of Custody Relinquished:	☐Yes	☐No		3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No		5.
Short Hold Time Analysis (<72hr):	☐Yes	☑No		6.
Rush Turn Around Time Requested:	☐Yes	☑No		7.
Sufficient Volume: (Triple volume provided for l	☑Yes	☐No		8.
Correct Containers Used:	☑Yes	☐No		9.
-Pace Containers Used:	☑Yes	☐No		
Containers Intact:	☑Yes	☐No		10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC: -Includes date/time/ID/ Matrix: SL WT OIL	☑Yes	☐No		12.
All containers needing preservation have been checked?	☑Yes	☐No	☐N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ HCl
pH paper Lot # HC293085				Sample #
All containers needing preservation are found to be in compliance with method recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NAOH>12 Cyanide)	☑Yes	☐No	☐N/A	
Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis				Initial when completed: / Lot # of added preservative: / Date/Time preservative added:
Samples checked for dechlorination:	☑Yes	☐No	☐N/A	14.
KI starch test strips Lot # 14-860				Positive for Res. Chlorine? Y N
Residual chlorine strips Lot #				
SM 4500 CN samples checked for sulfide?	☑Yes	☐No	☐N/A	15.
Lead Acetate Strips Lot # 14-862				Positive for Sulfide? Y N
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☐N/A	16.
Trip Blank Present:	☐Yes	☐No	☐N/A	17.
Trip Blank Custody Seals Present	☐Yes	☐No	☐N/A	
Pace Trip Blank Lot # (if applicable):				

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted:

Date/Time:

Comments/ Resolution:

PM (Project Manager) review is documented electronically in LIMS.

ENV-FRM-MELV-0024 01

Appendix 4
Wetland Delineation Report

RAMBOLL

ENVIRONMENT & HEALTH

MEMO

Project name	**Utica City Dump Remedial Design – Incinerator Road, Utica, NY**
Project no.	**1940101207**
Client	**New York State Department of Environmental Conservation**
To	**David Farber, P.E.**
From	**Matthew Dreimiller**
Copy to	**Deborah Wright**
Description	**Wetland Delineation Report**

Dated: March 18, 2025

Ramboll
101 First Street
4th Floor
Utica, NY 13
USA

T 315-956-6950
https://ramboll.com

1 Background

Ramboll performed a delineation of wetlands and Waters of the United States (WOTUS) within the proposed limits of work associated with the remediation of the former Utica City Dump (Site #6-33-015, the Site) located in the City of Utica, Oneida County, New York (see Figure 1). The Site was operated as an open landfill from 1930 through the 1970s and the City of Utica operated a trash incinerator at the landfill between 1930 and 1960. The Site was used as a municipal landfill for the City of Utica, with dumping beginning in the 1930s on the western end of the Site and extending eastward with time. The municipal solid waste portion of the Site closed in 1972. Reportedly, hazardous waste was disposed at the eastern portion of the landfill as recently as 1984. A temporary cap was constructed over the hardfill area of the landfill, which was utilized by the City of Utica for construction and demolition debris, as well as yard waste. This area was closed in 1997. An additional area, known as the Arson Area, is located in the center of the eastern portion of the landfill and was temporarily used as an emergency action to dispose of demolished houses affected by a spate of arson throughout the City of Utica. This area was closed with a temporary cover.

The Site is approximately 126 acres in size and is located east of Leland Avenue along Incinerator Road between the Barge Canal to the north and the Mohawk River to the east and south.

Remediation activities will involve installing an evapotranspiration (ET) cover over the former landfill using sediment dredged from the Barge Canal. The sediment removal area is approximately four miles east of the former landfill. Two alternatives for sediment transport are being evaluated, including the transport of dredge material along the Barge Canal via barge and hauling of dredge material via truck along a temporary transport route on an existing gravel access drive that parallels the Barge Canal west towards Leland Avenue for approximately four miles. Sediment transport along the haul route will require the installation of a

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temporary bridge and box culvert south of the spillway and sluice gates, which release water from the Barge Canal into the Mohawk River.

The wetland delineation of the former landfill was conducted in two stages: an Eastern stage and a Western stage. The Eastern portion of the Site measures approximately 74 acres, while the Western portion measures approximately 52 acres. Both the East and West portions of the Site were field evaluated for the potential presence of wetlands and waters of the United States, as regulated by the U.S Army Corps of Engineers (USACE) and the NSYDEC. The Eastern delineation was conducted in May 2022, while the Western delineation was conducted in October 2023. Both delineations were conducted by Ramboll biologists trained in wetlands identification and delineation.

Additionally, in November 2023, Ramboll biologists inspected the proposed overland sediment transport route and delineated wetlands within the limits of disturbance (LOD) of proposed truck pull-off locations along the route. Similarly, the proposed location of the temporary bridge was evaluated for the potential presence of wetlands and WOTUS.

This report is divided into three sections, herein: Utica Dump – East (eastern parcel), Utica Dump – West (western parcel), and Utica Dump – Sediment Transport Route (sediment transport route).

2 Methodology

The USACE and U.S. Environmental Protection Agency (USEPA) jointly define wetlands as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions [33 Code of Federal Regulation (CFR) 328.3(b), 40 CFR 230.3(t)]. Environmental criteria for wetlands, as defined by the USACE, include:

- the dominant vegetation is hydrophytic (water tolerant)
- the soils present have been classified as hydric or possess reducing soil characteristics
- the area is either permanently or periodically inundated at mean water depths less than or equal to 6.6 feet, or the soil is permanently or periodically saturated to the surface during the growing season.

The potential presence of habitats that would likely meet the criteria established by the USACE and NYSDEC for wetland habitat in the following Manuals was evaluated throughout the project area:

- USACE. 1987. *Corps of Engineers Wetlands Delineation Manual*, Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
- USACE. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*. ERDC/EL TR-09-19. USACE's Engineer Research and Development Center, Vicksburg, MS. January.
- NYSDEC 1995. *Freshwater Wetlands Delineation Manua*l. July.

According to the Manuals, wetlands are characterized based on hydrology, soils, and vegetation. These three parameters were evaluated within the project area for wetland indicators such as hydric soils, periodic flooding or soil saturation, and the presence of hydrophytes (water tolerant vegetation). On-site

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activities included evaluation of vegetation, soil, and hydrologic characteristics to identify potential wetland habitat.

To make a positive wetland determination, a minimum of one wetland indicator from each criterion (vegetation, soil, and hydrology) must be found.

3 Soil Mapping

Web Soil Survey (USDA-NRCS 2022) information (Attachment 1) identifies that the majority of the Utica Dump (both eastern and western parcels) is made up of Udorthents with a refuse substratum. This is consistent with what was observed in the field as soil profiles within the limits of the former landfill showed evidence of waste. Soils outside of the limits of previous waste disposal are identified as smoothed Udorthents, well drained, sandy soils. Neither of these soils are designated as hydric (wetland) soils in the Web Soil Survey. The Wayland soils that are found within the wetland in the northeast portion of the Site are predominantly hydric.

Soils along the sediment transport route are more of a mix, but consist predominantly of Wayland complex soils, Cohactah mucky, sandy loam, Palms muck, and cut and fill land.

4 Utica Dump - East

4.1 New York State Freshwater Wetlands (NYSFW): Utica Dump - East

The NYSFW maps were developed by the NYSDEC pursuant to Article 24 of the Environmental Conservation Law. These maps present the approximate boundaries of freshwater wetlands regulated by the NYSDEC. In most instances, the State-mapped boundaries are based on aerial photographs and soil survey interpretation and, therefore, require site-specific field verification.

As shown on Figure 2, the NYSFW UE-10, a 39.7-acre, Class 2 wetland, as well as portions of its 100-foot buffer, falls within the proposed LOD in the southeastern corner of the eastern parcel. UE-10 also falls within the proposed LOD along the eastern boundary of the eastern parcel. The NYSDEC-defined wetland check zone associated with UE-10, within which additional NYSFWs may be present, extends north from UE-10 into the proposed LOD in the southeastern-eastern corners of the eastern parcel. The check zone associated with NYSFW UE-6, a 188.6-acre, Class 2 wetland on the north side of the Barge Canal, extends south into the proposed LOD in the northern portion of the eastern parcel. Finally, the check zone for NYSFW UE-11, a 153.1-acre, Class 2 wetland that follows the Mohawk River, extends west into the proposed LOD in the northeastern corner of the eastern parcel.

4.2 On-Site Investigation

Ramboll biologists performed the field delineation activities in the eastern parcel in May 2022. On-site activities included the evaluation of vegetative communities, the soil substrate, and hydrologic characteristics to identify the presence/absence of wetlands. Field data were gathered at several locations within the limits of disturbance. Vegetative, soil, and hydrologic conditions were evaluated pursuant to the USACE delineation methodology, and the boundaries provided in Figure 3 illustrate the

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limits of the delineated wetland habitats. The following provides a summary of the wetland habitats that were delineated within the eastern parcel:

Wetland 1 (W1) – Small wetland within a topographic depression in the northwest corner of the landfill where vegetative clearing was previously completed. Dominant vegetation includes soft rush (*Juncus effusus*) and tree seedlings such as green ash (*Fraxinus pennsylvanica*) and eastern cottonwood (*Populus deltoides*).

Wetland 2 (W2) – Open water/shallow emergent/forested wetland that borders much of the southern Site boundary and is hydrologically connected to the Mohawk River. Water depth is approximately four feet deep within the open water area. Dominant emergent vegetation within the wetland habitat includes:

- Shallow emergent wetland – cattail (*Typha spp.*), soft rush (*Juncus effusus*), reed canary grass (*Phalaris arundacea*), and common reed (*Phragmites australis*).
- Forested wetland – boxelder (*Acer negundo*), green ash, common buckthorn (*Rhamnus cathartica*), and tatarian honeysuckle (*Lonicera tatarica*). Understory species include garlic mustard (*Alliaria petiolata*), goldenrod (*Solidago spp.*), and aster (*Symphyotrichum spp.*).

Wetland 3 (W3) – A sparsely vegetated concave surface within a forested portion of the floodplain. The dominant overstory includes boxelder, eastern cottonwood, and green ash. The sparse understory includes moneywort (*Lysimachia nummularia*) and field horsetail (*Equisetum arvense*).

Wetland 4 (W4) - Shallow emergent/forested wetland in the northeast portion of the Site that is hydrologically connected to the Mohawk River. Dominant vegetation is consistent with that in W2.

The surrounding area generally consists of the Barge Canal to the north; floodplain with a mix of forested, scrub/shrub, and old field habitat to the south and east; open water areas that are hydrologically connected to the Mohawk River to the south and east; and additional landfill acreage to the west with a mix of vegetation.

Wetland characteristics observed at sample points throughout the delineated area are summarized on the Wetland Data Forms included as Attachment 2. A photograph log of observed field conditions is included as Attachment 3.

5 Utica Dump – West

5.1 NYSFW: Utica Dump – West

As shown on Figure 4, no mapped NYSFWs or 100-foot buffer zones fall within the proposed LOD of the western parcel. However, the check zone for UE-6, which is located on the north side of the Barge Canal, extends south into the proposed LOD in the northern portion of the western parcel. The check zone for UE-10, which generally follows the Mohawk River, extends north into the proposed LOD in the southeastern corner of the western parcel.

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5.2 On-Site Investigation

Ramboll biologists performed the field delineation activities in the western parcel in October 2023. On-site activities included the same as those listed for the eastern parcel delineation. The boundaries provided in Figure 5 illustrate the limits of the delineated wetland habitats. The following provides a summary of the wetland habitats that were delineated within the western parcel:

Wetland A (WA) – Small wetland within a topographic depression in the northeast corner of the landfill where vegetative clearing was previously completed. Dominant vegetation includes common reed, purple loosestrife (*Lythrum salicaria*), and green ash saplings.

Wetland B (WB) – Open water/shallow emergent/forested wetland located east of the Canal Corp. service road. Wetland B borders the southern boundary of the western parcel, extends into its central portion, and is hydrologically connected to the Mohawk River. Water depth is approximately two feet deep within the open water area. Dominant emergent vegetation within the wetland habitat includes:

- Shallow emergent wetland - cattail, reed canary grass, common reed, and lake sedge (*Carex lacustris*).
- Forested wetland – black willow (*Salix nigra*), green ash, and common buckthorn. Understory species include devil's beggarticks (*Bidens frondosa*), moneywort, blue flag (*Iris versicolor*), and panicled aster (*Symphyotrichum lanceolatum*).

Wetland C (WC) – Linear forested and scrub/shrub wetland west of the Canal Corp. service road that follows the Mohawk River with an upper boundary approximately along the flood benches. The dominant overstory includes black willow, boxelder, European alder (*Alnus glutinosa*), and common buckthorn. Understory species include rough cocklebur (*Xanthium strumarium*), blue vervain (*Verbena hastata*), blue flag, curled dock (*Rumex crispus*), and grass-leaved goldenrod (*Euthamia graminifolia*).

Wetland D (WD) – Linear forested and scrub/shrub wetland east of the Canal Corp. service road that follows the Mohawk River with an upper boundary approximately along the flood benches. Dominant species were similar to Wetland C across all vertical strata.

The surrounding area generally consists of the Barge Canal to the north; floodplain with a mix of forested, scrub/shrub, and old field habitat along Incinerator Road; and open water areas that are hydrologically connected to the Mohawk River to the south.

Wetland characteristics observed at sample points throughout the delineated area are summarized on the Wetland Data Forms included as Attachment 2. A photograph log of observed field conditions is included as Attachment 3.

6 Utica Dump – Sediment Transport Route

6.1 NYSFW: Utica Dump – Sediment Transport Route

As shown on Figure 6, no mapped NYSFWs or 100-foot buffer zones fall within the proposed LOD of the entirety of the sediment transport route. However, the check zone associated with NYSFW UE-6 extends

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south of the Barge Canal into some portions of the sediment transport route, and notably, overlaps recommended pull-off locations 1 and 2 (west of Dyke Road). Similarly, the check zone for NYSFW UE-11 extends north into some portions of the sediment transport route, and notably, overlaps recommended pull-off location 1 (west of Dyke Road). As shown on Figure 9, the check zone for NYSFW UE-8, a 17.4-acre, Class 2 wetland on the north side of the Barge Canal, extends south into some portions of the sediment transport route (east of Dyke Road). The check zones for IN-2 (Class 2; north side of the Barge Canal) and IN-4 (Class 2; south side of the Barge Canal), 49.9-acre and 42.2-acre wetlands, respectively, converge towards the end of the sediment transport route, east of Dyke Road, in the vicinity of the sediment removal area. No NYS-regulated wetlands, 100-foot buffer zones, or NYSFW check zones are mapped within the area of the Barge Canal-Mohawk River spillway.

6.2 On-Site Investigation

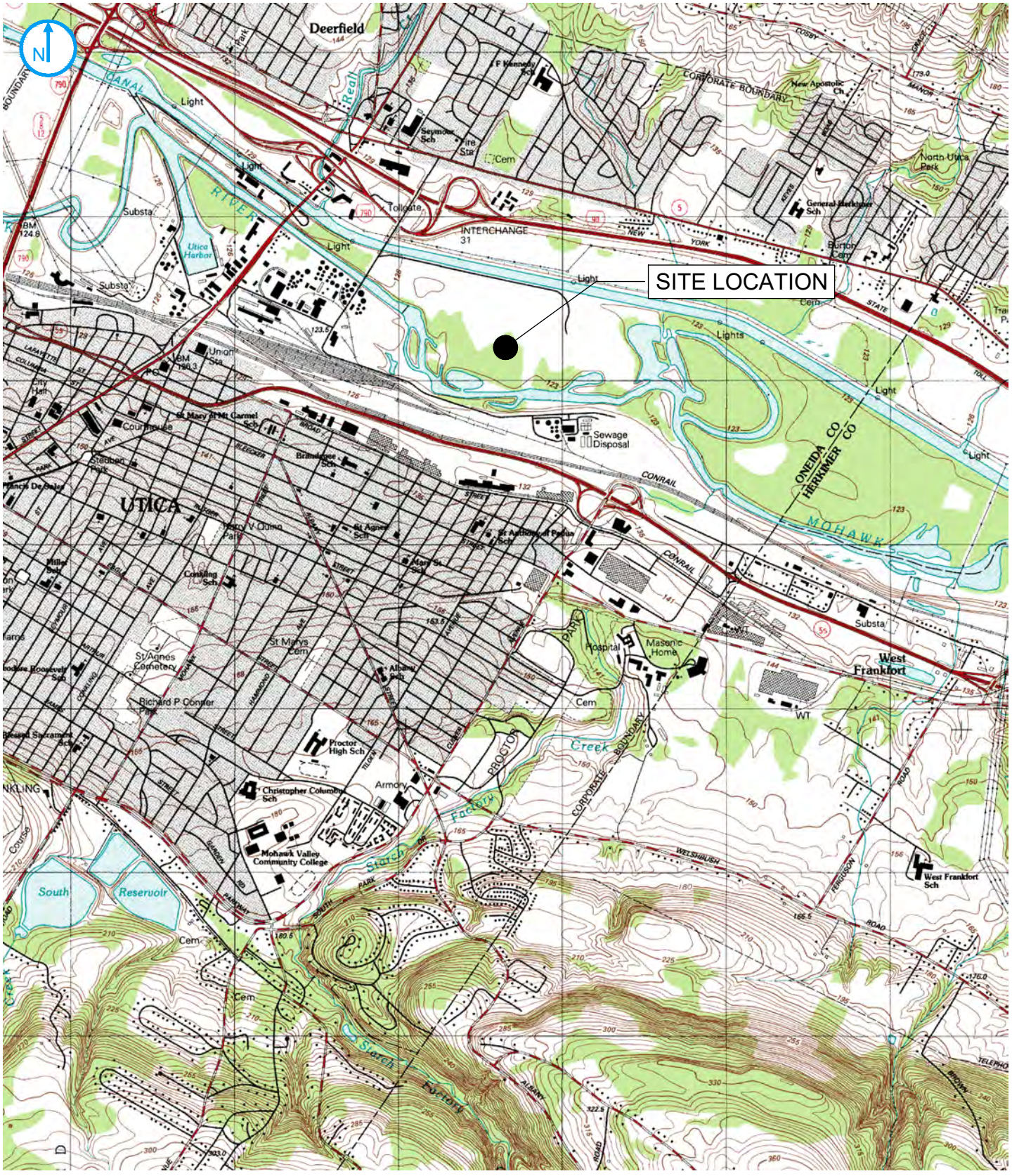
Ramboll biologists performed field delineation activities along the sediment transport route in November 2023. On-site activities included the evaluation of vegetative communities, the soil substrate, and hydrologic characteristics to identify the presence/absence of wetlands in the vicinity of proposed truck pull-offs along the route, as well as the area just south of the spillway where the temporary bridge, road, and box culvert will be installed under this alternative. Figure 7 illustrates the proposed truck pull-off locations in relation to the limits of delineated wetland habitats along the sediment transport route west of Dyke Road. Figure 10 illustrates the proposed truck pull-off locations in relation to the limits of delineated wetland habitats along the sediment transport route east of Dyke Road. Many of the proposed pull-off locations are with existing pull-offs or appear to have been cleared and/or filled previously. Delineated wetlands are shown on Figures 7 and 10 and generally consisted of forested and scrub/shrub habitat dominated by black willow, silver maple, and American elm (*Ulmus americana*) in the overstory, European alder (*Alnus glutinosa*), silky dogwood (*Cornus amomum*), and common buckthorn in the understory, and smooth goldenrod (*Solidago gigantea*) and moneywort in the herbaceous layer.

No wetlands were discovered south of the spillway in the vicinity of the proposed temporary bridge, box culvert, and access road. Figure 8 shows the results of the wetland delineation in this area.

Summary

Ramboll biologists performed wetland field delineations within the proposed area of impact associated with remedial design of the former Utica City Dump, as well as along proposed sediment transport route. Delineations were conducted in three stages (listed chronologically): Utica Dump – East, Utica Dump – West, and Utica Dump – Sediment Transport Route. The Utica Dump - East delineation was conducted in May 2022, the Utica Dump - West delineation was conducted in October 2023, and the sediment transport route delineation/inspection was conducted in November 2023. Wetland habitats that were identified and delineated within both parcels of the project area are shown in the attached figures. Relevant site information, such as soil mapping (Attachment 1), wetland data forms (Attachment 2), and photographic logs (Attachment 3) are included, herein.

Confidential


SITE LOCATION
Deerfield
UTICA
Utica Harbor
Mohawk Valley Community College
Proctor High Sch
Christopher Columbus Sch
Masonic Home
Hospital
West Frankfort
West Frankfort Sch
Sewage Disposal
Union Sta
Courthouse
Richard P Conner Park
St Agnes Cemetery
St Marys Cem
Albany Rd
Armory
Factory Starch Factory
Proctor Creek
South Reservoir
Mohawk River
Erie Canal
Interchange 31
Tollgate
Substa
Lights
Light
Cem
WT
Conrail
Oneida Co
Herkimer Co
Corporate Boundary
North Utica Park
Burton Cem
General Herkimer Sch
New Apostolic Ch
F Kennedy Sch
Seymour Sch
Fire Sta
Union Sta
City Hall
Post Office
Steuben Park
Brandegee Sch
St Mary at Mt Carmel Sch
St Agnes Sch
St Mary Sch
St Anthony of Padua Sch
Conkling Sch
Miller Sch
Theodore Roosevelt Sch
Blessed Sacrament Sch
Francis De Sales
Mary V Quinn Park
Utica Boilers
Utica Knitting
Utica Cutlery
Utica Gas & Electric
Utica Steam & Mohawk Valley Cotton Mills
Utica Steam & Mohawk Valley Cotton Mills Co
Utica Steam & Mohawk Valley Cotton Mills Co Inc
Utica Steam & Mohawk Valley Cotton Mills Co Inc Utica Knitting Co
Utica Steam & Mohawk Valley Cotton Mills Co Inc Utica Knitting Co Inc
Utica Steam & Mohawk Valley Cotton Mills Co Inc Utica Knitting Co Inc Utica Cutlery Co
Utica Steam & Mohawk Valley Cotton Mills Co Inc Utica Knitting Co Inc Utica Cutlery Co Inc
Utica Steam & Mohawk Valley Cotton Mills Co Inc Utica Knitting Co Inc Utica Cutlery Co Inc Utica Gas & Electric
Utica Steam & Mohawk Valley Cotton Mills Co Inc Utica Knitting Co Inc Utica Cutlery Co Inc Utica Gas & Electric Co
Utica Steam & Mohawk Valley Cotton Mills Co Inc Utica Knitting Co Inc Utica Cutlery Co Inc Utica Gas & Electric Co Inc
Utica Steam & Mohawk Valley Cotton Mills Co Inc Utica Knitting Co Inc Utica Cutlery Co Inc Utica Gas & Electric Co Inc

C:\Users\grizzo\OneDrive - Ramboll\Desktop\UTICA DUMP\FIGURE_2.dwg

DESIGNER: GRIZZO

DATED: 2/17/2023

PROJECT: ####



LEGEND

- LIMITS OF WORK
- STATE REGULATED FRESHWATER WETLANDS
- STATE REGULATED WETLAND CHECKZONE

150 0 150 300

SCALE IN FEET

NYS FRESHWATER WETLANDS
UTICA DUMP - EAST

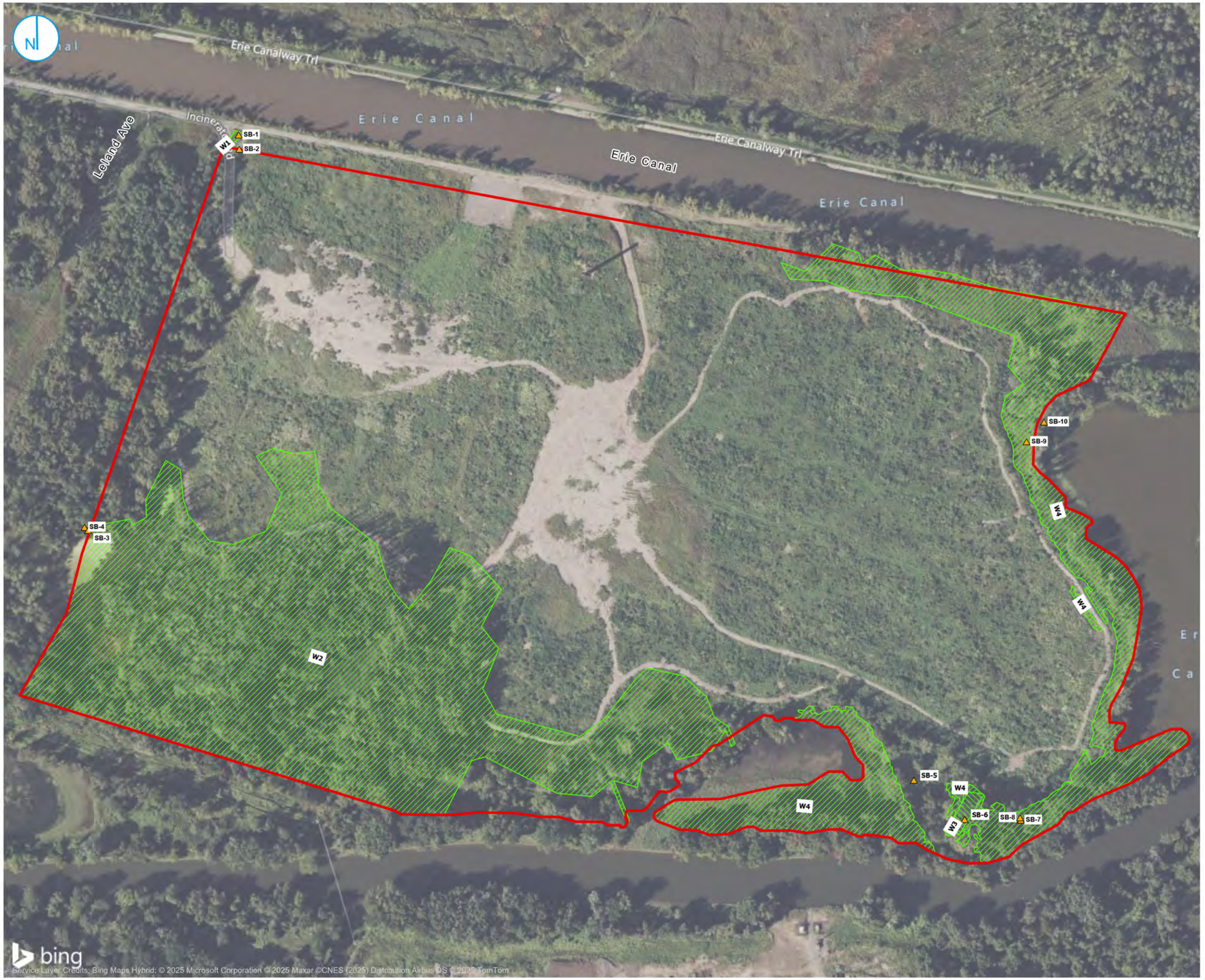
NYSDEC UTICA DUMP RD
UTICA, NEW YORK

FIGURE 2

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY

RAMBOLL

K:\NYS-DEC\.1087815\Standards\GIS\Utica_Dump\Pro\Utica_City_Dump\Utica_City_Dump.aprx



Legend

- Parcel Boundary
- Delineated Wetland
- Wetland Boring

150 0 150 300 Feet

DELINEATED WETLANDS - UTICA DUMP EAST

NYSDEC UTICA CITY DUMP RD
UTICA, NEW YORK

FIGURE 03

RAMBOLL US CONSULTING, INC.
A RAMBOLL COMPANY

RAMBOLL

PROJECT: 1940101207 | DATED: 2/27/2025 | DESIGNER: NTURK



Limits of Work
State Regulated Freshwater Wetlands
State Regulated Freshwater Wetlands Checkzone

0 120 240
Feet

NYS FRESHWATER WETLANDS
UTICA DUMP - WEST

NYSDEC UTICA CITY DUMP RD
UTICA, NEW YORK
ONEIDA COUNTY

FIGURE 4

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL

K:\NYS-DEC.1087815\Standards\GIS\Utica_Dump\Pro\Utica_City_Dump\Utica_City_Dump.aprx\West_Wetland_Delin_NYwetlands

PROJECT: 1940101207 | DATED: 11/17/2023 | DESIGNER: SSOULE



Soil Boring
Delineated Wetland
Limits of Work

0 120 240 Feet

DELINEATED WETLANDS:

UTICA DUMP - WEST

NYSDEC UTICA DUMP RD

UTICA, NEW YORK
ONEIDA COUNTY

FIGURE 5

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL

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PROJECT: 1940101207 | DATED: 11/17/2023 | DESIGNER: SSOULE

K:\NYS-DEC.1087815\Standards\GIS\Utica_Dump\Pro\Utica_City_Dump\Utica_City_Dump.aprx\Transpo_Route_West



PROJECT: 1940101207 | DATED: 11/17/2023 | DESIGNER: SSOULE

Post-Inspection Recommended Pull-Off Locations
Existing Gravel Road
State Regulated Freshwater Wetlands
State Regulated Freshwater Wetlands Checkzone

0 500 1,000 Feet

NYS FRESHWATER WETLANDS

DREDGE MATERIAL TRANSPORT ROUTE: WEST OF DYKE RD

NYSDEC UTICA CITY DUMP RD
UTICA, NEW YORK
ONEIDA COUNTY

FIGURE 6

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL

K:\NYS-DEC.1087815\Standards\GIS\Utica_Dump\Pro\Utica_City_Dump\Utica_City_Dump.aprx\Transpo_Route_West

PROJECT: 1940101207 | DATED: 11/30/2023 | DESIGNER: SSOULE



- Soil Boring
- Stream Flag
- Wetland Flag
- Pre-Inspection Pull-Off Locations
- Post-Inspection Recommended Pull-Off Locations
- Existing Gravel Road
- Delineated Wetland Boundary

0 500 1,000 Feet

DELINEATED WETLANDS AND RECOMMENDED PULL-OFF LOCATIONS

DREDGE MATERIAL TRANSPORT ROUTE: WEST OF DYKE RD

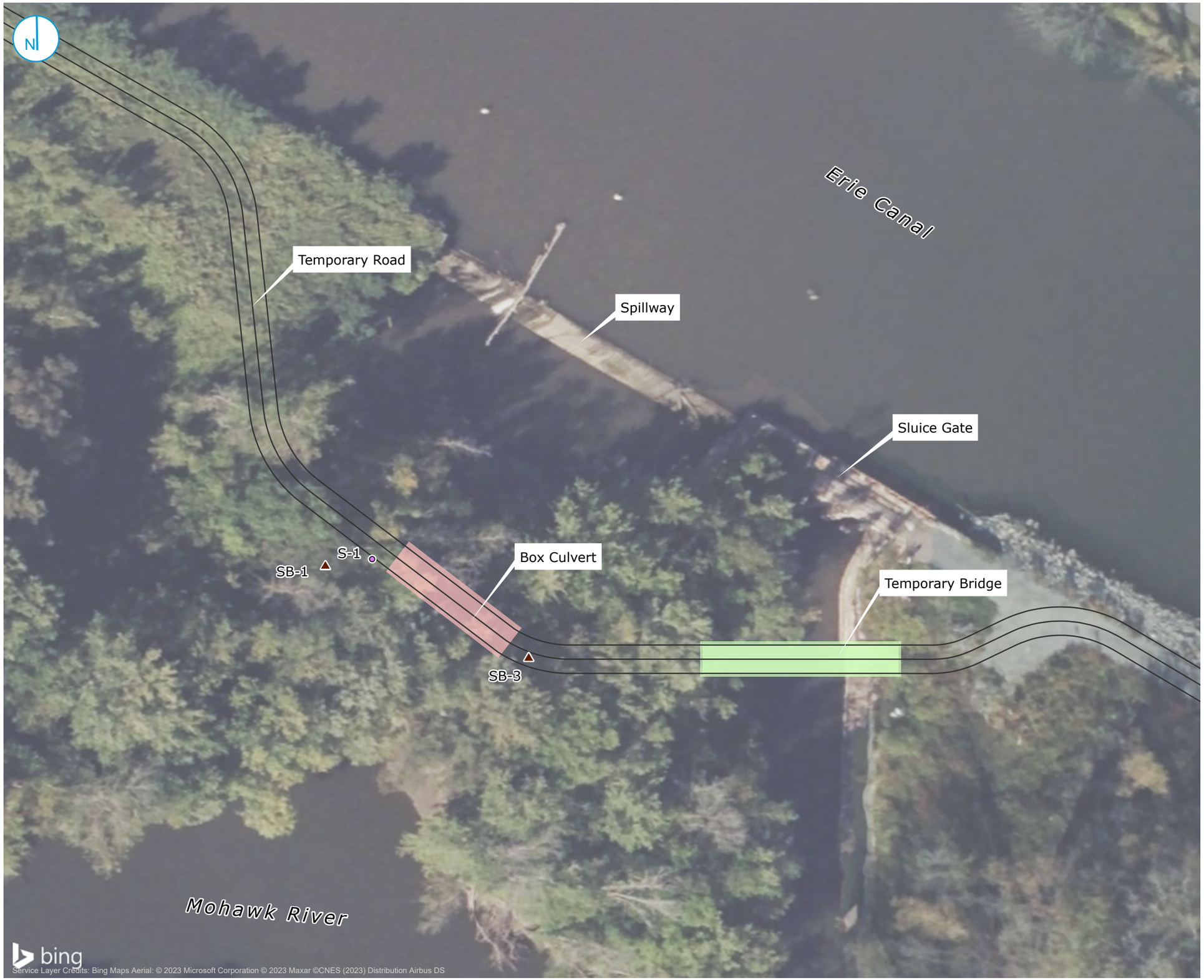
NYSDEC UTICA CITY DUMP RD
UTICA, NEW YORK
ONEIDA COUNTY

FIGURE 7

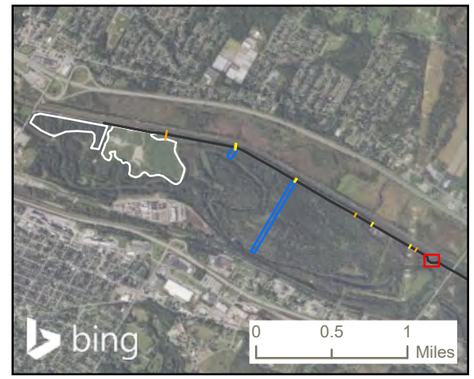
RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL

K:\NYS-DEC.1087815\Standards\GIS\Utica_Dump\Pro\Utica_City_Dump\Utica_City_Dump.aprx\Transpo_Route_Bridge



▲ Soil Boring
● Stream Flag



0 20 40 Feet

DREDGE MATERIAL TRANSPORT ROUTE

TEMPORARY SPILLWAY CROSSING

NYSDEC UTICA DUMP RD
UTICA, NEW YORK
ONEIDA COUNTY

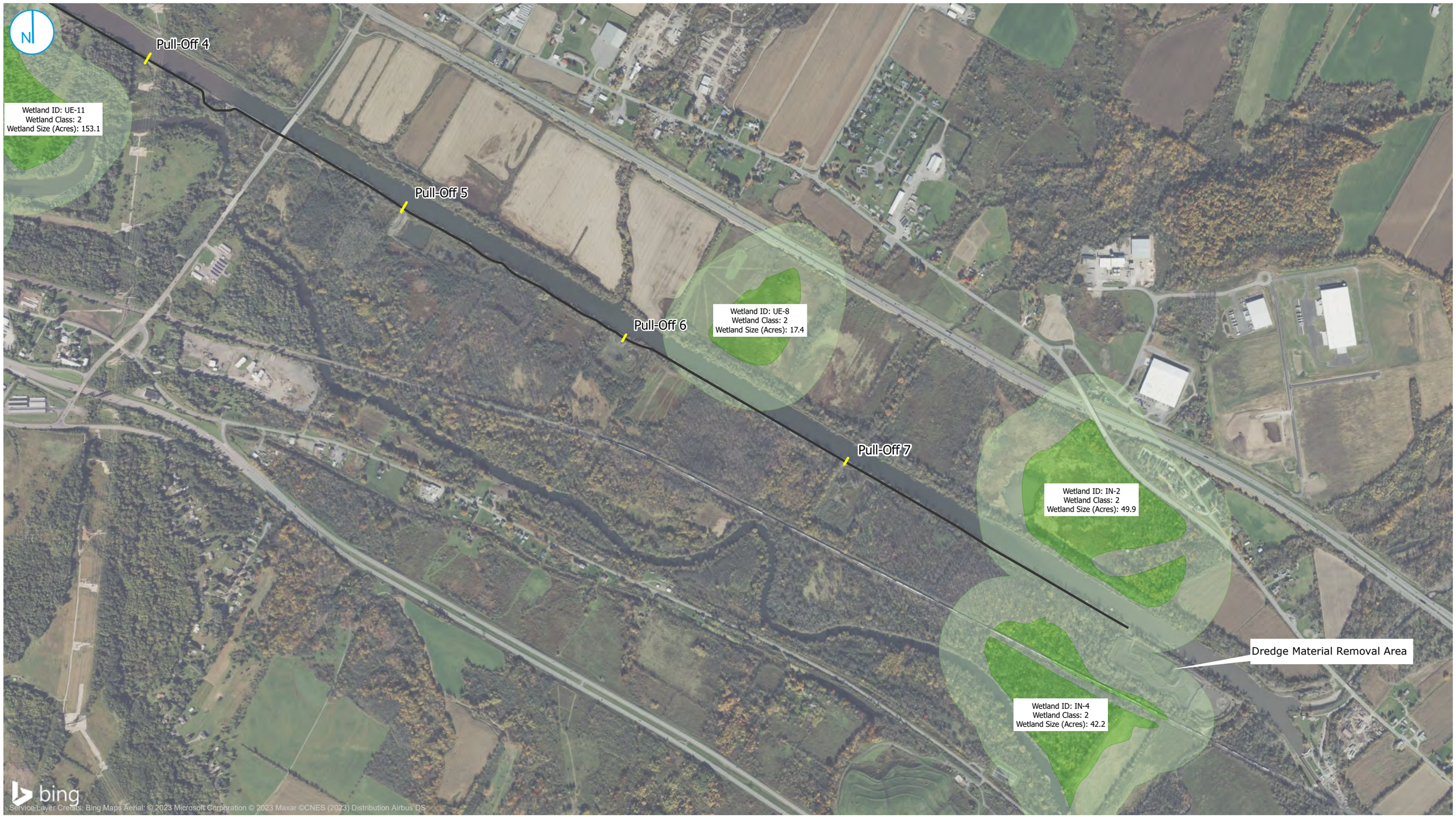
FIGURE 8

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL

PROJECT: 1940101207 | DATED: 11/15/2023 | DESIGNER: SSOULE

K:\NYS-DEC.1087815\Standards\GIS\Utica_Dump\Pro\Utica_City_Dump\Utica_City_Dump.aprx\Transpo_Route_East_NYwetlands



PROJECT: 1940101207 | DATED: 11/17/2023 | DESIGNER: SSOULE

Post-Inspection Recommended Pull-Off Locations
Existing Gravel Road
State Regulated Freshwater Wetlands
State Regulated Freshwater Wetlands Checkzone

0 500 1,000 Feet

NYS FRESHWATER WETLANDS

DREDGE MATERIAL TRANSPORT ROUTE: EAST OF DYKE RD

NYSDEC UTICA CITY DUMP RD
UTICA, NEW YORK
ONEIDA COUNTY

FIGURE 9

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL

K:\NYS-DEC.1087815\Standards\GIS\Utica_Dump\Pro\Utica_City_Dump\Utica_City_Dump.aprx\Transpo_Route_East



PROJECT: 1940101207 | DATED: 11/30/2023 | DESIGNER: SSOULE

- Soil Boring
- Stream Flag
- Wetland Flag
- Pre-Inspection Pull-Off Locations
- Post-Inspection Recommended Pull-Off Locations
- Existing Gravel Road
- Delineated Wetland Boundary

0 500 1,000 Feet

DELINEATED WETLANDS AND RECOMMENDED PULL-OFF LOCATIONS

DREDGE MATERIAL TRANSPORT ROUTE: EAST OF DYKE RD

NYSDEC UTICA CITY DUMP RD
UTICA, NEW YORK
ONEIDA COUNTY

FIGURE 10

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL

ATTACHMENT 1
SOIL MAPPING

Soil Map—Oneida County, New York
(Utica City Dump - East)



Map Scale: 1:6,050 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 50 100 200 300

Feet
0 250 500 1000 1500

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
7	Wayland soils complex, 0 to 3 percent slopes, frequently flooded	3.0	2.5%
21	Udorthents, refuse substratum	84.5	69.2%
22	Udorthents, smoothed	34.0	27.8%
W	Water	0.6	0.5%
Totals for Area of Interest		**122.1**	**100.0%**

Soil Map—Oneida County, New York
(Utica Dump - West)



Map Scale: 1:3,900 if printed on B landscape (17" x 11") sheet.

N

Meters: 0 50 100 200 300

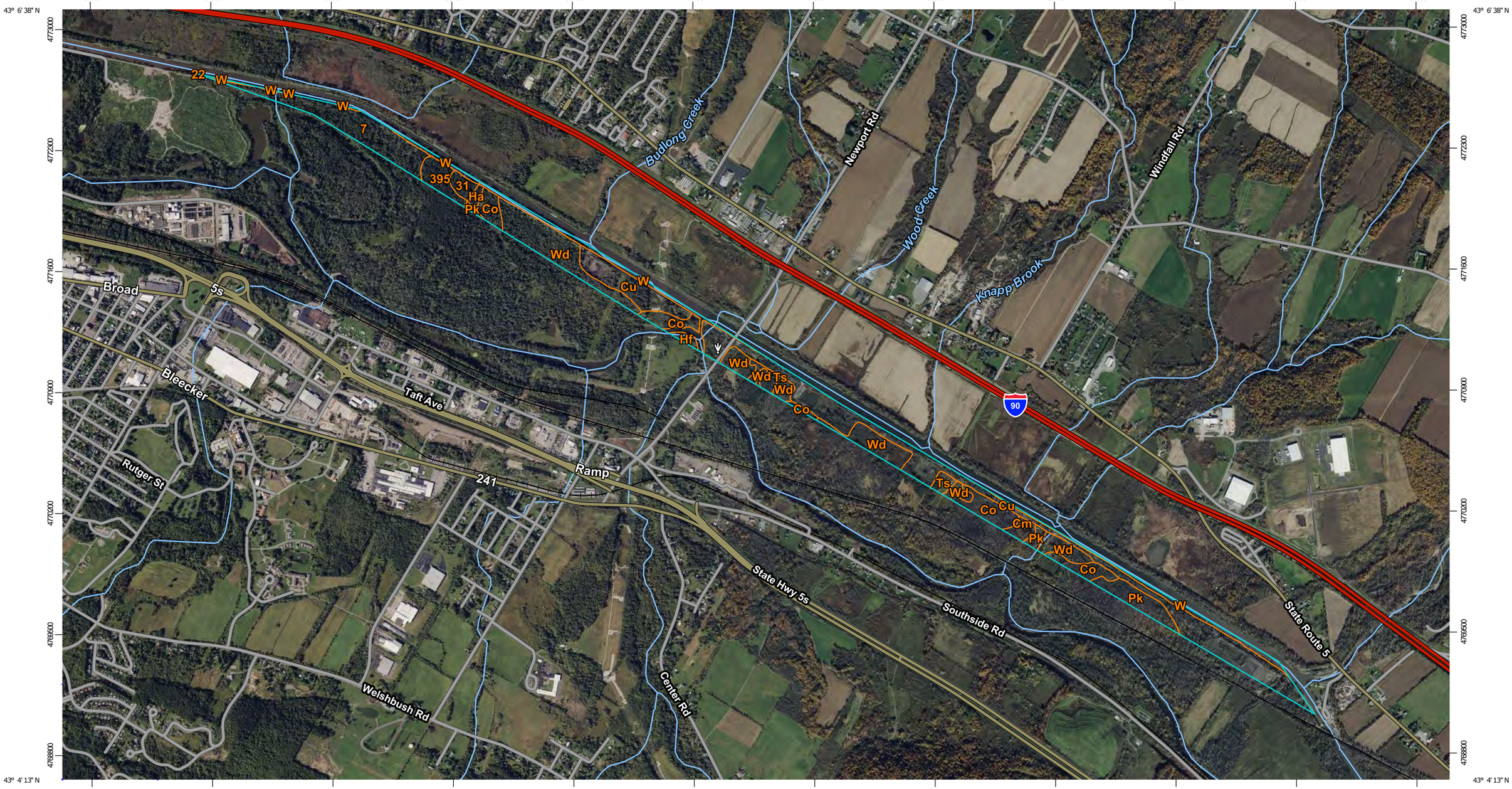
Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
21	Udorthents, refuse substratum	36.1	50.8%
22	Udorthents, smoothed	34.5	48.4%
W	Water	0.6	0.8%
Totals for Area of Interest		**71.2**	**100.0%**

Soil Map—Herkimer County, New York, and Oneida County, New York
(Utica Dump - Transport Route)



Map Scale: 1:21,700 if printed on B landscape (17" x 11") sheet.

N

Meters
0 300 600 1200 1800

Feet
0 1000 2000 4000 6000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Cm	Carlisle muck	3.7	1.3%
Co	Cohoctah mucky very fine sandy loam	28.8	10.4%
Cu	Cut and fill land	96.7	34.9%
Ha	Halsey soils	1.5	0.5%
Hf	Hamlin silt loam	1.8	0.6%
Pk	Palms muck	14.9	5.4%
Ts	Teel silt loam	6.5	2.3%
W	Water	17.7	6.4%
Wd	Wayland soils complex, 0 to 3 percent slopes, frequently flooded	57.2	20.6%
Subtotals for Soil Survey Area		**228.8**	**82.5%**
Totals for Area of Interest		**277.3**	**100.0%**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
7	Wayland soils complex, 0 to 3 percent slopes, frequently flooded	32.7	11.8%
22	Udorthents, smoothed	0.0	0.0%
31	Halsey gravelly loam	4.0	1.4%
395	Palms muck	8.3	3.0%
W	Water	3.4	1.2%
Subtotals for Soil Survey Area		**48.5**	**17.5%**
Totals for Area of Interest		**277.3**	**100.0%**

ATTACHMENT 2
WETLAND DATA FORMS

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Utica City Dump City/County: Utica/Oneida Sampling Date: May 11, 2022

Applicant/Owner: NYSDEC State: NY Sampling Point: SB1

Investigator(s): KWB, DMR Section, Township, Range:

Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 0

Subregion (LRR or MLRA): LRR L Lat: Long: Datum:

Soil Map Unit Name: Landfill NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation X, Soil X, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No X

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No	**within a Wetland?** **Yes** X **No**
Wetland Hydrology Present?	Yes X	No	If yes, optional Wetland Site ID: W1

Remarks: (Explain alternative procedures here or in a separate report.)
Small depressional wetland in the corner of the landfill that has recently been cleared of vegetation and is underlain by gravel.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- X Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- X Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- X Shallow Aquitard (D3)
- X Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):
Water Table Present?	Yes	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):

Wetland Hydrology Present? **Yes** X **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SB1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *Populus deltoides*	5	No	FAC
2. *Salix nigra*	2	No	OBL
3. *Fraxinus pennsylvanica*	25	Yes	FACW
4.			
5.			
6.			
7.			
	32 =Total Cover		
Herb Stratum (Plot size: 5)			
1. *Juncus effusus*	70	Yes	OBL
2. *Galium tinctorium*	20	Yes	OBL
3. *Dipsacus fullonum*	5	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	95 =Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	92	x 1 =	92
FACW species	25	x 2 =	50
FAC species	5	x 3 =	15
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	127 (A)		177 (B)

Prevalence Index = B/A = 1.39

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SB1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10yr 3/1	95	5yr 3/3	5	C	PL/M	Loamy/Clayey	Underlain by gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Dense gravel

Depth (inches): 6

Hydric Soil Present? **Yes** X **No** ___

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Utica City Dump City/County: Utica/Oneida Sampling Date: May 11, 2022

Applicant/Owner: NYSDEC State: NY Sampling Point: SB2

Investigator(s): KWB, DMR Section, Township, Range:

Landform (hillside, terrace, etc.): Landfill Local relief (concave, convex, none): none Slope %: 0

Subregion (LRR or MLRA): LRR L Lat: Long: Datum:

Soil Map Unit Name: Landfill NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation X, Soil X, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No X

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area within a Wetland?** **Yes** **No X**
Hydric Soil Present?	Yes	No X	If yes, optional Wetland Site ID: Upland for W1
Wetland Hydrology Present?	Yes	No X	

Remarks: (Explain alternative procedures here or in a separate report.)
Cleared portion of landfill

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):
Water Table Present?	Yes	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):

Wetland Hydrology Present? **Yes** **No X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SB2

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5)			
1. *Taraxacum officinale*	5	No	FACU
2. *Pastinaca sativa*	20	Yes	UPL
3. *Glechoma hederacea*	5	No	FACU
4. *Centaurea*	30	Yes	
5. *Solidago*	10	No	
6. *Galium mollugo*	5	No	FACU
7. *Artemisia vulgaris*	5	No	UPL
8.			
9.			
10.			
11.			
12.			
	80 =Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	15	x 4 =	60
UPL species	25	x 5 =	125
Column Totals:	40 (A)		185 (B)

Prevalence Index = B/A = 4.63

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SB2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	7.5yr 3/1	100					Loamy/Clayey	Gravel mixed in

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Utica City Dump City/County: Utica/Oneida Sampling Date: May 10, 2022

Applicant/Owner: NYSDEC State: NY Sampling Point: SB3

Investigator(s): KWB, RPC Section, Township, Range:

Landform (hillside, terrace, etc.): Base of fill area Local relief (concave, convex, none): none Slope %: 0

Subregion (LRR or MLRA): LRR L Lat: Long: Datum:

Soil Map Unit Name: Landfill NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil X , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No	**Is the Sampled Area**
Hydric Soil Present?	Yes X No	**within a Wetland?** **Yes** X **No**
Wetland Hydrology Present?	Yes X No	If yes, optional Wetland Site ID: W2

Remarks: (Explain alternative procedures here or in a separate report.)
Wetland at base of fill area

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- Saturation (A3)
- X Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- X Algal Mat or Crust (B4)
- Iron Deposits (B5)
- X Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- Shallow Aquitard (D3)
- X Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No	Depth (inches): 3
Water Table Present?	Yes X	No	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes X	No	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
At edge of open water area.

VEGETATION – Use scientific names of plants. Sampling Point: SB3

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	70	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	70	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Ribes americanum*	10	Yes	FACW
2. *Rhamnus cathartica*	5	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	15	=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Sagittaria latifolia*	2	No	OBL
2. *Fraxinus pennsylvanica*	2	No	FACW
3. *Rumex crispus*	15	Yes	FAC
4. *Lysimachia nummularia*	40	Yes	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	59	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. *Vitis riparia*	5	Yes	FAC
2.			
3.			
4.			
	5	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	2	x 1 =	2
FACW species	52	x 2 =	104
FAC species	95	x 3 =	285
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	149 (A)		391 (B)

Prevalence Index = B/A = 2.62

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SB3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10yr 4/2	100					Loamy/Clayey	
2-16	10yr 2/1	100					Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- X 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:
Muck mixed with fill material

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Utica City Dump City/County: Utica/Oneida Sampling Date: May 10, 2022

Applicant/Owner: NYSDEC State: NY Sampling Point: SB4

Investigator(s): KWB, RPC Section, Township, Range:

Landform (hillside, terrace, etc.): Landfill Local relief (concave, convex, none): none Slope %: 0

Subregion (LRR or MLRA): LRR L Lat: Long: Datum:

Soil Map Unit Name: Landfill NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation X, Soil X, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No X

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area within a Wetland?** **Yes** **No X**
Hydric Soil Present?	Yes	No X	If yes, optional Wetland Site ID: Upland for W2
Wetland Hydrology Present?	Yes	No X	

Remarks: (Explain alternative procedures here or in a separate report.)
Fill area

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):
Water Table Present?	Yes	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):

Wetland Hydrology Present? **Yes** **No X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SB4

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	60	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	60	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Lonicera tatarica*	30	Yes	FACU
2. *Rhamnus cathartica*	40	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	70	=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Taraxacum officinale*	5	No	FACU
2. *Hesperis matronalis*	60	Yes	FACU
3. *Alliaria petiolata*	40	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	105	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. *Vitis riparia*	15	Yes	FAC
2.			
3.			
4.			
	15	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	115	x 3 =	345
FACU species	135	x 4 =	540
UPL species	0	x 5 =	0
Column Totals:	250 (A)		885 (B)

Prevalence Index = B/A = 3.54

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SB4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10yr 2/1	100					Loamy/Clayey	Mixed with fill

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Utica City Dump City/County: Utica/Oneida Sampling Date: May 11, 2022

Applicant/Owner: NYSDEC State: NY Sampling Point: SB5

Investigator(s): KWB, RPC Section, Township, Range:

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): none Slope %: 0

Subregion (LRR or MLRA): LRR L Lat: Long: Datum:

Soil Map Unit Name: Landfill NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X	**Is the Sampled Area within a Wetland?** **Yes** **No** X
Hydric Soil Present?	Yes	No X	
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Floodplain area with a mix of vegetative species.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):
Water Table Present?	Yes	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):

Wetland Hydrology Present? **Yes** **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SB5

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	15	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	15	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Solidago*	5	No	
2. *Impatiens capensis*	5	No	FACW
3. *Alliaria petiolata*	70	Yes	FACU
4. *Urtica dioica*	10	No	FAC
5. *Allium canadense*	5	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	95	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	25	x 3 =	75
FACU species	75	x 4 =	300
UPL species	0	x 5 =	0
Column Totals:	105 (A)		385 (B)

Prevalence Index = B/A = 3.67

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SB5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10yr 3/2	60	10yr 4/2	40			Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Utica City Dump City/County: Utica/Oneida Sampling Date: May 11, 2022

Applicant/Owner: NYSDEC State: NY Sampling Point: SB6

Investigator(s): KWB, DMR Section, Township, Range:

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope %: 0

Subregion (LRR or MLRA): LRR L Lat: Long: Datum:

Soil Map Unit Name: Landfill NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No	**Is the Sampled Area**
Hydric Soil Present?	Yes X No	**within a Wetland?** **Yes** X **No**
Wetland Hydrology Present?	Yes X No	If yes, optional Wetland Site ID: W3

Remarks: (Explain alternative procedures here or in a separate report.)
Small topographical depression with no outlet in floodplain

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- X Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SB6

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	20	No	FAC
2. *Populus deltoides*	80	Yes	FAC
3. *Fraxinus pennsylvanica*	5	No	FACW
4.			
5.			
6.			
7.			
	105	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Lysimachia nummularia*	5	Yes	FACW
2. *Equisetum arvense*	2	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	7	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	102	x 3 =	306
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	112 (A)		326 (B)

Prevalence Index = B/A = 2.91

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SB6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10yr 4/1	100					Loamy/Clayey	
3-8	10yr 4/1	98	5yr 3/3	2	C	M	Loamy/Clayey	
8-16	10yr 3/2	90	5yr 3/4	10	C	M	Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Utica City Dump City/County: Utica/Oneida Sampling Date: May 11, 2022

Applicant/Owner: NYSDEC State: NY Sampling Point: SB7

Investigator(s): KWB, DMR Section, Township, Range:

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): none Slope %: 0

Subregion (LRR or MLRA): LRR L Lat: Long: Datum:

Soil Map Unit Name: Landfill NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area**
Hydric Soil Present?	Yes	No X	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes	No X	If yes, optional Wetland Site ID: Upland point for W3

Remarks: (Explain alternative procedures here or in a separate report.)
Floodplain area with a mix of vegetative species.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):
Water Table Present?	Yes	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):

Wetland Hydrology Present? **Yes** **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SB7

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	20	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	20	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Solidago*	30	No	
2. *Lysimachia nummularia*	60	Yes	FACW
3. *Viola*	20	No	
4. *Allium canadense*	40	Yes	FACU
5. *Arctium minus*	5	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	155	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	60	x 2 =	120
FAC species	20	x 3 =	60
FACU species	45	x 4 =	180
UPL species	0	x 5 =	0
Column Totals:	125 (A)		360 (B)

Prevalence Index = B/A = 2.88

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SB7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10yr 3/3	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Utica City Dump City/County: Utica/Oneida Sampling Date: May 11, 2022

Applicant/Owner: NYSDEC State: NY Sampling Point: SB8

Investigator(s): KWB, DMR Section, Township, Range:

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): none Slope %: 0

Subregion (LRR or MLRA): LRR L Lat: Long: Datum:

Soil Map Unit Name: Landfill NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Floodplain area but soils not hydric

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- X Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: SB8

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	20	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	20	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Lysimachia nummularia*	30	Yes	FACW
2. *Equisetum arvense*	10	Yes	FAC
3. *Geum canadense*	5	No	FAC
4. *Cardamine pratensis*	5	No	UPL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	50	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	30	x 2 =	60
FAC species	35	x 3 =	105
FACU species	0	x 4 =	0
UPL species	5	x 5 =	25
Column Totals:	70 (A)		190 (B)

Prevalence Index = B/A = 2.71

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SB8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10yr 3/3	100					Loamy/Clayey	
4-10	10yr 3/3	90	5yr 3/2	10	RM	PL	Loamy/Clayey	
10-16	10yr 2/2	90	5yr 3/2	10	RM	PL	Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Utica City Dump City/County: Utica/Oneida Sampling Date: May 17, 2022

Applicant/Owner: NYSDEC State: NY Sampling Point: SB9

Investigator(s): KWB, RPC Section, Township, Range:

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): none Slope %: 0

Subregion (LRR or MLRA): LRR L Lat: Long: Datum:

Soil Map Unit Name: Landfill NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes No X

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No	**Is the Sampled Area**
Hydric Soil Present?	Yes No X	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes X No	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Edge of landfill with trees cleared

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- Shallow Aquitard (D3)
- X Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):
Water Table Present?	Yes	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):

Wetland Hydrology Present? **Yes** X **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SB9

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	40	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	40	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Cornus racemosa*	2	No	FAC
2. *Fraxinus pennsylvanica*	2	No	FACW
3.			
4.			
5.			
6.			
7.			
	4	=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Lysimachia nummularia*	40	Yes	FACW
2. *Viola*	25	Yes	
3. *Alliaria petiolata*	5	No	FACU
4. *Ulmus americana*	5	No	FACW
5. *Toxicodendron radicans*	10	No	FAC
6. *Carex*	10	No	
7. *Galium tinctorium*	5	No	OBL
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. *Parthenocissus quinquefolia*	5	Yes	FACU
2.			
3.			
4.			
	5	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	87	x 2 =	174
FAC species	12	x 3 =	36
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	114 (A)		255 (B)

Prevalence Index = B/A = 2.24

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ___ 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SB9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	7.5yr 3/1	100					Loamy/Clayey	
3-12	7.5yr 3/2	100					Loamy/Clayey	
12-18	10yr 3/2	93	10yr 4/4	7	C	M	Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:
No saturation; floodplain soils

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Utica City Dump City/County: Utica/Oneida Sampling Date: May 17, 2022

Applicant/Owner: NYSDEC State: NY Sampling Point: SB10

Investigator(s): KWB, RPC Section, Township, Range:

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none) Concave Slope %: 0

Subregion (LRR or MLRA): LRR L Lat: Long: Datum:

Soil Map Unit Name: Landfill NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No	**Is the Sampled Area**
Hydric Soil Present?	Yes X No 0	**within a Wetland?** **Yes** X **No**
Wetland Hydrology Present?	Yes X No	If yes, optional Wetland Site ID: W4

Remarks: (Explain alternative procedures here or in a separate report.)
Flags 1-5 are on interior of swale. W4-1 is also OHWM8. Berm that is UPL extends east between W4-12 and 13.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- Shallow Aquitard (D3)
- X Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):
Water Table Present?	Yes	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):

Wetland Hydrology Present? **Yes** X **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Outlet from oxbow WL

VEGETATION– Use scientific names of plants. Sampling Point: SB10

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *Fraxinus pennsylvanica*	2	No	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	2 =Total Cover		
Herb Stratum (Plot size: 5)			
1. *Persicaria amphibia*	15	Yes	OBL
2. *Lysimachia nummularia*	25	Yes	FACW
3. *Persicaria maculosa*	5	No	FAC
4. *Lythrum salicaria*	10	No	OBL
5. *Apocynum cannabinum*	5	No	FAC
6. *Iris versicolor*	5	No	OBL
7.			
8.			
9.			
10.			
11.			
12.			
	65 =Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30
FACW species	27	x 2 =	54
FAC species	10	x 3 =	30
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	67 (A)		114 (B)

Prevalence Index = B/A = 1.70

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point SB10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10yr 3/1	100					Loamy/Clayey	
10-18	10yr 3/1	95	10yr 4/4	5	C	M	Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Utica City Dump - West City/County: Utica/Oneida Sampling Date: 10/2/23

Applicant/Owner: NYSDEC/City of Utica State: NY Sampling Point: SB-11

Investigator(s): Matt Dreimiller and Nate Turk Section, Township, Range:

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope %: 1-2

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43° 6' 28.46" Long: -75° 12' 3.27" Datum: NAD83

Soil Map Unit Name: NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil X , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No X

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No	**within a Wetland?** **Yes** X **No**
Wetland Hydrology Present?	Yes X	No	If yes, optional Wetland Site ID: WA

Remarks: (Explain alternative procedures here or in a separate report.)
Site located in old landfill and influenced by dumping/backfill of gravel, debris, garbage, scrap metal, etc.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- X Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- Shallow Aquitard (D3)
- X Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):
Water Table Present?	Yes	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):

Wetland Hydrology Present? **Yes** X **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: SB-11

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Fraxinus pennsylvanica*	5	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	5 =Total Cover		
Herb Stratum (Plot size: 5 ft. radius)			
1. *Phragmites australis*	70	Yes	FACW
2. *Lythrum salicaria*	30	Yes	OBL
3. *Symphyotrichum novae-angliae*	10	No	FACW
4. *Euthamia graminifolia*	5	No	FAC
5. *Juncus effusus*	5	No	OBL
6. *Solidago altissima*	2	No	FACU
7. *Epilobium ciliatum*	2	No	FACW
8.			
9.			
10.			
11.			
12.			
	124 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	35	x 1 =	35
FACW species	87	x 2 =	174
FAC species	5	x 3 =	15
FACU species	2	x 4 =	8
UPL species	0	x 5 =	0
Column Totals:	129 (A)		232 (B)

Prevalence Index = B/A = 1.80

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point SB-11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 2/1	60	2.5YR 2.5/3	40	C	M	Loamy/Clayey	Prominent redox concentrations
8-18	10YR 3/2	70	2.5YR 2.5/3	30	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Utica City Dump - West City/County: Utica/Oneida Sampling Date: 10/2/23

Applicant/Owner: NYSDEC/City of Utica State: NY Sampling Point: SB-12

Investigator(s): Matt Dreimiller and Nate Turk Section, Township, Range:

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): None Slope %: 0

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43° 6' 28.83" Long: -75° 12' 3.58" Datum: NAD83

Soil Map Unit Name: NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Site located within an old landfill and influenced by dumping/backfill of gravel, debris, garbage, scrap metal, etc.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: SB-12

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5 ft. radius)			
1. *Festuca rubra*	70	Yes	FACU
2. *Solidago altissima*	60	Yes	FACU
3. *Lotus corniculatus*	45	Yes	FACU
4. *Artemisia vulgaris*	25	No	UPL
5. *Galium mollugo*	20	No	FACU
6. *Juncus effusus*	10	No	OBL
7. *Phragmites australis*	5	No	FACW
8. *Daucus carota*	5	No	UPL
9. *Lythrum salicaria*	5	No	OBL
10. *Symphyotrichum novae-angliae*	5	No	FACW
11. *Euthamia graminifolia*	5	No	FAC
12. *Symphyotrichum pilosum*	5	No	FACU
	262	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15
FACW species	10	x 2 =	20
FAC species	5	x 3 =	15
FACU species	202	x 4 =	808
UPL species	30	x 5 =	150
Column Totals:	262 (A)		1008 (B)

Prevalence Index = B/A = 3.85

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

VEGETATION Continued – Use scientific names of plants. Sampling Point: SB-12

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
8.			
9.			
10.			
11.			
12.			
13.			
14.			
	=Total Cover		
Sapling/Shrub Stratum			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
	=Total Cover		
Herb Stratum			
13. *Taraxacum officinale*	2	No	FACU
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
	262 =Total Cover		
Woody Vine Stratum			
5.			
6.			
7.			
8.			
	=Total Cover		

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point SB-12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 2/2	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

Soil with apparent brick/gravel fill (~15% of matrix is brick/gravel)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Utica City Dump - West City/County: Utica/Oneida Sampling Date: 10/2/23

Applicant/Owner: NYSDEC/City of Utica State: NY Sampling Point: SB-13

Investigator(s): Matt Dreimiller and Nate Turk Section, Township, Range:

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): None Slope %: 0

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43° 6' 31.14" Long: -75° 12' 21.38" Datum: NAD83

Soil Map Unit Name: NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Site located in old landfill, and soils influenced by dumping of material/debris

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: SB-13

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft. radius)			
1. *Phragmites australis*	40	Yes	FACW
2. *Solidago altissima*	30	Yes	FACU
3. *Artemisia vulgaris*	30	Yes	UPL
4. *Symphyotrichum novae-angliae*	10	No	FACW
5. *Symphyotrichum lanceolatum*	5	No	FACW
6. *Lythrum salicaria*	5	No	OBL
7. *Euthamia graminifolia*	2	No	FAC
8.			
9.			
10.			
11.			
12.			
	122 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	55	x 2 =	110
FAC species	2	x 3 =	6
FACU species	30	x 4 =	120
UPL species	30	x 5 =	150
Column Totals:	122 (A)		391 (B)

Prevalence Index = B/A = 3.20

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point SB-13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 2/2	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Utica City Dump - West City/County: Utica/Oneida Sampling Date: 10/2/23

Applicant/Owner: NYSDEC/City of Utica State: NY Sampling Point: SB-14

Investigator(s): Matt Dreimiller and Nate Turk Section, Township, Range:

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope %: ~3%

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43° 6' 21.30" Long: -75° 12' 21.70" Datum: NAD83

Soil Map Unit Name: NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: WB

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- X Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- X Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 9
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 9

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
Aquatic snails observed on vegetation.

Spring peepers (Pseudacris crucifer) observed.

VEGETATION – Use scientific names of plants. Sampling Point: SB-14

Tree Stratum (Plot size: 30 ft. radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	40	Yes	FACW
2. *Salix nigra*	10	Yes	OBL
3.			
4.			
5.			
6.			
7.			
	50	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Fraxinus pennsylvanica*	30	Yes	FACW
2. *Rhamnus cathartica*	15	Yes	FAC
3. *Lonicera morrowii*	10	No	FACU
4.			
5.			
6.			
7.			
	55	=Total Cover	
Herb Stratum (Plot size: 5 ft. radius)			
1. *Lysimachia nummularia*	80	Yes	FACW
2. *Iris versicolor*	40	Yes	OBL
3. *Lythrum salicaria*	20	No	OBL
4. *Lemna minor*	20	No	OBL
5. *Symphyotrichum lanceolatum*	15	No	FACW
6. *Bidens frondosa*	10	No	FACW
7. *Rumex verticillatus*	10	No	OBL
8. *Galium tinctorium*	5	No	OBL
9. *Myosotis scorpioides*	5	No	OBL
10.			
11.			
12.			
	205	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	110	x 1 =	110
FACW species	175	x 2 =	350
FAC species	15	x 3 =	45
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	310 (A)		545 (B)

Prevalence Index = B/A = 1.76

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point SB-14

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 2/2	75	10YR 4/6	25	C	PL/M	Loamy/Clayey	Prominent redox concentrations
9-18	10YR 2/2	60	10YR 4/6	40	C	PL/M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- X Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Utica City Dump - West City/County: Utica/Oneida Sampling Date: 10/2/23

Applicant/Owner: NYSDEC/City of Utica State: NY Sampling Point: SB-15

Investigator(s): Matt Dreimiller and Nate Turk Section, Township, Range:

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope %: ~3%

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43° 6' 24.56" Long: -75° 12' 18.97 Datum: NAD83

Soil Map Unit Name: NWI classification: PEM1E/PSS1E

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: WB

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 12
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: SB-15

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Acer negundo*	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	10	=Total Cover	
Herb Stratum (Plot size: 5 ft. radius)			
1. *Phalaris arundinacea*	60	Yes	FACW
2. *Typha latifolia*	40	Yes	OBL
3. *Carex lacustris*	30	No	OBL
4. *Symphyotrichum lanceolatum*	20	No	FACW
5. *Impatiens capensis*	15	No	FACW
6. *Pilea pumila*	10	No	FACW
7. *Euthamia graminifolia*	5	No	FAC
8. *Epilobium ciliatum*	5	No	FACW
9.			
10.			
11.			
12.			
	185	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	70	x 1 =	70
FACW species	110	x 2 =	220
FAC species	15	x 3 =	45
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	195 (A)		335 (B)

Prevalence Index = B/A = 1.72

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point SB-15

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 2/2	90	10YR 4/6	10	C	M	Loamy/Clayey	Prominent redox concentrations
12-18	10YR 2/2	95	10YR 4/6	5	C	PL/M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ____

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Utica City Dump - West City/County: Utica/Oneida Sampling Date: 10/2/23

Applicant/Owner: NYSDEC/City of Utica State: NY Sampling Point: SB-16

Investigator(s): Matt Dreimiller and Nate Turk Section, Township, Range:

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): None Slope %: 0

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43° 6' 24.75" Long: -75° 12' 18.55" Datum: NAD83

Soil Map Unit Name: NWI classification: PEM1E/PSS1E

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Site located in old landfill and influenced by dumping of material. Apparent fill/restrictive layer in soil at ~12" (gravel, debris, brick, etc.).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: SB-16

Tree Stratum (Plot size: 30 ft. radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	50	Yes	FAC
2. *Rhamnus cathartica*	25	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	75	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Rhamnus cathartica*	40	Yes	FAC
2. *Fraxinus pennsylvanica*	5	No	FACW
3.			
4.			
5.			
6.			
7.			
	45	=Total Cover	
Herb Stratum (Plot size: 5 ft. radius)			
1. *Hesperis matronalis*	15	Yes	FACU
2. *Rubus allegheniensis*	10	Yes	FACU
3. *Fragaria vesca*	5	No	UPL
4. *Glechoma hederacea*	2	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	32	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	115	x 3 =	345
FACU species	27	x 4 =	108
UPL species	5	x 5 =	25
Column Totals:	152 (A)		488 (B)

Prevalence Index = B/A = 3.21

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point SB-16

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 2/2	100					Loamy/Clayey	Chunks of organic matter throughout

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Utica City Dump - West City/County: Utica/Oneida Sampling Date: 10/3/23

Applicant/Owner: NYSDEC/City of Utica State: NY Sampling Point: SB-17

Investigator(s): Matt Dreimiller and Nate Turk Section, Township, Range:

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): None Slope %: 0

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43° 6' 32.55 Long: -75° 12' 27.62 Datum: NAD83

Soil Map Unit Name: NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation , Soil X , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No X

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	**Is the Sampled Area**
Hydric Soil Present?	Yes	No X	**within a Wetland?** **Yes** **No** X
Wetland Hydrology Present?	Yes X	No	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Site located in old landfill and influenced by past dumping of material

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1)
- Sediment Deposits (B2)
- Drift Deposits (B3)
- Algal Mat or Crust (B4)
- Iron Deposits (B5)
- Inundation Visible on Aerial Imagery (B7)
- Sparsely Vegetated Concave Surface (B8)
- Water-Stained Leaves (B9)
- Aquatic Fauna (B13)
- Marl Deposits (B15)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres on Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):
Water Table Present?	Yes	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):

Wetland Hydrology Present? **Yes** X **No**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No moisture present in soil boring. Soils appear extremely dry and and somewhat sandy.

VEGETATION – Use scientific names of plants. Sampling Point: SB-17

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft. radius)			
1. *Phragmites australis*	95	Yes	FACW
2. *Lythrum salicaria*	2	No	OBL
3. *Boehmeria cylindrica*	2	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	99 =Total Cover		
Woody Vine Stratum (Plot size: 15 ft. radius)			
1. *Vitis riparia*	10	Yes	FAC
2.			
3.			
4.			
	10 =Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	4	x 1 =	4
FACW species	95	x 2 =	190
FAC species	10	x 3 =	30
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	109 (A)		224 (B)

Prevalence Index = B/A = 2.06

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point SB-17

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 2/2	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

Soil appears very sandy, so much so, that it crumbles when pulled out of boring hole and when in hand.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Utica City Dump - West City/County: Utica/Oneida Sampling Date: 10/3/23

Applicant/Owner: NYSDEC/City of Utica State: NY Sampling Point: SB-18

Investigator(s): Matt Dreimiller and Nate Turk Section, Township, Range:

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): None Slope %: 0

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43° 6' 32.36" Long: -75° 12' 25.50" Datum: NAD83

Soil Map Unit Name: NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Site located in old landfill and influenced by past dumping of material.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: SB-18

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5 ft. radius)			
1. *Phragmites australis*	30	Yes	FACW
2. *Solidago altissima*	20	Yes	FACU
3. *Artemisia vulgaris*	15	Yes	UPL
4. *Lythrum salicaria*	5	No	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	70 =Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	30	x 2 =	60
FAC species	0	x 3 =	0
FACU species	20	x 4 =	80
UPL species	15	x 5 =	75
Column Totals:	70 (A)		220 (B)

Prevalence Index = B/A = 3.14

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point SB-18

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 2/2	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

No moisture in soil sample or boring hole. Soils appear very dry and somewhat sandy, so much so, that sample crumbles when pulled from boring hole or when analyzed in hand.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Utica Dump - West City/County: Utica/Oneida Sampling Date: 10/6/23

Applicant/Owner: NYSDEC/City of Utica State: NY Sampling Point: SB-19

Investigator(s): Matt Dreimiller and Nate Turk Section, Township, Range:

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope %: ~3%

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43° 6' 25.16" Long: -75° 12' 31.82" Datum: NAD83

Soil Map Unit Name: 22-Udorthents, smoothed NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: Wetland C (WC)

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: SB-19

Tree Stratum (Plot size: 30 ft. radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	40	Yes	FAC
2. *Salix nigra*	10	Yes	OBL
3.			
4.			
5.			
6.			
7.			
	50	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Rhamnus cathartica*	15	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	15	=Total Cover	
Herb Stratum (Plot size: 5 ft. radius)			
1. *Myosotis scorpioides*	50	Yes	OBL
2. *Xanthium strumarium*	10	Yes	FAC
3. *Phalaris arundinacea*	10	Yes	FACW
4. *Euthamia graminifolia*	10	Yes	FAC
5. *Solidago gigantea*	10	Yes	FACW
6. *Iris versicolor*	10	Yes	OBL
7. *Rumex crispus*	10	Yes	FAC
8. *Verbena hastata*	10	Yes	FACW
9. *Symphyotrichum lanceolatum*	10	Yes	FACW
10. *Bidens frondosa*	5	No	FACW
11. *Juncus effusus*	5	No	OBL
12. *Eutrochium purpureum*	5	No	FAC
	154	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 12 (A)

Total Number of Dominant Species Across All Strata: 12 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	82	x 1 =	82
FACW species	47	x 2 =	94
FAC species	90	x 3 =	270
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	219 (A)		446 (B)

Prevalence Index = B/A = 2.04

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

VEGETATION Continued – Use scientific names of plants. Sampling Point: SB-19

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status
8.			
9.			
10.			
11.			
12.			
13.			
14.			
	50	=Total Cover	
Sapling/Shrub Stratum			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
	15	=Total Cover	
Herb Stratum			
13. *Lycopus americanus*	5	No	OBL
14. *Persicaria punctata*	2	No	OBL
15. *Impatiens capensis*	2	No	FACW
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
	154	=Total Cover	
Woody Vine Stratum			
5.			
6.			
7.			
8.			
		=Total Cover	

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point SB-19

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/2	90	10YR 5/6	10	C	PL/M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Utca City Dump - West City/County: Utica/Oneida Sampling Date: 10/6/23

Applicant/Owner: NYSDEC/City of Utica State: NY Sampling Point: SB-20

Investigator(s): Matt Dreimiller and Nate Turk Section, Township, Range:

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope %: 1%

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43° 6' 26.46" Long: -75° 12' 32.39" Datum: NAD83

Soil Map Unit Name: 22-Udorthents, smoothed NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: SB-20

Tree Stratum (Plot size: 30 ft. radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	50	Yes	OBL
2. *Acer negundo*	25	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	75	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Rhamnus cathartica*	35	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	35	=Total Cover	
Herb Stratum (Plot size: 5 ft. radius)			
1. *Pilea pumila*	50	Yes	FACW
2. *Dryopteris marginalis*	10	No	FACU
3. *Glechoma hederacea*	5	No	FACU
4. *Alliaria petiolata*	5	No	FACU
5. *Hesperis matronalis*	5	No	FACU
6. *Persicaria virginiana*	2	No	FAC
7.			
8.			
9.			
10.			
11.			
12.			
	77	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	50	x 1 =	50
FACW species	50	x 2 =	100
FAC species	62	x 3 =	186
FACU species	25	x 4 =	100
UPL species	0	x 5 =	0
Column Totals:	187 (A)		436 (B)

Prevalence Index = B/A = 2.33

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point SB-20

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 2/2	100					Loamy/Clayey	Soils with debris, material
12-18	10YR 2/2	60					Loamy/Clayey	
	10YR 3/2	40						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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Soils influenced by debris, material, fill, etc.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Utica City Dump - West City/County: Utica/Oneida Sampling Date: 10/6/23

Applicant/Owner: NYSDEC/City of Utica State: NY Sampling Point: SB-21

Investigator(s): Matt Dreimiller and Nate Turk Section, Township, Range:

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope %: ~1%

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43° 6' 21.83" Long: -75° 12' 22.74" Datum: NAD83

Soil Map Unit Name: 22-Udorthents, smoothed NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Investigated location for potential connection point between Wetland B (WB) and Wetland D (WD).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: SB-21

Tree Stratum (Plot size: 30 ft. radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	20	Yes	OBL
2. *Fraxinus pennsylvanica*	20	Yes	FACW
3. *Robinia pseudoacacia*	10	Yes	FACU
4.			
5.			
6.			
7.			
	50	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Crataegus crus-galli*	25	Yes	FAC
2. *Fraxinus pennsylvanica*	15	Yes	FACW
3. *Rhamnus cathartica*	15	Yes	FAC
4. *Rubus idaeus*	5	No	FACU
5. *Acer rubrum*	2	No	FAC
6.			
7.			
	62	=Total Cover	
Herb Stratum (Plot size: 5 ft. radius)			
1. *Lysimachia nummularia*	30	Yes	FACW
2. *Symphyotrichum lateriflorum*	20	Yes	FAC
3. *Solidago gigantea*	15	No	FACW
4. *Glechoma hederacea*	5	No	FACU
5. *Laportea canadensis*	5	No	FACW
6. *Galium triflorum*	5	No	FACU
7. *Impatiens capensis*	2	No	FACW
8. *Rumex obtusifolius*	2	No	FAC
9.			
10.			
11.			
12.			
	84	=Total Cover	
Woody Vine Stratum (Plot size: 15 ft. radius)			
1. *Vitis riparia*	15	Yes	FAC
2.			
3.			
4.			
	15	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 88.9% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	87	x 2 =	174
FAC species	79	x 3 =	237
FACU species	25	x 4 =	100
UPL species	0	x 5 =	0
Column Totals:	211 (A)		531 (B)

Prevalence Index = B/A = 2.52

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point SB-21

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 2/2	100					Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

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WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Utica City Dump - West City/County: Utica/Oneida Sampling Date: 10/6/23

Applicant/Owner: NYSDEC/City of Utica State: NY Sampling Point: SB-22

Investigator(s): Matt Dreimiller and Nate Turk Section, Township, Range:

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope %: ~1%

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43° 6' 30.11" Long: -75° 12' 29.21" Datum: NAD83

Soil Map Unit Name: 22-Udorthents, smoothed NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Investigated due to the presence of hydrophytic vegetation and local depressions. However, soils were dry, sandy, and showed no evidence of redox features. Soils influenced by dumping of material.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: SB-22

Tree Stratum (Plot size: 30 ft. radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	40	Yes	OBL
2. *Acer negundo*	20	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	60	=Total Cover	
Sapling/Shrub Stratum (Plot size:)			
1. *Rhamnus cathartica*	40	Yes	FAC
2. *Rubus idaeus*	5	No	FACU
3.			
4.			
5.			
6.			
7.			
	45	=Total Cover	
Herb Stratum (Plot size: 5 ft. radius)			
1. *Pilea pumila*	60	Yes	FACW
2. *Hesperis matronalis*	15	No	FACU
3. *Alliaria petiolata*	15	No	FACU
4. *Glechoma hederacea*	10	No	FACU
5. *Solidago altissima*	5	No	FACU
6. *Ageratina altissima*	5	No	FACU
7.			
8.			
9.			
10.			
11.			
12.			
	110	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	40	x 1 =	40
FACW species	60	x 2 =	120
FAC species	60	x 3 =	180
FACU species	55	x 4 =	220
UPL species	0	x 5 =	0
Column Totals:	215 (A)		560 (B)

Prevalence Index = B/A = 2.60

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point SB-22

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 2/2	100					Sandy	with rocks and debris
9-18	10YR 2/2	70					Sandy	with rocks and debris
	10YR 5/8	30						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

Soil with significant debris (rocks, gravel, brick, etc.) and extremely, dry, unconsolidated, and sandy.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Utica City Dump - West City/County: Utica/Oneida Sampling Date: 10/11/23

Applicant/Owner: NYSDEC/City of Utica State: NY Sampling Point: SB-23

Investigator(s): Matt Dreimiller and Nate Turk Section, Township, Range:

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope %: ~1%

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43° 6' 22.64" Long: -75° 12' 5.31" Datum: NAD83

Soil Map Unit Name: 22-Udorthents, smoothed NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil X, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ___ No X

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ___	**Is the Sampled Area**
Hydric Soil Present?	Yes ___	No X	**within a Wetland?** **Yes** ___ **No** X
Wetland Hydrology Present?	Yes ___	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Investigated due to presence of hydrophytic vegetation. However, soils were dry, sandy, unconsolidated, and showed no evidence of redox featuers.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___
Water Table Present?	Yes ___	No X	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: SB-23

Tree Stratum (Plot size: 30 ft. radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Populus deltoides*	40	Yes	FAC
2. *Acer negundo*	30	Yes	FAC
3. *Acer saccharinum*	15	No	FACW
4. *Robinia pseudoacacia*	5	No	FACU
5.			
6.			
7.			
	90	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Rhamnus cathartica*	20	Yes	FAC
2. *Acer negundo*	10	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	30	=Total Cover	
Herb Stratum (Plot size: 5 ft. radius)			
1. *Teucrium canadense*	30	Yes	FACW
2. *Glechoma hederacea*	15	Yes	FACU
3. *Solanum carolinense*	15	Yes	FACU
4. *Pilea pumila*	10	No	FACW
5. *Rubus idaeus*	5	No	FACU
6. *Solidago altissima*	5	No	FACU
7. *Hesperis matronalis*	5	No	FACU
8.			
9.			
10.			
11.			
12.			
	85	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71.4% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	55	x 2 =	110
FAC species	100	x 3 =	300
FACU species	50	x 4 =	200
UPL species	0	x 5 =	0
Column Totals:	205 (A)		610 (B)

Prevalence Index = B/A = 2.98

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point SB-23

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 2/2	100					Sandy	
8-10	10YR 3/2	100					Sandy	
10-18	10YR 3/2	50					Sandy	
	10YR 2/2	50						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Utica City Dump - Sediment Transportation Route City/County: Utica/Oneida Sampling Date: 11/3/23

Applicant/Owner: NYSDEC State: NY Sampling Point: SB-1

Investigator(s): M. Dreimiller, K. Buelow Section, Township, Range:

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): None Slope %: 0

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.09433327 Long: -75.15873053 Datum: NAD83

Soil Map Unit Name: Cohactah mucky very fine sandy loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Scattered garbage/waste in area

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: SB-1

Tree Stratum (Plot size: 30 ft. radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	65	Yes	FACW
2. *Acer saccharinum*	25	Yes	FACW
3. *Acer negundo*	15	No	FAC
4.			
5.			
6.			
7.			
	105	=Total Cover	

Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	

Herb Stratum (Plot size: 5 ft. radius)			
1. *Ranunculus acris*	20	Yes	FAC
2. *Teucrium canadense*	10	Yes	FACW
3. *Elymus virginicus*	10	Yes	FACW
4. *Cinna arundinacea*	10	Yes	FACW
5. *Artemisia vulgaris*	10	Yes	UPL
6. *Rumex crispus*	5	No	FAC
7. *Solidago gigantea*	5	No	FACW
8. *Viola sp.*	5	No	
9.			
10.			
11.			
12.			
	75	=Total Cover	

Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 85.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	125	x 2 =	250
FAC species	40	x 3 =	120
FACU species	0	x 4 =	0
UPL species	10	x 5 =	50
Column Totals:	175 (A)		420 (B)

Prevalence Index = B/A = 2.40

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point SB-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/2	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Utica City Dump - Sediment Transportation Route City/County: Utica/Oneida Sampling Date: 11/3/23

Applicant/Owner: NYSDEC State: NY Sampling Point: SB-2

Investigator(s): M. Dreimiller, K. Buelow Section, Township, Range:

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope %: ~2%

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.10538335 Long: -75.18353932 Datum: NAD83

Soil Map Unit Name: Wayland soils complex, 0-3% slopes, frequently flooded NWI classification: PSS1/FO1E

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: Wetland 1 (W1) and Wetland 2 (W2)

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: SB-2

Tree Stratum (Plot size: 30 ft. radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	65	Yes	FACW
2. *Quercus bicolor*	15	No	FACW
3.			
4.			
5.			
6.			
7.			
	80	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Cornus amomum*	60	Yes	FACW
2. *Lonicera morrowii*	35	Yes	FACU
3. *Rosa multiflora*	10	No	FACU
4.			
5.			
6.			
7.			
	105	=Total Cover	
Herb Stratum (Plot size: 5 ft. radius)			
1. *Solidago gigantea*	60	Yes	FACW
2. *Lysimachia nummularia*	30	Yes	FACW
3. *Teucrium canadense*	10	No	FACW
4. *Geum canadense*	5	No	FAC
5. *Agrimonia gryposepala*	5	No	FACU
6. *Symphyotrichum lateriflorum*	5	No	FAC
7.			
8.			
9.			
10.			
11.			
12.			
	115	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	240	x 2 =	480
FAC species	10	x 3 =	30
FACU species	50	x 4 =	200
UPL species	0	x 5 =	0
Column Totals:	300 (A)		710 (B)

Prevalence Index = B/A = 2.37

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point SB-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/1	100					Loamy/Clayey	
8-18	10YR 3/1	95	2.5YR 4/6	5	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Utica City Dump - Sediment Transportation Route City/County: Utica/Oneida Sampling Date: 11/3/23

Applicant/Owner: NYSDEC State: NY Sampling Point: SB-3

Investigator(s): M. Dreimiller, K. Buelow Section, Township, Range:

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): None Slope %: 0

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.09422274 Long: -75.15841104 Datum: NAD83

Soil Map Unit Name: Cut and fill land NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: SB-3

Tree Stratum (Plot size: 30 ft. radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	45	Yes	FACW
2. *Acer saccharinum*	35	Yes	FACW
3.			
4.			
5.			
6.			
7.			
	80	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Alnus glutinosa*	15	Yes	FACW
2. *Rhamnus cathartica*	5	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	20	=Total Cover	
Herb Stratum (Plot size: 5 ft. radius)			
1. *Cryptotaenia canadensis*	25	Yes	FAC
2. *Teucrium canadense*	20	Yes	FACW
3. *Elymus virginicus*	15	No	FACW
4. *Ranunculus acris*	10	No	FAC
5. *Solidago gigantea*	10	No	FACW
6. *Clematis virginiana*	5	No	FAC
7.			
8.			
9.			
10.			
11.			
12.			
	85	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	140	x 2 =	280
FAC species	45	x 3 =	135
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	185 (A)		415 (B)

Prevalence Index = B/A = 2.24

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point SB-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/2	100					Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Utica City Dump - Sediment Transportation Route City/County: Schuyler/Herkimer Sampling Date: 11/8/23

Applicant/Owner: NYSDEC State: NY Sampling Point: SB-4

Investigator(s): M. Dreimiller, N. Turk Section, Township, Range:

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope %: ~3%

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.08307619 Long: -75.13273052 Datum: NAD83

Soil Map Unit Name: Wayland soils complex, 0-3% slopes, frequently flooded NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: Wetland 3 (W3)

Remarks: (Explain alternative procedures here or in a separate report.)
Area located in drainage basin hydrologically connected to small spillway area off Barge Canal. Possible NYS Canal Corp activity in vicinty.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- X Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- X Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- X Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- X Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: SB-4

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Salix nigra*	35	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
	35	=Total Cover	
Herb Stratum (Plot size: 5 ft. radius)			
1. *Phragmites australis*	40	Yes	FACW
2. *Typha latifolia*	25	Yes	OBL
3. *Lysimachia nummularia*	15	No	FACW
4. *Equisetum arvense*	10	No	FAC
5. *Juncus effusus*	5	No	OBL
6. *Tussilago farfara*	5	No	FACU
7.			
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	65	x 1 =	65
FACW species	55	x 2 =	110
FAC species	10	x 3 =	30
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	135 (A)		225 (B)

Prevalence Index = B/A = 1.67

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point SB-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 4/1	90	10YR 5/4	10	C	M	Loamy/Clayey	Distinct redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** ____

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Utica City Dump - Sediment Transport Route City/County: Schuyler/Herkimer Sampling Date: 11/8/23

Applicant/Owner: NYSDEC State: NY Sampling Point: SB-5

Investigator(s): M. Dreimiller, N. Turk Section, Township, Range:

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope %: ~1%

Subregion (LRR or MLRA): LRR L, MLRA 101 Lat: 43.08166098 Long: -75.1294423 Datum: NAD83

Soil Map Unit Name: Cohactah, mucky, very fine sandy loam NWI classification: PFO1E/PSS1E

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: Wetlands 4 and 5 (W4 and W5)

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: SB-5

Tree Stratum (Plot size: 30 ft. radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	35	Yes	FACW
2. *Alnus glutinosa*	20	Yes	FACW
3.			
4.			
5.			
6.			
7.			
	55	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft. radius)			
1. *Lonicera morrowii*	50	Yes	FACU
2. *Rhamnus cathartica*	25	Yes	FAC
3. *Crataegus crus-galli*	20	No	FAC
4. *Cornus amomum*	15	No	FACW
5. *Rosa multiflora*	5	No	FACU
6. *Viburnum dentatum*	2	No	FAC
7. *Viburnum acerifolium*	2	No	UPL
	119	=Total Cover	
Herb Stratum (Plot size: 5 ft. radius)			
1. *Lysimachia nummularia*	30	Yes	FACW
2. *Equisetum arvense*	10	Yes	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	40	=Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	100	x 2 =	200
FAC species	57	x 3 =	171
FACU species	55	x 4 =	220
UPL species	2	x 5 =	10
Column Totals:	214 (A)		601 (B)

Prevalence Index = B/A = 2.81

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point SB-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 4/1	98	10YR 5/6	2	C	M	Loamy/Clayey	Prominent redox concentrations
9-18	10YR 3/1	95	10YR 5/6	5	C	M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

ATTACHMENT 3
PHOTOGRAPH LOG

Utica City Dump - Photograph Log

Client Name:	Site Location:	Project No.
City of Utica	Utica City Dump Remedial Design, Incinerator Road, Utica, NY	1940101207

Photo No.	Date:
1	5/11/2022

Description

Looking northeast at W1 (eastern parcel) – small wetland in the northwest corner of the landfill.



Client Name:	Site Location:	Project No.
City of Utica	Utica City Dump Remedial Design, Incinerator Road, Utica, NY	1940101207

Photo No.	Date:
2	5/10/2022

Description

Looking south at western side of W2 (eastern parcel) in the location of SB2 where forested wetland transitions to emergent wetland.



Confidential

Client Name:	Site Location:	Project No.
City of Utica	Utica City Dump Remedial Design, Incinerator Road, Utica, NY	1940101207

Photo No.	Date:
3	5/10/2022

Description

Tree blowdown in the vicinity of SB3 that shows the extent of subsurface fill material in and around the eastern parcel wetlands.



Client Name:	Site Location:	Project No.
City of Utica	Utica City Dump Remedial Design, Incinerator Road, Utica, NY	1940101207

Photo No.	Date:
4	5/10/2022

Description

Looking south at eastern portion of W2 (eastern parcel) that shows the transition from emergent to forested wetland.



Confidential

Client Name:	Site Location:	Project No.
City of Utica	Utica City Dump Remedial Design, Incinerator Road, Utica, NY	1940101207

Photo No.	Date:
5	5/11/2022

Description

Looking south at sparsely vegetated concave surface of W3 (eastern parcel) within a forested portion of the floodplain.



Client Name:	Site Location:	Project No.
City of Utica	Utica City Dump Remedial Design, Incinerator Road, Utica, NY	1940101207

Photo No.	Date:
6	5/11/2022

Description

Looking south at open water bay off of the Mohawk River in the eastern portion of the eastern parcel.



Confidential

Client Name:	Site Location:	Project No.
City of Utica	Utica City Dump Remedial Design, Incinerator Road, Utica, NY	1940101207

Photo No.	Date:
7	5/11/2022

Description

SB5 location within a typical non-wetland portion of the floodplain (eastern parcel).



Client Name:	Site Location:	Project No.
City of Utica	Utica City Dump Remedial Design, Incinerator Road, Utica, NY	1940101207

Photo No.	Date:
8	5/17/2022

Description

Looking east at W4 where it transitions to open water (eastern parcel).



Confidential

Client Name:	Site Location:	Project No.
City of Utica	Utica City Dump Remedial Design, Incinerator Road, Utica, NY	1940101207

Photo No.	Date:
9	5/17/2022

Description

Looking northeast at W4 from the upland berm along its southern edge (eastern parcel).



Client Name:	Site Location:	Project No.
City of Utica	Utica City Dump Remedial Design, Incinerator Road, Utica, NY	1940101207

Photo No.	Date:
10	5/11/2022

Description

Looking north across the eastern parcel from its southern portion.



Confidential

Client Name:	Site Location:	Project No.
City of Utica	Utica City Dump Remedial Design, Incinerator Road, Utica, NY	1940101207

Photo No.	Date:
11	10/2/2023

Description

Looking west at WA, a small wetland in a topographic depression in the northeast corner of the western parcel.



Client Name:	Site Location:	Project No.
City of Utica	Utica City Dump Remedial Design, Incinerator Road, Utica, NY	1940101207

Photo No.	Date:
12	10/3/2023

Description

Looking northeast at the western portion of WB (western parcel) which is dominated by emergent vegetation such as reed canary grass, cattail, and lake sedge.



Client Name:	Site Location:	Project No.
City of Utica	Utica City Dump Remedial Design, Incinerator Road, Utica, NY	1940101207

Photo No.	Date:
13	10/3/2023

Description

Looking east at the central portion of WB (western parcel) which shows the transition to forested habitat.



Client Name:	Site Location:	Project No.
City of Utica	Utica City Dump Remedial Design, Incinerator Road, Utica, NY	1940101207

Photo No.	Date:
14	10/3/2023

Description

Looking south at the central portion of WB (western parcel), beneath the powerline right-of-way, which shows the large, shallow emergent wetland complex.



Confidential

Client Name:	Site Location:	Project No.
City of Utica	Utica City Dump Remedial Design, Incinerator Road, Utica, NY	1940101207

Photo No.	Date:
15	10/3/2023

Description

Looking north at the western portion of WB (western parcel) which shows forested wetland habitat.



Client Name:	Site Location:	Project No.
City of Utica	Utica City Dump Remedial Design, Incinerator Road, Utica, NY	1940101207

Photo No.	Date:
16	10/3/2023

Description

Looking southeast at the open water area of WB in the southeastern corner of the western parcel.



Confidential

Client Name:	Site Location:	Project No.
City of Utica	Utica City Dump Remedial Design, Incinerator Road, Utica, NY	1940101207

Photo No.	Date:
17	10/6/2023

Description

Looking east in a typical upland, forested area of the western parcel. Note scattered waste and debris, as was typical of this Site.



Client Name:	Site Location:	Project No.
City of Utica	Utica City Dump Remedial Design, Incinerator Road, Utica, NY	1940101207

Photo No.	Date:
18	10/6/2023

Description

Looking west at WC (western parcel) which generally follows the first flood bench of the Mohawk River.



Confidential

Client Name:	Site Location:	Project No.
City of Utica	Utica City Dump Remedial Design, Incinerator Road, Utica, NY	1940101207

Photo No.	Date:
19	10/6/2023

Description

Looking southeast at WC (western parcel) which generally follows the first flood bench of the Mohawk River on the west side of the NYS Canal Corps access road.



Client Name:	Site Location:	Project No.
City of Utica	Utica City Dump Remedial Design, Incinerator Road, Utica, NY	1940101207

Photo No.	Date:
20	10/6/2023

Description

Looking south at WD (western parcel) which generally follows the first flood bench of the Mohawk River on the east side of the NYS Canal Corps. access road.



Client Name:	Site Location:	Project No.
City of Utica	Utica City Dump Remedial Design, Incinerator Road, Utica, NY	1940101207

Photo No.	Date:
21	11/3/2023

Description

Looking north at the Barge Canal-Mohawk River spillway and location of the proposed temporary bridge for the dredge material transport route.



Client Name:	Site Location:	Project No.
City of Utica	Utica City Dump Remedial Design, Incinerator Road, Utica, NY	1940101207

Photo No.	Date:
22	11/3/2023

Description

Looking south of the Barge Canal-Mohawk River spillway at the Mohawk River.



Client Name:	Site Location:	Project No.
City of Utica	Utica City Dump Remedial Design, Incinerator Road, Utica, NY	1940101207

Photo No.	Date:
23	11/3/2023

Description

Looking southeast at a representative recommended pull-off location along the western portion of the dredge material transport route (west of spillway and Dyke Road).



Client Name:	Site Location:	Project No.
City of Utica	Utica City Dump Remedial Design, Incinerator Road, Utica, NY	1940101207

Photo No.	Date:
24	11/8/2023

Description

Looking northeast at a representative recommended pull-off location along the eastern portion of the dredge material transport route (east of spillway and Dyke Road).



Confidential

Appendix 5
New York State Parks, Recreation and Historic Preservation Letter

KATHY HOCHUL
Governor

RANDY SIMONS
Commissioner *Pro Tempore*

March 20, 2024

Samantha Salotto
Professional Engineer 1
NYSDEC
625 Broadway
Albany, NY 12233

Re: DEC
Utica City Dump (NYSDEC Site #6-33-015)
City of Utica, Oneida County , NY
23PR01269

Dear Samantha Salotto:

Thank you for continuing to consult with the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted materials in accordance with the New York State Historic Preservation Act of 1980 (Section 14.09 of the New York State Parks, Recreation and Historic Preservation Law). These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project.

We have reviewed the project description, proposed plans, and sections, dated January 19, 2024. It is the OPRHP's opinion that the proposed work, as described will have No Adverse Impact on historic and archaeological resources, provided the following conditions are met:

1. All temporary work should be executed with care, ensuring that everything returns to its previous condition.
2. The canal infrastructure must not be disrupted.
3. After completing the work, remove the concrete and refill the area with the same material as before this intervention.

If you have any questions, you can e-mail me at the contact information below.

Sincerely,

Mariana Staines
Historic Site Restoration Coordinator
mariana.montesstaines@parks.ny.gov

cc: K. Buelow – Rambol
M. Dreimiller - Ramboll
L. Hoopes – NYPA

Appendix 6
New York State Canal Corporation Upland Disposal Site 4-26 Sampling Location Plan and Results


UDS 4-26
SAMPLE LOCATION PLAN
Legend
Approximate Sample Location
01
02
03
04
05
Google Earth
600 ft
N

ATLANTIC TESTING LABORATORIES

WBE certified company

LABORATORY DETERMINATION OF MOISTURE CONTENT OF SOILS

ASTM D 2216

PROJECT INFORMATION

Client:	Ramboll	**ATL Report No.:**	CT4434SL-01-06-23
Project:	Utica City Dump Site	**Report Date:**	June 2, 2023
		Date Received:	May 24, 2023

TEST DATA

Sample No.	Depth (ft)	Moisture Content (%)
01D	NA	53.1
01S	NA	66.2
02D	NA	32.7
02S	NA	53.9
03D	NA	34.5
03S	NA	58.1
04D	NA	39.8
04S	NA	47.6
05D	NA	45.7
05S	NA	47.3
SC-01	NA	7.5

REMARKS

1. Sample mass was less than the minimum mass outlined in the referenced test method.

Reviewed By: _____ Date: 6/20/23

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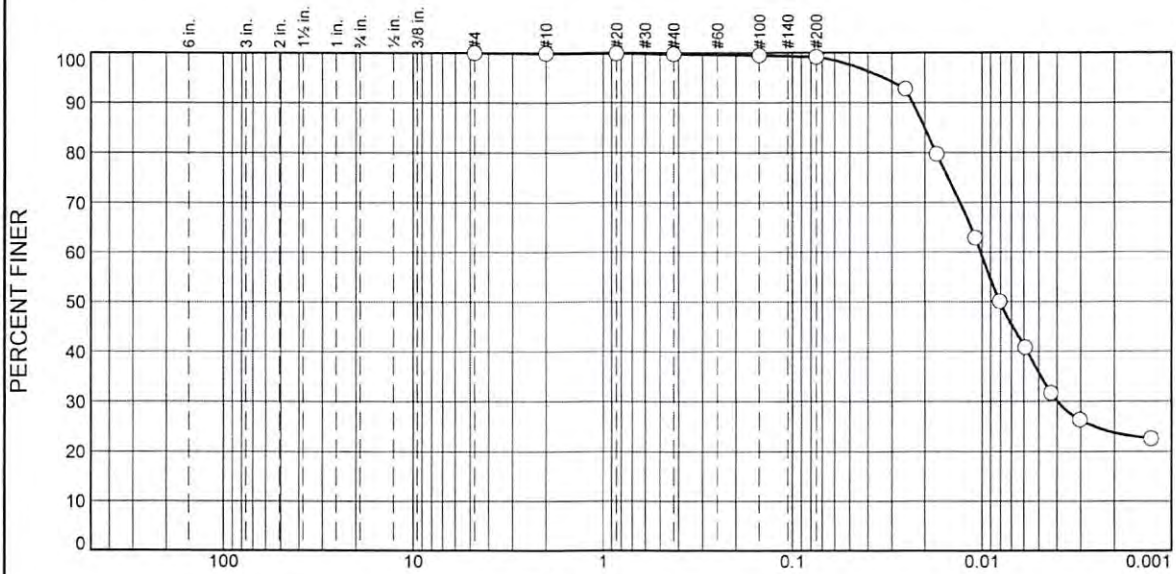
Particle Size Distribution Report

Project: Utica City Dump Site **Report No.:** CT4434SL-01-05-23

Client: Ramboll **Date:** 5/24/23

Sample No: 01D **Source of Sample:** Boring Sample

Location: In-place **Elev./Depth:** NA



% Cobbles	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0	0	0	0	0	1	63	36

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	OUT OF SPEC. (X)
#4	100		
#10	100		
#20	100		
#40	100		
#100	100		
#200	99		

Soil Description

Black SILT; and CLAY; trace f SAND

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.0201 D_{60}= 0.0102 D_{50}= 0.0081

D_{30}= 0.0040 D_{15}= D_{10}=

C_u= C_c=

Classification

USCS= AASHTO=

Remarks

* (no specification provided)

Figure

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Reviewed by: Date: 06/20/23

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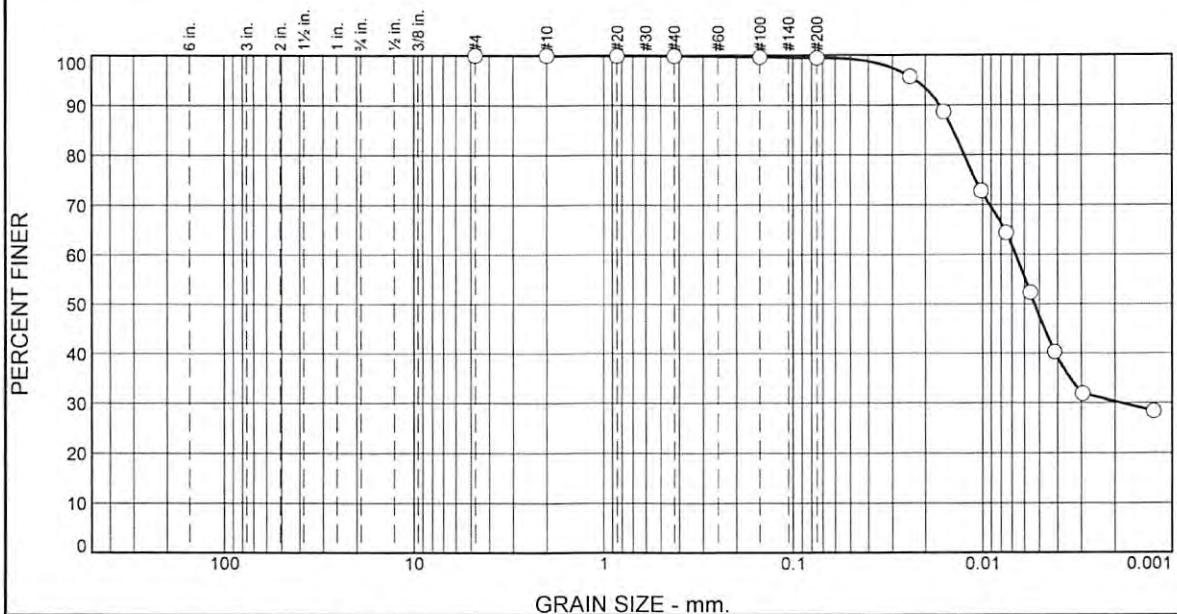
Particle Size Distribution Report

Project: Utica City Dump Site **Report No.:** CT4434SL-01-05-23

Client: Ramboll **Date:** 5/24/23

Sample No: 01S **Source of Sample:** Boring Sample

Location: In-place **Elev./Depth:** NA



% Cobbles	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0	0	0	0	0	1	52	47

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	OUT OF SPEC. (X)
#4	100		
#10	100		
#20	100		
#40	100		
#100	100		
#200	99		

Soil Description

Black SILT; and CLAY; trace f SAND

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.0143 D_{60}= 0.0067 D_{50}= 0.0053

D_{30}= 0.0019 D_{15}= D_{10}=

C_u= C_c=

Classification

USCS= AASHTO=

Remarks

* (no specification provided)

Figure

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Reviewed by: Date: 06/20/23

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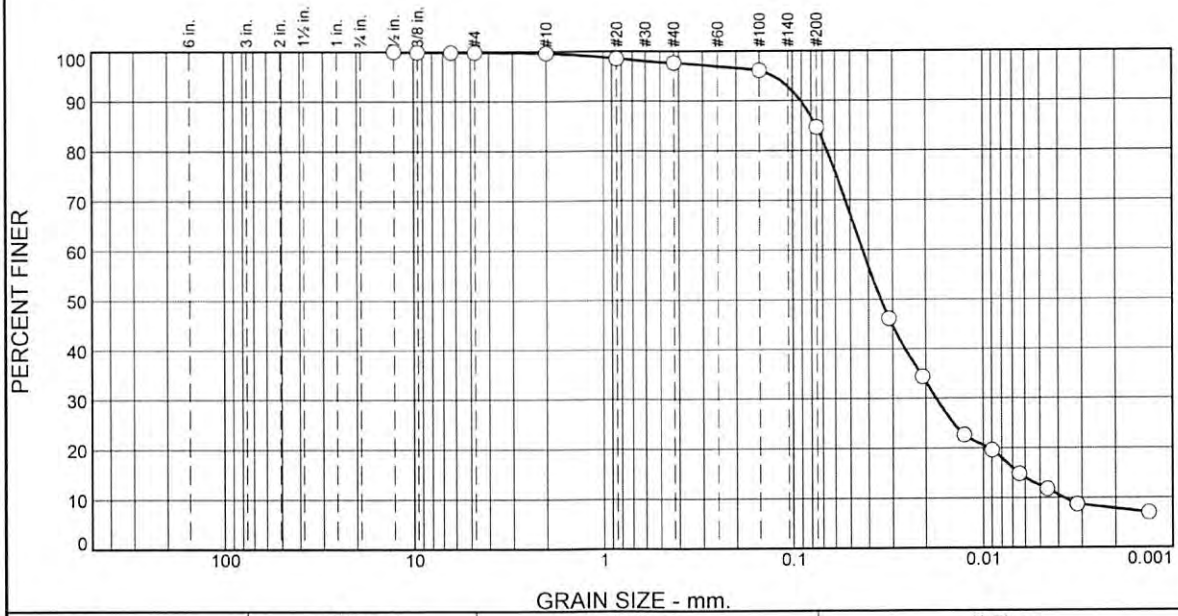
Particle Size Distribution Report

Project: Utica City Dump Site **Report No.:** CT4434SL-01-05-23

Client: Ramboll **Date:** 5/24/23

Sample No: 02D **Source of Sample:** Boring Sample

Location: In-place **Elev./Depth:** NA



% Cobbles	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0	0	0	0	2	13	73	12

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	OUT OF SPEC. (X)
1/2"	100		
3/8"	100		
1/4"	100		
#4	100		
#10	100		
#20	99		
#40	98		
#100	96		
#200	85		

Soil Description

Black SILT; little mf+ SAND; little CLAY

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.0757 D_{60}= 0.0431 D_{50}= 0.0345
D_{30}= 0.0177 D_{15}= 0.0065 D_{10}= 0.0037
C_u= 11.51 C_c= 1.94

Classification

USCS= AASHTO=

Remarks

* (no specification provided)

Figure

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Reviewed by: Date: 06/20/23

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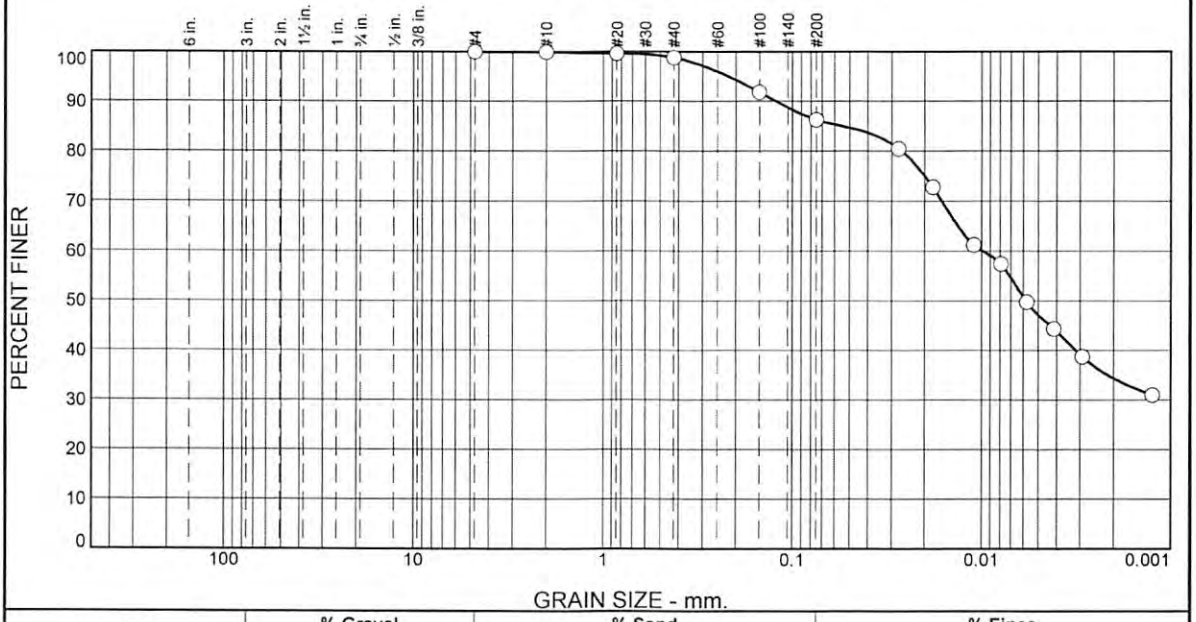
Particle Size Distribution Report

Project: Utica City Dump Site **Report No.:** CT4434SL-01-05-23

Client: Ramboll **Date:** 5/24/23

Sample No: 02S **Source of Sample:** Boring Sample

Location: In-place **Elev./Depth:** NA



% Cobbles	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0	0	0	0	1	13	39	47

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	OUT OF SPEC. (X)
#4	100		
#10	100		
#20	100		
#40	99		
#100	92		
#200	86		

* (no specification provided)

Soil Description

Black CLAY; and SILT; little mf+ SAND

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.0550 D_{60}= 0.0098 D_{50}= 0.0058

D_{30}= D_{15}= D_{10}=

C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Figure

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Reviewed by: Date: 06/20/23

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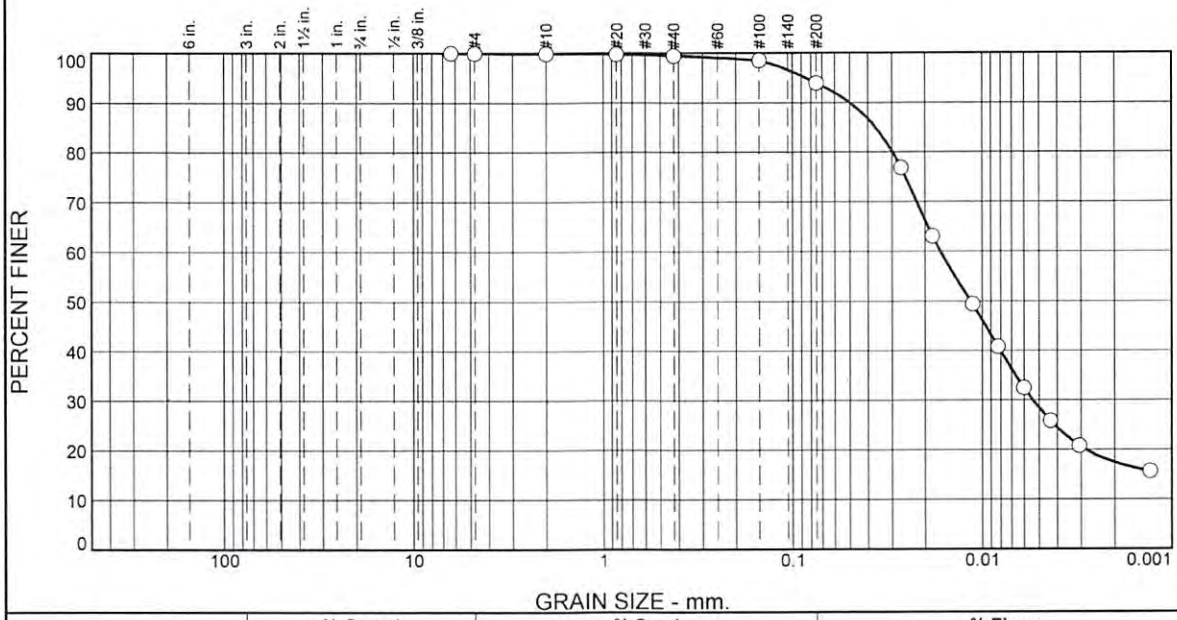
Particle Size Distribution Report

Project: Utica City Dump Site **Report No.:** CT4434SL-01-05-23

Client: Ramboll **Date:** 5/24/23

Sample No: 03D **Source of Sample:** Boring Sample

Location: In-place **Elev./Depth:** NA



% Cobbles	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0	0	0	0	1	5	66	28

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	OUT OF SPEC. (X)
1/4"	100		
#4	100		
#10	100		
#20	100		
#40	99		
#100	99		
#200	94		

Soil Description

Black SILT; some CLAY; trace mf+ SAND

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.0366 D_{60}= 0.0166 D_{50}= 0.0115

D_{30}= 0.0054 D_{15}= D_{10}=

C_u= C_c=

Classification

USCS= AASHTO=

Remarks

* (no specification provided)

Figure

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Reviewed by: Date: 06/20/23

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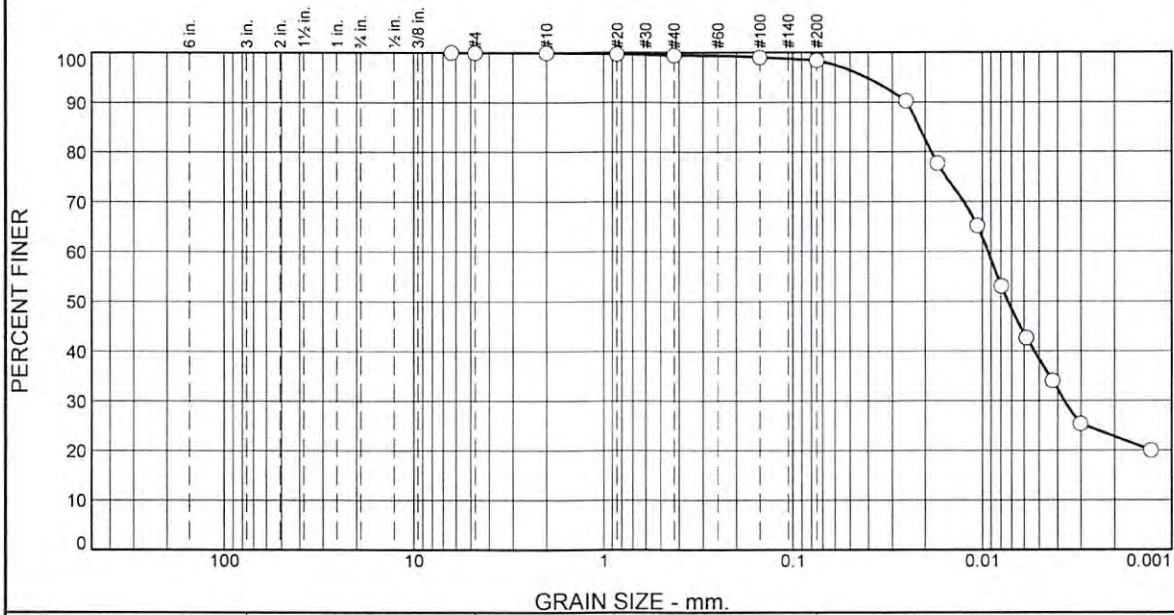
Particle Size Distribution Report

Project: Utica City Dump Site **Report No.:** CT4434SL-01-05-23

Client: Ramboll **Date:** 05/24/23

Sample No: 03S **Source of Sample:** Boring Sample

Location: In-place **Elev./Depth:** NA



% Cobbles	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0	0	0	0	1	1	60	38

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	OUT OF SPEC. (X)
1/4"	100		
#4	100		
#10	100		
#20	100		
#40	99		
#100	99		
#200	98		

Soil Description

Black SILT; and CLAY; trace mf SAND

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.0215 D_{60}= 0.0093 D_{50}= 0.0073

D_{30}= 0.0037 D_{15}= D_{10}=

C_u= C_c=

Classification

USCS= AASHTO=

Remarks

* (no specification provided)

Figure

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Reviewed by: Date: 06/20/23

ATLANTIC TESTING LABORATORIES

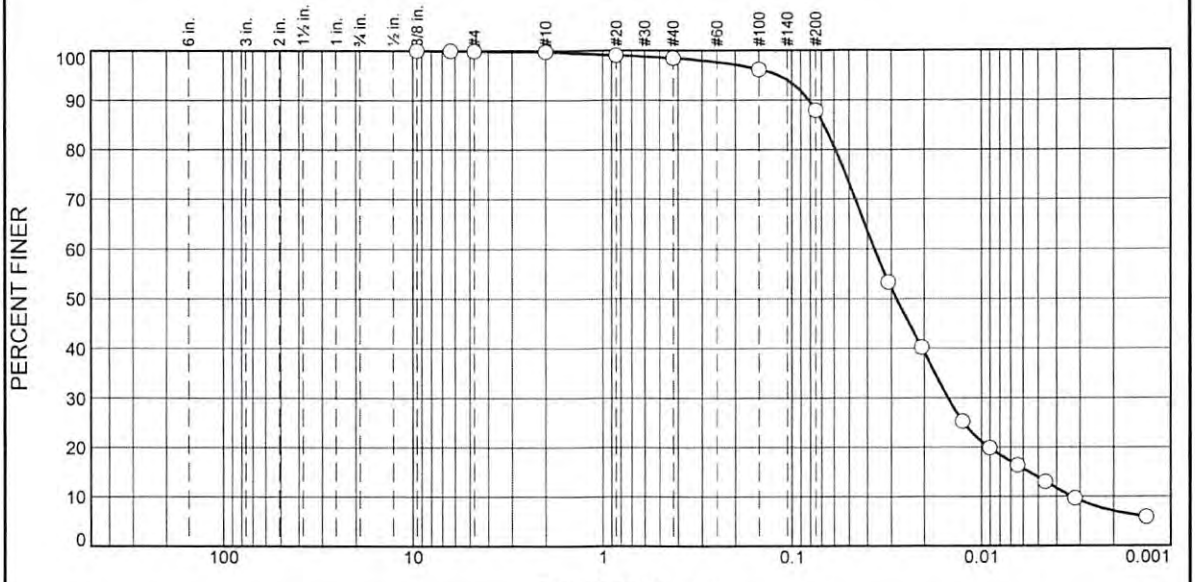
Particle Size Distribution Report

Project: Utica City Dump Site **Report No.:** CT4434SL-01-05-23

Client: Ramboll **Date:** 5/24/23

Sample No: 04D **Source of Sample:** Boring Sample

Location: In-place **Elev./Depth:** NA



% Cobbles	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0	0	0	0	2	10	74	14

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	OUT OF SPEC. (X)
3/8"	100		
1/4"	100		
#4	100		
#10	100		
#20	99		
#40	98		
#100	96		
#200	88		

* (no specification provided)

Soil Description

Black SILT; little CLAY; little mf+ SAND

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.0679 D_{60}= 0.0367 D_{50}= 0.0282

D_{30}= 0.0150 D_{15}= 0.0056 D_{10}= 0.0033

C_u= 10.99 C_c= 1.83

Classification

USCS= AASHTO=

Remarks

Figure

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Reviewed by: _____ Date: 06/20/23

ATLANTIC TESTING LABORATORIES

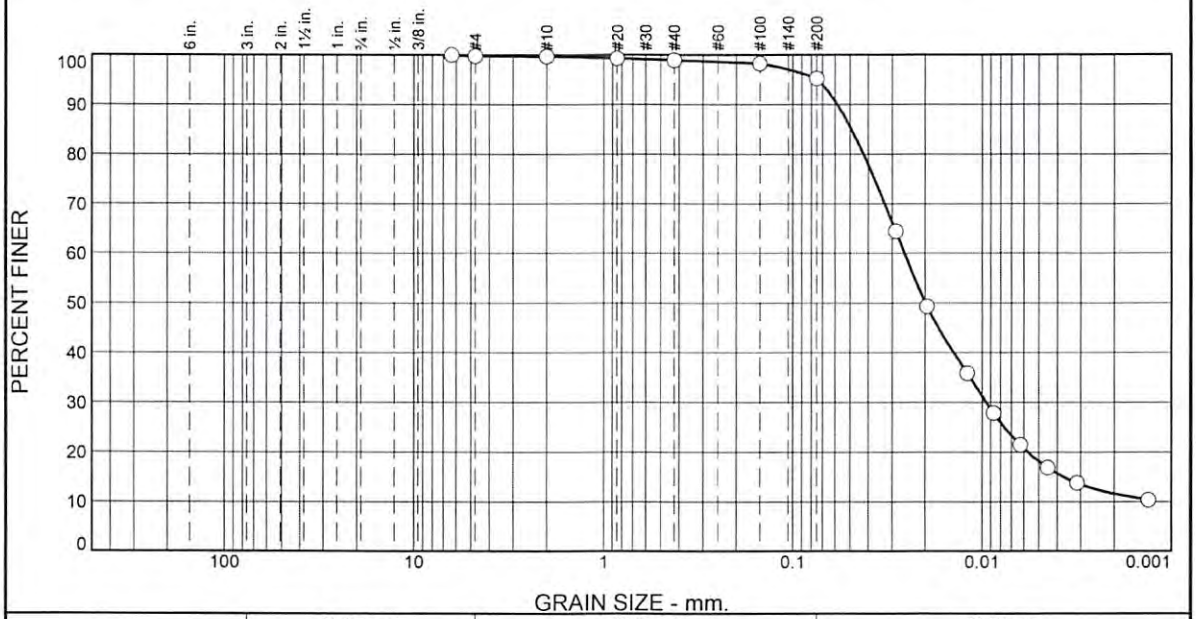
Particle Size Distribution Report

Project: Utica City Dump Site **Report No.:** CT4434SL-01-05-23

Client: Ramboll **Date:** 5/24/23

Sample No: 04S **Source of Sample:** Boring Sample

Location: In-place **Elev./Depth:** NA



% Cobbles	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0	0	0	0	1	4	77	18

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	OUT OF SPEC. (X)
1/4"	100		
#4	100		
#10	100		
#20	99		
#40	99		
#100	98		
#200	95		

Soil Description

Black SILT; trace CLAY; trace mf+ SAND

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.0492 D_{60}= 0.0258 D_{50}= 0.0199

D_{30}= 0.0095 D_{15}= 0.0037 D_{10}=

C_u= C_c=

Classification

USCS= AASHTO=

Remarks

* (no specification provided)

Figure

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Reviewed by: Date: 06/20/23

ATLANTIC TESTING LABORATORIES

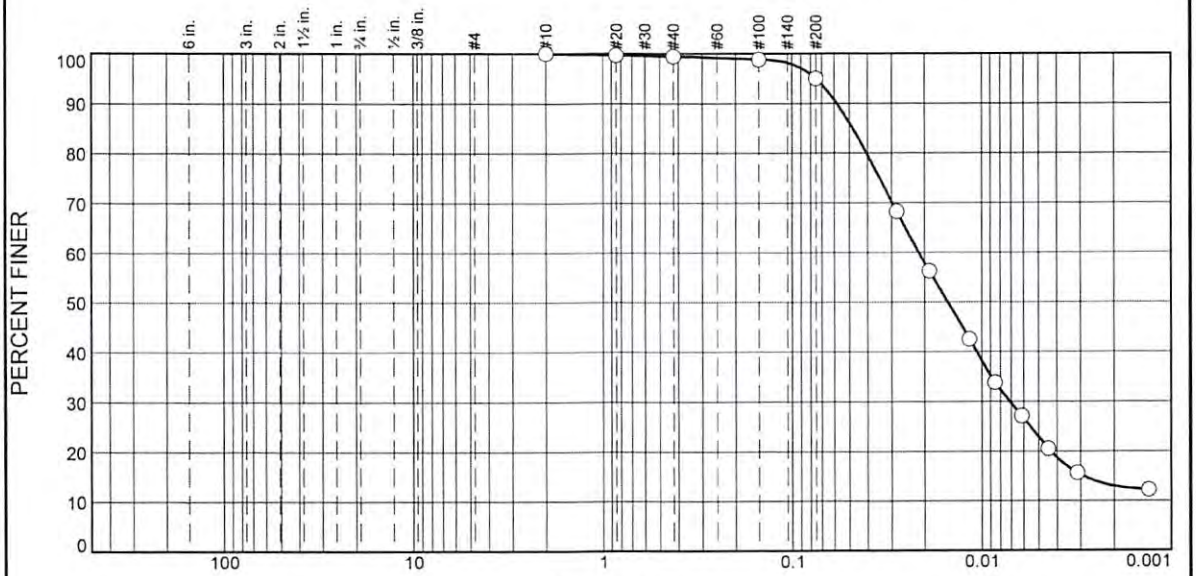
Particle Size Distribution Report

Project: Utica City Dump Site **Report No.:** CT4434SL-01-05-23

Client: Ramboll **Date:** 5/24/23

Sample No: 05D **Source of Sample:** Boring Sample

Location: In-place **Elev./Depth:** NA



% Cobbles	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0	0	0	0	1	4	72	23

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	OUT OF SPEC. (X)
#10	100		
#20	100		
#40	99		
#100	99		
#200	95		

Soil Description

Black SILT; some CLAY; trace mf+ SAND

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.0480 D_{60}= 0.0215 D_{50}= 0.0151

D_{30}= 0.0071 D_{15}= 0.0029 D_{10}=

C_u= C_c=

Classification

USCS= AASHTO=

Remarks

* (no specification provided)

Figure

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Reviewed by: Date: 06/20/23

ATLANTIC TESTING LABORATORIES

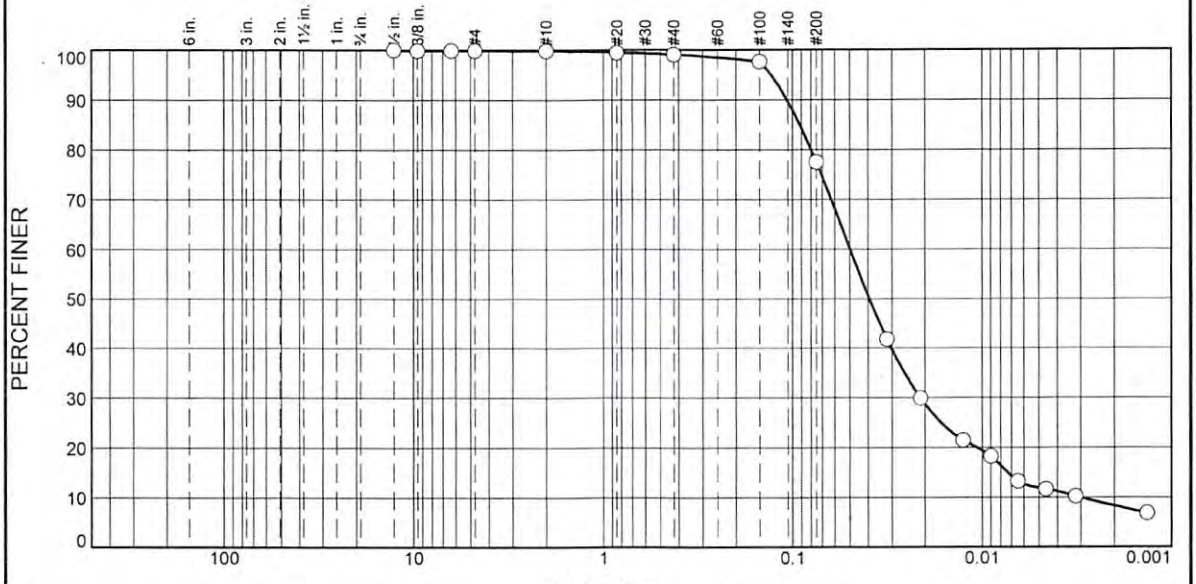
Particle Size Distribution Report

Project: Utica City Dump Site **Report No.:** CT4434SL-01-05-23

Client: Ramboll **Date:** 5/24/23

Sample No: 05S **Source of Sample:** Boring Sample

Location: In-place **Elev./Depth:** NA



% Cobbles	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0	0	0	0	1	21	66	12

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	OUT OF SPEC. (X)
1/2"	100		
3/8"	100		
1/4"	100		
#4	100		
#10	100		
#20	99		
#40	99		
#100	98		
#200	78		

Soil Description

Black SILT; some mf+ SAND; little CLAY

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.0915 D_{60}= 0.0498 D_{50}= 0.0394

D_{30}= 0.0212 D_{15}= 0.0073 D_{10}= 0.0030

C_u= 16.39 C_c= 2.98

Classification

USCS= AASHTO=

Remarks

* (no specification provided)

Figure

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Reviewed by: Date: 06/20/23

ATLANTIC TESTING LABORATORIES

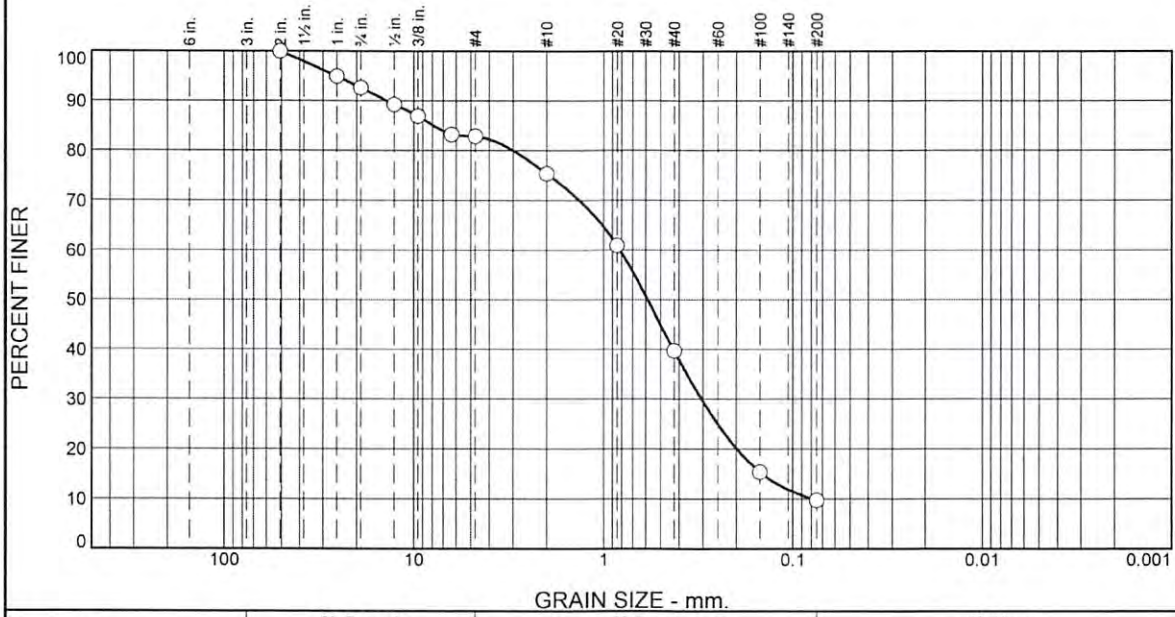
Particle Size Distribution Report

Project: Utica City Dump Site **Report No.:** CT4434SL-01-05-23

Client: Ramboll **Date:** 6/5/23

Sample No: SC-01 **Source of Sample:** Boring Sample

Location: In-place **Elev./Depth:** NA



% Cobbles	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0	7	10	8	35	30	10	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	OUT OF SPEC. (X)
2"	100		
1"	95		
3/4"	93		
1/2"	89		
3/8"	87		
1/4"	83		
#4	83		
#10	75		
#20	61		
#40	40		
#100	15		
#200	9.7		

Soil Description

Grey c-mf SAND; little cmf GRAVEL; trace SILT

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 7.9333 D_{60}= 0.8191 D_{50}= 0.5851

D_{30}= 0.3049 D_{15}= 0.1459 D_{10}= 0.0792

C_u= 10.34 C_c= 1.43

Classification

USCS= AASHTO=

Remarks

Moisture Content = 7.5 %

* (no specification provided)

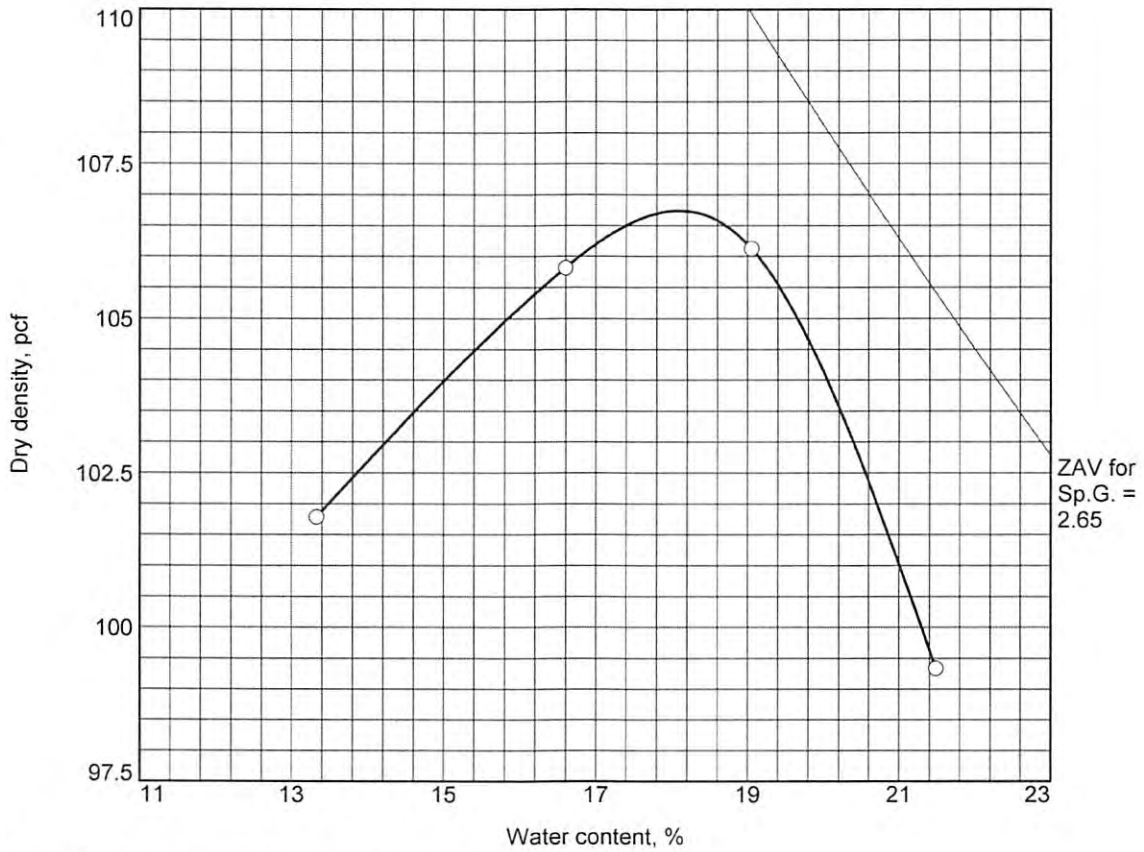
Figure

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Reviewed by: Date: 06/20/23

ATLANTIC TESTING LABORATORIES

COMPACTION TEST REPORT



Test specification: AASHTO T 180-10 Method A Modified

Elev/ Depth	Classification		Received Moist.	Sp.G.	LL	PL	PI	% > #4
	USCS	AASHTO						
NA				2.65				0

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 106.7 pcf Optimum moisture = 18.1 %	Black SILT; and CLAY; trace f SAND

Report No.: CT4434SL-01-05-23 **Client:** Ramboll
Project: Utica City Dump Site
Sample No.: 01D **Source of Sample:** Boring Sample
Location: In-place **Date:** 5/22/23

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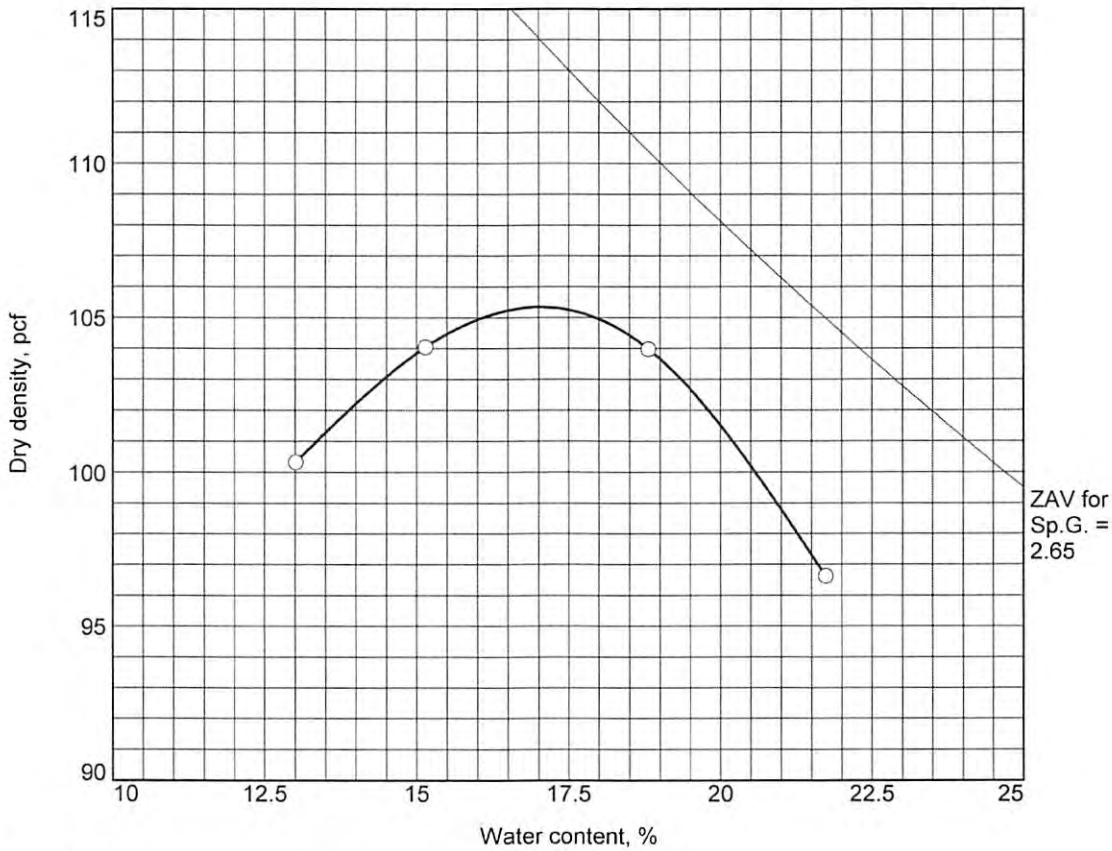
Remarks:

Rammer: Mechanical
Specific Gravity: Assumed

Reviewed by: _____ Date: 6/20/23

ATLANTIC TESTING LABORATORIES

COMPACTION TEST REPORT



Test specification: AASHTO T 180-10 Method A Modified

Elev/ Depth	Classification		Received Moist.	Sp.G.	LL	PL	PI	% > #4
	USCS	AASHTO						
NA				2.65				0

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 105.3 pcf Optimum moisture = 17.0 %	Black SILT; and CLAY; trace f SAND

Report No.: CT4434SL-01-05-23 **Client:** Ramboll
Project: Utica City Dump Site
Sample No.: 01S **Source of Sample:** Boring Sample
Location: In-place **Date:** 5/23/23

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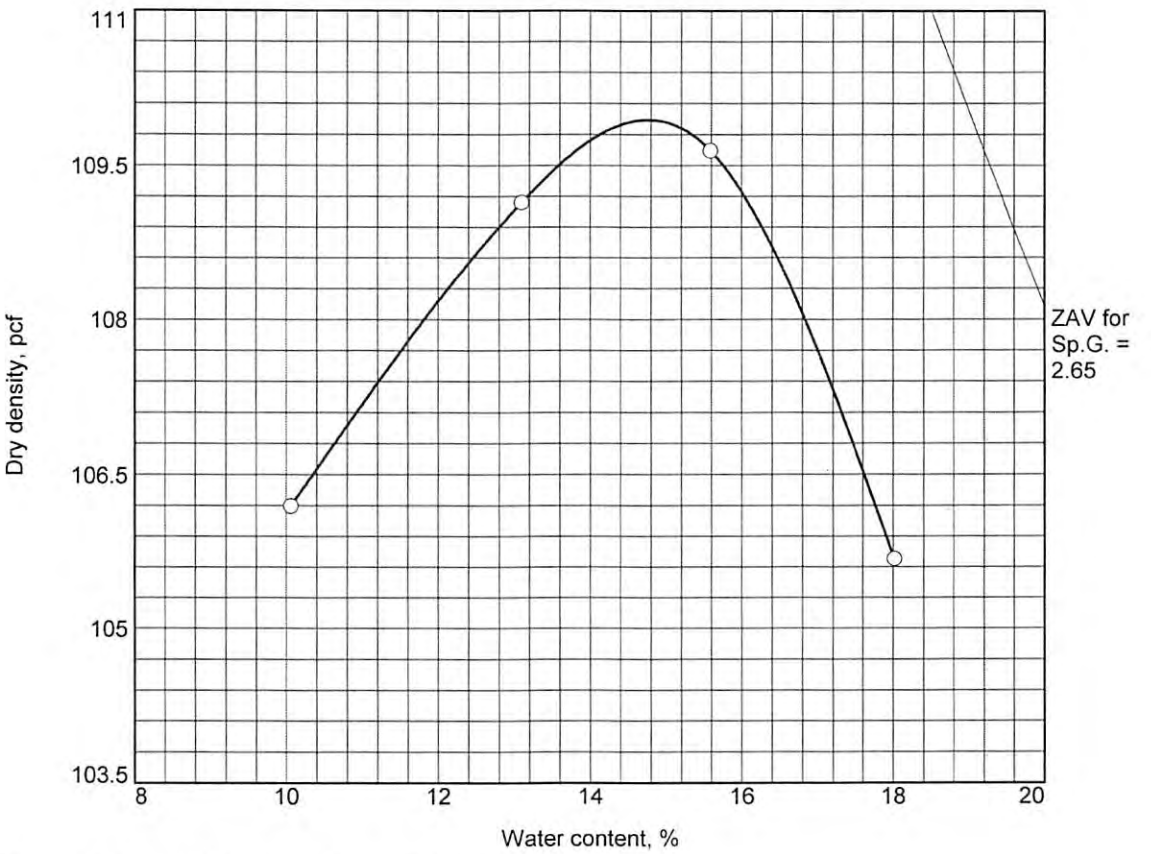
Remarks:

Rammer: Mechanical
Specific Gravity: Assumed

Reviewed by: _____ Date: 6/20/23

ATLANTIC TESTING LABORATORIES

COMPACTION TEST REPORT



Test specification: ASTM D 1557-12 Method B Modified

Elev/ Depth	Classification		Received Moist.	Sp.G.	LL	PL	PI	% > 3/8 in.
	USCS	AASHTO						
NA				2.65				0

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 109.9 pcf Optimum moisture = 14.8 %	Black SILT; little mf+ SAND; little CLAY

Report No.: CT4434SL-01-05-23 **Client:** Ramboll
Project: Utica City Dump Site
Sample No.: 02D **Source of Sample:** Boring Sample
Location: In-place **Date:** 5/24/23

ATLANTIC TESTING LABORATORIES, LIMITED

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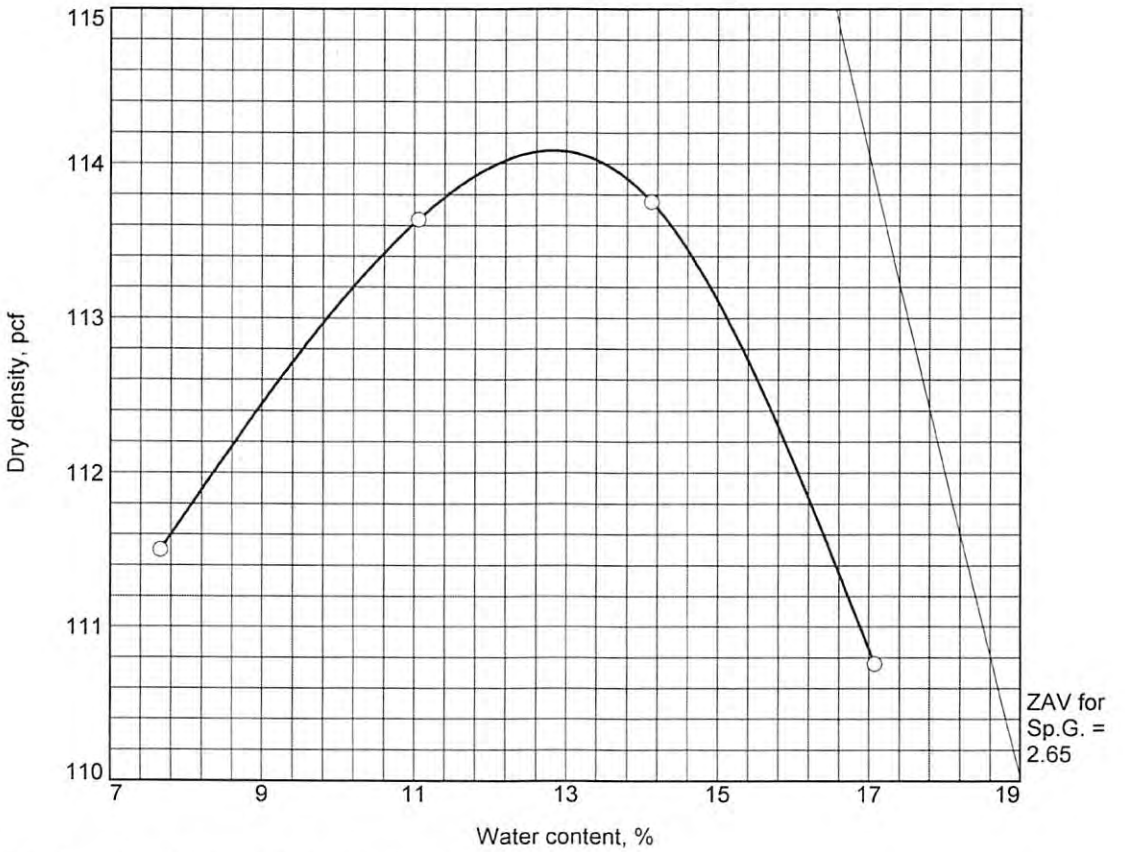
Remarks:

Rammer: Mechanical
Specific Gravity: Assumed

Reviewed by: _____ Date: 6/20/23

ATLANTIC TESTING LABORATORIES

COMPACTION TEST REPORT



Test specification: ASTM D 1557-12 Method B Modified

Elev/ Depth	Classification		Received Moist.	Sp.G.	LL	PL	PI	% > 3/8 in.
	USCS	AASHTO						
NA				2.65				0

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 114.1 pcf Optimum moisture = 12.8 %	Black CLAY; and SILT; little mf+ SAND

Report No.: CT4434SL-01-05-23 **Client:** Ramboll
Project: Utica City Dump Site
Sample No.: 02S **Source of Sample:** Boring Sample
Location: In-place **Date:** 5/25/23

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Canton, New York

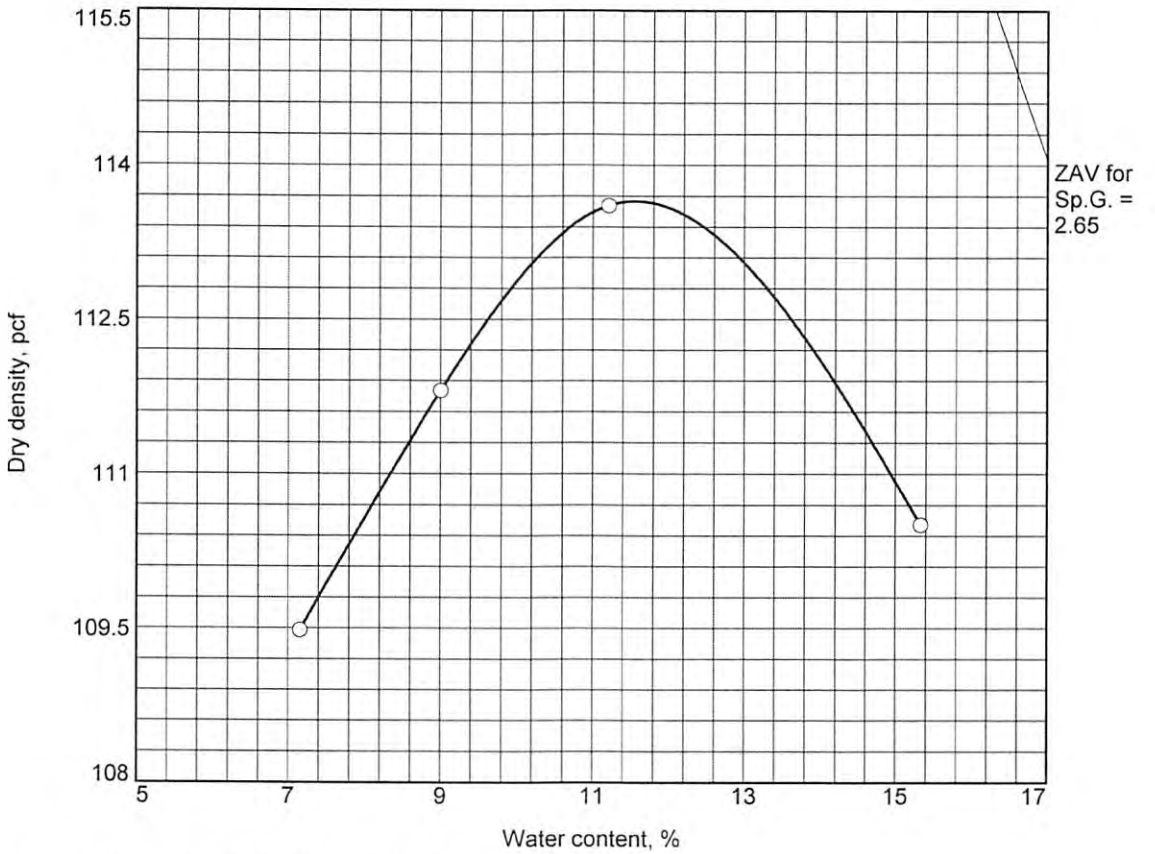
Remarks:

Rammer: Mechanical
Specific Gravity: Assumed

Reviewed by: _____ Date: 6/20/23

ATLANTIC TESTING LABORATORIES

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 Method A Standard

Elev/ Depth	Classification		Received Moist.	Sp.G.	LL	PL	PI	% > #4
	USCS	AASHTO						
NA				2.65				0

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 113.6 pcf Optimum moisture = 11.6 %	Black SILT; some CLAY; trace mf+ SAND

Report No.: CT4434SL-01-05-23 **Client:** Ramboll
Project: Utica City Dump Site
Sample No.: 03D **Source of Sample:** Boring Sample
Location: In-place **Date:** 5/22/23

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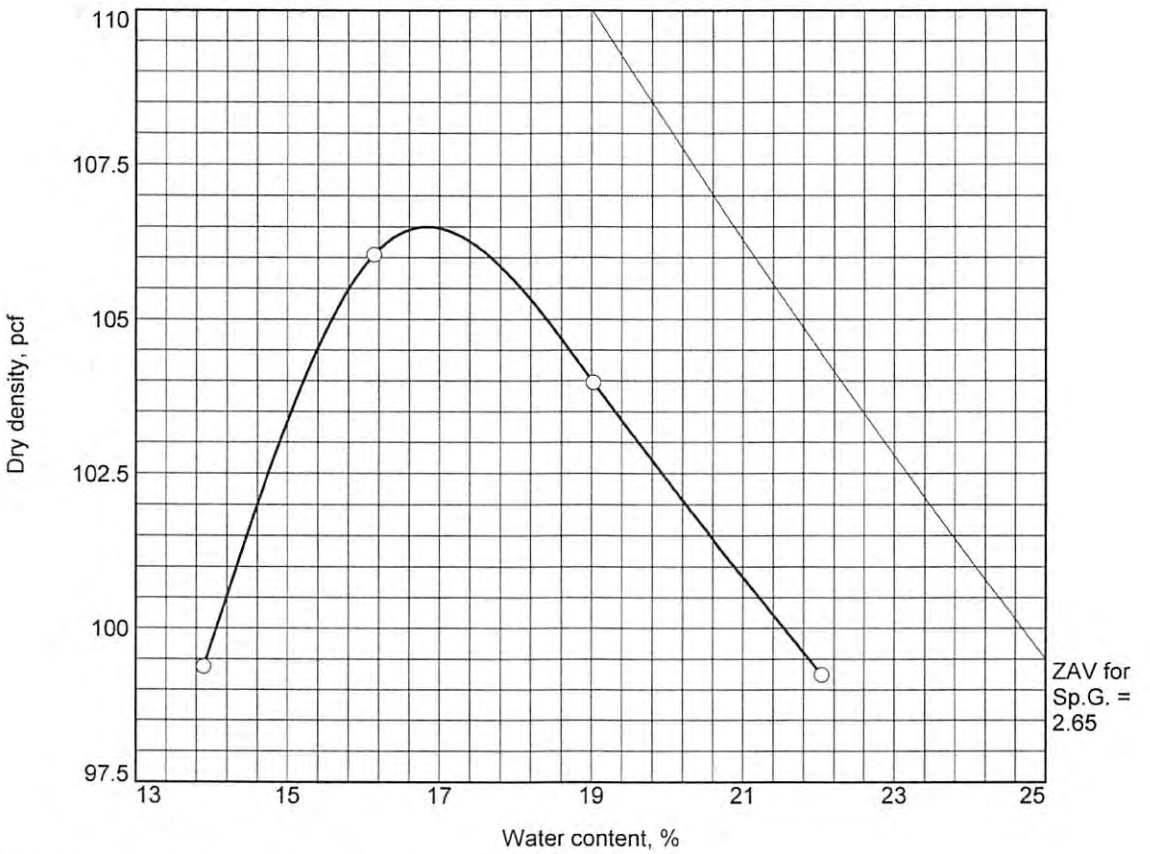
Remarks:

Rammer: Mechanical
Specific Gravity: Assumed

Reviewed by: _____ Date: 6/28/23

ATLANTIC TESTING LABORATORIES

COMPACTION TEST REPORT



Test specification: ASTM D 1557-12 Method B Modified

Elev/ Depth	Classification		Received Moist.	Sp.G.	LL	PL	PI	% > 3/8 in.
	USCS	AASHTO						
NA				2.65				0

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 106.5 pcf Optimum moisture = 16.8 %	Black SILT; and CLAY; trace mf SAND

Report No.: CT4434SL-01-05-23 **Client:** Ramboll
Project: Utica City Dump Site
Sample No.: 03S **Source of Sample:** Boring Sample
Location: In-place **Date:** 5/25/23

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Canton, New York

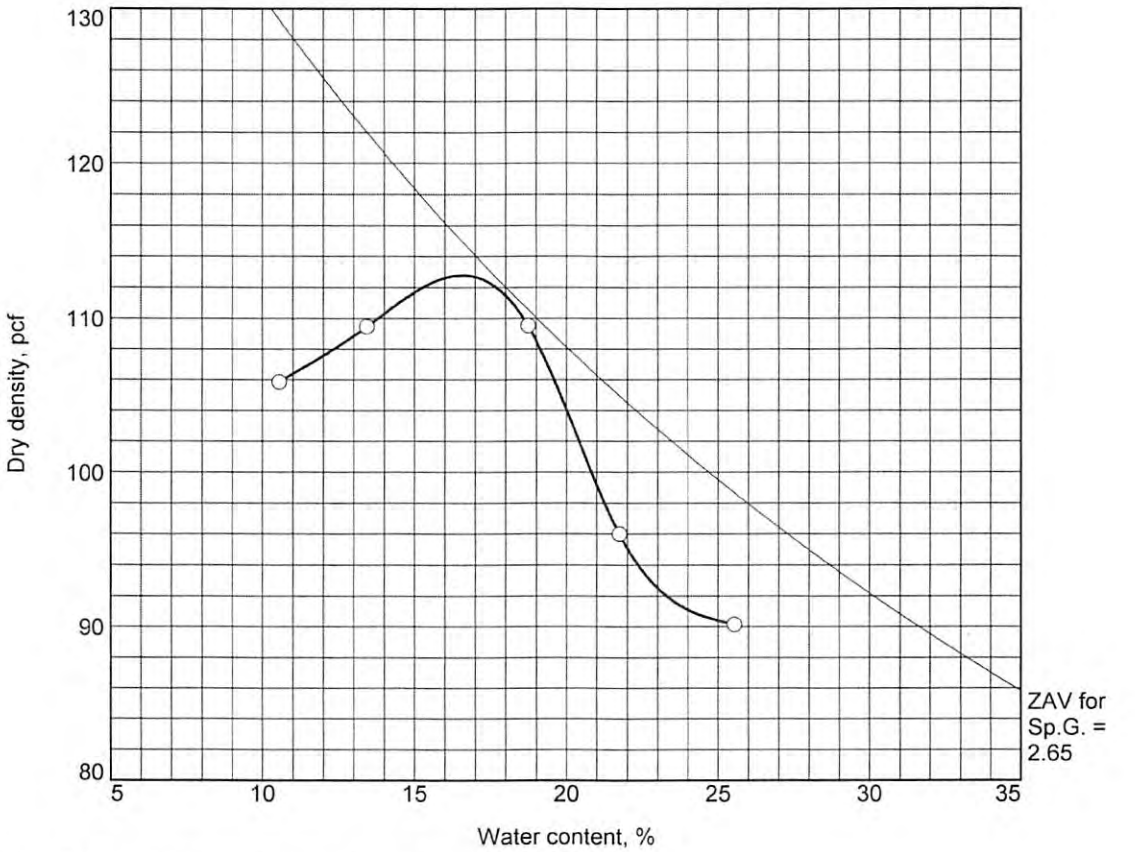
Remarks:

Rammer: Mechanical
Specific Gravity: Assumed

Reviewed by: _____ Date: 6/20/23

ATLANTIC TESTING LABORATORIES

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 Method A Standard

Elev/ Depth	Classification		Received Moist.	Sp.G.	LL	PL	PI	% > #4
	USCS	AASHTO						
NA				2.65				0

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 112.8 pcf Optimum moisture = 16.6 %	Black SILT; little CLAY; little mf+ SAND

Report No.: CT4434SL-01-05-23 **Client:** Ramboll
Project: Utica City Dump Site
Sample No.: 04D **Source of Sample:** Boring Sample
Location: In-place **Date:** 5/24/23

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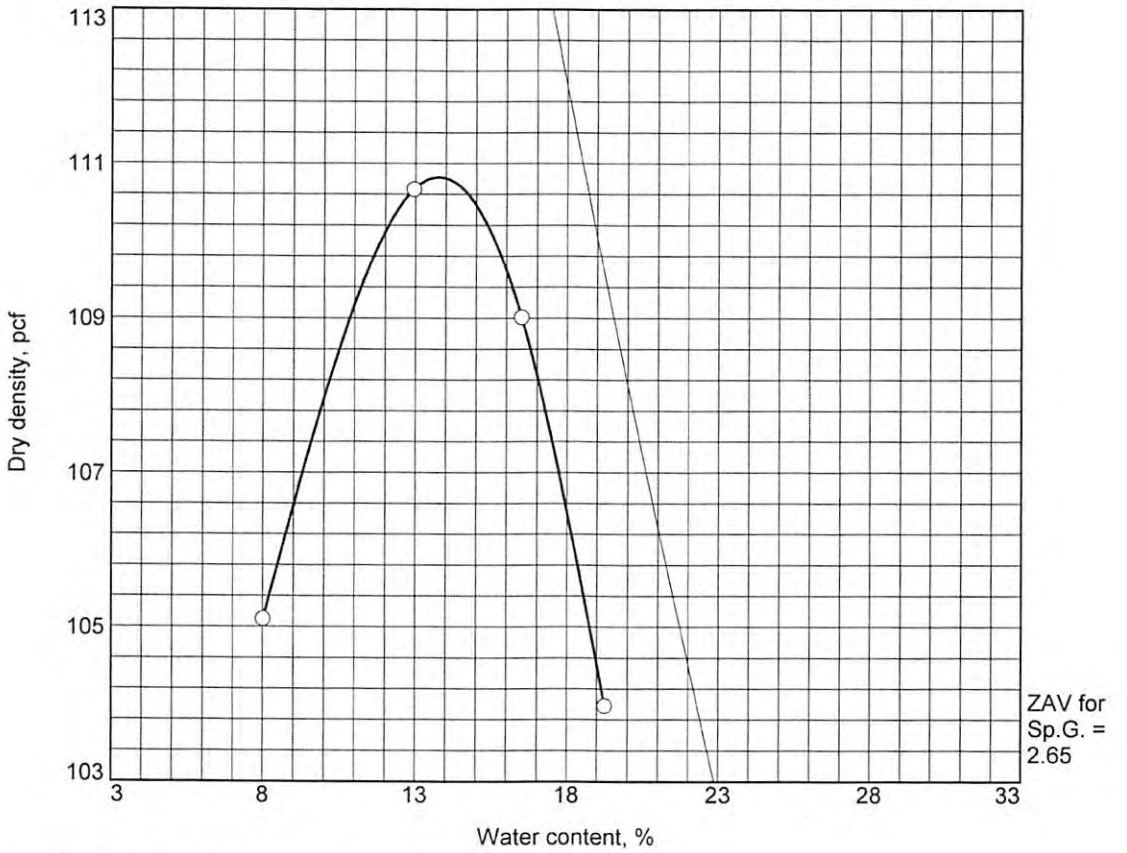
Remarks:

Rammer: Mechanical
Specific Gravity: Assumed

Reviewed by: _____ Date: 6/20/23

ATLANTIC TESTING LABORATORIES

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 Method A Standard

Elev/ Depth	Classification		Received Moist.	Sp.G.	LL	PL	PI	% > #4
	USCS	AASHTO						
NA				2.65				0

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 110.8 pcf Optimum moisture = 13.8 %	Black SILT; trace CLAY; trace mf+ SAND

Report No.: CT4434SL-01-05-23 **Client:** Ramboll
Project: Utica City Dump Site
Sample No.: 04S **Source of Sample:** Boring Sample
Location: In-place **Date:** 5/23/23

ATLANTIC TESTING LABORATORIES, LIMITED
Canton, New York

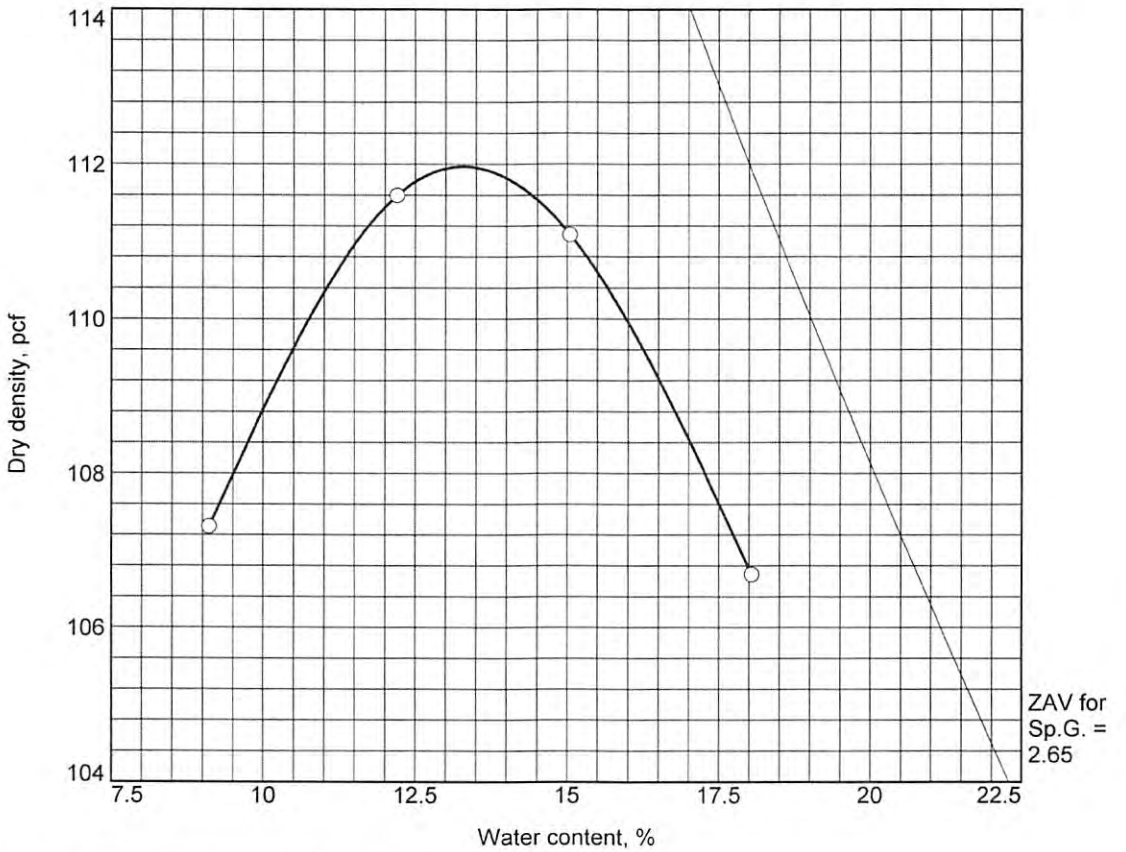
Remarks:

Rammer: Mechanical
Specific Gravity: Assumed

Reviewed by: _____ Date: 6/20/23

ATLANTIC TESTING LABORATORIES

COMPACTION TEST REPORT



Test specification: ASTM D 1557-12 Method B Modified

Elev/ Depth	Classification		Received Moist.	Sp.G.	LL	PL	PI	% > 3/8 in.
	USCS	AASHTO						
NA				2.65				0

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 112.0 pcf Optimum moisture = 13.3 %	Black SILT; some CLAY; trace mf+ SAND

Report No.: CT4434SL-01-05-23 **Client:** Ramboll
Project: Utica City Dump Site
Sample No.: 05D **Source of Sample:** Boring Sample
Location: In-place **Date:** 5/25/23

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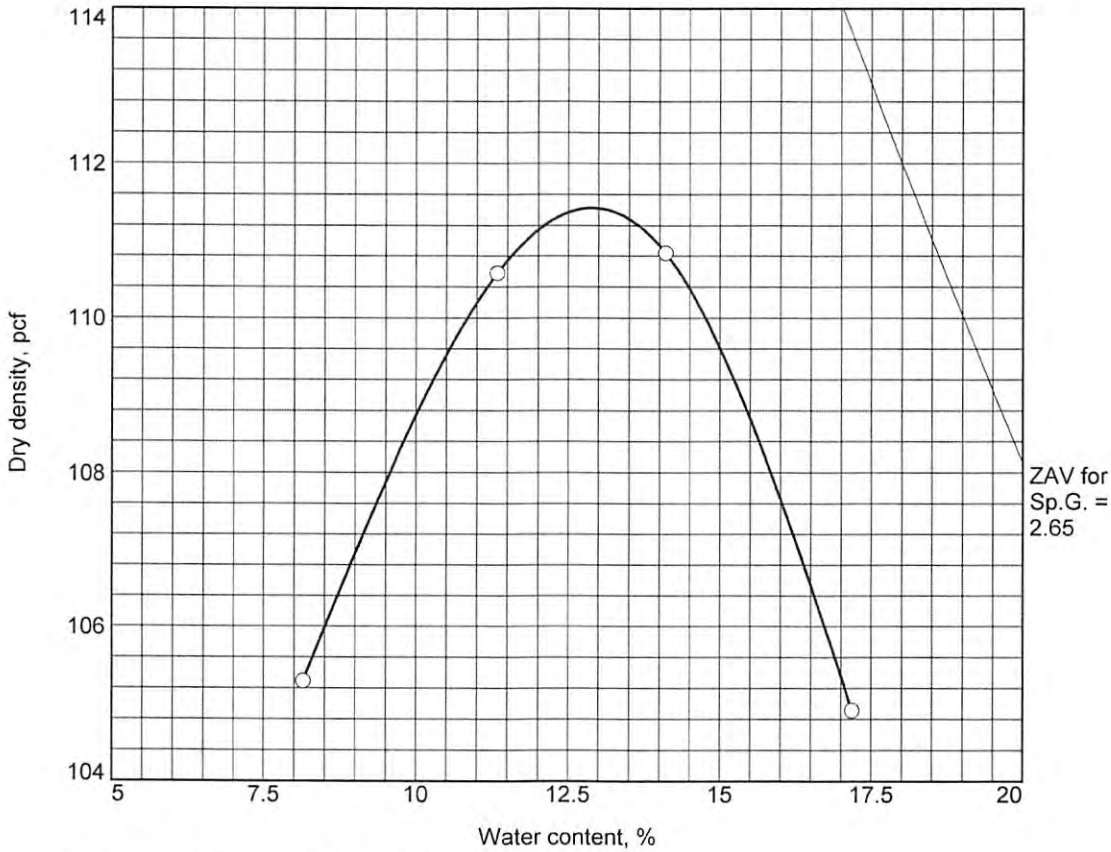
Remarks:

Rammer: Mechanical
Specific Gravity: Assumed

Reviewed by: _____ Date: 6/28/23

ATLANTIC TESTING LABORATORIES

COMPACTION TEST REPORT



Test specification: ASTM D 1557-12 Method B Modified

Elev/ Depth	Classification		Received Moist.	Sp.G.	LL	PL	PI	% > 3/8 in.
	USCS	AASHTO						
NA				2.65				0

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 111.4 pcf Optimum moisture = 12.9 %	Black SILT; some mf+ SAND; little CLAY

Report No.: CT4434SL-01-05-23 **Client:** Ramboll
Project: Utica City Dump Site
Sample No.: 05S **Source of Sample:** Boring Sample
Location: In-place **Date:** 5/25/23

ATLANTIC TESTING LABORATORIES, LIMITED
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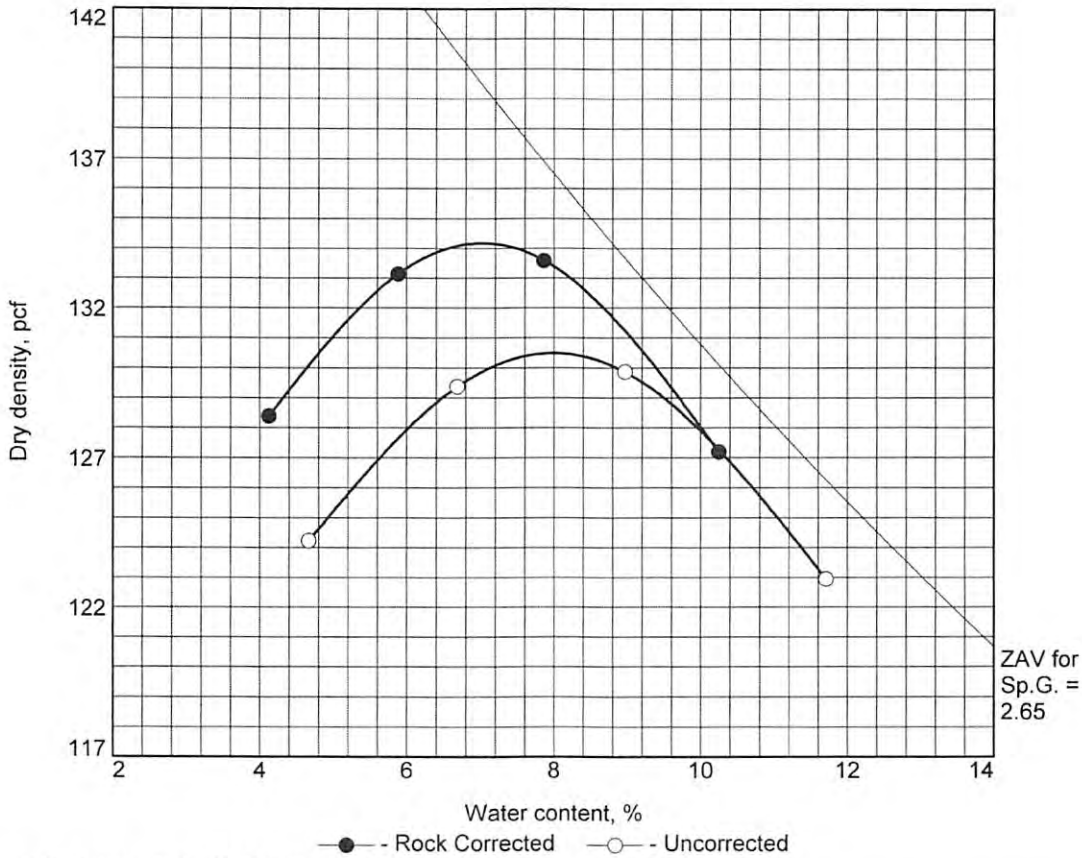
Remarks:

Rammer: Mechanical
Specific Gravity: Assumed

Reviewed by: _____ Date: 6/28/23

ATLANTIC TESTING LABORATORIES

COMPACTION TEST REPORT



Test specification: ASTM D 1557-12 Method B Modified
ASTM D4718-15 Oversize Corr. Applied to Each Test Point

Elev/ Depth	Classification		Received Moist.	Sp.G.	LL	PL	PI	% > 3/8 in.
	USCS	AASHTO						
NA				2.65				13

ROCK CORRECTED TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 134.2 pcf Optimum moisture = 7.0 %	Grey c-mf SAND; little cmf GRAVEL; trace SILT

Report No.: CT4434SL-01-05-23 **Client:** Ramboll
Project: Utica City Dump Site
Sample No.: SC-01 **Source of Sample:** Boring Sample
Location: In-place **Date:** 5/23/23

ATLANTIC TESTING LABORATORIES, LIMITED

Canton, New York

Remarks:

Rammer: Mechanical
Specific Gravity: Assumed

Reviewed by: _____ Date: 6/28/23

ATLANTIC TESTING LABORATORIES

Client:	Ramboll	**ATL Report No.:**	CT4434SL-01-06-23
Project:	Utica City Dump	**Report Date:**	June 14, 2023
Location:	Utica , NY	**Date Recieved:**	May 24, 2023

Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter
ASTM D 5084

Location: -- **Specimen Description:** Remolded **Compaction:** 95%
Sample ID: 01D **Sample Classification:** Black SILT; and CLAY; trace f SAND

Sample Information

	Initial	Final
Weight (lbs)	1.520	1.606
Sample Length (in)	3.504	3.485
Sample Diameter (in)	2.825	2.834
Area (in^2)	6.268	6.308
Volume (in^3)	21.96	21.98
Specific Gravity (Assumed)	2.65	2.65
Moisture Content (%)	18.3	24.9
Dry Unit Weight	101.1	101.0

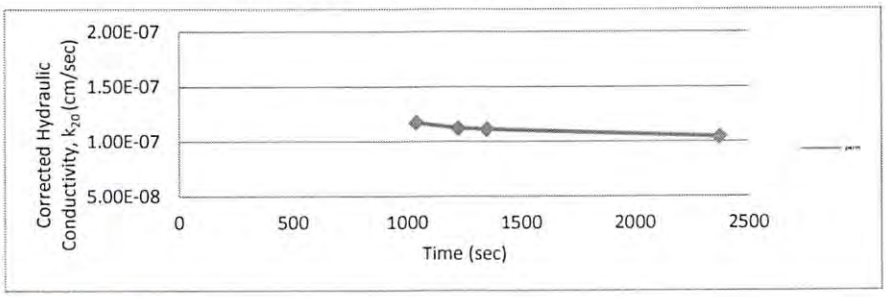
Test Conditions

Permeant Liquid	Water
Test Method	A
Saturation (%)	100
Temperature (°C)	24.5
Max Dry Density (pcf)	106.8
Optimum Moisture (%)	18.1

Test Data

Average Confining Pressure (psi)	Average Back Pressure (psi)	Average Differential Head (psi)	Minimum Effective Stress (psi)	Maximum Effective Stress (psi)	Range of Hydraulic Gradient		Average Corrected Hydraulic Conductivity k20 (cm/sec)
					Minimum	Maximum	
14	11	2	3	3	15.89	15.89	1.1E-07

Corrected Hydraulic Conductivity versus Time



REMARKS:

Reviewed by: _____ Date: 6/20/23

ATLANTIC TESTING LABORATORIES

Client:	Ramboll	**ATL Report No.:**	CT4434SL-01-06-23
Project:	Utica City Dump	**Report Date:**	June 14, 2023
Location:	Utica, NY	**Date Recieved:**	May 24, 2023

Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

ASTM D 5084

Location: -- **Specimen Description:** Remolded **Compaction:** 95%

Sample ID: 01S **Sample Classification:** Black SILT; and CLAY; trace f SAND

Sample Information

	Initial	Final
Weight (lbs)	1.268	1.362
Sample Length (in)	2.985	3.042
Sample Diameter (in)	2.829	2.858
Area (in^2)	6.284	6.417
Volume (in^3)	18.76	19.52
Specific Gravity (Assumed)	2.65	2.65
Moisture Content (%)	17.4	26.1
Dry Unit Weight	99.5	95.6

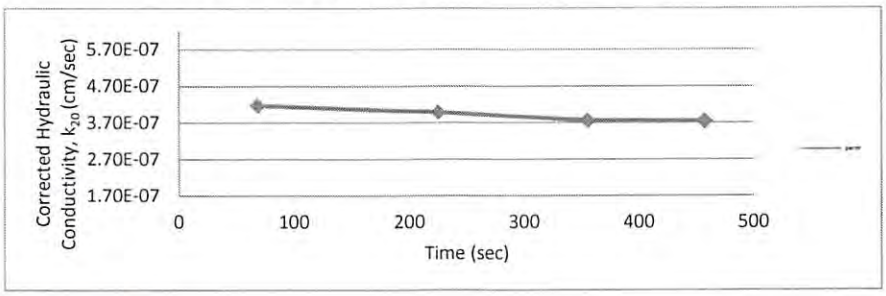
Test Conditions

Permeant Liquid	Water
Test Method	A
Saturation (%)	100
Temperature (°C)	25.2
Max Dry Density (pcf)	105.2
Optimum Moisture (%)	17.2

Test Data

Average Confining Pressure (psi)	Average Back Pressure (psi)	Average Differential Head (psi)	Minimum Effective Stress (psi)	Maximum Effective Stress (psi)	Range of Hydraulic Gradient		Average Corrected Hydraulic Conductivity k20 (cm/sec)
					Minimum	Maximum	
14	11	2	3	3	18.21	18.21	3.9E-07

Corrected Hydraulic Conductivity versus Time



REMARKS:

Reviewed by: _____ Date: 6/20/23

ATLANTIC TESTING LABORATORIES

Client:	Ramboll	**ATL Report No.:**	CT4434SL-01-06-23
Project:	Utica City Dump	**Report Date:**	June 14, 2023
Location:	Utica, NY	**Date Recieved:**	May 24, 2023

Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter
ASTM D 5084

Location: -- **Specimen Description:** Remolded **Compaction:** 95%
Sample ID: 02D **Sample Classification:** Black SILT; little mf+ SAND; little CLAY

Sample Information

	Initial	Final
Weight (lbs)	1.332	1.399
Sample Length (in)	3.092	3.091
Sample Diameter (in)	2.831	2.769
Area (in^2)	6.296	6.022
Volume (in^3)	19.47	18.62
Specific Gravity (Assumed)	2.65	2.65
Moisture Content (%)	17.8	23.7
Dry Unit Weight	100.4	105.0

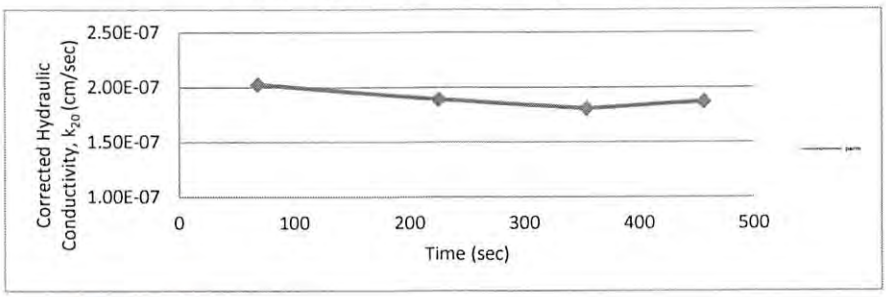
Test Conditions

Permeant Liquid	Water
Test Method	A
Saturation (%)	100
Temperature (°C)	25.2
Max Dry Density (pcf)	105.7
Optimum Moisture (%)	18.0

Test Data

Average Confining Pressure (psi)	Average Back Pressure (psi)	Average Differential Head (psi)	Minimum Effective Stress (psi)	Maximum Effective Stress (psi)	Range of Hydraulic Gradient		Average Corrected Hydraulic Conductivity k20 (cm/sec)
					Minimum	Maximum	
14	11	2	3	3	17.91	17.91	1.9E-07

Corrected Hydraulic Conductivity versus Time



REMARKS:

Reviewed by: _____ Date: 6/20/23

ATLANTIC TESTING LABORATORIES

Client:	Ramboll	**ATL Report No.:**	CT4434SL-01-06-23
Project:	Utica City Dump	**Report Date:**	June 20, 2023
Location:	Utica, NY	**Date Recieved:**	May 24, 2023

Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter
ASTM D 5084

Location: -- **Specimen Description:** Remolded **Compaction:** 95%
Sample ID: 02S **Sample Classification:** Black CLAY; and SILT; little mf+ SAND

Sample Information

	Initial	Final
Weight (lbs)	1.472	1.592
Sample Length (in)	3.340	3.520
Sample Diameter (in)	2.818	2.831
Area (in^2)	6.237	6.295
Volume (in^3)	20.83	22.15
Specific Gravity (Assumed)	2.65	2.65
Moisture Content (%)	12.6	21.8
Dry Unit Weight	108.4	101.9

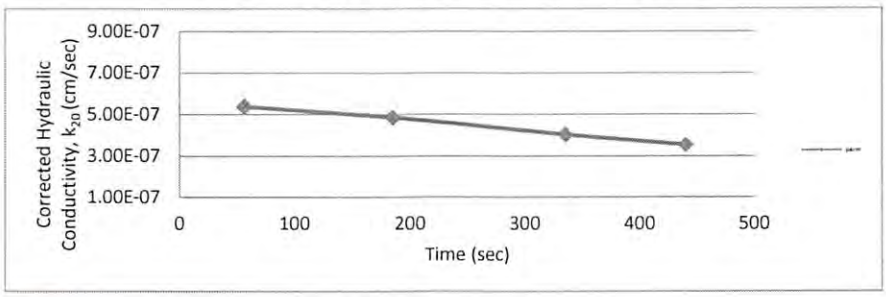
Test Conditions

Permeant Liquid	Water
Test Method	A
Saturation (%)	100
Temperature (°C)	25
Max Dry Density (pcf)	114.1
Optimum Moisture (%)	12.8

Test Data

Average Confining Pressure (psi)	Average Back Pressure (psi)	Average Differential Head (psi)	Minimum Effective Stress (psi)	Maximum Effective Stress (psi)	Range of Hydraulic Gradient		Average Corrected Hydraulic Conductivity k20 (cm/sec)
					Minimum	Maximum	
14	11	2	3	3	15.73	15.73	4.4E-07

Corrected Hydraulic Conductivity versus Time



REMARKS:

Reviewed by: _____ Date: 6/20/23

ATLANTIC TESTING LABORATORIES

Client:	Ramboll	**ATL Report No.:**	CT4434SL-01-06-23
Project:	Utica City Dump	**Report Date:**	June 20, 2023
Location:	Utica, NY	**Date Recieved:**	May 24, 2023

Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

ASTM D 5084

Location: -- **Specimen Description:** Remolded **Compaction:** 95%

Sample ID: 03D **Sample Classification:** Black SILT; some CLAY; trace mf+ SAND

Sample Information

	Initial	Final
Weight (lbs)	1.672	1.803
Sample Length (in)	3.807	3.976
Sample Diameter (in)	2.830	2.842
Area (in^2)	6.292	6.345
Volume (in^3)	23.95	25.23
Specific Gravity (Assumed)	2.65	2.65
Moisture Content (%)	12.0	20.8
Dry Unit Weight	107.7	102.2

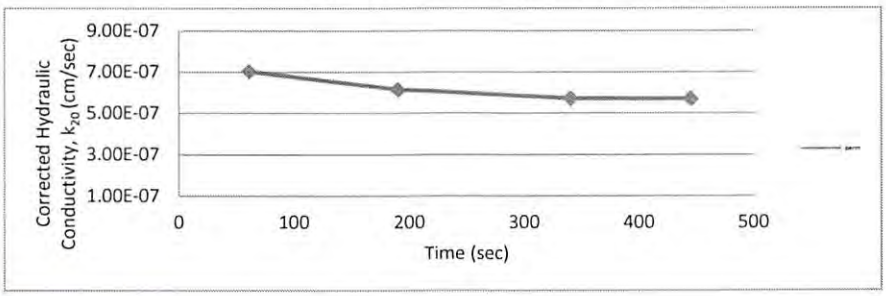
Test Conditions

Permeant Liquid	Water
Test Method	A
Saturation (%)	100
Temperature (°C)	25
Max Dry Density (pcf)	113.6
Optimum Moisture (%)	11.6

Test Data

Average Confining Pressure (psi)	Average Back Pressure (psi)	Average Differential Head (psi)	Minimum Effective Stress (psi)	Maximum Effective Stress (psi)	Range of Hydraulic Gradient		Average Corrected Hydraulic Conductivity k20 (cm/sec)
					Minimum	Maximum	
14	11	2	3	3	13.93	13.93	6.1E-07

Corrected Hydraulic Conductivity versus Time



REMARKS:

Reviewed by: _____ Date: 6/20/23

ATLANTIC TESTING LABORATORIES

Client:	Ramboll	**ATL Report No.:**	CT4434SL-01-06-23
Project:	Utica City Dump	**Report Date:**	June 16, 2023
Location:	Utica, NY	**Date Recieved:**	May 24, 2023

Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

ASTM D 5084

Location: -- **Specimen Description:** Remolded **Compaction:** 95%

Sample ID: 03S **Sample Classification:** Black SILT; and CLAY; trace mf SAND

Sample Information

	Initial	Final
Weight (lbs)	1.662	1.666
Sample Length (in)	3.958	3.902
Sample Diameter (in)	2.807	2.806
Area (in^2)	6.188	6.185
Volume (in^3)	24.49	24.14
Specific Gravity (Assumed)	2.65	2.65
Moisture Content (%)	-689.4	-690.8
Dry Unit Weight	-19.9	-20.2

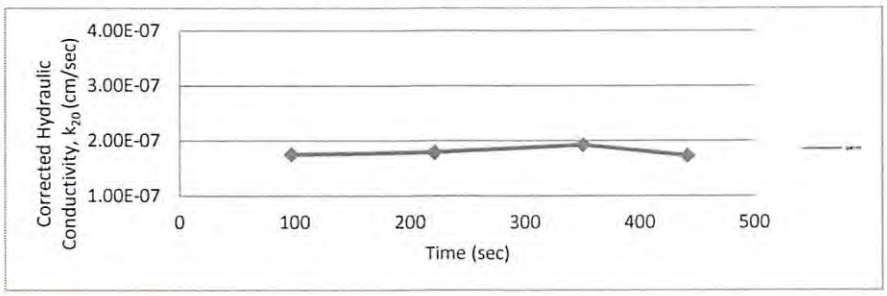
Test Conditions

Permeant Liquid	Water
Test Method	A
Saturation (%)	100
Temperature (°C)	25
Max Dry Density (pcf)	106.5
Optimum Moisture (%)	16.8

Test Data

Average Confining Pressure (psi)	Average Back Pressure (psi)	Average Differential Head (psi)	Minimum Effective Stress (psi)	Maximum Effective Stress (psi)	Range of Hydraulic Gradient		Average Corrected Hydraulic Conductivity k20 (cm/sec)
					Minimum	Maximum	
14	11	2	3	3	14.19	14.19	1.8E-07

Corrected Hydraulic Conductivity versus Time



REMARKS:

Reviewed by: _____ Date: 6/20/23

ATLANTIC TESTING LABORATORIES

Client:	Ramboll	**ATL Report No.:**	CT4434SL-01-06-23
Project:	Utica City Dump	**Report Date:**	June 14, 2023
Location:	Utica, NY	**Date Recieved:**	May 24, 2023

Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

ASTM D 5084

Location: -- **Specimen Description:** Remolded **Compaction:** 95%

Sample ID: 04D **Sample Classification:** Black SILT; little CLAY; little mf+ SAND

Sample Information

	Initial	Final
Weight (lbs)	1.340	1.357
Sample Length (in)	2.979	2.989
Sample Diameter (in)	2.830	2.819
Area (in^2)	6.289	6.241
Volume (in^3)	18.73	18.66
Specific Gravity (Assumed)	2.65	2.65
Moisture Content (%)	16.2	17.6
Dry Unit Weight	106.4	106.9

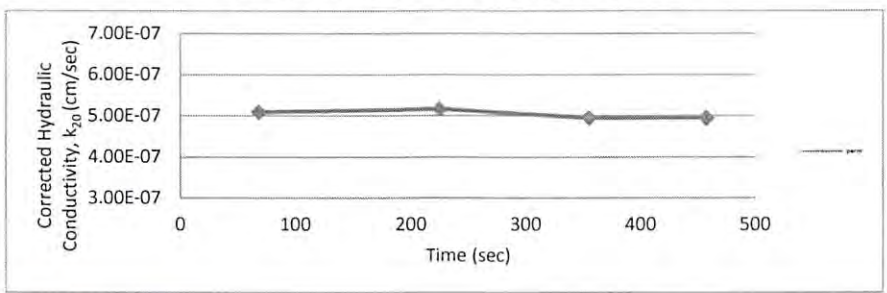
Test Conditions

Permeant Liquid	Water
Test Method	A
Saturation (%)	100
Temperature (°C)	25.2
Max Dry Density (pcf)	112.8
Optimum Moisture (%)	16.6

Test Data

Average Confining Pressure (psi)	Average Back Pressure (psi)	Average Differential Head (psi)	Minimum Effective Stress (psi)	Maximum Effective Stress (psi)	Range of Hydraulic Gradient		Average Corrected Hydraulic Conductivity k20 (cm/sec)
					Minimum	Maximum	
14	11	2	3	3	18.53	18.53	5.0E-07

Corrected Hydraulic Conductivity versus Time



REMARKS:

Reviewed by: _____ Date: 6/20/23

ATLANTIC TESTING LABORATORIES

Client:	Ramboll	**ATL Report No.:**	CT4434SL-01-06-23
Project:	Utica City Dump	**Report Date:**	June 16, 2023
Location:	Utica, NY	**Date Recieved:**	May 24, 2023

Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

ASTM D 5084

Location: -- **Specimen Description:** Remolded **Compaction:** 95%

Sample ID: 04S **Sample Classification:** Black SILT; trace CLAY; trace mf+ SAND

Sample Information

	Initial	Final
Weight (lbs)	1.565	1.726
Sample Length (in)	3.600	3.862
Sample Diameter (in)	2.823	2.814
Area (in^2)	6.259	6.218
Volume (in^3)	22.53	24.01
Specific Gravity (Assumed)	2.65	2.65
Moisture Content (%)	14.0	25.7
Dry Unit Weight	105.3	98.8

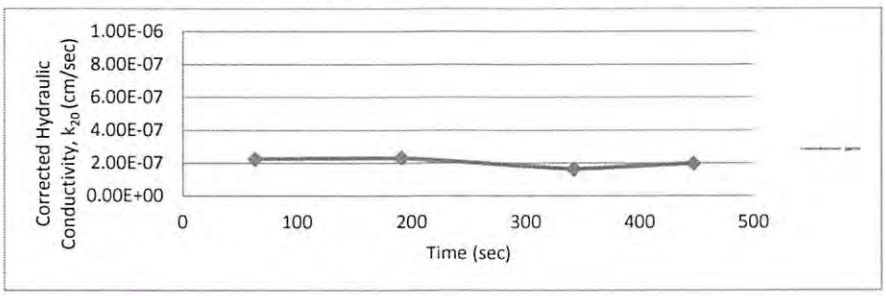
Test Conditions

Permeant Liquid	Water
Test Method	A
Saturation (%)	100
Temperature (°C)	25
Max Dry Density (pcf)	110.8
Optimum Moisture (%)	13.8

Test Data

Average Confining Pressure (psi)	Average Back Pressure (psi)	Average Differential Head (psi)	Minimum Effective Stress (psi)	Maximum Effective Stress (psi)	Range of Hydraulic Gradient		Average Corrected Hydraulic Conductivity k20 (cm/sec)
					Minimum	Maximum	
14	11	2	3	3	14.34	14.34	2.0E-07

Corrected Hydraulic Conductivity versus Time



REMARKS:

Reviewed by: _____ Date: 6/20/23

ATLANTIC TESTING LABORATORIES

Client:	Ramboll	**ATL Report No.:**	CT4434SL-01-06-23
Project:	Utica City Dumpsite	**Report Date:**	June 14, 2023
Location:	Utica , NY	**Date Recieved:**	May 24, 2023

Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

ASTM D 5084

Location: -- **Specimen Description:** Remolded **Compaction:** 95%

Sample ID: 05D **Sample Classification:** Black SILT; some CLAY; trace mf+ SAND

Sample Information

	Initial	Final
Weight (lbs)	1.445	1.561
Sample Length (in)	3.320	3.337
Sample Diameter (in)	2.828	2.849
Area (in^2)	6.281	6.376
Volume (in^3)	20.85	21.28
Specific Gravity (Assumed)	2.65	2.65
Moisture Content (%)	13.4	22.5
Dry Unit Weight	105.6	103.5

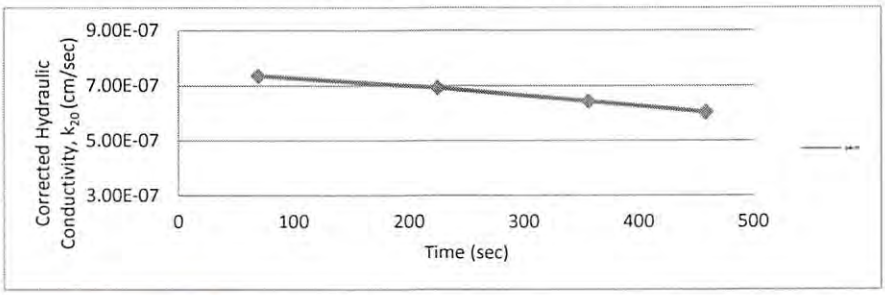
Test Conditions

Permeant Liquid	Water
Test Method	A
Saturation (%)	100
Temperature (°C)	25.2
Max Dry Density (pcf)	112.0
Optimum Moisture (%)	13.3

Test Data

Average Confining Pressure (psi)	Average Back Pressure (psi)	Average Differential Head (psi)	Minimum Effective Stress (psi)	Maximum Effective Stress (psi)	Range of Hydraulic Gradient		Average Corrected Hydraulic Conductivity k20 (cm/sec)
					Minimum	Maximum	
14	11	2	3	3	16.60	16.60	6.7E-07

Corrected Hydraulic Conductivity versus Time



REMARKS:

Reviewed by: _____ Date: 6/20/23

ATLANTIC TESTING LABORATORIES

Client:	Ramboll	**ATL Report No.:**	CT4434SL-01-06-23
Project:	Utica City Dumpsite	**Report Date:**	June 20, 2023
Location:	Utica , NY	**Date Recieved:**	May 24, 2023

Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter
ASTM D 5084

Location: -- **Specimen Description:** Remolded **Compaction:** 95%
Sample ID: 05S **Sample Classification:** Black SILT; some mf+ SAND; little CLAY

Sample Information

	Initial	Final
Weight (lbs)	1.520	1.651
Sample Length (in)	3.500	3.504
Sample Diameter (in)	2.826	2.833
Area (in^2)	6.272	6.302
Volume (in^3)	21.96	22.08
Specific Gravity (Assumed)	2.65	2.65
Moisture Content (%)	13.1	22.8
Dry Unit Weight	105.8	105.2

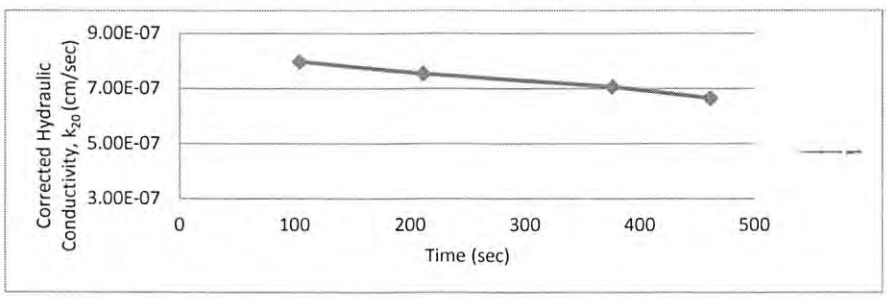
Test Conditions

Permeant Liquid	Water
Test Method	A
Saturation (%)	100
Temperature (°C)	25
Max Dry Density (pcf)	111.4
Optimum Moisture (%)	12.9

Test Data

Average Confining Pressure (psi)	Average Back Pressure (psi)	Average Differential Head (psi)	Minimum Effective Stress (psi)	Maximum Effective Stress (psi)	Range of Hydraulic Gradient		Average Corrected Hydraulic Conductivity k20 (cm/sec)
					Minimum	Maximum	
14	11	2	3	3	15.80	15.80	7.3E-07

Corrected Hydraulic Conductivity versus Time



REMARKS:

Reviewed by: _____ Date: 6/20/23

ATLANTIC TESTING LABORATORIES

PERMEABILITY ON GRANULAR SOIL TEST REPORT
ASTM D 2434 (using rigid wall permeameter)
PROJECT INFORMATION

Client:	Ramboll	Project No.:	CT4434SL-01-06-23
Project:	Utica City Dump	Report Date:	June 15, 2023
Location:	Utica, NY	Delivered By:	Client
		Delivered Date:	May 24, 2023

SAMPLE IDENTIFICATION

ATL Sample No.:	SC-01	Client Identification:	SC-01
Sample Location:	--	Sample Depth:	--
Max. Particle Size:	1"	Oversize Material (%):	13
Sample Classification:	Grey c-mf SAND, little cmf GRAVEL; trace SILT		

TEST INFORMATION

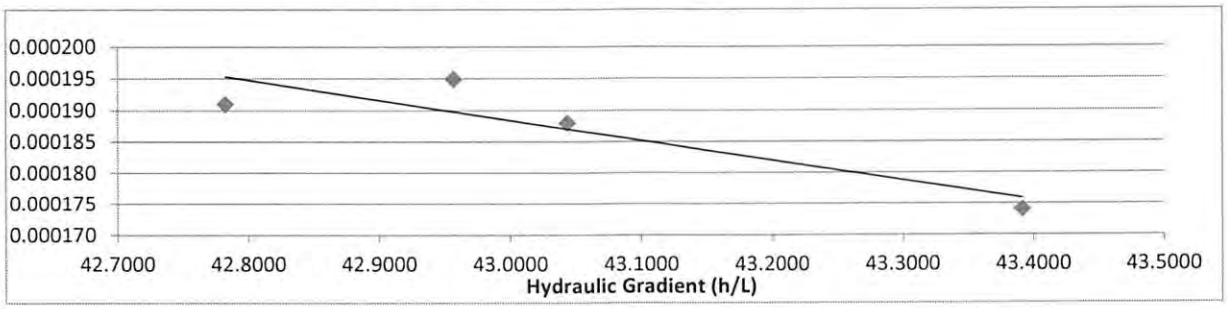
Diameter (cm):	10.00	Minimum Index Density (pcf):	--
Area (cm^2):	78.540	Maximum Index Density(pcf):	--
Effective Length (cm):	11.50	Relative Density (%):	--
Sample Length (cm):	17.50	Max. Dry Unit Weight (pcf):	130.5
Sample Weight (lbs):	6.468	Dry Unit Weight (pcf):	123.4
Moisture Content (%):	8.0	Compaction (%):	95
Permeant Liquid:	Water	Void Ratio:	--

TEST DATA

Test No.	Manometers h_1	Manometers h_2	Head h, (cm)	Q (cm^3)	t (sec)	Q/At	h/L	Temp (°C)	Corrected k, (cm/sec)
1	493	1	492.0	22.5	1500	0.000191	42.7826	22.9	4.21E-06
2	496	1	495.0	23	1560	0.000188	43.0435	22.6	4.11E-06
3	495	1	494.0	23	1500	0.000195	42.9565	22.6	4.28E-06
4	500	1	499.0	23	1680	0.000174	43.3913	22.8	3.78E-06

Average Corrected k (cm/sec): **4.10E-06** Project Specifications min k (cm/sec):

VELOCITY vs. HYDRAULIC GRADIENT



Reviewed by: _____ Date: 6/20/23

TABLE 4-1
Canal Dredge Sediment Results
UDS Area 4.26
Schuyler, NY

Analyte	For Imported Fill**				Pt 375										
	Unrest SCO	Rest Res SCO	Eco SCO	Comm/Ind SCO	Res Res SCO	UDS 4.26-03S-230511	UDS 4.26-03D-230511	UDS 4.26-04S-230511	UDS 4.26-04D-230511	UDS 4.26-02S-230511	UDS 4.26-02D-230511	UDS 4.26-01S-230511	UDS 4.26-01D-230511	UDS 4.26-05S-230511	UDS 4.26-05D-230511
VOCs															
Acetone	0.05	0.05	0.05	0.05	100	0.18	0.013	0.029	0.14	0.1	<0.0059	0.22	0.18	0.0094	0.11
2-Butanone (MEK)	0.12	0.12	0.12	0.12	100	<0.095	<0.0057	<0.0066	<0.064	0.015	<0.0041	<0.15	<0.097	<0.0051	0.019
p-Isopropyltoluene (p-Cymene)	NC					<0.0071	<0.00057	<0.00066	<0.0049	<0.00070	<0.00040	0.014	0.014	<0.00051	<0.0011
Methyl Acetate	NC					<0.034	<0.0013	<0.0015	0.12	<0.0016	<0.00093	0.069	0.062	<0.0012	<0.0025
SVOCs															
Benzo(a)pyrene	1	1	2.6	1	1	<0.086	<0.079	<0.092	<0.077	<0.085	0.075	<0.10	<0.075	<0.089	<0.088
Benzo(b)fluoranthene	1	1	NC	1.7	1	0.1	<0.081	<0.093	<0.078	<0.087	0.11	<0.10	<0.076	<0.090	0.12
Chrysene	1	1	NC	1	3.9	<0.094	<0.087	<0.10	<0.084	<0.093	0.093	<0.11	<0.082	<0.097	0.098
Fluoranthene	100	100	30	500	100	0.19	0.11	0.13	0.12	0.15	0.18	<0.11	<0.081	0.11	0.19
Phenanthrene	100	100	NC	500	100	0.12	<0.094	<0.11	0.095	0.12	0.13	<0.12	<0.088	<0.10	0.15
Phenol	0.33	0.33	NC	0.33	100	<0.12	<0.11	<0.13	<0.11	<0.12	<0.10	<0.14	<0.11	<0.12	0.16
Pyrene	100	100	NC	500	100	0.18	0.11	0.12	0.13	0.13	0.18	<0.12	<0.090	0.12	0.21
PESTICIDES						No Pesticide Compounds Detected									
PCBs						No PCB Aroclors Detected									
PFAS															
PFOS (µg/kg)					44*	0.4	0.4	0.35	0.36	0.64	0.64	0.52	0.42	0.26	0.35
PFOS SPLP (ng/L)					10*	<1.8	<2	<1.9	<1.9	<2.0	<1.8	<1.9	<1.8	<1.9	<1.9
INORGANICS (PPM)															
Aluminum						10000	8200	9500	6000	9800	8800	13000	9500	7200	9000
Antimony						<0.53	<0.48	<0.56	<0.45	<0.51	<0.44	<0.59	<0.45	<0.52	<0.52
Arsenic	13	16	13	16	16	6.9	5.5	6	4	6.3	5	8.8	6.3	5.1	6.2
Barium	350	400	433	400	400	81	64	75	47	69	60	100	74	51	71
Beryllium	7.2	14	10	47	72	0.68	0.55	0.63	0.43	0.64	0.59	0.84	0.61	0.5	0.63
Cadmium	2.5	2.5	4	7.5	4.3	0.33	0.26	0.3	0.2	0.26	0.28	0.42	0.33	0.18	0.31
Calcium						68000	62000	79000	62000	47000	46000	69000	68000	74000	72000
Chromium*	30	36	41	1500	180	13	11	12	8.5	13	12	16	12	9.8	12
Cobalt						11	9	10	6.9	9.7	9.7	13	10	8	10
Copper	50	270	50	270	270	38	30	34	22	33	34	47	34	22	32
Iron						30000	24000	30000	18000	24000	23000	36000	29000	21000	26000
Lead	63	400	63	450	400	13	10	11	6.8	12	12	17	12	7.3	11
Magnesium						11000	11000	15000	13000	10000	11000	11000	11000	18000	14000
Manganese	1600	2000	1600	2000	2000	690	570	640	430	490	500	800	630	520	640
Mercury	0.18	0.73	0.18	0.73	0.81	0.06	0.058	0.054	0.028	0.045	0.033	0.07	0.059	0.022	0.053
Nickel	30	130	30	130	310	28	23	26	18	26	25	35	26	20	26
Potassium						1900	1600	1900	1300	2000	1600	2500	1800	1500	1800
Selenium	3.9	4	3.9	4	180	<1.1	<0.98	<1.2	<0.93	<1.1	<0.91	<1.2	<0.94	<1.1	<1.1
Silver	2	8.3	2	8.3	180	2.3	1.9	2.1	1.4	2.1	1.9	2.8	2.1	1.6	2
Sodium						120	110	130	110	98	85	130	110	120	120
Thallium						<0.88	<0.80	<0.95	<0.76	<0.86	<0.74	<0.99	<0.76	<0.87	<0.88
Vanadium						23	19	22	15	21	19	28	20	16	20
Zinc	109	2200	109	2480	10000	67	54	63	44	62	63	84	62	48	62
Cyanide	27	27	NC	27	27	<0.52	<0.42	<0.56	<0.46	<0.47	<0.43	<0.58	<0.39	<0.51	<0.45
% Solids						65	70.7	61.3	73.1	65.7	75.3	56.3	75	63.4	64

Notes: PFAS results in ug/Kg. PFS SPLP results in ng/L. All other results reported in mg/Kg.
*-Trivalent Chromium SCO based on location of sample
**- per DER-10 Appendix 5.
Greater than Unrestricted or Eco Imported fill value
* -Per *Sampling, Analysis and Assessment of Per- and Polyfluoroalkyl Substances (PFAS)* dated April 2023.

Table 4-2
Canal Dredge Material Results
UDS Area 4.26
Schuyler, NY

Analyte IENT ID	For Imported Fill Unrest SCO	 Rest Res SCO	 Eco SCO	 Comm/Ind SCO	Part 375 Rest Res SCO	5000 cy Pile on N Side of canal SC-01-230511
SVOCs						
Benzo(a)pyrene	1	1	2.6	1	1	<0.061
Benzo(b)fluoranthene	1	1	NC	1.7	1	<0.062
Chrysene	1	1	NC	1	3.9	<0.067
Fluoranthene	100	100	30	500	100	<0.066
Phenanthrene	100	100	NC	500	100	<0.072
Phenol	0.33	0.33	NC	0.33	100	<0.086
Pyrene	100	100	NC	500	100	<0.074
PFAS						
PFOS (µg/kg)	NC	NC	NC	NC	44	<0.20
PFOS SPLP (ng/L)	NC	NC	NC	NC	10	<2.0
INORGANICS						
Aluminum						5600
Antimony						<0.37
Arsenic	13	16	13	16	16	4.4
Barium	350	400	433	400	400	37
Beryllium	7.2	14	10	47	72	0.42
Cadmium	2.5	2.5	4	7.5	4.3	0.17
Calcium						79000
Chromium*	30	36	41	1500	180	7.5
Cobalt						6
Copper	50	270	50	270	270	22
Iron						18000
Lead	63	400	63	450	400	6.2
Magnesium						7500
Manganese	1600	2000	1600	2000	2000	370
Mercury	0.18	0.73	0.18	0.73	0.81	0.017
Nickel	30	130	30	130	310	17
Potassium						1200
Selenium	3.9	4	3.9	4	180	<0.76
Silver	2	8.3	2	8.3	180	1.3
Sodium						90
Thallium						<0.62
Vanadium						13
Zinc	109	2200	109	2480	10000	38

nventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Notes: PFAS results in ug/Kg. PFS SPLP results in ng/L. All other results reported in mg/Kg
*-Trivalent Chromium SCO based on location of sample

Greater than Unrestricted or Eco Imported fill value

PFAS criteria from Sampling, Analysisand Assessment of Per- and Polyfluoralkyl Substandes (PFAS); NYSDEC April 2023

con-test®
A Pace Analytical® Laboratory

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

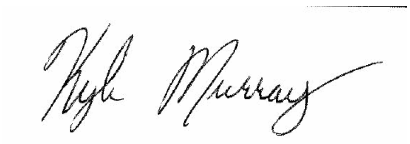
September 13, 2023

Deborah Y. Wright
NYDEC_Ramboll US Consulting, Inc. - Syracuse
333 West Washington Street, PO Box 4873
Syracuse, NY 13221

Project Location: Utica, NY
Client Job Number:
Project Number: 633015
Laboratory Work Order Number: 23E1969

Enclosed are results of analyses for samples as received by the laboratory on May 13, 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. 413/525-2332

NYDEC_Ramboll US Consulting, Inc. - Syracuse
333 West Washington Street, PO Box 4873
Syracuse, NY 13221
ATTN: Deborah Y. Wright

REPORT DATE: 9/13/2023

PURCHASE ORDER NUMBER: 144354

PROJECT NUMBER: 633015

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23E1969

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

PROJECT LOCATION: Utica, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
UDS 4.26-03S-230511	23E1969-01	Soil		Draft Method 1633	
				SM 2540G	
				SW-846 1312	
UDS 4.26-03D-230511	23E1969-02	Soil		Draft Method 1633	
				SM 2540G	
				SW-846 1312	
UDS 4.26-04S-230511	23E1969-03	Soil		Draft Method 1633	
				SM 2540G	
				SW-846 1312	
UDS 4.26-04D-230511	23E1969-04	Soil		Draft Method 1633	
				SM 2540G	
				SW-846 1312	
UDS 4.26-02S-230511	23E1969-05	Soil		Draft Method 1633	
				SM 2540G	
				SW-846 1312	
UDS 4.26-02D-230511	23E1969-06	Soil		Draft Method 1633	
				SM 2540G	
				SW-846 1312	
UDS 4.26-01S-230511	23E1969-07	Soil		Draft Method 1633	
				SM 2540G	
				SW-846 1312	
UDS 4.26-01D-230511	23E1969-08	Soil		Draft Method 1633	
				SM 2540G	
				SW-846 1312	
UDS 4.26-05S-230511	23E1969-09	Soil		Draft Method 1633	
				SM 2540G	
				SW-846 1312	
UDS 4.26-05D-230511	23E1969-10	Soil		Draft Method 1633	
				SM 2540G	
				SW-846 1312	
SC-01-230511	23E1969-11	Soil		Draft Method 1633	
				SM 2540G	
				SW-846 1312	

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CASE NARRATIVE SUMMARY

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

Revised Report 9/11/23: PFAS 1633 SPLP reporting limit corrected.

Draft Method 1633

Qualifications:

PF-17B

Extracted internal standard is outside of control limits. Insufficient sample volume for re-extraction.

Analyte & Samples(s) Qualified:

D9-NEtFOSE
23E1969-04[UDS 4.26-04D-230511]

N-ethylperfluorooctanesulfonamidoethanol (NEtFO
23E1969-04[UDS 4.26-04D-230511]

PF-18

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

Analyte & Samples(s) Qualified:

D3-NMeFOSA
23E1969-04RE1[UDS 4.26-04D-230511], 23E1969-08RE1[UDS 4.26-01D-230511], 23E1969-10RE1[UDS 4.26-05D-230511]

D5-NEtFOSA
23E1969-01RE1[UDS 4.26-03S-230511], 23E1969-02RE1[UDS 4.26-03D-230511], 23E1969-03RE1[UDS 4.26-04S-230511], 23E1969-04RE1[UDS 4.26-04D-230511], 23E1969-07RE1[UDS 4.26-01S-230511], 23E1969-08RE1[UDS 4.26-01D-230511], 23E1969-10RE1[UDS 4.26-05D-230511]

N-ethyl perfluorooctanesulfonamide (NEtFOSA)
23E1969-01RE1[UDS 4.26-03S-230511], 23E1969-02RE1[UDS 4.26-03D-230511], 23E1969-03RE1[UDS 4.26-04S-230511], 23E1969-04RE1[UDS 4.26-04D-230511], 23E1969-07RE1[UDS 4.26-01S-230511], 23E1969-08RE1[UDS 4.26-01D-230511], 23E1969-10RE1[UDS 4.26-05D-230511]

N-methyl perfluoroocatnesulfonamide (NMeFOSA)
23E1969-04RE1[UDS 4.26-04D-230511], 23E1969-08RE1[UDS 4.26-01D-230511], 23E1969-10RE1[UDS 4.26-05D-230511]

SM 2540G

Qualifications:

H-06

Sample was extracted past the recommended holding time.

Analyte & Samples(s) Qualified:

% Solids
23E1969-01[UDS 4.26-03S-230511], 23E1969-02[UDS 4.26-03D-230511], 23E1969-03[UDS 4.26-04S-230511], 23E1969-04[UDS 4.26-04D-230511], 23E1969-05[UDS 4.26-02S-230511], 23E1969-06[UDS 4.26-02D-230511], 23E1969-07[UDS 4.26-01S-230511], 23E1969-08[UDS 4.26-01D-230511], 23E1969-09[UDS 4.26-05S-230511], 23E1969-10[UDS 4.26-05D-230511], 23E1969-11[SC-01-230511]

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.



Lisa A. Worthington
Technical Representative

con-test® A Pace Analytical® Laboratory

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-03S-230511 | Sampled: 5/11/2023 09:30

Sample ID: 23E1969-01

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
Perfluoropentanoic acid (PFPeA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
Perfluorohexanoic acid (PFHxA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
Perfluorooctanoic acid (PFOA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
Perfluorononanoic acid (PFNA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
Perfluorodecanoic acid (PFDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
Perfluorooctanesulfonic acid (PFOS)	0.40	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	µg/kg dry	1	PF-18	Draft Method 1633	6/2/23	6/3/23 8:37	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	10	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	10	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-03S-230511 | Sampled: 5/11/2023 09:30

Sample ID: 23E1969-01

Sample Matrix: Soil

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	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:37	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	64.1	20-150		6/3/23 8:37
13C5-PFPeA	64.7	20-150		6/3/23 8:37
13C5-PFHxA	67.9	20-150		6/3/23 8:37
13C4-PFHpA	68.4	20-150		6/3/23 8:37
13C8-PFOA	68.8	20-150		6/3/23 8:37
13C9-PFNA	62.9	20-150		6/3/23 8:37
13C6-PFDA	67.4	20-150		6/3/23 8:37
13C7-PFUnA	71.2	20-150		6/3/23 8:37
13C2-PFDoA	67.7	20-150		6/3/23 8:37
13C2-PFTeDA	54.7	20-150		6/3/23 8:37
13C3-PFBS	72.3	20-150		6/3/23 8:37
13C3-PFHxS	66.3	20-150		6/3/23 8:37
13C8-PFOS	66.8	20-150		6/3/23 8:37
13C2-4:2FTS	97.6	20-150		6/3/23 8:37
13C2-6:2FTS	85.6	20-150		6/3/23 8:37
13C2-8:2FTS	85.3	20-150		6/3/23 8:37
13C8-PFOSA	61.0	20-150		6/3/23 8:37
D3-NMeFOSA	23.8	20-150		6/3/23 8:37
D5-NEtFOSA	**15.5** *	20-150	PF-18	6/3/23 8:37
D3-NMeFOSAA	67.7	20-150		6/3/23 8:37
D5-NEtFOSAA	72.8	20-150		6/3/23 8:37
D7-NMeFOSE	43.2	20-150		6/3/23 8:37
D9-NEtFOSE	38.6	20-150		6/3/23 8:37
13C3-HFPO-DA	66.3	20-150		6/3/23 8:37

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-03S-230511 | Sampled: 5/11/2023 09:30

Sample ID: 23E1969-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	62.0		% Wt	1	H-06	SM 2540G	5/23/23	5/23/23 8:15	ATP

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-03S-230511 | Sampled: 5/11/2023 09:30

Sample ID: 23E1969-01

Sample Matrix: Soil

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	7.4	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
Perfluoropentanoic acid (PFPeA)	ND	3.7	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
Perfluorohexanoic acid (PFHxA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
Perfluoroheptanoic acid (PFHpA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
Perfluorooctanoic acid (PFOA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
Perfluorononanoic acid (PFNA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
Perfluorodecanoic acid (PFDA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
Perfluoroundecanoic acid (PFUnA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
Perfluorododecanoic acid (PFDoA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
Perfluorotetradecanoic acid (PFTeDA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
Perfluorooctanesulfonic acid (PFOS)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
Perfluorononanesulfonic acid (PFNS)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
Perfluorodecanesulfonic acid (PFDS)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
Perfluorododecanesulfonic acid (PFDoS)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	7.4	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	7.4	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	7.4	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
Perfluorooctanesulfonamide (PFOSA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
N-MeFOSAA (NMeFOSAA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
N-EtFOSAA (NEtFOSAA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	18	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	18	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	7.4	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	7.4	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
9Cl-PF3ONS (F53B Minor)	ND	7.4	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
11Cl-PF3OUdS (F53B Major)	ND	7.4	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	18	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	92	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	92	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	3.7	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	3.7	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-03S-230511 | Sampled: 5/11/2023 09:30

Sample ID: 23E1969-01

Sample Matrix: Soil

SPLP - 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	3.7	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	3.7	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:03	DRL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	89.7	20-150		6/9/23 16:03
13C5-PFPeA	88.9	20-150		6/9/23 16:03
13C5-PFHxA	88.2	20-150		6/9/23 16:03
13C4-PFHpA	86.7	20-150		6/9/23 16:03
13C8-PFOA	86.9	20-150		6/9/23 16:03
13C9-PFNA	85.3	20-150		6/9/23 16:03
13C6-PFDA	82.4	20-150		6/9/23 16:03
13C7-PFUnA	76.7	20-150		6/9/23 16:03
13C2-PFDoA	69.2	20-150		6/9/23 16:03
13C2-PFTeDA	65.9	20-150		6/9/23 16:03
13C3-PFBS	89.3	20-150		6/9/23 16:03
13C3-PFHxS	85.3	20-150		6/9/23 16:03
13C8-PFOS	85.6	20-150		6/9/23 16:03
13C2-4:2FTS	82.1	20-150		6/9/23 16:03
13C2-6:2FTS	76.8	20-150		6/9/23 16:03
13C2-8:2FTS	71.1	20-150		6/9/23 16:03
13C8-PFOSA	71.3	20-150		6/9/23 16:03
D3-NMeFOSA	55.4	20-150		6/9/23 16:03
D5-NEtFOSA	54.2	20-150		6/9/23 16:03
D3-NMeFOSAA	61.5	20-150		6/9/23 16:03
D5-NEtFOSAA	59.8	20-150		6/9/23 16:03
D7-NMeFOSE	67.0	20-150		6/9/23 16:03
D9-NEtFOSE	63.7	20-150		6/9/23 16:03
13C3-HFPO-DA	88.8	20-150		6/9/23 16:03

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-03D-230511 | Sampled: 5/11/2023 09:40

Sample ID: 23E1969-02

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
Perfluoropentanoic acid (PFPeA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
Perfluorohexanoic acid (PFHxA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
Perfluorooctanoic acid (PFOA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
Perfluorononanoic acid (PFNA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
Perfluorodecanoic acid (PFDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
Perfluorooctanesulfonic acid (PFOS)	0.40	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	µg/kg dry	1	PF-18	Draft Method 1633	6/2/23	6/3/23 8:52	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.9	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.9	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-03D-230511 | Sampled: 5/11/2023 09:40

Sample ID: 23E1969-02

Sample Matrix: Soil

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	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 8:52	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	68.9	20-150		6/3/23 8:52
13C5-PFPeA	66.0	20-150		6/3/23 8:52
13C5-PFHxA	67.5	20-150		6/3/23 8:52
13C4-PFHpA	69.2	20-150		6/3/23 8:52
13C8-PFOA	68.2	20-150		6/3/23 8:52
13C9-PFNA	65.6	20-150		6/3/23 8:52
13C6-PFDA	67.6	20-150		6/3/23 8:52
13C7-PFUnA	71.2	20-150		6/3/23 8:52
13C2-PFDoA	69.7	20-150		6/3/23 8:52
13C2-PFTeDA	58.3	20-150		6/3/23 8:52
13C3-PFBS	70.9	20-150		6/3/23 8:52
13C3-PFHxS	66.3	20-150		6/3/23 8:52
13C8-PFOS	65.8	20-150		6/3/23 8:52
13C2-4:2FTS	79.5	20-150		6/3/23 8:52
13C2-6:2FTS	88.4	20-150		6/3/23 8:52
13C2-8:2FTS	91.5	20-150		6/3/23 8:52
13C8-PFOSA	58.1	20-150		6/3/23 8:52
D3-NMeFOSA	23.7	20-150		6/3/23 8:52
D5-NEtFOSA	**15.7** *	20-150	PF-18	6/3/23 8:52
D3-NMeFOSAA	65.1	20-150		6/3/23 8:52
D5-NEtFOSAA	70.2	20-150		6/3/23 8:52
D7-NMeFOSE	43.0	20-150		6/3/23 8:52
D9-NEtFOSE	39.8	20-150		6/3/23 8:52
13C3-HFPO-DA	66.2	20-150		6/3/23 8:52

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-03D-230511 | Sampled: 5/11/2023 09:40

Sample ID: 23E1969-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	69.0		% Wt	1	H-06	SM 2540G	5/23/23	5/23/23 8:15	ATP

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-03D-230511 | Sampled: 5/11/2023 09:40

Sample ID: 23E1969-02

Sample Matrix: Soil

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	7.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
Perfluoropentanoic acid (PFPeA)	ND	4.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
Perfluorotetradecanoic acid (PFTeDA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
Perfluoropentanesulfonic acid (PFPeS)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
Perfluorononanesulfonic acid (PFNS)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
Perfluorodecanesulfonic acid (PFDS)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
Perfluorododecanesulfonic acid (PFDoS)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	7.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	7.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	7.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
Perfluorooctanesulfonamide (PFOSA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
N-MeFOSAA (NMeFOSAA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
N-EtFOSAA (NEtFOSAA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	20	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	20	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	7.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	7.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
9Cl-PF3ONS (F53B Minor)	ND	7.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
11Cl-PF3OUdS (F53B Major)	ND	7.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	20	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	99	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	99	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	4.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	4.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-03D-230511 | Sampled: 5/11/2023 09:40

Sample ID: 23E1969-02

Sample Matrix: Soil

SPLP - 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	4.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	4.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:19	DRL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	83.4	20-150		6/9/23 16:19
13C5-PFPeA	83.6	20-150		6/9/23 16:19
13C5-PFHxA	82.3	20-150		6/9/23 16:19
13C4-PFHpA	82.0	20-150		6/9/23 16:19
13C8-PFOA	82.3	20-150		6/9/23 16:19
13C9-PFNA	81.7	20-150		6/9/23 16:19
13C6-PFDA	83.1	20-150		6/9/23 16:19
13C7-PFUnA	79.9	20-150		6/9/23 16:19
13C2-PFDoA	75.3	20-150		6/9/23 16:19
13C2-PFTeDA	67.5	20-150		6/9/23 16:19
13C3-PFBS	82.5	20-150		6/9/23 16:19
13C3-PFHxS	78.3	20-150		6/9/23 16:19
13C8-PFOS	80.2	20-150		6/9/23 16:19
13C2-4:2FTS	61.2	20-150		6/9/23 16:19
13C2-6:2FTS	63.6	20-150		6/9/23 16:19
13C2-8:2FTS	62.6	20-150		6/9/23 16:19
13C8-PFOSA	72.9	20-150		6/9/23 16:19
D3-NMeFOSA	63.7	20-150		6/9/23 16:19
D5-NEtFOSA	65.1	20-150		6/9/23 16:19
D3-NMeFOSAA	58.4	20-150		6/9/23 16:19
D5-NEtFOSAA	56.6	20-150		6/9/23 16:19
D7-NMeFOSE	64.1	20-150		6/9/23 16:19
D9-NEtFOSE	59.8	20-150		6/9/23 16:19
13C3-HFPO-DA	88.0	20-150		6/9/23 16:19

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-04S-230511 | Sampled: 5/11/2023 09:50

Sample ID: 23E1969-03

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.79	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
Perfluoropentanoic acid (PFPeA)	ND	0.39	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
Perfluorohexanoic acid (PFHxA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
Perfluorooctanoic acid (PFOA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
Perfluorononanoic acid (PFNA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
Perfluorodecanoic acid (PFDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
Perfluorooctanesulfonic acid (PFOS)	0.35	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.79	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.79	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.79	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	µg/kg dry	1	PF-18	Draft Method 1633	6/2/23	6/3/23 9:08	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.79	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.79	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.79	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.79	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	9.9	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	9.9	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.39	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.39	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-04S-230511 | Sampled: 5/11/2023 09:50

Sample ID: 23E1969-03

Sample Matrix: Soil

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	0.39	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.39	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:08	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	59.8		20-150		6/3/23 9:08
13C5-PFPeA	60.9		20-150		6/3/23 9:08
13C5-PFHxA	62.4		20-150		6/3/23 9:08
13C4-PFHpA	64.4		20-150		6/3/23 9:08
13C8-PFOA	61.8		20-150		6/3/23 9:08
13C9-PFNA	59.7		20-150		6/3/23 9:08
13C6-PFDA	63.1		20-150		6/3/23 9:08
13C7-PFUnA	63.7		20-150		6/3/23 9:08
13C2-PFDoA	62.6		20-150		6/3/23 9:08
13C2-PFTeDA	55.2		20-150		6/3/23 9:08
13C3-PFBS	66.5		20-150		6/3/23 9:08
13C3-PFHxS	63.4		20-150		6/3/23 9:08
13C8-PFOS	61.7		20-150		6/3/23 9:08
13C2-4:2FTS	76.6		20-150		6/3/23 9:08
13C2-6:2FTS	89.5		20-150		6/3/23 9:08
13C2-8:2FTS	98.2		20-150		6/3/23 9:08
13C8-PFOSA	58.4		20-150		6/3/23 9:08
D3-NMeFOSA	24.1		20-150		6/3/23 9:08
D5-NEtFOSA	**17.1**	*	20-150	PF-18	6/3/23 9:08
D3-NMeFOSAA	61.9		20-150		6/3/23 9:08
D5-NEtFOSAA	69.3		20-150		6/3/23 9:08
D7-NMeFOSE	41.4		20-150		6/3/23 9:08
D9-NEtFOSE	38.2		20-150		6/3/23 9:08
13C3-HFPO-DA	61.4		20-150		6/3/23 9:08

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-04S-230511 | Sampled: 5/11/2023 09:50

Sample ID: 23E1969-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	67.6		% Wt	1	H-06	SM 2540G	5/23/23	5/23/23 8:15	ATP

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-04S-230511 | Sampled: 5/11/2023 09:50

Sample ID: 23E1969-03

Sample Matrix: Soil

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	7.6	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
Perfluoropentanoic acid (PFPeA)	ND	3.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
Perfluorohexanoic acid (PFHxA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
Perfluoroheptanoic acid (PFHpA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
Perfluorooctanoic acid (PFOA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
Perfluorononanoic acid (PFNA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
Perfluorodecanoic acid (PFDA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
Perfluoroundecanoic acid (PFUnA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
Perfluorododecanoic acid (PFDoA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
Perfluorotridecanoic acid (PFTrDA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
Perfluorotetradecanoic acid (PFTeDA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
Perfluorononanesulfonic acid (PFNS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
Perfluorodecanesulfonic acid (PFDS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
Perfluorododecanesulfonic acid (PFDoS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	7.6	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	7.6	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	7.6	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
Perfluorooctanesulfonamide (PFOSA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
N-MeFOSAA (NMeFOSAA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
N-EtFOSAA (NEtFOSAA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	19	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	19	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	7.6	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	7.6	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
9Cl-PF3ONS (F53B Minor)	ND	7.6	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
11Cl-PF3OUdS (F53B Major)	ND	7.6	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	19	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	95	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	95	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	3.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	3.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-04S-230511 | Sampled: 5/11/2023 09:50

Sample ID: 23E1969-03

Sample Matrix: Soil

SPLP - 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	3.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	3.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:34	DRL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	83.4	20-150		6/9/23 16:34
13C5-PFPeA	83.2	20-150		6/9/23 16:34
13C5-PFHxA	82.0	20-150		6/9/23 16:34
13C4-PFHpA	80.0	20-150		6/9/23 16:34
13C8-PFOA	79.6	20-150		6/9/23 16:34
13C9-PFNA	81.6	20-150		6/9/23 16:34
13C6-PFDA	78.1	20-150		6/9/23 16:34
13C7-PFUnA	79.4	20-150		6/9/23 16:34
13C2-PFDoA	71.0	20-150		6/9/23 16:34
13C2-PFTeDA	63.8	20-150		6/9/23 16:34
13C3-PFBS	82.7	20-150		6/9/23 16:34
13C3-PFHxS	80.2	20-150		6/9/23 16:34
13C8-PFOS	76.6	20-150		6/9/23 16:34
13C2-4:2FTS	59.8	20-150		6/9/23 16:34
13C2-6:2FTS	61.5	20-150		6/9/23 16:34
13C2-8:2FTS	59.6	20-150		6/9/23 16:34
13C8-PFOSA	73.3	20-150		6/9/23 16:34
D3-NMeFOSA	63.3	20-150		6/9/23 16:34
D5-NEtFOSA	61.1	20-150		6/9/23 16:34
D3-NMeFOSAA	55.4	20-150		6/9/23 16:34
D5-NEtFOSAA	52.6	20-150		6/9/23 16:34
D7-NMeFOSE	46.6	20-150		6/9/23 16:34
D9-NEtFOSE	35.1	20-150		6/9/23 16:34
13C3-HFPO-DA	83.7	20-150		6/9/23 16:34

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-04D-230511 | Sampled: 5/11/2023 10:00

Sample ID: 23E1969-04

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
Perfluoropentanoic acid (PFPeA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
Perfluorohexanoic acid (PFHxA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
Perfluorooctanoic acid (PFOA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
Perfluorononanoic acid (PFNA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
Perfluorodecanoic acid (PFDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
Perfluorooctanesulfonic acid (PFOS)	0.36	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	µg/kg dry	1	PF-18	Draft Method 1633	6/2/23	6/3/23 9:24	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	µg/kg dry	1	PF-18	Draft Method 1633	6/2/23	6/3/23 9:24	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	10	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	10	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-04D-230511 | Sampled: 5/11/2023 10:00

Sample ID: 23E1969-04

Sample Matrix: Soil

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	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:24	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	71.8		20-150		6/3/23 9:24
13C5-PFPeA	68.0		20-150		6/3/23 9:24
13C5-PFHxA	70.0		20-150		6/3/23 9:24
13C4-PFHpA	71.7		20-150		6/3/23 9:24
13C8-PFOA	73.3		20-150		6/3/23 9:24
13C9-PFNA	67.6		20-150		6/3/23 9:24
13C6-PFDA	68.3		20-150		6/3/23 9:24
13C7-PFUnA	71.9		20-150		6/3/23 9:24
13C2-PFDoA	69.9		20-150		6/3/23 9:24
13C2-PFTeDA	54.6		20-150		6/3/23 9:24
13C3-PFBS	76.1		20-150		6/3/23 9:24
13C3-PFHxS	71.1		20-150		6/3/23 9:24
13C8-PFOS	70.1		20-150		6/3/23 9:24
13C2-4:2FTS	75.4		20-150		6/3/23 9:24
13C2-6:2FTS	79.7		20-150		6/3/23 9:24
13C2-8:2FTS	104		20-150		6/3/23 9:24
13C8-PFOSA	64.7		20-150		6/3/23 9:24
D3-NMeFOSA	**15.8**	*	20-150	PF-18	6/3/23 9:24
D5-NEtFOSA	**9.14**	*	20-150	PF-18	6/3/23 9:24
D3-NMeFOSAA	71.5		20-150		6/3/23 9:24
D5-NEtFOSAA	78.7		20-150		6/3/23 9:24
D7-NMeFOSE	43.3		20-150		6/3/23 9:24
D9-NEtFOSE	40.2		20-150		6/3/23 9:24
13C3-HFPO-DA	69.1		20-150		6/3/23 9:24

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-04D-230511 | Sampled: 5/11/2023 10:00

Sample ID: 23E1969-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	64.2		% Wt	1	H-06	SM 2540G	5/23/23	5/23/23 8:15	ATP

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-04D-230511 | Sampled: 5/11/2023 10:00

Sample ID: 23E1969-04

Sample Matrix: Soil

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	7.5	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
Perfluoropentanoic acid (PFPeA)	ND	3.7	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
Perfluorohexanoic acid (PFHxA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
Perfluoroheptanoic acid (PFHpA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
Perfluorooctanoic acid (PFOA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
Perfluorononanoic acid (PFNA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
Perfluorodecanoic acid (PFDA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
Perfluoroundecanoic acid (PFUnA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
Perfluorododecanoic acid (PFDoA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
Perfluorotridecanoic acid (PFTrDA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
Perfluorotetradecanoic acid (PFTeDA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
Perfluorononanesulfonic acid (PFNS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
Perfluorodecanesulfonic acid (PFDS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
Perfluorododecanesulfonic acid (PFDoS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	7.5	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	7.5	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	7.5	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
Perfluorooctanesulfonamide (PFOSA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
N-MeFOSAA (NMeFOSAA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
N-EtFOSAA (NEtFOSAA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	19	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	19	ng/L	1	PF-17B	Draft Method 1633	6/8/23	6/9/23 16:50	DRL
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	7.5	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	7.5	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
9Cl-PF3ONS (F53B Minor)	ND	7.5	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
11Cl-PF3OUdS (F53B Major)	ND	7.5	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	19	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	93	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	93	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	3.7	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	3.7	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-04D-230511 | Sampled: 5/11/2023 10:00

Sample ID: 23E1969-04

Sample Matrix: Soil

SPLP - 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	3.7	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	3.7	ng/L	1		Draft Method 1633	6/8/23	6/9/23 16:50	DRL

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	79.5		20-150		6/9/23 16:50
13C5-PFPeA	77.7		20-150		6/9/23 16:50
13C5-PFHxA	76.3		20-150		6/9/23 16:50
13C4-PFHpA	73.7		20-150		6/9/23 16:50
13C8-PFOA	72.4		20-150		6/9/23 16:50
13C9-PFNA	78.8		20-150		6/9/23 16:50
13C6-PFDA	75.1		20-150		6/9/23 16:50
13C7-PFUnA	73.9		20-150		6/9/23 16:50
13C2-PFDoA	65.0		20-150		6/9/23 16:50
13C2-PFTeDA	50.3		20-150		6/9/23 16:50
13C3-PFBS	76.6		20-150		6/9/23 16:50
13C3-PFHxS	76.5		20-150		6/9/23 16:50
13C8-PFOS	78.0		20-150		6/9/23 16:50
13C2-4:2FTS	61.4		20-150		6/9/23 16:50
13C2-6:2FTS	59.7		20-150		6/9/23 16:50
13C2-8:2FTS	66.0		20-150		6/9/23 16:50
13C8-PFOSA	69.2		20-150		6/9/23 16:50
D3-NMeFOSA	58.4		20-150		6/9/23 16:50
D5-NEtFOSA	56.0		20-150		6/9/23 16:50
D3-NMeFOSAA	48.4		20-150		6/9/23 16:50
D5-NEtFOSAA	48.5		20-150		6/9/23 16:50
D7-NMeFOSE	22.3		20-150		6/9/23 16:50
D9-NEtFOSE	**12.9**	*	20-150	PF-17B	6/9/23 16:50
13C3-HFPO-DA	82.6		20-150		6/9/23 16:50

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-02S-230511 | Sampled: 5/11/2023 10:25

Sample ID: 23E1969-05

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
Perfluoropentanoic acid (PFPeA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
Perfluorohexanoic acid (PFHxA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
Perfluorooctanoic acid (PFOA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
Perfluorononanoic acid (PFNA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
Perfluorodecanoic acid (PFDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
Perfluorooctanesulfonic acid (PFOS)	0.64	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	10	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	10	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-02S-230511 | Sampled: 5/11/2023 10:25

Sample ID: 23E1969-05

Sample Matrix: Soil

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	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 9:39	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	71.1	20-150		6/3/23 9:39
13C5-PFPeA	67.5	20-150		6/3/23 9:39
13C5-PFHxA	70.2	20-150		6/3/23 9:39
13C4-PFHpA	71.3	20-150		6/3/23 9:39
13C8-PFOA	67.8	20-150		6/3/23 9:39
13C9-PFNA	68.9	20-150		6/3/23 9:39
13C6-PFDA	70.3	20-150		6/3/23 9:39
13C7-PFUnA	72.1	20-150		6/3/23 9:39
13C2-PFDoA	70.9	20-150		6/3/23 9:39
13C2-PFTeDA	64.1	20-150		6/3/23 9:39
13C3-PFBS	73.4	20-150		6/3/23 9:39
13C3-PFHxS	69.1	20-150		6/3/23 9:39
13C8-PFOS	67.4	20-150		6/3/23 9:39
13C2-4:2FTS	62.9	20-150		6/3/23 9:39
13C2-6:2FTS	68.3	20-150		6/3/23 9:39
13C2-8:2FTS	78.3	20-150		6/3/23 9:39
13C8-PFOSA	63.0	20-150		6/3/23 9:39
D3-NMeFOSA	30.1	20-150		6/3/23 9:39
D5-NEtFOSA	21.5	20-150		6/3/23 9:39
D3-NMeFOSAA	69.2	20-150		6/3/23 9:39
D5-NEtFOSAA	71.3	20-150		6/3/23 9:39
D7-NMeFOSE	51.5	20-150		6/3/23 9:39
D9-NEtFOSE	49.6	20-150		6/3/23 9:39
13C3-HFPO-DA	65.6	20-150		6/3/23 9:39

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-02S-230511 | Sampled: 5/11/2023 10:25

Sample ID: 23E1969-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	76.1		% Wt	1	H-06	SM 2540G	5/23/23	5/23/23 8:15	ATP

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-02S-230511 | Sampled: 5/11/2023 10:25

Sample ID: 23E1969-05

Sample Matrix: Soil

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	8.1	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
Perfluoropentanoic acid (PFPeA)	ND	4.1	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
Perfluorotetradecanoic acid (PFTeDA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
Perfluoropentanesulfonic acid (PFPeS)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
Perfluorononanesulfonic acid (PFNS)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
Perfluorodecanesulfonic acid (PFDS)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
Perfluorododecanesulfonic acid (PFDoS)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	8.1	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	8.1	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	8.1	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
Perfluorooctanesulfonamide (PFOSA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
N-MeFOSAA (NMeFOSAA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
N-EtFOSAA (NEtFOSAA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	20	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	20	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	8.1	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	8.1	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
9Cl-PF3ONS (F53B Minor)	ND	8.1	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
11Cl-PF3OUdS (F53B Major)	ND	8.1	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	20	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	100	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	100	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	4.1	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	4.1	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-02S-230511 | Sampled: 5/11/2023 10:25

Sample ID: 23E1969-05

Sample Matrix: Soil

SPLP - 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	4.1	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	4.1	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:06	DRL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	107	20-150		6/9/23 17:06
13C5-PFPeA	108	20-150		6/9/23 17:06
13C5-PFHxA	107	20-150		6/9/23 17:06
13C4-PFHpA	103	20-150		6/9/23 17:06
13C8-PFOA	105	20-150		6/9/23 17:06
13C9-PFNA	104	20-150		6/9/23 17:06
13C6-PFDA	97.9	20-150		6/9/23 17:06
13C7-PFUnA	96.1	20-150		6/9/23 17:06
13C2-PFDoA	81.1	20-150		6/9/23 17:06
13C2-PFTeDA	45.4	20-150		6/9/23 17:06
13C3-PFBS	107	20-150		6/9/23 17:06
13C3-PFHxS	102	20-150		6/9/23 17:06
13C8-PFOS	93.7	20-150		6/9/23 17:06
13C2-4:2FTS	76.4	20-150		6/9/23 17:06
13C2-6:2FTS	80.0	20-150		6/9/23 17:06
13C2-8:2FTS	77.4	20-150		6/9/23 17:06
13C8-PFOSA	88.9	20-150		6/9/23 17:06
D3-NMeFOSA	82.3	20-150		6/9/23 17:06
D5-NEtFOSA	80.7	20-150		6/9/23 17:06
D3-NMeFOSAA	66.5	20-150		6/9/23 17:06
D5-NEtFOSAA	62.7	20-150		6/9/23 17:06
D7-NMeFOSE	69.9	20-150		6/9/23 17:06
D9-NEtFOSE	53.5	20-150		6/9/23 17:06
13C3-HFPO-DA	112	20-150		6/9/23 17:06

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-02D-230511 | Sampled: 5/11/2023 10:35

Sample ID: 23E1969-06

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
Perfluoropentanoic acid (PFPeA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
Perfluorohexanoic acid (PFHxA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
Perfluorooctanoic acid (PFOA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
Perfluorononanoic acid (PFNA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
Perfluorodecanoic acid (PFDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
Perfluorooctanesulfonic acid (PFOS)	0.64	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	10	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	10	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-02D-230511 | Sampled: 5/11/2023 10:35

Sample ID: 23E1969-06

Sample Matrix: Soil

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	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:26	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	70.8	20-150		6/3/23 10:26
13C5-PFPeA	68.2	20-150		6/3/23 10:26
13C5-PFHxA	70.9	20-150		6/3/23 10:26
13C4-PFHpA	70.8	20-150		6/3/23 10:26
13C8-PFOA	70.8	20-150		6/3/23 10:26
13C9-PFNA	66.9	20-150		6/3/23 10:26
13C6-PFDA	68.7	20-150		6/3/23 10:26
13C7-PFUnA	73.1	20-150		6/3/23 10:26
13C2-PFDoA	70.5	20-150		6/3/23 10:26
13C2-PFTeDA	59.2	20-150		6/3/23 10:26
13C3-PFBS	73.1	20-150		6/3/23 10:26
13C3-PFHxS	67.7	20-150		6/3/23 10:26
13C8-PFOS	69.6	20-150		6/3/23 10:26
13C2-4:2FTS	66.2	20-150		6/3/23 10:26
13C2-6:2FTS	72.5	20-150		6/3/23 10:26
13C2-8:2FTS	77.6	20-150		6/3/23 10:26
13C8-PFOSA	64.3	20-150		6/3/23 10:26
D3-NMeFOSA	39.9	20-150		6/3/23 10:26
D5-NEtFOSA	33.6	20-150		6/3/23 10:26
D3-NMeFOSAA	72.2	20-150		6/3/23 10:26
D5-NEtFOSAA	73.2	20-150		6/3/23 10:26
D7-NMeFOSE	55.3	20-150		6/3/23 10:26
D9-NEtFOSE	52.6	20-150		6/3/23 10:26
13C3-HFPO-DA	68.3	20-150		6/3/23 10:26

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-02D-230511 | Sampled: 5/11/2023 10:35

Sample ID: 23E1969-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	76.2		% Wt	1	H-06	SM 2540G	5/23/23	5/23/23 8:15	ATP

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-02D-230511 | Sampled: 5/11/2023 10:35

Sample ID: 23E1969-06

Sample Matrix: Soil

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	7.2	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
Perfluoropentanoic acid (PFPeA)	ND	3.6	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
Perfluorohexanoic acid (PFHxA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
Perfluoroheptanoic acid (PFHpA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
Perfluorooctanoic acid (PFOA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
Perfluorononanoic acid (PFNA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
Perfluorodecanoic acid (PFDA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
Perfluoroundecanoic acid (PFUnA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
Perfluorododecanoic acid (PFDoA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
Perfluorotetradecanoic acid (PFTeDA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
Perfluorooctanesulfonic acid (PFOS)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
Perfluorononanesulfonic acid (PFNS)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
Perfluorodecanesulfonic acid (PFDS)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
Perfluorododecanesulfonic acid (PFDoS)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	7.2	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	7.2	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	7.2	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
Perfluorooctanesulfonamide (PFOSA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
N-MeFOSAA (NMeFOSAA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
N-EtFOSAA (NEtFOSAA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	18	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	18	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	7.2	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	7.2	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
9Cl-PF3ONS (F53B Minor)	ND	7.2	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
11Cl-PF3OUdS (F53B Major)	ND	7.2	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	18	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	90	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	90	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	3.6	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	3.6	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-02D-230511 | Sampled: 5/11/2023 10:35

Sample ID: 23E1969-06

Sample Matrix: Soil

SPLP - 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	3.6	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	3.6	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:21	DRL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	81.2	20-150		6/9/23 17:21
13C5-PFPeA	82.1	20-150		6/9/23 17:21
13C5-PFHxA	82.5	20-150		6/9/23 17:21
13C4-PFHpA	80.6	20-150		6/9/23 17:21
13C8-PFOA	80.1	20-150		6/9/23 17:21
13C9-PFNA	81.5	20-150		6/9/23 17:21
13C6-PFDA	80.7	20-150		6/9/23 17:21
13C7-PFUnA	78.8	20-150		6/9/23 17:21
13C2-PFDoA	73.3	20-150		6/9/23 17:21
13C2-PFTeDA	66.9	20-150		6/9/23 17:21
13C3-PFBS	84.7	20-150		6/9/23 17:21
13C3-PFHxS	83.1	20-150		6/9/23 17:21
13C8-PFOS	77.8	20-150		6/9/23 17:21
13C2-4:2FTS	59.0	20-150		6/9/23 17:21
13C2-6:2FTS	62.3	20-150		6/9/23 17:21
13C2-8:2FTS	61.1	20-150		6/9/23 17:21
13C8-PFOSA	74.4	20-150		6/9/23 17:21
D3-NMeFOSA	68.5	20-150		6/9/23 17:21
D5-NEtFOSA	69.5	20-150		6/9/23 17:21
D3-NMeFOSAA	57.9	20-150		6/9/23 17:21
D5-NEtFOSAA	54.9	20-150		6/9/23 17:21
D7-NMeFOSE	67.3	20-150		6/9/23 17:21
D9-NEtFOSE	62.4	20-150		6/9/23 17:21
13C3-HFPO-DA	83.9	20-150		6/9/23 17:21

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-01S-230511 | Sampled: 5/11/2023 11:00

Sample ID: 23E1969-07

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
Perfluoropentanoic acid (PFPeA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
Perfluorohexanoic acid (PFHxA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
Perfluorooctanoic acid (PFOA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
Perfluorononanoic acid (PFNA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
Perfluorodecanoic acid (PFDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
Perfluorooctanesulfonic acid (PFOS)	0.52	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	µg/kg dry	1	PF-18	Draft Method 1633	6/2/23	6/3/23 10:42	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	10	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	10	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-01S-230511 | Sampled: 5/11/2023 11:00

Sample ID: 23E1969-07

Sample Matrix: Soil

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	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:42	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	68.4		20-150		6/3/23 10:42
13C5-PFPeA	65.7		20-150		6/3/23 10:42
13C5-PFHxA	68.2		20-150		6/3/23 10:42
13C4-PFHpA	68.9		20-150		6/3/23 10:42
13C8-PFOA	68.6		20-150		6/3/23 10:42
13C9-PFNA	65.8		20-150		6/3/23 10:42
13C6-PFDA	66.0		20-150		6/3/23 10:42
13C7-PFUnA	69.3		20-150		6/3/23 10:42
13C2-PFDoA	68.0		20-150		6/3/23 10:42
13C2-PFTeDA	50.2		20-150		6/3/23 10:42
13C3-PFBS	72.3		20-150		6/3/23 10:42
13C3-PFHxS	66.8		20-150		6/3/23 10:42
13C8-PFOS	65.8		20-150		6/3/23 10:42
13C2-4:2FTS	67.6		20-150		6/3/23 10:42
13C2-6:2FTS	77.0		20-150		6/3/23 10:42
13C2-8:2FTS	81.9		20-150		6/3/23 10:42
13C8-PFOSA	58.1		20-150		6/3/23 10:42
D3-NMeFOSA	24.8		20-150		6/3/23 10:42
D5-NEtFOSA	**16.5**	*	20-150	PF-18	6/3/23 10:42
D3-NMeFOSAA	68.5		20-150		6/3/23 10:42
D5-NEtFOSAA	71.0		20-150		6/3/23 10:42
D7-NMeFOSE	42.9		20-150		6/3/23 10:42
D9-NEtFOSE	40.4		20-150		6/3/23 10:42
13C3-HFPO-DA	65.6		20-150		6/3/23 10:42

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-01S-230511 | Sampled: 5/11/2023 11:00

Sample ID: 23E1969-07

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	67.8		% Wt	1	H-06	SM 2540G	5/23/23	5/23/23 8:15	ATP

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-01S-230511 | Sampled: 5/11/2023 11:00

Sample ID: 23E1969-07

Sample Matrix: Soil

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	7.7	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
Perfluoropentanoic acid (PFPeA)	ND	3.8	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
Perfluorohexanoic acid (PFHxA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
Perfluoroheptanoic acid (PFHpA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
Perfluorooctanoic acid (PFOA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
Perfluorononanoic acid (PFNA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
Perfluorodecanoic acid (PFDA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
Perfluoroundecanoic acid (PFUnA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
Perfluorododecanoic acid (PFDoA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
Perfluorotridecanoic acid (PFTrDA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
Perfluorotetradecanoic acid (PFTeDA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
Perfluorononanesulfonic acid (PFNS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
Perfluorodecanesulfonic acid (PFDS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
Perfluorododecanesulfonic acid (PFDoS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	7.7	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	7.7	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	7.7	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
Perfluorooctanesulfonamide (PFOSA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
N-MeFOSAA (NMeFOSAA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
N-EtFOSAA (NEtFOSAA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	19	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	19	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	7.7	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	7.7	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
9Cl-PF3ONS (F53B Minor)	ND	7.7	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
11Cl-PF3OUdS (F53B Major)	ND	7.7	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	19	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	96	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	96	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	3.8	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	3.8	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-01S-230511 | Sampled: 5/11/2023 11:00

Sample ID: 23E1969-07

Sample Matrix: Soil

SPLP - 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	3.8	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	3.8	ng/L	1		Draft Method 1633	6/8/23	6/12/23 16:54	DRL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	105	20-150		6/12/23 16:54
13C5-PFPeA	105	20-150		6/12/23 16:54
13C5-PFHxA	105	20-150		6/12/23 16:54
13C4-PFHpA	106	20-150		6/12/23 16:54
13C8-PFOA	106	20-150		6/12/23 16:54
13C9-PFNA	105	20-150		6/12/23 16:54
13C6-PFDA	102	20-150		6/12/23 16:54
13C7-PFUnA	98.0	20-150		6/12/23 16:54
13C2-PFDoA	94.6	20-150		6/12/23 16:54
13C2-PFTeDA	84.4	20-150		6/12/23 16:54
13C3-PFBS	106	20-150		6/12/23 16:54
13C3-PFHxS	104	20-150		6/12/23 16:54
13C8-PFOS	103	20-150		6/12/23 16:54
13C2-4:2FTS	81.5	20-150		6/12/23 16:54
13C2-6:2FTS	81.3	20-150		6/12/23 16:54
13C2-8:2FTS	78.6	20-150		6/12/23 16:54
13C8-PFOSA	94.1	20-150		6/12/23 16:54
D3-NMeFOSA	92.3	20-150		6/12/23 16:54
D5-NEtFOSA	89.6	20-150		6/12/23 16:54
D3-NMeFOSAA	79.6	20-150		6/12/23 16:54
D5-NEtFOSAA	79.5	20-150		6/12/23 16:54
D7-NMeFOSE	72.3	20-150		6/12/23 16:54
D9-NEtFOSE	54.8	20-150		6/12/23 16:54
13C3-HFPO-DA	110	20-150		6/12/23 16:54

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-01D-230511 | Sampled: 5/11/2023 11:10

Sample ID: 23E1969-08

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
Perfluoropentanoic acid (PFPeA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
Perfluorohexanoic acid (PFHxA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
Perfluorooctanoic acid (PFOA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
Perfluorononanoic acid (PFNA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
Perfluorodecanoic acid (PFDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
Perfluorooctanesulfonic acid (PFOS)	0.42	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	µg/kg dry	1	PF-18	Draft Method 1633	6/2/23	6/3/23 10:58	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	µg/kg dry	1	PF-18	Draft Method 1633	6/2/23	6/3/23 10:58	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	10	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	10	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-01D-230511 | Sampled: 5/11/2023 11:10

Sample ID: 23E1969-08

Sample Matrix: Soil

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	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 10:58	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	69.6		20-150		6/3/23 10:58
13C5-PFPeA	65.6		20-150		6/3/23 10:58
13C5-PFHxA	67.8		20-150		6/3/23 10:58
13C4-PFHpA	68.5		20-150		6/3/23 10:58
13C8-PFOA	69.9		20-150		6/3/23 10:58
13C9-PFNA	67.7		20-150		6/3/23 10:58
13C6-PFDA	67.2		20-150		6/3/23 10:58
13C7-PFUnA	69.5		20-150		6/3/23 10:58
13C2-PFDoA	65.6		20-150		6/3/23 10:58
13C2-PFTeDA	49.1		20-150		6/3/23 10:58
13C3-PFBS	72.8		20-150		6/3/23 10:58
13C3-PFHxS	67.7		20-150		6/3/23 10:58
13C8-PFOS	69.1		20-150		6/3/23 10:58
13C2-4:2FTS	68.1		20-150		6/3/23 10:58
13C2-6:2FTS	75.3		20-150		6/3/23 10:58
13C2-8:2FTS	82.6		20-150		6/3/23 10:58
13C8-PFOSA	59.3		20-150		6/3/23 10:58
D3-NMeFOSA	**19.4**	*	20-150	PF-18	6/3/23 10:58
D5-NEtFOSA	**11.5**	*	20-150	PF-18	6/3/23 10:58
D3-NMeFOSAA	68.5		20-150		6/3/23 10:58
D5-NEtFOSAA	72.7		20-150		6/3/23 10:58
D7-NMeFOSE	38.4		20-150		6/3/23 10:58
D9-NEtFOSE	35.3		20-150		6/3/23 10:58
13C3-HFPO-DA	64.6		20-150		6/3/23 10:58

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-01D-230511 | Sampled: 5/11/2023 11:10

Sample ID: 23E1969-08

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	67.0		% Wt	1	H-06	SM 2540G	5/23/23	5/23/23 8:15	ATP

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-01D-230511 | Sampled: 5/11/2023 11:10

Sample ID: 23E1969-08

Sample Matrix: Soil

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	7.4	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
Perfluoropentanoic acid (PFPeA)	ND	3.7	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
Perfluorohexanoic acid (PFHxA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
Perfluoroheptanoic acid (PFHpA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
Perfluorooctanoic acid (PFOA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
Perfluorononanoic acid (PFNA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
Perfluorodecanoic acid (PFDA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
Perfluoroundecanoic acid (PFUnA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
Perfluorododecanoic acid (PFDoA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
Perfluorotridecanoic acid (PFTrDA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
Perfluorotetradecanoic acid (PFTeDA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
Perfluorobutanesulfonic acid (PFBS)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
Perfluoropentanesulfonic acid (PFPeS)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
Perfluorohexanesulfonic acid (PFHxS)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
Perfluorooctanesulfonic acid (PFOS)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
Perfluorononanesulfonic acid (PFNS)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
Perfluorodecanesulfonic acid (PFDS)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
Perfluorododecanesulfonic acid (PFDoS)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	7.4	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	7.4	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	7.4	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
Perfluorooctanesulfonamide (PFOSA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
N-MeFOSAA (NMeFOSAA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
N-EtFOSAA (NEtFOSAA)	ND	1.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	18	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	18	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	7.4	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	7.4	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
9Cl-PF3ONS (F53B Minor)	ND	7.4	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
11Cl-PF3OUdS (F53B Major)	ND	7.4	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	18	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	92	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	92	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	3.7	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	3.7	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-01D-230511 | Sampled: 5/11/2023 11:10

Sample ID: 23E1969-08

Sample Matrix: Soil

SPLP - 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	3.7	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	3.7	ng/L	1		Draft Method 1633	6/8/23	6/9/23 17:53	DRL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	91.1	20-150		6/9/23 17:53
13C5-PFPeA	90.2	20-150		6/9/23 17:53
13C5-PFHxA	89.8	20-150		6/9/23 17:53
13C4-PFHpA	86.9	20-150		6/9/23 17:53
13C8-PFOA	85.5	20-150		6/9/23 17:53
13C9-PFNA	91.2	20-150		6/9/23 17:53
13C6-PFDA	84.9	20-150		6/9/23 17:53
13C7-PFUnA	81.5	20-150		6/9/23 17:53
13C2-PFDoA	77.6	20-150		6/9/23 17:53
13C2-PFTeDA	65.0	20-150		6/9/23 17:53
13C3-PFBS	92.6	20-150		6/9/23 17:53
13C3-PFHxS	90.3	20-150		6/9/23 17:53
13C8-PFOS	83.7	20-150		6/9/23 17:53
13C2-4:2FTS	76.7	20-150		6/9/23 17:53
13C2-6:2FTS	73.3	20-150		6/9/23 17:53
13C2-8:2FTS	68.6	20-150		6/9/23 17:53
13C8-PFOSA	79.1	20-150		6/9/23 17:53
D3-NMeFOSA	66.3	20-150		6/9/23 17:53
D5-NEtFOSA	66.4	20-150		6/9/23 17:53
D3-NMeFOSAA	68.4	20-150		6/9/23 17:53
D5-NEtFOSAA	65.2	20-150		6/9/23 17:53
D7-NMeFOSE	69.9	20-150		6/9/23 17:53
D9-NEtFOSE	65.1	20-150		6/9/23 17:53
13C3-HFPO-DA	93.0	20-150		6/9/23 17:53

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-05S-230511 | Sampled: 5/11/2023 11:40

Sample ID: 23E1969-09

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
Perfluoropentanoic acid (PFPeA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
Perfluorohexanoic acid (PFHxA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
Perfluorooctanoic acid (PFOA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
Perfluorononanoic acid (PFNA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
Perfluorodecanoic acid (PFDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
Perfluorooctanesulfonic acid (PFOS)	0.26	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	10	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	10	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-05S-230511 | Sampled: 5/11/2023 11:40

Sample ID: 23E1969-09

Sample Matrix: Soil

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	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:13	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	70.2	20-150		6/3/23 11:13
13C5-PFPeA	67.2	20-150		6/3/23 11:13
13C5-PFHxA	67.5	20-150		6/3/23 11:13
13C4-PFHpA	70.2	20-150		6/3/23 11:13
13C8-PFOA	68.5	20-150		6/3/23 11:13
13C9-PFNA	67.1	20-150		6/3/23 11:13
13C6-PFDA	65.6	20-150		6/3/23 11:13
13C7-PFUnA	70.0	20-150		6/3/23 11:13
13C2-PFDoA	64.6	20-150		6/3/23 11:13
13C2-PFTeDA	52.5	20-150		6/3/23 11:13
13C3-PFBS	71.8	20-150		6/3/23 11:13
13C3-PFHxS	67.0	20-150		6/3/23 11:13
13C8-PFOS	64.5	20-150		6/3/23 11:13
13C2-4:2FTS	75.2	20-150		6/3/23 11:13
13C2-6:2FTS	82.3	20-150		6/3/23 11:13
13C2-8:2FTS	80.5	20-150		6/3/23 11:13
13C8-PFOSA	60.4	20-150		6/3/23 11:13
D3-NMeFOSA	29.4	20-150		6/3/23 11:13
D5-NEtFOSA	22.5	20-150		6/3/23 11:13
D3-NMeFOSAA	68.6	20-150		6/3/23 11:13
D5-NEtFOSAA	72.5	20-150		6/3/23 11:13
D7-NMeFOSE	46.0	20-150		6/3/23 11:13
D9-NEtFOSE	41.8	20-150		6/3/23 11:13
13C3-HFPO-DA	66.2	20-150		6/3/23 11:13

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-05S-230511 | Sampled: 5/11/2023 11:40

Sample ID: 23E1969-09

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	71.8		% Wt	1	H-06	SM 2540G	5/23/23	5/23/23 8:15	ATP

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-05S-230511 | Sampled: 5/11/2023 11:40

Sample ID: 23E1969-09

Sample Matrix: Soil

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	7.6	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
Perfluoropentanoic acid (PFPeA)	ND	3.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
Perfluorohexanoic acid (PFHxA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
Perfluoroheptanoic acid (PFHpA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
Perfluorooctanoic acid (PFOA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
Perfluorononanoic acid (PFNA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
Perfluorodecanoic acid (PFDA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
Perfluoroundecanoic acid (PFUnA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
Perfluorododecanoic acid (PFDoA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
Perfluorotridecanoic acid (PFTrDA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
Perfluorotetradecanoic acid (PFTeDA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
Perfluorononanesulfonic acid (PFNS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
Perfluorodecanesulfonic acid (PFDS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
Perfluorododecanesulfonic acid (PFDoS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	7.6	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	7.6	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	7.6	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
Perfluorooctanesulfonamide (PFOSA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
N-MeFOSAA (NMeFOSAA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
N-EtFOSAA (NEtFOSAA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	19	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	19	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	7.6	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	7.6	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
9Cl-PF3ONS (F53B Minor)	ND	7.6	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
11Cl-PF3OUdS (F53B Major)	ND	7.6	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	19	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	95	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	95	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	3.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	3.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-05S-230511 | Sampled: 5/11/2023 11:40

Sample ID: 23E1969-09

Sample Matrix: Soil

SPLP - 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	3.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	3.8	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:08	DRL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	82.9	20-150		6/9/23 18:08
13C5-PFPeA	81.9	20-150		6/9/23 18:08
13C5-PFHxA	79.6	20-150		6/9/23 18:08
13C4-PFHpA	78.9	20-150		6/9/23 18:08
13C8-PFOA	80.2	20-150		6/9/23 18:08
13C9-PFNA	78.6	20-150		6/9/23 18:08
13C6-PFDA	78.9	20-150		6/9/23 18:08
13C7-PFUnA	78.0	20-150		6/9/23 18:08
13C2-PFDoA	72.0	20-150		6/9/23 18:08
13C2-PFTeDA	64.3	20-150		6/9/23 18:08
13C3-PFBS	81.8	20-150		6/9/23 18:08
13C3-PFHxS	79.3	20-150		6/9/23 18:08
13C8-PFOS	79.3	20-150		6/9/23 18:08
13C2-4:2FTS	59.6	20-150		6/9/23 18:08
13C2-6:2FTS	60.9	20-150		6/9/23 18:08
13C2-8:2FTS	63.8	20-150		6/9/23 18:08
13C8-PFOSA	68.2	20-150		6/9/23 18:08
D3-NMeFOSA	58.9	20-150		6/9/23 18:08
D5-NEtFOSA	59.2	20-150		6/9/23 18:08
D3-NMeFOSAA	47.7	20-150		6/9/23 18:08
D5-NEtFOSAA	48.8	20-150		6/9/23 18:08
D7-NMeFOSE	62.1	20-150		6/9/23 18:08
D9-NEtFOSE	56.4	20-150		6/9/23 18:08
13C3-HFPO-DA	83.4	20-150		6/9/23 18:08

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-05D-230511 | Sampled: 5/11/2023 11:50

Sample ID: 23E1969-10

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
Perfluoropentanoic acid (PFPeA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
Perfluorohexanoic acid (PFHxA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
Perfluorooctanoic acid (PFOA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
Perfluorononanoic acid (PFNA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
Perfluorodecanoic acid (PFDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
Perfluorooctanesulfonic acid (PFOS)	0.35	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	µg/kg dry	1	PF-18	Draft Method 1633	6/2/23	6/3/23 11:29	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	µg/kg dry	1	PF-18	Draft Method 1633	6/2/23	6/3/23 11:29	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	10	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	10	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-05D-230511 | Sampled: 5/11/2023 11:50

Sample ID: 23E1969-10

Sample Matrix: Soil

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	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:29	AMS

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
13C4-PFBA	72.0		20-150		6/3/23 11:29
13C5-PFPeA	69.2		20-150		6/3/23 11:29
13C5-PFHxA	71.3		20-150		6/3/23 11:29
13C4-PFHpA	73.4		20-150		6/3/23 11:29
13C8-PFOA	72.4		20-150		6/3/23 11:29
13C9-PFNA	69.7		20-150		6/3/23 11:29
13C6-PFDA	68.3		20-150		6/3/23 11:29
13C7-PFUnA	72.2		20-150		6/3/23 11:29
13C2-PFDoA	68.2		20-150		6/3/23 11:29
13C2-PFTeDA	55.4		20-150		6/3/23 11:29
13C3-PFBS	77.3		20-150		6/3/23 11:29
13C3-PFHxS	72.7		20-150		6/3/23 11:29
13C8-PFOS	70.6		20-150		6/3/23 11:29
13C2-4:2FTS	79.5		20-150		6/3/23 11:29
13C2-6:2FTS	90.6		20-150		6/3/23 11:29
13C2-8:2FTS	93.6		20-150		6/3/23 11:29
13C8-PFOSA	62.6		20-150		6/3/23 11:29
D3-NMeFOSA	**14.3**	*	20-150	PF-18	6/3/23 11:29
D5-NEtFOSA	**7.70**	*	20-150	PF-18	6/3/23 11:29
D3-NMeFOSAA	71.0		20-150		6/3/23 11:29
D5-NEtFOSAA	74.6		20-150		6/3/23 11:29
D7-NMeFOSE	36.6		20-150		6/3/23 11:29
D9-NEtFOSE	31.9		20-150		6/3/23 11:29
13C3-HFPO-DA	71.4		20-150		6/3/23 11:29

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-05D-230511 | Sampled: 5/11/2023 11:50

Sample ID: 23E1969-10

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	68.5		% Wt	1	H-06	SM 2540G	5/23/23	5/23/23 8:15	ATP

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-05D-230511 | Sampled: 5/11/2023 11:50

Sample ID: 23E1969-10

Sample Matrix: Soil

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	7.7	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
Perfluoropentanoic acid (PFPeA)	ND	3.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
Perfluorohexanoic acid (PFHxA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
Perfluoroheptanoic acid (PFHpA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
Perfluorooctanoic acid (PFOA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
Perfluorononanoic acid (PFNA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
Perfluorodecanoic acid (PFDA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
Perfluoroundecanoic acid (PFUnA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
Perfluorododecanoic acid (PFDoA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
Perfluorotridecanoic acid (PFTrDA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
Perfluorotetradecanoic acid (PFTeDA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
Perfluorobutanesulfonic acid (PFBS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
Perfluoropentanesulfonic acid (PFPeS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
Perfluorohexanesulfonic acid (PFHxS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
Perfluoroheptanesulfonic acid (PFHpS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
Perfluorooctanesulfonic acid (PFOS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
Perfluorononanesulfonic acid (PFNS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
Perfluorodecanesulfonic acid (PFDS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
Perfluorododecanesulfonic acid (PFDoS)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	7.7	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	7.7	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	7.7	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
Perfluorooctanesulfonamide (PFOSA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
N-MeFOSAA (NMeFOSAA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
N-EtFOSAA (NEtFOSAA)	ND	1.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	19	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	19	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	7.7	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	7.7	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
9Cl-PF3ONS (F53B Minor)	ND	7.7	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
11Cl-PF3OUdS (F53B Major)	ND	7.7	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	19	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	96	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	96	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	3.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	3.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: UDS 4.26-05D-230511 | Sampled: 5/11/2023 11:50

Sample ID: 23E1969-10

Sample Matrix: Soil

SPLP - 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	3.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	3.9	ng/L	1		Draft Method 1633	6/8/23	6/9/23 18:24	DRL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	88.3	20-150		6/9/23 18:24
13C5-PFPeA	87.9	20-150		6/9/23 18:24
13C5-PFHxA	87.1	20-150		6/9/23 18:24
13C4-PFHpA	85.0	20-150		6/9/23 18:24
13C8-PFOA	85.9	20-150		6/9/23 18:24
13C9-PFNA	85.0	20-150		6/9/23 18:24
13C6-PFDA	83.0	20-150		6/9/23 18:24
13C7-PFUnA	71.1	20-150		6/9/23 18:24
13C2-PFDoA	66.5	20-150		6/9/23 18:24
13C2-PFTeDA	61.8	20-150		6/9/23 18:24
13C3-PFBS	91.7	20-150		6/9/23 18:24
13C3-PFHxS	89.4	20-150		6/9/23 18:24
13C8-PFOS	82.3	20-150		6/9/23 18:24
13C2-4:2FTS	74.4	20-150		6/9/23 18:24
13C2-6:2FTS	68.6	20-150		6/9/23 18:24
13C2-8:2FTS	63.5	20-150		6/9/23 18:24
13C8-PFOSA	67.0	20-150		6/9/23 18:24
D3-NMeFOSA	52.8	20-150		6/9/23 18:24
D5-NEtFOSA	53.5	20-150		6/9/23 18:24
D3-NMeFOSAA	59.5	20-150		6/9/23 18:24
D5-NEtFOSAA	53.7	20-150		6/9/23 18:24
D7-NMeFOSE	59.6	20-150		6/9/23 18:24
D9-NEtFOSE	53.4	20-150		6/9/23 18:24
13C3-HFPO-DA	86.9	20-150		6/9/23 18:24

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: SC-01-230511 | Sampled: 5/11/2023 12:20

Sample ID: 23E1969-11

Sample Matrix: Soil

Semivolatile Organic Compounds by - LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
Perfluoropentanoic acid (PFPeA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
Perfluorohexanoic acid (PFHxA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
Perfluoroheptanoic acid (PFHpA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
Perfluorooctanoic acid (PFOA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
Perfluorononanoic acid (PFNA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
Perfluorodecanoic acid (PFDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
Perfluoroundecanoic acid (PFUnA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
Perfluorododecanoic acid (PFDoA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
Perfluorooctanesulfonic acid (PFOS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
Perfluorononanesulfonic acid (PFNS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
N-MeFOSAA (NMeFOSAA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
N-EtFOSAA (NEtFOSAA)	ND	0.20	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
9Cl-PF3ONS (F53B Minor)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
11Cl-PF3OUdS (F53B Major)	ND	0.80	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	10	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	10	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: SC-01-230511 | Sampled: 5/11/2023 12:20

Sample ID: 23E1969-11

Sample Matrix: Soil

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	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	µg/kg dry	1		Draft Method 1633	6/2/23	6/3/23 11:45	AMS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	70.3	20-150		6/3/23 11:45
13C5-PFPeA	66.2	20-150		6/3/23 11:45
13C5-PFHxA	68.2	20-150		6/3/23 11:45
13C4-PFHpA	70.3	20-150		6/3/23 11:45
13C8-PFOA	70.8	20-150		6/3/23 11:45
13C9-PFNA	68.1	20-150		6/3/23 11:45
13C6-PFDA	68.8	20-150		6/3/23 11:45
13C7-PFUnA	69.5	20-150		6/3/23 11:45
13C2-PFDoA	66.2	20-150		6/3/23 11:45
13C2-PFTeDA	62.9	20-150		6/3/23 11:45
13C3-PFBS	75.3	20-150		6/3/23 11:45
13C3-PFHxS	70.3	20-150		6/3/23 11:45
13C8-PFOS	65.4	20-150		6/3/23 11:45
13C2-4:2FTS	67.0	20-150		6/3/23 11:45
13C2-6:2FTS	70.3	20-150		6/3/23 11:45
13C2-8:2FTS	70.3	20-150		6/3/23 11:45
13C8-PFOSA	60.0	20-150		6/3/23 11:45
D3-NMeFOSA	36.8	20-150		6/3/23 11:45
D5-NEtFOSA	32.7	20-150		6/3/23 11:45
D3-NMeFOSAA	67.8	20-150		6/3/23 11:45
D5-NEtFOSAA	69.5	20-150		6/3/23 11:45
D7-NMeFOSE	51.4	20-150		6/3/23 11:45
D9-NEtFOSE	50.6	20-150		6/3/23 11:45
13C3-HFPO-DA	68.3	20-150		6/3/23 11:45

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: SC-01-230511 | Sampled: 5/11/2023 12:20

Sample ID: 23E1969-11

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	90.1		% Wt	1	H-06	SM 2540G	5/23/23	5/23/23 8:15	ATP

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: SC-01-230511 | Sampled: 5/11/2023 12:20

Sample ID: 23E1969-11

Sample Matrix: Soil

SPLP - Semivolatile Organic Compounds by LC/MS-MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Perfluorobutanoic acid (PFBA)	ND	8.1	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
Perfluoropentanoic acid (PFPeA)	ND	4.1	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
Perfluorohexanoic acid (PFHxA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
Perfluoroheptanoic acid (PFHpA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
Perfluorooctanoic acid (PFOA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
Perfluorononanoic acid (PFNA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
Perfluorodecanoic acid (PFDA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
Perfluoroundecanoic acid (PFUnA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
Perfluorododecanoic acid (PFDoA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
Perfluorotridecanoic acid (PFTrDA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
Perfluorotetradecanoic acid (PFTeDA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
Perfluorobutanesulfonic acid (PFBS)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
Perfluoropentanesulfonic acid (PFPeS)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
Perfluorohexanesulfonic acid (PFHxS)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
Perfluoroheptanesulfonic acid (PFHpS)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
Perfluorooctanesulfonic acid (PFOS)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
Perfluorononanesulfonic acid (PFNS)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
Perfluorodecanesulfonic acid (PFDS)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
Perfluorododecanesulfonic acid (PFDoS)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	8.1	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	8.1	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	8.1	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
Perfluorooctanesulfonamide (PFOSA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
N-MeFOSAA (NMeFOSAA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
N-EtFOSAA (NEtFOSAA)	ND	2.0	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	20	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	20	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	8.1	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	8.1	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
9Cl-PF3ONS (F53B Minor)	ND	8.1	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
11Cl-PF3OUdS (F53B Major)	ND	8.1	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	20	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	100	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	100	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	4.1	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	4.1	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1969

Date Received: 5/13/2023

Field Sample #: SC-01-230511 | Sampled: 5/11/2023 12:20

Sample ID: 23E1969-11

Sample Matrix: Soil

SPLP - 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	4.1	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	4.1	ng/L	1		Draft Method 1633	6/8/23	6/9/23 19:11	DRL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
13C4-PFBA	84.1	20-150		6/9/23 19:11
13C5-PFPeA	82.3	20-150		6/9/23 19:11
13C5-PFHxA	81.1	20-150		6/9/23 19:11
13C4-PFHpA	80.2	20-150		6/9/23 19:11
13C8-PFOA	77.5	20-150		6/9/23 19:11
13C9-PFNA	80.6	20-150		6/9/23 19:11
13C6-PFDA	84.9	20-150		6/9/23 19:11
13C7-PFUnA	85.9	20-150		6/9/23 19:11
13C2-PFDoA	83.3	20-150		6/9/23 19:11
13C2-PFTeDA	75.4	20-150		6/9/23 19:11
13C3-PFBS	84.6	20-150		6/9/23 19:11
13C3-PFHxS	79.6	20-150		6/9/23 19:11
13C8-PFOS	82.5	20-150		6/9/23 19:11
13C2-4:2FTS	70.7	20-150		6/9/23 19:11
13C2-6:2FTS	69.8	20-150		6/9/23 19:11
13C2-8:2FTS	68.0	20-150		6/9/23 19:11
13C8-PFOSA	78.8	20-150		6/9/23 19:11
D3-NMeFOSA	69.9	20-150		6/9/23 19:11
D5-NEtFOSA	69.1	20-150		6/9/23 19:11
D3-NMeFOSAA	73.2	20-150		6/9/23 19:11
D5-NEtFOSAA	73.2	20-150		6/9/23 19:11
D7-NMeFOSE	75.2	20-150		6/9/23 19:11
D9-NEtFOSE	73.4	20-150		6/9/23 19:11
13C3-HFPO-DA	82.9	20-150		6/9/23 19:11

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Sample Extraction Data

Prep Method:Draft Method 1633 **Analytical Method:Draft Method 1633**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23E1969-01RE1 [UDS 4.26-03S-230511]	B341895	8.04	5.00	06/02/23
23E1969-02RE1 [UDS 4.26-03D-230511]	B341895	7.30	5.00	06/02/23
23E1969-03RE1 [UDS 4.26-04S-230511]	B341895	7.50	5.00	06/02/23
23E1969-04RE1 [UDS 4.26-04D-230511]	B341895	7.76	5.00	06/02/23
23E1969-05RE1 [UDS 4.26-02S-230511]	B341895	6.56	5.00	06/02/23
23E1969-06RE1 [UDS 4.26-02D-230511]	B341895	6.60	5.00	06/02/23
23E1969-07RE1 [UDS 4.26-01S-230511]	B341895	7.36	5.00	06/02/23
23E1969-08RE1 [UDS 4.26-01D-230511]	B341895	7.49	5.00	06/02/23
23E1969-09RE1 [UDS 4.26-05S-230511]	B341895	6.94	5.00	06/02/23
23E1969-10RE1 [UDS 4.26-05D-230511]	B341895	7.33	5.00	06/02/23
23E1969-11RE1 [SC-01-230511]	B341895	5.52	5.00	06/02/23

Prep Method:Draft Method 1633 **Analytical Method:Draft Method 1633** **Leachates were extracted on 5/25/2023 per SW-846 1312 in Batch B341348**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
23E1969-01 [UDS 4.26-03S-230511]	B341937	271	5.00	06/08/23
23E1969-02 [UDS 4.26-03D-230511]	B341937	252	5.00	06/08/23
23E1969-03 [UDS 4.26-04S-230511]	B341937	264	5.00	06/08/23
23E1969-04 [UDS 4.26-04D-230511]	B341937	268	5.00	06/08/23
23E1969-05 [UDS 4.26-02S-230511]	B341937	247	5.00	06/08/23
23E1969-06 [UDS 4.26-02D-230511]	B341937	278	5.00	06/08/23
23E1969-07 [UDS 4.26-01S-230511]	B341937	261	5.00	06/08/23
23E1969-08 [UDS 4.26-01D-230511]	B341937	271	5.00	06/08/23
23E1969-09 [UDS 4.26-05S-230511]	B341937	263	5.00	06/08/23
23E1969-10 [UDS 4.26-05D-230511]	B341937	260	5.00	06/08/23
23E1969-11 [SC-01-230511]	B341937	246	5.00	06/08/23

Prep Method:% Solids **Analytical Method:SM 2540G**

Lab Number [Field ID]	Batch	Date
23E1969-01 [UDS 4.26-03S-230511]	B341070	05/23/23
23E1969-02 [UDS 4.26-03D-230511]	B341070	05/23/23
23E1969-03 [UDS 4.26-04S-230511]	B341070	05/23/23
23E1969-04 [UDS 4.26-04D-230511]	B341070	05/23/23
23E1969-05 [UDS 4.26-02S-230511]	B341070	05/23/23
23E1969-06 [UDS 4.26-02D-230511]	B341070	05/23/23
23E1969-07 [UDS 4.26-01S-230511]	B341070	05/23/23
23E1969-08 [UDS 4.26-01D-230511]	B341070	05/23/23
23E1969-09 [UDS 4.26-05S-230511]	B341070	05/23/23
23E1969-10 [UDS 4.26-05D-230511]	B341070	05/23/23
23E1969-11 [SC-01-230511]	B341070	05/23/23

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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 B341895 - Draft Method 1633										
Blank (B341895-BLK1)				Prepared: 06/02/23 Analyzed: 06/03/23						
Perfluorobutanoic acid (PFBA)	ND	0.80	µg/kg wet							
Perfluoropentanoic acid (PFPeA)	ND	0.40	µg/kg wet							
Perfluorohexanoic acid (PFHxA)	ND	0.20	µg/kg wet							
Perfluoroheptanoic acid (PFHpA)	ND	0.20	µg/kg wet							
Perfluorooctanoic acid (PFOA)	ND	0.20	µg/kg wet							
Perfluorononanoic acid (PFNA)	ND	0.20	µg/kg wet							
Perfluorodecanoic acid (PFDA)	ND	0.20	µg/kg wet							
Perfluoroundecanoic acid (PFUnA)	ND	0.20	µg/kg wet							
Perfluorododecanoic acid (PFDoA)	ND	0.20	µg/kg wet							
Perfluorotridecanoic acid (PFTrDA)	ND	0.20	µg/kg wet							
Perfluorotetradecanoic acid (PFTeDA)	ND	0.20	µg/kg wet							
Perfluorobutanesulfonic acid (PFBS)	ND	0.20	µg/kg wet							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.20	µg/kg wet							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.20	µg/kg wet							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.20	µg/kg wet							
Perfluorooctanesulfonic acid (PFOS)	ND	0.20	µg/kg wet							
Perfluorononanesulfonic acid (PFNS)	ND	0.20	µg/kg wet							
Perfluorodecanesulfonic acid (PFDS)	ND	0.20	µg/kg wet							
Perfluorododecanesulfonic acid (PFDoS)	ND	0.20	µg/kg wet							
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	0.80	µg/kg wet							
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	0.80	µg/kg wet							
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	0.80	µg/kg wet							
Perfluorooctanesulfonamide (PFOSA)	ND	0.20	µg/kg wet							
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.20	µg/kg wet							
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.20	µg/kg wet							
N-MeFOSAA (NMeFOSAA)	ND	0.20	µg/kg wet							
N-EtFOSAA (NEtFOSAA)	ND	0.20	µg/kg wet							
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	2.0	µg/kg wet							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	2.0	µg/kg wet							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	0.80	µg/kg wet							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	0.80	µg/kg wet							
9Cl-PF3ONS (F53B Minor)	ND	0.80	µg/kg wet							
11Cl-PF3OUdS (F53B Major)	ND	0.80	µg/kg wet							
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	2.0	µg/kg wet							
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	10	µg/kg wet							
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	10	µg/kg wet							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	0.40	µg/kg wet							
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	0.40	µg/kg wet							
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	0.40	µg/kg wet							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	0.40	µg/kg wet							
Surrogate: 13C4-PFBA	*6.98*		µg/kg wet	9.96		70.1	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
Batch B341895 - Draft Method 1633										
Blank (B341895-BLK1)				Prepared: 06/02/23 Analyzed: 06/03/23						
Surrogate: 13C5-PFPeA	*3.39*		µg/kg wet	4.98		68.0	20-150			
Surrogate: 13C5-PFHxA	*1.74*		µg/kg wet	2.49		69.7	20-150			
Surrogate: 13C4-PFHpA	*1.80*		µg/kg wet	2.49		72.4	20-150			
Surrogate: 13C8-PFOA	*1.69*		µg/kg wet	2.49		67.7	20-150			
Surrogate: 13C9-PFNA	*0.813*		µg/kg wet	1.25		65.3	20-150			
Surrogate: 13C6-PFDA	*0.822*		µg/kg wet	1.25		66.0	20-150			
Surrogate: 13C7-PFUnA	*0.830*		µg/kg wet	1.25		66.6	20-150			
Surrogate: 13C2-PFDoA	*0.810*		µg/kg wet	1.25		65.0	20-150			
Surrogate: 13C2-PFTeDA	*0.768*		µg/kg wet	1.25		61.6	20-150			
Surrogate: 13C3-PFBS	*1.84*		µg/kg wet	2.49		74.0	20-150			
Surrogate: 13C3-PFHxS	*1.66*		µg/kg wet	2.49		66.7	20-150			
Surrogate: 13C8-PFOS	*1.58*		µg/kg wet	2.49		63.4	20-150			
Surrogate: 13C2-4:2FTS	*3.14*		µg/kg wet	4.98		63.1	20-150			
Surrogate: 13C2-6:2FTS	*3.38*		µg/kg wet	4.98		67.9	20-150			
Surrogate: 13C2-8:2FTS	*3.24*		µg/kg wet	4.98		65.1	20-150			
Surrogate: 13C8-PFOSA	*1.57*		µg/kg wet	2.49		62.9	20-150			
Surrogate: D3-NMeFOSA	*1.01*		µg/kg wet	2.49		40.7	20-150			
Surrogate: D5-NEtFOSA	*0.866*		µg/kg wet	2.49		34.7	20-150			
Surrogate: D3-NMeFOSAA	*3.32*		µg/kg wet	4.98		66.5	20-150			
Surrogate: D5-NEtFOSAA	*3.41*		µg/kg wet	4.98		68.5	20-150			
Surrogate: D7-NMeFOSE	*12.2*		µg/kg wet	24.9		49.0	20-150			
Surrogate: D9-NEtFOSE	*11.3*		µg/kg wet	24.9		45.2	20-150			
Surrogate: 13C3-HFPO-DA	*6.80*		µg/kg wet	9.96		68.2	20-150			
LCS (B341895-BS1)				Prepared: 06/02/23 Analyzed: 06/03/23						
Perfluorobutanoic acid (PFBA)	1.01	0.79	µg/kg wet	0.794		128	40-150			
Perfluoropentanoic acid (PFPeA)	0.466	0.40	µg/kg wet	0.397		117	40-150			
Perfluorohexanoic acid (PFHxA)	0.228	0.20	µg/kg wet	0.198		115	40-150			
Perfluoroheptanoic acid (PFHpA)	0.224	0.20	µg/kg wet	0.198		113	40-150			
Perfluorooctanoic acid (PFOA)	0.233	0.20	µg/kg wet	0.198		118	40-150			
Perfluorononanoic acid (PFNA)	0.232	0.20	µg/kg wet	0.198		117	40-150			
Perfluorodecanoic acid (PFDA)	0.227	0.20	µg/kg wet	0.198		115	40-150			
Perfluoroundecanoic acid (PFUnA)	0.218	0.20	µg/kg wet	0.198		110	40-150			
Perfluorododecanoic acid (PFDoA)	0.216	0.20	µg/kg wet	0.198		109	40-150			
Perfluorotridecanoic acid (PFTrDA)	0.206	0.20	µg/kg wet	0.198		104	40-150			
Perfluorotetradecanoic acid (PFTeDA)	0.226	0.20	µg/kg wet	0.198		114	40-150			
Perfluorobutanesulfonic acid (PFBS)	0.195	0.20	µg/kg wet	0.176		111	40-150			
Perfluoropentanesulfonic acid (PFPeS)	0.213	0.20	µg/kg wet	0.187		114	40-150			
Perfluorohexanesulfonic acid (PFHxS)	0.209	0.20	µg/kg wet	0.182		115	40-150			
Perfluoroheptanesulfonic acid (PFHpS)	0.214	0.20	µg/kg wet	0.189		113	40-150			
Perfluorooctanesulfonic acid (PFOS)	0.225	0.20	µg/kg wet	0.184		122	40-150			
Perfluorononanesulfonic acid (PFNS)	0.246	0.20	µg/kg wet	0.191		129	40-150			
Perfluorodecanesulfonic acid (PFDS)	0.193	0.20	µg/kg wet	0.192		101	40-150			
Perfluorododecanesulfonic acid (PFDoS)	0.200	0.20	µg/kg wet	0.192		104	40-150			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	0.864	0.79	µg/kg wet	0.744		116	40-150			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	0.858	0.79	µg/kg wet	0.754		114	40-150			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	0.867	0.79	µg/kg wet	0.764		113	40-150			
Perfluorooctanesulfonamide (PFOSA)	0.230	0.20	µg/kg wet	0.198		116	40-150			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	0.224	0.20	µg/kg wet	0.198		113	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 B341895 - Draft Method 1633										
LCS (B341895-BS1)				Prepared: 06/02/23 Analyzed: 06/03/23						
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	0.213	0.20	µg/kg wet	0.198		107	40-150			
N-MeFOSAA (NMeFOSAA)	0.253	0.20	µg/kg wet	0.198		127	40-150			
N-EtFOSAA (NEtFOSAA)	0.208	0.20	µg/kg wet	0.198		105	40-150			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	2.07	2.0	µg/kg wet	1.98		104	40-150			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	2.22	2.0	µg/kg wet	1.98		112	40-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	0.791	0.79	µg/kg wet	0.794		99.6	40-150			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	0.777	0.79	µg/kg wet	0.749		104	40-150			
9Cl-PF3ONS (F53B Minor)	0.716	0.79	µg/kg wet	0.744		96.3	40-150			
11Cl-PF3OUdS (F53B Major)	0.707	0.79	µg/kg wet	0.749		94.4	40-150			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	1.63	2.0	µg/kg wet	1.98		82.1	40-150			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	8.31	9.9	µg/kg wet	9.92		83.7	40-150			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	8.22	9.9	µg/kg wet	9.92		82.8	40-150			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	0.325	0.40	µg/kg wet	0.353		92.0	40-150			
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.373	0.40	µg/kg wet	0.397		93.9	40-150			
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.384	0.40	µg/kg wet	0.397		96.8	40-150			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	0.364	0.40	µg/kg wet	0.397		91.8	40-150			
Surrogate: 13C4-PFBA	*7.15*		µg/kg wet	9.92		72.1	20-150			
Surrogate: 13C5-PFPeA	*3.41*		µg/kg wet	4.96		68.8	20-150			
Surrogate: 13C5-PFHxA	*1.73*		µg/kg wet	2.48		69.8	20-150			
Surrogate: 13C4-PFHpA	*1.79*		µg/kg wet	2.48		72.1	20-150			
Surrogate: 13C8-PFOA	*1.75*		µg/kg wet	2.48		70.5	20-150			
Surrogate: 13C9-PFNA	*0.844*		µg/kg wet	1.24		68.0	20-150			
Surrogate: 13C6-PFDA	*0.864*		µg/kg wet	1.24		69.7	20-150			
Surrogate: 13C7-PFUnA	*0.919*		µg/kg wet	1.24		74.1	20-150			
Surrogate: 13C2-PFDoA	*0.881*		µg/kg wet	1.24		71.0	20-150			
Surrogate: 13C2-PFTeDA	*0.820*		µg/kg wet	1.24		66.1	20-150			
Surrogate: 13C3-PFBS	*1.91*		µg/kg wet	2.48		77.1	20-150			
Surrogate: 13C3-PFHxS	*1.78*		µg/kg wet	2.48		71.7	20-150			
Surrogate: 13C8-PFOS	*1.73*		µg/kg wet	2.48		69.6	20-150			
Surrogate: 13C2-4:2FTS	*3.26*		µg/kg wet	4.96		65.8	20-150			
Surrogate: 13C2-6:2FTS	*3.42*		µg/kg wet	4.96		69.0	20-150			
Surrogate: 13C2-8:2FTS	*3.50*		µg/kg wet	4.96		70.5	20-150			
Surrogate: 13C8-PFOSA	*1.65*		µg/kg wet	2.48		66.6	20-150			
Surrogate: D3-NMeFOSA	*1.29*		µg/kg wet	2.48		51.8	20-150			
Surrogate: D5-NEtFOSA	*1.26*		µg/kg wet	2.48		50.8	20-150			
Surrogate: D3-NMeFOSAA	*3.60*		µg/kg wet	4.96		72.6	20-150			
Surrogate: D5-NEtFOSAA	*3.60*		µg/kg wet	4.96		72.5	20-150			
Surrogate: D7-NMeFOSE	*14.2*		µg/kg wet	24.8		57.4	20-150			
Surrogate: D9-NEtFOSE	*13.3*		µg/kg wet	24.8		53.7	20-150			
Surrogate: 13C3-HFPO-DA	*6.78*		µg/kg wet	9.92		68.3	20-150			
LCS (B341895-BS2)				Prepared: 06/02/23 Analyzed: 06/03/23						
Perfluorobutanoic acid (PFBA)	9.13	0.80	µg/kg wet	9.58		95.2	40-150			
Perfluoropentanoic acid (PFPeA)	4.51	0.40	µg/kg wet	4.79		94.0	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 B341895 - Draft Method 1633										
LCS (B341895-BS2)				Prepared: 06/02/23 Analyzed: 06/03/23						
Perfluorohexanoic acid (PFHxA)	2.21	0.20	µg/kg wet	2.40		92.3	40-150			
Perfluoroheptanoic acid (PFHpA)	2.17	0.20	µg/kg wet	2.40		90.5	40-150			
Perfluorooctanoic acid (PFOA)	2.26	0.20	µg/kg wet	2.40		94.4	40-150			
Perfluorononanoic acid (PFNA)	2.31	0.20	µg/kg wet	2.40		96.3	40-150			
Perfluorodecanoic acid (PFDA)	2.27	0.20	µg/kg wet	2.40		94.9	40-150			
Perfluoroundecanoic acid (PFUnA)	2.31	0.20	µg/kg wet	2.40		96.3	40-150			
Perfluorododecanoic acid (PFDoA)	2.32	0.20	µg/kg wet	2.40		96.9	40-150			
Perfluorotridecanoic acid (PFTrDA)	2.36	0.20	µg/kg wet	2.40		98.7	40-150			
Perfluorotetradecanoic acid (PFTeDA)	2.29	0.20	µg/kg wet	2.40		95.5	40-150			
Perfluorobutanesulfonic acid (PFBS)	1.88	0.20	µg/kg wet	2.13		88.4	40-150			
Perfluoropentanesulfonic acid (PFPeS)	2.15	0.20	µg/kg wet	2.25		95.3	40-150			
Perfluorohexanesulfonic acid (PFHxS)	1.96	0.20	µg/kg wet	2.19		89.2	40-150			
Perfluoroheptanesulfonic acid (PFHpS)	2.07	0.20	µg/kg wet	2.28		90.9	40-150			
Perfluorooctanesulfonic acid (PFOS)	1.99	0.20	µg/kg wet	2.22		89.8	40-150			
Perfluorononanesulfonic acid (PFNS)	2.22	0.20	µg/kg wet	2.31		96.3	40-150			
Perfluorodecanesulfonic acid (PFDS)	2.08	0.20	µg/kg wet	2.31		89.9	40-150			
Perfluorododecanesulfonic acid (PFDoS)	2.00	0.20	µg/kg wet	2.32		86.2	40-150			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	8.89	0.80	µg/kg wet	8.99		98.9	40-150			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	8.54	0.80	µg/kg wet	9.11		93.8	40-150			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	8.72	0.80	µg/kg wet	9.23		94.6	40-150			
Perfluorooctanesulfonamide (PFOSA)	2.22	0.20	µg/kg wet	2.40		92.5	40-150			
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	2.19	0.20	µg/kg wet	2.40		91.3	40-150			
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	2.23	0.20	µg/kg wet	2.40		93.1	40-150			
N-MeFOSAA (NMeFOSAA)	2.34	0.20	µg/kg wet	2.40		97.7	40-150			
N-EtFOSAA (NEtFOSAA)	2.16	0.20	µg/kg wet	2.40		90.3	40-150			
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	22.4	2.0	µg/kg wet	24.0		93.7	40-150			
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	23.2	2.0	µg/kg wet	24.0		96.9	40-150			
Hexafluoropropylene oxide dimer acid (HFPO-DA)	9.83	0.80	µg/kg wet	9.58		103	40-150			
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	9.18	0.80	µg/kg wet	9.05		102	40-150			
9Cl-PF3ONS (F53B Minor)	8.44	0.80	µg/kg wet	8.99		94.0	40-150			
11Cl-PF3OUdS (F53B Major)	8.45	0.80	µg/kg wet	9.05		93.4	40-150			
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	18.6	2.0	µg/kg wet	24.0		77.6	40-150			
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	92.9	10	µg/kg wet	120		77.6	40-150			
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	90.8	10	µg/kg wet	120		75.8	40-150			
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	3.88	0.40	µg/kg wet	4.27		90.9	40-150			
Perfluoro-3-methoxypropanoic acid (PFMPA)	4.43	0.40	µg/kg wet	4.79		92.4	40-150			
Perfluoro-4-methoxybutanoic acid (PFMBA)	4.77	0.40	µg/kg wet	4.79		99.4	40-150			
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	4.11	0.40	µg/kg wet	4.79		85.9	40-150			
Surrogate: 13C4-PFBA	*7.13*		µg/kg wet	9.98		71.4	20-150			
Surrogate: 13C5-PFPeA	*3.43*		µg/kg wet	4.99		68.7	20-150			
Surrogate: 13C5-PFHxA	*1.79*		µg/kg wet	2.50		71.6	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
Batch B341895 - Draft Method 1633										
LCS (B341895-BS2)				Prepared: 06/02/23 Analyzed: 06/03/23						
Surrogate: 13C4-PFHpA	*1.78*		µg/kg wet	2.50		71.3	20-150			
Surrogate: 13C8-PFOA	*1.74*		µg/kg wet	2.50		69.9	20-150			
Surrogate: 13C9-PFNA	*0.844*		µg/kg wet	1.25		67.7	20-150			
Surrogate: 13C6-PFDA	*0.848*		µg/kg wet	1.25		67.9	20-150			
Surrogate: 13C7-PFUnA	*0.863*		µg/kg wet	1.25		69.2	20-150			
Surrogate: 13C2-PFDoA	*0.808*		µg/kg wet	1.25		64.7	20-150			
Surrogate: 13C2-PFTeDA	*0.779*		µg/kg wet	1.25		62.4	20-150			
Surrogate: 13C3-PFBS	*1.91*		µg/kg wet	2.50		76.7	20-150			
Surrogate: 13C3-PFHxS	*1.73*		µg/kg wet	2.50		69.5	20-150			
Surrogate: 13C8-PFOS	*1.71*		µg/kg wet	2.50		68.7	20-150			
Surrogate: 13C2-4:2FTS	*3.35*		µg/kg wet	4.99		67.2	20-150			
Surrogate: 13C2-6:2FTS	*3.42*		µg/kg wet	4.99		68.6	20-150			
Surrogate: 13C2-8:2FTS	*3.52*		µg/kg wet	4.99		70.5	20-150			
Surrogate: 13C8-PFOSA	*1.63*		µg/kg wet	2.50		65.4	20-150			
Surrogate: D3-NMeFOSA	*1.28*		µg/kg wet	2.50		51.2	20-150			
Surrogate: D5-NEtFOSA	*1.26*		µg/kg wet	2.50		50.6	20-150			
Surrogate: D3-NMeFOSAA	*3.55*		µg/kg wet	4.99		71.2	20-150			
Surrogate: D5-NEtFOSAA	*3.52*		µg/kg wet	4.99		70.6	20-150			
Surrogate: D7-NMeFOSE	*13.4*		µg/kg wet	25.0		53.8	20-150			
Surrogate: D9-NEtFOSE	*12.8*		µg/kg wet	25.0		51.4	20-150			
Surrogate: 13C3-HFPO-DA	*6.69*		µg/kg wet	9.98		67.0	20-150			

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QUALITY CONTROL

SPLP - 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 B341937 - Draft Method 1633										
Blank (B341937-BLK1)				Prepared: 06/08/23 Analyzed: 06/09/23						
Perfluorobutanoic acid (PFBA)	ND	3.8	ng/L							
Perfluoropentanoic acid (PFPeA)	ND	1.9	ng/L							
Perfluorohexanoic acid (PFHxA)	ND	0.96	ng/L							
Perfluoroheptanoic acid (PFHpA)	ND	0.96	ng/L							
Perfluorooctanoic acid (PFOA)	ND	0.96	ng/L							
Perfluorononanoic acid (PFNA)	ND	0.96	ng/L							
Perfluorodecanoic acid (PFDA)	ND	0.96	ng/L							
Perfluoroundecanoic acid (PFUnA)	ND	0.96	ng/L							
Perfluorododecanoic acid (PFDoA)	ND	0.96	ng/L							
Perfluorotridecanoic acid (PFTrDA)	ND	0.96	ng/L							
Perfluorotetradecanoic acid (PFTeDA)	ND	0.96	ng/L							
Perfluorobutanesulfonic acid (PFBS)	ND	0.96	ng/L							
Perfluoropentanesulfonic acid (PFPeS)	ND	0.96	ng/L							
Perfluorohexanesulfonic acid (PFHxS)	ND	0.96	ng/L							
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.96	ng/L							
Perfluorooctanesulfonic acid (PFOS)	ND	0.96	ng/L							
Perfluorononanesulfonic acid (PFNS)	ND	0.96	ng/L							
Perfluorodecanesulfonic acid (PFDS)	ND	0.96	ng/L							
Perfluorododecanesulfonic acid (PFDoS)	ND	0.96	ng/L							
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	ND	3.8	ng/L							
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	ND	3.8	ng/L							
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	ND	3.8	ng/L							
Perfluorooctanesulfonamide (PFOSA)	ND	0.96	ng/L							
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	ND	0.96	ng/L							
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	ND	0.96	ng/L							
N-MeFOSAA (NMeFOSAA)	ND	0.96	ng/L							
N-EtFOSAA (NEtFOSAA)	ND	0.96	ng/L							
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	ND	9.6	ng/L							
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	ND	9.6	ng/L							
Hexafluoropropylene oxide dimer acid (HFPO-DA)	ND	3.8	ng/L							
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND	3.8	ng/L							
9Cl-PF3ONS (F53B Minor)	ND	3.8	ng/L							
11Cl-PF3OUdS (F53B Major)	ND	3.8	ng/L							
3-Perfluoropropyl propanoic acid (FPrPA) (3:3FTCA)	ND	9.6	ng/L							
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	ND	48	ng/L							
3-Perfluoroheptyl propanoic acid (FHpPA) (7:3FTCA)	ND	48	ng/L							
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ND	1.9	ng/L							
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND	1.9	ng/L							
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND	1.9	ng/L							
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND	1.9	ng/L							
Surrogate: 13C4-PFBA	*88.9*		ng/L	95.8		92.8	20-150			

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QUALITY CONTROL

SPLP - 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 B341937 - Draft Method 1633										
Blank (B341937-BLK1)				Prepared: 06/08/23 Analyzed: 06/09/23						
Surrogate: 13C5-PFPeA	*43.7*		ng/L	47.9		91.2	20-150			
Surrogate: 13C5-PFHxA	*21.8*		ng/L	24.0		90.9	20-150			
Surrogate: 13C4-PFHpA	*21.8*		ng/L	24.0		91.1	20-150			
Surrogate: 13C8-PFOA	*21.6*		ng/L	24.0		90.3	20-150			
Surrogate: 13C9-PFNA	*10.8*		ng/L	12.0		90.4	20-150			
Surrogate: 13C6-PFDA	*10.9*		ng/L	12.0		91.1	20-150			
Surrogate: 13C7-PFUnA	*11.0*		ng/L	12.0		91.5	20-150			
Surrogate: 13C2-PFDoA	*10.5*		ng/L	12.0		87.8	20-150			
Surrogate: 13C2-PFTeDA	*10.4*		ng/L	12.0		86.5	20-150			
Surrogate: 13C3-PFBS	*22.1*		ng/L	24.0		92.1	20-150			
Surrogate: 13C3-PFHxS	*21.5*		ng/L	24.0		89.8	20-150			
Surrogate: 13C8-PFOS	*21.6*		ng/L	24.0		90.2	20-150			
Surrogate: 13C2-4:2FTS	*30.9*		ng/L	47.9		64.6	20-150			
Surrogate: 13C2-6:2FTS	*33.3*		ng/L	47.9		69.5	20-150			
Surrogate: 13C2-8:2FTS	*33.5*		ng/L	47.9		69.9	20-150			
Surrogate: 13C8-PFOSA	*20.5*		ng/L	24.0		85.4	20-150			
Surrogate: D3-NMeFOSA	*19.3*		ng/L	24.0		80.7	20-150			
Surrogate: D5-NEtFOSA	*19.4*		ng/L	24.0		81.1	20-150			
Surrogate: D3-NMeFOSAA	*35.0*		ng/L	47.9		73.0	20-150			
Surrogate: D5-NEtFOSAA	*35.1*		ng/L	47.9		73.3	20-150			
Surrogate: D7-NMeFOSE	*208*		ng/L	240		86.8	20-150			
Surrogate: D9-NEtFOSE	*201*		ng/L	240		83.9	20-150			
Surrogate: 13C3-HFPO-DA	*89.4*		ng/L	95.8		93.3	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.
H-06	Sample was extracted past the recommended holding time.
PF-17B	Extracted internal standard is outside of control limits. Insufficient sample volume for re-extraction.
PF-18	Duplicate analysis confirmed Extracted Internal Standard failure due to matrix effects.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
Draft Method 1633 in Soil	
Perfluorobutanoic acid (PFBA)	NH-P,NY,PA,WV
Perfluoropentanoic acid (PFPeA)	NH-P,NY,PA,WV
Perfluorohexanoic acid (PFHxA)	NH-P,NY,PA,WV
Perfluoroheptanoic acid (PFHpA)	NH-P,NY,PA,WV
Perfluorooctanoic acid (PFOA)	NH-P,NY,PA,WV
Perfluorononanoic acid (PFNA)	NH-P,NY,PA,WV
Perfluorodecanoic acid (PFDA)	NH-P,NY,PA,WV
Perfluoroundecanoic acid (PFUnA)	NH-P,NY,PA,WV
Perfluorododecanoic acid (PFDoA)	NH-P,NY,PA,WV
Perfluorotridecanoic acid (PFTrDA)	NH-P,NY,PA,WV
Perfluorotetradecanoic acid (PFTeDA)	NH-P,PA,WV
Perfluorobutanesulfonic acid (PFBS)	NH-P,PA,WV
Perfluoropentanesulfonic acid (PFPeS)	NH-P,PA,WV
Perfluorohexanesulfonic acid (PFHxS)	NH-P,PA,WV
Perfluoroheptanesulfonic acid (PFHpS)	NH-P,PA,WV
Perfluorooctanesulfonic acid (PFOS)	NH-P,NY,PA,WV
Perfluorononanesulfonic acid (PFNS)	NH-P,PA,WV
Perfluorodecanesulfonic acid (PFDS)	NH-P,PA,WV
Perfluorododecanesulfonic acid (PFDoS)	NH-P,PA,WV
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	NH-P,PA,WV
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	NH-P,PA,WV
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	NH-P,NY,PA,WV
Perfluorooctanesulfonamide (PFOSA)	NH-P,PA,WV
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	NH-P,PA,WV
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NH-P,PA,WV
N-MeFOSAA (NMeFOSAA)	NH-P,NY,PA,WV
N-EtFOSAA (NEtFOSAA)	NH-P,PA,WV
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	NH-P,PA,WV
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	NH-P,PA,WV
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,PA,WV
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,PA,WV
9Cl-PF3ONS (F53B Minor)	NH-P,PA,WV
11Cl-PF3OUdS (F53B Major)	NH-P,PA,WV
3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA)	NH-P,PA,WV
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	NH-P,PA,WV
3-Perfluoroheptyl propanoic acid (FHpPA)(7:3FTCA)	NH-P,PA,WV
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NH-P,PA,WV
Perfluoro-3-methoxypropanoic acid (PFMPA)	NH-P,PA,WV
Perfluoro-4-methoxybutanoic acid (PFMBA)	NH-P,PA,WV
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P,PA,WV
Draft Method 1633 in Water	
Perfluorobutanoic acid (PFBA)	NH-P,NY,PA,WV
Perfluorobutanoic acid (PFBA)	NH-P,NY
Perfluoropentanoic acid (PFPeA)	NH-P,NY,PA,WV
Perfluoropentanoic acid (PFPeA)	NH-P,NY
Perfluorohexanoic acid (PFHxA)	NH-P,NY

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
Draft Method 1633 in Water	
Perfluorohexanoic acid (PFHxA)	NH-P,NY,PA,WV
Perfluoroheptanoic acid (PFHpA)	NH-P,NY
Perfluoroheptanoic acid (PFHpA)	NH-P,NY,PA,WV
Perfluorooctanoic acid (PFOA)	NH-P,NY,PA,WV
Perfluorooctanoic acid (PFOA)	NH-P,NY
Perfluorononanoic acid (PFNA)	NH-P,NY
Perfluorononanoic acid (PFNA)	NH-P,NY,PA,WV
Perfluorodecanoic acid (PFDA)	NH-P,NY,PA,WV
Perfluorodecanoic acid (PFDA)	NH-P,NY
Perfluoroundecanoic acid (PFUnA)	NH-P,NY
Perfluoroundecanoic acid (PFUnA)	NH-P,NY,PA,WV
Perfluorododecanoic acid (PFDoA)	NH-P,NY
Perfluorododecanoic acid (PFDoA)	NH-P,NY,PA,WV
Perfluorotridecanoic acid (PFTrDA)	NH-P,NY,PA,WV
Perfluorotridecanoic acid (PFTrDA)	NH-P,NY
Perfluorotetradecanoic acid (PFTeDA)	NH-P,NY,PA,WV
Perfluorotetradecanoic acid (PFTeDA)	NH-P,NY
Perfluorobutanesulfonic acid (PFBS)	NH-P,NY,PA,WV
Perfluorobutanesulfonic acid (PFBS)	NH-P,NY
Perfluoropentanesulfonic acid (PFPeS)	NH-P,NY,PA,WV
Perfluoropentanesulfonic acid (PFPeS)	NH-P,NY
Perfluorohexanesulfonic acid (PFHxS)	NH-P,NY
Perfluorohexanesulfonic acid (PFHxS)	NH-P,NY,PA,WV
Perfluoroheptanesulfonic acid (PFHpS)	NH-P,NY,PA,WV
Perfluoroheptanesulfonic acid (PFHpS)	NH-P,NY
Perfluorooctanesulfonic acid (PFOS)	NH-P,NY
Perfluorooctanesulfonic acid (PFOS)	NH-P,NY,PA,WV
Perfluorononanesulfonic acid (PFNS)	NH-P,PA,WV
Perfluorononanesulfonic acid (PFNS)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P
Perfluorodecanesulfonic acid (PFDS)	NH-P,PA,WV
Perfluorododecanesulfonic acid (PFDoS)	NH-P
Perfluorododecanesulfonic acid (PFDoS)	NH-P,PA,WV
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	NH-P
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2FTS)	NH-P,PA,WV
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	NH-P,NY
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2FTS)	NH-P,NY,PA,WV
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	NH-P,NY
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2FTS)	NH-P,NY,PA,WV
Perfluorooctanesulfonamide (PFOSA)	NH-P,PA,WV
Perfluorooctanesulfonamide (PFOSA)	NH-P
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	NH-P
N-methyl perfluoroocatnesulfonamide (NMeFOSA)	NH-P,PA,WV
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NH-P,PA,WV
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	NH-P
N-MeFOSAA (NMeFOSAA)	NH-P,NY,PA,WV
N-MeFOSAA (NMeFOSAA)	NH-P,NY

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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
Draft Method 1633 in Water	
N-EtFOSAA (NEtFOSAA)	NH-P,NY,PA,WV
N-EtFOSAA (NEtFOSAA)	NH-P,NY
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	NH-P,PA,WV
N-methylperfluorooctanesulfonamidoethanol(NMeFOSE)	NH-P
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	NH-P,PA,WV
N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	NH-P
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,NY
Hexafluoropropylene oxide dimer acid (HFPO-DA)	NH-P,NY,PA,WV
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,NY
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	NH-P,NY,PA,WV
9Cl-PF3ONS (F53B Minor)	NH-P,NY,PA,WV
9Cl-PF3ONS (F53B Minor)	NH-P,NY
11Cl-PF3OUdS (F53B Major)	NH-P,NY
11Cl-PF3OUdS (F53B Major)	NH-P,NY,PA,WV
3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA)	NH-P,PA,WV
3-Perfluoropropyl propanoic acid (FPrPA)(3:3FTCA)	NH-P
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	NH-P
2H,2H,3H,3H-Perfluorooctanoic acid(FPePA)(5:3FTCA)	NH-P,PA,WV
3-Perfluoroheptyl propanoic acid (FHpPA)(7:3FTCA)	NH-P
3-Perfluoroheptyl propanoic acid (FHpPA)(7:3FTCA)	NH-P,PA,WV
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NH-P,NY
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	NH-P,NY,PA,WV
Perfluoro-3-methoxypropanoic acid (PFMPA)	NH-P,NY,PA,WV
Perfluoro-3-methoxypropanoic acid (PFMPA)	NH-P,NY
Perfluoro-4-methoxybutanoic acid (PFMBA)	NH-P
Perfluoro-4-methoxybutanoic acid (PFMBA)	NH-P,PA,WV
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P,PA,WV
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	NH-P

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

Code	Description	Number	Expires
NY	New York State Department of Health	10899 NELAP	04/1/2024
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2024
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2024
WV	West Virginia DEP Division of Water and Waste Management	419	08/31/2024

23E1969

con-test ANALYTICAL LABORATORY

Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

http://www.contestlabs.com

Doc # 380 Rev 1_03242017

CHAIN OF CUSTODY RECORD (New York)

39 Spruce Street
East Longmeadow, MA 01028

Company Name: Ramboll
Address: 333 W Washington St Syracuse NY 13202
Phone: 315-956-6100
Project Name: Utica Effluent - 633015
Project Location: Utica, NY Callout - 144354
Project Number: 1440101207
Project Manager: Deb Wright
Con-Test Quote Name/Number:
Invoice Recipient: Samantha Salatto
Sampled By: Vincent Farruggia

Requested Turnaround Time
7-Day ☐ 10-Day ☐
Due Date: Standard

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Cat B
CLP Like Data Pkg Required: ☐
Email To: deborah.wright@ramboll.com
Fax To #:

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code	6010B, 9010B, 7471A	8270, 8082, 8081B	USEPA Method 8260	USEPA Method 8260	USEPA Method 1633	SPLP Method 1633
1	UDS4.26-035-230511	5/11/23	5/11/23 0930		X	S	U	X	X	X	X	X	X
2	UDS4.26-030-230511	5/11/23	0940		X	S	U	X	X	X	X	X	X
3	UDS4.26-045-230511	5/11/23	0950		X	S	U	X	X	X	X	X	X
4	UDS4.26-040-230511	5/11/23	1000		X	S	U	X	X	X	X	X	X
5	UDS4.26-025-230511	5/11/23	1025		X	S	U	X	X	X	X	X	X
6	UDS4.26-020-230511	5/11/23	1035		X	S	U	X	X	X	X	X	X
7	UDS4.26-015-230511	5/11/23	1100		X	S	U	X	X	X	X	X	X
8	UDS4.26-010-230511	5/11/23	1110		X	S	U	X	X	X	X	X	X
9	UDS4.26-055-230511	5/11/23	1140		X	S	U	X	X	X	X	X	X
10	UDS4.26-050-230511	5/11/23	1150		X	S	U	X	X	X	X	X	X

ANALYSIS REQUESTED

1	1	2	1	1	2
		B	M		
A	A	B	V	P	P

# of Containers
² Preservation Code
³ Container Code

Dissolved Metals Samples
☐ Field Filtered
☐ Lab to Filter

Orthophosphate Samples
☐ Field Filtered
☐ Lab to Filter

Comments:

¹ Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

² Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

³ Container Codes:
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time: 5/12/23 1315	
Received by: (signature)	Date/Time: 5-12 1315	
Relinquished by: (signature)	Date/Time: 5-12 1600	
Received by: (signature) Mike	Date/Time: 5-13-23 1015 ~~1600~~	3.3°C
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Program & Regulatory Information
☐ AWQ STDS ☐ NY TOGS
☐ NYC Sewer Discharge ☐ NY CP-51
☐ Part 360 GW (Landfill)
☐ NY Restricted Use
☐ NY Unrestricted Use
☐ NY Part 375

Deliverables
☒ Enhanced Data Package
☒ NYSDEC EQuIS EDD
☐ EQuIS (Standard) EDD
☒ NY Regulatory EDD
☐ NY Regs Hits-Only EDD

Other:
Project Entity
☒ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

Other:
NELAC and AIHA-LAP, LLC Accredited
Other
☐ Chromatogram
☐ AIHA-LAP,LLC

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

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Pace Analytical®

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https://www.pacelabs.com/

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CHAIN OF CUSTODY RECORD (New York)

1800 Elm Street SE
Minneapolis, MN 55414

Page 2 of 2

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name: Ramboll

Address: 333 W Washington St Syracuse NY 13202

Phone: 315-956-6100

Project Name: Utica City Dump - 633015

Project Location: Utica NY Callout 144354

Project Number: 19416101207

Project Manager: Deb Wright

Pace Analytical Quote Name/Number:

Invoice Recipient: Samantha Salette

Sampled By: Vincent Farruggia

Requested Turnaround Time

7-Day ☐ 10-Day ☐

Due Date: Standard

Rush-Approval Required

1-Day ☐ 3-Day ☐

2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☒ EXCEL ☒

Other: Cat B

CLP Like Data Pkg Required: ☐

Email To:

Fax To #:

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code	# of Containers	² Preservation Code	³ Container Code	ANALYSIS REQUESTED: USEPA 8270	USEPA 6010B	USEPA 1633	SPLP Method 1633
1	SC-01-230511	5/11/23	1220		X	S	U	1	A	A	X	X	X	X

Dissolved Metals Samples

☐ Field Filtered

☐ Lab to Filter

Orthophosphate Samples

☐ Field Filtered

☐ Lab to Filter

¹ **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

² **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

³ **Container Codes:**
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

Comments:

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

	Relinquished by: (signature)	Date/Time:
1		5-12 1315
2	Received by: (signature)	Date/Time: 5-12 1315
3	Relinquished by: (signature)	Date/Time: 5-12 1600
4	Received by: (signature) 3.3°C	Date/Time: 5-13-23 1600
5	Relinquished by: (signature)	Date/Time:
6	Received by: (signature)	Date/Time:

Program & Regulatory Information

☐ AWQ STDS ☐ NY TOGS

☐ NYC Sewer Discharge ☐ NY CP-51

☐ Part 360 GW (Landfill)

☐ NY Restricted Use

☐ NY Unrestricted Use

☐ NY Part 375

Other:

Deliverables

☒ Enhanced Data Package

☒ NYSDEC EQuIS EDD

☐ EQuIS (Standard) EDD

☒ NY Regulatory EDD

☐ NY Regs Hits-Only EDD

Other:

NELAC and AIHA-LAP, LLC Accredited

Project Entity

☒ Government ☐ Municipality ☐ MWRA ☐ WRTA

☐ Federal ☐ 21 J ☐ School

☐ City ☐ Brownfield ☐ MBTA

Other

☐ Chromatogram

☐ *AIHA-LAP,LLC*

PCB ONLY

☐ Soxhlet

☐ Non Soxhlet

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

ENV-FRM-ELON-0001 V05__Sample Receiving Checklist

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

Pace
PEOPLE ADVANCING SCIENCE

Client Rumbrill
Project Utica City Dump
MCP/RCP Required N/A
Deliverable Package Requirement N/A
Location Utica, NY
PWSID# (When Applicable) N/A
Arrival Method:
Courier ☑ Fed Ex ☑ (UPS) Walk In ☐ Other ☐
Received By / Date / Time AMS 5/12/23 1600
Back-Sheet By / Date / Time JA 5/15/23 1115
Temperature Method Gun #5
Temp ☑ < 6° C Actual Temperature 3.3
Rush Samples: Yes / (No) Notify
Short Hold: Yes / (No) Notify

	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)

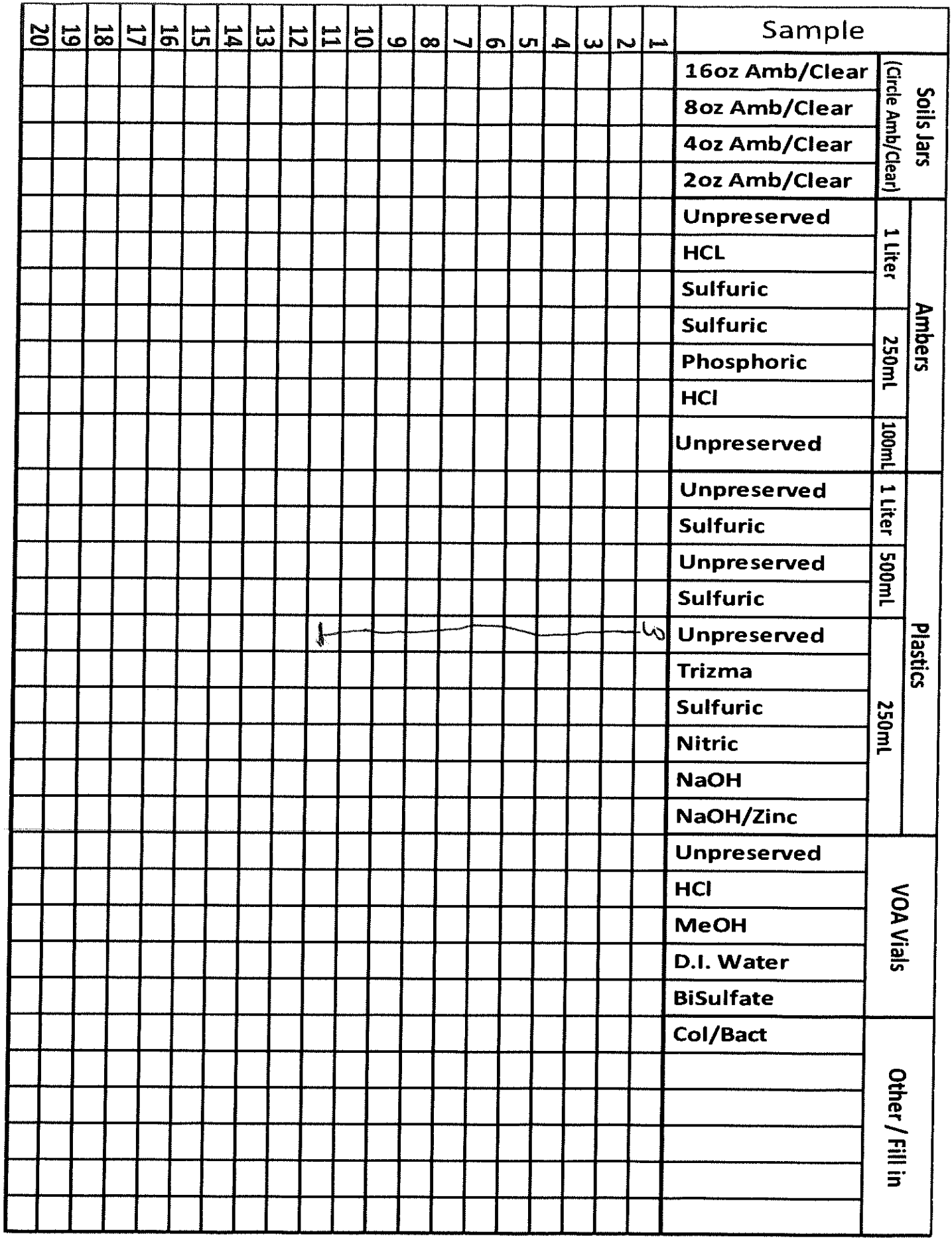
Client	☑	Analysis	☑	Sampler Name	☑
Project	☑	IDs	☑	Collection Date/Time	☑

All Samples Proper pH: (N/A) ☐ ☐

Notes regarding Samples/COC outside of SOP:

Split Only for PFAS 1633 Only

Additional Container Notes



Sample		
16oz Amb/Clear	(Circle Amb/Clear)	Soils Jars
8oz Amb/Clear		
4oz Amb/Clear		
2oz Amb/Clear		
Unpreserved	1 Liter	Ambers
HCL		
Sulfuric		
Sulfuric	250mL	
Phosphoric		
HCl		
Unpreserved	100mL	
Unpreserved	1 Liter	Plastics
Sulfuric		
Unpreserved	500mL	
Sulfuric		
Unpreserved	250mL	
Trizma		
Sulfuric		
Nitric		
NaOH		
NaOH/Zinc		
Unpreserved	VOA Vials	
HCl		
MeOH		
D.I. Water		
BiSulfate		
Col/Bact	Other / Fill in	

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

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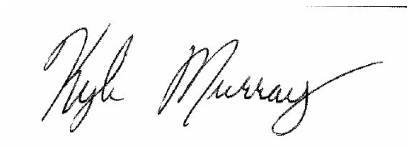
June 7, 2023

Deborah Y. Wright
NYDEC_Ramboll US Consulting, Inc. - Syracuse
333 West Washington Street, PO Box 4873
Syracuse, NY 13221

Project Location: Utica, NY
Client Job Number:
Project Number: 633015
Laboratory Work Order Number: 23E1982

Enclosed are results of analyses for samples as received by the laboratory on May 13, 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. 413/525-2332

NYDEC_Ramboll US Consulting, Inc. - Syracuse
333 West Washington Street, PO Box 4873
Syracuse, NY 13221
ATTN: Deborah Y. Wright

REPORT DATE: 6/7/2023

PURCHASE ORDER NUMBER: 144354

PROJECT NUMBER: 633015

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23E1982

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

PROJECT LOCATION: Utica, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
UDS 4.26-03S-230511	23E1982-01	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8260D	
				SW-846 8270E	
				SW-846 9014	
UDS 4.26-03D-230511	23E1982-02	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8260D	
				SW-846 8270E	
				SW-846 9014	
UDS 4.26-04S-230511	23E1982-03	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8260D	
				SW-846 8270E	
				SW-846 9014	
UDS 4.26-04D-230511	23E1982-04	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8260D	
				SW-846 8270E	
				SW-846 9014	
UDS 4.26-02S-230511	23E1982-05	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8260D	
				SW-846 8270E	
				SW-846 9014	

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

NYDEC_Ramboll US Consulting, Inc. - Syracuse
333 West Washington Street, PO Box 4873
Syracuse, NY 13221
ATTN: Deborah Y. Wright

REPORT DATE: 6/7/2023

PURCHASE ORDER NUMBER: 144354

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PROJECT LOCATION: Utica, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
UDS 4.26-02D-230511	23E1982-06	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8260D	
				SW-846 8270E	
				SW-846 9014	
UDS 4.26-01S-230511	23E1982-07	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8260D	
				SW-846 8270E	
				SW-846 9014	
UDS 4.26-01D-230511	23E1982-08	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8260D	
				SW-846 8270E	
				SW-846 9014	
UDS 4.26-05S-230511	23E1982-09	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8260D	
				SW-846 8270E	
				SW-846 9014	
UDS 4.26-05D-230511	23E1982-10	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8260D	
				SW-846 8270E	
				SW-846 9014	

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

NYDEC_Ramboll US Consulting, Inc. - Syracuse
333 West Washington Street, PO Box 4873
Syracuse, NY 13221
ATTN: Deborah Y. Wright

REPORT DATE: 6/7/2023

PURCHASE ORDER NUMBER: 144354

PROJECT NUMBER: 633015

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 23E1982

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

PROJECT LOCATION: Utica, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SC-01-230511	23E1982-11	Soil		SM 2540G	
				SW-846 6010D	
				SW-846 7471B	
				SW-846 8270E	

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

SW-846 6010D

Qualifications:

B

Analyte is found in the associated laboratory blank as well as in the sample.

Analyte & Samples(s) Qualified:

Copper

23E1982-01[UDS 4.26-03S-230511], 23E1982-02[UDS 4.26-03D-230511], 23E1982-03[UDS 4.26-04S-230511], 23E1982-04[UDS 4.26-04D-230511], 23E1982-05[UDS 4.26-02S-230511], 23E1982-06[UDS 4.26-02D-230511], 23E1982-07[UDS 4.26-01S-230511], 23E1982-08[UDS 4.26-01D-230511], 23E1982-09[UDS 4.26-05S-230511], 23E1982-10[UDS 4.26-05D-230511], 23E1982-11[SC-01-230511], B342082-BS1, B342082-BSD1

B-07

Data is not affected by elevated level in laboratory blank since sample result is >10x level found in the blank.

Analyte & Samples(s) Qualified:

Copper

23E1982-01[UDS 4.26-03S-230511], 23E1982-02[UDS 4.26-03D-230511], 23E1982-03[UDS 4.26-04S-230511], 23E1982-04[UDS 4.26-04D-230511], 23E1982-05[UDS 4.26-02S-230511], 23E1982-06[UDS 4.26-02D-230511], 23E1982-07[UDS 4.26-01S-230511], 23E1982-08[UDS 4.26-01D-230511], 23E1982-09[UDS 4.26-05S-230511], 23E1982-10[UDS 4.26-05D-230511], 23E1982-11[SC-01-230511], B342082-BLK1

B-08

Continuing Calibration Blank (CCB) was greater than the method detection limit but less than the reporting limit.

Analyte & Samples(s) Qualified:

Copper

23E1982-01[UDS 4.26-03S-230511], 23E1982-02[UDS 4.26-03D-230511], 23E1982-03[UDS 4.26-04S-230511], 23E1982-04[UDS 4.26-04D-230511], 23E1982-05[UDS 4.26-02S-230511], 23E1982-06[UDS 4.26-02D-230511], 23E1982-07[UDS 4.26-01S-230511], 23E1982-08[UDS 4.26-01D-230511], 23E1982-09[UDS 4.26-05S-230511], 23E1982-10[UDS 4.26-05D-230511], 23E1982-11[SC-01-230511]

SW-846 8081B

Qualifications:

DL-03

Elevated reporting limit due to matrix interference.

Analyte & Samples(s) Qualified:

23E1982-01[UDS 4.26-03S-230511], 23E1982-02[UDS 4.26-03D-230511], 23E1982-03[UDS 4.26-04S-230511], 23E1982-06[UDS 4.26-02D-230511], 23E1982-07[UDS 4.26-01S-230511], 23E1982-08[UDS 4.26-01D-230511], 23E1982-10[UDS 4.26-05D-230511]

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:

4,4'-DDD

23E1982-05[UDS 4.26-02S-230511], B341342-MS1, B341342-MSD1

4,4'-DDD [2C]

23E1982-05[UDS 4.26-02S-230511], B341342-MS1, B341342-MSD1

4,4'-DDT

23E1982-05[UDS 4.26-02S-230511], B341342-MS1, B341342-MSD1

4,4'-DDT [2C]

23E1982-05[UDS 4.26-02S-230511], B341342-MS1, B341342-MSD1

Endrin Ketone [2C]

23E1982-05[UDS 4.26-02S-230511], B341342-MS1, B341342-MSD1

gamma-BHC (Lindane)

23E1982-05[UDS 4.26-02S-230511], B341342-MS1, B341342-MSD1

gamma-BHC (Lindane) [2C]

23E1982-05[UDS 4.26-02S-230511], B341342-MS1, B341342-MSD1

SW-846 8260D

Qualifications:

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

L-02

Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.

Analyte & Samples(s) Qualified:

Bromomethane

B340391-BS1, B340391-BSD1, B340591-BS1, B340591-BSD1

Chloroethane

B340391-BS1, B340391-BSD1, B340591-BS1, B340591-BSD1

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:

Methyl Acetate

B340275-BS1

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:

1,2-Dibromo-3-chloropropane (DBCP)

23E1982-01[UDS 4.26-03S-230511], 23E1982-04[UDS 4.26-04D-230511], 23E1982-06[UDS 4.26-02D-230511], 23E1982-07[UDS 4.26-01S-230511], 23E1982-08[UDS 4.26-01D-230511], B340275-BLK1, B340275-BS1, B340275-BSD1, B340591-BLK1, B340591-BS1, B340591-BSD1, S087672-CCV1, S087779-CCV1

2,2-Dichloropropane

23E1982-01[UDS 4.26-03S-230511], 23E1982-04[UDS 4.26-04D-230511], 23E1982-07[UDS 4.26-01S-230511], 23E1982-08[UDS 4.26-01D-230511], B340275-BLK1, B340275-BS1, B340275-BSD1, S087779-CCV1

Bromoform

23E1982-01[UDS 4.26-03S-230511], 23E1982-04[UDS 4.26-04D-230511], 23E1982-07[UDS 4.26-01S-230511], 23E1982-08[UDS 4.26-01D-230511], B340275-BLK1, B340275-BS1, B340275-BSD1, S087779-CCV1

Methyl Acetate

23E1982-01[UDS 4.26-03S-230511], 23E1982-04[UDS 4.26-04D-230511], 23E1982-07[UDS 4.26-01S-230511], 23E1982-08[UDS 4.26-01D-230511], B340275-BLK1, B340275-BS1, B340275-BSD1, S087779-CCV1

tert-Butyl Alcohol (TBA)

23E1982-01[UDS 4.26-03S-230511], 23E1982-02[UDS 4.26-03D-230511], 23E1982-03[UDS 4.26-04S-230511], 23E1982-04[UDS 4.26-04D-230511], 23E1982-05[UDS 4.26-02S-230511], 23E1982-06[UDS 4.26-02D-230511], 23E1982-07[UDS 4.26-01S-230511], 23E1982-08[UDS 4.26-01D-230511], 23E1982-09[UDS 4.26-05S-230511], 23E1982-10[UDS 4.26-05D-230511], B340275-BLK1, B340275-BS1, B340275-BSD1, B340391-BLK1, B340391-BS1, B340391-BSD1, B340591-BLK1, B340591-BS1, B340591-BSD1, S087532-CCV1, S087672-CCV1, S087779-CCV1

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Bromomethane

B340391-BS1, B340391-BSD1, B340591-BS1, B340591-BSD1, S087532-CCV1, S087672-CCV1

Chloroethane

B340391-BS1, B340391-BSD1, B340591-BS1, B340591-BSD1, S087532-CCV1, S087672-CCV1

V-35

Initial calibration verification (ICV) did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:

Carbon Disulfide

B340391-BS1, B340391-BSD1, B340591-BS1, B340591-BSD1, S087532-CCV1, S087672-CCV1

Dichlorodifluoromethane (Freon 12)

B340391-BS1, B340391-BSD1, B340591-BS1, B340591-BSD1, S087532-CCV1, S087672-CCV1

SW-846 8270E

Qualifications:

H-06

Sample was extracted past the recommended holding time.

Analyte & Samples(s) Qualified:

23E1982-01RE1[UDS 4.26-03S-230511], 23E1982-03RE1[UDS 4.26-04S-230511], 23E1982-08RE1[UDS 4.26-01D-230511]

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L-04

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

1,2-Dichlorobenzene

23E1982-02[UDS 4.26-03D-230511], 23E1982-04[UDS 4.26-04D-230511], 23E1982-05[UDS 4.26-02S-230511], 23E1982-06[UDS 4.26-02D-230511], 23E1982-07[UDS 4.26-01S-230511], 23E1982-09[UDS 4.26-05S-230511], 23E1982-10[UDS 4.26-05D-230511], 23E1982-11[SC-01-230511], B341346-BLK1, B341346-BS1, B341346-BSD1

1,3-Dichlorobenzene

23E1982-02[UDS 4.26-03D-230511], 23E1982-04[UDS 4.26-04D-230511], 23E1982-05[UDS 4.26-02S-230511], 23E1982-06[UDS 4.26-02D-230511], 23E1982-07[UDS 4.26-01S-230511], 23E1982-09[UDS 4.26-05S-230511], 23E1982-10[UDS 4.26-05D-230511], 23E1982-11[SC-01-230511], B341346-BLK1, B341346-BS1, B341346-BSD1

1,4-Dichlorobenzene

23E1982-02[UDS 4.26-03D-230511], 23E1982-04[UDS 4.26-04D-230511], 23E1982-05[UDS 4.26-02S-230511], 23E1982-06[UDS 4.26-02D-230511], 23E1982-07[UDS 4.26-01S-230511], 23E1982-09[UDS 4.26-05S-230511], 23E1982-10[UDS 4.26-05D-230511], 23E1982-11[SC-01-230511], B341346-BLK1, B341346-BS1, B341346-BSD1

Hexachlorobutadiene

23E1982-02[UDS 4.26-03D-230511], 23E1982-04[UDS 4.26-04D-230511], 23E1982-05[UDS 4.26-02S-230511], 23E1982-06[UDS 4.26-02D-230511], 23E1982-07[UDS 4.26-01S-230511], 23E1982-09[UDS 4.26-05S-230511], 23E1982-10[UDS 4.26-05D-230511], 23E1982-11[SC-01-230511], B341346-BLK1, B341346-BS1, B341346-BSD1

Hexachlorocyclopentadiene

23E1982-02[UDS 4.26-03D-230511], 23E1982-04[UDS 4.26-04D-230511], 23E1982-05[UDS 4.26-02S-230511], 23E1982-06[UDS 4.26-02D-230511], 23E1982-07[UDS 4.26-01S-230511], 23E1982-09[UDS 4.26-05S-230511], 23E1982-10[UDS 4.26-05D-230511], 23E1982-11[SC-01-230511], B341346-BLK1, B341346-BS1, B341346-BSD1

Hexachloroethane

23E1982-02[UDS 4.26-03D-230511], 23E1982-04[UDS 4.26-04D-230511], 23E1982-05[UDS 4.26-02S-230511], 23E1982-06[UDS 4.26-02D-230511], 23E1982-07[UDS 4.26-01S-230511], 23E1982-09[UDS 4.26-05S-230511], 23E1982-10[UDS 4.26-05D-230511], 23E1982-11[SC-01-230511], B341346-BLK1, B341346-BS1, B341346-BSD1

Pyridine

23E1982-02[UDS 4.26-03D-230511], 23E1982-04[UDS 4.26-04D-230511], 23E1982-05[UDS 4.26-02S-230511], 23E1982-06[UDS 4.26-02D-230511], 23E1982-07[UDS 4.26-01S-230511], 23E1982-09[UDS 4.26-05S-230511], 23E1982-10[UDS 4.26-05D-230511], 23E1982-11[SC-01-230511], B341346-BLK1, B341346-BS1, B341346-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:

3/4-Methylphenol

23E1982-02[UDS 4.26-03D-230511], 23E1982-04[UDS 4.26-04D-230511], 23E1982-05[UDS 4.26-02S-230511], 23E1982-06[UDS 4.26-02D-230511], 23E1982-07[UDS 4.26-01S-230511], 23E1982-09[UDS 4.26-05S-230511], 23E1982-10[UDS 4.26-05D-230511], 23E1982-11[SC-01-230511], B341346-BLK1, B341346-BS1, B341346-BSD1

S-07

One associated surrogate standard recovery is outside of control limits but the other(s) is/are within limits. All recoveries are > 10%.

Analyte & Samples(s) Qualified:

2,4,6-Tribromophenol

23E1982-04[UDS 4.26-04D-230511], 23E1982-05[UDS 4.26-02S-230511], 23E1982-06[UDS 4.26-02D-230511], 23E1982-07[UDS 4.26-01S-230511], 23E1982-09[UDS 4.26-05S-230511], 23E1982-10[UDS 4.26-05D-230511]

Nitrobenzene-d5

23E1982-04[UDS 4.26-04D-230511], 23E1982-05[UDS 4.26-02S-230511], 23E1982-06[UDS 4.26-02D-230511], 23E1982-07[UDS 4.26-01S-230511], 23E1982-09[UDS 4.26-05S-230511], 23E1982-10[UDS 4.26-05D-230511]

p-Terphenyl-d14

B341346-BLK1

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:

Benzidine

23E1982-01RE1[UDS 4.26-03S-230511], 23E1982-03RE1[UDS 4.26-04S-230511], 23E1982-08RE1[UDS 4.26-01D-230511], B342052-BLK1, B342052-BS1, B342052-BSD1, S088583-CCV1, S088621-CCV1

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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:

2,4-Dinitrophenol
B341346-BLK1, B341346-BS1, B341346-BSD1, S088133-CCV1

4-Bromophenylphenylether
B342052-BS1

Benzidine
23E1982-01RE1[UDS 4.26-03S-230511], 23E1982-02[UDS 4.26-03D-230511], 23E1982-03RE1[UDS 4.26-04S-230511], 23E1982-04[UDS 4.26-04D-230511], 23E1982-05[UDS 4.26-02S-230511], 23E1982-06[UDS 4.26-02D-230511], 23E1982-07[UDS 4.26-01S-230511], 23E1982-08RE1[UDS 4.26-01D-230511], 23E1982-09[UDS 4.26-05S-230511], 23E1982-10[UDS 4.26-05D-230511], 23E1982-11[SC-01-230511], B341346-BLK1, B341346-BS1, B341346-BSD1, B342052-BLK1, B342052-BS1, B342052-BSD1, S088133-CCV1, S088329-CCV1, S088583-CCV1, S088621-CCV1

Hexachlorocyclopentadiene
23E1982-01RE1[UDS 4.26-03S-230511], 23E1982-02[UDS 4.26-03D-230511], 23E1982-03RE1[UDS 4.26-04S-230511], 23E1982-04[UDS 4.26-04D-230511], 23E1982-05[UDS 4.26-02S-230511], 23E1982-06[UDS 4.26-02D-230511], 23E1982-07[UDS 4.26-01S-230511], 23E1982-08RE1[UDS 4.26-01D-230511], 23E1982-09[UDS 4.26-05S-230511], 23E1982-10[UDS 4.26-05D-230511], 23E1982-11[SC-01-230511], B341346-BLK1, B341346-BS1, B341346-BSD1, B342052-BLK1, B342052-BS1, B342052-BSD1, S088329-CCV1, S088583-CCV1, S088621-CCV1

Pentachlorophenol
23E1982-01RE1[UDS 4.26-03S-230511], 23E1982-03RE1[UDS 4.26-04S-230511], 23E1982-08RE1[UDS 4.26-01D-230511], B342052-BS1, S088621-CCV1

V-34

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:

Aniline
23E1982-01RE1[UDS 4.26-03S-230511], 23E1982-03RE1[UDS 4.26-04S-230511], 23E1982-08RE1[UDS 4.26-01D-230511], B342052-BS1, S085144-ICV1, S088621-CCV1

V-35

Initial calibration verification (ICV) did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:

Benzidine
23E1982-02[UDS 4.26-03D-230511], 23E1982-04[UDS 4.26-04D-230511], 23E1982-05[UDS 4.26-02S-230511], 23E1982-06[UDS 4.26-02D-230511], 23E1982-07[UDS 4.26-01S-230511], 23E1982-09[UDS 4.26-05S-230511], 23E1982-10[UDS 4.26-05D-230511], 23E1982-11[SC-01-230511], B341346-BLK1, B341346-BS1, B341346-BSD1, S086760-ICV1, S088133-CCV1, S088329-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.



Lisa A. Worthington
Technical Representative

con-test® A Pace Analytical® Laboratory

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-03S-230511 | Sampled: 5/11/2023 09:30

Sample ID: 23E1982-01

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.18	2.8	0.11	mg/Kg dry	1	J	SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Acrylonitrile	ND	0.28	0.026	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.028	0.0075	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Benzene	ND	0.056	0.010	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Bromobenzene	ND	0.056	0.0084	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Bromochloromethane	ND	0.056	0.016	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Bromodichloromethane	ND	0.056	0.0089	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Bromoform	ND	0.056	0.023	mg/Kg dry	1	V-05	SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Bromomethane	ND	0.11	0.075	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
2-Butanone (MEK)	ND	1.1	0.095	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
tert-Butyl Alcohol (TBA)	ND	1.1	0.24	mg/Kg dry	1	V-05	SW-846 8260D	5/17/23	5/20/23 3:08	EEH
n-Butylbenzene	ND	0.056	0.0084	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
sec-Butylbenzene	ND	0.056	0.0072	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
tert-Butylbenzene	ND	0.056	0.0080	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.028	0.0087	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Carbon Disulfide	ND	0.28	0.088	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Carbon Tetrachloride	ND	0.056	0.0092	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Chlorobenzene	ND	0.056	0.0067	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Chlorodibromomethane	ND	0.028	0.011	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Chloroethane	ND	0.11	0.019	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Chloroform	ND	0.11	0.0079	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Chloromethane	0.033	0.11	0.028	mg/Kg dry	1	J	SW-846 8260D	5/17/23	5/20/23 3:08	EEH
2-Chlorotoluene	ND	0.056	0.0087	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
4-Chlorotoluene	ND	0.056	0.0087	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.28	0.048	mg/Kg dry	1	V-05	SW-846 8260D	5/17/23	5/20/23 3:08	EEH
1,2-Dibromoethane (EDB)	ND	0.028	0.0090	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Dibromomethane	ND	0.056	0.018	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
1,2-Dichlorobenzene	ND	0.056	0.0073	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
1,3-Dichlorobenzene	ND	0.056	0.0077	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
1,4-Dichlorobenzene	ND	0.056	0.0072	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
trans-1,4-Dichloro-2-butene	ND	0.11	0.085	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Dichlorodifluoromethane (Freon 12)	ND	0.11	0.0091	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
1,1-Dichloroethane	ND	0.056	0.0077	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
1,2-Dichloroethane	ND	0.056	0.017	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
1,1-Dichloroethylene	ND	0.056	0.0080	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
cis-1,2-Dichloroethylene	ND	0.056	0.0079	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
trans-1,2-Dichloroethylene	ND	0.056	0.0097	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
1,2-Dichloropropane	ND	0.056	0.011	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
1,3-Dichloropropane	ND	0.028	0.0065	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
2,2-Dichloropropane	ND	0.056	0.020	mg/Kg dry	1	V-05	SW-846 8260D	5/17/23	5/20/23 3:08	EEH
1,1-Dichloropropene	ND	0.11	0.0085	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
cis-1,3-Dichloropropene	ND	0.028	0.0092	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
trans-1,3-Dichloropropene	ND	0.028	0.0080	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Diethyl Ether	ND	0.11	0.0082	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-03S-230511 | Sampled: 5/11/2023 09:30

Sample ID: 23E1982-01

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.028	0.011	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
1,4-Dioxane	ND	2.8	1.0	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Ethylbenzene	ND	0.056	0.012	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Hexachlorobutadiene	ND	0.056	0.026	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
2-Hexanone (MBK)	ND	0.56	0.068	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Isopropylbenzene (Cumene)	ND	0.056	0.0085	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
p-Isopropyltoluene (p-Cymene)	ND	0.056	0.0071	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Methyl Acetate	ND	0.56	0.034	mg/Kg dry	1	V-05	SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.056	0.0096	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Methyl Cyclohexane	ND	0.056	0.0088	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Methylene Chloride	ND	0.28	0.0099	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
4-Methyl-2-pentanone (MIBK)	ND	0.56	0.075	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Naphthalene	ND	0.11	0.021	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
n-Propylbenzene	ND	0.056	0.0070	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Styrene	ND	0.056	0.0085	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
1,1,1,2-Tetrachloroethane	ND	0.056	0.0092	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
1,1,2,2-Tetrachloroethane	ND	0.028	0.0077	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Tetrachloroethylene	ND	0.056	0.0095	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Tetrahydrofuran	ND	0.56	0.028	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Toluene	ND	0.056	0.013	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
1,2,3-Trichlorobenzene	ND	0.28	0.019	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
1,2,4-Trichlorobenzene	ND	0.056	0.017	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
1,3,5-Trichlorobenzene	ND	0.056	0.012	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
1,1,1-Trichloroethane	ND	0.056	0.0085	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
1,1,2-Trichloroethane	ND	0.056	0.011	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Trichloroethylene	ND	0.056	0.0098	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Trichlorofluoromethane (Freon 11)	ND	0.11	0.0087	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
1,2,3-Trichloropropane	ND	0.11	0.016	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.056	0.012	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
1,2,4-Trimethylbenzene	ND	0.056	0.011	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
1,3,5-Trimethylbenzene	ND	0.056	0.0085	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
Vinyl Chloride	ND	0.11	0.013	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
m+p Xylene	ND	0.11	0.028	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH
o-Xylene	ND	0.056	0.014	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:08	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	97.2	70-130		5/20/23 3:08
Toluene-d8	100	70-130		5/20/23 3:08
4-Bromofluorobenzene	99.2	70-130		5/20/23 3:08

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-03S-230511 | Sampled: 5/11/2023 09:30

Sample ID: 23E1982-01

Sample Matrix: Soil

Sample Flags: H-06

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.26	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Acenaphthylene	ND	0.26	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Acetophenone	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Aniline	ND	0.52	0.089	mg/Kg dry	1	V-34	SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Anthracene	ND	0.26	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Benzidine	ND	1.0	0.32	mg/Kg dry	1	V-04, V-05	SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Benzo(a)anthracene	ND	0.26	0.094	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Benzo(a)pyrene	ND	0.26	0.086	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Benzo(b)fluoranthene	0.10	0.26	0.088	mg/Kg dry	1	J	SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Benzo(g,h,i)perylene	ND	0.26	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Benzo(k)fluoranthene	ND	0.26	0.094	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Benzoic Acid	ND	1.5	0.46	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Bis(2-chloroethoxy)methane	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Bis(2-chloroethyl)ether	ND	0.52	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Bis(2-chloroisopropyl)ether	ND	0.52	0.22	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Bis(2-Ethylhexyl)phthalate	ND	0.52	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
4-Bromophenylphenylether	ND	0.52	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Butylbenzylphthalate	ND	0.52	0.098	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Carbazole	ND	0.26	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
4-Chloroaniline	ND	1.0	0.093	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
4-Chloro-3-methylphenol	ND	1.0	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
2-Chloronaphthalene	ND	0.52	0.092	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
2-Chlorophenol	ND	0.52	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
4-Chlorophenylphenylether	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Chrysene	ND	0.26	0.094	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Dibenz(a,h)anthracene	ND	0.26	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Dibenzofuran	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Di-n-butylphthalate	ND	0.52	0.095	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
1,2-Dichlorobenzene	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
1,3-Dichlorobenzene	ND	0.52	0.097	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
1,4-Dichlorobenzene	ND	0.52	0.099	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
3,3-Dichlorobenzidine	ND	0.26	0.069	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
2,4-Dichlorophenol	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Diethylphthalate	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
2,4-Dimethylphenol	ND	0.52	0.14	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Dimethylphthalate	ND	0.52	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
4,6-Dinitro-2-methylphenol	ND	0.52	0.43	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
2,4-Dinitrophenol	ND	1.0	0.46	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
2,4-Dinitrotoluene	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
2,6-Dinitrotoluene	ND	0.52	0.12	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Di-n-octylphthalate	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
1,2-Diphenylhydrazine/Azobenzene	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Fluoranthene	0.19	0.26	0.093	mg/Kg dry	1	J	SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Fluorene	ND	0.26	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-03S-230511 | Sampled: 5/11/2023 09:30

Sample ID: 23E1982-01

Sample Matrix: Soil

Sample Flags: H-06

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.52	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Hexachlorobutadiene	ND	0.52	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Hexachlorocyclopentadiene	ND	0.52	0.34	mg/Kg dry	1	V-05	SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Hexachloroethane	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Indeno(1,2,3-cd)pyrene	ND	0.26	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Isophorone	ND	0.52	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
1-Methylnaphthalene	ND	0.26	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
2-Methylnaphthalene	ND	0.26	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
2-Methylphenol	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
3/4-Methylphenol	ND	0.52	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Naphthalene	ND	0.26	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
2-Nitroaniline	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
3-Nitroaniline	ND	0.52	0.12	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
4-Nitroaniline	ND	0.52	0.088	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Nitrobenzene	ND	0.52	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
2-Nitrophenol	ND	0.52	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
4-Nitrophenol	ND	1.0	0.22	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
N-Nitrosodimethylamine	ND	0.52	0.15	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
N-Nitrosodiphenylamine/Diphenylamine	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
N-Nitrosodi-n-propylamine	ND	0.52	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Pentachloronitrobenzene	ND	0.52	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Pentachlorophenol	ND	0.52	0.23	mg/Kg dry	1	V-05	SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Phenanthrene	0.12	0.26	0.10	mg/Kg dry	1	J	SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Phenol	ND	0.52	0.12	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Pyrene	0.18	0.26	0.10	mg/Kg dry	1	J	SW-846 8270E	6/2/23	6/6/23 11:24	AR2
Pyridine	ND	0.52	0.084	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
1,2,4,5-Tetrachlorobenzene	ND	0.52	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
1,2,4-Trichlorobenzene	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
2,4,5-Trichlorophenol	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2
2,4,6-Trichlorophenol	ND	0.52	0.099	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:24	AR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	66.0	30-130		6/6/23 11:24
Phenol-d6	77.0	30-130		6/6/23 11:24
Nitrobenzene-d5	78.6	30-130		6/6/23 11:24
2-Fluorobiphenyl	82.2	30-130		6/6/23 11:24
2,4,6-Tribromophenol	59.1	30-130		6/6/23 11:24
p-Terphenyl-d14	88.6	30-130		6/6/23 11:24

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-03S-230511 | Sampled: 5/11/2023 09:30

Sample ID: 23E1982-01

Sample Matrix: Soil

Sample Flags: DL-03

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.30	0.090	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:18	TG
Aldrin [1]	ND	0.075	0.0074	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:18	TG
alpha-BHC [1]	ND	0.075	0.041	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:18	TG
beta-BHC [1]	ND	0.075	0.034	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:18	TG
delta-BHC [1]	ND	0.075	0.050	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 19:40	TG
gamma-BHC (Lindane) [1]	ND	0.030	0.0064	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:18	TG
Chlordane [2]	ND	0.30	0.12	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:18	TG
4,4'-DDD [1]	ND	0.060	0.0067	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:18	TG
4,4'-DDE [1]	ND	0.060	0.0070	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:18	TG
4,4'-DDT [1]	ND	0.060	0.0064	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:18	TG
Dieldrin [1]	ND	0.060	0.0059	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:18	TG
Endosulfan I [1]	ND	0.075	0.037	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:18	TG
Endosulfan II [1]	ND	0.12	0.037	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:18	TG
Endosulfan sulfate [1]	ND	0.12	0.037	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 19:40	TG
Endrin [1]	ND	0.12	0.038	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:18	TG
Endrin aldehyde [1]	ND	0.12	0.074	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 19:40	TG
Endrin ketone [1]	ND	0.12	0.035	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:18	TG
Heptachlor [1]	ND	0.075	0.0074	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:18	TG
Heptachlor epoxide [1]	ND	0.075	0.0068	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:18	TG
Hexachlorobenzene [1]	ND	0.090	0.051	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:18	TG
Methoxychlor [1]	ND	0.75	0.093	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:18	TG
Toxaphene [1]	ND	1.5	0.73	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:18	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	81.1	30-150		6/3/23 10:18
Decachlorobiphenyl [2]	78.4	30-150		6/3/23 10:18
Tetrachloro-m-xylene [1]	74.8	30-150		6/3/23 10:18
Tetrachloro-m-xylene [2]	73.1	30-150		6/3/23 10:18

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-03S-230511 | Sampled: 5/11/2023 09:30

Sample ID: 23E1982-01

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.12	0.031	mg/Kg dry	4		SW-846 8082A	5/25/23	5/28/23 0:36	SFM
Aroclor-1221 [1]	ND	0.12	0.065	mg/Kg dry	4		SW-846 8082A	5/25/23	5/28/23 0:36	SFM
Aroclor-1232 [1]	ND	0.12	0.039	mg/Kg dry	4		SW-846 8082A	5/25/23	5/28/23 0:36	SFM
Aroclor-1242 [1]	ND	0.12	0.036	mg/Kg dry	4		SW-846 8082A	5/25/23	5/28/23 0:36	SFM
Aroclor-1248 [1]	ND	0.12	0.030	mg/Kg dry	4		SW-846 8082A	5/25/23	5/28/23 0:36	SFM
Aroclor-1254 [1]	ND	0.12	0.037	mg/Kg dry	4		SW-846 8082A	5/25/23	5/28/23 0:36	SFM
Aroclor-1260 [1]	ND	0.12	0.032	mg/Kg dry	4		SW-846 8082A	5/25/23	5/28/23 0:36	SFM
Aroclor-1262 [1]	ND	0.12	0.036	mg/Kg dry	4		SW-846 8082A	5/25/23	5/28/23 0:36	SFM
Aroclor-1268 [1]	ND	0.12	0.040	mg/Kg dry	4		SW-846 8082A	5/25/23	5/28/23 0:36	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
Decachlorobiphenyl [1]	93.0	30-150		5/28/23	0:36
Decachlorobiphenyl [2]	92.5	30-150		5/28/23	0:36
Tetrachloro-m-xylene [1]	81.4	30-150		5/28/23	0:36
Tetrachloro-m-xylene [2]	83.0	30-150		5/28/23	0:36

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-03S-230511 | Sampled: 5/11/2023 09:30

Sample ID: 23E1982-01

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	10000	25	18	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:48	NC
Antimony	ND	2.5	0.53	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:48	NC
Arsenic	6.9	5.1	0.85	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:48	NC
Barium	81	2.5	0.39	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:48	NC
Beryllium	0.68	0.25	0.075	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:48	NC
Cadmium	0.33	0.51	0.17	mg/Kg dry	1	J	SW-846 6010D	6/2/23	6/3/23 14:48	NC
Calcium	68000	250	46	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 17:20	NC
Chromium	13	1.0	0.37	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:48	NC
Cobalt	11	2.5	0.37	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:48	NC
Copper	38	1.0	0.22	mg/Kg dry	1	B-07, B-08, B	SW-846 6010D	6/2/23	6/3/23 14:48	NC
Iron	30000	250	160	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 17:20	NC
Lead	13	0.76	0.42	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:48	NC
Magnesium	11000	250	39	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 17:20	NC
Manganese	690	0.51	0.27	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:48	NC
Mercury	0.060	0.038	0.017	mg/Kg dry	1		SW-846 7471B	6/5/23	6/6/23 11:01	AAJ
Nickel	28	1.0	0.41	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:48	NC
Potassium	1900	250	46	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:48	NC
Selenium	ND	5.1	1.1	mg/Kg dry	1		SW-846 6010D	6/2/23	6/4/23 18:32	NC
Silver	2.3	0.51	0.17	mg/Kg dry	1		SW-846 6010D	6/2/23	6/4/23 18:32	NC
Sodium	120	250	45	mg/Kg dry	1	J	SW-846 6010D	6/2/23	6/3/23 14:48	NC
Thallium	ND	2.5	0.88	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:48	NC
Vanadium	23	1.0	0.32	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:48	NC
Zinc	67	1.0	0.35	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:48	NC

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-03S-230511 | Sampled: 5/11/2023 09:30

Sample ID: 23E1982-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	65.0			% Wt	1		SM 2540G	5/18/23	5/18/23 14:16	ATP
Cyanide	ND	0.73	0.52	mg/Kg dry	1		SW-846 9014	5/17/23	5/18/23 10:14	DET/MMH

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-03D-230511 | Sampled: 5/11/2023 09:40

Sample ID: 23E1982-02

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.013	0.091	0.0083	mg/Kg dry	1	J	SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Acrylonitrile	ND	0.0055	0.00082	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00091	0.00062	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Benzene	ND	0.0018	0.00053	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Bromobenzene	ND	0.0018	0.00042	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Bromochloromethane	ND	0.0018	0.00072	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Bromodichloromethane	ND	0.0018	0.00048	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Bromoform	ND	0.0018	0.00056	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Bromomethane	ND	0.0091	0.0016	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
2-Butanone (MEK)	ND	0.037	0.0057	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
tert-Butyl Alcohol (TBA)	ND	0.091	0.036	mg/Kg dry	1	V-05	SW-846 8260D	5/16/23	5/16/23 13:16	MFF
n-Butylbenzene	ND	0.0018	0.00060	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
sec-Butylbenzene	ND	0.0018	0.00087	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
tert-Butylbenzene	ND	0.0018	0.00078	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00091	0.00072	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Carbon Disulfide	ND	0.0091	0.0073	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Carbon Tetrachloride	ND	0.0018	0.00072	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Chlorobenzene	ND	0.0018	0.00051	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Chlorodibromomethane	ND	0.00091	0.00058	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Chloroethane	ND	0.018	0.0010	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Chloroform	ND	0.0037	0.00057	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Chloromethane	ND	0.0091	0.00090	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
2-Chlorotoluene	ND	0.0018	0.00046	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
4-Chlorotoluene	ND	0.0018	0.00041	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0018	0.00072	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
1,2-Dibromoethane (EDB)	ND	0.00091	0.00070	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Dibromomethane	ND	0.0018	0.00063	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
1,2-Dichlorobenzene	ND	0.0018	0.00048	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
1,3-Dichlorobenzene	ND	0.0018	0.00050	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
1,4-Dichlorobenzene	ND	0.0018	0.00055	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
trans-1,4-Dichloro-2-butene	ND	0.0037	0.00057	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.018	0.00094	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
1,1-Dichloroethane	ND	0.0018	0.00063	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
1,2-Dichloroethane	ND	0.0018	0.00061	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
1,1-Dichloroethylene	ND	0.0037	0.00075	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
cis-1,2-Dichloroethylene	ND	0.0018	0.00058	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
trans-1,2-Dichloroethylene	ND	0.0018	0.00067	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
1,2-Dichloropropane	ND	0.0018	0.00057	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
1,3-Dichloropropane	ND	0.00091	0.00045	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
2,2-Dichloropropane	ND	0.0018	0.00071	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
1,1-Dichloropropene	ND	0.0018	0.00081	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
cis-1,3-Dichloropropene	ND	0.00091	0.00051	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
trans-1,3-Dichloropropene	ND	0.00091	0.00056	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Diethyl Ether	ND	0.018	0.00075	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-03D-230511 | Sampled: 5/11/2023 09:40

Sample ID: 23E1982-02

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00091	0.00062	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
1,4-Dioxane	ND	0.091	0.042	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Ethylbenzene	ND	0.0018	0.00055	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Hexachlorobutadiene	ND	0.0018	0.00077	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
2-Hexanone (MBK)	ND	0.018	0.0046	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Isopropylbenzene (Cumene)	ND	0.0018	0.00057	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0018	0.00057	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Methyl Acetate	ND	0.0018	0.0013	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0037	0.00062	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Methyl Cyclohexane	ND	0.0018	0.00071	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Methylene Chloride	ND	0.018	0.00088	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.018	0.0040	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Naphthalene	ND	0.0037	0.00066	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
n-Propylbenzene	ND	0.0018	0.00044	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Styrene	ND	0.0018	0.00045	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
1,1,1,2-Tetrachloroethane	ND	0.0018	0.00049	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
1,1,2,2-Tetrachloroethane	ND	0.00091	0.00050	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Tetrachloroethylene	ND	0.0018	0.00077	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Tetrahydrofuran	ND	0.0091	0.0033	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Toluene	ND	0.0018	0.00062	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
1,2,3-Trichlorobenzene	ND	0.0018	0.00052	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
1,2,4-Trichlorobenzene	ND	0.0018	0.00055	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
1,3,5-Trichlorobenzene	ND	0.0018	0.00052	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
1,1,1-Trichloroethane	ND	0.0018	0.00070	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
1,1,2-Trichloroethane	ND	0.0018	0.00049	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Trichloroethylene	ND	0.0018	0.00074	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0091	0.00068	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
1,2,3-Trichloropropane	ND	0.0018	0.00081	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0091	0.00079	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
1,2,4-Trimethylbenzene	ND	0.0018	0.00070	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
1,3,5-Trimethylbenzene	ND	0.0018	0.00053	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
Vinyl Chloride	ND	0.0091	0.00068	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
m+p Xylene	ND	0.0037	0.0013	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF
o-Xylene	ND	0.0018	0.00051	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:16	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	103	70-130		5/16/23 13:16
Toluene-d8	98.6	70-130		5/16/23 13:16
4-Bromofluorobenzene	94.9	70-130		5/16/23 13:16

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-03D-230511 | Sampled: 5/11/2023 09:40

Sample ID: 23E1982-02

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.24	0.092	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Acenaphthylene	ND	0.24	0.094	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Acetophenone	ND	0.48	0.094	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Aniline	ND	0.48	0.082	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Anthracene	ND	0.24	0.093	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Benzidine	ND	0.93	0.29	mg/Kg dry	1	V-05, V-35	SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Benzo(a)anthracene	ND	0.24	0.087	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Benzo(a)pyrene	ND	0.24	0.079	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Benzo(b)fluoranthene	ND	0.24	0.081	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Benzo(g,h,i)perylene	ND	0.24	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Benzo(k)fluoranthene	ND	0.24	0.087	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Benzoic Acid	ND	1.4	0.42	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Bis(2-chloroethoxy)methane	ND	0.48	0.094	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Bis(2-chloroethyl)ether	ND	0.48	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Bis(2-chloroisopropyl)ether	ND	0.48	0.20	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Bis(2-Ethylhexyl)phthalate	ND	0.48	0.098	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
4-Bromophenylphenylether	ND	0.48	0.099	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Butylbenzylphthalate	ND	0.48	0.090	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Carbazole	ND	0.24	0.093	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
4-Chloroaniline	ND	0.93	0.085	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
4-Chloro-3-methylphenol	ND	0.93	0.095	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
2-Chloronaphthalene	ND	0.48	0.085	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
2-Chlorophenol	ND	0.48	0.097	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
4-Chlorophenylphenylether	ND	0.48	0.093	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Chrysene	ND	0.24	0.087	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Dibenz(a,h)anthracene	ND	0.24	0.093	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Dibenzofuran	ND	0.48	0.094	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Di-n-butylphthalate	ND	0.48	0.087	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
1,2-Dichlorobenzene	ND	0.48	0.092	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 11:50	AR2
1,3-Dichlorobenzene	ND	0.48	0.089	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 11:50	AR2
1,4-Dichlorobenzene	ND	0.48	0.091	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 11:50	AR2
3,3-Dichlorobenzidine	ND	0.24	0.063	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
2,4-Dichlorophenol	ND	0.48	0.093	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Diethylphthalate	ND	0.48	0.093	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
2,4-Dimethylphenol	ND	0.48	0.13	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Dimethylphthalate	ND	0.48	0.099	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
4,6-Dinitro-2-methylphenol	ND	0.48	0.39	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
2,4-Dinitrophenol	ND	0.93	0.42	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
2,4-Dinitrotoluene	ND	0.48	0.096	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
2,6-Dinitrotoluene	ND	0.48	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Di-n-octylphthalate	ND	0.48	0.095	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
1,2-Diphenylhydrazine/Azobenzene	ND	0.48	0.093	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Fluoranthene	0.11	0.24	0.086	mg/Kg dry	1	J	SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Fluorene	ND	0.24	0.094	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-03D-230511 | Sampled: 5/11/2023 09:40

Sample ID: 23E1982-02

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.48	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Hexachlorobutadiene	ND	0.48	0.097	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Hexachlorocyclopentadiene	ND	0.48	0.31	mg/Kg dry	1	L-04, V-05	SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Hexachloroethane	ND	0.48	0.094	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Indeno(1,2,3-cd)pyrene	ND	0.24	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Isophorone	ND	0.48	0.098	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
1-Methylnaphthalene	ND	0.24	0.098	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
2-Methylnaphthalene	ND	0.24	0.094	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
2-Methylphenol	ND	0.48	0.095	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
3/4-Methylphenol	ND	0.48	0.10	mg/Kg dry	1	R-05	SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Naphthalene	ND	0.24	0.096	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
2-Nitroaniline	ND	0.48	0.096	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
3-Nitroaniline	ND	0.48	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
4-Nitroaniline	ND	0.48	0.081	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Nitrobenzene	ND	0.48	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
2-Nitrophenol	ND	0.48	0.099	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
4-Nitrophenol	ND	0.93	0.20	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
N-Nitrosodimethylamine	ND	0.48	0.14	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
N-Nitrosodiphenylamine/Diphenylamine	ND	0.48	0.096	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
N-Nitrosodi-n-propylamine	ND	0.48	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Pentachloronitrobenzene	ND	0.48	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Pentachlorophenol	ND	0.48	0.22	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Phenanthrene	ND	0.24	0.094	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Phenol	ND	0.48	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Pyrene	0.11	0.24	0.096	mg/Kg dry	1	J	SW-846 8270E	5/25/23	5/31/23 11:50	AR2
Pyridine	ND	0.48	0.077	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 11:50	AR2
1,2,4,5-Tetrachlorobenzene	ND	0.48	0.098	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
1,2,4-Trichlorobenzene	ND	0.48	0.093	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
2,4,5-Trichlorophenol	ND	0.48	0.093	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2
2,4,6-Trichlorophenol	ND	0.48	0.091	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 11:50	AR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	53.2	30-130		5/31/23 11:50
Phenol-d6	60.3	30-130		5/31/23 11:50
Nitrobenzene-d5	43.6	30-130		5/31/23 11:50
2-Fluorobiphenyl	64.1	30-130		5/31/23 11:50
2,4,6-Tribromophenol	37.6	30-130		5/31/23 11:50
p-Terphenyl-d14	71.1	30-130		5/31/23 11:50

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-03D-230511 | Sampled: 5/11/2023 09:40

Sample ID: 23E1982-02

Sample Matrix: Soil

Sample Flags: DL-03

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.27	0.082	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:44	TG
Aldrin [1]	ND	0.069	0.0068	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:44	TG
alpha-BHC [1]	ND	0.069	0.037	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:44	TG
beta-BHC [1]	ND	0.069	0.031	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:44	TG
delta-BHC [1]	ND	0.069	0.045	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 20:07	TG
gamma-BHC (Lindane) [1]	ND	0.027	0.0058	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:44	TG
Chlordane [2]	ND	0.27	0.11	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:44	TG
4,4'-DDD [1]	ND	0.055	0.0061	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:44	TG
4,4'-DDE [1]	ND	0.055	0.0064	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:44	TG
4,4'-DDT [1]	ND	0.055	0.0058	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:44	TG
Dieldrin [1]	ND	0.055	0.0053	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:44	TG
Endosulfan I [1]	ND	0.069	0.033	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:44	TG
Endosulfan II [1]	ND	0.11	0.033	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:44	TG
Endosulfan sulfate [1]	ND	0.11	0.034	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 20:07	TG
Endrin [1]	ND	0.11	0.034	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:44	TG
Endrin aldehyde [1]	ND	0.11	0.067	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 20:07	TG
Endrin ketone [1]	ND	0.11	0.032	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:44	TG
Heptachlor [1]	ND	0.069	0.0067	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:44	TG
Heptachlor epoxide [1]	ND	0.069	0.0062	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:44	TG
Hexachlorobenzene [1]	ND	0.082	0.046	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:44	TG
Methoxychlor [1]	ND	0.69	0.085	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:44	TG
Toxaphene [1]	ND	1.4	0.67	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 10:44	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	81.0	30-150		6/3/23 10:44
Decachlorobiphenyl [2]	83.0	30-150		6/3/23 10:44
Tetrachloro-m-xylene [1]	77.0	30-150		6/3/23 10:44
Tetrachloro-m-xylene [2]	74.4	30-150		6/3/23 10:44

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-03D-230511 | Sampled: 5/11/2023 09:40

Sample ID: 23E1982-02

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	0.028	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 16:52	SFM
Aroclor-1221 [1]	ND	0.11	0.059	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 16:52	SFM
Aroclor-1232 [1]	ND	0.11	0.036	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 16:52	SFM
Aroclor-1242 [1]	ND	0.11	0.033	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 16:52	SFM
Aroclor-1248 [1]	ND	0.11	0.028	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 16:52	SFM
Aroclor-1254 [1]	ND	0.11	0.033	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 16:52	SFM
Aroclor-1260 [1]	ND	0.11	0.029	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 16:52	SFM
Aroclor-1262 [1]	ND	0.11	0.033	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 16:52	SFM
Aroclor-1268 [1]	ND	0.11	0.036	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 16:52	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	97.9	30-150		6/5/23 16:52
Decachlorobiphenyl [2]	96.1	30-150		6/5/23 16:52
Tetrachloro-m-xylene [1]	90.0	30-150		6/5/23 16:52
Tetrachloro-m-xylene [2]	91.9	30-150		6/5/23 16:52

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-03D-230511 | Sampled: 5/11/2023 09:40

Sample ID: 23E1982-02

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	8200	23	17	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:55	NC
Antimony	ND	2.3	0.48	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:55	NC
Arsenic	5.5	4.6	0.77	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:55	NC
Barium	64	2.3	0.35	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:55	NC
Beryllium	0.55	0.23	0.068	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:55	NC
Cadmium	0.26	0.46	0.15	mg/Kg dry	1	J	SW-846 6010D	6/2/23	6/3/23 14:55	NC
Calcium	62000	230	41	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 17:25	NC
Chromium	11	0.92	0.34	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:55	NC
Cobalt	9.0	2.3	0.34	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:55	NC
Copper	30	0.92	0.20	mg/Kg dry	1	B-07, B-08, B	SW-846 6010D	6/2/23	6/3/23 14:55	NC
Iron	24000	230	150	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 17:25	NC
Lead	10	0.69	0.38	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:55	NC
Magnesium	11000	230	36	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 17:25	NC
Manganese	570	0.46	0.24	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:55	NC
Mercury	0.058	0.035	0.015	mg/Kg dry	1		SW-846 7471B	6/5/23	6/6/23 11:03	AAJ
Nickel	23	0.92	0.37	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:55	NC
Potassium	1600	230	42	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:55	NC
Selenium	ND	4.6	0.98	mg/Kg dry	1		SW-846 6010D	6/2/23	6/4/23 18:37	NC
Silver	1.9	0.46	0.15	mg/Kg dry	1		SW-846 6010D	6/2/23	6/4/23 18:37	NC
Sodium	110	230	41	mg/Kg dry	1	J	SW-846 6010D	6/2/23	6/3/23 14:55	NC
Thallium	ND	2.3	0.80	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:55	NC
Vanadium	19	0.92	0.29	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:55	NC
Zinc	54	0.92	0.32	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 14:55	NC

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-03D-230511 | Sampled: 5/11/2023 09:40

Sample ID: 23E1982-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	70.7			% Wt	1		SM 2540G	5/18/23	5/18/23 14:16	ATP
Cyanide	ND	0.59	0.42	mg/Kg dry	1		SW-846 9014	5/17/23	5/18/23 10:14	DET/MMH

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-04S-230511 | Sampled: 5/11/2023 09:50

Sample ID: 23E1982-03

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.029	0.11	0.0096	mg/Kg dry	1	J	SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Acrylonitrile	ND	0.0064	0.00095	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0011	0.00073	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Benzene	ND	0.0021	0.00062	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Bromobenzene	ND	0.0021	0.00049	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Bromochloromethane	ND	0.0021	0.00083	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Bromodichloromethane	ND	0.0021	0.00055	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Bromoform	ND	0.0021	0.00065	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Bromomethane	ND	0.011	0.0018	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
2-Butanone (MEK)	ND	0.043	0.0066	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
tert-Butyl Alcohol (TBA)	ND	0.11	0.042	mg/Kg dry	1	V-05	SW-846 8260D	5/16/23	5/16/23 13:42	MFF
n-Butylbenzene	ND	0.0021	0.00069	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
sec-Butylbenzene	ND	0.0021	0.0010	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
tert-Butylbenzene	ND	0.0021	0.00091	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0011	0.00083	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Carbon Disulfide	ND	0.011	0.0085	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Carbon Tetrachloride	ND	0.0021	0.00084	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Chlorobenzene	ND	0.0021	0.00060	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Chlorodibromomethane	ND	0.0011	0.00067	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Chloroethane	ND	0.021	0.0012	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Chloroform	ND	0.0043	0.00067	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Chloromethane	ND	0.011	0.0011	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
2-Chlorotoluene	ND	0.0021	0.00054	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
4-Chlorotoluene	ND	0.0021	0.00048	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0021	0.00084	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
1,2-Dibromoethane (EDB)	ND	0.0011	0.00081	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Dibromomethane	ND	0.0021	0.00073	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
1,2-Dichlorobenzene	ND	0.0021	0.00056	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
1,3-Dichlorobenzene	ND	0.0021	0.00059	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
1,4-Dichlorobenzene	ND	0.0021	0.00064	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
trans-1,4-Dichloro-2-butene	ND	0.0043	0.00066	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.021	0.0011	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
1,1-Dichloroethane	ND	0.0021	0.00073	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
1,2-Dichloroethane	ND	0.0021	0.00071	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
1,1-Dichloroethylene	ND	0.0043	0.00087	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
cis-1,2-Dichloroethylene	ND	0.0021	0.00068	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
trans-1,2-Dichloroethylene	ND	0.0021	0.00077	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
1,2-Dichloropropane	ND	0.0021	0.00066	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
1,3-Dichloropropane	ND	0.0011	0.00052	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
2,2-Dichloropropane	ND	0.0021	0.00083	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
1,1-Dichloropropene	ND	0.0021	0.00094	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
cis-1,3-Dichloropropene	ND	0.0011	0.00060	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
trans-1,3-Dichloropropene	ND	0.0011	0.00065	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Diethyl Ether	ND	0.021	0.00087	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-04S-230511 | Sampled: 5/11/2023 09:50

Sample ID: 23E1982-03

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0011	0.00072	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
1,4-Dioxane	ND	0.11	0.048	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Ethylbenzene	ND	0.0021	0.00063	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Hexachlorobutadiene	ND	0.0021	0.00089	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
2-Hexanone (MBK)	ND	0.021	0.0053	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Isopropylbenzene (Cumene)	ND	0.0021	0.00066	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0021	0.00066	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Methyl Acetate	ND	0.0021	0.0015	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0043	0.00072	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Methyl Cyclohexane	ND	0.0021	0.00083	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Methylene Chloride	ND	0.021	0.0010	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.021	0.0047	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Naphthalene	ND	0.0043	0.00077	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
n-Propylbenzene	ND	0.0021	0.00051	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Styrene	ND	0.0021	0.00053	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
1,1,1,2-Tetrachloroethane	ND	0.0021	0.00057	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
1,1,2,2-Tetrachloroethane	ND	0.0011	0.00059	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Tetrachloroethylene	ND	0.0021	0.00089	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Tetrahydrofuran	ND	0.011	0.0038	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Toluene	ND	0.0021	0.00072	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
1,2,3-Trichlorobenzene	ND	0.0021	0.00060	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
1,2,4-Trichlorobenzene	ND	0.0021	0.00064	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
1,3,5-Trichlorobenzene	ND	0.0021	0.00061	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
1,1,1-Trichloroethane	ND	0.0021	0.00081	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
1,1,2-Trichloroethane	ND	0.0021	0.00057	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Trichloroethylene	ND	0.0021	0.00085	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Trichlorofluoromethane (Freon 11)	ND	0.011	0.00079	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
1,2,3-Trichloropropane	ND	0.0021	0.00094	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.011	0.00091	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
1,2,4-Trimethylbenzene	0.00091	0.0021	0.00081	mg/Kg dry	1	J	SW-846 8260D	5/16/23	5/16/23 13:42	MFF
1,3,5-Trimethylbenzene	ND	0.0021	0.00062	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
Vinyl Chloride	ND	0.011	0.00079	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
m+p Xylene	ND	0.0043	0.0015	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF
o-Xylene	ND	0.0021	0.00059	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 13:42	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	102	70-130		5/16/23 13:42
Toluene-d8	98.6	70-130		5/16/23 13:42
4-Bromofluorobenzene	94.7	70-130		5/16/23 13:42

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-04S-230511 | Sampled: 5/11/2023 09:50

Sample ID: 23E1982-03

Sample Matrix: Soil

Sample Flags: H-06

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.28	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Acenaphthylene	ND	0.28	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Acetophenone	ND	0.56	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Aniline	ND	0.56	0.094	mg/Kg dry	1	V-34	SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Anthracene	ND	0.28	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Benzidine	ND	1.1	0.34	mg/Kg dry	1	V-04, V-05	SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Benzo(a)anthracene	ND	0.28	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Benzo(a)pyrene	ND	0.28	0.092	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Benzo(b)fluoranthene	ND	0.28	0.093	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Benzo(g,h,i)perylene	ND	0.28	0.12	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Benzo(k)fluoranthene	ND	0.28	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Benzoic Acid	ND	1.6	0.49	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Bis(2-chloroethoxy)methane	ND	0.56	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Bis(2-chloroethyl)ether	ND	0.56	0.12	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Bis(2-chloroisopropyl)ether	ND	0.56	0.23	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Bis(2-Ethylhexyl)phthalate	ND	0.56	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
4-Bromophenylphenylether	ND	0.56	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Butylbenzylphthalate	ND	0.56	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Carbazole	ND	0.28	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
4-Chloroaniline	ND	1.1	0.098	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
4-Chloro-3-methylphenol	ND	1.1	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
2-Chloronaphthalene	ND	0.56	0.098	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
2-Chlorophenol	ND	0.56	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
4-Chlorophenylphenylether	ND	0.56	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Chrysene	ND	0.28	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Dibenz(a,h)anthracene	ND	0.28	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Dibenzofuran	ND	0.56	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Di-n-butylphthalate	ND	0.56	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
1,2-Dichlorobenzene	ND	0.56	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
1,3-Dichlorobenzene	ND	0.56	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
1,4-Dichlorobenzene	ND	0.56	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
3,3-Dichlorobenzidine	ND	0.28	0.073	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
2,4-Dichlorophenol	ND	0.56	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Diethylphthalate	ND	0.56	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
2,4-Dimethylphenol	ND	0.56	0.14	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Dimethylphthalate	ND	0.56	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
4,6-Dinitro-2-methylphenol	ND	0.56	0.45	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
2,4-Dinitrophenol	ND	1.1	0.49	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
2,4-Dinitrotoluene	ND	0.56	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
2,6-Dinitrotoluene	ND	0.56	0.13	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Di-n-octylphthalate	ND	0.56	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
1,2-Diphenylhydrazine/Azobenzene	ND	0.56	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Fluoranthene	0.13	0.28	0.099	mg/Kg dry	1	J	SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Fluorene	ND	0.28	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-04S-230511 | Sampled: 5/11/2023 09:50

Sample ID: 23E1982-03

Sample Matrix: Soil

Sample Flags: H-06

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.56	0.12	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Hexachlorobutadiene	ND	0.56	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Hexachlorocyclopentadiene	ND	0.56	0.36	mg/Kg dry	1	V-05	SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Hexachloroethane	ND	0.56	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Indeno(1,2,3-cd)pyrene	ND	0.28	0.12	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Isophorone	ND	0.56	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
1-Methylnaphthalene	ND	0.28	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
2-Methylnaphthalene	ND	0.28	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
2-Methylphenol	ND	0.56	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
3/4-Methylphenol	ND	0.56	0.12	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Naphthalene	ND	0.28	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
2-Nitroaniline	ND	0.56	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
3-Nitroaniline	ND	0.56	0.13	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
4-Nitroaniline	ND	0.56	0.094	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Nitrobenzene	ND	0.56	0.12	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
2-Nitrophenol	ND	0.56	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
4-Nitrophenol	ND	1.1	0.23	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
N-Nitrosodimethylamine	ND	0.56	0.16	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
N-Nitrosodiphenylamine/Diphenylamine	ND	0.56	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
N-Nitrosodi-n-propylamine	ND	0.56	0.12	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Pentachloronitrobenzene	ND	0.56	0.12	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Pentachlorophenol	ND	0.56	0.25	mg/Kg dry	1	V-05	SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Phenanthrene	ND	0.28	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Phenol	ND	0.56	0.13	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Pyrene	0.12	0.28	0.11	mg/Kg dry	1	J	SW-846 8270E	6/2/23	6/6/23 11:49	AR2
Pyridine	ND	0.56	0.089	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
1,2,4,5-Tetrachlorobenzene	ND	0.56	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
1,2,4-Trichlorobenzene	ND	0.56	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
2,4,5-Trichlorophenol	ND	0.56	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2
2,4,6-Trichlorophenol	ND	0.56	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 11:49	AR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	62.3	30-130		6/6/23 11:49
Phenol-d6	76.9	30-130		6/6/23 11:49
Nitrobenzene-d5	66.2	30-130		6/6/23 11:49
2-Fluorobiphenyl	83.6	30-130		6/6/23 11:49
2,4,6-Tribromophenol	58.7	30-130		6/6/23 11:49
p-Terphenyl-d14	84.3	30-130		6/6/23 11:49

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-04S-230511 | Sampled: 5/11/2023 09:50

Sample ID: 23E1982-03

Sample Matrix: Soil

Sample Flags: DL-03

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.65	0.19	mg/Kg dry	20		SW-846 8081B	5/25/23	6/3/23 11:11	TG
Aldrin [1]	ND	0.16	0.016	mg/Kg dry	20		SW-846 8081B	5/25/23	6/3/23 11:11	TG
alpha-BHC [1]	ND	0.16	0.087	mg/Kg dry	20		SW-846 8081B	5/25/23	6/3/23 11:11	TG
beta-BHC [1]	ND	0.16	0.072	mg/Kg dry	20		SW-846 8081B	5/25/23	6/3/23 11:11	TG
delta-BHC [1]	ND	0.16	0.11	mg/Kg dry	20		SW-846 8081B	5/25/23	6/3/23 20:33	TG
gamma-BHC (Lindane) [1]	ND	0.065	0.014	mg/Kg dry	20		SW-846 8081B	5/25/23	6/3/23 11:11	TG
Chlordane [2]	ND	0.65	0.26	mg/Kg dry	20		SW-846 8081B	5/25/23	6/3/23 11:11	TG
4,4'-DDD [1]	ND	0.13	0.014	mg/Kg dry	20		SW-846 8081B	5/25/23	6/3/23 11:11	TG
4,4'-DDE [1]	ND	0.13	0.015	mg/Kg dry	20		SW-846 8081B	5/25/23	6/3/23 11:11	TG
4,4'-DDT [1]	ND	0.13	0.014	mg/Kg dry	20		SW-846 8081B	5/25/23	6/3/23 11:11	TG
Dieldrin [1]	ND	0.13	0.013	mg/Kg dry	20		SW-846 8081B	5/25/23	6/3/23 11:11	TG
Endosulfan I [1]	ND	0.16	0.079	mg/Kg dry	20		SW-846 8081B	5/25/23	6/3/23 11:11	TG
Endosulfan II [1]	ND	0.26	0.079	mg/Kg dry	20		SW-846 8081B	5/25/23	6/3/23 11:11	TG
Endosulfan sulfate [1]	ND	0.26	0.080	mg/Kg dry	20		SW-846 8081B	5/25/23	6/3/23 20:33	TG
Endrin [1]	ND	0.26	0.081	mg/Kg dry	20		SW-846 8081B	5/25/23	6/3/23 11:11	TG
Endrin aldehyde [1]	ND	0.26	0.16	mg/Kg dry	20		SW-846 8081B	5/25/23	6/3/23 20:33	TG
Endrin ketone [1]	ND	0.26	0.075	mg/Kg dry	20		SW-846 8081B	5/25/23	6/3/23 11:11	TG
Heptachlor [1]	ND	0.16	0.016	mg/Kg dry	20		SW-846 8081B	5/25/23	6/3/23 11:11	TG
Heptachlor epoxide [1]	ND	0.16	0.015	mg/Kg dry	20		SW-846 8081B	5/25/23	6/3/23 11:11	TG
Hexachlorobenzene [1]	ND	0.19	0.11	mg/Kg dry	20		SW-846 8081B	5/25/23	6/3/23 11:11	TG
Methoxychlor [1]	ND	1.6	0.20	mg/Kg dry	20		SW-846 8081B	5/25/23	6/3/23 11:11	TG
Toxaphene [1]	ND	3.2	1.6	mg/Kg dry	20		SW-846 8081B	5/25/23	6/3/23 11:11	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	78.0	30-150		6/3/23 11:11
Decachlorobiphenyl [2]	80.5	30-150		6/3/23 11:11
Tetrachloro-m-xylene [1]	73.7	30-150		6/3/23 11:11
Tetrachloro-m-xylene [2]	73.0	30-150		6/3/23 11:11

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-04S-230511 | Sampled: 5/11/2023 09:50

Sample ID: 23E1982-03

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.13	0.034	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:09	SFM
Aroclor-1221 [1]	ND	0.13	0.069	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:09	SFM
Aroclor-1232 [1]	ND	0.13	0.042	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:09	SFM
Aroclor-1242 [1]	ND	0.13	0.039	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:09	SFM
Aroclor-1248 [1]	ND	0.13	0.033	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:09	SFM
Aroclor-1254 [1]	ND	0.13	0.039	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:09	SFM
Aroclor-1260 [1]	ND	0.13	0.035	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:09	SFM
Aroclor-1262 [1]	ND	0.13	0.039	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:09	SFM
Aroclor-1268 [1]	ND	0.13	0.043	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:09	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	98.9	30-150		6/5/23 17:09
Decachlorobiphenyl [2]	97.0	30-150		6/5/23 17:09
Tetrachloro-m-xylene [1]	93.0	30-150		6/5/23 17:09
Tetrachloro-m-xylene [2]	95.2	30-150		6/5/23 17:09

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-04S-230511 | Sampled: 5/11/2023 09:50

Sample ID: 23E1982-03

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	9500	27	20	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:02	NC
Antimony	ND	2.7	0.56	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:02	NC
Arsenic	6.0	5.4	0.91	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:02	NC
Barium	75	2.7	0.42	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:02	NC
Beryllium	0.63	0.27	0.081	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:02	NC
Cadmium	0.30	0.54	0.18	mg/Kg dry	1	J	SW-846 6010D	6/2/23	6/3/23 15:02	NC
Calcium	79000	270	49	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 17:31	NC
Chromium	12	1.1	0.40	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:02	NC
Cobalt	10	2.7	0.40	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:02	NC
Copper	34	1.1	0.24	mg/Kg dry	1	B-07, B-08, B	SW-846 6010D	6/2/23	6/3/23 15:02	NC
Iron	30000	270	170	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 17:31	NC
Lead	11	0.81	0.45	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:02	NC
Magnesium	15000	270	42	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 17:31	NC
Manganese	640	0.54	0.29	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:02	NC
Mercury	0.054	0.042	0.018	mg/Kg dry	1		SW-846 7471B	6/5/23	6/6/23 11:04	AAJ
Nickel	26	1.1	0.44	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:02	NC
Potassium	1900	270	49	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:02	NC
Selenium	ND	5.4	1.2	mg/Kg dry	1		SW-846 6010D	6/2/23	6/4/23 18:42	NC
Silver	2.1	0.54	0.18	mg/Kg dry	1		SW-846 6010D	6/2/23	6/4/23 18:42	NC
Sodium	130	270	49	mg/Kg dry	1	J	SW-846 6010D	6/2/23	6/3/23 15:02	NC
Thallium	ND	2.7	0.95	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:02	NC
Vanadium	22	1.1	0.34	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:02	NC
Zinc	63	1.1	0.37	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:02	NC

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-04S-230511 | Sampled: 5/11/2023 09:50

Sample ID: 23E1982-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	61.3			% Wt	1		SM 2540G	5/18/23	5/18/23 14:16	ATP
Cyanide	ND	0.78	0.56	mg/Kg dry	1		SW-846 9014	5/17/23	5/18/23 10:14	DET/MMH

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-04D-230511 | Sampled: 5/11/2023 10:00

Sample ID: 23E1982-04

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.14	1.9	0.077	mg/Kg dry	1	J	SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Acrylonitrile	ND	0.19	0.018	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.019	0.0051	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Benzene	ND	0.038	0.0071	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Bromobenzene	ND	0.038	0.0057	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Bromochloromethane	ND	0.038	0.011	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Bromodichloromethane	ND	0.038	0.0060	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Bromoform	ND	0.038	0.016	mg/Kg dry	1	V-05	SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Bromomethane	ND	0.077	0.051	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
2-Butanone (MEK)	ND	0.77	0.064	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
tert-Butyl Alcohol (TBA)	ND	0.77	0.16	mg/Kg dry	1	V-05	SW-846 8260D	5/17/23	5/20/23 3:34	EEH
n-Butylbenzene	ND	0.038	0.0057	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
sec-Butylbenzene	ND	0.038	0.0049	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
tert-Butylbenzene	ND	0.038	0.0054	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.019	0.0059	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Carbon Disulfide	ND	0.19	0.060	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Carbon Tetrachloride	ND	0.038	0.0063	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Chlorobenzene	ND	0.038	0.0046	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Chlorodibromomethane	ND	0.019	0.0077	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Chloroethane	ND	0.077	0.013	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Chloroform	ND	0.077	0.0054	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Chloromethane	ND	0.077	0.019	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
2-Chlorotoluene	ND	0.038	0.0059	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
4-Chlorotoluene	ND	0.038	0.0059	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.19	0.033	mg/Kg dry	1	V-05	SW-846 8260D	5/17/23	5/20/23 3:34	EEH
1,2-Dibromoethane (EDB)	ND	0.019	0.0061	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Dibromomethane	ND	0.038	0.012	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
1,2-Dichlorobenzene	ND	0.038	0.0050	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
1,3-Dichlorobenzene	ND	0.038	0.0052	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
1,4-Dichlorobenzene	ND	0.038	0.0049	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
trans-1,4-Dichloro-2-butene	ND	0.077	0.057	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Dichlorodifluoromethane (Freon 12)	ND	0.077	0.0062	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
1,1-Dichloroethane	ND	0.038	0.0052	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
1,2-Dichloroethane	ND	0.038	0.012	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
1,1-Dichloroethylene	ND	0.038	0.0054	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
cis-1,2-Dichloroethylene	ND	0.038	0.0053	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
trans-1,2-Dichloroethylene	ND	0.038	0.0066	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
1,2-Dichloropropane	ND	0.038	0.0074	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
1,3-Dichloropropane	ND	0.019	0.0044	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
2,2-Dichloropropane	ND	0.038	0.013	mg/Kg dry	1	V-05	SW-846 8260D	5/17/23	5/20/23 3:34	EEH
1,1-Dichloropropene	ND	0.077	0.0057	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
cis-1,3-Dichloropropene	ND	0.019	0.0063	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
trans-1,3-Dichloropropene	ND	0.019	0.0054	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Diethyl Ether	ND	0.077	0.0055	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-04D-230511 | Sampled: 5/11/2023 10:00

Sample ID: 23E1982-04

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.019	0.0077	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
1,4-Dioxane	ND	1.9	0.69	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Ethylbenzene	ND	0.038	0.0085	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Hexachlorobutadiene	ND	0.038	0.018	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
2-Hexanone (MBK)	ND	0.38	0.046	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Isopropylbenzene (Cumene)	ND	0.038	0.0058	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
p-Isopropyltoluene (p-Cymene)	ND	0.038	0.0049	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Methyl Acetate	0.12	0.38	0.023	mg/Kg dry	1	J, V-05	SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.038	0.0065	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Methyl Cyclohexane	ND	0.038	0.0060	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Methylene Chloride	ND	0.19	0.0068	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
4-Methyl-2-pentanone (MIBK)	ND	0.38	0.051	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Naphthalene	ND	0.077	0.014	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
n-Propylbenzene	ND	0.038	0.0048	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Styrene	ND	0.038	0.0058	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
1,1,1,2-Tetrachloroethane	ND	0.038	0.0062	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
1,1,2,2-Tetrachloroethane	ND	0.019	0.0052	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Tetrachloroethylene	ND	0.038	0.0065	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Tetrahydrofuran	ND	0.38	0.019	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Toluene	ND	0.038	0.0085	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
1,2,3-Trichlorobenzene	ND	0.19	0.013	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
1,2,4-Trichlorobenzene	ND	0.038	0.012	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
1,3,5-Trichlorobenzene	ND	0.038	0.0080	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
1,1,1-Trichloroethane	ND	0.038	0.0057	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
1,1,2-Trichloroethane	ND	0.038	0.0073	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Trichloroethylene	ND	0.038	0.0067	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Trichlorofluoromethane (Freon 11)	ND	0.077	0.0059	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
1,2,3-Trichloropropane	ND	0.077	0.011	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.038	0.0080	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
1,2,4-Trimethylbenzene	ND	0.038	0.0076	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
1,3,5-Trimethylbenzene	ND	0.038	0.0057	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
Vinyl Chloride	ND	0.077	0.0091	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
m+p Xylene	ND	0.077	0.019	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH
o-Xylene	ND	0.038	0.0093	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 3:34	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	98.2	70-130		5/20/23 3:34
Toluene-d8	100	70-130		5/20/23 3:34
4-Bromofluorobenzene	98.9	70-130		5/20/23 3:34

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-04D-230511 | Sampled: 5/11/2023 10:00

Sample ID: 23E1982-04

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.23	0.089	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Acenaphthylene	ND	0.23	0.091	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Acetophenone	ND	0.46	0.091	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Aniline	ND	0.46	0.079	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Anthracene	ND	0.23	0.090	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Benzidine	ND	0.90	0.28	mg/Kg dry	1	V-05, V-35	SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Benzo(a)anthracene	ND	0.23	0.084	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Benzo(a)pyrene	ND	0.23	0.077	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Benzo(b)fluoranthene	ND	0.23	0.078	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Benzo(g,h,i)perylene	ND	0.23	0.097	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Benzo(k)fluoranthene	ND	0.23	0.084	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Benzoic Acid	ND	1.4	0.41	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Bis(2-chloroethoxy)methane	ND	0.46	0.091	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Bis(2-chloroethyl)ether	ND	0.46	0.097	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Bis(2-chloroisopropyl)ether	ND	0.46	0.19	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Bis(2-Ethylhexyl)phthalate	ND	0.46	0.095	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
4-Bromophenylphenylether	ND	0.46	0.096	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Butylbenzylphthalate	ND	0.46	0.087	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Carbazole	ND	0.23	0.090	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
4-Chloroaniline	ND	0.90	0.082	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
4-Chloro-3-methylphenol	ND	0.90	0.092	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
2-Chloronaphthalene	ND	0.46	0.082	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
2-Chlorophenol	ND	0.46	0.094	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
4-Chlorophenylphenylether	ND	0.46	0.090	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Chrysene	ND	0.23	0.084	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Dibenz(a,h)anthracene	ND	0.23	0.089	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Dibenzofuran	ND	0.46	0.091	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Di-n-butylphthalate	ND	0.46	0.085	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
1,2-Dichlorobenzene	ND	0.46	0.089	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 12:31	AR2
1,3-Dichlorobenzene	ND	0.46	0.086	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 12:31	AR2
1,4-Dichlorobenzene	ND	0.46	0.088	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 12:31	AR2
3,3-Dichlorobenzidine	ND	0.23	0.061	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
2,4-Dichlorophenol	ND	0.46	0.090	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Diethylphthalate	ND	0.46	0.090	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
2,4-Dimethylphenol	ND	0.46	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Dimethylphthalate	ND	0.46	0.095	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
4,6-Dinitro-2-methylphenol	ND	0.46	0.38	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
2,4-Dinitrophenol	ND	0.90	0.41	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
2,4-Dinitrotoluene	ND	0.46	0.093	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
2,6-Dinitrotoluene	ND	0.46	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Di-n-octylphthalate	ND	0.46	0.092	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
1,2-Diphenylhydrazine/Azobenzene	ND	0.46	0.090	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Fluoranthene	0.12	0.23	0.083	mg/Kg dry	1	J	SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Fluorene	ND	0.23	0.090	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-04D-230511 | Sampled: 5/11/2023 10:00

Sample ID: 23E1982-04

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.46	0.096	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Hexachlorobutadiene	ND	0.46	0.094	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Hexachlorocyclopentadiene	ND	0.46	0.30	mg/Kg dry	1	L-04, V-05	SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Hexachloroethane	ND	0.46	0.091	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Indeno(1,2,3-cd)pyrene	ND	0.23	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Isophorone	ND	0.46	0.095	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
1-Methylnaphthalene	ND	0.23	0.095	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
2-Methylnaphthalene	ND	0.23	0.091	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
2-Methylphenol	ND	0.46	0.092	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
3/4-Methylphenol	ND	0.46	0.10	mg/Kg dry	1	R-05	SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Naphthalene	ND	0.23	0.093	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
2-Nitroaniline	ND	0.46	0.092	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
3-Nitroaniline	ND	0.46	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
4-Nitroaniline	ND	0.46	0.078	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Nitrobenzene	ND	0.46	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
2-Nitrophenol	ND	0.46	0.096	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
4-Nitrophenol	ND	0.90	0.19	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
N-Nitrosodimethylamine	ND	0.46	0.13	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
N-Nitrosodiphenylamine/Diphenylamine	ND	0.46	0.093	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
N-Nitrosodi-n-propylamine	ND	0.46	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Pentachloronitrobenzene	ND	0.46	0.098	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Pentachlorophenol	ND	0.46	0.21	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Phenanthrene	0.095	0.23	0.091	mg/Kg dry	1	J	SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Phenol	ND	0.46	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Pyrene	0.13	0.23	0.093	mg/Kg dry	1	J	SW-846 8270E	5/25/23	5/31/23 12:31	AR2
Pyridine	ND	0.46	0.074	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 12:31	AR2
1,2,4,5-Tetrachlorobenzene	ND	0.46	0.095	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
1,2,4-Trichlorobenzene	ND	0.46	0.090	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
2,4,5-Trichlorophenol	ND	0.46	0.090	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2
2,4,6-Trichlorophenol	ND	0.46	0.088	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 12:31	AR2

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
2-Fluorophenol	50.9		30-130		5/31/23 12:31
Phenol-d6	61.6		30-130		5/31/23 12:31
Nitrobenzene-d5	**26.8**	*	30-130	S-07	5/31/23 12:31
2-Fluorobiphenyl	64.8		30-130		5/31/23 12:31
2,4,6-Tribromophenol	**15.3**	*	30-130	S-07	5/31/23 12:31
p-Terphenyl-d14	72.7		30-130		5/31/23 12:31

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-04D-230511 | Sampled: 5/11/2023 10:00

Sample ID: 23E1982-04

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.027	0.0081	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 11:38	TG
Aldrin [1]	ND	0.0068	0.00068	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 11:38	TG
alpha-BHC [1]	ND	0.0068	0.0037	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 11:38	TG
beta-BHC [1]	ND	0.0068	0.0031	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 11:38	TG
delta-BHC [1]	ND	0.0068	0.0045	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 21:00	TG
gamma-BHC (Lindane) [1]	ND	0.0027	0.00058	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 11:38	TG
Chlordane [2]	ND	0.027	0.011	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 11:38	TG
4,4'-DDD [1]	ND	0.0055	0.00061	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 11:38	TG
4,4'-DDE [1]	ND	0.0055	0.00064	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 11:38	TG
4,4'-DDT [1]	ND	0.0055	0.00058	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 11:38	TG
Dieldrin [1]	ND	0.0055	0.00053	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 11:38	TG
Endosulfan I [1]	ND	0.0068	0.0033	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 11:38	TG
Endosulfan II [1]	ND	0.011	0.0033	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 11:38	TG
Endosulfan sulfate [1]	ND	0.011	0.0034	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 21:00	TG
Endrin [1]	ND	0.011	0.0034	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 11:38	TG
Endrin aldehyde [1]	ND	0.011	0.0067	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 21:00	TG
Endrin ketone [1]	ND	0.011	0.0032	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 11:38	TG
Heptachlor [1]	ND	0.0068	0.00067	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 11:38	TG
Heptachlor epoxide [1]	ND	0.0068	0.00062	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 11:38	TG
Hexachlorobenzene [1]	ND	0.0082	0.0046	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 11:38	TG
Methoxychlor [1]	ND	0.068	0.0085	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 11:38	TG
Toxaphene [1]	ND	0.14	0.066	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 11:38	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	89.1	30-150		6/3/23 11:38
Decachlorobiphenyl [2]	87.7	30-150		6/3/23 11:38
Tetrachloro-m-xylene [1]	83.6	30-150		6/3/23 11:38
Tetrachloro-m-xylene [2]	76.1	30-150		6/3/23 11:38

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-04D-230511 | Sampled: 5/11/2023 10:00

Sample ID: 23E1982-04

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	0.028	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:26	SFM
Aroclor-1221 [1]	ND	0.11	0.059	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:26	SFM
Aroclor-1232 [1]	ND	0.11	0.036	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:26	SFM
Aroclor-1242 [1]	ND	0.11	0.033	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:26	SFM
Aroclor-1248 [1]	ND	0.11	0.028	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:26	SFM
Aroclor-1254 [1]	ND	0.11	0.033	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:26	SFM
Aroclor-1260 [1]	ND	0.11	0.029	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:26	SFM
Aroclor-1262 [1]	ND	0.11	0.033	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:26	SFM
Aroclor-1268 [1]	ND	0.11	0.036	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:26	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	100	30-150		6/5/23 17:26
Decachlorobiphenyl [2]	96.9	30-150		6/5/23 17:26
Tetrachloro-m-xylene [1]	89.2	30-150		6/5/23 17:26
Tetrachloro-m-xylene [2]	91.7	30-150		6/5/23 17:26

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-04D-230511 | Sampled: 5/11/2023 10:00

Sample ID: 23E1982-04

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	6000	22	16	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:20	NC
Antimony	ND	2.2	0.45	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:20	NC
Arsenic	4.0	4.3	0.73	mg/Kg dry	1	J	SW-846 6010D	6/2/23	6/3/23 15:20	NC
Barium	47	2.2	0.33	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:20	NC
Beryllium	0.43	0.22	0.064	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:20	NC
Cadmium	0.20	0.43	0.14	mg/Kg dry	1	J	SW-846 6010D	6/2/23	6/3/23 15:20	NC
Calcium	62000	220	39	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 17:36	NC
Chromium	8.5	0.87	0.32	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:20	NC
Cobalt	6.9	2.2	0.32	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:20	NC
Copper	22	0.87	0.19	mg/Kg dry	1	B-07, B-08, B	SW-846 6010D	6/2/23	6/3/23 15:20	NC
Iron	18000	220	140	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 17:36	NC
Lead	6.8	0.65	0.36	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:20	NC
Magnesium	13000	220	34	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 17:36	NC
Manganese	430	0.43	0.23	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:20	NC
Mercury	0.028	0.035	0.015	mg/Kg dry	1	J	SW-846 7471B	6/5/23	6/6/23 11:06	AAJ
Nickel	18	0.87	0.35	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:20	NC
Potassium	1300	220	40	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:20	NC
Selenium	ND	4.3	0.93	mg/Kg dry	1		SW-846 6010D	6/2/23	6/4/23 18:57	NC
Silver	1.4	0.43	0.15	mg/Kg dry	1		SW-846 6010D	6/2/23	6/4/23 18:57	NC
Sodium	110	220	39	mg/Kg dry	1	J	SW-846 6010D	6/2/23	6/3/23 15:20	NC
Thallium	ND	2.2	0.76	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:20	NC
Vanadium	15	0.87	0.27	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:20	NC
Zinc	44	0.87	0.30	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:20	NC

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-04D-230511 | Sampled: 5/11/2023 10:00

Sample ID: 23E1982-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	73.1			% Wt	1		SM 2540G	5/18/23	5/18/23 14:16	ATP
Cyanide	ND	0.64	0.46	mg/Kg dry	1		SW-846 9014	5/17/23	5/18/23 10:14	DET/MMH

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-02S-230511 | Sampled: 5/11/2023 10:25

Sample ID: 23E1982-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.10	0.11	0.010	mg/Kg dry	1	J	SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Acrylonitrile	ND	0.0068	0.0010	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0011	0.00077	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Benzene	ND	0.0023	0.00066	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Bromobenzene	ND	0.0023	0.00052	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Bromochloromethane	ND	0.0023	0.00088	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Bromodichloromethane	ND	0.0023	0.00059	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Bromoform	ND	0.0023	0.00069	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Bromomethane	ND	0.011	0.0019	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
2-Butanone (MEK)	0.015	0.045	0.0070	mg/Kg dry	1	J	SW-846 8260D	5/16/23	5/16/23 14:33	MFF
tert-Butyl Alcohol (TBA)	ND	0.11	0.045	mg/Kg dry	1	V-05	SW-846 8260D	5/16/23	5/16/23 14:33	MFF
n-Butylbenzene	ND	0.0023	0.00074	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
sec-Butylbenzene	ND	0.0023	0.0011	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
tert-Butylbenzene	ND	0.0023	0.00097	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0011	0.00088	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Carbon Disulfide	ND	0.011	0.0090	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Carbon Tetrachloride	ND	0.0023	0.00089	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Chlorobenzene	ND	0.0023	0.00063	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Chlorodibromomethane	ND	0.0011	0.00071	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Chloroethane	ND	0.023	0.0012	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Chloroform	ND	0.0045	0.00071	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Chloromethane	ND	0.011	0.0011	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
2-Chlorotoluene	ND	0.0023	0.00057	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
4-Chlorotoluene	ND	0.0023	0.00051	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0023	0.00089	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
1,2-Dibromoethane (EDB)	ND	0.0011	0.00086	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Dibromomethane	ND	0.0023	0.00078	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
1,2-Dichlorobenzene	ND	0.0023	0.00060	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
1,3-Dichlorobenzene	ND	0.0023	0.00062	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
1,4-Dichlorobenzene	ND	0.0023	0.00068	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
trans-1,4-Dichloro-2-butene	ND	0.0045	0.00070	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.023	0.0012	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
1,1-Dichloroethane	ND	0.0023	0.00077	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
1,2-Dichloroethane	ND	0.0023	0.00075	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
1,1-Dichloroethylene	ND	0.0045	0.00093	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
cis-1,2-Dichloroethylene	ND	0.0023	0.00072	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
trans-1,2-Dichloroethylene	ND	0.0023	0.00082	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
1,2-Dichloropropane	ND	0.0023	0.00070	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
1,3-Dichloropropane	ND	0.0011	0.00056	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
2,2-Dichloropropane	ND	0.0023	0.00088	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
1,1-Dichloropropene	ND	0.0023	0.0010	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
cis-1,3-Dichloropropene	ND	0.0011	0.00063	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
trans-1,3-Dichloropropene	ND	0.0011	0.00069	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Diethyl Ether	ND	0.023	0.00093	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-02S-230511 | Sampled: 5/11/2023 10:25

Sample ID: 23E1982-05

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0011	0.00077	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
1,4-Dioxane	ND	0.11	0.051	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Ethylbenzene	ND	0.0023	0.00067	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Hexachlorobutadiene	ND	0.0023	0.00095	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
2-Hexanone (MBK)	ND	0.023	0.0057	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Isopropylbenzene (Cumene)	ND	0.0023	0.00070	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0023	0.00070	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Methyl Acetate	ND	0.0023	0.0016	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0045	0.00076	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Methyl Cyclohexane	ND	0.0023	0.00088	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Methylene Chloride	ND	0.023	0.0011	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.023	0.0050	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Naphthalene	ND	0.0045	0.00081	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
n-Propylbenzene	ND	0.0023	0.00054	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Styrene	ND	0.0023	0.00056	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
1,1,1,2-Tetrachloroethane	ND	0.0023	0.00061	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
1,1,2,2-Tetrachloroethane	ND	0.0011	0.00062	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Tetrachloroethylene	ND	0.0023	0.00095	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Tetrahydrofuran	ND	0.011	0.0040	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Toluene	ND	0.0023	0.00076	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
1,2,3-Trichlorobenzene	ND	0.0023	0.00064	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
1,2,4-Trichlorobenzene	ND	0.0023	0.00068	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
1,3,5-Trichlorobenzene	ND	0.0023	0.00064	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
1,1,1-Trichloroethane	ND	0.0023	0.00086	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
1,1,2-Trichloroethane	ND	0.0023	0.00060	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Trichloroethylene	ND	0.0023	0.00091	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Trichlorofluoromethane (Freon 11)	ND	0.011	0.00084	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
1,2,3-Trichloropropane	ND	0.0023	0.0010	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.011	0.00097	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
1,2,4-Trimethylbenzene	ND	0.0023	0.00086	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
1,3,5-Trimethylbenzene	ND	0.0023	0.00066	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
Vinyl Chloride	ND	0.011	0.00083	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
m+p Xylene	ND	0.0045	0.0016	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF
o-Xylene	ND	0.0023	0.00063	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:33	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	95.3	70-130		5/16/23 14:33
Toluene-d8	98.5	70-130		5/16/23 14:33
4-Bromofluorobenzene	84.6	70-130		5/16/23 14:33

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-02S-230511 | Sampled: 5/11/2023 10:25

Sample ID: 23E1982-05

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.26	0.099	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Acenaphthylene	ND	0.26	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Acetophenone	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Aniline	ND	0.52	0.088	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Anthracene	ND	0.26	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Benzidine	ND	1.0	0.32	mg/Kg dry	1	V-05, V-35	SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Benzo(a)anthracene	ND	0.26	0.093	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Benzo(a)pyrene	ND	0.26	0.085	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Benzo(b)fluoranthene	ND	0.26	0.087	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Benzo(g,h,i)perylene	ND	0.26	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Benzo(k)fluoranthene	ND	0.26	0.093	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Benzoic Acid	ND	1.5	0.45	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Bis(2-chloroethoxy)methane	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Bis(2-chloroethyl)ether	ND	0.52	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Bis(2-chloroisopropyl)ether	ND	0.52	0.22	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Bis(2-Ethylhexyl)phthalate	ND	0.52	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
4-Bromophenylphenylether	ND	0.52	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Butylbenzylphthalate	ND	0.52	0.097	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Carbazole	ND	0.26	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
4-Chloroaniline	ND	1.0	0.092	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
4-Chloro-3-methylphenol	ND	1.0	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
2-Chloronaphthalene	ND	0.52	0.091	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
2-Chlorophenol	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
4-Chlorophenylphenylether	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Chrysene	ND	0.26	0.093	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Dibenz(a,h)anthracene	ND	0.26	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Dibenzofuran	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Di-n-butylphthalate	ND	0.52	0.094	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
1,2-Dichlorobenzene	ND	0.52	0.099	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 15:25	AR2
1,3-Dichlorobenzene	ND	0.52	0.096	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 15:25	AR2
1,4-Dichlorobenzene	ND	0.52	0.098	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 15:25	AR2
3,3-Dichlorobenzidine	ND	0.26	0.068	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
2,4-Dichlorophenol	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Diethylphthalate	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
2,4-Dimethylphenol	ND	0.52	0.13	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Dimethylphthalate	ND	0.52	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
4,6-Dinitro-2-methylphenol	ND	0.52	0.42	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
2,4-Dinitrophenol	ND	1.0	0.45	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
2,4-Dinitrotoluene	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
2,6-Dinitrotoluene	ND	0.52	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Di-n-octylphthalate	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
1,2-Diphenylhydrazine/Azobenzene	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Fluoranthene	0.15	0.26	0.092	mg/Kg dry	1	J	SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Fluorene	ND	0.26	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-02S-230511 | Sampled: 5/11/2023 10:25

Sample ID: 23E1982-05

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.52	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Hexachlorobutadiene	ND	0.52	0.10	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Hexachlorocyclopentadiene	ND	0.52	0.33	mg/Kg dry	1	L-04, V-05	SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Hexachloroethane	ND	0.52	0.10	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Indeno(1,2,3-cd)pyrene	ND	0.26	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Isophorone	ND	0.52	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
1-Methylnaphthalene	ND	0.26	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
2-Methylnaphthalene	ND	0.26	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
2-Methylphenol	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
3/4-Methylphenol	ND	0.52	0.11	mg/Kg dry	1	R-05	SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Naphthalene	ND	0.26	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
2-Nitroaniline	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
3-Nitroaniline	ND	0.52	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
4-Nitroaniline	ND	0.52	0.087	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Nitrobenzene	ND	0.52	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
2-Nitrophenol	ND	0.52	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
4-Nitrophenol	ND	1.0	0.22	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
N-Nitrosodimethylamine	ND	0.52	0.15	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
N-Nitrosodiphenylamine/Diphenylamine	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
N-Nitrosodi-n-propylamine	ND	0.52	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Pentachloronitrobenzene	ND	0.52	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Pentachlorophenol	ND	0.52	0.23	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Phenanthrene	0.12	0.26	0.10	mg/Kg dry	1	J	SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Phenol	ND	0.52	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Pyrene	0.13	0.26	0.10	mg/Kg dry	1	J	SW-846 8270E	5/25/23	5/31/23 15:25	AR2
Pyridine	ND	0.52	0.083	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 15:25	AR2
1,2,4,5-Tetrachlorobenzene	ND	0.52	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
1,2,4-Trichlorobenzene	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
2,4,5-Trichlorophenol	ND	0.52	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2
2,4,6-Trichlorophenol	ND	0.52	0.098	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:25	AR2

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
2-Fluorophenol	41.2		30-130		5/31/23 15:25
Phenol-d6	49.3		30-130		5/31/23 15:25
Nitrobenzene-d5	**19.0**	*	30-130	S-07	5/31/23 15:25
2-Fluorobiphenyl	50.8		30-130		5/31/23 15:25
2,4,6-Tribromophenol	**10.6**	*	30-130	S-07	5/31/23 15:25
p-Terphenyl-d14	52.6		30-130		5/31/23 15:25

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-02S-230511 | Sampled: 5/11/2023 10:25

Sample ID: 23E1982-05

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.030	0.0091	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 12:04	TG
Aldrin [1]	ND	0.0076	0.00075	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 12:04	TG
alpha-BHC [1]	ND	0.0076	0.0041	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 12:04	TG
beta-BHC [1]	ND	0.0076	0.0034	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 12:04	TG
delta-BHC [1]	ND	0.0076	0.0050	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 21:27	TG
gamma-BHC (Lindane) [1]	ND	0.0030	0.00064	mg/Kg dry	1	R-06	SW-846 8081B	5/25/23	6/3/23 12:04	TG
Chlordane [2]	ND	0.030	0.012	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 12:04	TG
4,4'-DDD [1]	ND	0.0061	0.00068	mg/Kg dry	1	R-06	SW-846 8081B	5/25/23	6/3/23 12:04	TG
4,4'-DDE [1]	ND	0.0061	0.00071	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 12:04	TG
4,4'-DDT [1]	ND	0.0061	0.00065	mg/Kg dry	1	R-06	SW-846 8081B	5/25/23	6/3/23 12:04	TG
Dieldrin [1]	ND	0.0061	0.00059	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 12:04	TG
Endosulfan I [1]	ND	0.0076	0.0037	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 12:04	TG
Endosulfan II [1]	ND	0.012	0.0037	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 12:04	TG
Endosulfan sulfate [1]	ND	0.012	0.0038	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 21:27	TG
Endrin [1]	ND	0.012	0.0038	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 12:04	TG
Endrin aldehyde [1]	ND	0.012	0.0074	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 21:27	TG
Endrin ketone [1]	ND	0.012	0.0035	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 12:04	TG
Heptachlor [1]	ND	0.0076	0.00074	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 12:04	TG
Heptachlor epoxide [1]	ND	0.0076	0.00068	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 12:04	TG
Hexachlorobenzene [1]	ND	0.0091	0.0051	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 12:04	TG
Methoxychlor [1]	ND	0.076	0.0094	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 12:04	TG
Toxaphene [1]	ND	0.15	0.074	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 12:04	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	88.0	30-150		6/3/23 12:04
Decachlorobiphenyl [2]	87.7	30-150		6/3/23 12:04
Tetrachloro-m-xylene [1]	85.9	30-150		6/3/23 12:04
Tetrachloro-m-xylene [2]	76.0	30-150		6/3/23 12:04

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-02S-230511 | Sampled: 5/11/2023 10:25

Sample ID: 23E1982-05

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.12	0.032	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:43	SFM
Aroclor-1221 [1]	ND	0.12	0.065	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:43	SFM
Aroclor-1232 [1]	ND	0.12	0.040	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:43	SFM
Aroclor-1242 [1]	ND	0.12	0.037	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:43	SFM
Aroclor-1248 [1]	ND	0.12	0.031	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:43	SFM
Aroclor-1254 [1]	ND	0.12	0.037	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:43	SFM
Aroclor-1260 [1]	ND	0.12	0.033	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:43	SFM
Aroclor-1262 [1]	ND	0.12	0.036	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:43	SFM
Aroclor-1268 [1]	ND	0.12	0.040	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:43	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	99.6	30-150		6/5/23 17:43
Decachlorobiphenyl [2]	96.5	30-150		6/5/23 17:43
Tetrachloro-m-xylene [1]	90.8	30-150		6/5/23 17:43
Tetrachloro-m-xylene [2]	93.0	30-150		6/5/23 17:43

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-02S-230511 | Sampled: 5/11/2023 10:25

Sample ID: 23E1982-05

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	9800	25	18	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:27	NC
Antimony	ND	2.5	0.51	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:27	NC
Arsenic	6.3	5.0	0.83	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:27	NC
Barium	69	2.5	0.38	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:27	NC
Beryllium	0.64	0.25	0.074	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:27	NC
Cadmium	0.26	0.50	0.16	mg/Kg dry	1	J	SW-846 6010D	6/2/23	6/3/23 15:27	NC
Calcium	47000	250	45	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 17:53	NC
Chromium	13	0.99	0.37	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:27	NC
Cobalt	9.7	2.5	0.36	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:27	NC
Copper	33	0.99	0.22	mg/Kg dry	1	B-07, B-08, B	SW-846 6010D	6/2/23	6/3/23 15:27	NC
Iron	24000	250	160	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 17:53	NC
Lead	12	0.74	0.41	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:27	NC
Magnesium	10000	250	39	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 17:53	NC
Manganese	490	0.50	0.26	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:27	NC
Mercury	0.045	0.038	0.016	mg/Kg dry	1		SW-846 7471B	6/5/23	6/6/23 11:08	AAJ
Nickel	26	0.99	0.40	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:27	NC
Potassium	2000	250	45	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:27	NC
Selenium	ND	5.0	1.1	mg/Kg dry	1		SW-846 6010D	6/2/23	6/4/23 19:02	NC
Silver	2.1	0.50	0.17	mg/Kg dry	1		SW-846 6010D	6/2/23	6/4/23 19:02	NC
Sodium	98	250	44	mg/Kg dry	1	J	SW-846 6010D	6/2/23	6/3/23 15:27	NC
Thallium	ND	2.5	0.86	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:27	NC
Vanadium	21	0.99	0.31	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:27	NC
Zinc	62	0.99	0.34	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:27	NC

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

Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-02S-230511 | Sampled: 5/11/2023 10:25

Sample ID: 23E1982-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	65.7			% Wt	1		SM 2540G	5/18/23	5/18/23 14:16	ATP
Cyanide	ND	0.66	0.47	mg/Kg dry	1		SW-846 9014	5/17/23	5/18/23 10:14	DET/MMH

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-02D-230511 | Sampled: 5/11/2023 10:35

Sample ID: 23E1982-06

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.065	0.0059	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Acrylonitrile	ND	0.0039	0.00058	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00065	0.00044	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Benzene	ND	0.0013	0.00038	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Bromobenzene	ND	0.0013	0.00030	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Bromochloromethane	ND	0.0013	0.00051	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Bromodichloromethane	ND	0.0013	0.00034	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Bromoform	ND	0.0013	0.00040	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Bromomethane	ND	0.0065	0.0011	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
2-Butanone (MEK)	ND	0.026	0.0041	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
tert-Butyl Alcohol (TBA)	ND	0.065	0.026	mg/Kg dry	1	V-05	SW-846 8260D	5/18/23	5/18/23 6:55	MFF
n-Butylbenzene	ND	0.0013	0.00042	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
sec-Butylbenzene	ND	0.0013	0.00061	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
tert-Butylbenzene	ND	0.0013	0.00056	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00065	0.00051	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Carbon Disulfide	ND	0.0065	0.0052	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Carbon Tetrachloride	ND	0.0013	0.00051	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Chlorobenzene	ND	0.0013	0.00036	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Chlorodibromomethane	ND	0.00065	0.00041	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Chloroethane	ND	0.013	0.00072	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Chloroform	ND	0.0026	0.00041	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Chloromethane	ND	0.0065	0.00064	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
2-Chlorotoluene	ND	0.0013	0.00033	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
4-Chlorotoluene	ND	0.0013	0.00029	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0013	0.00051	mg/Kg dry	1	V-05	SW-846 8260D	5/18/23	5/18/23 6:55	MFF
1,2-Dibromoethane (EDB)	ND	0.00065	0.00050	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Dibromomethane	ND	0.0013	0.00045	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
1,2-Dichlorobenzene	ND	0.0013	0.00034	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
1,3-Dichlorobenzene	ND	0.0013	0.00036	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
1,4-Dichlorobenzene	ND	0.0013	0.00039	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
trans-1,4-Dichloro-2-butene	ND	0.0026	0.00040	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.013	0.00067	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
1,1-Dichloroethane	ND	0.0013	0.00045	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
1,2-Dichloroethane	ND	0.0013	0.00043	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
1,1-Dichloroethylene	ND	0.0026	0.00053	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
cis-1,2-Dichloroethylene	ND	0.0013	0.00041	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
trans-1,2-Dichloroethylene	ND	0.0013	0.00047	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
1,2-Dichloropropane	ND	0.0013	0.00040	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
1,3-Dichloropropane	ND	0.00065	0.00032	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
2,2-Dichloropropane	ND	0.0013	0.00051	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
1,1-Dichloropropene	ND	0.0013	0.00058	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
cis-1,3-Dichloropropene	ND	0.00065	0.00036	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
trans-1,3-Dichloropropene	ND	0.00065	0.00040	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Diethyl Ether	ND	0.013	0.00053	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-02D-230511 | Sampled: 5/11/2023 10:35

Sample ID: 23E1982-06

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00065	0.00044	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
1,4-Dioxane	ND	0.065	0.030	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Ethylbenzene	ND	0.0013	0.00039	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Hexachlorobutadiene	ND	0.0013	0.00054	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
2-Hexanone (MBK)	ND	0.013	0.0033	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Isopropylbenzene (Cumene)	ND	0.0013	0.00040	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0013	0.00040	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Methyl Acetate	ND	0.0013	0.00093	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0026	0.00044	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Methyl Cyclohexane	ND	0.0013	0.00050	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Methylene Chloride	ND	0.013	0.00062	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.013	0.0029	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Naphthalene	ND	0.0026	0.00047	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
n-Propylbenzene	ND	0.0013	0.00031	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Styrene	ND	0.0013	0.00032	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
1,1,1,2-Tetrachloroethane	ND	0.0013	0.00035	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
1,1,2,2-Tetrachloroethane	ND	0.00065	0.00036	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Tetrachloroethylene	ND	0.0013	0.00055	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Tetrahydrofuran	ND	0.0065	0.0023	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Toluene	ND	0.0013	0.00044	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
1,2,3-Trichlorobenzene	ND	0.0013	0.00037	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
1,2,4-Trichlorobenzene	ND	0.0013	0.00039	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
1,3,5-Trichlorobenzene	ND	0.0013	0.00037	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
1,1,1-Trichloroethane	ND	0.0013	0.00050	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
1,1,2-Trichloroethane	ND	0.0013	0.00035	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Trichloroethylene	ND	0.0013	0.00052	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0065	0.00048	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
1,2,3-Trichloropropane	ND	0.0013	0.00057	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0065	0.00056	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
1,2,4-Trimethylbenzene	ND	0.0013	0.00050	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
1,3,5-Trimethylbenzene	ND	0.0013	0.00038	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
Vinyl Chloride	ND	0.0065	0.00048	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
m+p Xylene	ND	0.0026	0.00093	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF
o-Xylene	ND	0.0013	0.00036	mg/Kg dry	1		SW-846 8260D	5/18/23	5/18/23 6:55	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
1,2-Dichloroethane-d4	96.3	70-130		5/18/23	6:55
Toluene-d8	98.5	70-130		5/18/23	6:55
4-Bromofluorobenzene	97.0	70-130		5/18/23	6:55

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-02D-230511 | Sampled: 5/11/2023 10:35

Sample ID: 23E1982-06

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.23	0.086	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Acenaphthylene	ND	0.23	0.088	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Acetophenone	ND	0.45	0.088	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Aniline	ND	0.45	0.077	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Anthracene	ND	0.23	0.087	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Benzidine	ND	0.88	0.28	mg/Kg dry	1	V-05, V-35	SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Benzo(a)anthracene	ND	0.23	0.081	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Benzo(a)pyrene	0.075	0.23	0.075	mg/Kg dry	1	J	SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Benzo(b)fluoranthene	0.11	0.23	0.076	mg/Kg dry	1	J	SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Benzo(g,h,i)perylene	ND	0.23	0.094	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Benzo(k)fluoranthene	ND	0.23	0.081	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Benzoic Acid	ND	1.3	0.40	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Bis(2-chloroethoxy)methane	ND	0.45	0.088	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Bis(2-chloroethyl)ether	ND	0.45	0.095	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Bis(2-chloroisopropyl)ether	ND	0.45	0.19	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Bis(2-Ethylhexyl)phthalate	ND	0.45	0.092	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
4-Bromophenylphenylether	ND	0.45	0.093	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Butylbenzylphthalate	ND	0.45	0.085	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Carbazole	ND	0.23	0.088	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
4-Chloroaniline	ND	0.88	0.080	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
4-Chloro-3-methylphenol	ND	0.88	0.089	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
2-Chloronaphthalene	ND	0.45	0.080	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
2-Chlorophenol	ND	0.45	0.091	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
4-Chlorophenylphenylether	ND	0.45	0.087	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Chrysene	0.093	0.23	0.081	mg/Kg dry	1	J	SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Dibenz(a,h)anthracene	ND	0.23	0.087	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Dibenzofuran	ND	0.45	0.089	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Di-n-butylphthalate	ND	0.45	0.082	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
1,2-Dichlorobenzene	ND	0.45	0.086	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 15:45	AR2
1,3-Dichlorobenzene	ND	0.45	0.084	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 15:45	AR2
1,4-Dichlorobenzene	ND	0.45	0.085	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 15:45	AR2
3,3-Dichlorobenzidine	ND	0.23	0.059	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
2,4-Dichlorophenol	ND	0.45	0.087	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Diethylphthalate	ND	0.45	0.087	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
2,4-Dimethylphenol	ND	0.45	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Dimethylphthalate	ND	0.45	0.093	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
4,6-Dinitro-2-methylphenol	ND	0.45	0.37	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
2,4-Dinitrophenol	ND	0.88	0.39	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
2,4-Dinitrotoluene	ND	0.45	0.090	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
2,6-Dinitrotoluene	ND	0.45	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Di-n-octylphthalate	ND	0.45	0.089	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
1,2-Diphenylhydrazine/Azobenzene	ND	0.45	0.088	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Fluoranthene	0.18	0.23	0.080	mg/Kg dry	1	J	SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Fluorene	ND	0.23	0.088	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-02D-230511 | Sampled: 5/11/2023 10:35

Sample ID: 23E1982-06

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.45	0.094	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Hexachlorobutadiene	ND	0.45	0.091	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Hexachlorocyclopentadiene	ND	0.45	0.29	mg/Kg dry	1	L-04, V-05	SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Hexachloroethane	ND	0.45	0.088	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Indeno(1,2,3-cd)pyrene	ND	0.23	0.099	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Isophorone	ND	0.45	0.092	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
1-Methylnaphthalene	ND	0.23	0.092	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
2-Methylnaphthalene	ND	0.23	0.088	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
2-Methylphenol	ND	0.45	0.090	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
3/4-Methylphenol	ND	0.45	0.098	mg/Kg dry	1	R-05	SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Naphthalene	ND	0.23	0.090	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
2-Nitroaniline	ND	0.45	0.090	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
3-Nitroaniline	ND	0.45	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
4-Nitroaniline	ND	0.45	0.076	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Nitrobenzene	ND	0.45	0.097	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
2-Nitrophenol	ND	0.45	0.093	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
4-Nitrophenol	ND	0.88	0.19	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
N-Nitrosodimethylamine	ND	0.45	0.13	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
N-Nitrosodiphenylamine/Diphenylamine	ND	0.45	0.091	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
N-Nitrosodi-n-propylamine	ND	0.45	0.098	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Pentachloronitrobenzene	ND	0.45	0.095	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Pentachlorophenol	ND	0.45	0.20	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Phenanthrene	0.13	0.23	0.088	mg/Kg dry	1	J	SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Phenol	ND	0.45	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Pyrene	0.18	0.23	0.090	mg/Kg dry	1	J	SW-846 8270E	5/25/23	5/31/23 15:45	AR2
Pyridine	ND	0.45	0.072	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 15:45	AR2
1,2,4,5-Tetrachlorobenzene	ND	0.45	0.092	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
1,2,4-Trichlorobenzene	ND	0.45	0.088	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
2,4,5-Trichlorophenol	ND	0.45	0.087	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2
2,4,6-Trichlorophenol	ND	0.45	0.086	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 15:45	AR2

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
2-Fluorophenol	43.9		30-130		5/31/23 15:45
Phenol-d6	52.0		30-130		5/31/23 15:45
Nitrobenzene-d5	**12.0**	*	30-130	S-07	5/31/23 15:45
2-Fluorobiphenyl	59.2		30-130		5/31/23 15:45
2,4,6-Tribromophenol	**21.3**	*	30-130	S-07	5/31/23 15:45
p-Terphenyl-d14	60.7		30-130		5/31/23 15:45

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-02D-230511 | Sampled: 5/11/2023 10:35

Sample ID: 23E1982-06

Sample Matrix: Soil

Sample Flags: DL-03

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.26	0.077	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:31	TG
Aldrin [1]	ND	0.064	0.0064	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:31	TG
alpha-BHC [1]	ND	0.064	0.035	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:31	TG
beta-BHC [1]	ND	0.064	0.029	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:31	TG
delta-BHC [1]	ND	0.064	0.043	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 21:53	TG
gamma-BHC (Lindane) [1]	ND	0.026	0.0055	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:31	TG
Chlordane [2]	ND	0.26	0.11	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:31	TG
4,4'-DDD [1]	ND	0.052	0.0057	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:31	TG
4,4'-DDE [1]	ND	0.052	0.0060	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:31	TG
4,4'-DDT [1]	ND	0.052	0.0055	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:31	TG
Dieldrin [1]	ND	0.052	0.0050	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:31	TG
Endosulfan I [1]	ND	0.064	0.031	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:31	TG
Endosulfan II [1]	ND	0.10	0.031	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:31	TG
Endosulfan sulfate [1]	ND	0.10	0.032	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 21:53	TG
Endrin [1]	ND	0.10	0.032	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:31	TG
Endrin aldehyde [1]	ND	0.10	0.063	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 21:53	TG
Endrin ketone [1]	ND	0.10	0.030	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:31	TG
Heptachlor [1]	ND	0.064	0.0063	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:31	TG
Heptachlor epoxide [1]	ND	0.064	0.0058	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:31	TG
Hexachlorobenzene [1]	ND	0.077	0.043	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:31	TG
Methoxychlor [1]	ND	0.64	0.080	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:31	TG
Toxaphene [1]	ND	1.3	0.63	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:31	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	75.7	30-150		6/3/23 12:31
Decachlorobiphenyl [2]	75.6	30-150		6/3/23 12:31
Tetrachloro-m-xylene [1]	74.3	30-150		6/3/23 12:31
Tetrachloro-m-xylene [2]	67.9	30-150		6/3/23 12:31

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-02D-230511 | Sampled: 5/11/2023 10:35

Sample ID: 23E1982-06

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	0.027	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:59	SFM
Aroclor-1221 [1]	ND	0.10	0.055	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:59	SFM
Aroclor-1232 [1]	ND	0.10	0.034	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:59	SFM
Aroclor-1242 [1]	ND	0.10	0.031	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:59	SFM
Aroclor-1248 [1]	ND	0.10	0.026	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:59	SFM
Aroclor-1254 [1]	ND	0.10	0.031	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:59	SFM
Aroclor-1260 [1]	ND	0.10	0.028	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:59	SFM
Aroclor-1262 [1]	ND	0.10	0.031	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:59	SFM
Aroclor-1268 [1]	ND	0.10	0.034	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 17:59	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	96.4	30-150		6/5/23 17:59
Decachlorobiphenyl [2]	93.3	30-150		6/5/23 17:59
Tetrachloro-m-xylene [1]	89.0	30-150		6/5/23 17:59
Tetrachloro-m-xylene [2]	90.8	30-150		6/5/23 17:59

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-02D-230511 | Sampled: 5/11/2023 10:35

Sample ID: 23E1982-06

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	8800	21	16	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:34	NC
Antimony	ND	2.1	0.44	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:34	NC
Arsenic	5.0	4.3	0.72	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:34	NC
Barium	60	2.1	0.33	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:34	NC
Beryllium	0.59	0.21	0.063	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:34	NC
Cadmium	0.28	0.43	0.14	mg/Kg dry	1	J	SW-846 6010D	6/2/23	6/3/23 15:34	NC
Calcium	46000	210	38	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 17:59	NC
Chromium	12	0.85	0.31	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:34	NC
Cobalt	9.7	2.1	0.31	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:34	NC
Copper	34	0.85	0.19	mg/Kg dry	1	B-08, B-07, B	SW-846 6010D	6/2/23	6/3/23 15:34	NC
Iron	23000	210	140	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 17:59	NC
Lead	12	0.64	0.35	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:34	NC
Magnesium	11000	210	33	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 17:59	NC
Manganese	500	0.43	0.23	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:34	NC
Mercury	0.033	0.033	0.014	mg/Kg dry	1	J	SW-846 7471B	6/5/23	6/6/23 11:14	AAJ
Nickel	25	0.85	0.34	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:34	NC
Potassium	1600	210	39	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:34	NC
Selenium	ND	4.3	0.91	mg/Kg dry	1		SW-846 6010D	6/2/23	6/4/23 19:07	NC
Silver	1.9	0.43	0.14	mg/Kg dry	1		SW-846 6010D	6/2/23	6/4/23 19:07	NC
Sodium	85	210	38	mg/Kg dry	1	J	SW-846 6010D	6/2/23	6/3/23 15:34	NC
Thallium	ND	2.1	0.74	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:34	NC
Vanadium	19	0.85	0.27	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:34	NC
Zinc	63	0.85	0.29	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:34	NC

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-02D-230511 | Sampled: 5/11/2023 10:35

Sample ID: 23E1982-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	75.3			% Wt	1		SM 2540G	5/18/23	5/18/23 14:16	ATP
Cyanide	ND	0.60	0.43	mg/Kg dry	1		SW-846 9014	5/17/23	5/18/23 10:14	DET/MMH

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-01S-230511 | Sampled: 5/11/2023 11:00

Sample ID: 23E1982-07

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.22	4.5	0.18	mg/Kg dry	1	J	SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Acrylonitrile	ND	0.45	0.042	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.045	0.012	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Benzene	ND	0.091	0.017	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Bromobenzene	ND	0.091	0.013	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Bromochloromethane	ND	0.091	0.026	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Bromodichloromethane	ND	0.091	0.014	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Bromoform	ND	0.091	0.037	mg/Kg dry	1	V-05	SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Bromomethane	ND	0.18	0.12	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
2-Butanone (MEK)	ND	1.8	0.15	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
tert-Butyl Alcohol (TBA)	ND	1.8	0.39	mg/Kg dry	1	V-05	SW-846 8260D	5/17/23	5/20/23 4:01	EEH
n-Butylbenzene	ND	0.091	0.014	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
sec-Butylbenzene	ND	0.091	0.011	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
tert-Butylbenzene	ND	0.091	0.013	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.045	0.014	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Carbon Disulfide	ND	0.45	0.14	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Carbon Tetrachloride	ND	0.091	0.015	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Chlorobenzene	ND	0.091	0.011	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Chlorodibromomethane	ND	0.045	0.018	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Chloroethane	ND	0.18	0.031	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Chloroform	ND	0.18	0.013	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Chloromethane	0.049	0.18	0.046	mg/Kg dry	1	J	SW-846 8260D	5/17/23	5/20/23 4:01	EEH
2-Chlorotoluene	ND	0.091	0.014	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
4-Chlorotoluene	ND	0.091	0.014	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.45	0.077	mg/Kg dry	1	V-05	SW-846 8260D	5/17/23	5/20/23 4:01	EEH
1,2-Dibromoethane (EDB)	ND	0.045	0.015	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Dibromomethane	ND	0.091	0.029	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
1,2-Dichlorobenzene	ND	0.091	0.012	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
1,3-Dichlorobenzene	ND	0.091	0.012	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
1,4-Dichlorobenzene	ND	0.091	0.012	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
trans-1,4-Dichloro-2-butene	ND	0.18	0.14	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Dichlorodifluoromethane (Freon 12)	ND	0.18	0.015	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
1,1-Dichloroethane	ND	0.091	0.012	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
1,2-Dichloroethane	ND	0.091	0.028	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
1,1-Dichloroethylene	ND	0.091	0.013	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
cis-1,2-Dichloroethylene	ND	0.091	0.013	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
trans-1,2-Dichloroethylene	ND	0.091	0.016	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
1,2-Dichloropropane	ND	0.091	0.018	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
1,3-Dichloropropane	ND	0.045	0.010	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
2,2-Dichloropropane	ND	0.091	0.032	mg/Kg dry	1	V-05	SW-846 8260D	5/17/23	5/20/23 4:01	EEH
1,1-Dichloropropene	ND	0.18	0.014	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
cis-1,3-Dichloropropene	ND	0.045	0.015	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
trans-1,3-Dichloropropene	ND	0.045	0.013	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Diethyl Ether	ND	0.18	0.013	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-01S-230511 | Sampled: 5/11/2023 11:00

Sample ID: 23E1982-07

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.045	0.018	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
1,4-Dioxane	ND	4.5	1.6	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Ethylbenzene	ND	0.091	0.020	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Hexachlorobutadiene	ND	0.091	0.043	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
2-Hexanone (MBK)	ND	0.91	0.11	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Isopropylbenzene (Cumene)	ND	0.091	0.014	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
p-Isopropyltoluene (p-Cymene)	0.014	0.091	0.011	mg/Kg dry	1	J	SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Methyl Acetate	0.069	0.91	0.055	mg/Kg dry	1	J, V-05	SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.091	0.015	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Methyl Cyclohexane	ND	0.091	0.014	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Methylene Chloride	ND	0.45	0.016	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
4-Methyl-2-pentanone (MIBK)	ND	0.91	0.12	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Naphthalene	ND	0.18	0.034	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
n-Propylbenzene	ND	0.091	0.011	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Styrene	ND	0.091	0.014	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
1,1,1,2-Tetrachloroethane	ND	0.091	0.015	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
1,1,2,2-Tetrachloroethane	ND	0.045	0.012	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Tetrachloroethylene	ND	0.091	0.015	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Tetrahydrofuran	ND	0.91	0.044	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Toluene	0.024	0.091	0.020	mg/Kg dry	1	J	SW-846 8260D	5/17/23	5/20/23 4:01	EEH
1,2,3-Trichlorobenzene	ND	0.45	0.031	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
1,2,4-Trichlorobenzene	ND	0.091	0.027	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
1,3,5-Trichlorobenzene	ND	0.091	0.019	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
1,1,1-Trichloroethane	ND	0.091	0.014	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
1,1,2-Trichloroethane	ND	0.091	0.017	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Trichloroethylene	ND	0.091	0.016	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Trichlorofluoromethane (Freon 11)	ND	0.18	0.014	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
1,2,3-Trichloropropane	ND	0.18	0.025	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.091	0.019	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
1,2,4-Trimethylbenzene	ND	0.091	0.018	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
1,3,5-Trimethylbenzene	ND	0.091	0.014	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
Vinyl Chloride	ND	0.18	0.022	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
m+p Xylene	ND	0.18	0.045	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH
o-Xylene	ND	0.091	0.022	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:01	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	97.8	70-130		5/20/23 4:01
Toluene-d8	100	70-130		5/20/23 4:01
4-Bromofluorobenzene	98.4	70-130		5/20/23 4:01

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-01S-230511 | Sampled: 5/11/2023 11:00

Sample ID: 23E1982-07

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.30	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Acenaphthylene	ND	0.30	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Acetophenone	ND	0.60	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Aniline	ND	0.60	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Anthracene	ND	0.30	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Benzidine	ND	1.2	0.37	mg/Kg dry	1	V-05, V-35	SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Benzo(a)anthracene	ND	0.30	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Benzo(a)pyrene	ND	0.30	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Benzo(b)fluoranthene	ND	0.30	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Benzo(g,h,i)perylene	ND	0.30	0.13	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Benzo(k)fluoranthene	ND	0.30	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Benzoic Acid	ND	1.8	0.53	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Bis(2-chloroethoxy)methane	ND	0.60	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Bis(2-chloroethyl)ether	ND	0.60	0.13	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Bis(2-chloroisopropyl)ether	ND	0.60	0.25	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Bis(2-Ethylhexyl)phthalate	ND	0.60	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
4-Bromophenylphenylether	ND	0.60	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Butylbenzylphthalate	ND	0.60	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Carbazole	ND	0.30	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
4-Chloroaniline	ND	1.2	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
4-Chloro-3-methylphenol	ND	1.2	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
2-Chloronaphthalene	ND	0.60	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
2-Chlorophenol	ND	0.60	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
4-Chlorophenylphenylether	ND	0.60	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Chrysene	ND	0.30	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Dibenz(a,h)anthracene	ND	0.30	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Dibenzofuran	ND	0.60	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Di-n-butylphthalate	ND	0.60	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
1,2-Dichlorobenzene	ND	0.60	0.12	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 16:23	AR2
1,3-Dichlorobenzene	ND	0.60	0.11	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 16:23	AR2
1,4-Dichlorobenzene	ND	0.60	0.11	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 16:23	AR2
3,3-Dichlorobenzidine	ND	0.30	0.080	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
2,4-Dichlorophenol	ND	0.60	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Diethylphthalate	ND	0.60	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
2,4-Dimethylphenol	ND	0.60	0.16	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Dimethylphthalate	ND	0.60	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
4,6-Dinitro-2-methylphenol	ND	0.60	0.49	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
2,4-Dinitrophenol	ND	1.2	0.53	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
2,4-Dinitrotoluene	ND	0.60	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
2,6-Dinitrotoluene	ND	0.60	0.14	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Di-n-octylphthalate	ND	0.60	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
1,2-Diphenylhydrazine/Azobenzene	ND	0.60	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Fluoranthene	ND	0.30	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Fluorene	ND	0.30	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-01S-230511 | Sampled: 5/11/2023 11:00

Sample ID: 23E1982-07

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.60	0.13	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Hexachlorobutadiene	ND	0.60	0.12	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Hexachlorocyclopentadiene	ND	0.60	0.39	mg/Kg dry	1	L-04, V-05	SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Hexachloroethane	ND	0.60	0.12	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Indeno(1,2,3-cd)pyrene	ND	0.30	0.13	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Isophorone	ND	0.60	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
1-Methylnaphthalene	ND	0.30	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
2-Methylnaphthalene	ND	0.30	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
2-Methylphenol	ND	0.60	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
3/4-Methylphenol	ND	0.60	0.13	mg/Kg dry	1	R-05	SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Naphthalene	ND	0.30	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
2-Nitroaniline	ND	0.60	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
3-Nitroaniline	ND	0.60	0.14	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
4-Nitroaniline	ND	0.60	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Nitrobenzene	ND	0.60	0.13	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
2-Nitrophenol	ND	0.60	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
4-Nitrophenol	ND	1.2	0.25	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
N-Nitrosodimethylamine	ND	0.60	0.18	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
N-Nitrosodiphenylamine/Diphenylamine	ND	0.60	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
N-Nitrosodi-n-propylamine	ND	0.60	0.13	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Pentachloronitrobenzene	ND	0.60	0.13	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Pentachlorophenol	ND	0.60	0.27	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Phenanthrene	ND	0.30	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Phenol	ND	0.60	0.14	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Pyrene	ND	0.30	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
Pyridine	ND	0.60	0.097	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 16:23	AR2
1,2,4,5-Tetrachlorobenzene	ND	0.60	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
1,2,4-Trichlorobenzene	ND	0.60	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
2,4,5-Trichlorophenol	ND	0.60	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2
2,4,6-Trichlorophenol	ND	0.60	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 16:23	AR2

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
2-Fluorophenol	74.1		30-130		5/31/23 16:23
Phenol-d6	85.0		30-130		5/31/23 16:23
Nitrobenzene-d5	**29.2**	*	30-130	S-07	5/31/23 16:23
2-Fluorobiphenyl	81.5		30-130		5/31/23 16:23
2,4,6-Tribromophenol	**23.7**	*	30-130	S-07	5/31/23 16:23
p-Terphenyl-d14	81.0		30-130		5/31/23 16:23

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-01S-230511 | Sampled: 5/11/2023 11:00

Sample ID: 23E1982-07

Sample Matrix: Soil

Sample Flags: DL-03

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.36	0.11	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:57	TG
Aldrin [1]	ND	0.089	0.0088	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:57	TG
alpha-BHC [1]	ND	0.089	0.048	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:57	TG
beta-BHC [1]	ND	0.089	0.040	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:57	TG
delta-BHC [1]	ND	0.089	0.059	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 22:20	TG
gamma-BHC (Lindane) [1]	ND	0.036	0.0075	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:57	TG
Chlordane [2]	ND	0.36	0.15	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:57	TG
4,4'-DDD [1]	ND	0.071	0.0079	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:57	TG
4,4'-DDE [1]	ND	0.071	0.0083	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:57	TG
4,4'-DDT [1]	ND	0.071	0.0076	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:57	TG
Dieldrin [1]	ND	0.071	0.0069	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:57	TG
Endosulfan I [1]	ND	0.089	0.043	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:57	TG
Endosulfan II [1]	ND	0.14	0.043	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:57	TG
Endosulfan sulfate [1]	ND	0.14	0.044	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 22:20	TG
Endrin [1]	ND	0.14	0.044	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:57	TG
Endrin aldehyde [1]	ND	0.14	0.087	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 22:20	TG
Endrin ketone [1]	ND	0.14	0.041	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:57	TG
Heptachlor [1]	ND	0.089	0.0087	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:57	TG
Heptachlor epoxide [1]	ND	0.089	0.0080	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:57	TG
Hexachlorobenzene [1]	ND	0.11	0.060	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:57	TG
Methoxychlor [1]	ND	0.89	0.11	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:57	TG
Toxaphene [1]	ND	1.8	0.86	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 12:57	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	75.4	30-150		6/3/23 12:57
Decachlorobiphenyl [2]	77.1	30-150		6/3/23 12:57
Tetrachloro-m-xylene [1]	76.1	30-150		6/3/23 12:57
Tetrachloro-m-xylene [2]	71.5	30-150		6/3/23 12:57

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-01S-230511 | Sampled: 5/11/2023 11:00

Sample ID: 23E1982-07

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.14	0.037	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:16	SFM
Aroclor-1221 [1]	ND	0.14	0.076	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:16	SFM
Aroclor-1232 [1]	ND	0.14	0.046	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:16	SFM
Aroclor-1242 [1]	ND	0.14	0.043	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:16	SFM
Aroclor-1248 [1]	ND	0.14	0.036	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:16	SFM
Aroclor-1254 [1]	ND	0.14	0.043	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:16	SFM
Aroclor-1260 [1]	ND	0.14	0.038	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:16	SFM
Aroclor-1262 [1]	ND	0.14	0.042	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:16	SFM
Aroclor-1268 [1]	ND	0.14	0.047	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:16	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	98.2	30-150		6/5/23 18:16
Decachlorobiphenyl [2]	96.2	30-150		6/5/23 18:16
Tetrachloro-m-xylene [1]	90.9	30-150		6/5/23 18:16
Tetrachloro-m-xylene [2]	92.3	30-150		6/5/23 18:16

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-01S-230511 | Sampled: 5/11/2023 11:00

Sample ID: 23E1982-07

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	13000	28	21	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:41	NC
Antimony	ND	2.8	0.59	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:41	NC
Arsenic	8.8	5.6	0.95	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:41	NC
Barium	100	2.8	0.43	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:41	NC
Beryllium	0.84	0.28	0.084	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:41	NC
Cadmium	0.42	0.56	0.19	mg/Kg dry	1	J	SW-846 6010D	6/2/23	6/3/23 15:41	NC
Calcium	69000	280	51	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 18:04	NC
Chromium	16	1.1	0.42	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:41	NC
Cobalt	13	2.8	0.41	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:41	NC
Copper	47	1.1	0.25	mg/Kg dry	1	B-07, B-08, B	SW-846 6010D	6/2/23	6/3/23 15:41	NC
Iron	36000	280	180	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 18:04	NC
Lead	17	0.85	0.47	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:41	NC
Magnesium	11000	280	44	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 18:04	NC
Manganese	800	0.56	0.30	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:41	NC
Mercury	0.070	0.043	0.019	mg/Kg dry	1		SW-846 7471B	6/5/23	6/6/23 11:16	AAJ
Nickel	35	1.1	0.46	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:41	NC
Potassium	2500	280	51	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:41	NC
Selenium	ND	5.6	1.2	mg/Kg dry	1		SW-846 6010D	6/2/23	6/4/23 19:11	NC
Silver	2.8	0.56	0.19	mg/Kg dry	1		SW-846 6010D	6/2/23	6/4/23 19:11	NC
Sodium	130	280	50	mg/Kg dry	1	J	SW-846 6010D	6/2/23	6/3/23 15:41	NC
Thallium	ND	2.8	0.99	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:41	NC
Vanadium	28	1.1	0.35	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:41	NC
Zinc	84	1.1	0.39	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:41	NC

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-01S-230511 | Sampled: 5/11/2023 11:00

Sample ID: 23E1982-07

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	56.3			% Wt	1		SM 2540G	5/18/23	5/18/23 14:16	ATP
Cyanide	ND	0.82	0.58	mg/Kg dry	1		SW-846 9014	5/17/23	5/18/23 10:14	DET/MMH

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-01D-230511 | Sampled: 5/11/2023 11:10

Sample ID: 23E1982-08

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.18	2.9	0.12	mg/Kg dry	1	J	SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Acrylonitrile	ND	0.29	0.027	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.029	0.0077	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Benzene	ND	0.058	0.011	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Bromobenzene	ND	0.058	0.0086	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Bromochloromethane	ND	0.058	0.016	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Bromodichloromethane	ND	0.058	0.0091	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Bromoform	ND	0.058	0.024	mg/Kg dry	1	V-05	SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Bromomethane	ND	0.12	0.077	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
2-Butanone (MEK)	ND	1.2	0.097	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
tert-Butyl Alcohol (TBA)	ND	1.2	0.25	mg/Kg dry	1	V-05	SW-846 8260D	5/17/23	5/20/23 4:28	EEH
n-Butylbenzene	ND	0.058	0.0087	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
sec-Butylbenzene	ND	0.058	0.0074	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
tert-Butylbenzene	ND	0.058	0.0082	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.029	0.0089	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Carbon Disulfide	ND	0.29	0.090	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Carbon Tetrachloride	ND	0.058	0.0095	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Chlorobenzene	ND	0.058	0.0069	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Chlorodibromomethane	ND	0.029	0.012	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Chloroethane	ND	0.12	0.020	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Chloroform	ND	0.12	0.0081	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Chloromethane	ND	0.12	0.029	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
2-Chlorotoluene	ND	0.058	0.0090	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
4-Chlorotoluene	ND	0.058	0.0089	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.29	0.049	mg/Kg dry	1	V-05	SW-846 8260D	5/17/23	5/20/23 4:28	EEH
1,2-Dibromoethane (EDB)	ND	0.029	0.0093	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Dibromomethane	ND	0.058	0.018	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
1,2-Dichlorobenzene	ND	0.058	0.0075	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
1,3-Dichlorobenzene	ND	0.058	0.0079	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
1,4-Dichlorobenzene	ND	0.058	0.0074	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
trans-1,4-Dichloro-2-butene	ND	0.12	0.087	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Dichlorodifluoromethane (Freon 12)	ND	0.12	0.0093	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
1,1-Dichloroethane	ND	0.058	0.0079	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
1,2-Dichloroethane	ND	0.058	0.018	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
1,1-Dichloroethylene	ND	0.058	0.0082	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
cis-1,2-Dichloroethylene	ND	0.058	0.0081	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
trans-1,2-Dichloroethylene	ND	0.058	0.0099	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
1,2-Dichloropropane	ND	0.058	0.011	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
1,3-Dichloropropane	ND	0.029	0.0067	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
2,2-Dichloropropane	ND	0.058	0.020	mg/Kg dry	1	V-05	SW-846 8260D	5/17/23	5/20/23 4:28	EEH
1,1-Dichloropropene	ND	0.12	0.0087	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
cis-1,3-Dichloropropene	ND	0.029	0.0095	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
trans-1,3-Dichloropropene	ND	0.029	0.0082	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Diethyl Ether	ND	0.12	0.0084	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-01D-230511 | Sampled: 5/11/2023 11:10

Sample ID: 23E1982-08

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.029	0.012	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
1,4-Dioxane	ND	2.9	1.0	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Ethylbenzene	ND	0.058	0.013	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Hexachlorobutadiene	ND	0.058	0.027	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
2-Hexanone (MBK)	ND	0.58	0.069	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Isopropylbenzene (Cumene)	ND	0.058	0.0088	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
p-Isopropyltoluene (p-Cymene)	0.014	0.058	0.0073	mg/Kg dry	1	J	SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Methyl Acetate	0.062	0.58	0.035	mg/Kg dry	1	J, V-05	SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Methyl tert-Butyl Ether (MTBE)	ND	0.058	0.0099	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Methyl Cyclohexane	0.016	0.058	0.0090	mg/Kg dry	1	J	SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Methylene Chloride	ND	0.29	0.010	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
4-Methyl-2-pentanone (MIBK)	ND	0.58	0.077	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Naphthalene	ND	0.12	0.022	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
n-Propylbenzene	ND	0.058	0.0072	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Styrene	ND	0.058	0.0087	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
1,1,1,2-Tetrachloroethane	ND	0.058	0.0094	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
1,1,2,2-Tetrachloroethane	ND	0.029	0.0079	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Tetrachloroethylene	ND	0.058	0.0098	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Tetrahydrofuran	ND	0.58	0.028	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Toluene	0.015	0.058	0.013	mg/Kg dry	1	J	SW-846 8260D	5/17/23	5/20/23 4:28	EEH
1,2,3-Trichlorobenzene	ND	0.29	0.020	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
1,2,4-Trichlorobenzene	ND	0.058	0.017	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
1,3,5-Trichlorobenzene	ND	0.058	0.012	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
1,1,1-Trichloroethane	ND	0.058	0.0087	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
1,1,2-Trichloroethane	ND	0.058	0.011	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Trichloroethylene	ND	0.058	0.010	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Trichlorofluoromethane (Freon 11)	ND	0.12	0.0090	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
1,2,3-Trichloropropane	ND	0.12	0.016	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.058	0.012	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
1,2,4-Trimethylbenzene	ND	0.058	0.012	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
1,3,5-Trimethylbenzene	ND	0.058	0.0087	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
Vinyl Chloride	ND	0.12	0.014	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
m+p Xylene	ND	0.12	0.028	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH
o-Xylene	ND	0.058	0.014	mg/Kg dry	1		SW-846 8260D	5/17/23	5/20/23 4:28	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	98.2	70-130		5/20/23 4:28
Toluene-d8	101	70-130		5/20/23 4:28
4-Bromofluorobenzene	98.7	70-130		5/20/23 4:28

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-01D-230511 | Sampled: 5/11/2023 11:10

Sample ID: 23E1982-08

Sample Matrix: Soil

Sample Flags: H-06

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.23	0.086	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Acenaphthylene	ND	0.23	0.089	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Acetophenone	ND	0.45	0.089	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Aniline	ND	0.45	0.077	mg/Kg dry	1	V-34	SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Anthracene	ND	0.23	0.087	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Benzidine	ND	0.88	0.28	mg/Kg dry	1	V-04, V-05	SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Benzo(a)anthracene	ND	0.23	0.082	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Benzo(a)pyrene	ND	0.23	0.075	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Benzo(b)fluoranthene	ND	0.23	0.076	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Benzo(g,h,i)perylene	ND	0.23	0.095	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Benzo(k)fluoranthene	ND	0.23	0.082	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Benzoic Acid	ND	1.3	0.40	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Bis(2-chloroethoxy)methane	ND	0.45	0.089	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Bis(2-chloroethyl)ether	ND	0.45	0.095	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Bis(2-chloroisopropyl)ether	ND	0.45	0.19	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Bis(2-Ethylhexyl)phthalate	ND	0.45	0.092	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
4-Bromophenylphenylether	ND	0.45	0.093	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Butylbenzylphthalate	ND	0.45	0.085	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Carbazole	ND	0.23	0.088	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
4-Chloroaniline	ND	0.88	0.080	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
4-Chloro-3-methylphenol	ND	0.88	0.089	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
2-Chloronaphthalene	ND	0.45	0.080	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
2-Chlorophenol	ND	0.45	0.091	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
4-Chlorophenylphenylether	ND	0.45	0.087	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Chrysene	ND	0.23	0.082	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Dibenz(a,h)anthracene	ND	0.23	0.087	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Dibenzofuran	ND	0.45	0.089	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Di-n-butylphthalate	ND	0.45	0.082	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
1,2-Dichlorobenzene	ND	0.45	0.086	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
1,3-Dichlorobenzene	ND	0.45	0.084	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
1,4-Dichlorobenzene	ND	0.45	0.086	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
3,3-Dichlorobenzidine	ND	0.23	0.060	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
2,4-Dichlorophenol	ND	0.45	0.087	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Diethylphthalate	ND	0.45	0.087	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
2,4-Dimethylphenol	ND	0.45	0.12	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Dimethylphthalate	ND	0.45	0.093	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
4,6-Dinitro-2-methylphenol	ND	0.45	0.37	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
2,4-Dinitrophenol	ND	0.88	0.40	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
2,4-Dinitrotoluene	ND	0.45	0.090	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
2,6-Dinitrotoluene	ND	0.45	0.10	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Di-n-octylphthalate	ND	0.45	0.090	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
1,2-Diphenylhydrazine/Azobenzene	ND	0.45	0.088	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Fluoranthene	ND	0.23	0.081	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Fluorene	ND	0.23	0.088	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-01D-230511 | Sampled: 5/11/2023 11:10

Sample ID: 23E1982-08

Sample Matrix: Soil

Sample Flags: H-06

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.45	0.094	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Hexachlorobutadiene	ND	0.45	0.091	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Hexachlorocyclopentadiene	ND	0.45	0.29	mg/Kg dry	1	V-05	SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Hexachloroethane	ND	0.45	0.088	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Indeno(1,2,3-cd)pyrene	ND	0.23	0.099	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Isophorone	ND	0.45	0.092	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
1-Methylnaphthalene	ND	0.23	0.092	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
2-Methylnaphthalene	ND	0.23	0.089	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
2-Methylphenol	ND	0.45	0.090	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
3/4-Methylphenol	ND	0.45	0.098	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Naphthalene	ND	0.23	0.090	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
2-Nitroaniline	ND	0.45	0.090	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
3-Nitroaniline	ND	0.45	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
4-Nitroaniline	ND	0.45	0.076	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Nitrobenzene	ND	0.45	0.098	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
2-Nitrophenol	ND	0.45	0.093	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
4-Nitrophenol	ND	0.88	0.19	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
N-Nitrosodimethylamine	ND	0.45	0.13	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
N-Nitrosodiphenylamine/Diphenylamine	ND	0.45	0.091	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
N-Nitrosodi-n-propylamine	ND	0.45	0.098	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Pentachloronitrobenzene	ND	0.45	0.095	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Pentachlorophenol	ND	0.45	0.20	mg/Kg dry	1	V-05	SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Phenanthrene	ND	0.23	0.088	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Phenol	ND	0.45	0.11	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Pyrene	ND	0.23	0.090	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
Pyridine	ND	0.45	0.073	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
1,2,4,5-Tetrachlorobenzene	ND	0.45	0.093	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
1,2,4-Trichlorobenzene	ND	0.45	0.088	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
2,4,5-Trichlorophenol	ND	0.45	0.088	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2
2,4,6-Trichlorophenol	ND	0.45	0.086	mg/Kg dry	1		SW-846 8270E	6/2/23	6/6/23 12:13	AR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	51.9	30-130		6/6/23 12:13
Phenol-d6	60.8	30-130		6/6/23 12:13
Nitrobenzene-d5	57.4	30-130		6/6/23 12:13
2-Fluorobiphenyl	60.6	30-130		6/6/23 12:13
2,4,6-Tribromophenol	48.6	30-130		6/6/23 12:13
p-Terphenyl-d14	70.3	30-130		6/6/23 12:13

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-01D-230511 | Sampled: 5/11/2023 11:10

Sample ID: 23E1982-08

Sample Matrix: Soil

Sample Flags: DL-03

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.27	0.079	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 13:24	TG
Aldrin [1]	ND	0.067	0.0066	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 13:24	TG
alpha-BHC [1]	ND	0.067	0.036	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 13:24	TG
beta-BHC [1]	ND	0.067	0.030	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 13:24	TG
delta-BHC [1]	ND	0.067	0.044	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 22:46	TG
gamma-BHC (Lindane) [1]	ND	0.027	0.0056	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 13:24	TG
Chlordane [2]	ND	0.27	0.11	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 13:24	TG
4,4'-DDD [1]	ND	0.053	0.0059	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 13:24	TG
4,4'-DDE [1]	ND	0.053	0.0062	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 13:24	TG
4,4'-DDT [1]	ND	0.053	0.0057	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 13:24	TG
Dieldrin [1]	ND	0.053	0.0052	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 13:24	TG
Endosulfan I [1]	ND	0.067	0.032	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 13:24	TG
Endosulfan II [1]	ND	0.11	0.032	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 13:24	TG
Endosulfan sulfate [1]	ND	0.11	0.033	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 22:46	TG
Endrin [1]	ND	0.11	0.033	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 13:24	TG
Endrin aldehyde [1]	ND	0.11	0.065	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 22:46	TG
Endrin ketone [1]	ND	0.11	0.031	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 13:24	TG
Heptachlor [1]	ND	0.067	0.0065	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 13:24	TG
Heptachlor epoxide [1]	ND	0.067	0.0060	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 13:24	TG
Hexachlorobenzene [1]	ND	0.080	0.045	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 13:24	TG
Methoxychlor [1]	ND	0.67	0.082	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 13:24	TG
Toxaphene [1]	ND	1.3	0.65	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 13:24	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	82.3	30-150		6/3/23 13:24
Decachlorobiphenyl [2]	83.6	30-150		6/3/23 13:24
Tetrachloro-m-xylene [1]	78.0	30-150		6/3/23 13:24
Tetrachloro-m-xylene [2]	76.0	30-150		6/3/23 13:24

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-01D-230511 | Sampled: 5/11/2023 11:10

Sample ID: 23E1982-08

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	0.028	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:33	SFM
Aroclor-1221 [1]	ND	0.11	0.057	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:33	SFM
Aroclor-1232 [1]	ND	0.11	0.035	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:33	SFM
Aroclor-1242 [1]	ND	0.11	0.032	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:33	SFM
Aroclor-1248 [1]	ND	0.11	0.027	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:33	SFM
Aroclor-1254 [1]	ND	0.11	0.032	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:33	SFM
Aroclor-1260 [1]	ND	0.11	0.029	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:33	SFM
Aroclor-1262 [1]	ND	0.11	0.032	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:33	SFM
Aroclor-1268 [1]	ND	0.11	0.035	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:33	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	99.7	30-150		6/5/23 18:33
Decachlorobiphenyl [2]	96.7	30-150		6/5/23 18:33
Tetrachloro-m-xylene [1]	89.0	30-150		6/5/23 18:33
Tetrachloro-m-xylene [2]	90.7	30-150		6/5/23 18:33

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-01D-230511 | Sampled: 5/11/2023 11:10

Sample ID: 23E1982-08

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	9500	22	16	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:48	NC
Antimony	ND	2.2	0.45	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:48	NC
Arsenic	6.3	4.4	0.74	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:48	NC
Barium	74	2.2	0.34	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:48	NC
Beryllium	0.61	0.22	0.065	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:48	NC
Cadmium	0.33	0.44	0.15	mg/Kg dry	1	J	SW-846 6010D	6/2/23	6/3/23 15:48	NC
Calcium	68000	220	39	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 18:10	NC
Chromium	12	0.88	0.32	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:48	NC
Cobalt	10	2.2	0.32	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:48	NC
Copper	34	0.88	0.19	mg/Kg dry	1	B-07, B-08, B	SW-846 6010D	6/2/23	6/3/23 15:48	NC
Iron	29000	220	140	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 18:10	NC
Lead	12	0.66	0.36	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:48	NC
Magnesium	11000	220	34	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 18:10	NC
Manganese	630	0.44	0.23	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:48	NC
Mercury	0.059	0.032	0.014	mg/Kg dry	1		SW-846 7471B	6/5/23	6/6/23 11:18	AAJ
Nickel	26	0.88	0.35	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:48	NC
Potassium	1800	220	40	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:48	NC
Selenium	ND	4.4	0.94	mg/Kg dry	1		SW-846 6010D	6/2/23	6/4/23 19:16	NC
Silver	2.1	0.44	0.15	mg/Kg dry	1		SW-846 6010D	6/2/23	6/4/23 19:16	NC
Sodium	110	220	39	mg/Kg dry	1	J	SW-846 6010D	6/2/23	6/3/23 15:48	NC
Thallium	ND	2.2	0.76	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:48	NC
Vanadium	20	0.88	0.28	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:48	NC
Zinc	62	0.88	0.30	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:48	NC

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-01D-230511 | Sampled: 5/11/2023 11:10

Sample ID: 23E1982-08

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	75.0			% Wt	1		SM 2540G	5/18/23	5/18/23 14:16	ATP
Cyanide	ND	0.54	0.39	mg/Kg dry	1		SW-846 9014	5/17/23	5/18/23 10:14	DET/MMH

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-05S-230511 | Sampled: 5/11/2023 11:40

Sample ID: 23E1982-09

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.0094	0.082	0.0074	mg/Kg dry	1	J	SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Acrylonitrile	ND	0.0049	0.00073	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.00082	0.00056	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Benzene	ND	0.0016	0.00048	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Bromobenzene	ND	0.0016	0.00038	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Bromochloromethane	ND	0.0016	0.00064	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Bromodichloromethane	ND	0.0016	0.00043	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Bromoform	ND	0.0016	0.00050	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Bromomethane	ND	0.0082	0.0014	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
2-Butanone (MEK)	ND	0.033	0.0051	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
tert-Butyl Alcohol (TBA)	ND	0.082	0.032	mg/Kg dry	1	V-05	SW-846 8260D	5/16/23	5/16/23 14:58	MFF
n-Butylbenzene	ND	0.0016	0.00054	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
sec-Butylbenzene	ND	0.0016	0.00078	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
tert-Butylbenzene	ND	0.0016	0.00070	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.00082	0.00064	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Carbon Disulfide	ND	0.0082	0.0066	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Carbon Tetrachloride	ND	0.0016	0.00065	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Chlorobenzene	ND	0.0016	0.00046	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Chlorodibromomethane	ND	0.00082	0.00052	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Chloroethane	ND	0.016	0.00091	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Chloroform	ND	0.0033	0.00051	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Chloromethane	ND	0.0082	0.00081	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
2-Chlorotoluene	ND	0.0016	0.00041	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
4-Chlorotoluene	ND	0.0016	0.00037	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0016	0.00065	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
1,2-Dibromoethane (EDB)	ND	0.00082	0.00063	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Dibromomethane	ND	0.0016	0.00057	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
1,2-Dichlorobenzene	ND	0.0016	0.00044	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
1,3-Dichlorobenzene	ND	0.0016	0.00045	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
1,4-Dichlorobenzene	ND	0.0016	0.00050	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
trans-1,4-Dichloro-2-butene	ND	0.0033	0.00051	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.016	0.00085	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
1,1-Dichloroethane	ND	0.0016	0.00056	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
1,2-Dichloroethane	ND	0.0016	0.00055	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
1,1-Dichloroethylene	ND	0.0033	0.00067	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
cis-1,2-Dichloroethylene	ND	0.0016	0.00052	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
trans-1,2-Dichloroethylene	ND	0.0016	0.00060	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
1,2-Dichloropropane	ND	0.0016	0.00051	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
1,3-Dichloropropane	ND	0.00082	0.00040	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
2,2-Dichloropropane	ND	0.0016	0.00064	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
1,1-Dichloropropene	ND	0.0016	0.00073	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
cis-1,3-Dichloropropene	ND	0.00082	0.00046	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
trans-1,3-Dichloropropene	ND	0.00082	0.00050	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Diethyl Ether	ND	0.016	0.00067	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-05S-230511 | Sampled: 5/11/2023 11:40

Sample ID: 23E1982-09

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00082	0.00056	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
1,4-Dioxane	ND	0.082	0.037	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Ethylbenzene	ND	0.0016	0.00049	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Hexachlorobutadiene	ND	0.0016	0.00069	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
2-Hexanone (MBK)	ND	0.016	0.0041	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Isopropylbenzene (Cumene)	ND	0.0016	0.00051	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0016	0.00051	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Methyl Acetate	ND	0.0016	0.0012	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0033	0.00055	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Methyl Cyclohexane	ND	0.0016	0.00064	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Methylene Chloride	ND	0.016	0.00079	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.016	0.0036	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Naphthalene	ND	0.0033	0.00059	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
n-Propylbenzene	ND	0.0016	0.00040	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Styrene	ND	0.0016	0.00041	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
1,1,1,2-Tetrachloroethane	ND	0.0016	0.00044	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
1,1,2,2-Tetrachloroethane	ND	0.00082	0.00045	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Tetrachloroethylene	ND	0.0016	0.00069	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Tetrahydrofuran	ND	0.0082	0.0029	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Toluene	ND	0.0016	0.00056	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
1,2,3-Trichlorobenzene	ND	0.0016	0.00046	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
1,2,4-Trichlorobenzene	ND	0.0016	0.00050	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
1,3,5-Trichlorobenzene	ND	0.0016	0.00047	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
1,1,1-Trichloroethane	ND	0.0016	0.00063	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
1,1,2-Trichloroethane	ND	0.0016	0.00044	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Trichloroethylene	ND	0.0016	0.00066	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Trichlorofluoromethane (Freon 11)	ND	0.0082	0.00061	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
1,2,3-Trichloropropane	ND	0.0016	0.00073	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0082	0.00071	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
1,2,4-Trimethylbenzene	ND	0.0016	0.00063	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
1,3,5-Trimethylbenzene	ND	0.0016	0.00048	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
Vinyl Chloride	ND	0.0082	0.00061	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
m+p Xylene	ND	0.0033	0.0012	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF
o-Xylene	ND	0.0016	0.00046	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 14:58	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	103	70-130		5/16/23 14:58
Toluene-d8	98.4	70-130		5/16/23 14:58
4-Bromofluorobenzene	92.1	70-130		5/16/23 14:58

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-05S-230511 | Sampled: 5/11/2023 11:40

Sample ID: 23E1982-09

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.27	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Acenaphthylene	ND	0.27	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Acetophenone	ND	0.54	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Aniline	ND	0.54	0.091	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Anthracene	ND	0.27	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Benzidine	ND	1.0	0.33	mg/Kg dry	1	V-05, V-35	SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Benzo(a)anthracene	ND	0.27	0.097	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Benzo(a)pyrene	ND	0.27	0.089	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Benzo(b)fluoranthene	ND	0.27	0.090	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Benzo(g,h,i)perylene	ND	0.27	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Benzo(k)fluoranthene	ND	0.27	0.097	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Benzoic Acid	ND	1.6	0.47	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Bis(2-chloroethoxy)methane	ND	0.54	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Bis(2-chloroethyl)ether	ND	0.54	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Bis(2-chloroisopropyl)ether	ND	0.54	0.22	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Bis(2-Ethylhexyl)phthalate	ND	0.54	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
4-Bromophenylphenylether	ND	0.54	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Butylbenzylphthalate	ND	0.54	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Carbazole	ND	0.27	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
4-Chloroaniline	ND	1.0	0.095	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
4-Chloro-3-methylphenol	ND	1.0	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
2-Chloronaphthalene	ND	0.54	0.095	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
2-Chlorophenol	ND	0.54	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
4-Chlorophenylphenylether	ND	0.54	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Chrysene	ND	0.27	0.097	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Dibenz(a,h)anthracene	ND	0.27	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Dibenzofuran	ND	0.54	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Di-n-butylphthalate	ND	0.54	0.098	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
1,2-Dichlorobenzene	ND	0.54	0.10	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 17:04	AR2
1,3-Dichlorobenzene	ND	0.54	0.099	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 17:04	AR2
1,4-Dichlorobenzene	ND	0.54	0.10	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 17:04	AR2
3,3-Dichlorobenzidine	ND	0.27	0.071	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
2,4-Dichlorophenol	ND	0.54	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Diethylphthalate	ND	0.54	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
2,4-Dimethylphenol	ND	0.54	0.14	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Dimethylphthalate	ND	0.54	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
4,6-Dinitro-2-methylphenol	ND	0.54	0.44	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
2,4-Dinitrophenol	ND	1.0	0.47	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
2,4-Dinitrotoluene	ND	0.54	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
2,6-Dinitrotoluene	ND	0.54	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Di-n-octylphthalate	ND	0.54	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
1,2-Diphenylhydrazine/Azobenzene	ND	0.54	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Fluoranthene	0.11	0.27	0.095	mg/Kg dry	1	J	SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Fluorene	ND	0.27	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-05S-230511 | Sampled: 5/11/2023 11:40

Sample ID: 23E1982-09

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.54	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Hexachlorobutadiene	ND	0.54	0.11	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Hexachlorocyclopentadiene	ND	0.54	0.35	mg/Kg dry	1	L-04, V-05	SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Hexachloroethane	ND	0.54	0.10	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Indeno(1,2,3-cd)pyrene	ND	0.27	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Isophorone	ND	0.54	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
1-Methylnaphthalene	ND	0.27	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
2-Methylnaphthalene	ND	0.27	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
2-Methylphenol	ND	0.54	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
3/4-Methylphenol	ND	0.54	0.12	mg/Kg dry	1	R-05	SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Naphthalene	ND	0.27	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
2-Nitroaniline	ND	0.54	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
3-Nitroaniline	ND	0.54	0.13	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
4-Nitroaniline	ND	0.54	0.090	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Nitrobenzene	ND	0.54	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
2-Nitrophenol	ND	0.54	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
4-Nitrophenol	ND	1.0	0.22	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
N-Nitrosodimethylamine	ND	0.54	0.16	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
N-Nitrosodiphenylamine/Diphenylamine	ND	0.54	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
N-Nitrosodi-n-propylamine	ND	0.54	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Pentachloronitrobenzene	ND	0.54	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Pentachlorophenol	ND	0.54	0.24	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Phenanthrene	ND	0.27	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Phenol	ND	0.54	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Pyrene	0.12	0.27	0.11	mg/Kg dry	1	J	SW-846 8270E	5/25/23	5/31/23 17:04	AR2
Pyridine	ND	0.54	0.086	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 17:04	AR2
1,2,4,5-Tetrachlorobenzene	ND	0.54	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
1,2,4-Trichlorobenzene	ND	0.54	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
2,4,5-Trichlorophenol	ND	0.54	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2
2,4,6-Trichlorophenol	ND	0.54	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:04	AR2

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
2-Fluorophenol	55.3		30-130		5/31/23 17:04
Phenol-d6	62.3		30-130		5/31/23 17:04
Nitrobenzene-d5	**19.4**	*	30-130	S-07	5/31/23 17:04
2-Fluorobiphenyl	63.0		30-130		5/31/23 17:04
2,4,6-Tribromophenol	**22.7**	*	30-130	S-07	5/31/23 17:04
p-Terphenyl-d14	69.6		30-130		5/31/23 17:04

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-05S-230511 | Sampled: 5/11/2023 11:40

Sample ID: 23E1982-09

Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.031	0.0093	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 13:51	TG
Aldrin [1]	ND	0.0078	0.00077	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 13:51	TG
alpha-BHC [1]	ND	0.0078	0.0042	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 13:51	TG
beta-BHC [1]	ND	0.0078	0.0035	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 13:51	TG
delta-BHC [1]	ND	0.0078	0.0052	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 23:13	TG
gamma-BHC (Lindane) [1]	ND	0.0031	0.00066	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 13:51	TG
Chlordane [2]	ND	0.031	0.013	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 13:51	TG
4,4'-DDD [1]	ND	0.0062	0.00069	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 13:51	TG
4,4'-DDE [1]	ND	0.0062	0.00073	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 13:51	TG
4,4'-DDT [1]	ND	0.0062	0.00066	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 13:51	TG
Dieldrin [1]	ND	0.0062	0.00061	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 13:51	TG
Endosulfan I [1]	ND	0.0078	0.0038	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 13:51	TG
Endosulfan II [1]	ND	0.012	0.0038	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 13:51	TG
Endosulfan sulfate [1]	ND	0.012	0.0039	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 23:13	TG
Endrin [1]	ND	0.012	0.0039	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 13:51	TG
Endrin aldehyde [1]	ND	0.012	0.0076	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 23:13	TG
Endrin ketone [1]	ND	0.012	0.0036	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 13:51	TG
Heptachlor [1]	ND	0.0078	0.00076	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 13:51	TG
Heptachlor epoxide [1]	ND	0.0078	0.00070	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 13:51	TG
Hexachlorobenzene [1]	ND	0.0094	0.0052	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 13:51	TG
Methoxychlor [1]	ND	0.078	0.0097	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 13:51	TG
Toxaphene [1]	ND	0.16	0.076	mg/Kg dry	1		SW-846 8081B	5/25/23	6/3/23 13:51	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	90.5	30-150		6/3/23 13:51
Decachlorobiphenyl [2]	89.0	30-150		6/3/23 13:51
Tetrachloro-m-xylene [1]	85.6	30-150		6/3/23 13:51
Tetrachloro-m-xylene [2]	73.6	30-150		6/3/23 13:51

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-05S-230511 | Sampled: 5/11/2023 11:40

Sample ID: 23E1982-09

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.12	0.032	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:55	SFM
Aroclor-1221 [1]	ND	0.12	0.067	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:55	SFM
Aroclor-1232 [1]	ND	0.12	0.041	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:55	SFM
Aroclor-1242 [1]	ND	0.12	0.038	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:55	SFM
Aroclor-1248 [1]	ND	0.12	0.032	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:55	SFM
Aroclor-1254 [1]	ND	0.12	0.038	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:55	SFM
Aroclor-1260 [1]	ND	0.12	0.033	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:55	SFM
Aroclor-1262 [1]	ND	0.12	0.037	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:55	SFM
Aroclor-1268 [1]	ND	0.12	0.041	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 18:55	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	103	30-150		6/5/23 18:55
Decachlorobiphenyl [2]	97.1	30-150		6/5/23 18:55
Tetrachloro-m-xylene [1]	89.5	30-150		6/5/23 18:55
Tetrachloro-m-xylene [2]	91.9	30-150		6/5/23 18:55

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-05S-230511 | Sampled: 5/11/2023 11:40

Sample ID: 23E1982-09

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	7200	25	18	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:55	NC
Antimony	ND	2.5	0.52	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:55	NC
Arsenic	5.1	5.0	0.84	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:55	NC
Barium	51	2.5	0.38	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:55	NC
Beryllium	0.50	0.25	0.074	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:55	NC
Cadmium	0.18	0.50	0.17	mg/Kg dry	1	J	SW-846 6010D	6/2/23	6/3/23 15:55	NC
Calcium	74000	250	45	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 18:15	NC
Chromium	9.8	1.0	0.37	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:55	NC
Cobalt	8.0	2.5	0.37	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:55	NC
Copper	22	1.0	0.22	mg/Kg dry	1	B-07, B-08, B	SW-846 6010D	6/2/23	6/3/23 15:55	NC
Iron	21000	250	160	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 18:15	NC
Lead	7.3	0.75	0.41	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:55	NC
Magnesium	18000	250	39	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 18:15	NC
Manganese	520	0.50	0.27	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:55	NC
Mercury	0.022	0.041	0.018	mg/Kg dry	1	J	SW-846 7471B	6/5/23	6/6/23 11:20	AAJ
Nickel	20	1.0	0.40	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:55	NC
Potassium	1500	250	45	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:55	NC
Selenium	ND	5.0	1.1	mg/Kg dry	1		SW-846 6010D	6/2/23	6/4/23 19:21	NC
Silver	1.6	0.50	0.17	mg/Kg dry	1		SW-846 6010D	6/2/23	6/4/23 19:21	NC
Sodium	120	250	45	mg/Kg dry	1	J	SW-846 6010D	6/2/23	6/3/23 15:55	NC
Thallium	ND	2.5	0.87	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:55	NC
Vanadium	16	1.0	0.31	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:55	NC
Zinc	48	1.0	0.34	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 15:55	NC

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-05S-230511 | Sampled: 5/11/2023 11:40

Sample ID: 23E1982-09

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	63.4			% Wt	1		SM 2540G	5/18/23	5/18/23 14:16	ATP
Cyanide	ND	0.71	0.51	mg/Kg dry	1		SW-846 9014	5/17/23	5/18/23 10:14	DET/MMH

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-05D-230511 | Sampled: 5/11/2023 11:50

Sample ID: 23E1982-10

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	0.11	0.18	0.016	mg/Kg dry	1	J	SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Acrylonitrile	ND	0.011	0.0016	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.0018	0.0012	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Benzene	ND	0.0036	0.0010	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Bromobenzene	ND	0.0036	0.00082	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Bromochloromethane	ND	0.0036	0.0014	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Bromodichloromethane	ND	0.0036	0.00093	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Bromoform	ND	0.0036	0.0011	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Bromomethane	ND	0.018	0.0031	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
2-Butanone (MEK)	0.019	0.071	0.011	mg/Kg dry	1	J	SW-846 8260D	5/16/23	5/16/23 15:23	MFF
tert-Butyl Alcohol (TBA)	ND	0.18	0.070	mg/Kg dry	1	V-05	SW-846 8260D	5/16/23	5/16/23 15:23	MFF
n-Butylbenzene	ND	0.0036	0.0012	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
sec-Butylbenzene	ND	0.0036	0.0017	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
tert-Butylbenzene	ND	0.0036	0.0015	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.0018	0.0014	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Carbon Disulfide	ND	0.018	0.014	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Carbon Tetrachloride	ND	0.0036	0.0014	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Chlorobenzene	ND	0.0036	0.0010	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Chlorodibromomethane	ND	0.0018	0.0011	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Chloroethane	ND	0.036	0.0020	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Chloroform	ND	0.0071	0.0011	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Chloromethane	ND	0.018	0.0018	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
2-Chlorotoluene	ND	0.0036	0.00090	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
4-Chlorotoluene	ND	0.0036	0.00080	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0036	0.0014	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
1,2-Dibromoethane (EDB)	ND	0.0018	0.0014	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Dibromomethane	ND	0.0036	0.0012	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
1,2-Dichlorobenzene	ND	0.0036	0.00094	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
1,3-Dichlorobenzene	ND	0.0036	0.00098	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
1,4-Dichlorobenzene	ND	0.0036	0.0011	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
trans-1,4-Dichloro-2-butene	ND	0.0071	0.0011	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Dichlorodifluoromethane (Freon 12)	ND	0.036	0.0018	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
1,1-Dichloroethane	ND	0.0036	0.0012	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
1,2-Dichloroethane	ND	0.0036	0.0012	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
1,1-Dichloroethylene	ND	0.0071	0.0015	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
cis-1,2-Dichloroethylene	ND	0.0036	0.0011	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
trans-1,2-Dichloroethylene	ND	0.0036	0.0013	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
1,2-Dichloropropane	ND	0.0036	0.0011	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
1,3-Dichloropropane	ND	0.0018	0.00088	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
2,2-Dichloropropane	ND	0.0036	0.0014	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
1,1-Dichloropropene	ND	0.0036	0.0016	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
cis-1,3-Dichloropropene	ND	0.0018	0.0010	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
trans-1,3-Dichloropropene	ND	0.0018	0.0011	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Diethyl Ether	ND	0.036	0.0015	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-05D-230511 | Sampled: 5/11/2023 11:50

Sample ID: 23E1982-10

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.0018	0.0012	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
1,4-Dioxane	ND	0.18	0.081	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Ethylbenzene	ND	0.0036	0.0011	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Hexachlorobutadiene	ND	0.0036	0.0015	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
2-Hexanone (MBK)	ND	0.036	0.0089	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Isopropylbenzene (Cumene)	ND	0.0036	0.0011	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
p-Isopropyltoluene (p-Cymene)	ND	0.0036	0.0011	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Methyl Acetate	ND	0.0036	0.0025	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Methyl tert-Butyl Ether (MTBE)	ND	0.0071	0.0012	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Methyl Cyclohexane	ND	0.0036	0.0014	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Methylene Chloride	ND	0.036	0.0017	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
4-Methyl-2-pentanone (MIBK)	ND	0.036	0.0079	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Naphthalene	ND	0.0071	0.0013	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
n-Propylbenzene	ND	0.0036	0.00086	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Styrene	ND	0.0036	0.00088	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
1,1,1,2-Tetrachloroethane	ND	0.0036	0.00096	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
1,1,2,2-Tetrachloroethane	ND	0.0018	0.00098	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Tetrachloroethylene	ND	0.0036	0.0015	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Tetrahydrofuran	ND	0.018	0.0063	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Toluene	ND	0.0036	0.0012	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
1,2,3-Trichlorobenzene	ND	0.0036	0.0010	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
1,2,4-Trichlorobenzene	ND	0.0036	0.0011	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
1,3,5-Trichlorobenzene	ND	0.0036	0.0010	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
1,1,1-Trichloroethane	ND	0.0036	0.0014	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
1,1,2-Trichloroethane	ND	0.0036	0.00095	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Trichloroethylene	ND	0.0036	0.0014	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Trichlorofluoromethane (Freon 11)	ND	0.018	0.0013	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
1,2,3-Trichloropropane	ND	0.0036	0.0016	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.018	0.0015	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
1,2,4-Trimethylbenzene	ND	0.0036	0.0014	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
1,3,5-Trimethylbenzene	ND	0.0036	0.0010	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
Vinyl Chloride	ND	0.018	0.0013	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
m+p Xylene	ND	0.0071	0.0025	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF
o-Xylene	ND	0.0036	0.00099	mg/Kg dry	1		SW-846 8260D	5/16/23	5/16/23 15:23	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	103	70-130		5/16/23 15:23
Toluene-d8	95.8	70-130		5/16/23 15:23
4-Bromofluorobenzene	88.3	70-130		5/16/23 15:23

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-05D-230511 | Sampled: 5/11/2023 11:50

Sample ID: 23E1982-10

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.27	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Acenaphthylene	ND	0.27	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Acetophenone	ND	0.53	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Aniline	ND	0.53	0.090	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Anthracene	ND	0.27	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Benzidine	ND	1.0	0.33	mg/Kg dry	1	V-05, V-35	SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Benzo(a)anthracene	ND	0.27	0.096	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Benzo(a)pyrene	ND	0.27	0.088	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Benzo(b)fluoranthene	0.12	0.27	0.089	mg/Kg dry	1	J	SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Benzo(g,h,i)perylene	ND	0.27	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Benzo(k)fluoranthene	ND	0.27	0.096	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Benzoic Acid	ND	1.6	0.47	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Bis(2-chloroethoxy)methane	ND	0.53	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Bis(2-chloroethyl)ether	ND	0.53	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Bis(2-chloroisopropyl)ether	ND	0.53	0.22	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Bis(2-Ethylhexyl)phthalate	ND	0.53	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
4-Bromophenylphenylether	ND	0.53	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Butylbenzylphthalate	ND	0.53	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Carbazole	ND	0.27	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
4-Chloroaniline	ND	1.0	0.094	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
4-Chloro-3-methylphenol	ND	1.0	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
2-Chloronaphthalene	ND	0.53	0.094	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
2-Chlorophenol	ND	0.53	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
4-Chlorophenylphenylether	ND	0.53	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Chrysene	0.098	0.27	0.096	mg/Kg dry	1	J	SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Dibenz(a,h)anthracene	ND	0.27	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Dibenzofuran	ND	0.53	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Di-n-butylphthalate	ND	0.53	0.097	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
1,2-Dichlorobenzene	ND	0.53	0.10	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 17:25	AR2
1,3-Dichlorobenzene	ND	0.53	0.098	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 17:25	AR2
1,4-Dichlorobenzene	ND	0.53	0.10	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 17:25	AR2
3,3-Dichlorobenzidine	ND	0.27	0.070	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
2,4-Dichlorophenol	ND	0.53	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Diethylphthalate	ND	0.53	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
2,4-Dimethylphenol	ND	0.53	0.14	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Dimethylphthalate	ND	0.53	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
4,6-Dinitro-2-methylphenol	ND	0.53	0.43	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
2,4-Dinitrophenol	ND	1.0	0.46	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
2,4-Dinitrotoluene	ND	0.53	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
2,6-Dinitrotoluene	ND	0.53	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Di-n-octylphthalate	ND	0.53	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
1,2-Diphenylhydrazine/Azobenzene	ND	0.53	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Fluoranthene	0.19	0.27	0.095	mg/Kg dry	1	J	SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Fluorene	ND	0.27	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-05D-230511 | Sampled: 5/11/2023 11:50

Sample ID: 23E1982-10

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.53	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Hexachlorobutadiene	ND	0.53	0.11	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Hexachlorocyclopentadiene	ND	0.53	0.34	mg/Kg dry	1	L-04, V-05	SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Hexachloroethane	ND	0.53	0.10	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Indeno(1,2,3-cd)pyrene	ND	0.27	0.12	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Isophorone	ND	0.53	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
1-Methylnaphthalene	ND	0.27	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
2-Methylnaphthalene	ND	0.27	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
2-Methylphenol	ND	0.53	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
3/4-Methylphenol	ND	0.53	0.12	mg/Kg dry	1	R-05	SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Naphthalene	ND	0.27	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
2-Nitroaniline	ND	0.53	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
3-Nitroaniline	ND	0.53	0.13	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
4-Nitroaniline	ND	0.53	0.090	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Nitrobenzene	ND	0.53	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
2-Nitrophenol	ND	0.53	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
4-Nitrophenol	ND	1.0	0.22	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
N-Nitrosodimethylamine	ND	0.53	0.15	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
N-Nitrosodiphenylamine/Diphenylamine	ND	0.53	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
N-Nitrosodi-n-propylamine	ND	0.53	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Pentachloronitrobenzene	ND	0.53	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Pentachlorophenol	ND	0.53	0.24	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Phenanthrene	0.15	0.27	0.10	mg/Kg dry	1	J	SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Phenol	0.16	0.53	0.12	mg/Kg dry	1	J	SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Pyrene	0.21	0.27	0.11	mg/Kg dry	1	J	SW-846 8270E	5/25/23	5/31/23 17:25	AR2
Pyridine	ND	0.53	0.085	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 17:25	AR2
1,2,4,5-Tetrachlorobenzene	ND	0.53	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
1,2,4-Trichlorobenzene	ND	0.53	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
2,4,5-Trichlorophenol	ND	0.53	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2
2,4,6-Trichlorophenol	ND	0.53	0.10	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:25	AR2

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
2-Fluorophenol	57.0		30-130		5/31/23 17:25
Phenol-d6	65.8		30-130		5/31/23 17:25
Nitrobenzene-d5	**28.8**	*	30-130	S-07	5/31/23 17:25
2-Fluorobiphenyl	66.8		30-130		5/31/23 17:25
2,4,6-Tribromophenol	**15.2**	*	30-130	S-07	5/31/23 17:25
p-Terphenyl-d14	76.0		30-130		5/31/23 17:25

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-05D-230511 | Sampled: 5/11/2023 11:50

Sample ID: 23E1982-10

Sample Matrix: Soil

Sample Flags: DL-03

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Alachlor [1]	ND	0.31	0.093	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 14:17	TG
Aldrin [1]	ND	0.078	0.0077	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 14:17	TG
alpha-BHC [1]	ND	0.078	0.042	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 14:17	TG
beta-BHC [1]	ND	0.078	0.035	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 14:17	TG
delta-BHC [1]	ND	0.078	0.052	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 23:39	TG
gamma-BHC (Lindane) [1]	ND	0.031	0.0066	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 14:17	TG
Chlordane [2]	ND	0.31	0.13	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 14:17	TG
4,4'-DDD [1]	ND	0.062	0.0069	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 14:17	TG
4,4'-DDE [1]	ND	0.062	0.0073	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 14:17	TG
4,4'-DDT [1]	ND	0.062	0.0066	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 14:17	TG
Dieldrin [1]	ND	0.062	0.0061	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 14:17	TG
Endosulfan I [1]	ND	0.078	0.038	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 14:17	TG
Endosulfan II [1]	ND	0.12	0.038	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 14:17	TG
Endosulfan sulfate [1]	ND	0.12	0.039	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 23:39	TG
Endrin [1]	ND	0.12	0.039	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 14:17	TG
Endrin aldehyde [1]	ND	0.12	0.076	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 23:39	TG
Endrin ketone [1]	ND	0.12	0.036	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 14:17	TG
Heptachlor [1]	ND	0.078	0.0076	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 14:17	TG
Heptachlor epoxide [1]	ND	0.078	0.0070	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 14:17	TG
Hexachlorobenzene [1]	ND	0.094	0.052	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 14:17	TG
Methoxychlor [1]	ND	0.78	0.096	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 14:17	TG
Toxaphene [1]	ND	1.6	0.76	mg/Kg dry	10		SW-846 8081B	5/25/23	6/3/23 14:17	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	86.0	30-150		6/3/23 14:17
Decachlorobiphenyl [2]	84.3	30-150		6/3/23 14:17
Tetrachloro-m-xylene [1]	83.1	30-150		6/3/23 14:17
Tetrachloro-m-xylene [2]	80.5	30-150		6/3/23 14:17

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-05D-230511 | Sampled: 5/11/2023 11:50

Sample ID: 23E1982-10

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.12	0.032	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 19:11	SFM
Aroclor-1221 [1]	ND	0.12	0.067	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 19:11	SFM
Aroclor-1232 [1]	ND	0.12	0.041	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 19:11	SFM
Aroclor-1242 [1]	ND	0.12	0.038	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 19:11	SFM
Aroclor-1248 [1]	ND	0.12	0.031	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 19:11	SFM
Aroclor-1254 [1]	ND	0.12	0.038	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 19:11	SFM
Aroclor-1260 [1]	ND	0.12	0.033	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 19:11	SFM
Aroclor-1262 [1]	ND	0.12	0.037	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 19:11	SFM
Aroclor-1268 [1]	ND	0.12	0.041	mg/Kg dry	4		SW-846 8082A	5/25/23	6/5/23 19:11	SFM

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	101	30-150		6/5/23 19:11
Decachlorobiphenyl [2]	99.5	30-150		6/5/23 19:11
Tetrachloro-m-xylene [1]	92.1	30-150		6/5/23 19:11
Tetrachloro-m-xylene [2]	94.4	30-150		6/5/23 19:11

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-05D-230511 | Sampled: 5/11/2023 11:50

Sample ID: 23E1982-10

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	9000	25	18	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:02	NC
Antimony	ND	2.5	0.52	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:02	NC
Arsenic	6.2	5.1	0.85	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:02	NC
Barium	71	2.5	0.39	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:02	NC
Beryllium	0.63	0.25	0.075	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:02	NC
Cadmium	0.31	0.51	0.17	mg/Kg dry	1	J	SW-846 6010D	6/2/23	6/3/23 16:02	NC
Calcium	72000	250	45	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 18:21	NC
Chromium	12	1.0	0.37	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:02	NC
Cobalt	10	2.5	0.37	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:02	NC
Copper	32	1.0	0.22	mg/Kg dry	1	B-07, B-08, B	SW-846 6010D	6/2/23	6/3/23 16:02	NC
Iron	26000	250	160	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 18:21	NC
Lead	11	0.76	0.42	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:02	NC
Magnesium	14000	250	39	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 18:21	NC
Manganese	640	0.51	0.27	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:02	NC
Mercury	0.053	0.038	0.016	mg/Kg dry	1		SW-846 7471B	6/5/23	6/6/23 11:22	AAJ
Nickel	26	1.0	0.41	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:02	NC
Potassium	1800	250	46	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:02	NC
Selenium	ND	5.1	1.1	mg/Kg dry	1		SW-846 6010D	6/2/23	6/4/23 19:26	NC
Silver	2.0	0.51	0.17	mg/Kg dry	1		SW-846 6010D	6/2/23	6/4/23 19:26	NC
Sodium	120	250	45	mg/Kg dry	1	J	SW-846 6010D	6/2/23	6/3/23 16:02	NC
Thallium	ND	2.5	0.88	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:02	NC
Vanadium	20	1.0	0.32	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:02	NC
Zinc	62	1.0	0.35	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:02	NC

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: UDS 4.26-05D-230511 | Sampled: 5/11/2023 11:50

Sample ID: 23E1982-10

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	64.0			% Wt	1		SM 2540G	5/18/23	5/18/23 14:16	ATP
Cyanide	ND	0.63	0.45	mg/Kg dry	1		SW-846 9014	5/17/23	5/18/23 10:14	DET/MMH

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: SC-01-230511 | Sampled: 5/11/2023 12:20

Sample ID: 23E1982-11

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	0.071	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Acenaphthylene	ND	0.19	0.073	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Acetophenone	ND	0.37	0.073	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Aniline	ND	0.37	0.063	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Anthracene	ND	0.19	0.071	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Benzidine	ND	0.72	0.23	mg/Kg dry	1	V-05, V-35	SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Benzo(a)anthracene	ND	0.19	0.067	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Benzo(a)pyrene	ND	0.19	0.061	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Benzo(b)fluoranthene	ND	0.19	0.062	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Benzo(g,h,i)perylene	ND	0.19	0.077	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Benzo(k)fluoranthene	ND	0.19	0.067	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Benzoic Acid	ND	1.1	0.33	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Bis(2-chloroethoxy)methane	ND	0.37	0.073	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Bis(2-chloroethyl)ether	ND	0.37	0.078	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Bis(2-chloroisopropyl)ether	ND	0.37	0.16	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Bis(2-Ethylhexyl)phthalate	ND	0.37	0.076	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
4-Bromophenylphenylether	ND	0.37	0.077	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Butylbenzylphthalate	ND	0.37	0.070	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Carbazole	ND	0.19	0.072	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
4-Chloroaniline	ND	0.72	0.066	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
4-Chloro-3-methylphenol	ND	0.72	0.073	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
2-Chloronaphthalene	ND	0.37	0.066	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
2-Chlorophenol	ND	0.37	0.075	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
4-Chlorophenylphenylether	ND	0.37	0.072	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Chrysene	ND	0.19	0.067	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Dibenz(a,h)anthracene	ND	0.19	0.071	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Dibenzofuran	ND	0.37	0.073	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Di-n-butylphthalate	ND	0.37	0.068	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
1,2-Dichlorobenzene	ND	0.37	0.071	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 17:45	AR2
1,3-Dichlorobenzene	ND	0.37	0.069	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 17:45	AR2
1,4-Dichlorobenzene	ND	0.37	0.070	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 17:45	AR2
3,3-Dichlorobenzidine	ND	0.19	0.049	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
2,4-Dichlorophenol	ND	0.37	0.071	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Diethylphthalate	ND	0.37	0.072	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
2,4-Dimethylphenol	ND	0.37	0.097	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Dimethylphthalate	ND	0.37	0.076	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
4,6-Dinitro-2-methylphenol	ND	0.37	0.30	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
2,4-Dinitrophenol	ND	0.72	0.32	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
2,4-Dinitrotoluene	ND	0.37	0.074	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
2,6-Dinitrotoluene	ND	0.37	0.084	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Di-n-octylphthalate	ND	0.37	0.073	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
1,2-Diphenylhydrazine/Azobenzene	ND	0.37	0.072	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Fluoranthene	ND	0.19	0.066	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Fluorene	ND	0.19	0.072	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: SC-01-230511 | Sampled: 5/11/2023 12:20

Sample ID: 23E1982-11

Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.37	0.077	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Hexachlorobutadiene	ND	0.37	0.075	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Hexachlorocyclopentadiene	ND	0.37	0.24	mg/Kg dry	1	L-04, V-05	SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Hexachloroethane	ND	0.37	0.072	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Indeno(1,2,3-cd)pyrene	ND	0.19	0.081	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Isophorone	ND	0.37	0.076	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
1-Methylnaphthalene	ND	0.19	0.075	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
2-Methylnaphthalene	ND	0.19	0.073	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
2-Methylphenol	ND	0.37	0.074	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
3/4-Methylphenol	ND	0.37	0.081	mg/Kg dry	1	R-05	SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Naphthalene	ND	0.19	0.074	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
2-Nitroaniline	ND	0.37	0.074	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
3-Nitroaniline	ND	0.37	0.087	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
4-Nitroaniline	ND	0.37	0.063	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Nitrobenzene	ND	0.37	0.080	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
2-Nitrophenol	ND	0.37	0.077	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
4-Nitrophenol	ND	0.72	0.15	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
N-Nitrosodimethylamine	ND	0.37	0.11	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
N-Nitrosodiphenylamine/Diphenylamine	ND	0.37	0.074	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
N-Nitrosodi-n-propylamine	ND	0.37	0.080	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Pentachloronitrobenzene	ND	0.37	0.078	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Pentachlorophenol	ND	0.37	0.17	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Phenanthrene	ND	0.19	0.072	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Phenol	ND	0.37	0.086	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Pyrene	ND	0.19	0.074	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
Pyridine	ND	0.37	0.059	mg/Kg dry	1	L-04	SW-846 8270E	5/25/23	5/31/23 17:45	AR2
1,2,4,5-Tetrachlorobenzene	ND	0.37	0.076	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
1,2,4-Trichlorobenzene	ND	0.37	0.072	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
2,4,5-Trichlorophenol	ND	0.37	0.072	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2
2,4,6-Trichlorophenol	ND	0.37	0.071	mg/Kg dry	1		SW-846 8270E	5/25/23	5/31/23 17:45	AR2

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	64.4	30-130		5/31/23 17:45
Phenol-d6	66.4	30-130		5/31/23 17:45
Nitrobenzene-d5	70.0	30-130		5/31/23 17:45
2-Fluorobiphenyl	73.1	30-130		5/31/23 17:45
2,4,6-Tribromophenol	48.1	30-130		5/31/23 17:45
p-Terphenyl-d14	81.1	30-130		5/31/23 17:45

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: SC-01-230511 | Sampled: 5/11/2023 12:20

Sample ID: 23E1982-11

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aluminum	5600	18	13	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:09	NC
Antimony	ND	1.8	0.37	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:09	NC
Arsenic	4.4	3.6	0.60	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:09	NC
Barium	37	1.8	0.27	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:09	NC
Beryllium	0.42	0.18	0.053	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:09	NC
Cadmium	0.17	0.36	0.12	mg/Kg dry	1	J	SW-846 6010D	6/2/23	6/3/23 16:09	NC
Calcium	79000	180	32	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 18:27	NC
Chromium	7.5	0.71	0.26	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:09	NC
Cobalt	6.0	1.8	0.26	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:09	NC
Copper	22	0.71	0.16	mg/Kg dry	1	B-07, B-08, B	SW-846 6010D	6/2/23	6/3/23 16:09	NC
Iron	18000	180	110	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 18:27	NC
Lead	6.2	0.53	0.29	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:09	NC
Magnesium	7500	180	28	mg/Kg dry	10		SW-846 6010D	6/2/23	6/4/23 18:27	NC
Manganese	370	0.36	0.19	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:09	NC
Mercury	0.017	0.027	0.012	mg/Kg dry	1	J	SW-846 7471B	6/5/23	6/6/23 11:23	AAJ
Nickel	17	0.71	0.29	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:09	NC
Potassium	1200	180	32	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:09	NC
Selenium	ND	3.6	0.76	mg/Kg dry	1		SW-846 6010D	6/2/23	6/4/23 19:30	NC
Silver	1.3	0.36	0.12	mg/Kg dry	1		SW-846 6010D	6/2/23	6/4/23 19:30	NC
Sodium	90	180	32	mg/Kg dry	1	J	SW-846 6010D	6/2/23	6/3/23 16:09	NC
Thallium	ND	1.8	0.62	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:09	NC
Vanadium	13	0.71	0.22	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:09	NC
Zinc	38	0.71	0.24	mg/Kg dry	1		SW-846 6010D	6/2/23	6/3/23 16:09	NC

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Project Location: Utica, NY | Sample Description: | Work Order: 23E1982

Date Received: 5/13/2023

Field Sample #: SC-01-230511 | Sampled: 5/11/2023 12:20

Sample ID: 23E1982-11

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	91.6			% Wt	1		SM 2540G	5/18/23	5/18/23 14:16	ATP

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Sample Extraction Data

Prep Method:% Solids **Analytical Method:SM 2540G**

Lab Number [Field ID]	Batch	Date
23E1982-01 [UDS 4.26-03S-230511]	B340708	05/18/23
23E1982-02 [UDS 4.26-03D-230511]	B340708	05/18/23
23E1982-03 [UDS 4.26-04S-230511]	B340708	05/18/23
23E1982-04 [UDS 4.26-04D-230511]	B340708	05/18/23
23E1982-05 [UDS 4.26-02S-230511]	B340708	05/18/23
23E1982-06 [UDS 4.26-02D-230511]	B340708	05/18/23
23E1982-07 [UDS 4.26-01S-230511]	B340708	05/18/23
23E1982-08 [UDS 4.26-01D-230511]	B340708	05/18/23
23E1982-09 [UDS 4.26-05S-230511]	B340708	05/18/23
23E1982-10 [UDS 4.26-05D-230511]	B340708	05/18/23
23E1982-11 [SC-01-230511]	B340708	05/18/23

Prep Method:SW-846 3050B **Analytical Method:SW-846 6010D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23E1982-01 [UDS 4.26-03S-230511]	B342082	1.52	50.0	06/02/23
23E1982-02 [UDS 4.26-03D-230511]	B342082	1.54	50.0	06/02/23
23E1982-03 [UDS 4.26-04S-230511]	B342082	1.50	50.0	06/02/23
23E1982-04 [UDS 4.26-04D-230511]	B342082	1.58	50.0	06/02/23
23E1982-05 [UDS 4.26-02S-230511]	B342082	1.54	50.0	06/02/23
23E1982-06 [UDS 4.26-02D-230511]	B342082	1.56	50.0	06/02/23
23E1982-07 [UDS 4.26-01S-230511]	B342082	1.57	50.0	06/02/23
23E1982-08 [UDS 4.26-01D-230511]	B342082	1.52	50.0	06/02/23
23E1982-09 [UDS 4.26-05S-230511]	B342082	1.58	50.0	06/02/23
23E1982-10 [UDS 4.26-05D-230511]	B342082	1.55	50.0	06/02/23
23E1982-11 [SC-01-230511]	B342082	1.54	50.0	06/02/23

Prep Method:SW-846 7471 **Analytical Method:SW-846 7471B**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23E1982-01 [UDS 4.26-03S-230511]	B342287	0.604	50.0	06/05/23
23E1982-02 [UDS 4.26-03D-230511]	B342287	0.610	50.0	06/05/23
23E1982-03 [UDS 4.26-04S-230511]	B342287	0.587	50.0	06/05/23
23E1982-04 [UDS 4.26-04D-230511]	B342287	0.584	50.0	06/05/23
23E1982-05 [UDS 4.26-02S-230511]	B342287	0.602	50.0	06/05/23
23E1982-06 [UDS 4.26-02D-230511]	B342287	0.597	50.0	06/05/23
23E1982-07 [UDS 4.26-01S-230511]	B342287	0.616	50.0	06/05/23
23E1982-08 [UDS 4.26-01D-230511]	B342287	0.618	50.0	06/05/23
23E1982-09 [UDS 4.26-05S-230511]	B342287	0.581	50.0	06/05/23
23E1982-10 [UDS 4.26-05D-230511]	B342287	0.615	50.0	06/05/23
23E1982-11 [SC-01-230511]	B342287	0.604	50.0	06/05/23

Prep Method:SW-846 3546 **Analytical Method:SW-846 8081B**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23E1982-01 [UDS 4.26-03S-230511]	B341342	10.2	10.0	05/25/23
23E1982-02 [UDS 4.26-03D-230511]	B341342	10.3	10.0	05/25/23
23E1982-03 [UDS 4.26-04S-230511]	B341342	10.1	10.0	05/25/23
23E1982-04 [UDS 4.26-04D-230511]	B341342	10.0	10.0	05/25/23
23E1982-05 [UDS 4.26-02S-230511]	B341342	10.0	10.0	05/25/23
23E1982-06 [UDS 4.26-02D-230511]	B341342	10.3	10.0	05/25/23

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Sample Extraction Data

Prep Method:SW-846 3546 **Analytical Method:SW-846 8081B**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23E1982-07 [UDS 4.26-01S-230511]	B341342	10.0	10.0	05/25/23
23E1982-08 [UDS 4.26-01D-230511]	B341342	10.0	10.0	05/25/23
23E1982-09 [UDS 4.26-05S-230511]	B341342	10.1	10.0	05/25/23
23E1982-10 [UDS 4.26-05D-230511]	B341342	10.0	10.0	05/25/23

Prep Method:SW-846 3546 **Analytical Method:SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23E1982-01 [UDS 4.26-03S-230511]	B341341	10.2	10.0	05/25/23
23E1982-02 [UDS 4.26-03D-230511]	B341341	10.3	10.0	05/25/23
23E1982-03 [UDS 4.26-04S-230511]	B341341	10.1	10.0	05/25/23
23E1982-04 [UDS 4.26-04D-230511]	B341341	10.0	10.0	05/25/23
23E1982-05 [UDS 4.26-02S-230511]	B341341	10.0	10.0	05/25/23
23E1982-06 [UDS 4.26-02D-230511]	B341341	10.3	10.0	05/25/23
23E1982-07 [UDS 4.26-01S-230511]	B341341	10.0	10.0	05/25/23
23E1982-08 [UDS 4.26-01D-230511]	B341341	10.0	10.0	05/25/23
23E1982-09 [UDS 4.26-05S-230511]	B341341	10.1	10.0	05/25/23
23E1982-10 [UDS 4.26-05D-230511]	B341341	10.0	10.0	05/25/23

Prep Method:SW-846 5035 **Analytical Method:SW-846 8260D**

Lab Number [Field ID]	Batch	Sample Amount(g)	Methanol Volume(mL)	Methanol Aliquot(mL)	Final Volume(mL)	Date
23E1982-01 [UDS 4.26-03S-230511]	B340275	13.0	9.55	1	50	05/17/23
23E1982-04 [UDS 4.26-04D-230511]	B340275	17.2	9.62	1	50	05/17/23
23E1982-07 [UDS 4.26-01S-230511]	B340275	8.58	8.75	1	50	05/17/23
23E1982-08 [UDS 4.26-01D-230511]	B340275	8.07	7.02	1	50	05/17/23

Prep Method:SW-846 5035 **Analytical Method:SW-846 8260D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23E1982-02 [UDS 4.26-03D-230511]	B340391	7.73	10.0	05/16/23
23E1982-03 [UDS 4.26-04S-230511]	B340391	7.68	10.0	05/16/23
23E1982-05 [UDS 4.26-02S-230511]	B340391	6.75	10.0	05/16/23
23E1982-09 [UDS 4.26-05S-230511]	B340391	9.60	10.0	05/16/23
23E1982-10 [UDS 4.26-05D-230511]	B340391	4.40	10.0	05/16/23

Prep Method:SW-846 5035 **Analytical Method:SW-846 8260D**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23E1982-06 [UDS 4.26-02D-230511]	B340591	10.2	10.0	05/18/23

Prep Method:SW-846 3546 **Analytical Method:SW-846 8270E**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23E1982-02 [UDS 4.26-03D-230511]	B341346	30.0	1.00	05/25/23
23E1982-04 [UDS 4.26-04D-230511]	B341346	30.0	1.00	05/25/23
23E1982-05 [UDS 4.26-02S-230511]	B341346	30.0	1.00	05/25/23
23E1982-06 [UDS 4.26-02D-230511]	B341346	30.0	1.00	05/25/23
23E1982-07 [UDS 4.26-01S-230511]	B341346	30.0	1.00	05/25/23

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Sample Extraction Data

Prep Method:SW-846 3546 **Analytical Method:SW-846 8270E**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23E1982-09 [UDS 4.26-05S-230511]	B341346	30.0	1.00	05/25/23
23E1982-10 [UDS 4.26-05D-230511]	B341346	30.0	1.00	05/25/23
23E1982-11 [SC-01-230511]	B341346	30.0	1.00	05/25/23

Prep Method:SW-846 3546 **Analytical Method:SW-846 8270E**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23E1982-01RE1 [UDS 4.26-03S-230511]	B342052	30.0	1.00	06/02/23
23E1982-03RE1 [UDS 4.26-04S-230511]	B342052	30.0	1.00	06/02/23
23E1982-08RE1 [UDS 4.26-01D-230511]	B342052	30.0	1.00	06/02/23

Prep Method:SW-846 9010C **Analytical Method:SW-846 9014**

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
23E1982-01 [UDS 4.26-03S-230511]	B340476	1.05	50.0	05/17/23
23E1982-02 [UDS 4.26-03D-230511]	B340476	1.20	50.0	05/17/23
23E1982-03 [UDS 4.26-04S-230511]	B340476	1.04	50.0	05/17/23
23E1982-04 [UDS 4.26-04D-230511]	B340476	1.06	50.0	05/17/23
23E1982-05 [UDS 4.26-02S-230511]	B340476	1.15	50.0	05/17/23
23E1982-06 [UDS 4.26-02D-230511]	B340476	1.11	50.0	05/17/23
23E1982-07 [UDS 4.26-01S-230511]	B340476	1.09	50.0	05/17/23
23E1982-08 [UDS 4.26-01D-230511]	B340476	1.23	50.0	05/17/23
23E1982-09 [UDS 4.26-05S-230511]	B340476	1.11	50.0	05/17/23
23E1982-10 [UDS 4.26-05D-230511]	B340476	1.24	50.0	05/17/23

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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
Batch B340275 - SW-846 5035										
Blank (B340275-BLK1)				Prepared: 05/15/23 Analyzed: 05/19/23						
Acetone	ND	2.5	mg/Kg wet							
Acrylonitrile	ND	0.25	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.025	mg/Kg wet							
Benzene	ND	0.050	mg/Kg wet							
Bromobenzene	ND	0.050	mg/Kg wet							
Bromochloromethane	ND	0.050	mg/Kg wet							
Bromodichloromethane	ND	0.050	mg/Kg wet							
Bromoform	ND	0.050	mg/Kg wet							V-05
Bromomethane	ND	0.10	mg/Kg wet							
2-Butanone (MEK)	ND	1.0	mg/Kg wet							
tert-Butyl Alcohol (TBA)	ND	1.0	mg/Kg wet							V-05
n-Butylbenzene	ND	0.050	mg/Kg wet							
sec-Butylbenzene	ND	0.050	mg/Kg wet							
tert-Butylbenzene	ND	0.050	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.025	mg/Kg wet							
Carbon Disulfide	ND	0.25	mg/Kg wet							
Carbon Tetrachloride	ND	0.050	mg/Kg wet							
Chlorobenzene	ND	0.050	mg/Kg wet							
Chlorodibromomethane	ND	0.025	mg/Kg wet							
Chloroethane	ND	0.10	mg/Kg wet							
Chloroform	ND	0.10	mg/Kg wet							
Chloromethane	ND	0.10	mg/Kg wet							
2-Chlorotoluene	ND	0.050	mg/Kg wet							
4-Chlorotoluene	ND	0.050	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.25	mg/Kg wet							V-05
1,2-Dibromoethane (EDB)	ND	0.025	mg/Kg wet							
Dibromomethane	ND	0.050	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.050	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.050	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.050	mg/Kg wet							
trans-1,4-Dichloro-2-butene	ND	0.10	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.10	mg/Kg wet							
1,1-Dichloroethane	ND	0.050	mg/Kg wet							
1,2-Dichloroethane	ND	0.050	mg/Kg wet							
1,1-Dichloroethylene	ND	0.050	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.050	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.050	mg/Kg wet							
Dichlorofluoromethane (Freon 21)	ND	0.050	mg/Kg wet							
1,2-Dichloropropane	ND	0.050	mg/Kg wet							
1,3-Dichloropropane	ND	0.025	mg/Kg wet							
2,2-Dichloropropane	ND	0.050	mg/Kg wet							V-05
1,1-Dichloropropene	ND	0.10	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.025	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.025	mg/Kg wet							
Diethyl Ether	ND	0.10	mg/Kg wet							
Difluorochloromethane (Freon 22)	ND	0.050	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.025	mg/Kg wet							
1,4-Dioxane	ND	2.5	mg/Kg wet							
Ethylbenzene	ND	0.050	mg/Kg wet							
Hexachlorobutadiene	ND	0.050	mg/Kg wet							
2-Hexanone (MBK)	ND	0.50	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.050	mg/Kg wet							

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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 B340275 - SW-846 5035											
Blank (B340275-BLK1)				Prepared: 05/15/23 Analyzed: 05/19/23							
p-Isopropyltoluene (p-Cymene)	ND	0.050	mg/Kg wet								
Methyl Acetate	ND	0.50	mg/Kg wet							V-05	
Methyl tert-Butyl Ether (MTBE)	ND	0.050	mg/Kg wet								
Methyl Cyclohexane	ND	0.050	mg/Kg wet								
Methylene Chloride	ND	0.25	mg/Kg wet								
4-Methyl-2-pentanone (MIBK)	ND	0.50	mg/Kg wet								
Naphthalene	ND	0.10	mg/Kg wet								
n-Propylbenzene	ND	0.050	mg/Kg wet								
Styrene	ND	0.050	mg/Kg wet								
1,1,1,2-Tetrachloroethane	ND	0.050	mg/Kg wet								
1,1,2,2-Tetrachloroethane	ND	0.025	mg/Kg wet								
Tetrachloroethylene	ND	0.050	mg/Kg wet								
Tetrahydrofuran	ND	0.50	mg/Kg wet								
Toluene	ND	0.050	mg/Kg wet								
1,2,3-Trichlorobenzene	ND	0.25	mg/Kg wet								
1,2,4-Trichlorobenzene	ND	0.050	mg/Kg wet								
1,3,5-Trichlorobenzene	ND	0.050	mg/Kg wet								
1,1,1-Trichloroethane	ND	0.050	mg/Kg wet								
1,1,2-Trichloroethane	ND	0.050	mg/Kg wet								
Trichloroethylene	ND	0.050	mg/Kg wet								
Trichlorofluoromethane (Freon 11)	ND	0.10	mg/Kg wet								
1,2,3-Trichloropropane	ND	0.10	mg/Kg wet								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.050	mg/Kg wet								
1,2,4-Trimethylbenzene	ND	0.050	mg/Kg wet								
1,3,5-Trimethylbenzene	ND	0.050	mg/Kg wet								
Vinyl Chloride	ND	0.10	mg/Kg wet								
m+p Xylene	ND	0.10	mg/Kg wet								
o-Xylene	ND	0.050	mg/Kg wet								
Surrogate: 1,2-Dichloroethane-d4	*0.0242*		mg/Kg wet	0.0250		97.0	70-130				
Surrogate: Toluene-d8	*0.0244*		mg/Kg wet	0.0250		97.7	70-130				
Surrogate: 4-Bromofluorobenzene	*0.0230*		mg/Kg wet	0.0250		92.0	70-130				
LCS (B340275-BS1)				Prepared: 05/15/23 Analyzed: 05/19/23							
Acetone	4.21	2.5	mg/Kg wet	5.00		84.3	70-160				†
Acrylonitrile	0.455	0.25	mg/Kg wet	0.500		91.0	70-130				
tert-Amyl Methyl Ether (TAME)	0.504	0.025	mg/Kg wet	0.500		101	70-130				
Benzene	0.554	0.050	mg/Kg wet	0.500		111	70-130				
Bromobenzene	0.502	0.050	mg/Kg wet	0.500		100	70-130				
Bromochloromethane	0.580	0.050	mg/Kg wet	0.500		116	70-130				
Bromodichloromethane	0.482	0.050	mg/Kg wet	0.500		96.3	70-130				
Bromoform	0.366	0.050	mg/Kg wet	0.500		73.1	70-130			V-05	
Bromomethane	0.599	0.10	mg/Kg wet	0.500		120	40-130				†
2-Butanone (MEK)	4.88	1.0	mg/Kg wet	5.00		97.5	70-160				†
tert-Butyl Alcohol (TBA)	3.55	1.0	mg/Kg wet	5.00		71.0	40-130			V-05	†
n-Butylbenzene	0.508	0.050	mg/Kg wet	0.500		102	70-130				
sec-Butylbenzene	0.490	0.050	mg/Kg wet	0.500		98.0	70-130				
tert-Butylbenzene	0.482	0.050	mg/Kg wet	0.500		96.3	70-160				†
tert-Butyl Ethyl Ether (TBEE)	0.504	0.025	mg/Kg wet	0.500		101	70-130				
Carbon Disulfide	4.60	0.25	mg/Kg wet	5.00		92.0	70-130				
Carbon Tetrachloride	0.477	0.050	mg/Kg wet	0.500		95.4	70-130				
Chlorobenzene	0.512	0.050	mg/Kg wet	0.500		102	70-130				
Chlorodibromomethane	0.442	0.025	mg/Kg wet	0.500		88.3	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 B340275 - SW-846 5035												
LCS (B340275-BS1)				Prepared: 05/15/23 Analyzed: 05/19/23								
Chloroethane	0.482	0.10	mg/Kg wet	0.500		96.4		70-130				
Chloroform	0.506	0.10	mg/Kg wet	0.500		101		70-130				
Chloromethane	0.512	0.10	mg/Kg wet	0.500		102		70-130				
2-Chlorotoluene	0.499	0.050	mg/Kg wet	0.500		99.8		70-130				
4-Chlorotoluene	0.492	0.050	mg/Kg wet	0.500		98.4		70-130				
1,2-Dibromo-3-chloropropane (DBCP)	0.411	0.25	mg/Kg wet	0.500		82.2		70-130			V-05	
1,2-Dibromoethane (EDB)	0.498	0.025	mg/Kg wet	0.500		99.6		70-130				
Dibromomethane	0.498	0.050	mg/Kg wet	0.500		99.6		70-130				
1,2-Dichlorobenzene	0.496	0.050	mg/Kg wet	0.500		99.3		70-130				
1,3-Dichlorobenzene	0.502	0.050	mg/Kg wet	0.500		100		70-130				
1,4-Dichlorobenzene	0.485	0.050	mg/Kg wet	0.500		97.0		70-130				
trans-1,4-Dichloro-2-butene	0.410	0.10	mg/Kg wet	0.500		82.0		70-130				
Dichlorodifluoromethane (Freon 12)	0.468	0.10	mg/Kg wet	0.500		93.6		40-160				†
1,1-Dichloroethane	0.516	0.050	mg/Kg wet	0.500		103		70-130				
1,2-Dichloroethane	0.486	0.050	mg/Kg wet	0.500		97.2		70-130				
1,1-Dichloroethylene	0.467	0.050	mg/Kg wet	0.500		93.4		70-130				
cis-1,2-Dichloroethylene	0.496	0.050	mg/Kg wet	0.500		99.3		70-130				
trans-1,2-Dichloroethylene	0.469	0.050	mg/Kg wet	0.500		93.8		70-130				
Dichlorofluoromethane (Freon 21)	0.488	0.050	mg/Kg wet	0.500		97.5		70-130				
1,2-Dichloropropane	0.532	0.050	mg/Kg wet	0.500		106		70-130				
1,3-Dichloropropane	0.513	0.025	mg/Kg wet	0.500		103		70-130				
2,2-Dichloropropane	0.400	0.050	mg/Kg wet	0.500		79.9		70-130			V-05	
1,1-Dichloropropene	0.508	0.10	mg/Kg wet	0.500		102		70-130				
cis-1,3-Dichloropropene	0.499	0.025	mg/Kg wet	0.500		99.8		70-130				
trans-1,3-Dichloropropene	0.462	0.025	mg/Kg wet	0.500		92.4		70-130				
Diethyl Ether	0.503	0.10	mg/Kg wet	0.500		101		70-130				
Difluorochloromethane (Freon 22)	0.510	0.050	mg/Kg wet	0.500		102		70-130				
Diisopropyl Ether (DIPE)	0.526	0.025	mg/Kg wet	0.500		105		70-130				
1,4-Dioxane	4.12	2.5	mg/Kg wet	5.00		82.4		40-160				†
Ethylbenzene	0.504	0.050	mg/Kg wet	0.500		101		70-130				
Hexachlorobutadiene	0.512	0.050	mg/Kg wet	0.500		102		70-160				
2-Hexanone (MBK)	4.37	0.50	mg/Kg wet	5.00		87.4		70-160				†
Isopropylbenzene (Cumene)	0.486	0.050	mg/Kg wet	0.500		97.2		70-130				
p-Isopropyltoluene (p-Cymene)	0.498	0.050	mg/Kg wet	0.500		99.6		70-130				
Methyl Acetate	0.346	0.50	mg/Kg wet	0.500		**69.2**	*	70-130			L-07, V-05, J	
Methyl tert-Butyl Ether (MTBE)	0.476	0.050	mg/Kg wet	0.500		95.1		70-130				
Methyl Cyclohexane	0.522	0.050	mg/Kg wet	0.500		104		70-130				
Methylene Chloride	0.487	0.25	mg/Kg wet	0.500		97.4		40-160				†
4-Methyl-2-pentanone (MIBK)	4.28	0.50	mg/Kg wet	5.00		85.7		70-160				†
Naphthalene	0.418	0.10	mg/Kg wet	0.500		83.7		40-130				†
n-Propylbenzene	0.501	0.050	mg/Kg wet	0.500		100		70-130				
Styrene	0.516	0.050	mg/Kg wet	0.500		103		70-130				
1,1,1,2-Tetrachloroethane	0.490	0.050	mg/Kg wet	0.500		98.1		70-130				
1,1,2,2-Tetrachloroethane	0.464	0.025	mg/Kg wet	0.500		92.7		70-130				
Tetrachloroethylene	0.496	0.050	mg/Kg wet	0.500		99.3		70-130				
Tetrahydrofuran	0.490	0.50	mg/Kg wet	0.500		98.1		70-130			J	
Toluene	0.514	0.050	mg/Kg wet	0.500		103		70-130				
1,2,3-Trichlorobenzene	0.472	0.25	mg/Kg wet	0.500		94.5		70-130				
1,2,4-Trichlorobenzene	0.472	0.050	mg/Kg wet	0.500		94.3		70-130				
1,3,5-Trichlorobenzene	0.510	0.050	mg/Kg wet	0.500		102		70-130				
1,1,1-Trichloroethane	0.478	0.050	mg/Kg wet	0.500		95.5		70-130				
1,1,2-Trichloroethane	0.521	0.050	mg/Kg wet	0.500		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 B340275 - SW-846 5035											
LCS (B340275-BS1)				Prepared: 05/15/23 Analyzed: 05/19/23							
Trichloroethylene	0.500	0.050	mg/Kg wet	0.500		99.9	70-130				
Trichlorofluoromethane (Freon 11)	0.458	0.10	mg/Kg wet	0.500		91.6	70-130				
1,2,3-Trichloropropane	0.567	0.10	mg/Kg wet	0.500		113	70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.489	0.050	mg/Kg wet	0.500		97.8	70-130				
1,2,4-Trimethylbenzene	0.490	0.050	mg/Kg wet	0.500		97.9	70-130				
1,3,5-Trimethylbenzene	0.492	0.050	mg/Kg wet	0.500		98.4	70-130				
Vinyl Chloride	0.558	0.10	mg/Kg wet	0.500		112	40-130				†
m+p Xylene	1.00	0.10	mg/Kg wet	1.00		100	70-130				
o-Xylene	0.494	0.050	mg/Kg wet	0.500		98.8	70-130				
Surrogate: 1,2-Dichloroethane-d4	*0.0237*		mg/Kg wet	0.0250		94.8	70-130				
Surrogate: Toluene-d8	*0.0251*		mg/Kg wet	0.0250		101	70-130				
Surrogate: 4-Bromofluorobenzene	*0.0246*		mg/Kg wet	0.0250		98.3	70-130				
LCS Dup (B340275-BSD1)				Prepared: 05/15/23 Analyzed: 05/19/23							
Acetone	4.39	2.5	mg/Kg wet	5.00		87.8	70-160	4.16	25		†
Acrylonitrile	0.497	0.25	mg/Kg wet	0.500		99.4	70-130	8.82	25		
tert-Amyl Methyl Ether (TAME)	0.498	0.025	mg/Kg wet	0.500		99.5	70-130	1.20	25		
Benzene	0.548	0.050	mg/Kg wet	0.500		110	70-130	1.09	25		
Bromobenzene	0.516	0.050	mg/Kg wet	0.500		103	70-130	2.75	25		
Bromochloromethane	0.574	0.050	mg/Kg wet	0.500		115	70-130	1.21	25		
Bromodichloromethane	0.498	0.050	mg/Kg wet	0.500		99.6	70-130	3.37	25		
Bromoform	0.385	0.050	mg/Kg wet	0.500		77.0	70-130	5.20	25	V-05	
Bromomethane	0.598	0.10	mg/Kg wet	0.500		120	40-130	0.167	25		†
2-Butanone (MEK)	4.99	1.0	mg/Kg wet	5.00		99.8	70-160	2.28	25		†
tert-Butyl Alcohol (TBA)	3.65	1.0	mg/Kg wet	5.00		73.0	40-130	2.79	25	V-05	†
n-Butylbenzene	0.522	0.050	mg/Kg wet	0.500		104	70-130	2.72	25		
sec-Butylbenzene	0.504	0.050	mg/Kg wet	0.500		101	70-130	2.72	25		
tert-Butylbenzene	0.495	0.050	mg/Kg wet	0.500		99.0	70-160	2.76	25		†
tert-Butyl Ethyl Ether (TBEE)	0.512	0.025	mg/Kg wet	0.500		102	70-130	1.48	25		
Carbon Disulfide	4.71	0.25	mg/Kg wet	5.00		94.2	70-130	2.40	25		
Carbon Tetrachloride	0.498	0.050	mg/Kg wet	0.500		99.6	70-130	4.31	25		
Chlorobenzene	0.523	0.050	mg/Kg wet	0.500		105	70-130	2.22	25		
Chlorodibromomethane	0.462	0.025	mg/Kg wet	0.500		92.3	70-130	4.43	25		
Chloroethane	0.498	0.10	mg/Kg wet	0.500		99.5	70-130	3.16	25		
Chloroform	0.515	0.10	mg/Kg wet	0.500		103	70-130	1.66	25		
Chloromethane	0.518	0.10	mg/Kg wet	0.500		104	70-130	1.07	25		
2-Chlorotoluene	0.504	0.050	mg/Kg wet	0.500		101	70-130	1.10	25		
4-Chlorotoluene	0.516	0.050	mg/Kg wet	0.500		103	70-130	4.67	25		
1,2-Dibromo-3-chloropropane (DBCP)	0.406	0.25	mg/Kg wet	0.500		81.2	70-130	1.22	25	V-05	
1,2-Dibromoethane (EDB)	0.516	0.025	mg/Kg wet	0.500		103	70-130	3.45	25		
Dibromomethane	0.508	0.050	mg/Kg wet	0.500		102	70-130	1.99	25		
1,2-Dichlorobenzene	0.506	0.050	mg/Kg wet	0.500		101	70-130	1.90	25		
1,3-Dichlorobenzene	0.513	0.050	mg/Kg wet	0.500		103	70-130	2.17	25		
1,4-Dichlorobenzene	0.498	0.050	mg/Kg wet	0.500		99.7	70-130	2.75	25		
trans-1,4-Dichloro-2-butene	0.418	0.10	mg/Kg wet	0.500		83.5	70-130	1.81	25		
Dichlorodifluoromethane (Freon 12)	0.483	0.10	mg/Kg wet	0.500		96.6	40-160	3.15	25		†
1,1-Dichloroethane	0.518	0.050	mg/Kg wet	0.500		104	70-130	0.483	25		
1,2-Dichloroethane	0.498	0.050	mg/Kg wet	0.500		99.6	70-130	2.44	25		
1,1-Dichloroethylene	0.466	0.050	mg/Kg wet	0.500		93.1	70-130	0.322	25		
cis-1,2-Dichloroethylene	0.512	0.050	mg/Kg wet	0.500		102	70-130	3.17	25		
trans-1,2-Dichloroethylene	0.480	0.050	mg/Kg wet	0.500		96.0	70-130	2.32	25		
Dichlorofluoromethane (Freon 21)	0.486	0.050	mg/Kg wet	0.500		97.3	70-130	0.205	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	
Batch B340275 - SW-846 5035											
LCS Dup (B340275-BSD1)				Prepared: 05/15/23 Analyzed: 05/19/23							
1,2-Dichloropropane	0.518	0.050	mg/Kg wet	0.500		104	70-130	2.67	25		
1,3-Dichloropropane	0.519	0.025	mg/Kg wet	0.500		104	70-130	1.16	25		
2,2-Dichloropropane	0.407	0.050	mg/Kg wet	0.500		81.4	70-130	1.86	25	V-05	
1,1-Dichloropropene	0.516	0.10	mg/Kg wet	0.500		103	70-130	1.46	25		
cis-1,3-Dichloropropene	0.508	0.025	mg/Kg wet	0.500		102	70-130	1.79	25		
trans-1,3-Dichloropropene	0.478	0.025	mg/Kg wet	0.500		95.7	70-130	3.51	25		
Diethyl Ether	0.510	0.10	mg/Kg wet	0.500		102	70-130	1.28	25		
Difluorochloromethane (Freon 22)	0.524	0.050	mg/Kg wet	0.500		105	70-130	2.61	25		
Diisopropyl Ether (DIPE)	0.532	0.025	mg/Kg wet	0.500		106	70-130	0.945	25		
1,4-Dioxane	4.15	2.5	mg/Kg wet	5.00		83.0	40-160	0.738	50		† ‡
Ethylbenzene	0.522	0.050	mg/Kg wet	0.500		104	70-130	3.41	25		
Hexachlorobutadiene	0.526	0.050	mg/Kg wet	0.500		105	70-160	2.60	25		
2-Hexanone (MBK)	4.53	0.50	mg/Kg wet	5.00		90.6	70-160	3.63	25		†
Isopropylbenzene (Cumene)	0.502	0.050	mg/Kg wet	0.500		100	70-130	3.24	25		
p-Isopropyltoluene (p-Cymene)	0.513	0.050	mg/Kg wet	0.500		103	70-130	2.97	25		
Methyl Acetate	0.350	0.50	mg/Kg wet	0.500		70.1	70-130	1.29	25	V-05, J	
Methyl tert-Butyl Ether (MTBE)	0.472	0.050	mg/Kg wet	0.500		94.3	70-130	0.845	25		
Methyl Cyclohexane	0.529	0.050	mg/Kg wet	0.500		106	70-130	1.24	25		
Methylene Chloride	0.490	0.25	mg/Kg wet	0.500		97.9	40-160	0.512	25		†
4-Methyl-2-pentanone (MIBK)	4.49	0.50	mg/Kg wet	5.00		89.9	70-160	4.80	25		†
Naphthalene	0.424	0.10	mg/Kg wet	0.500		84.9	40-130	1.42	25		†
n-Propylbenzene	0.517	0.050	mg/Kg wet	0.500		103	70-130	3.14	25		
Styrene	0.526	0.050	mg/Kg wet	0.500		105	70-130	1.92	25		
1,1,1,2-Tetrachloroethane	0.498	0.050	mg/Kg wet	0.500		99.5	70-130	1.42	25		
1,1,2,2-Tetrachloroethane	0.472	0.025	mg/Kg wet	0.500		94.3	70-130	1.71	25		
Tetrachloroethylene	0.508	0.050	mg/Kg wet	0.500		102	70-130	2.29	25		
Tetrahydrofuran	0.513	0.50	mg/Kg wet	0.500		103	70-130	4.48	25		
Toluene	0.534	0.050	mg/Kg wet	0.500		107	70-130	3.72	25		
1,2,3-Trichlorobenzene	0.481	0.25	mg/Kg wet	0.500		96.2	70-130	1.78	25		
1,2,4-Trichlorobenzene	0.476	0.050	mg/Kg wet	0.500		95.2	70-130	0.950	25		
1,3,5-Trichlorobenzene	0.506	0.050	mg/Kg wet	0.500		101	70-130	0.885	25		
1,1,1-Trichloroethane	0.496	0.050	mg/Kg wet	0.500		99.3	70-130	3.90	25		
1,1,2-Trichloroethane	0.512	0.050	mg/Kg wet	0.500		102	70-130	1.84	25		
Trichloroethylene	0.515	0.050	mg/Kg wet	0.500		103	70-130	3.06	25		
Trichlorofluoromethane (Freon 11)	0.460	0.10	mg/Kg wet	0.500		91.9	70-130	0.327	25		
1,2,3-Trichloropropane	0.588	0.10	mg/Kg wet	0.500		118	70-130	3.55	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.485	0.050	mg/Kg wet	0.500		97.0	70-130	0.821	25		
1,2,4-Trimethylbenzene	0.491	0.050	mg/Kg wet	0.500		98.2	70-130	0.306	25		
1,3,5-Trimethylbenzene	0.502	0.050	mg/Kg wet	0.500		100	70-130	2.01	25		
Vinyl Chloride	0.549	0.10	mg/Kg wet	0.500		110	40-130	1.63	25		†
m+p Xylene	1.04	0.10	mg/Kg wet	1.00		104	70-130	3.24	25		
o-Xylene	0.511	0.050	mg/Kg wet	0.500		102	70-130	3.38	25		
Surrogate: 1,2-Dichloroethane-d4	*0.0237*		mg/Kg wet	0.0250		94.8	70-130				
Surrogate: Toluene-d8	*0.0254*		mg/Kg wet	0.0250		101	70-130				
Surrogate: 4-Bromofluorobenzene	*0.0248*		mg/Kg wet	0.0250		99.1	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 B340391 - SW-846 5035										
Blank (B340391-BLK1)				Prepared & Analyzed: 05/16/23						
Acetone	ND	0.10	mg/Kg wet							
Acrylonitrile	ND	0.0060	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							
2-Butanone (MEK)	ND	0.040	mg/Kg wet							
tert-Butyl Alcohol (TBA)	ND	0.10	mg/Kg wet							V-05
n-Butylbenzene	ND	0.0020	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.010	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.020	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
trans-1,4-Dichloro-2-butene	ND	0.0040	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg wet							
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.020	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							
Ethylbenzene	ND	0.0020	mg/Kg wet							
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							
2-Hexanone (MBK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl Acetate	ND	0.0020	mg/Kg wet							

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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 B340391 - SW-846 5035												
Blank (B340391-BLK1)				Prepared & Analyzed: 05/16/23								
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet									
Methyl Cyclohexane	ND	0.0020	mg/Kg wet									
Methylene Chloride	ND	0.020	mg/Kg wet									
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet									
Naphthalene	ND	0.0040	mg/Kg wet									
n-Propylbenzene	ND	0.0020	mg/Kg wet									
Styrene	ND	0.0020	mg/Kg wet									
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet									
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet									
Tetrachloroethylene	ND	0.0020	mg/Kg wet									
Tetrahydrofuran	ND	0.010	mg/Kg wet									
Toluene	ND	0.0020	mg/Kg wet									
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet									
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet									
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg wet									
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet									
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet									
Trichloroethylene	ND	0.0020	mg/Kg wet									
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet									
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet									
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg wet									
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet									
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet									
Vinyl Chloride	ND	0.010	mg/Kg wet									
m+p Xylene	ND	0.0040	mg/Kg wet									
o-Xylene	ND	0.0020	mg/Kg wet									
Surrogate: 1,2-Dichloroethane-d4	*0.0482*		mg/Kg wet	0.0500		96.3		70-130				
Surrogate: Toluene-d8	*0.0493*		mg/Kg wet	0.0500		98.6		70-130				
Surrogate: 4-Bromofluorobenzene	*0.0496*		mg/Kg wet	0.0500		99.1		70-130				
LCS (B340391-BS1)				Prepared & Analyzed: 05/16/23								
Acetone	0.185	0.10	mg/Kg wet	0.200		92.3		70-160				†
Acrylonitrile	0.0209	0.0060	mg/Kg wet	0.0200		104		70-130				
tert-Amyl Methyl Ether (TAME)	0.0187	0.0010	mg/Kg wet	0.0200		93.4		70-130				
Benzene	0.0209	0.0020	mg/Kg wet	0.0200		105		70-130				
Bromobenzene	0.0233	0.0020	mg/Kg wet	0.0200		116		70-130				
Bromochloromethane	0.0209	0.0020	mg/Kg wet	0.0200		104		70-130				
Bromodichloromethane	0.0203	0.0020	mg/Kg wet	0.0200		102		70-130				
Bromoform	0.0210	0.0020	mg/Kg wet	0.0200		105		70-130				
Bromomethane	0.0273	0.010	mg/Kg wet	0.0200		**137**	*	40-130			L-02, V-20	†
2-Butanone (MEK)	0.206	0.040	mg/Kg wet	0.200		103		70-160				†
tert-Butyl Alcohol (TBA)	0.157	0.10	mg/Kg wet	0.200		78.6		40-130			V-05	†
n-Butylbenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.4		70-130				
sec-Butylbenzene	0.0188	0.0020	mg/Kg wet	0.0200		94.1		70-130				
tert-Butylbenzene	0.0188	0.0020	mg/Kg wet	0.0200		93.8		70-160				†
tert-Butyl Ethyl Ether (TBEE)	0.0188	0.0010	mg/Kg wet	0.0200		93.9		70-130				
Carbon Disulfide	0.215	0.010	mg/Kg wet	0.200		108		70-130			V-35	
Carbon Tetrachloride	0.0188	0.0020	mg/Kg wet	0.0200		94.2		70-130				
Chlorobenzene	0.0214	0.0020	mg/Kg wet	0.0200		107		70-130				
Chlorodibromomethane	0.0202	0.0010	mg/Kg wet	0.0200		101		70-130				
Chloroethane	0.0308	0.020	mg/Kg wet	0.0200		**154**	*	70-130			L-02, V-20	
Chloroform	0.0204	0.0040	mg/Kg wet	0.0200		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 B340391 - SW-846 5035											
LCS (B340391-BS1)				Prepared & Analyzed: 05/16/23							
Chloromethane	0.0171	0.010	mg/Kg wet	0.0200		85.4	70-130				
2-Chlorotoluene	0.0209	0.0020	mg/Kg wet	0.0200		105	70-130				
4-Chlorotoluene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130				
1,2-Dibromo-3-chloropropane (DBCP)	0.0160	0.0020	mg/Kg wet	0.0200		79.8	70-130				
1,2-Dibromoethane (EDB)	0.0211	0.0010	mg/Kg wet	0.0200		105	70-130				
Dibromomethane	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130				
1,2-Dichlorobenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130				
1,3-Dichlorobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.7	70-130				
1,4-Dichlorobenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.4	70-130				
trans-1,4-Dichloro-2-butene	0.0185	0.0040	mg/Kg wet	0.0200		92.6	70-130				
Dichlorodifluoromethane (Freon 12)	0.0200	0.020	mg/Kg wet	0.0200		100	40-160			V-35	†
1,1-Dichloroethane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130				
1,2-Dichloroethane	0.0195	0.0020	mg/Kg wet	0.0200		97.3	70-130				
1,1-Dichloroethylene	0.0202	0.0040	mg/Kg wet	0.0200		101	70-130				
cis-1,2-Dichloroethylene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130				
trans-1,2-Dichloroethylene	0.0198	0.0020	mg/Kg wet	0.0200		98.9	70-130				
1,2-Dichloropropane	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130				
1,3-Dichloropropane	0.0214	0.0010	mg/Kg wet	0.0200		107	70-130				
2,2-Dichloropropane	0.0183	0.0020	mg/Kg wet	0.0200		91.3	70-130				
1,1-Dichloropropene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130				
cis-1,3-Dichloropropene	0.0194	0.0010	mg/Kg wet	0.0200		96.9	70-130				
trans-1,3-Dichloropropene	0.0186	0.0010	mg/Kg wet	0.0200		92.9	70-130				
Diethyl Ether	0.0214	0.020	mg/Kg wet	0.0200		107	70-130				
Diisopropyl Ether (DIPE)	0.0195	0.0010	mg/Kg wet	0.0200		97.5	70-130				
1,4-Dioxane	0.201	0.10	mg/Kg wet	0.200		100	40-160				†
Ethylbenzene	0.0211	0.0020	mg/Kg wet	0.0200		105	70-130				
Hexachlorobutadiene	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-160				
2-Hexanone (MBK)	0.198	0.020	mg/Kg wet	0.200		99.0	70-160				†
Isopropylbenzene (Cumene)	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130				
p-Isopropyltoluene (p-Cymene)	0.0191	0.0020	mg/Kg wet	0.0200		95.7	70-130				
Methyl Acetate	0.0213	0.0020	mg/Kg wet	0.0200		106	70-130				
Methyl tert-Butyl Ether (MTBE)	0.0187	0.0040	mg/Kg wet	0.0200		93.4	70-130				
Methyl Cyclohexane	0.0195	0.0020	mg/Kg wet	0.0200		97.6	70-130				
Methylene Chloride	0.0196	0.020	mg/Kg wet	0.0200		98.0	40-160			J	†
4-Methyl-2-pentanone (MIBK)	0.201	0.020	mg/Kg wet	0.200		100	70-160				†
Naphthalene	0.0199	0.0040	mg/Kg wet	0.0200		99.7	40-130				†
n-Propylbenzene	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130				
Styrene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130				
1,1,1,2-Tetrachloroethane	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130				
1,1,2,2-Tetrachloroethane	0.0233	0.0010	mg/Kg wet	0.0200		117	70-130				
Tetrachloroethylene	0.0199	0.0020	mg/Kg wet	0.0200		99.3	70-130				
Tetrahydrofuran	0.0185	0.010	mg/Kg wet	0.0200		92.7	70-130				
Toluene	0.0195	0.0020	mg/Kg wet	0.0200		97.4	70-130				
1,2,3-Trichlorobenzene	0.0194	0.0020	mg/Kg wet	0.0200		96.9	70-130				
1,2,4-Trichlorobenzene	0.0188	0.0020	mg/Kg wet	0.0200		94.1	70-130				
1,3,5-Trichlorobenzene	0.0186	0.0020	mg/Kg wet	0.0200		92.9	70-130				
1,1,1-Trichloroethane	0.0193	0.0020	mg/Kg wet	0.0200		96.4	70-130				
1,1,2-Trichloroethane	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130				
Trichloroethylene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130				
Trichlorofluoromethane (Freon 11)	0.0226	0.010	mg/Kg wet	0.0200		113	70-130				
1,2,3-Trichloropropane	0.0208	0.0020	mg/Kg wet	0.0200		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 B340391 - SW-846 5035												
LCS (B340391-BS1)				Prepared & Analyzed: 05/16/23								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0206	0.010	mg/Kg wet	0.0200		103		70-130				
1,2,4-Trimethylbenzene	0.0189	0.0020	mg/Kg wet	0.0200		94.5		70-130				
1,3,5-Trimethylbenzene	0.0206	0.0020	mg/Kg wet	0.0200		103		70-130				
Vinyl Chloride	0.0212	0.010	mg/Kg wet	0.0200		106		40-130				†
m+p Xylene	0.0435	0.0040	mg/Kg wet	0.0400		109		70-130				
o-Xylene	0.0214	0.0020	mg/Kg wet	0.0200		107		70-130				
Surrogate: 1,2-Dichloroethane-d4	*0.0471*		mg/Kg wet	0.0500		94.2		70-130				
Surrogate: Toluene-d8	*0.0508*		mg/Kg wet	0.0500		102		70-130				
Surrogate: 4-Bromofluorobenzene	*0.0503*		mg/Kg wet	0.0500		101		70-130				
LCS Dup (B340391-BSD1)				Prepared & Analyzed: 05/16/23								
Acetone	0.176	0.10	mg/Kg wet	0.200		88.2		70-160	4.56	25		†
Acrylonitrile	0.0189	0.0060	mg/Kg wet	0.0200		94.6		70-130	9.75	25		
tert-Amyl Methyl Ether (TAME)	0.0180	0.0010	mg/Kg wet	0.0200		89.8		70-130	3.93	25		
Benzene	0.0204	0.0020	mg/Kg wet	0.0200		102		70-130	2.32	25		
Bromobenzene	0.0231	0.0020	mg/Kg wet	0.0200		115		70-130	1.04	25		
Bromochloromethane	0.0202	0.0020	mg/Kg wet	0.0200		101		70-130	3.51	25		
Bromodichloromethane	0.0203	0.0020	mg/Kg wet	0.0200		102		70-130	0.00	25		
Bromoform	0.0204	0.0020	mg/Kg wet	0.0200		102		70-130	2.80	25		
Bromomethane	0.0283	0.010	mg/Kg wet	0.0200		**142**	*	40-130	3.59	25	V-20, L-02	†
2-Butanone (MEK)	0.194	0.040	mg/Kg wet	0.200		97.2		70-160	5.68	25		†
tert-Butyl Alcohol (TBA)	0.142	0.10	mg/Kg wet	0.200		71.0		40-130	10.3	25	V-05	†
n-Butylbenzene	0.0187	0.0020	mg/Kg wet	0.0200		93.6		70-130	2.95	25		
sec-Butylbenzene	0.0185	0.0020	mg/Kg wet	0.0200		92.6		70-130	1.61	25		
tert-Butylbenzene	0.0185	0.0020	mg/Kg wet	0.0200		92.6		70-160	1.29	25		†
tert-Butyl Ethyl Ether (TBEE)	0.0183	0.0010	mg/Kg wet	0.0200		91.6		70-130	2.48	25		
Carbon Disulfide	0.209	0.010	mg/Kg wet	0.200		104		70-130	3.09	25	V-35	
Carbon Tetrachloride	0.0183	0.0020	mg/Kg wet	0.0200		91.3		70-130	3.13	25		
Chlorobenzene	0.0212	0.0020	mg/Kg wet	0.0200		106		70-130	1.13	25		
Chlorodibromomethane	0.0205	0.0010	mg/Kg wet	0.0200		102		70-130	1.18	25		
Chloroethane	0.0309	0.020	mg/Kg wet	0.0200		**154**	*	70-130	0.195	25	L-02, V-20	
Chloroform	0.0199	0.0040	mg/Kg wet	0.0200		99.7		70-130	2.18	25		
Chloromethane	0.0163	0.010	mg/Kg wet	0.0200		81.3		70-130	4.92	25		
2-Chlorotoluene	0.0210	0.0020	mg/Kg wet	0.0200		105		70-130	0.572	25		
4-Chlorotoluene	0.0210	0.0020	mg/Kg wet	0.0200		105		70-130	1.89	25		
1,2-Dibromo-3-chloropropane (DBCP)	0.0151	0.0020	mg/Kg wet	0.0200		75.5		70-130	5.54	25		
1,2-Dibromoethane (EDB)	0.0207	0.0010	mg/Kg wet	0.0200		104		70-130	1.53	25		
Dibromomethane	0.0207	0.0020	mg/Kg wet	0.0200		103		70-130	2.29	25		
1,2-Dichlorobenzene	0.0202	0.0020	mg/Kg wet	0.0200		101		70-130	0.888	25		
1,3-Dichlorobenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.5		70-130	1.25	25		
1,4-Dichlorobenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.6		70-130	1.87	25		
trans-1,4-Dichloro-2-butene	0.0177	0.0040	mg/Kg wet	0.0200		88.6		70-130	4.42	25		
Dichlorodifluoromethane (Freon 12)	0.0194	0.020	mg/Kg wet	0.0200		97.0		40-160	3.25	25	V-35, J	†
1,1-Dichloroethane	0.0197	0.0020	mg/Kg wet	0.0200		98.3		70-130	2.81	25		
1,2-Dichloroethane	0.0199	0.0020	mg/Kg wet	0.0200		99.5		70-130	2.24	25		
1,1-Dichloroethylene	0.0198	0.0040	mg/Kg wet	0.0200		99.2		70-130	1.90	25		
cis-1,2-Dichloroethylene	0.0197	0.0020	mg/Kg wet	0.0200		98.4		70-130	2.61	25		
trans-1,2-Dichloroethylene	0.0191	0.0020	mg/Kg wet	0.0200		95.3		70-130	3.71	25		
1,2-Dichloropropane	0.0213	0.0020	mg/Kg wet	0.0200		107		70-130	0.187	25		
1,3-Dichloropropane	0.0213	0.0010	mg/Kg wet	0.0200		106		70-130	0.655	25		
2,2-Dichloropropane	0.0172	0.0020	mg/Kg wet	0.0200		85.9		70-130	6.09	25		
1,1-Dichloropropene	0.0195	0.0020	mg/Kg wet	0.0200		97.5		70-130	3.53	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	
Batch B340391 - SW-846 5035											
LCS Dup (B340391-BSD1)				Prepared & Analyzed: 05/16/23							
cis-1,3-Dichloropropene	0.0192	0.0010	mg/Kg wet	0.0200		96.1	70-130	0.829	25		
trans-1,3-Dichloropropene	0.0187	0.0010	mg/Kg wet	0.0200		93.3	70-130	0.430	25		
Diethyl Ether	0.0210	0.020	mg/Kg wet	0.0200		105	70-130	1.51	25		
Diisopropyl Ether (DIPE)	0.0205	0.0010	mg/Kg wet	0.0200		102	70-130	4.80	25		
1,4-Dioxane	0.172	0.10	mg/Kg wet	0.200		85.9	40-160	15.6	50		† ‡
Ethylbenzene	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	1.53	25		
Hexachlorobutadiene	0.0176	0.0020	mg/Kg wet	0.0200		88.2	70-160	4.98	25		
2-Hexanone (MBK)	0.192	0.020	mg/Kg wet	0.200		95.8	70-160	3.37	25		†
Isopropylbenzene (Cumene)	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	1.48	25		
p-Isopropyltoluene (p-Cymene)	0.0187	0.0020	mg/Kg wet	0.0200		93.4	70-130	2.43	25		
Methyl Acetate	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	1.68	25		
Methyl tert-Butyl Ether (MTBE)	0.0183	0.0040	mg/Kg wet	0.0200		91.3	70-130	2.27	25		
Methyl Cyclohexane	0.0189	0.0020	mg/Kg wet	0.0200		94.7	70-130	3.02	25		
Methylene Chloride	0.0193	0.020	mg/Kg wet	0.0200		96.7	40-160	1.34	25	J	†
4-Methyl-2-pentanone (MIBK)	0.196	0.020	mg/Kg wet	0.200		97.8	70-160	2.50	25		†
Naphthalene	0.0191	0.0040	mg/Kg wet	0.0200		95.3	40-130	4.51	25		†
n-Propylbenzene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	3.53	25		
Styrene	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130	1.65	25		
1,1,1,2-Tetrachloroethane	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130	0.854	25		
1,1,2,2-Tetrachloroethane	0.0224	0.0010	mg/Kg wet	0.0200		112	70-130	3.93	25		
Tetrachloroethylene	0.0197	0.0020	mg/Kg wet	0.0200		98.7	70-130	0.606	25		
Tetrahydrofuran	0.0181	0.010	mg/Kg wet	0.0200		90.3	70-130	2.62	25		
Toluene	0.0191	0.0020	mg/Kg wet	0.0200		95.3	70-130	2.18	25		
1,2,3-Trichlorobenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.4	70-130	1.56	25		
1,2,4-Trichlorobenzene	0.0179	0.0020	mg/Kg wet	0.0200		89.7	70-130	4.79	25		
1,3,5-Trichlorobenzene	0.0181	0.0020	mg/Kg wet	0.0200		90.4	70-130	2.73	25		
1,1,1-Trichloroethane	0.0190	0.0020	mg/Kg wet	0.0200		94.8	70-130	1.67	25		
1,1,2-Trichloroethane	0.0208	0.0020	mg/Kg wet	0.0200		104	70-130	0.00	25		
Trichloroethylene	0.0197	0.0020	mg/Kg wet	0.0200		98.4	70-130	2.51	25		
Trichlorofluoromethane (Freon 11)	0.0218	0.010	mg/Kg wet	0.0200		109	70-130	3.61	25		
1,2,3-Trichloropropane	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130	2.24	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0196	0.010	mg/Kg wet	0.0200		98.0	70-130	4.78	25		
1,2,4-Trimethylbenzene	0.0186	0.0020	mg/Kg wet	0.0200		92.9	70-130	1.71	25		
1,3,5-Trimethylbenzene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130	1.37	25		
Vinyl Chloride	0.0201	0.010	mg/Kg wet	0.0200		101	40-130	5.03	25		†
m+p Xylene	0.0424	0.0040	mg/Kg wet	0.0400		106	70-130	2.61	25		
o-Xylene	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	0.0936	25		
Surrogate: 1,2-Dichloroethane-d4	*0.0458*		mg/Kg wet	0.0500		91.7	70-130				
Surrogate: Toluene-d8	*0.0510*		mg/Kg wet	0.0500		102	70-130				
Surrogate: 4-Bromofluorobenzene	*0.0501*		mg/Kg wet	0.0500		100	70-130				
Batch B340591 - SW-846 5035											
Blank (B340591-BLK1)				Prepared & Analyzed: 05/18/23							
Acetone	ND	0.10	mg/Kg wet								
Acrylonitrile	ND	0.0060	mg/Kg wet								
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet								
Benzene	ND	0.0020	mg/Kg wet								
Bromobenzene	ND	0.0020	mg/Kg wet								
Bromochloromethane	ND	0.0020	mg/Kg wet								
Bromodichloromethane	ND	0.0020	mg/Kg wet								
Bromoform	ND	0.0020	mg/Kg wet								

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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 B340591 - SW-846 5035										
Blank (B340591-BLK1)				Prepared & Analyzed: 05/18/23						
Bromomethane	ND	0.010	mg/Kg wet							
2-Butanone (MEK)	ND	0.040	mg/Kg wet							
tert-Butyl Alcohol (TBA)	ND	0.10	mg/Kg wet							V-05
n-Butylbenzene	ND	0.0020	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.010	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.020	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0020	mg/Kg wet							V-05
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
trans-1,4-Dichloro-2-butene	ND	0.0040	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg wet							
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.020	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							
Ethylbenzene	ND	0.0020	mg/Kg wet							
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							
2-Hexanone (MBK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl Acetate	ND	0.0020	mg/Kg wet							
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet							
Methyl Cyclohexane	ND	0.0020	mg/Kg wet							
Methylene Chloride	ND	0.020	mg/Kg wet							
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet							
Naphthalene	ND	0.0040	mg/Kg wet							
n-Propylbenzene	ND	0.0020	mg/Kg wet							
Styrene	ND	0.0020	mg/Kg wet							
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet							

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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 B340591 - SW-846 5035												
Blank (B340591-BLK1)				Prepared & Analyzed: 05/18/23								
1,1,2,2-Tetrachloroethane	ND	0.0010	mg/Kg wet									
Tetrachloroethylene	ND	0.0020	mg/Kg wet									
Tetrahydrofuran	ND	0.010	mg/Kg wet									
Toluene	ND	0.0020	mg/Kg wet									
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet									
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet									
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg wet									
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet									
1,1,2-Trichloroethane	ND	0.0020	mg/Kg wet									
Trichloroethylene	ND	0.0020	mg/Kg wet									
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet									
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet									
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg wet									
1,2,3-Trimethylbenzene	ND	0.020	mg/Kg wet									
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet									
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet									
Vinyl Chloride	ND	0.010	mg/Kg wet									
m+p Xylene	ND	0.0040	mg/Kg wet									
o-Xylene	ND	0.0020	mg/Kg wet									
Surrogate: 1,2-Dichloroethane-d4	*0.0472*		mg/Kg wet	0.0500		94.5		70-130				
Surrogate: Toluene-d8	*0.0495*		mg/Kg wet	0.0500		99.1		70-130				
Surrogate: 4-Bromofluorobenzene	*0.0490*		mg/Kg wet	0.0500		98.1		70-130				
LCS (B340591-BS1)				Prepared & Analyzed: 05/18/23								
Acetone	0.184	0.10	mg/Kg wet	0.200		92.0		70-160				†
Acrylonitrile	0.0206	0.0060	mg/Kg wet	0.0200		103		70-130				
tert-Amyl Methyl Ether (TAME)	0.0185	0.0010	mg/Kg wet	0.0200		92.4		70-130				
Benzene	0.0211	0.0020	mg/Kg wet	0.0200		105		70-130				
Bromobenzene	0.0241	0.0020	mg/Kg wet	0.0200		120		70-130				
Bromochloromethane	0.0210	0.0020	mg/Kg wet	0.0200		105		70-130				
Bromodichloromethane	0.0206	0.0020	mg/Kg wet	0.0200		103		70-130				
Bromoform	0.0210	0.0020	mg/Kg wet	0.0200		105		70-130				
Bromomethane	0.0291	0.010	mg/Kg wet	0.0200		**146**	*	40-130			L-02, V-20	†
2-Butanone (MEK)	0.203	0.040	mg/Kg wet	0.200		102		70-160				†
tert-Butyl Alcohol (TBA)	0.155	0.10	mg/Kg wet	0.200		77.4		40-130			V-05	†
n-Butylbenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.4		70-130				
sec-Butylbenzene	0.0196	0.0020	mg/Kg wet	0.0200		98.0		70-130				
tert-Butylbenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.4		70-160				†
tert-Butyl Ethyl Ether (TBEE)	0.0186	0.0010	mg/Kg wet	0.0200		93.2		70-130				
Carbon Disulfide	0.215	0.010	mg/Kg wet	0.200		107		70-130			V-35	
Carbon Tetrachloride	0.0184	0.0020	mg/Kg wet	0.0200		92.1		70-130				
Chlorobenzene	0.0220	0.0020	mg/Kg wet	0.0200		110		70-130				
Chlorodibromomethane	0.0203	0.0010	mg/Kg wet	0.0200		102		70-130				
Chloroethane	0.0318	0.020	mg/Kg wet	0.0200		**159**	*	70-130			L-02, V-20	
Chloroform	0.0205	0.0040	mg/Kg wet	0.0200		102		70-130				
Chloromethane	0.0169	0.010	mg/Kg wet	0.0200		84.7		70-130				
2-Chlorotoluene	0.0217	0.0020	mg/Kg wet	0.0200		108		70-130				
4-Chlorotoluene	0.0221	0.0020	mg/Kg wet	0.0200		110		70-130				
1,2-Dibromo-3-chloropropane (DBCP)	0.0162	0.0020	mg/Kg wet	0.0200		80.8		70-130			V-05	
1,2-Dibromoethane (EDB)	0.0212	0.0010	mg/Kg wet	0.0200		106		70-130				
Dibromomethane	0.0214	0.0020	mg/Kg wet	0.0200		107		70-130				
1,2-Dichlorobenzene	0.0211	0.0020	mg/Kg wet	0.0200		105		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 B340591 - SW-846 5035											
LCS (B340591-BS1)				Prepared & Analyzed: 05/18/23							
1,3-Dichlorobenzene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130				
1,4-Dichlorobenzene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130				
trans-1,4-Dichloro-2-butene	0.0180	0.0040	mg/Kg wet	0.0200		89.8	70-130				
Dichlorodifluoromethane (Freon 12)	0.0200	0.020	mg/Kg wet	0.0200		99.8	40-160			V-35, J	†
1,1-Dichloroethane	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130				
1,2-Dichloroethane	0.0198	0.0020	mg/Kg wet	0.0200		98.8	70-130				
1,1-Dichloroethylene	0.0205	0.0040	mg/Kg wet	0.0200		102	70-130				
cis-1,2-Dichloroethylene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130				
trans-1,2-Dichloroethylene	0.0196	0.0020	mg/Kg wet	0.0200		98.2	70-130				
1,2-Dichloropropane	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130				
1,3-Dichloropropane	0.0218	0.0010	mg/Kg wet	0.0200		109	70-130				
2,2-Dichloropropane	0.0179	0.0020	mg/Kg wet	0.0200		89.5	70-130				
1,1-Dichloropropene	0.0203	0.0020	mg/Kg wet	0.0200		102	70-130				
cis-1,3-Dichloropropene	0.0195	0.0010	mg/Kg wet	0.0200		97.6	70-130				
trans-1,3-Dichloropropene	0.0187	0.0010	mg/Kg wet	0.0200		93.7	70-130				
Diethyl Ether	0.0214	0.020	mg/Kg wet	0.0200		107	70-130				
Diisopropyl Ether (DIPE)	0.0204	0.0010	mg/Kg wet	0.0200		102	70-130				
1,4-Dioxane	0.183	0.10	mg/Kg wet	0.200		91.7	40-160				†
Ethylbenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130				
Hexachlorobutadiene	0.0190	0.0020	mg/Kg wet	0.0200		94.9	70-160				
2-Hexanone (MBK)	0.195	0.020	mg/Kg wet	0.200		97.4	70-160				†
Isopropylbenzene (Cumene)	0.0213	0.0020	mg/Kg wet	0.0200		107	70-130				
p-Isopropyltoluene (p-Cymene)	0.0197	0.0020	mg/Kg wet	0.0200		98.3	70-130				
Methyl Acetate	0.0223	0.0020	mg/Kg wet	0.0200		111	70-130				
Methyl tert-Butyl Ether (MTBE)	0.0189	0.0040	mg/Kg wet	0.0200		94.5	70-130				
Methyl Cyclohexane	0.0195	0.0020	mg/Kg wet	0.0200		97.4	70-130				
Methylene Chloride	0.0198	0.020	mg/Kg wet	0.0200		99.1	40-160			J	†
4-Methyl-2-pentanone (MIBK)	0.201	0.020	mg/Kg wet	0.200		100	70-160				†
Naphthalene	0.0204	0.0040	mg/Kg wet	0.0200		102	40-130				†
n-Propylbenzene	0.0218	0.0020	mg/Kg wet	0.0200		109	70-130				
Styrene	0.0227	0.0020	mg/Kg wet	0.0200		114	70-130				
1,1,1,2-Tetrachloroethane	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130				
1,1,2,2-Tetrachloroethane	0.0232	0.0010	mg/Kg wet	0.0200		116	70-130				
Tetrachloroethylene	0.0204	0.0020	mg/Kg wet	0.0200		102	70-130				
Tetrahydrofuran	0.0185	0.010	mg/Kg wet	0.0200		92.4	70-130				
Toluene	0.0197	0.0020	mg/Kg wet	0.0200		98.4	70-130				
1,2,3-Trichlorobenzene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130				
1,2,4-Trichlorobenzene	0.0198	0.0020	mg/Kg wet	0.0200		98.8	70-130				
1,3,5-Trichlorobenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.4	70-130				
1,1,1-Trichloroethane	0.0192	0.0020	mg/Kg wet	0.0200		96.0	70-130				
1,1,2-Trichloroethane	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130				
Trichloroethylene	0.0201	0.0020	mg/Kg wet	0.0200		100	70-130				
Trichlorofluoromethane (Freon 11)	0.0222	0.010	mg/Kg wet	0.0200		111	70-130				
1,2,3-Trichloropropane	0.0217	0.0020	mg/Kg wet	0.0200		108	70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0204	0.010	mg/Kg wet	0.0200		102	70-130				
1,2,3-Trimethylbenzene	0.0189	0.020	mg/Kg wet	0.0200		94.5	70-130			J	
1,2,4-Trimethylbenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.7	70-130				
1,3,5-Trimethylbenzene	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130				
Vinyl Chloride	0.0211	0.010	mg/Kg wet	0.0200		105	40-130				†
m+p Xylene	0.0447	0.0040	mg/Kg wet	0.0400		112	70-130				
o-Xylene	0.0222	0.0020	mg/Kg wet	0.0200		111	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 B340591 - SW-846 5035												
LCS (B340591-BS1)				Prepared & Analyzed: 05/18/23								
Surrogate: 1,2-Dichloroethane-d4	*0.0469*		mg/Kg wet	0.0500		93.8		70-130				
Surrogate: Toluene-d8	*0.0504*		mg/Kg wet	0.0500		101		70-130				
Surrogate: 4-Bromofluorobenzene	*0.0502*		mg/Kg wet	0.0500		100		70-130				
LCS Dup (B340591-BSD1)				Prepared & Analyzed: 05/18/23								
Acetone	0.189	0.10	mg/Kg wet	0.200		94.4		70-160	2.56	25		†
Acrylonitrile	0.0199	0.0060	mg/Kg wet	0.0200		99.3		70-130	3.46	25		
tert-Amyl Methyl Ether (TAME)	0.0185	0.0010	mg/Kg wet	0.0200		92.4		70-130	0.00	25		
Benzene	0.0217	0.0020	mg/Kg wet	0.0200		108		70-130	2.90	25		
Bromobenzene	0.0204	0.0020	mg/Kg wet	0.0200		102		70-130	16.4	25		
Bromochloromethane	0.0215	0.0020	mg/Kg wet	0.0200		107		70-130	2.16	25		
Bromodichloromethane	0.0205	0.0020	mg/Kg wet	0.0200		102		70-130	0.487	25		
Bromoform	0.0211	0.0020	mg/Kg wet	0.0200		106		70-130	0.474	25		
Bromomethane	0.0290	0.010	mg/Kg wet	0.0200		**145**	*	40-130	0.344	25	L-02, V-20	†
2-Butanone (MEK)	0.207	0.040	mg/Kg wet	0.200		103		70-160	1.65	25		†
tert-Butyl Alcohol (TBA)	0.154	0.10	mg/Kg wet	0.200		77.1		40-130	0.376	25	V-05	†
n-Butylbenzene	0.0204	0.0020	mg/Kg wet	0.0200		102		70-130	2.39	25		
sec-Butylbenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.7		70-130	1.72	25		
tert-Butylbenzene	0.0198	0.0020	mg/Kg wet	0.0200		99.0		70-160	0.608	25		†
tert-Butyl Ethyl Ether (TBEE)	0.0190	0.0010	mg/Kg wet	0.0200		94.9		70-130	1.81	25		
Carbon Disulfide	0.219	0.010	mg/Kg wet	0.200		109		70-130	1.98	25	V-35	
Carbon Tetrachloride	0.0191	0.0020	mg/Kg wet	0.0200		95.7		70-130	3.83	25		
Chlorobenzene	0.0224	0.0020	mg/Kg wet	0.0200		112		70-130	1.98	25		
Chlorodibromomethane	0.0202	0.0010	mg/Kg wet	0.0200		101		70-130	0.791	25		
Chloroethane	0.0328	0.020	mg/Kg wet	0.0200		**164**	*	70-130	3.22	25	L-02, V-20	
Chloroform	0.0208	0.0040	mg/Kg wet	0.0200		104		70-130	1.55	25		
Chloromethane	0.0172	0.010	mg/Kg wet	0.0200		86.2		70-130	1.76	25		
2-Chlorotoluene	0.0215	0.0020	mg/Kg wet	0.0200		108		70-130	0.741	25		
4-Chlorotoluene	0.0218	0.0020	mg/Kg wet	0.0200		109		70-130	1.00	25		
1,2-Dibromo-3-chloropropane (DBCP)	0.0169	0.0020	mg/Kg wet	0.0200		84.6		70-130	4.59	25	V-05	
1,2-Dibromoethane (EDB)	0.0209	0.0010	mg/Kg wet	0.0200		104		70-130	1.52	25		
Dibromomethane	0.0210	0.0020	mg/Kg wet	0.0200		105		70-130	1.70	25		
1,2-Dichlorobenzene	0.0212	0.0020	mg/Kg wet	0.0200		106		70-130	0.568	25		
1,3-Dichlorobenzene	0.0206	0.0020	mg/Kg wet	0.0200		103		70-130	2.35	25		
1,4-Dichlorobenzene	0.0206	0.0020	mg/Kg wet	0.0200		103		70-130	2.36	25		
trans-1,4-Dichloro-2-butene	0.0184	0.0040	mg/Kg wet	0.0200		92.0		70-130	2.42	25		
Dichlorodifluoromethane (Freon 12)	0.0203	0.020	mg/Kg wet	0.0200		102		40-160	1.89	25	V-35	†
1,1-Dichloroethane	0.0206	0.0020	mg/Kg wet	0.0200		103		70-130	2.35	25		
1,2-Dichloroethane	0.0201	0.0020	mg/Kg wet	0.0200		101		70-130	1.90	25		
1,1-Dichloroethylene	0.0208	0.0040	mg/Kg wet	0.0200		104		70-130	1.36	25		
cis-1,2-Dichloroethylene	0.0208	0.0020	mg/Kg wet	0.0200		104		70-130	1.16	25		
trans-1,2-Dichloroethylene	0.0202	0.0020	mg/Kg wet	0.0200		101		70-130	3.01	25		
1,2-Dichloropropane	0.0199	0.0020	mg/Kg wet	0.0200		99.6		70-130	9.10	25		
1,3-Dichloropropane	0.0217	0.0010	mg/Kg wet	0.0200		108		70-130	0.276	25		
2,2-Dichloropropane	0.0178	0.0020	mg/Kg wet	0.0200		89.2		70-130	0.336	25		
1,1-Dichloropropene	0.0207	0.0020	mg/Kg wet	0.0200		104		70-130	1.95	25		
cis-1,3-Dichloropropene	0.0194	0.0010	mg/Kg wet	0.0200		97.2		70-130	0.411	25		
trans-1,3-Dichloropropene	0.0183	0.0010	mg/Kg wet	0.0200		91.7		70-130	2.16	25		
Diethyl Ether	0.0217	0.020	mg/Kg wet	0.0200		108		70-130	1.21	25		
Diisopropyl Ether (DIPE)	0.0208	0.0010	mg/Kg wet	0.0200		104		70-130	1.65	25		
1,4-Dioxane	0.185	0.10	mg/Kg wet	0.200		92.6		40-160	0.988	50		† ‡
Ethylbenzene	0.0219	0.0020	mg/Kg wet	0.0200		110		70-130	0.457	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	
Batch B340591 - SW-846 5035											
LCS Dup (B340591-BSD1)				Prepared & Analyzed: 05/18/23							
Hexachlorobutadiene	0.0191	0.0020	mg/Kg wet	0.0200		95.5	70-160	0.630	25		
2-Hexanone (MBK)	0.194	0.020	mg/Kg wet	0.200		97.1	70-160	0.247	25		†
Isopropylbenzene (Cumene)	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	0.281	25		
p-Isopropyltoluene (p-Cymene)	0.0200	0.0020	mg/Kg wet	0.0200		99.8	70-130	1.51	25		
Methyl Acetate	0.0214	0.0020	mg/Kg wet	0.0200		107	70-130	3.85	25		
Methyl tert-Butyl Ether (MTBE)	0.0189	0.0040	mg/Kg wet	0.0200		94.6	70-130	0.106	25		
Methyl Cyclohexane	0.0185	0.0020	mg/Kg wet	0.0200		92.7	70-130	4.94	25		
Methylene Chloride	0.0198	0.020	mg/Kg wet	0.0200		99.1	40-160	0.00	25	J	†
4-Methyl-2-pentanone (MIBK)	0.197	0.020	mg/Kg wet	0.200		98.7	70-160	1.68	25		†
Naphthalene	0.0205	0.0040	mg/Kg wet	0.0200		103	40-130	0.782	25		†
n-Propylbenzene	0.0220	0.0020	mg/Kg wet	0.0200		110	70-130	0.730	25		
Styrene	0.0228	0.0020	mg/Kg wet	0.0200		114	70-130	0.264	25		
1,1,1,2-Tetrachloroethane	0.0216	0.0020	mg/Kg wet	0.0200		108	70-130	0.277	25		
1,1,2,2-Tetrachloroethane	0.0228	0.0010	mg/Kg wet	0.0200		114	70-130	1.65	25		
Tetrachloroethylene	0.0206	0.0020	mg/Kg wet	0.0200		103	70-130	0.878	25		
Tetrahydrofuran	0.0187	0.010	mg/Kg wet	0.0200		93.4	70-130	1.08	25		
Toluene	0.0196	0.0020	mg/Kg wet	0.0200		98.0	70-130	0.407	25		
1,2,3-Trichlorobenzene	0.0205	0.0020	mg/Kg wet	0.0200		102	70-130	0.487	25		
1,2,4-Trichlorobenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.5	70-130	0.304	25		
1,3,5-Trichlorobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.6	70-130	0.825	25		
1,1,1-Trichloroethane	0.0196	0.0020	mg/Kg wet	0.0200		98.0	70-130	2.06	25		
1,1,2-Trichloroethane	0.0210	0.0020	mg/Kg wet	0.0200		105	70-130	0.0951	25		
Trichloroethylene	0.0202	0.0020	mg/Kg wet	0.0200		101	70-130	0.496	25		
Trichlorofluoromethane (Freon 11)	0.0229	0.010	mg/Kg wet	0.0200		114	70-130	2.84	25		
1,2,3-Trichloropropane	0.0211	0.0020	mg/Kg wet	0.0200		106	70-130	2.71	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0209	0.010	mg/Kg wet	0.0200		104	70-130	2.32	25		
1,2,3-Trimethylbenzene	0.0191	0.020	mg/Kg wet	0.0200		95.6	70-130	1.16	25	J	
1,2,4-Trimethylbenzene	0.0200	0.0020	mg/Kg wet	0.0200		100	70-130	1.41	25		
1,3,5-Trimethylbenzene	0.0212	0.0020	mg/Kg wet	0.0200		106	70-130	1.77	25		
Vinyl Chloride	0.0215	0.010	mg/Kg wet	0.0200		108	40-130	2.07	25		†
m+p Xylene	0.0447	0.0040	mg/Kg wet	0.0400		112	70-130	0.0447	25		
o-Xylene	0.0222	0.0020	mg/Kg wet	0.0200		111	70-130	0.0901	25		
Surrogate: 1,2-Dichloroethane-d4	*0.0470*		mg/Kg wet	0.0500		94.0	70-130				
Surrogate: Toluene-d8	*0.0506*		mg/Kg wet	0.0500		101	70-130				
Surrogate: 4-Bromofluorobenzene	*0.0497*		mg/Kg wet	0.0500		99.5	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
Batch B341346 - SW-846 3546										
Blank (B341346-BLK1)				Prepared: 05/25/23 Analyzed: 05/26/23						
Acenaphthene	ND	0.085	mg/Kg wet							
Acenaphthylene	ND	0.085	mg/Kg wet							
Acetophenone	ND	0.17	mg/Kg wet							
Aniline	ND	0.17	mg/Kg wet							
Anthracene	ND	0.085	mg/Kg wet							
Benzidine	ND	0.33	mg/Kg wet							V-05, V-35
Benzo(a)anthracene	ND	0.085	mg/Kg wet							
Benzo(a)pyrene	ND	0.085	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.085	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.085	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.085	mg/Kg wet							
Benzoic Acid	ND	0.50	mg/Kg wet							
Bis(2-chloroethoxy)methane	ND	0.17	mg/Kg wet							
Bis(2-chloroethyl)ether	ND	0.17	mg/Kg wet							
Bis(2-chloroisopropyl)ether	ND	0.17	mg/Kg wet							
Bis(2-Ethylhexyl)phthalate	ND	0.17	mg/Kg wet							
4-Bromophenylphenylether	ND	0.17	mg/Kg wet							
Butylbenzylphthalate	ND	0.17	mg/Kg wet							
Carbazole	ND	0.085	mg/Kg wet							
4-Chloroaniline	ND	0.33	mg/Kg wet							
4-Chloro-3-methylphenol	ND	0.33	mg/Kg wet							
2-Chloronaphthalene	ND	0.17	mg/Kg wet							
2-Chlorophenol	ND	0.17	mg/Kg wet							
4-Chlorophenylphenylether	ND	0.17	mg/Kg wet							
Chrysene	ND	0.085	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.085	mg/Kg wet							
Dibenzofuran	ND	0.17	mg/Kg wet							
Di-n-butylphthalate	ND	0.17	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.17	mg/Kg wet							L-04
1,3-Dichlorobenzene	ND	0.17	mg/Kg wet							L-04
1,4-Dichlorobenzene	ND	0.17	mg/Kg wet							L-04
3,3-Dichlorobenzidine	ND	0.085	mg/Kg wet							
2,4-Dichlorophenol	ND	0.17	mg/Kg wet							
Diethylphthalate	ND	0.17	mg/Kg wet							
2,4-Dimethylphenol	ND	0.17	mg/Kg wet							
Dimethylphthalate	ND	0.17	mg/Kg wet							
4,6-Dinitro-2-methylphenol	ND	0.17	mg/Kg wet							
2,4-Dinitrophenol	ND	0.33	mg/Kg wet							V-05
2,4-Dinitrotoluene	ND	0.17	mg/Kg wet							
2,6-Dinitrotoluene	ND	0.17	mg/Kg wet							
Di-n-octylphthalate	ND	0.17	mg/Kg wet							
1,2-Diphenylhydrazine/Azobenzene	ND	0.17	mg/Kg wet							
Fluoranthene	ND	0.085	mg/Kg wet							
Fluorene	ND	0.085	mg/Kg wet							
Hexachlorobenzene	ND	0.17	mg/Kg wet							
Hexachlorobutadiene	ND	0.17	mg/Kg wet							L-04
Hexachlorocyclopentadiene	ND	0.17	mg/Kg wet							L-04, V-05
Hexachloroethane	ND	0.17	mg/Kg wet							L-04
Indeno(1,2,3-cd)pyrene	ND	0.085	mg/Kg wet							
Isophorone	ND	0.17	mg/Kg wet							
1-Methylnaphthalene	ND	0.085	mg/Kg wet							
2-Methylnaphthalene	ND	0.085	mg/Kg wet							

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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 B341346 - SW-846 3546												
Blank (B341346-BLK1)				Prepared: 05/25/23 Analyzed: 05/26/23								
2-Methylphenol	ND	0.17	mg/Kg wet									
3/4-Methylphenol	ND	0.17	mg/Kg wet								R-05	
Naphthalene	ND	0.085	mg/Kg wet									
2-Nitroaniline	ND	0.17	mg/Kg wet									
3-Nitroaniline	ND	0.17	mg/Kg wet									
4-Nitroaniline	ND	0.17	mg/Kg wet									
Nitrobenzene	ND	0.17	mg/Kg wet									
2-Nitrophenol	ND	0.17	mg/Kg wet									
4-Nitrophenol	ND	0.33	mg/Kg wet									
N-Nitrosodimethylamine	ND	0.17	mg/Kg wet									
N-Nitrosodiphenylamine/Diphenylamine	ND	0.17	mg/Kg wet									
N-Nitrosodi-n-propylamine	ND	0.17	mg/Kg wet									
Pentachloronitrobenzene	ND	0.17	mg/Kg wet									
Pentachlorophenol	ND	0.17	mg/Kg wet									
Phenanthrene	ND	0.085	mg/Kg wet									
Phenol	ND	0.17	mg/Kg wet									
Pyrene	ND	0.085	mg/Kg wet									
Pyridine	ND	0.17	mg/Kg wet								L-04	
1,2,4,5-Tetrachlorobenzene	ND	0.17	mg/Kg wet									
1,2,4-Trichlorobenzene	ND	0.17	mg/Kg wet									
2,4,5-Trichlorophenol	ND	0.17	mg/Kg wet									
2,4,6-Trichlorophenol	ND	0.17	mg/Kg wet									
Surrogate: 2-Fluorophenol	*4.85*		mg/Kg wet	6.67		72.7		30-130				
Surrogate: Phenol-d6	*4.62*		mg/Kg wet	6.67		69.2		30-130				
Surrogate: Nitrobenzene-d5	*2.26*		mg/Kg wet	3.33		67.7		30-130				
Surrogate: 2-Fluorobiphenyl	*2.37*		mg/Kg wet	3.33		71.2		30-130				
Surrogate: 2,4,6-Tribromophenol	*6.86*		mg/Kg wet	6.67		103		30-130				
Surrogate: p-Terphenyl-d14	*4.88*		mg/Kg wet	3.33		**146**	*	30-130			S-07	
LCS (B341346-BS1)				Prepared: 05/25/23 Analyzed: 05/26/23								
Acenaphthene	1.04	0.17	mg/Kg wet	1.67		62.2		40-140				
Acenaphthylene	1.10	0.17	mg/Kg wet	1.67		66.0		40-140				
Acetophenone	0.843	0.34	mg/Kg wet	1.67		50.6		40-140				
Aniline	0.777	0.34	mg/Kg wet	1.67		46.6		10-140				†
Anthracene	1.24	0.17	mg/Kg wet	1.67		74.3		40-140				
Benzidine	0.933	0.66	mg/Kg wet	1.67		56.0		40-140			V-05, V-35	
Benzo(a)anthracene	1.23	0.17	mg/Kg wet	1.67		73.9		40-140				
Benzo(a)pyrene	1.21	0.17	mg/Kg wet	1.67		72.4		40-140				
Benzo(b)fluoranthene	1.25	0.17	mg/Kg wet	1.67		74.9		40-140				
Benzo(g,h,i)perylene	1.16	0.17	mg/Kg wet	1.67		69.6		40-140				
Benzo(k)fluoranthene	1.28	0.17	mg/Kg wet	1.67		76.8		40-140				
Benzoic Acid	1.03	1.0	mg/Kg wet	1.67		61.9		30-130				
Bis(2-chloroethoxy)methane	0.955	0.34	mg/Kg wet	1.67		57.3		40-140				
Bis(2-chloroethyl)ether	0.795	0.34	mg/Kg wet	1.67		47.7		40-140				
Bis(2-chloroisopropyl)ether	1.01	0.34	mg/Kg wet	1.67		60.3		40-140				
Bis(2-Ethylhexyl)phthalate	1.25	0.34	mg/Kg wet	1.67		75.0		40-140				
4-Bromophenylphenylether	1.14	0.34	mg/Kg wet	1.67		68.2		40-140				
Butylbenzylphthalate	1.30	0.34	mg/Kg wet	1.67		78.1		40-140				
Carbazole	1.24	0.17	mg/Kg wet	1.67		74.1		40-140				
4-Chloroaniline	0.803	0.66	mg/Kg wet	1.67		48.2		10-140				†
4-Chloro-3-methylphenol	1.06	0.66	mg/Kg wet	1.67		63.8		30-130				
2-Chloronaphthalene	0.931	0.34	mg/Kg wet	1.67		55.8		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		%REC Limits	RPD	RPD Limit	Notes	
Batch B341346 - SW-846 3546												
LCS (B341346-BS1)				Prepared: 05/25/23 Analyzed: 05/26/23								
2-Chlorophenol	0.731	0.34	mg/Kg wet	1.67		43.8		30-130				
4-Chlorophenylphenylether	1.07	0.34	mg/Kg wet	1.67		64.4		40-140				
Chrysene	1.18	0.17	mg/Kg wet	1.67		70.7		40-140				
Dibenz(a,h)anthracene	1.15	0.17	mg/Kg wet	1.67		69.0		40-140				
Dibenzofuran	1.13	0.34	mg/Kg wet	1.67		67.9		40-140				
Di-n-butylphthalate	1.23	0.34	mg/Kg wet	1.67		74.1		40-140				
1,2-Dichlorobenzene	0.660	0.34	mg/Kg wet	1.67		**39.6**	*	40-140			L-04	
1,3-Dichlorobenzene	0.612	0.34	mg/Kg wet	1.67		**36.7**	*	40-140			L-04	
1,4-Dichlorobenzene	0.628	0.34	mg/Kg wet	1.67		**37.7**	*	40-140			L-04	
3,3-Dichlorobenzidine	1.13	0.17	mg/Kg wet	1.67		68.0		20-140				†
2,4-Dichlorophenol	0.895	0.34	mg/Kg wet	1.67		53.7		30-130				
Diethylphthalate	1.12	0.34	mg/Kg wet	1.67		67.3		40-140				
2,4-Dimethylphenol	0.939	0.34	mg/Kg wet	1.67		56.3		30-130				
Dimethylphthalate	1.14	0.34	mg/Kg wet	1.67		68.5		40-140				
4,6-Dinitro-2-methylphenol	1.14	0.34	mg/Kg wet	1.67		68.1		30-130				
2,4-Dinitrophenol	0.843	0.66	mg/Kg wet	1.67		50.6		30-130			V-05	
2,4-Dinitrotoluene	1.16	0.34	mg/Kg wet	1.67		69.3		40-140				
2,6-Dinitrotoluene	1.19	0.34	mg/Kg wet	1.67		71.5		40-140				
Di-n-octylphthalate	1.20	0.34	mg/Kg wet	1.67		72.1		40-140				
1,2-Diphenylhydrazine/Azobenzene	1.34	0.34	mg/Kg wet	1.67		80.6		40-140				
Fluoranthene	1.22	0.17	mg/Kg wet	1.67		72.9		40-140				
Fluorene	1.12	0.17	mg/Kg wet	1.67		67.3		40-140				
Hexachlorobenzene	1.16	0.34	mg/Kg wet	1.67		69.7		40-140				
Hexachlorobutadiene	0.631	0.34	mg/Kg wet	1.67		**37.9**	*	40-140			L-04	
Hexachlorocyclopentadiene	0.602	0.34	mg/Kg wet	1.67		**36.1**	*	40-140			L-04, V-05	
Hexachloroethane	0.647	0.34	mg/Kg wet	1.67		**38.8**	*	40-140			L-04	
Indeno(1,2,3-cd)pyrene	1.17	0.17	mg/Kg wet	1.67		70.1		40-140				
Isophorone	1.09	0.34	mg/Kg wet	1.67		65.6		40-140				
1-Methylnaphthalene	0.919	0.17	mg/Kg wet	1.67		55.1		40-140				
2-Methylnaphthalene	0.913	0.17	mg/Kg wet	1.67		54.8		40-140				
2-Methylphenol	0.951	0.34	mg/Kg wet	1.67		57.0		30-130				
3/4-Methylphenol	0.559	0.34	mg/Kg wet	1.67		33.6		30-130			R-05	
Naphthalene	0.830	0.17	mg/Kg wet	1.67		49.8		40-140				
2-Nitroaniline	1.28	0.34	mg/Kg wet	1.67		77.1		40-140				
3-Nitroaniline	1.05	0.34	mg/Kg wet	1.67		63.1		30-140				†
4-Nitroaniline	1.10	0.34	mg/Kg wet	1.67		66.1		40-140				
Nitrobenzene	0.838	0.34	mg/Kg wet	1.67		50.3		40-140				
2-Nitrophenol	0.807	0.34	mg/Kg wet	1.67		48.4		30-130				
4-Nitrophenol	0.990	0.66	mg/Kg wet	1.67		59.4		30-130				
N-Nitrosodimethylamine	0.759	0.34	mg/Kg wet	1.67		45.6		40-140				
N-Nitrosodiphenylamine/Diphenylamine	1.29	0.34	mg/Kg wet	1.67		77.7		40-140				
N-Nitrosodi-n-propylamine	1.02	0.34	mg/Kg wet	1.67		60.9		40-140				
Pentachloronitrobenzene	1.14	0.34	mg/Kg wet	1.67		68.1		40-140				
Pentachlorophenol	0.854	0.34	mg/Kg wet	1.67		51.3		30-130				
Phenanthrene	1.22	0.17	mg/Kg wet	1.67		73.4		40-140				
Phenol	0.873	0.34	mg/Kg wet	1.67		52.4		30-130				
Pyrene	1.31	0.17	mg/Kg wet	1.67		78.7		40-140				
Pyridine	0.473	0.34	mg/Kg wet	1.67		**28.4**	*	30-140			L-04	†
1,2,4,5-Tetrachlorobenzene	0.900	0.34	mg/Kg wet	1.67		54.0		40-140				
1,2,4-Trichlorobenzene	0.722	0.34	mg/Kg wet	1.67		43.3		40-140				
2,4,5-Trichlorophenol	1.16	0.34	mg/Kg wet	1.67		69.3		30-130				
2,4,6-Trichlorophenol	1.02	0.34	mg/Kg wet	1.67		61.2		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	
Batch B341346 - SW-846 3546												
LCS (B341346-BS1)				Prepared: 05/25/23 Analyzed: 05/26/23								
Surrogate: 2-Fluorophenol	*3.10*		mg/Kg wet	6.67		46.6		30-130				
Surrogate: Phenol-d6	*3.88*		mg/Kg wet	6.67		58.2		30-130				
Surrogate: Nitrobenzene-d5	*1.75*		mg/Kg wet	3.33		52.4		30-130				
Surrogate: 2-Fluorobiphenyl	*2.21*		mg/Kg wet	3.33		66.4		30-130				
Surrogate: 2,4,6-Tribromophenol	*4.79*		mg/Kg wet	6.67		71.8		30-130				
Surrogate: p-Terphenyl-d14	*2.74*		mg/Kg wet	3.33		82.2		30-130				
LCS Dup (B341346-BSD1)				Prepared: 05/25/23 Analyzed: 05/26/23								
Acenaphthene	0.998	0.17	mg/Kg wet	1.67		59.9		40-140	3.80	30		
Acenaphthylene	1.04	0.17	mg/Kg wet	1.67		62.5		40-140	5.54	30		
Acetophenone	0.825	0.34	mg/Kg wet	1.67		49.5		40-140	2.16	30		
Aniline	0.866	0.34	mg/Kg wet	1.67		51.9		10-140	10.8	50		† ‡
Anthracene	1.20	0.17	mg/Kg wet	1.67		71.9		40-140	3.23	30		
Benzidine	1.09	0.66	mg/Kg wet	1.67		65.4		40-140	15.6	30	V-35, V-05	
Benzo(a)anthracene	1.19	0.17	mg/Kg wet	1.67		71.5		40-140	3.36	30		
Benzo(a)pyrene	1.15	0.17	mg/Kg wet	1.67		69.2		40-140	4.49	30		
Benzo(b)fluoranthene	1.20	0.17	mg/Kg wet	1.67		72.0		40-140	3.95	30		
Benzo(g,h,i)perylene	1.13	0.17	mg/Kg wet	1.67		67.7		40-140	2.77	30		
Benzo(k)fluoranthene	1.24	0.17	mg/Kg wet	1.67		74.6		40-140	2.93	30		
Benzoic Acid	0.939	1.0	mg/Kg wet	1.67		56.3		30-130	9.47	50	J	‡
Bis(2-chloroethoxy)methane	0.920	0.34	mg/Kg wet	1.67		55.2		40-140	3.77	30		
Bis(2-chloroethyl)ether	0.764	0.34	mg/Kg wet	1.67		45.9		40-140	3.98	30		
Bis(2-chloroisopropyl)ether	0.943	0.34	mg/Kg wet	1.67		56.6		40-140	6.36	30		
Bis(2-Ethylhexyl)phthalate	1.18	0.34	mg/Kg wet	1.67		70.8		40-140	5.68	30		
4-Bromophenylphenylether	1.06	0.34	mg/Kg wet	1.67		63.7		40-140	6.82	30		
Butylbenzylphthalate	1.22	0.34	mg/Kg wet	1.67		73.0		40-140	6.75	30		
Carbazole	1.22	0.17	mg/Kg wet	1.67		73.0		40-140	1.52	30		
4-Chloroaniline	0.885	0.66	mg/Kg wet	1.67		53.1		10-140	9.71	30		†
4-Chloro-3-methylphenol	0.985	0.66	mg/Kg wet	1.67		59.1		30-130	7.71	30		
2-Chloronaphthalene	0.885	0.34	mg/Kg wet	1.67		53.1		40-140	5.03	30		
2-Chlorophenol	0.727	0.34	mg/Kg wet	1.67		43.6		30-130	0.457	30		
4-Chlorophenylphenylether	1.03	0.34	mg/Kg wet	1.67		61.5		40-140	4.48	30		
Chrysene	1.13	0.17	mg/Kg wet	1.67		67.6		40-140	4.51	30		
Dibenz(a,h)anthracene	1.11	0.17	mg/Kg wet	1.67		66.6		40-140	3.60	30		
Dibenzofuran	1.08	0.34	mg/Kg wet	1.67		64.8		40-140	4.70	30		
Di-n-butylphthalate	1.18	0.34	mg/Kg wet	1.67		70.9		40-140	4.33	30		
1,2-Dichlorobenzene	0.638	0.34	mg/Kg wet	1.67		**38.3**	*	40-140	3.39	30	L-04	
1,3-Dichlorobenzene	0.595	0.34	mg/Kg wet	1.67		**35.7**	*	40-140	2.82	30	L-04	
1,4-Dichlorobenzene	0.607	0.34	mg/Kg wet	1.67		**36.4**	*	40-140	3.29	30	L-04	
3,3-Dichlorobenzidine	1.18	0.17	mg/Kg wet	1.67		70.6		20-140	3.69	50		† ‡
2,4-Dichlorophenol	0.856	0.34	mg/Kg wet	1.67		51.4		30-130	4.38	30		
Diethylphthalate	1.09	0.34	mg/Kg wet	1.67		65.4		40-140	2.83	30		
2,4-Dimethylphenol	0.900	0.34	mg/Kg wet	1.67		54.0		30-130	4.20	30		
Dimethylphthalate	1.09	0.34	mg/Kg wet	1.67		65.6		40-140	4.35	30		
4,6-Dinitro-2-methylphenol	1.10	0.34	mg/Kg wet	1.67		66.1		30-130	3.04	30		
2,4-Dinitrophenol	0.855	0.66	mg/Kg wet	1.67		51.3		30-130	1.33	30	V-05	
2,4-Dinitrotoluene	1.13	0.34	mg/Kg wet	1.67		67.6		40-140	2.54	30		
2,6-Dinitrotoluene	1.16	0.34	mg/Kg wet	1.67		69.3		40-140	3.13	30		
Di-n-octylphthalate	1.16	0.34	mg/Kg wet	1.67		69.6		40-140	3.53	30		
1,2-Diphenylhydrazine/Azobenzene	1.15	0.34	mg/Kg wet	1.67		69.2		40-140	15.3	30		
Fluoranthene	1.21	0.17	mg/Kg wet	1.67		72.7		40-140	0.247	30		
Fluorene	1.07	0.17	mg/Kg wet	1.67		64.0		40-140	5.06	30		

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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 B341346 - SW-846 3546													
LCS Dup (B341346-BSD1)				Prepared: 05/25/23 Analyzed: 05/26/23									
Hexachlorobenzene	1.09	0.34	mg/Kg wet	1.67		65.4		40-140	6.40		30		
Hexachlorobutadiene	0.661	0.34	mg/Kg wet	1.67		**39.7**	*	40-140	4.64		30	L-04	
Hexachlorocyclopentadiene	0.647	0.34	mg/Kg wet	1.67		**38.8**	*	40-140	7.20		30	L-04, V-05	
Hexachloroethane	0.622	0.34	mg/Kg wet	1.67		**37.3**	*	40-140	3.89		30	L-04	
Indeno(1,2,3-cd)pyrene	1.14	0.17	mg/Kg wet	1.67		68.4		40-140	2.54		30		
Isophorone	1.02	0.34	mg/Kg wet	1.67		61.0		40-140	7.36		30		
1-Methylnaphthalene	0.912	0.17	mg/Kg wet	1.67		54.7		40-140	0.801		30		
2-Methylnaphthalene	0.908	0.17	mg/Kg wet	1.67		54.5		40-140	0.586		30		
2-Methylphenol	0.915	0.34	mg/Kg wet	1.67		54.9		30-130	3.82		30		
3/4-Methylphenol	0.972	0.34	mg/Kg wet	1.67		58.3		30-130	**53.9**	*	30	R-05	
Naphthalene	0.821	0.17	mg/Kg wet	1.67		49.3		40-140	1.01		30		
2-Nitroaniline	1.16	0.34	mg/Kg wet	1.67		69.6		40-140	10.2		30		
3-Nitroaniline	1.09	0.34	mg/Kg wet	1.67		65.6		30-140	3.79		30		†
4-Nitroaniline	1.11	0.34	mg/Kg wet	1.67		66.5		40-140	0.483		30		
Nitrobenzene	0.810	0.34	mg/Kg wet	1.67		48.6		40-140	3.44		30		
2-Nitrophenol	0.817	0.34	mg/Kg wet	1.67		49.0		30-130	1.27		30		
4-Nitrophenol	1.04	0.66	mg/Kg wet	1.67		62.6		30-130	5.28		50		‡
N-Nitrosodimethylamine	0.673	0.34	mg/Kg wet	1.67		40.4		40-140	12.0		30		
N-Nitrosodiphenylamine/Diphenylamine	1.21	0.34	mg/Kg wet	1.67		72.7		40-140	6.60		30		
N-Nitrosodi-n-propylamine	0.941	0.34	mg/Kg wet	1.67		56.5		40-140	7.60		30		
Pentachloronitrobenzene	1.11	0.34	mg/Kg wet	1.67		66.6		40-140	2.32		30		
Pentachlorophenol	0.814	0.34	mg/Kg wet	1.67		48.8		30-130	4.88		30		
Phenanthrene	1.17	0.17	mg/Kg wet	1.67		70.3		40-140	4.32		30		
Phenol	0.840	0.34	mg/Kg wet	1.67		50.4		30-130	3.93		30		
Pyrene	1.25	0.17	mg/Kg wet	1.67		74.9		40-140	4.87		30		
Pyridine	0.405	0.34	mg/Kg wet	1.67		**24.3**	*	30-140	15.3		30	L-04	†
1,2,4,5-Tetrachlorobenzene	0.886	0.34	mg/Kg wet	1.67		53.2		40-140	1.53		30		
1,2,4-Trichlorobenzene	0.749	0.34	mg/Kg wet	1.67		45.0		40-140	3.72		30		
2,4,5-Trichlorophenol	1.11	0.34	mg/Kg wet	1.67		66.9		30-130	3.55		30		
2,4,6-Trichlorophenol	0.933	0.34	mg/Kg wet	1.67		56.0		30-130	8.95		30		
Surrogate: 2-Fluorophenol	*3.15*		mg/Kg wet	6.67		47.3		30-130					
Surrogate: Phenol-d6	*3.69*		mg/Kg wet	6.67		55.3		30-130					
Surrogate: Nitrobenzene-d5	*1.71*		mg/Kg wet	3.33		51.4		30-130					
Surrogate: 2-Fluorobiphenyl	*2.10*		mg/Kg wet	3.33		63.0		30-130					
Surrogate: 2,4,6-Tribromophenol	*4.90*		mg/Kg wet	6.67		73.5		30-130					
Surrogate: p-Terphenyl-d14	*2.62*		mg/Kg wet	3.33		78.7		30-130					
Batch B342052 - SW-846 3546													
Blank (B342052-BLK1)				Prepared: 06/02/23 Analyzed: 06/05/23									
Acenaphthene	ND	0.17	mg/Kg wet										
Acenaphthylene	ND	0.17	mg/Kg wet										
Acetophenone	ND	0.34	mg/Kg wet										
Aniline	ND	0.34	mg/Kg wet										
Anthracene	ND	0.17	mg/Kg wet										
Benzidine	ND	0.66	mg/Kg wet									V-04, V-05	
Benzo(a)anthracene	ND	0.17	mg/Kg wet										
Benzo(a)pyrene	ND	0.17	mg/Kg wet										
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet										
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet										
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet										
Benzoic Acid	ND	1.0	mg/Kg wet										
Bis(2-chloroethoxy)methane	ND	0.34	mg/Kg wet										

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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 B342052 - SW-846 3546										
Blank (B342052-BLK1)				Prepared: 06/02/23 Analyzed: 06/05/23						
Bis(2-chloroethyl)ether	ND	0.34	mg/Kg wet							
Bis(2-chloroisopropyl)ether	ND	0.34	mg/Kg wet							
Bis(2-Ethylhexyl)phthalate	ND	0.34	mg/Kg wet							
4-Bromophenylphenylether	ND	0.34	mg/Kg wet							
Butylbenzylphthalate	ND	0.34	mg/Kg wet							
Carbazole	ND	0.17	mg/Kg wet							
4-Chloroaniline	ND	0.66	mg/Kg wet							
4-Chloro-3-methylphenol	ND	0.66	mg/Kg wet							
2-Chloronaphthalene	ND	0.34	mg/Kg wet							
2-Chlorophenol	ND	0.34	mg/Kg wet							
4-Chlorophenylphenylether	ND	0.34	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Dibenzofuran	ND	0.34	mg/Kg wet							
Di-n-butylphthalate	ND	0.34	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.34	mg/Kg wet							
3,3-Dichlorobenzidine	ND	0.17	mg/Kg wet							
2,4-Dichlorophenol	ND	0.34	mg/Kg wet							
Diethylphthalate	ND	0.34	mg/Kg wet							
2,4-Dimethylphenol	ND	0.34	mg/Kg wet							
Dimethylphthalate	ND	0.34	mg/Kg wet							
4,6-Dinitro-2-methylphenol	ND	0.34	mg/Kg wet							
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							
2,4-Dinitrotoluene	ND	0.34	mg/Kg wet							
2,6-Dinitrotoluene	ND	0.34	mg/Kg wet							
Di-n-octylphthalate	ND	0.34	mg/Kg wet							
1,2-Diphenylhydrazine/Azobenzene	ND	0.34	mg/Kg wet							
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Hexachlorobenzene	ND	0.34	mg/Kg wet							
Hexachlorobutadiene	ND	0.34	mg/Kg wet							
Hexachlorocyclopentadiene	ND	0.34	mg/Kg wet							V-05
Hexachloroethane	ND	0.34	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
Isophorone	ND	0.34	mg/Kg wet							
1-Methylnaphthalene	ND	0.17	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							
2-Methylphenol	ND	0.34	mg/Kg wet							
3/4-Methylphenol	ND	0.34	mg/Kg wet							
Naphthalene	ND	0.17	mg/Kg wet							
2-Nitroaniline	ND	0.34	mg/Kg wet							
3-Nitroaniline	ND	0.34	mg/Kg wet							
4-Nitroaniline	ND	0.34	mg/Kg wet							
Nitrobenzene	ND	0.34	mg/Kg wet							
2-Nitrophenol	ND	0.34	mg/Kg wet							
4-Nitrophenol	ND	0.66	mg/Kg wet							
N-Nitrosodimethylamine	ND	0.34	mg/Kg wet							
N-Nitrosodiphenylamine/Diphenylamine	ND	0.34	mg/Kg wet							
N-Nitrosodi-n-propylamine	ND	0.34	mg/Kg wet							
Pentachloronitrobenzene	ND	0.34	mg/Kg wet							

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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 B342052 - SW-846 3546											
Blank (B342052-BLK1)				Prepared: 06/02/23 Analyzed: 06/05/23							
Pentachlorophenol	ND	0.34	mg/Kg wet								
Phenanthrene	ND	0.17	mg/Kg wet								
Phenol	ND	0.34	mg/Kg wet								
Pyrene	ND	0.17	mg/Kg wet								
Pyridine	ND	0.34	mg/Kg wet								
1,2,4,5-Tetrachlorobenzene	ND	0.34	mg/Kg wet								
1,2,4-Trichlorobenzene	ND	0.34	mg/Kg wet								
2,4,5-Trichlorophenol	ND	0.34	mg/Kg wet								
2,4,6-Trichlorophenol	ND	0.34	mg/Kg wet								
Surrogate: 2-Fluorophenol	*4.79*		mg/Kg wet	6.67		71.9	30-130				
Surrogate: Phenol-d6	*5.03*		mg/Kg wet	6.67		75.4	30-130				
Surrogate: Nitrobenzene-d5	*2.50*		mg/Kg wet	3.33		74.9	30-130				
Surrogate: 2-Fluorobiphenyl	*3.05*		mg/Kg wet	3.33		91.6	30-130				
Surrogate: 2,4,6-Tribromophenol	*6.01*		mg/Kg wet	6.67		90.1	30-130				
Surrogate: p-Terphenyl-d14	*3.49*		mg/Kg wet	3.33		105	30-130				
LCS (B342052-BS1)				Prepared: 06/02/23 Analyzed: 06/05/23							
Acenaphthene	1.30	0.17	mg/Kg wet	1.67		77.9	40-140				
Acenaphthylene	1.45	0.17	mg/Kg wet	1.67		86.9	40-140				
Acetophenone	1.20	0.34	mg/Kg wet	1.67		71.7	40-140				
Aniline	1.07	0.34	mg/Kg wet	1.67		64.0	10-140			V-34	†
Anthracene	1.50	0.17	mg/Kg wet	1.67		89.7	40-140				
Benzidine	1.89	0.66	mg/Kg wet	1.67		113	40-140			V-04, V-05	
Benzo(a)anthracene	1.50	0.17	mg/Kg wet	1.67		89.7	40-140				
Benzo(a)pyrene	1.44	0.17	mg/Kg wet	1.67		86.3	40-140				
Benzo(b)fluoranthene	1.57	0.17	mg/Kg wet	1.67		94.5	40-140				
Benzo(g,h,i)perylene	1.69	0.17	mg/Kg wet	1.67		102	40-140				
Benzo(k)fluoranthene	1.59	0.17	mg/Kg wet	1.67		95.3	40-140				
Benzoic Acid	1.17	1.0	mg/Kg wet	1.67		70.2	30-130				
Bis(2-chloroethoxy)methane	1.20	0.34	mg/Kg wet	1.67		72.3	40-140				
Bis(2-chloroethyl)ether	1.12	0.34	mg/Kg wet	1.67		67.2	40-140				
Bis(2-chloroisopropyl)ether	1.28	0.34	mg/Kg wet	1.67		76.8	40-140				
Bis(2-Ethylhexyl)phthalate	1.48	0.34	mg/Kg wet	1.67		89.0	40-140				
4-Bromophenylphenylether	1.49	0.34	mg/Kg wet	1.67		89.1	40-140			V-05	
Butylbenzylphthalate	1.34	0.34	mg/Kg wet	1.67		80.1	40-140				
Carbazole	1.44	0.17	mg/Kg wet	1.67		86.2	40-140				
4-Chloroaniline	0.826	0.66	mg/Kg wet	1.67		49.6	10-140				†
4-Chloro-3-methylphenol	1.23	0.66	mg/Kg wet	1.67		74.1	30-130				
2-Chloronaphthalene	1.24	0.34	mg/Kg wet	1.67		74.6	40-140				
2-Chlorophenol	1.27	0.34	mg/Kg wet	1.67		76.1	30-130				
4-Chlorophenylphenylether	1.28	0.34	mg/Kg wet	1.67		76.6	40-140				
Chrysene	1.44	0.17	mg/Kg wet	1.67		86.4	40-140				
Dibenz(a,h)anthracene	1.65	0.17	mg/Kg wet	1.67		99.2	40-140				
Dibenzofuran	1.31	0.34	mg/Kg wet	1.67		78.5	40-140				
Di-n-butylphthalate	1.37	0.34	mg/Kg wet	1.67		82.1	40-140				
1,2-Dichlorobenzene	1.25	0.34	mg/Kg wet	1.67		75.0	40-140				
1,3-Dichlorobenzene	1.21	0.34	mg/Kg wet	1.67		72.4	40-140				
1,4-Dichlorobenzene	1.22	0.34	mg/Kg wet	1.67		73.2	40-140				
3,3-Dichlorobenzidine	1.23	0.17	mg/Kg wet	1.67		74.0	20-140				†
2,4-Dichlorophenol	1.35	0.34	mg/Kg wet	1.67		80.9	30-130				
Diethylphthalate	1.22	0.34	mg/Kg wet	1.67		73.5	40-140				
2,4-Dimethylphenol	1.12	0.34	mg/Kg wet	1.67		67.4	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	
Batch B342052 - SW-846 3546											
LCS (B342052-BS1)				Prepared: 06/02/23 Analyzed: 06/05/23							
Dimethylphthalate	1.33	0.34	mg/Kg wet	1.67		80.0	40-140				
4,6-Dinitro-2-methylphenol	1.48	0.34	mg/Kg wet	1.67		88.6	30-130				
2,4-Dinitrophenol	1.19	0.66	mg/Kg wet	1.67		71.3	30-130				
2,4-Dinitrotoluene	1.47	0.34	mg/Kg wet	1.67		88.1	40-140				
2,6-Dinitrotoluene	1.54	0.34	mg/Kg wet	1.67		92.7	40-140				
Di-n-octylphthalate	1.79	0.34	mg/Kg wet	1.67		108	40-140				
1,2-Diphenylhydrazine/Azobenzene	1.26	0.34	mg/Kg wet	1.67		75.5	40-140				
Fluoranthene	1.50	0.17	mg/Kg wet	1.67		89.7	40-140				
Fluorene	1.33	0.17	mg/Kg wet	1.67		79.6	40-140				
Hexachlorobenzene	1.62	0.34	mg/Kg wet	1.67		97.0	40-140				
Hexachlorobutadiene	1.26	0.34	mg/Kg wet	1.67		75.6	40-140				
Hexachlorocyclopentadiene	0.943	0.34	mg/Kg wet	1.67		56.6	40-140			V-05	
Hexachloroethane	1.11	0.34	mg/Kg wet	1.67		66.7	40-140				
Indeno(1,2,3-cd)pyrene	1.77	0.17	mg/Kg wet	1.67		106	40-140				
Isophorone	1.29	0.34	mg/Kg wet	1.67		77.3	40-140				
1-Methylnaphthalene	1.37	0.17	mg/Kg wet	1.67		82.1	40-140				
2-Methylnaphthalene	1.27	0.17	mg/Kg wet	1.67		76.0	40-140				
2-Methylphenol	1.27	0.34	mg/Kg wet	1.67		76.3	30-130				
3/4-Methylphenol	1.31	0.34	mg/Kg wet	1.67		78.4	30-130				
Naphthalene	1.33	0.17	mg/Kg wet	1.67		79.5	40-140				
2-Nitroaniline	1.25	0.34	mg/Kg wet	1.67		75.0	40-140				
3-Nitroaniline	1.23	0.34	mg/Kg wet	1.67		73.7	30-140				†
4-Nitroaniline	1.22	0.34	mg/Kg wet	1.67		72.9	40-140				
Nitrobenzene	1.18	0.34	mg/Kg wet	1.67		71.0	40-140				
2-Nitrophenol	1.38	0.34	mg/Kg wet	1.67		82.9	30-130				
4-Nitrophenol	1.18	0.66	mg/Kg wet	1.67		71.1	30-130				
N-Nitrosodimethylamine	1.27	0.34	mg/Kg wet	1.67		76.0	40-140				
N-Nitrosodiphenylamine/Diphenylamine	1.48	0.34	mg/Kg wet	1.67		88.7	40-140				
N-Nitrosodi-n-propylamine	1.19	0.34	mg/Kg wet	1.67		71.5	40-140				
Pentachloronitrobenzene	1.74	0.34	mg/Kg wet	1.67		104	40-140				
Pentachlorophenol	1.19	0.34	mg/Kg wet	1.67		71.2	30-130			V-05	
Phenanthrene	1.48	0.17	mg/Kg wet	1.67		88.5	40-140				
Phenol	1.22	0.34	mg/Kg wet	1.67		73.2	30-130				
Pyrene	1.33	0.17	mg/Kg wet	1.67		79.6	40-140				
Pyridine	0.777	0.34	mg/Kg wet	1.67		46.6	30-140				†
1,2,4,5-Tetrachlorobenzene	1.33	0.34	mg/Kg wet	1.67		79.7	40-140				
1,2,4-Trichlorobenzene	1.30	0.34	mg/Kg wet	1.67		77.9	40-140				
2,4,5-Trichlorophenol	1.39	0.34	mg/Kg wet	1.67		83.5	30-130				
2,4,6-Trichlorophenol	1.34	0.34	mg/Kg wet	1.67		80.2	30-130				
Surrogate: 2-Fluorophenol	*4.73*		mg/Kg wet	6.67		70.9	30-130				
Surrogate: Phenol-d6	*4.98*		mg/Kg wet	6.67		74.8	30-130				
Surrogate: Nitrobenzene-d5	*2.56*		mg/Kg wet	3.33		76.8	30-130				
Surrogate: 2-Fluorobiphenyl	*3.07*		mg/Kg wet	3.33		92.1	30-130				
Surrogate: 2,4,6-Tribromophenol	*5.88*		mg/Kg wet	6.67		88.2	30-130				
Surrogate: p-Terphenyl-d14	*3.35*		mg/Kg wet	3.33		100	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	
Batch B342052 - SW-846 3546											
LCS Dup (B342052-BSD1)				Prepared: 06/02/23 Analyzed: 06/05/23							
Acenaphthene	1.30	0.17	mg/Kg wet	1.67		77.7	40-140	0.231	30		
Acenaphthylene	1.42	0.17	mg/Kg wet	1.67		85.0	40-140	2.28	30		
Acetophenone	1.18	0.34	mg/Kg wet	1.67		70.8	40-140	1.26	30		
Aniline	0.934	0.34	mg/Kg wet	1.67		56.1	10-140	13.2	50		† ‡
Anthracene	1.45	0.17	mg/Kg wet	1.67		86.9	40-140	3.12	30		
Benzidine	1.78	0.66	mg/Kg wet	1.67		107	40-140	5.79	30	V-04, V-05	
Benzo(a)anthracene	1.44	0.17	mg/Kg wet	1.67		86.6	40-140	3.47	30		
Benzo(a)pyrene	1.43	0.17	mg/Kg wet	1.67		85.8	40-140	0.535	30		
Benzo(b)fluoranthene	1.56	0.17	mg/Kg wet	1.67		93.4	40-140	1.13	30		
Benzo(g,h,i)perylene	1.47	0.17	mg/Kg wet	1.67		88.4	40-140	13.9	30		
Benzo(k)fluoranthene	1.57	0.17	mg/Kg wet	1.67		94.0	40-140	1.33	30		
Benzoic Acid	1.35	1.0	mg/Kg wet	1.67		81.1	30-130	14.4	50		‡
Bis(2-chloroethoxy)methane	1.19	0.34	mg/Kg wet	1.67		71.2	40-140	1.56	30		
Bis(2-chloroethyl)ether	1.10	0.34	mg/Kg wet	1.67		65.7	40-140	2.20	30		
Bis(2-chloroisopropyl)ether	1.25	0.34	mg/Kg wet	1.67		75.0	40-140	2.42	30		
Bis(2-Ethylhexyl)phthalate	1.40	0.34	mg/Kg wet	1.67		84.0	40-140	5.80	30		
4-Bromophenylphenylether	1.46	0.34	mg/Kg wet	1.67		87.5	40-140	1.88	30		
Butylbenzylphthalate	1.29	0.34	mg/Kg wet	1.67		77.5	40-140	3.27	30		
Carbazole	1.37	0.17	mg/Kg wet	1.67		82.5	40-140	4.48	30		
4-Chloroaniline	0.720	0.66	mg/Kg wet	1.67		43.2	10-140	13.7	30		†
4-Chloro-3-methylphenol	1.23	0.66	mg/Kg wet	1.67		73.6	30-130	0.650	30		
2-Chloronaphthalene	1.18	0.34	mg/Kg wet	1.67		70.8	40-140	5.23	30		
2-Chlorophenol	1.23	0.34	mg/Kg wet	1.67		73.6	30-130	3.42	30		
4-Chlorophenylphenylether	1.27	0.34	mg/Kg wet	1.67		75.9	40-140	0.865	30		
Chrysene	1.41	0.17	mg/Kg wet	1.67		84.4	40-140	2.34	30		
Dibenz(a,h)anthracene	1.50	0.17	mg/Kg wet	1.67		89.9	40-140	9.75	30		
Dibenzofuran	1.30	0.34	mg/Kg wet	1.67		78.1	40-140	0.537	30		
Di-n-butylphthalate	1.31	0.34	mg/Kg wet	1.67		78.8	40-140	4.10	30		
1,2-Dichlorobenzene	1.21	0.34	mg/Kg wet	1.67		72.4	40-140	3.47	30		
1,3-Dichlorobenzene	1.19	0.34	mg/Kg wet	1.67		71.6	40-140	1.22	30		
1,4-Dichlorobenzene	1.20	0.34	mg/Kg wet	1.67		72.1	40-140	1.60	30		
3,3-Dichlorobenzidine	1.14	0.17	mg/Kg wet	1.67		68.5	20-140	7.66	50		† ‡
2,4-Dichlorophenol	1.32	0.34	mg/Kg wet	1.67		79.4	30-130	1.97	30		
Diethylphthalate	1.23	0.34	mg/Kg wet	1.67		73.9	40-140	0.597	30		
2,4-Dimethylphenol	1.12	0.34	mg/Kg wet	1.67		67.0	30-130	0.625	30		
Dimethylphthalate	1.32	0.34	mg/Kg wet	1.67		79.1	40-140	1.13	30		
4,6-Dinitro-2-methylphenol	1.44	0.34	mg/Kg wet	1.67		86.3	30-130	2.70	30		
2,4-Dinitrophenol	1.16	0.66	mg/Kg wet	1.67		69.7	30-130	2.35	30		
2,4-Dinitrotoluene	1.46	0.34	mg/Kg wet	1.67		87.8	40-140	0.341	30		
2,6-Dinitrotoluene	1.54	0.34	mg/Kg wet	1.67		92.5	40-140	0.259	30		
Di-n-octylphthalate	1.59	0.34	mg/Kg wet	1.67		95.3	40-140	12.1	30		
1,2-Diphenylhydrazine/Azobenzene	1.25	0.34	mg/Kg wet	1.67		75.0	40-140	0.771	30		
Fluoranthene	1.37	0.17	mg/Kg wet	1.67		82.2	40-140	8.77	30		
Fluorene	1.34	0.17	mg/Kg wet	1.67		80.5	40-140	1.12	30		
Hexachlorobenzene	1.57	0.34	mg/Kg wet	1.67		94.4	40-140	2.68	30		
Hexachlorobutadiene	1.22	0.34	mg/Kg wet	1.67		73.4	40-140	2.95	30		
Hexachlorocyclopentadiene	0.922	0.34	mg/Kg wet	1.67		55.3	40-140	2.22	30	V-05	
Hexachloroethane	1.06	0.34	mg/Kg wet	1.67		63.7	40-140	4.66	30		
Indeno(1,2,3-cd)pyrene	1.57	0.17	mg/Kg wet	1.67		94.5	40-140	11.8	30		
Isophorone	1.26	0.34	mg/Kg wet	1.67		75.9	40-140	1.88	30		
1-Methylnaphthalene	1.38	0.17	mg/Kg wet	1.67		83.1	40-140	1.14	30		
2-Methylnaphthalene	1.27	0.17	mg/Kg wet	1.67		76.4	40-140	0.499	30		

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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 B342052 - SW-846 3546										
LCS Dup (B342052-BSD1)				Prepared: 06/02/23 Analyzed: 06/05/23						
2-Methylphenol	1.26	0.34	mg/Kg wet	1.67		75.7	30-130	0.790	30	
3/4-Methylphenol	1.30	0.34	mg/Kg wet	1.67		78.0	30-130	0.460	30	
Naphthalene	1.30	0.17	mg/Kg wet	1.67		78.0	40-140	2.01	30	
2-Nitroaniline	1.22	0.34	mg/Kg wet	1.67		73.3	40-140	2.27	30	
3-Nitroaniline	1.23	0.34	mg/Kg wet	1.67		73.6	30-140	0.190	30	†
4-Nitroaniline	1.20	0.34	mg/Kg wet	1.67		72.3	40-140	0.854	30	
Nitrobenzene	1.17	0.34	mg/Kg wet	1.67		70.2	40-140	1.13	30	
2-Nitrophenol	1.38	0.34	mg/Kg wet	1.67		82.8	30-130	0.121	30	
4-Nitrophenol	1.14	0.66	mg/Kg wet	1.67		68.7	30-130	3.38	50	‡
N-Nitrosodimethylamine	1.22	0.34	mg/Kg wet	1.67		73.2	40-140	3.75	30	
N-Nitrosodiphenylamine/Diphenylamine	1.44	0.34	mg/Kg wet	1.67		86.6	40-140	2.44	30	
N-Nitrosodi-n-propylamine	1.17	0.34	mg/Kg wet	1.67		70.0	40-140	2.04	30	
Pentachloronitrobenzene	1.65	0.34	mg/Kg wet	1.67		99.1	40-140	5.21	30	
Pentachlorophenol	1.14	0.34	mg/Kg wet	1.67		68.4	30-130	4.01	30	
Phenanthrene	1.44	0.17	mg/Kg wet	1.67		86.3	40-140	2.56	30	
Phenol	1.18	0.34	mg/Kg wet	1.67		70.7	30-130	3.42	30	
Pyrene	1.31	0.17	mg/Kg wet	1.67		78.7	40-140	1.09	30	
Pyridine	0.757	0.34	mg/Kg wet	1.67		45.4	30-140	2.65	30	†
1,2,4,5-Tetrachlorobenzene	1.32	0.34	mg/Kg wet	1.67		79.3	40-140	0.478	30	
1,2,4-Trichlorobenzene	1.27	0.34	mg/Kg wet	1.67		76.5	40-140	1.89	30	
2,4,5-Trichlorophenol	1.38	0.34	mg/Kg wet	1.67		82.7	30-130	0.915	30	
2,4,6-Trichlorophenol	1.33	0.34	mg/Kg wet	1.67		79.7	30-130	0.600	30	
Surrogate: 2-Fluorophenol	*4.64*		mg/Kg wet	6.67		69.6	30-130			
Surrogate: Phenol-d6	*4.88*		mg/Kg wet	6.67		73.1	30-130			
Surrogate: Nitrobenzene-d5	*2.53*		mg/Kg wet	3.33		75.8	30-130			
Surrogate: 2-Fluorobiphenyl	*2.99*		mg/Kg wet	3.33		89.6	30-130			
Surrogate: 2,4,6-Tribromophenol	*5.83*		mg/Kg wet	6.67		87.4	30-130			
Surrogate: p-Terphenyl-d14	*3.31*		mg/Kg wet	3.33		99.3	30-130			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B341342 - SW-846 3546										
Blank (B341342-BLK1)			Prepared: 05/25/23 Analyzed: 06/01/23							
alpha-Chlordane	ND	0.0050	mg/Kg wet							
alpha-Chlordane [2C]	ND	0.0050	mg/Kg wet							
gamma-Chlordane	ND	0.0050	mg/Kg wet							
gamma-Chlordane [2C]	ND	0.0050	mg/Kg wet							
Alachlor	ND	0.020	mg/Kg wet							
Alachlor [2C]	ND	0.020	mg/Kg wet							
Aldrin	ND	0.0050	mg/Kg wet							
Aldrin [2C]	ND	0.0050	mg/Kg wet							
alpha-BHC	ND	0.0050	mg/Kg wet							
alpha-BHC [2C]	ND	0.0050	mg/Kg wet							
beta-BHC	ND	0.0050	mg/Kg wet							
beta-BHC [2C]	ND	0.0050	mg/Kg wet							
delta-BHC	ND	0.0050	mg/Kg wet							
delta-BHC [2C]	ND	0.0050	mg/Kg wet							
gamma-BHC (Lindane)	ND	0.0020	mg/Kg wet							
gamma-BHC (Lindane) [2C]	ND	0.0020	mg/Kg wet							
Chlordane	ND	0.020	mg/Kg wet							
Chlordane [2C]	ND	0.020	mg/Kg wet							
4,4'-DDD	ND	0.0040	mg/Kg wet							
4,4'-DDD [2C]	ND	0.0040	mg/Kg wet							
4,4'-DDE	ND	0.0040	mg/Kg wet							
4,4'-DDE [2C]	ND	0.0040	mg/Kg wet							
4,4'-DDT	ND	0.0040	mg/Kg wet							
4,4'-DDT [2C]	ND	0.0040	mg/Kg wet							
Dieldrin	ND	0.0040	mg/Kg wet							
Dieldrin [2C]	ND	0.0040	mg/Kg wet							
Endosulfan I	ND	0.0050	mg/Kg wet							
Endosulfan I [2C]	ND	0.0050	mg/Kg wet							
Endosulfan II	ND	0.0080	mg/Kg wet							
Endosulfan II [2C]	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate [2C]	ND	0.0080	mg/Kg wet							
Endrin	ND	0.0080	mg/Kg wet							
Endrin [2C]	ND	0.0080	mg/Kg wet							
Endrin Aldehyde	ND	0.0080	mg/Kg wet							
Endrin Aldehyde [2C]	ND	0.0080	mg/Kg wet							
Endrin Ketone	ND	0.0080	mg/Kg wet							
Endrin Ketone [2C]	ND	0.0080	mg/Kg wet							
Heptachlor	ND	0.0050	mg/Kg wet							
Heptachlor [2C]	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide [2C]	ND	0.0050	mg/Kg wet							
Hexachlorobenzene	ND	0.0060	mg/Kg wet							
Hexachlorobenzene [2C]	ND	0.0060	mg/Kg wet							
Methoxychlor	ND	0.050	mg/Kg wet							
Methoxychlor [2C]	ND	0.050	mg/Kg wet							
Toxaphene	ND	0.10	mg/Kg wet							
Toxaphene [2C]	ND	0.10	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.170*		mg/Kg wet	0.200		85.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.166*		mg/Kg wet	0.200		82.9	30-150			
Surrogate: Tetrachloro-m-xylene	*0.170*		mg/Kg wet	0.200		85.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.155*		mg/Kg wet	0.200		77.6	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B341342 - SW-846 3546										
LCS (B341342-BS1)				Prepared: 05/25/23 Analyzed: 06/01/23						
alpha-Chlordane	0.088	0.0050	mg/Kg wet	0.100		88.4	40-140			
alpha-Chlordane [2C]	0.085	0.0050	mg/Kg wet	0.100		85.3	40-140			
gamma-Chlordane	0.089	0.0050	mg/Kg wet	0.100		88.7	40-140			
gamma-Chlordane [2C]	0.087	0.0050	mg/Kg wet	0.100		86.6	40-140			
Alachlor	0.073	0.020	mg/Kg wet	0.100		72.9	40-140			
Alachlor [2C]	0.071	0.020	mg/Kg wet	0.100		71.3	40-140			
Aldrin	0.088	0.0050	mg/Kg wet	0.100		87.9	40-140			
Aldrin [2C]	0.085	0.0050	mg/Kg wet	0.100		85.4	40-140			
alpha-BHC	0.093	0.0050	mg/Kg wet	0.100		92.6	40-140			
alpha-BHC [2C]	0.089	0.0050	mg/Kg wet	0.100		88.6	40-140			
beta-BHC	0.081	0.0050	mg/Kg wet	0.100		81.0	40-140			
beta-BHC [2C]	0.075	0.0050	mg/Kg wet	0.100		74.5	40-140			
delta-BHC	0.087	0.0050	mg/Kg wet	0.100		87.0	40-140			
delta-BHC [2C]	0.083	0.0050	mg/Kg wet	0.100		82.5	40-140			
gamma-BHC (Lindane)	0.089	0.0020	mg/Kg wet	0.100		89.3	40-140			
gamma-BHC (Lindane) [2C]	0.085	0.0020	mg/Kg wet	0.100		84.8	40-140			
4,4'-DDD	0.099	0.0040	mg/Kg wet	0.100		99.4	40-140			
4,4'-DDD [2C]	0.095	0.0040	mg/Kg wet	0.100		95.3	40-140			
4,4'-DDE	0.098	0.0040	mg/Kg wet	0.100		98.2	40-140			
4,4'-DDE [2C]	0.094	0.0040	mg/Kg wet	0.100		93.5	40-140			
4,4'-DDT	0.10	0.0040	mg/Kg wet	0.100		104	40-140			
4,4'-DDT [2C]	0.098	0.0040	mg/Kg wet	0.100		97.9	40-140			
Dieldrin	0.094	0.0040	mg/Kg wet	0.100		94.5	40-140			
Dieldrin [2C]	0.088	0.0040	mg/Kg wet	0.100		87.6	40-140			
Endosulfan I	0.088	0.0050	mg/Kg wet	0.100		88.1	40-140			
Endosulfan I [2C]	0.083	0.0050	mg/Kg wet	0.100		83.1	40-140			
Endosulfan II	0.084	0.0080	mg/Kg wet	0.100		84.3	40-140			
Endosulfan II [2C]	0.083	0.0080	mg/Kg wet	0.100		82.7	40-140			
Endosulfan Sulfate	0.074	0.0080	mg/Kg wet	0.100		74.1	40-140			
Endosulfan Sulfate [2C]	0.084	0.0080	mg/Kg wet	0.100		84.2	40-140			
Endrin	0.094	0.0080	mg/Kg wet	0.100		94.0	40-140			
Endrin [2C]	0.091	0.0080	mg/Kg wet	0.100		91.4	40-140			
Endrin Aldehyde	0.097	0.0080	mg/Kg wet	0.100		96.5	40-140			
Endrin Aldehyde [2C]	0.092	0.0080	mg/Kg wet	0.100		92.1	40-140			
Endrin Ketone	0.091	0.0080	mg/Kg wet	0.100		91.0	40-140			
Endrin Ketone [2C]	0.087	0.0080	mg/Kg wet	0.100		87.1	40-140			
Heptachlor	0.094	0.0050	mg/Kg wet	0.100		94.1	40-140			
Heptachlor [2C]	0.090	0.0050	mg/Kg wet	0.100		90.1	40-140			
Heptachlor Epoxide	0.090	0.0050	mg/Kg wet	0.100		89.6	40-140			
Heptachlor Epoxide [2C]	0.088	0.0050	mg/Kg wet	0.100		87.9	40-140			
Hexachlorobenzene	0.093	0.0060	mg/Kg wet	0.100		92.8	40-140			
Hexachlorobenzene [2C]	0.085	0.0060	mg/Kg wet	0.100		84.6	40-140			
Methoxychlor	0.10	0.050	mg/Kg wet	0.100		104	40-140			
Methoxychlor [2C]	0.098	0.050	mg/Kg wet	0.100		98.4	40-140			
Surrogate: Decachlorobiphenyl	*0.191*		mg/Kg wet	0.200		95.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.185*		mg/Kg wet	0.200		92.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.189*		mg/Kg wet	0.200		94.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.165*		mg/Kg wet	0.200		82.3	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B341342 - SW-846 3546										
LCS Dup (B341342-BSD1)				Prepared: 05/25/23 Analyzed: 06/01/23						
alpha-Chlordane	0.087	0.0050	mg/Kg wet	0.100		86.6	40-140	2.05	30	
alpha-Chlordane [2C]	0.084	0.0050	mg/Kg wet	0.100		84.2	40-140	1.29	30	
gamma-Chlordane	0.087	0.0050	mg/Kg wet	0.100		86.9	40-140	2.02	30	
gamma-Chlordane [2C]	0.085	0.0050	mg/Kg wet	0.100		85.3	40-140	1.53	30	
Alachlor	0.070	0.020	mg/Kg wet	0.100		70.2	40-140	3.76	30	
Alachlor [2C]	0.070	0.020	mg/Kg wet	0.100		70.1	40-140	1.64	30	
Aldrin	0.088	0.0050	mg/Kg wet	0.100		87.6	40-140	0.428	30	
Aldrin [2C]	0.085	0.0050	mg/Kg wet	0.100		85.1	40-140	0.386	30	
alpha-BHC	0.092	0.0050	mg/Kg wet	0.100		91.7	40-140	0.973	30	
alpha-BHC [2C]	0.088	0.0050	mg/Kg wet	0.100		87.7	40-140	0.954	30	
beta-BHC	0.080	0.0050	mg/Kg wet	0.100		79.7	40-140	1.70	30	
beta-BHC [2C]	0.074	0.0050	mg/Kg wet	0.100		73.7	40-140	1.14	30	
delta-BHC	0.085	0.0050	mg/Kg wet	0.100		85.4	40-140	1.88	30	
delta-BHC [2C]	0.082	0.0050	mg/Kg wet	0.100		81.8	40-140	0.836	30	
gamma-BHC (Lindane)	0.088	0.0020	mg/Kg wet	0.100		87.9	40-140	1.59	30	
gamma-BHC (Lindane) [2C]	0.084	0.0020	mg/Kg wet	0.100		83.7	40-140	1.39	30	
4,4'-DDD	0.097	0.0040	mg/Kg wet	0.100		97.1	40-140	2.33	30	
4,4'-DDD [2C]	0.094	0.0040	mg/Kg wet	0.100		93.6	40-140	1.80	30	
4,4'-DDE	0.096	0.0040	mg/Kg wet	0.100		96.1	40-140	2.17	30	
4,4'-DDE [2C]	0.092	0.0040	mg/Kg wet	0.100		92.4	40-140	1.17	30	
4,4'-DDT	0.10	0.0040	mg/Kg wet	0.100		102	40-140	2.28	30	
4,4'-DDT [2C]	0.096	0.0040	mg/Kg wet	0.100		95.9	40-140	2.07	30	
Dieldrin	0.093	0.0040	mg/Kg wet	0.100		92.7	40-140	1.96	30	
Dieldrin [2C]	0.087	0.0040	mg/Kg wet	0.100		86.8	40-140	0.900	30	
Endosulfan I	0.086	0.0050	mg/Kg wet	0.100		86.3	40-140	1.98	30	
Endosulfan I [2C]	0.082	0.0050	mg/Kg wet	0.100		82.1	40-140	1.23	30	
Endosulfan II	0.083	0.0080	mg/Kg wet	0.100		82.7	40-140	1.93	30	
Endosulfan II [2C]	0.081	0.0080	mg/Kg wet	0.100		81.3	40-140	1.72	30	
Endosulfan Sulfate	0.072	0.0080	mg/Kg wet	0.100		72.1	40-140	2.80	30	
Endosulfan Sulfate [2C]	0.082	0.0080	mg/Kg wet	0.100		82.0	40-140	2.61	30	
Endrin	0.092	0.0080	mg/Kg wet	0.100		92.3	40-140	1.88	30	
Endrin [2C]	0.091	0.0080	mg/Kg wet	0.100		90.5	40-140	0.951	30	
Endrin Aldehyde	0.093	0.0080	mg/Kg wet	0.100		93.3	40-140	3.41	30	
Endrin Aldehyde [2C]	0.089	0.0080	mg/Kg wet	0.100		89.5	40-140	2.90	30	
Endrin Ketone	0.089	0.0080	mg/Kg wet	0.100		88.6	40-140	2.69	30	
Endrin Ketone [2C]	0.085	0.0080	mg/Kg wet	0.100		85.0	40-140	2.50	30	
Heptachlor	0.093	0.0050	mg/Kg wet	0.100		93.3	40-140	0.792	30	
Heptachlor [2C]	0.090	0.0050	mg/Kg wet	0.100		89.8	40-140	0.287	30	
Heptachlor Epoxide	0.088	0.0050	mg/Kg wet	0.100		88.4	40-140	1.31	30	
Heptachlor Epoxide [2C]	0.087	0.0050	mg/Kg wet	0.100		87.4	40-140	0.565	30	
Hexachlorobenzene	0.092	0.0060	mg/Kg wet	0.100		92.4	40-140	0.464	30	
Hexachlorobenzene [2C]	0.085	0.0060	mg/Kg wet	0.100		84.8	40-140	0.196	30	
Methoxychlor	0.10	0.050	mg/Kg wet	0.100		105	40-140	0.903	30	
Methoxychlor [2C]	0.099	0.050	mg/Kg wet	0.100		98.7	40-140	0.221	30	
Surrogate: Decachlorobiphenyl	*0.193*		mg/Kg wet	0.200		96.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.187*		mg/Kg wet	0.200		93.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.190*		mg/Kg wet	0.200		95.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.166*		mg/Kg wet	0.200		82.9	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B341342 - SW-846 3546										
Matrix Spike (B341342-MS1)	**Source: 23E1982-05**		Prepared: 05/25/23 Analyzed: 06/03/23							
Alachlor	0.087	0.030	mg/Kg dry	0.151	ND	57.7	30-150			
Alachlor [2C]	0.076	0.030	mg/Kg dry	0.151	ND	50.3	30-150			
Aldrin	0.11	0.0075	mg/Kg dry	0.151	ND	73.8	30-150			
Aldrin [2C]	0.10	0.0075	mg/Kg dry	0.151	ND	66.8	30-150			
alpha-BHC	0.088	0.0075	mg/Kg dry	0.151	ND	58.4	30-150			
alpha-BHC [2C]	0.077	0.0075	mg/Kg dry	0.151	ND	51.5	30-150			
beta-BHC	0.099	0.0075	mg/Kg dry	0.151	ND	65.6	30-150			
beta-BHC [2C]	0.090	0.0075	mg/Kg dry	0.151	ND	59.8	30-150			
delta-BHC	0.15	0.0075	mg/Kg dry	0.151	ND	103	30-150			
delta-BHC [2C]	0.15	0.0075	mg/Kg dry	0.151	ND	96.5	30-150			
gamma-BHC (Lindane)	0.072	0.0030	mg/Kg dry	0.151	ND	48.0	30-150			R-06
gamma-BHC (Lindane) [2C]	0.065	0.0030	mg/Kg dry	0.151	ND	42.9	30-150			R-06
4,4'-DDD	0.071	0.0060	mg/Kg dry	0.151	ND	47.2	30-150			R-06
4,4'-DDD [2C]	0.069	0.0060	mg/Kg dry	0.151	ND	45.8	30-150			R-06
4,4'-DDE	0.20	0.0060	mg/Kg dry	0.151	ND	130	30-150			
4,4'-DDE [2C]	0.19	0.0060	mg/Kg dry	0.151	ND	125	30-150			
4,4'-DDT	0.060	0.0060	mg/Kg dry	0.151	ND	39.9	30-150			R-06
4,4'-DDT [2C]	0.058	0.0060	mg/Kg dry	0.151	ND	38.8	30-150			R-06
Dieldrin	0.12	0.0060	mg/Kg dry	0.151	ND	81.5	30-150			
Dieldrin [2C]	0.11	0.0060	mg/Kg dry	0.151	ND	73.9	30-150			
Endosulfan I	0.11	0.0075	mg/Kg dry	0.151	ND	71.4	30-150			
Endosulfan I [2C]	0.10	0.0075	mg/Kg dry	0.151	ND	66.1	30-150			
Endosulfan II	0.093	0.012	mg/Kg dry	0.151	ND	62.1	30-150			
Endosulfan II [2C]	0.094	0.012	mg/Kg dry	0.151	ND	62.6	30-150			
Endosulfan Sulfate	0.14	0.012	mg/Kg dry	0.151	ND	96.2	30-150			
Endosulfan Sulfate [2C]	0.16	0.012	mg/Kg dry	0.151	ND	106	30-150			
Endrin	0.12	0.012	mg/Kg dry	0.151	ND	80.1	30-150			
Endrin [2C]	0.12	0.012	mg/Kg dry	0.151	ND	77.0	30-150			
Endrin Aldehyde	0.15	0.012	mg/Kg dry	0.151	ND	97.9	30-150			
Endrin Aldehyde [2C]	0.15	0.012	mg/Kg dry	0.151	ND	98.7	30-150			
Endrin Ketone	0.10	0.012	mg/Kg dry	0.151	ND	67.0	30-150			
Endrin Ketone [2C]	0.098	0.012	mg/Kg dry	0.151	ND	65.4	30-150			R-06
Heptachlor	0.11	0.0075	mg/Kg dry	0.151	ND	72.0	30-150			
Heptachlor [2C]	0.097	0.0075	mg/Kg dry	0.151	ND	64.1	30-150			
Heptachlor Epoxide	0.13	0.0075	mg/Kg dry	0.151	ND	86.8	30-150			
Heptachlor Epoxide [2C]	0.11	0.0075	mg/Kg dry	0.151	ND	70.1	30-150			
Hexachlorobenzene	0.12	0.0090	mg/Kg dry	0.151	ND	80.0	30-150			
Hexachlorobenzene [2C]	0.10	0.0090	mg/Kg dry	0.151	ND	69.2	30-150			
Methoxychlor	0.12	0.075	mg/Kg dry	0.151	ND	80.4	30-150			
Methoxychlor [2C]	0.12	0.075	mg/Kg dry	0.151	ND	80.5	30-150			
Surrogate: Decachlorobiphenyl	*0.257*		mg/Kg dry	0.301		85.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.251*		mg/Kg dry	0.301		83.4	30-150			
Surrogate: Tetrachloro-m-xylene	*0.234*		mg/Kg dry	0.301		77.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.198*		mg/Kg dry	0.301		65.6	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD		RPD Limit	Notes
Batch B341342 - SW-846 3546											
Matrix Spike Dup (B341342-MSD1)	**Source: 23E1982-05**			Prepared: 05/25/23 Analyzed: 06/03/23							
Alachlor	0.10	0.030	mg/Kg dry	0.149	ND	68.3	30-150	15.8		30	
Alachlor [2C]	0.094	0.030	mg/Kg dry	0.149	ND	62.9	30-150	21.3		30	
Aldrin	0.13	0.0075	mg/Kg dry	0.149	ND	85.1	30-150	13.2		30	
Aldrin [2C]	0.12	0.0075	mg/Kg dry	0.149	ND	81.9	30-150	19.3		30	
alpha-BHC	0.11	0.0075	mg/Kg dry	0.149	ND	72.0	30-150	19.9		30	
alpha-BHC [2C]	0.10	0.0075	mg/Kg dry	0.149	ND	69.4	30-150	28.8		30	
beta-BHC	0.12	0.0075	mg/Kg dry	0.149	ND	77.4	30-150	15.5		30	
beta-BHC [2C]	0.11	0.0075	mg/Kg dry	0.149	ND	71.8	30-150	17.2		30	
delta-BHC	0.16	0.0075	mg/Kg dry	0.149	ND	106	30-150	2.68		30	
delta-BHC [2C]	0.14	0.0075	mg/Kg dry	0.149	ND	96.2	30-150	1.36		30	
gamma-BHC (Lindane)	0.10	0.0030	mg/Kg dry	0.149	ND	69.3	30-150	**35.4**	*	30	R-06
gamma-BHC (Lindane) [2C]	0.10	0.0030	mg/Kg dry	0.149	ND	67.2	30-150	**43.2**	*	30	R-06
4,4'-DDD	0.14	0.0060	mg/Kg dry	0.149	ND	94.8	30-150	**66.1**	*	30	R-06
4,4'-DDD [2C]	0.16	0.0060	mg/Kg dry	0.149	ND	107	30-150	**78.9**	*	30	R-06
4,4'-DDE	0.15	0.0060	mg/Kg dry	0.149	ND	101	30-150	26.4		30	
4,4'-DDE [2C]	0.14	0.0060	mg/Kg dry	0.149	ND	96.9	30-150	26.6		30	
4,4'-DDT	0.14	0.0060	mg/Kg dry	0.149	ND	93.2	30-150	**79.2**	*	30	R-06
4,4'-DDT [2C]	0.14	0.0060	mg/Kg dry	0.149	ND	93.1	30-150	**81.6**	*	30	R-06
Dieldrin	0.14	0.0060	mg/Kg dry	0.149	ND	95.6	30-150	14.9		30	
Dieldrin [2C]	0.13	0.0060	mg/Kg dry	0.149	ND	87.0	30-150	15.3		30	
Endosulfan I	0.090	0.0075	mg/Kg dry	0.149	ND	60.4	30-150	17.7		30	
Endosulfan I [2C]	0.085	0.0075	mg/Kg dry	0.149	ND	56.8	30-150	16.2		30	
Endosulfan II	0.080	0.012	mg/Kg dry	0.149	ND	53.6	30-150	15.7		30	
Endosulfan II [2C]	0.081	0.012	mg/Kg dry	0.149	ND	54.5	30-150	14.8		30	
Endosulfan Sulfate	0.15	0.012	mg/Kg dry	0.149	ND	100	30-150	3.00		30	
Endosulfan Sulfate [2C]	0.16	0.012	mg/Kg dry	0.149	ND	111	30-150	2.92		30	
Endrin	0.14	0.012	mg/Kg dry	0.149	ND	97.2	30-150	18.3		30	
Endrin [2C]	0.14	0.012	mg/Kg dry	0.149	ND	91.0	30-150	15.7		30	
Endrin Aldehyde	0.15	0.012	mg/Kg dry	0.149	ND	97.9	30-150	1.02		30	
Endrin Aldehyde [2C]	0.15	0.012	mg/Kg dry	0.149	ND	102	30-150	2.01		30	
Endrin Ketone	0.12	0.012	mg/Kg dry	0.149	ND	83.5	30-150	20.9		30	
Endrin Ketone [2C]	0.14	0.012	mg/Kg dry	0.149	ND	92.3	30-150	**33.2**	*	30	R-06
Heptachlor	0.13	0.0075	mg/Kg dry	0.149	ND	90.0	30-150	21.2		30	
Heptachlor [2C]	0.13	0.0075	mg/Kg dry	0.149	ND	85.4	30-150	27.5		30	
Heptachlor Epoxide	0.13	0.0075	mg/Kg dry	0.149	ND	90.2	30-150	2.85		30	
Heptachlor Epoxide [2C]	0.13	0.0075	mg/Kg dry	0.149	ND	85.7	30-150	19.0		30	
Hexachlorobenzene	0.13	0.0089	mg/Kg dry	0.149	ND	86.6	30-150	6.93		30	
Hexachlorobenzene [2C]	0.12	0.0089	mg/Kg dry	0.149	ND	80.2	30-150	13.7		30	
Methoxychlor	0.14	0.075	mg/Kg dry	0.149	ND	94.0	30-150	14.6		30	
Methoxychlor [2C]	0.14	0.075	mg/Kg dry	0.149	ND	94.5	30-150	15.1		30	
Surrogate: Decachlorobiphenyl	*0.269*		mg/Kg dry	0.298		90.3	30-150				
Surrogate: Decachlorobiphenyl [2C]	*0.267*		mg/Kg dry	0.298		89.6	30-150				
Surrogate: Tetrachloro-m-xylene	*0.256*		mg/Kg dry	0.298		85.8	30-150				
Surrogate: Tetrachloro-m-xylene [2C]	*0.232*		mg/Kg dry	0.298		77.7	30-150				

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B341341 - SW-846 3546										
Blank (B341341-BLK1)				Prepared: 05/25/23 Analyzed: 05/28/23						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.186*		mg/Kg wet	0.200		93.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.199*		mg/Kg wet	0.200		99.7	30-150			
Surrogate: Tetrachloro-m-xylene	*0.164*		mg/Kg wet	0.200		81.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.185*		mg/Kg wet	0.200		92.3	30-150			
LCS (B341341-BS1)				Prepared: 05/25/23 Analyzed: 05/28/23						
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		75.7	40-140			
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		79.2	40-140			
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		76.4	40-140			
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		77.7	40-140			
Surrogate: Decachlorobiphenyl	*0.189*		mg/Kg wet	0.200		94.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.202*		mg/Kg wet	0.200		101	30-150			
Surrogate: Tetrachloro-m-xylene	*0.167*		mg/Kg wet	0.200		83.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.188*		mg/Kg wet	0.200		94.2	30-150			
LCS Dup (B341341-BSD1)				Prepared: 05/25/23 Analyzed: 05/28/23						
Aroclor-1016	0.15	0.020	mg/Kg wet	0.200		74.5	40-140	1.53	30	
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		77.8	40-140	1.85	30	
Aroclor-1260	0.15	0.020	mg/Kg wet	0.200		76.1	40-140	0.444	30	
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		78.4	40-140	0.941	30	
Surrogate: Decachlorobiphenyl	*0.188*		mg/Kg wet	0.200		94.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.200*		mg/Kg wet	0.200		100	30-150			
Surrogate: Tetrachloro-m-xylene	*0.164*		mg/Kg wet	0.200		81.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.185*		mg/Kg wet	0.200		92.5	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B341341 - SW-846 3546										
Matrix Spike (B341341-MS1)	**Source: 23E1982-01**			Prepared: 05/25/23 Analyzed: 06/05/23						
Aroclor-1016	0.27	0.12	mg/Kg dry	0.302	ND	89.7	40-140			
Aroclor-1016 [2C]	0.27	0.12	mg/Kg dry	0.302	ND	90.2	40-140			
Aroclor-1260	0.28	0.12	mg/Kg dry	0.302	ND	92.7	40-140			
Aroclor-1260 [2C]	0.27	0.12	mg/Kg dry	0.302	ND	89.1	40-140			
Surrogate: Decachlorobiphenyl	*0.299*		mg/Kg dry	0.302		99.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.298*		mg/Kg dry	0.302		98.8	30-150			
Surrogate: Tetrachloro-m-xylene	*0.272*		mg/Kg dry	0.302		90.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.277*		mg/Kg dry	0.302		91.9	30-150			
Matrix Spike Dup (B341341-MSD1)	**Source: 23E1982-01**			Prepared: 05/25/23 Analyzed: 06/05/23						
Aroclor-1016	0.28	0.12	mg/Kg dry	0.305	ND	92.3	40-140	2.85	30	
Aroclor-1016 [2C]	0.28	0.12	mg/Kg dry	0.305	ND	92.2	40-140	2.28	30	
Aroclor-1260	0.28	0.12	mg/Kg dry	0.305	ND	92.3	40-140	0.389	30	
Aroclor-1260 [2C]	0.27	0.12	mg/Kg dry	0.305	ND	88.1	40-140	1.13	30	
Surrogate: Decachlorobiphenyl	*0.312*		mg/Kg dry	0.305		102	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.305*		mg/Kg dry	0.305		100	30-150			
Surrogate: Tetrachloro-m-xylene	*0.276*		mg/Kg dry	0.305		90.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.281*		mg/Kg dry	0.305		92.4	30-150			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B342082 - SW-846 3050B										
Blank (B342082-BLK1)				Prepared: 06/02/23 Analyzed: 06/03/23						
Aluminum	ND	16	mg/Kg wet							
Antimony	ND	1.6	mg/Kg wet							
Arsenic	ND	3.2	mg/Kg wet							
Barium	ND	1.6	mg/Kg wet							
Beryllium	ND	0.16	mg/Kg wet							
Cadmium	ND	0.32	mg/Kg wet							
Calcium	ND	16	mg/Kg wet							
Chromium	ND	0.64	mg/Kg wet							
Cobalt	ND	1.6	mg/Kg wet							
Copper	1.0	0.64	mg/Kg wet							B-07
Iron	ND	16	mg/Kg wet							
Lead	ND	0.48	mg/Kg wet							
Magnesium	ND	16	mg/Kg wet							
Manganese	ND	0.32	mg/Kg wet							
Nickel	ND	0.64	mg/Kg wet							
Potassium	ND	160	mg/Kg wet							
Sodium	ND	160	mg/Kg wet							
Thallium	ND	1.6	mg/Kg wet							
Vanadium	ND	0.64	mg/Kg wet							
Zinc	ND	0.64	mg/Kg wet							
Blank (B342082-BLK2)				Prepared: 06/02/23 Analyzed: 06/04/23						
Selenium	ND	3.2	mg/Kg wet							
Silver	ND	0.32	mg/Kg wet							
LCS (B342082-BS1)				Prepared: 06/02/23 Analyzed: 06/03/23						
Aluminum	6980	50	mg/Kg wet	8040		86.8	47.6-151.7			
Antimony	96.6	5.0	mg/Kg wet	129		74.9	9.8-189.9			
Arsenic	164	10	mg/Kg wet	183		89.8	83.1-116.9			
Barium	297	5.0	mg/Kg wet	297		100	82.2-118.2			
Beryllium	81.9	0.50	mg/Kg wet	78.8		104	83-117			
Cadmium	238	1.0	mg/Kg wet	221		108	82.4-117.2			
Calcium	4470	50	mg/Kg wet	4710		94.9	81.3-118.5			
Chromium	201	2.0	mg/Kg wet	200		101	81.5-118.5			
Cobalt	98.1	5.0	mg/Kg wet	97.4		101	83.3-117			
Copper	144	2.0	mg/Kg wet	136		106	83.8-116.2			B
Iron	11600	50	mg/Kg wet	14000		82.8	60.1-140			
Lead	237	1.5	mg/Kg wet	257		92.3	82.1-117.9			
Magnesium	2090	50	mg/Kg wet	2290		91.1	75.5-124.5			
Manganese	364	1.0	mg/Kg wet	381		95.5	81.6-118.1			
Nickel	173	2.0	mg/Kg wet	169		102	82.2-117.2			
Potassium	1840	500	mg/Kg wet	2030		90.7	70-130			
Sodium	406	500	mg/Kg wet	427		95.0	74-126			J
Thallium	81.4	5.0	mg/Kg wet	80.5		101	80.7-119.4			
Vanadium	202	2.0	mg/Kg wet	205		98.5	78.5-121			
Zinc	216	2.0	mg/Kg wet	224		96.4	80.4-119.6			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B342082 - SW-846 3050B										
LCS (B342082-BS2)				Prepared: 06/02/23 Analyzed: 06/04/23						
Selenium	200	10	mg/Kg wet	217		92.2	79.3-121.2			
Silver	72.8	1.0	mg/Kg wet	67.8		107	79.8-120.1			
LCS Dup (B342082-BSD1)				Prepared: 06/02/23 Analyzed: 06/03/23						
Aluminum	7280	50	mg/Kg wet	8040		90.5	47.6-151.7	4.12	30	
Antimony	95.3	5.0	mg/Kg wet	129		73.9	9.8-189.9	1.32	30	
Arsenic	165	10	mg/Kg wet	183		90.3	83.1-116.9	0.534	30	
Barium	287	5.0	mg/Kg wet	297		96.7	82.2-118.2	3.41	20	
Beryllium	76.8	0.50	mg/Kg wet	78.8		97.5	83-117	6.42	30	
Cadmium	213	1.0	mg/Kg wet	221		96.4	82.4-117.2	11.1	20	
Calcium	4480	50	mg/Kg wet	4710		95.2	81.3-118.5	0.336	30	
Chromium	193	2.0	mg/Kg wet	200		96.6	81.5-118.5	4.04	30	
Cobalt	92.4	5.0	mg/Kg wet	97.4		94.9	83.3-117	5.97	20	
Copper	142	2.0	mg/Kg wet	136		105	83.8-116.2	1.42	30	B
Iron	12100	50	mg/Kg wet	14000		86.3	60.1-140	4.16	30	
Lead	243	1.5	mg/Kg wet	257		94.7	82.1-117.9	2.63	30	
Magnesium	2130	50	mg/Kg wet	2290		93.2	75.5-124.5	2.20	30	
Manganese	362	1.0	mg/Kg wet	381		95.0	81.6-118.1	0.525	30	
Nickel	159	2.0	mg/Kg wet	169		94.3	82.2-117.2	8.34	30	
Potassium	1910	500	mg/Kg wet	2030		93.9	70-130	3.52	30	
Sodium	407	500	mg/Kg wet	427		95.4	74-126	0.370	30	J
Thallium	76.9	5.0	mg/Kg wet	80.5		95.6	80.7-119.4	5.59	30	
Vanadium	198	2.0	mg/Kg wet	205		96.6	78.5-121	1.94	30	
Zinc	218	2.0	mg/Kg wet	224		97.5	80.4-119.6	1.15	30	
LCS Dup (B342082-BSD2)				Prepared: 06/02/23 Analyzed: 06/04/23						
Selenium	195	10	mg/Kg wet	217		89.9	79.3-121.2	2.48	30	
Silver	72.9	1.0	mg/Kg wet	67.8		108	79.8-120.1	0.143	30	
Reference (B342082-SRM1) MRL CHECK				Prepared: 06/02/23 Analyzed: 06/03/23						
Lead	0.493	0.48	mg/Kg wet	0.485		102	80-120			
Batch B342287 - SW-846 7471										
Blank (B342287-BLK1)				Prepared: 06/05/23 Analyzed: 06/06/23						
Mercury	ND	0.026	mg/Kg wet							
LCS (B342287-BS1)				Prepared: 06/05/23 Analyzed: 06/06/23						
Mercury	25.0	3.7	mg/Kg wet	25.6		97.7	67.2-132.8			
LCS Dup (B342287-BSD1)				Prepared: 06/05/23 Analyzed: 06/06/23						
Mercury	26.1	3.7	mg/Kg wet	25.6		102	67.2-132.8	4.09	20	

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B340476 - SW-846 9010C										
Blank (B340476-BLK1)				Prepared: 05/17/23 Analyzed: 05/18/23						
Cyanide	ND	0.47	mg/Kg wet							
LCS (B340476-BS1)				Prepared: 05/17/23 Analyzed: 05/18/23						
Cyanide	140	2.5	mg/Kg wet	130		106	80-120			
LCS Dup (B340476-BSD1)				Prepared: 05/17/23 Analyzed: 05/18/23						
Cyanide	140	2.5	mg/Kg wet	130		106	80-120	0.438	20	
Matrix Spike (B340476-MS2)	**Source: 23E1982-10**			Prepared: 05/17/23 Analyzed: 05/18/23						
Cyanide	20	0.69	mg/Kg dry	22.8	ND	88.9	75-125			
Matrix Spike Dup (B340476-MSD2)	**Source: 23E1982-10**			Prepared: 05/17/23 Analyzed: 05/18/23						
Cyanide	26	0.74	mg/Kg dry	24.6	ND	106	75-125	25.2	35	

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BREAKDOWN REPORT

Lab Sample ID: **S088411-PEM1** **Analyzed:** **05/31/2023**

Column Number: **1**

Analyte	% Breakdown
4,4'-DDT [1]	0.99
Endrin [1]	1.11

Column Number: **2**

Analyte	% Breakdown
4,4'-DDT [2]	1.14
Endrin [2]	1.04

BREAKDOWN REPORT

Lab Sample ID: **S088411-PEM2** **Analyzed:** **06/01/2023**

Column Number: **1**

Analyte	% Breakdown
4,4'-DDT [1]	1.03
Endrin [1]	1.08

Column Number: **2**

Analyte	% Breakdown
4,4'-DDT [2]	1.08
Endrin [2]	0.87

BREAKDOWN REPORT

Lab Sample ID: **S088411-PEM3** **Analyzed:** **06/01/2023**

Column Number: **1**

Analyte	% Breakdown
4,4'-DDT [1]	0.99
Endrin [1]	0.75

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BREAKDOWN REPORT

Lab Sample ID:	S088411-PEM3	Analyzed:	06/01/2023

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	1.10
Endrin [2]	0.66

BREAKDOWN REPORT

Lab Sample ID:	S088544-PEM1	Analyzed:	06/03/2023

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	2.70
Endrin [1]	2.07

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	2.62
Endrin [2]	2.48

BREAKDOWN REPORT

Lab Sample ID:	S088544-PEM2	Analyzed:	06/03/2023

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	4.88
Endrin [1]	2.78

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	4.46
Endrin [2]	2.69

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B341341-BS1

Date(s) Analyzed: 05/28/2023 05/28/2023

Instrument ID (1): ECD 9

Instrument ID (2): ECD 9

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.15	
	2	0.000	0.000	0.000	0.16	6.5
Aroclor-1260	1	0.000	0.000	0.000	0.15	
	2	0.000	0.000	0.000	0.16	6.5

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B341341-BSD1 Date(s) Analyzed: 05/28/2023 05/28/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.15	
	2	0.000	0.000	0.000	0.16	6.5
Aroclor-1260	1	0.000	0.000	0.000	0.15	
	2	0.000	0.000	0.000	0.16	6.5

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B341341-MS1 Date(s) Analyzed: 06/05/2023 06/05/2023

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.27	
	2	0.000	0.000	0.000	0.27	0.0
Aroclor-1260	1	0.000	0.000	0.000	0.28	
	2	0.000	0.000	0.000	0.27	3.6

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B341341-MSD1

Date(s) Analyzed: 06/05/2023 06/05/2023

Instrument ID (1): ECD 9

Instrument ID (2): ECD 9

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.28	
	2	0.000	0.000	0.000	0.28	0.0
Aroclor-1260	1	0.000	0.000	0.000	0.28	
	2	0.000	0.000	0.000	0.27	3.6

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B341342-BS1 Date(s) Analyzed: 06/01/2023 06/01/2023

Instrument ID (1): ECD6A Instrument ID (2): ECD6B

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.790	7.760	7.820	0.099	
	2	7.688	7.659	7.719	0.095	4.1
4,4'-DDE	1	7.324	7.294	7.354	0.098	
	2	7.243	7.213	7.273	0.094	4.2
4,4'-DDT	1	8.004	7.974	8.034	0.10	
	2	7.934	7.905	7.965	0.098	2.0
Alachlor	1	6.722	6.693	6.753	0.073	
	2	6.374	6.345	6.405	0.071	2.8
Aldrin	1	6.635	6.606	6.666	0.088	
	2	6.458	6.428	6.488	0.085	3.5
alpha-BHC	1	5.852	5.824	5.884	0.093	
	2	5.689	5.660	5.720	0.089	4.4
alpha-Chlordane	1	7.279	7.249	7.309	0.088	
	2	7.118	7.089	7.149	0.085	3.5
beta-BHC	1	6.129	6.099	6.159	0.081	
	2	5.974	5.944	6.004	0.075	7.7
delta-BHC	1	6.259	6.230	6.290	0.087	
	2	6.176	6.146	6.206	0.083	4.7
Dieldrin	1	7.574	7.543	7.603	0.094	
	2	7.369	7.339	7.399	0.088	7.7
Endosulfan I	1	7.390	7.360	7.420	0.088	
	2	7.162	7.132	7.192	0.083	5.9
Endosulfan II	1	7.930	7.899	7.959	0.084	
	2	7.766	7.736	7.796	0.083	1.2
Endosulfan Sulfate	1	8.515	8.485	8.545	0.074	
	2	8.219	8.189	8.249	0.084	12.7
Endrin	1	7.757	7.727	7.787	0.094	
	2	7.603	7.573	7.633	0.091	3.2
Endrin Aldehyde	1	8.229	8.200	8.260	0.097	
	2	8.022	7.993	8.053	0.092	5.3
Endrin Ketone	1	8.689	8.658	8.718	0.091	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B341342-BS1 Date(s) Analyzed: 06/01/2023 06/01/2023

Instrument ID (1): ECD6A Instrument ID (2): ECD6B

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	8.560	8.530	8.590	0.087	4.5
gamma-BHC (Lindane)	1	6.073	6.044	6.104	0.089	
	2	5.923	5.894	5.954	0.085	4.6
gamma-Chlordane	1	7.178	7.148	7.208	0.089	
	2	7.009	6.979	7.039	0.087	2.3
Heptachlor	1	6.413	6.383	6.443	0.094	
	2	6.228	6.199	6.259	0.090	4.4
Heptachlor Epoxide	1	7.086	7.056	7.116	0.090	
	2	6.869	6.839	6.899	0.088	2.3
Hexachlorobenzene	1	5.736	5.707	5.767	0.093	
	2	5.600	5.570	5.630	0.085	9.0
Methoxychlor	1	8.330	8.300	8.360	0.10	
	2	8.408	8.379	8.439	0.098	2.0

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B341342-BSD1 Date(s) Analyzed: 06/01/2023 06/01/2023

Instrument ID (1): ECD6A Instrument ID (2): ECD6B

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.790	7.760	7.820	0.097	
	2	7.688	7.659	7.719	0.094	3.1
4,4'-DDE	1	7.325	7.294	7.354	0.096	
	2	7.243	7.213	7.273	0.092	4.3
4,4'-DDT	1	8.004	7.974	8.034	0.10	
	2	7.934	7.905	7.965	0.096	4.1
Alachlor	1	6.722	6.693	6.753	0.070	
	2	6.374	6.345	6.405	0.070	0.0
Aldrin	1	6.636	6.606	6.666	0.088	
	2	6.458	6.428	6.488	0.085	3.5
alpha-BHC	1	5.854	5.824	5.884	0.092	
	2	5.689	5.660	5.720	0.088	4.4
alpha-Chlordane	1	7.279	7.249	7.309	0.087	
	2	7.118	7.089	7.149	0.084	3.5
beta-BHC	1	6.129	6.099	6.159	0.080	
	2	5.974	5.944	6.004	0.074	7.8
delta-BHC	1	6.260	6.230	6.290	0.085	
	2	6.176	6.146	6.206	0.082	3.6
Dieldrin	1	7.573	7.543	7.603	0.093	
	2	7.368	7.339	7.399	0.087	6.7
Endosulfan I	1	7.390	7.360	7.420	0.086	
	2	7.161	7.132	7.192	0.082	4.8
Endosulfan II	1	7.930	7.899	7.959	0.083	
	2	7.766	7.736	7.796	0.081	2.4
Endosulfan Sulfate	1	8.515	8.485	8.545	0.072	
	2	8.219	8.189	8.249	0.082	13.0
Endrin	1	7.757	7.727	7.787	0.092	
	2	7.602	7.573	7.633	0.091	1.1
Endrin Aldehyde	1	8.229	8.200	8.260	0.093	
	2	8.023	7.993	8.053	0.089	4.4
Endrin Ketone	1	8.688	8.658	8.718	0.089	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B341342-BSD1 Date(s) Analyzed: 06/01/2023 06/01/2023

Instrument ID (1): ECD6A Instrument ID (2): ECD6B

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	8.559	8.530	8.590	0.085	4.6
gamma-BHC (Lindane)	1	6.074	6.044	6.104	0.088	
	2	5.923	5.894	5.954	0.084	4.7
gamma-Chlordane	1	7.178	7.148	7.208	0.087	
	2	7.008	6.979	7.039	0.085	2.3
Heptachlor	1	6.414	6.383	6.443	0.093	
	2	6.229	6.199	6.259	0.090	3.3
Heptachlor Epoxide	1	7.086	7.056	7.116	0.088	
	2	6.868	6.839	6.899	0.087	1.1
Hexachlorobenzene	1	5.737	5.707	5.767	0.092	
	2	5.600	5.570	5.630	0.085	7.9
Methoxychlor	1	8.330	8.300	8.360	0.10	
	2	8.408	8.379	8.439	0.099	10.5

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

Matrix Spike

Lab Sample ID: B341342-MS1 Date(s) Analyzed: 06/03/2023 06/04/2023

Instrument ID (1): ECD6A Instrument ID (2): ECD6B

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.775	7.749	7.809	0.071	
	2	7.661	7.636	7.696	0.069	2.9
4,4'-DDE	1	7.312	7.285	7.345	0.20	
	2	7.218	7.192	7.252	0.19	5.1
4,4'-DDT	1	7.990	7.964	8.024	0.060	
	2	7.908	7.882	7.942	0.058	3.4
Alachlor	1	6.710	6.683	6.743	0.087	
	2	6.353	6.327	6.387	0.076	13.5
Aldrin	1	6.624	6.597	6.657	0.11	
	2	6.436	6.409	6.469	0.10	9.5
alpha-BHC	1	5.844	5.816	5.876	0.088	
	2	5.671	5.644	5.704	0.077	13.3
beta-BHC	1	6.119	6.091	6.151	0.099	
	2	5.955	5.927	5.987	0.090	9.5
delta-BHC	1	6.247	6.221	6.281	0.15	
	2	6.149	6.123	6.183	0.15	0.0
Dieldrin	1	7.559	7.533	7.593	0.12	
	2	7.343	7.317	7.377	0.11	8.7
Endosulfan I	1	7.376	7.349	7.409	0.11	
	2	7.136	7.110	7.170	0.10	9.5
Endosulfan II	1	7.915	7.889	7.949	0.093	
	2	7.738	7.712	7.772	0.094	0.0
Endosulfan Sulfate	1	8.500	8.474	8.534	0.14	
	2	8.188	8.163	8.223	0.16	6.5
Endrin	1	7.743	7.716	7.776	0.12	
	2	7.575	7.550	7.610	0.12	0.0
Endrin Aldehyde	1	8.214	8.189	8.249	0.15	
	2	7.989	7.964	8.024	0.15	0.0
Endrin Ketone	1	8.675	8.650	8.710	0.10	
	2	8.536	8.510	8.570	0.098	2.0
gamma-BHC (Lindane)	1	6.064	6.036	6.096	0.072	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

Matrix Spike

Lab Sample ID: B341342-MS1 Date(s) Analyzed: 06/03/2023 06/04/2023

Instrument ID (1): ECD6A Instrument ID (2): ECD6B

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	5.904	5.877	5.937	0.065	10.2
Heptachlor	1	6.402	6.375	6.435	0.11	
	2	6.208	6.181	6.241	0.097	12.6
Heptachlor Epoxide	1	7.073	7.046	7.106	0.13	
	2	6.845	6.818	6.878	0.11	16.7
Hexachlorobenzene	1	5.728	5.700	5.760	0.12	
	2	5.582	5.555	5.615	0.10	18.2
Methoxychlor	1	8.318	8.291	8.351	0.12	
	2	8.385	8.360	8.420	0.12	0.0

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

Matrix Spike Dup

Lab Sample ID: B341342-MSD1 Date(s) Analyzed: 06/03/2023 06/04/2023

Instrument ID (1): ECD6A Instrument ID (2): ECD6B

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.776	7.749	7.809	0.14	
	2	7.661	7.636	7.696	0.16	13.3
4,4'-DDE	1	7.312	7.285	7.345	0.15	
	2	7.218	7.192	7.252	0.14	6.9
4,4'-DDT	1	7.990	7.964	8.024	0.14	
	2	7.909	7.882	7.942	0.14	0.0
Alachlor	1	6.711	6.683	6.743	0.10	
	2	6.353	6.327	6.387	0.094	6.2
Aldrin	1	6.624	6.597	6.657	0.13	
	2	6.435	6.409	6.469	0.12	8.0
alpha-BHC	1	5.844	5.816	5.876	0.11	
	2	5.671	5.644	5.704	0.10	9.5
beta-BHC	1	6.119	6.091	6.151	0.12	
	2	5.954	5.927	5.987	0.11	8.7
delta-BHC	1	6.247	6.221	6.281	0.16	
	2	6.149	6.123	6.183	0.14	13.3
Dieldrin	1	7.559	7.533	7.593	0.14	
	2	7.343	7.317	7.377	0.13	7.4
Endosulfan I	1	7.376	7.349	7.409	0.090	
	2	7.136	7.110	7.170	0.085	5.7
Endosulfan II	1	7.916	7.889	7.949	0.080	
	2	7.738	7.712	7.772	0.081	1.2
Endosulfan Sulfate	1	8.501	8.474	8.534	0.15	
	2	8.187	8.163	8.223	0.16	6.5
Endrin	1	7.743	7.716	7.776	0.14	
	2	7.575	7.550	7.610	0.14	6.9
Endrin Aldehyde	1	8.214	8.189	8.249	0.15	
	2	7.989	7.964	8.024	0.15	0.0
Endrin Ketone	1	8.677	8.650	8.710	0.12	
	2	8.536	8.510	8.570	0.14	15.4
gamma-BHC (Lindane)	1	6.064	6.036	6.096	0.10	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

Matrix Spike Dup

Lab Sample ID: B341342-MSD1 Date(s) Analyzed: 06/03/2023 06/04/2023

Instrument ID (1): ECD6A Instrument ID (2): ECD6B

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	5.903	5.877	5.937	0.10	0.0
Heptachlor	1	6.402	6.375	6.435	0.13	
	2	6.207	6.181	6.241	0.13	0.0
Heptachlor Epoxide	1	7.073	7.046	7.106	0.13	
	2	6.844	6.818	6.878	0.13	7.4
Hexachlorobenzene	1	5.728	5.700	5.760	0.13	
	2	5.582	5.555	5.615	0.12	8.0
Methoxychlor	1	8.319	8.291	8.351	0.14	
	2	8.386	8.360	8.420	0.14	0.0

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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.
B	Analyte is found in the associated laboratory blank as well as in the sample.
B-07	Data is not affected by elevated level in laboratory blank since sample result is >10x level found in the blank.
B-08	Continuing Calibration Blank (CCB) was greater than the method detection limit but less than the reporting limit.
DL-03	Elevated reporting limit due to matrix interference.
H-06	Sample was extracted past the recommended holding time.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-02	Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
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.
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-07	One associated surrogate standard recovery is outside of control limits but the other(s) is/are within limits. All recoveries are > 10%.
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-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.
V-35	Initial calibration verification (ICV) did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6010D in Soil	
Aluminum	CT,NH,NY,ME,VA,NC
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Beryllium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Calcium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Cobalt	CT,NH,NY,ME,VA,NC
Copper	CT,NH,NY,ME,VA,NC
Iron	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,AIHA,ME,VA,NC
Magnesium	CT,NH,NY,ME,VA,NC
Manganese	CT,NH,NY,ME,VA,NC
Nickel	CT,NH,NY,ME,VA,NC
Potassium	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Sodium	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,ME,VA,NC
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
SW-846 6010D in Water	
Aluminum	CT,NH,NY,ME,VA,NC
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,VA,RI,NC
Barium	CT,NH,NY,ME,VA,NC
Beryllium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Calcium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Cobalt	CT,NH,NY,ME,VA,NC
Copper	CT,NH,NY,ME,VA,NC
Iron	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,ME,VA,NC
Magnesium	CT,NH,NY,ME,VA,NC
Manganese	CT,NH,NY,ME,VA,NC
Nickel	CT,NH,NY,ME,VA,NC
Potassium	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Sodium	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,VA,NC
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
SW-846 7471B in Soil	

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 7471B in Soil	
Mercury	CT,NH,NY,NC,ME,VA
SW-846 8081B in Soil	
Alachlor	NC
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA
Aldrin [2C]	CT,NH,NY,ME,NC,VA
alpha-BHC	CT,NH,NY,ME,NC,VA
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA
beta-BHC	CT,NH,NY,ME,NC,VA
beta-BHC [2C]	CT,NH,NY,ME,NC,VA
delta-BHC	CT,NH,NY,ME,NC,VA
delta-BHC [2C]	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA
Chlordane	CT,NH,NY,ME,NC,VA
Chlordane [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDD	CT,NH,NY,ME,NC,VA
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDE	CT,NH,NY,ME,NC,VA
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDT	CT,NH,NY,ME,NC,VA
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA
Dieldrin	CT,NH,NY,ME,NC,VA
Dieldrin [2C]	CT,NH,NY,ME,NC,VA
Endosulfan I	CT,NH,NY,ME,NC,VA
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA
Endosulfan II	CT,NH,NY,ME,NC,VA
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA
Endrin	CT,NH,NY,ME,NC,VA
Endrin [2C]	CT,NH,NY,ME,NC,VA
Endrin Aldehyde	CT,NH,NY,ME,NC,VA
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA
Heptachlor [2C]	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NH,NY,ME,NC,VA
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA
Toxaphene	CT,NH,NY,ME,NC,VA
Toxaphene [2C]	CT,NH,NY,ME,NC,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8081B in Water	
Alachlor	NC
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA
Aldrin [2C]	CT,NH,NY,ME,NC,VA
alpha-BHC	CT,NH,NY,ME,NC,VA
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA
beta-BHC	CT,NH,NY,ME,NC,VA
beta-BHC [2C]	CT,NH,NY,ME,NC,VA
delta-BHC	CT,NH,NY,ME,NC,VA
delta-BHC [2C]	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA
Chlordane	CT,NH,NY,ME,NC,VA
Chlordane [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDD	CT,NH,NY,ME,NC,VA
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDE	CT,NH,NY,ME,NC,VA
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDT	CT,NH,NY,ME,NC,VA
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA
Dieldrin	CT,NH,NY,ME,NC,VA
Dieldrin [2C]	CT,NH,NY,ME,NC,VA
Endosulfan I	CT,NH,NY,ME,NC,VA
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA
Endosulfan II	CT,NH,NY,ME,NC,VA
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA
Endrin	CT,NH,NY,ME,NC,VA
Endrin [2C]	CT,NH,NY,ME,NC,VA
Endrin Aldehyde	CT,NH,NY,ME,NC,VA
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA
Heptachlor [2C]	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NH,NY,ME,NC,VA
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA
Toxaphene	CT,NH,NY,ME,NC,VA
Toxaphene [2C]	CT,NH,NY,ME,NC,VA
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,NC,ME,VA,PA

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Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1262	NH,NY,NC,ME,VA,PA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA,PA
Aroclor-1268	NH,NY,NC,ME,VA,PA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA,PA
SW-846 8082A in Water	
Aroclor-1016	CT,NH,NY,NC,ME,VA,PA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221	CT,NH,NY,NC,ME,VA,PA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232	CT,NH,NY,NC,ME,VA,PA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242	CT,NH,NY,NC,ME,VA,PA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248	CT,NH,NY,NC,ME,VA,PA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254	CT,NH,NY,NC,ME,VA,PA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260	CT,NH,NY,NC,ME,VA,PA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA,PA
Aroclor-1262	NH,NY,NC,ME,VA,PA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA,PA
Aroclor-1268	NH,NY,NC,ME,VA,PA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA,PA
SW-846 8260D in Soil	
Acetone	CT,NH,NY,ME,VA
Acetone	CT,NH,NY,ME,VA
Acrylonitrile	CT,NH,NY,ME,VA
Acrylonitrile	CT,NH,NY,ME,VA
Benzene	CT,NH,NY,ME,VA
Benzene	CT,NH,NY,ME,VA
Bromobenzene	NH,NY,ME,VA
Bromobenzene	NH,NY,ME,VA
Bromochloromethane	NH,NY,ME,VA

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Analyte	Certifications
SW-846 8260D in Soil	
Bromochloromethane	NH,NY,ME,VA
Bromodichloromethane	CT,NH,NY,ME,VA
Bromodichloromethane	CT,NH,NY,ME,VA
Bromoform	CT,NH,NY,ME,VA
Bromoform	CT,NH,NY,ME,VA
Bromomethane	CT,NH,NY,ME,VA
Bromomethane	CT,NH,NY,ME,VA
2-Butanone (MEK)	CT,NH,NY,ME,VA
2-Butanone (MEK)	CT,NH,NY,ME,VA
tert-Butyl Alcohol (TBA)	NY,ME
n-Butylbenzene	CT,NH,NY,ME,VA
n-Butylbenzene	CT,NH,NY,ME,VA
sec-Butylbenzene	CT,NH,NY,ME,VA
sec-Butylbenzene	CT,NH,NY,ME,VA
tert-Butylbenzene	CT,NH,NY,ME,VA
tert-Butylbenzene	CT,NH,NY,ME,VA
Carbon Disulfide	CT,NH,NY,ME,VA
Carbon Disulfide	CT,NH,NY,ME,VA
Carbon Tetrachloride	CT,NH,NY,ME,VA
Carbon Tetrachloride	CT,NH,NY,ME,VA
Chlorobenzene	CT,NH,NY,ME,VA
Chlorobenzene	CT,NH,NY,ME,VA
Chlorodibromomethane	CT,NH,NY,ME,VA
Chlorodibromomethane	CT,NH,NY,ME,VA
Chloroethane	CT,NH,NY,ME,VA
Chloroethane	CT,NH,NY,ME,VA
Chloroform	CT,NH,NY,ME,VA
Chloroform	CT,NH,NY,ME,VA
Chloromethane	CT,NH,NY,ME,VA
Chloromethane	CT,NH,NY,ME,VA
2-Chlorotoluene	CT,NH,NY,ME,VA
2-Chlorotoluene	CT,NH,NY,ME,VA
4-Chlorotoluene	CT,NH,NY,ME,VA
4-Chlorotoluene	CT,NH,NY,ME,VA
1,2-Dibromo-3-chloropropane (DBCP)	NY,ME
1,2-Dibromo-3-chloropropane (DBCP)	NY
1,2-Dibromoethane (EDB)	NH,NY
1,2-Dibromoethane (EDB)	NH,NY
Dibromomethane	NH,NY,ME,VA
Dibromomethane	NH,NY,ME,VA
1,2-Dichlorobenzene	CT,NH,NY,ME,VA
1,2-Dichlorobenzene	CT,NH,NY,ME,VA
1,3-Dichlorobenzene	CT,NH,NY,ME,VA
1,3-Dichlorobenzene	CT,NH,NY,ME,VA
1,4-Dichlorobenzene	CT,NH,NY,ME,VA
1,4-Dichlorobenzene	CT,NH,NY,ME,VA
trans-1,4-Dichloro-2-butene	NY,ME

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CERTIFICATIONS

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Analyte	Certifications
SW-846 8260D in Soil	
Dichlorodifluoromethane (Freon 12)	NH,NY,ME,VA
Dichlorodifluoromethane (Freon 12)	NY,ME,VA
1,1-Dichloroethane	CT,NH,NY,ME,VA
1,1-Dichloroethane	CT,NH,NY,ME,VA
1,2-Dichloroethane	CT,NH,NY,ME,VA
1,2-Dichloroethane	CT,NH,NY,ME,VA
1,1-Dichloroethylene	CT,NH,NY,ME,VA
1,1-Dichloroethylene	CT,NH,NY,ME,VA
cis-1,2-Dichloroethylene	CT,NH,NY,ME,VA
cis-1,2-Dichloroethylene	CT,NH,NY,ME,VA
trans-1,2-Dichloroethylene	CT,NH,NY,ME,VA
trans-1,2-Dichloroethylene	CT,NH,NY,ME,VA
1,2-Dichloropropane	CT,NH,NY,ME,VA
1,2-Dichloropropane	CT,NH,NY,ME,VA
1,3-Dichloropropane	NH,NY,ME,VA
1,3-Dichloropropane	NH,NY,ME,VA
2,2-Dichloropropane	NH,NY,ME,VA
2,2-Dichloropropane	NH,NY,ME,VA
1,1-Dichloropropene	NH,NY,ME,VA
1,1-Dichloropropene	NH,NY,ME,VA
cis-1,3-Dichloropropene	CT,NH,NY,ME,VA
cis-1,3-Dichloropropene	CT,NH,NY,ME,VA
trans-1,3-Dichloropropene	CT,NH,NY,ME,VA
trans-1,3-Dichloropropene	CT,NH,NY,ME,VA
Diethyl Ether	ME
1,4-Dioxane	NY,ME
Ethylbenzene	CT,NH,NY,ME,VA
Ethylbenzene	CT,NH,NY,ME,VA
Hexachlorobutadiene	NH,NY,ME,VA
Hexachlorobutadiene	NH,NY,ME,VA
2-Hexanone (MBK)	CT,NH,NY,ME,VA
2-Hexanone (MBK)	CT,NH,NY,ME,VA
Isopropylbenzene (Cumene)	CT,NH,NY,ME,VA
Isopropylbenzene (Cumene)	CT,NH,NY,ME,VA
p-Isopropyltoluene (p-Cymene)	NH,NY
p-Isopropyltoluene (p-Cymene)	NH,NY
Methyl Acetate	NY,ME
Methyl tert-Butyl Ether (MTBE)	NY,ME,VA
Methyl tert-Butyl Ether (MTBE)	NY,VA
Methyl Cyclohexane	NY
Methylene Chloride	CT,NH,NY,ME,VA
Methylene Chloride	CT,NH,NY,ME,VA
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,ME,VA
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,VA
Naphthalene	NH,NY,ME,VA
Naphthalene	NH,NY,ME,VA
n-Propylbenzene	NH,NY

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Analyte	Certifications
SW-846 8260D in Soil	
n-Propylbenzene	NH,NY,ME
Styrene	CT,NH,NY,ME,VA
Styrene	CT,NH,NY,ME,VA
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME,VA
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME,VA
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME,VA
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME,VA
Tetrachloroethylene	CT,NH,NY,ME,VA
Tetrachloroethylene	CT,NH,NY,ME,VA
Toluene	CT,NH,NY,ME,VA
Toluene	CT,NH,NY,ME,VA
1,2,3-Trichlorobenzene	NY,ME
1,2,4-Trichlorobenzene	NH,NY,ME,VA
1,2,4-Trichlorobenzene	NH,NY,ME,VA
1,3,5-Trichlorobenzene	ME
1,1,1-Trichloroethane	CT,NH,NY,ME,VA
1,1,1-Trichloroethane	CT,NH,NY,ME,VA
1,1,2-Trichloroethane	CT,NH,NY,ME,VA
1,1,2-Trichloroethane	CT,NH,NY,ME,VA
Trichloroethylene	CT,NH,NY,ME,VA
Trichloroethylene	CT,NH,NY,ME,VA
Trichlorofluoromethane (Freon 11)	CT,NH,NY,VA
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME,VA
1,2,3-Trichloropropane	NH,NY,ME,VA
1,2,3-Trichloropropane	NH,NY,ME,VA
1,2,4-Trimethylbenzene	CT,NH,NY,ME,VA
1,2,4-Trimethylbenzene	CT,NH,NY,ME,VA
1,3,5-Trimethylbenzene	CT,NH,NY,ME,VA
1,3,5-Trimethylbenzene	CT,NH,NY,ME,VA
Vinyl Chloride	CT,NH,NY,ME,VA
Vinyl Chloride	CT,NH,NY,ME,VA
m+p Xylene	CT,NH,NY,ME,VA
m+p Xylene	CT,NH,NY,ME,VA
o-Xylene	CT,NH,NY,ME,VA
o-Xylene	CT,NH,NY,ME,VA
SW-846 8270E in Soil	
Acenaphthene	CT,NY,NH,ME,NC,VA
Acenaphthylene	CT,NY,NH,ME,NC,VA
Acetophenone	NY,NH,ME,NC,VA
Aniline	NY,NH,ME,NC,VA
Anthracene	CT,NY,NH,ME,NC,VA
Benzidine	CT,NY,NH,ME,NC,VA
Benzo(a)anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)pyrene	CT,NY,NH,ME,NC,VA
Benzo(b)fluoranthene	CT,NY,NH,ME,NC,VA
Benzo(g,h,i)perylene	CT,NY,NH,ME,NC,VA

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CERTIFICATIONS

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

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270E in Soil	
4-Nitroaniline	CT,NY,NH,ME,NC,VA
Nitrobenzene	CT,NY,NH,ME,NC,VA
2-Nitrophenol	CT,NY,NH,ME,NC,VA
4-Nitrophenol	CT,NY,NH,ME,NC,VA
N-Nitrosodimethylamine	CT,NY,NH,ME,NC,VA
N-Nitrosodiphenylamine/Diphenylamine	NY
N-Nitrosodi-n-propylamine	CT,NY,NH,ME,NC,VA
Pentachloronitrobenzene	NY,NC
Pentachlorophenol	CT,NY,NH,ME,NC,VA
Phenanthrene	CT,NY,NH,ME,NC,VA
Phenol	CT,NY,NH,ME,NC,VA
Pyrene	CT,NY,NH,ME,NC,VA
Pyridine	CT,NY,NH,ME,NC,VA
1,2,4,5-Tetrachlorobenzene	NY,NC
1,2,4-Trichlorobenzene	CT,NY,NH,ME,NC,VA
2,4,5-Trichlorophenol	CT,NY,NH,ME,NC,VA
2,4,6-Trichlorophenol	CT,NY,NH,ME,NC,VA
2-Fluorophenol	NC
SW-846 8270E in Water	
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
Benzidine	CT,NY,NC,ME,NH,VA
Benzo(a)anthracene	CT,NY,NC,ME,NH,VA
Benzo(a)pyrene	CT,NY,NC,ME,NH,VA
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

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270E in Water	
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
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-Nitrosodiphenylamine/Diphenylamine	NY
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

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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270E in Water	
2-Fluorophenol	NC
SW-846 9014 in Soil	
Cyanide	NY,CT,NC,ME,NH,VA

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO 17025:2017	100033	03/1/2024
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	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2023
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2023

23E1982

con-test ANALYTICAL LABORATORY

http://www.contestlabs.com Doc # 380 Rev 1_03242017

Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

CHAIN OF CUSTODY RECORD (New York)

39 Spruce Street
East Longmeadow, MA 01028

Company Name: Ramboll
Address: 333 W Washington St Syracuse NY 13202
Phone: 315-956-6100
Project Name: Utica Terminal - 633015
Project Location: Utica, NY Callout - 144354
Project Number: 1440101207
Project Manager: Deb Wright
Con-Test Quote Name/Number:
Invoice Recipient: Samantha Salatto
Sampled By: Vincent Farruggia

Requested Turnaround Time
7-Day ☐ 10-Day ☐
Due Date: Standard

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☑
Other: Cat B
CLP Like Data Pkg Required: ☐
Email To: Deborah.Wright@Ramboll.com
Fax To #:

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code	6010B, 9010B, 7471A	8270, 8082, 8081B	USEPA Method 8260	US EPA Method 8260	USEPA Method 1632	SPLP Method 1633								
1	VDS4.26-035-230511	5/11/23	5/11/23 0930		X	S	U	X	X	X	X	X	X								
2	VDS4.26-030-230511	5/11/23	0940		X	S	U	X	X	X	X	X	X								
3	VDS4.26-045-230511	5/11/23	0950		X	S	U	X	X	X	X	X	X								
4	VDS4.26-040-230511	5/11/23	1000		X	S	U	X	X	X	X	X	X								
5	VDS4.26-025-230511	5/11/23	1025		X	S	U	X	X	X	X	X	X								
6	VDS4.26-020-230511	5/11/23	1035		X	S	U	X	X	X	X	X	X								
7	VDS4.26-015-230511	5/11/23	1100		X	S	U	X	X	X	X	X	X								
8	VDS4.26-010-230511	5/11/23	1110		X	S	U	X	X	X	X	X	X								
9	VDS4.26-055-230511	5/11/23	1140		X	S	U	X	X	X	X	X	X								
10	VDS4.26-050-230511	5/11/23	1150		X	S	U	X	X	X	X	X	X								

Comments:

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time: 5/12/23 1315	
Received by: (signature)	Date/Time: 5-12 1315	
Relinquished by: (signature)	Date/Time: 5-12 1600	
Received by: (signature) 3.3°C	Date/Time: 5-13-23 1035 ~~1600~~	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Program & Regulatory Information
☐ AWQ STDS ☐ NY TOGS
☐ NYC Sewer Discharge ☐ NY CP-51
☐ Part 360 GW (Landfill)
☐ NY Restricted Use
☐ NY Unrestricted Use
☐ NY Part 375
Other:

Deliverables
☒ Enhanced Data Package
☒ NYSDEC EQuIS EDD
☐ EQuIS (Standard) EDD
☒ NY Regulatory EDD
☐ NY Regs Hits-Only EDD
Other:

Project Entity
☒ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

NELAC and AIHA-LAP, LLC Accredited

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

# of Containers
[2] Preservation Code
[3] Container Code

Dissolved Metals Samples
☐ Field Filtered
☐ Lab to Filter

Orthophosphate Samples
☐ Field Filtered
☐ Lab to Filter

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[3] **Container Codes:**
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

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Pace Analytical®

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Fax: 612-607-6344

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Doc # 380 Rev 1_03242017

CHAIN OF CUSTODY RECORD (New York)

1800 Elm Street SE
Minneapolis, MN 55414

Contact: https://www.pacelabs.com/contact-us/contact-environmental-sciences/

Company Name: Parsons

Address: 333 W Washington St Syracuse NY 13202

Phone: 315-956-6100

Project Name: Utica City Dump - 633015

Project Location: Utica NY Callout 144354

Project Number: 194101207

Project Manager: Deb Wright

Pace Analytical Quote Name/Number

Invoice Recipient: Samantha Salatto

Sampled By: Vincent Farruggia

Requested Turnaround Time

7-Day ☐ 10-Day ☐

Due Date: Standard

Rush Approval Required

1-Day ☐ 3-Day ☐

2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☒ EXCEL ☒

Other: Cat B

CLP Like Data Pkg Required: ☐

Email To:

Fax To #:

Pace Analytical Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	Matrix Code	Conc Code	# of Containers	Preservation Code	Container Code	VSOA 8270	USEPA 6010B	USEPA 1633	SPLP Method 1633
11	SC-01-230511	5/11/23	1220		X	S	U	1	A	P	X	X	X	X

ANALYSIS REQUESTED

Dissolved Metals Samples
☐ Field Filtered
☐ Lab to Filter

Orthophosphate Samples
☐ Field Filtered
☐ Lab to Filter

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

[3] **Container Codes:**
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

Comments:

Please use the following codes to indicate possible sample concentration within the **Conc Code** column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time: 5-12 1315	
Received by: (signature)	Date/Time: 5-12 1315	
Relinquished by: (signature)	Date/Time: 5-12 1600	
Received by: (signature) 3.3°C	Date/Time: 5-13-23 1000	
Relinquished by: (signature)	Date/Time:	
Received by: (signature)	Date/Time:	

Program & Regulatory Information

☐ AWQ STDS ☐ NY TOGS
☐ NYC Sewer Discharge ☐ NY CP-51
☐ Part 360 GW (Landfill)
☐ NY Restricted Use
☐ NY Unrestricted Use
☐ NY Part 375

Other:

Deliverables

☒ Enhanced Data Package
☒ NYSDEC EQuIS EDD
☐ EQuIS (Standard) EDD
☒ NY Regulatory EDD
☐ NY Regs Hits-Only EDD

Other:

NELAC and AIHA-LAP, LLC Accredited

Project Entity

☒ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

Other

☐ Chromatogram
☐ *AIHA-LAP,LLC*

PCB ONLY

☐ Soxhlet
☐ Non Soxhlet

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

ENV-FRM-ELON-0001 V05__Sample Receiving Checklist

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

Pace
PEOPLE ADVANCING SCIENCE

Client Rumpell
Project Utica City Dump-
MCP/RCP Required N/A
Deliverable Package Requirement N/A
Location Utica, NY
PWSID# (When Applicable) N/A
Arrival Method:

Courier ☑ Fed Ex ☐ Walk In ☐ Other ☐
Received By / Date / Time Alyssa 5/13/23 1015
Back-Sheet By / Date / Time [illegible] 5/15/23 1130
Temperature Method Gun # 5
Temp ☑ < 6° C Actual Temperature 9.3
Rush Samples: Yes / (No) Notify
Short Hold: Yes / (No) Notify

	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) ☐ ☐

Notes regarding Samples/COC outside of SOP:

Additional Container Notes

Sample	Soils Jars (Circle Amb/Clear)				Ambers					Plastics									VOA Vials						Other / Fill in					
					1 Liter			250mL		1 Liter		500mL		250mL					100mL												
	16oz Amb/Clear	8oz Amb/Clear	4oz Amb/Clear	2oz Amb/Clear	Unpreserved	HCL	Sulfuric	Sulfuric	Phosphoric	HCl	Unpreserved	Sulfuric	Unpreserved	Sulfuric	Trizma	Unpreserved	Nitric	NaOH	NaOH/Zinc	Unpreserved	HCl	MeOH	D.I. Water	Bisulfate	Col/Bact					
1																														
2																														
3																														
4																														
5																														
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19																														
20																														

Appendix 7
SHAW Model Input and Water Output Tables (Will be provided electronically upon request)

Appendix 8
Loading/Unloading Platforms Basis of Design

RAMBOLL

ENVIRONMENT
& HEALTH

Dredge Material Loading Platform Basis of Design

Appendix

Project name	**Former Utica City Dump Remedial Design**
Project no.	**1940101207**
Recipient	**NYSDEC**
Document type	**Appendix**
Version	**01**
Date	**June 17, 2025**
Prepared by	**Victor Warner / Jacqueline Renn**
Checked by	**Dave Farber / Tim Kivisto**
Approved by	**Dave Farber**
Description	**100% Basis of Design Report**

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1. Introduction 1

2. Pre-Design Investigation 1
2.1 Hydrographic and Topographic Surveys 1
2.2 Geotechnical Subsurface Investigation and Laboratory Testing 2
2.2.1 Subsurface Investigation 2
2.2.2 Laboratory Testing 2

3. Platform Design 5
3.1 Structural Design 5
3.1.1 Codes and Standards 5
3.1.2 Description of Structural Systems 5
3.1.3 Design Criteria 6
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4. Summary 9

1. Introduction

This report details the Basis of Design (BOD) of the two proposed loading/unloading platforms to be constructed within the Erie Canal, with one platform constructed at the Former Utica City Dump (Dump Site) and the second located at the New York State Canal Corporation (NYSCC) Upland Disposal Site (UDS) #4-26. The platforms will be utilized to load and unload canal dredge material excavated from UDS #4-26 and barged form the UDS to the Dump Site.

2. Pre-Design Investigation

2.1 Hydrographic and Topographic Surveys

As part of the pre-design investigation, Ramboll subcontracted MJ Engineering and Land Surveying P.C. (MJ) to complete hydrographic and topographic survey. The survey was completed to obtain existing grade within the canal and on the banks in the vicinity of the proposed loading/unloading platforms. MJ completed the hydrographic and topographic surveys on July 14 and August 5, 2024, respectively.

2.2 Geotechnical Subsurface Investigation and Laboratory Testing

2.2.1 Subsurface Investigation

The subsurface investigation for the proposed loading/unloading platforms was completed from August 8, 2024 through August 15, 2024. The investigation consisted of a total of five geotechnical soil borings, two completed at the Dump Site and three completed at the UDS. The locations of the borings are shown on the attached boring location plan provided as Attachment 1. The subsurface investigation was completed by Labella Associates under contract with the New York State Department of Environmental Conservation (NYSDEC).

The borings were drilled utilizing 3¼ - in-inside diameter hollow stem augers in accordance with ASTM D1452 *Standard Practice for Soil Investigation and Sampling by Auger Borings*. Split spoon sampling was conducted using a safety hammer in accordance with ASTM D1586 *Standard Method for Penetration test and Split Barrel Sampling of Soils*. Private utility clearing was performed prior to drilling at all borings location by Blood Hound LLC. The borings were sampled continuously from grade to a depth of approximately 40 ft below ground surface (bgs). Soil samples were collected on a standard basis (every 5 ft) from approximately 40 ft bgs until the termination of the borings. The Dump Site borings RSB-11 and RSB-13 were terminated at 107 ft and 102 ft bgs, respectively. The three borings at the UDS, RSB-UDS-1, RSB-UDS-2, and RSB-UDS-3 were terminated at 67 ft, 62 ft, and 67 ft bgs, respectively. Select undisturbed soil samples were collected at borings RSB-13, RSB-1, and RSB-3 in accordance with ASTM D1587 *Standard Practice for Thin-Walled Tube Sampling of Fine-Grained Soils for Geotechnical Purposes*.

The subsurface conditions observed at the dump site generally consisted of 4 to 8 feet of fill material, generally consisting of dense silt and gravel. Underlying the fill, soft to very soft gray/brown clay, with varying amount of silt and sand was observed in borings RSB-11 and RSB-13 to depths of 62 ft and 47 ft bgs, respectively. Below the soft clay, firm to stiff silt and clay was observed to the termination depths of 107 and 102 feet bgs in borings RSB-11 and RSB-13, respectively. Groundwater was observed in both RSB-11 and RSB-13 at depths of 22 ft bgs. The detailed soil boring logs are provided as Attachment 2.

The subsurface conditions observed at the UDS generally consisted of 4 to 6 feet of fill material, generally consisting of medium dense to dense silty sand with little to some gravel. Below the fill material, soft silt and clay was observed in borings RSB-UDS-1, RSB-UDS-2, and RSB-UDS-3 to depths of 32 ft, 14 ft, and 10 ft bgs, respectively. In boring RSB-UDS-2, a four-foot-thick layer of loose to medium dense sand and gravel layer was observed from 14 to 18 ft below grade. In boring RSB-UDS-3, a stratum of medium dense gravel and sand was observed from 10 ft to 24 ft below grade. Below the sand and gravel layers in RSB-UDS-2, and RSB-UDS-3, soft silt and clay was observed to approximately 30 ft bgs. Below the soft silt and clay, medium dense to very dense sand and gravel was observed in borings RSB-UDS-1, RSB-UDS-2, and RSB-UDS-3 to the termination depths of 67 ft, 60 ft, and 67 ft, respectively. Groundwater was observed in borings RSB-UDS-1, RSB-UDS-2, and RSB-UDS-3 at depths of approximately 5 ft, 14 ft, and 9.5 ft, respectively. The detailed soil boring logs are provided as Attachment 2.

2.2.2 Laboratory Testing

A laboratory testing program was developed by Ramboll to analyze select soil samples obtained from the five soil borings drilled to assess the specific geotechnical properties of the soils. The laboratory testing program for the soil samples, performed by Advance Testing, included the following:

- Natural Moisture Content of Soil and Rock in accordance with ASTM D2216

- Particle Size Analysis with Hydrometer in accordance with ASTM D422
- Liquid Limit, Plastic Limit, and Plasticity Index in accordance with ASTM D4318
- Triaxial Shear Test in accordance with ASTM D4767

Below is a summary of the results of the laboratory testing. The detailed laboratory testing reports are provided in Attachment 3.

2.2.2.1 Natural Moisture Content

The natural moisture content was evaluated on 19 soil samples obtained from the site, nine form the dump Site and 10 form the UDS. The analysis was performed in accordance with ASTM D2216 *Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass*. The test results are summarized below.

Table 1: Natural Moisture Content Summary

Boring	Sample	Natural Moisture Content (%)
RSB-11	S-5	33.6
RSB-11	S-12	35.6
RSB-11	S-20	17.5
RSB-11	S-26	21.2
RSB-11	S-31	19.6
RSB-13	S-7	123.3
RSB-13	S-24	18.8
RSB-13	S-28	20.2
RSB-13	S-32	27.3
RSB-UDS-1	S-4	26.1
RSB-UDS-1	S-13	37.6
RSB-UDS-1	S-16	43.3
RSB-UDS-1	S-23	13.5
RSB-UDS-2	S-5	59.1
RSB-UDS-2	S-12	39.4
RSB-UDS-2	S-15	34.2
RSB-UDS-3	S-4	38.8
RSB-UDS-3	S-13	37.2
RSB-UDS-3	S-19	20.6

2.2.2.2 Particle Size Analysis with Hydrometer

Particle Size Analysis was performed on six soil samples obtained from the site, two including hydrometer analysis. The analysis was performed in accordance with ASTM D422 *Standard Test Method for Particle-Size Analysis of Soils*. The results are summarized below in Table 2.

Table 2: Particle Size Analysis with Hydrometer Results

Boring	Approximate Depth BGS (ft)	Percent Gravel (%)	Percent Sand (%)	Percent Fines (%)	Percent Silt (%)	Percent Clay (%)
RSB-2	8-10	0.0	9.9	90.1	60.1	15.0
RSB-4	16-18	0.0	4.0	96.0	47.5	48.5
RSB-8	10-12	0.1	2.4	97.5	67.5	30.0

2.2.2.3 Atterberg Limits

Atterberg limit testing was conducted on six soil samples obtained from the site, four from the dump Site and two from the UDS. Atterberg limits were determined in accordance with ASTM D4318 *Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils*. The results of the testing are summarized below in Table 3.

Table 3: Atterberg Limits Results

Boring	Sample	Plastic Limit	Liquid Limit	Plasticity Index
RSB-11	S-19	17	27	10
RSB-11	S-30	17	23	6
RSB-13	S-14	NA	NA	Non-Plastic
RSB-13	S-27	18	20	2
RSB-UDS-1	S-12	NA	NA	Non-Plastic
RSB-UDS-3	S-14	20	29	9

2.2.2.4 Triaxial Shear Strength

Triaxial shear strength testing was completed on select undisturbed Shelby tube samples collected from the dump Site and UDS. Triaxial testing was completed in accordance with ASTM D4767 *Standard Test Method for Consolidated Undrained Triaxial Compression Test for Cohesive Soils.* The results of the tests are summarized below in Table 4.

Table 4: Triaxial Shear Testing Summary

Boring	Sample Depth (ft bgs)	Total Back Pressure (psi)	Deviator Stress at Failure (psi)
RSB-13	30 - 32	11.2	23.4
RSB-13	65 - 67	10.0	74.0
		26.2	34.7
		55.5	36.4

RSB-UDS-1	18 - 20	5.4	13.0
		15.9	30.0
		35.2	35.0
RSB-UDS-3	28 - 30	7.2	24.0
		15.0	33.8

3. Platform Design

3.1 Structural Design

The following section lists the applicable codes and referenced standards, describes the structural systems, provides structural design criteria, and identifies material properties for the design of the two proposed loading/unloading platforms.

3.1.1 Codes and Standards

The structural design for the project will be in accordance with the following codes, referenced standards and publications:

- 2020 Building Code of New York State (2020 BCNYS), part of the 2020 Uniform Fire Prevention and Building Code of New York State (Uniform Code)
  - 2018 International Building Code (IBC 2018) as incorporated by reference into the 2020 BCNYS
- American Society of Civil Engineers (ASCE) 7-16, Minimum Design Loads and Associated Criteria for Buildings and Other Structures
- American Institute of Steel Construction (AISC) 360, Specification for Structural Steel Buildings
- AISC 303, Code of Standard Practice for Steel Buildings and Bridges
- American Welding Society (AWS) D1.1, Structural Welding Code – Steel
- Research Council on Structural Connections (RCSC), Specification for Structural Joints
- Using High- Strength Bolts
- American Wood Council (AWC) 2018 National Design Specification for Wood Construction with NDS Supplement (2018 NDS)
- American Concrete Institute (ACI) 301-10, Specifications for Structural Concrete
- ACI 318-14, Building Code Requirements for Structural Concrete
- Unified Facilities Criteria (UFC) Design: Piers and Wharves (UFC4-152-01)

3.1.2 Description of Structural Systems

The two galvanized steel platforms shall be 150 ft long x 30 ft wide and support an 8″ thick timber deck. Each platform shall have 11 rows of 30 ft long girders spaced every 15 ft which run continuously over top of the piles. 15 ft long simply supported beams spaced at 5 ft on center shall be run between these girders. The 8″ thick timber planks or crane mat shall be supported by these beams. Horizontal chevron and inverted chevron braces shall serve as the diaphragm and brace the beams at midspan.

The platforms were analyzed and designed using STAAD Pro Connect Edition V22 Update 12 (STAAD), structural analysis software developed by Bentley, to support the loads tabulated below in section 3.1.3. STAAD performs a code check in accordance with AISC 360-16 to determine a "utilization ratio", namely the demand-capacity ratio, for each element, and hence accounts for an allowable strength equal to 60% of the steel's yield strength. The ship berthing load is a short-term impact load, meaning the allowable stress for an operational condition can be increased to 80% of the yield strength. Hence, the factors for the load combinations including the operational ship berthing load case were reduced by

25%. Additionally, the deflection of the beams and girders were limited to ¾" maximum to limit the potential for a tripping hazard.

Note that the barge loads listed include an operational berthing load, but do not include accidental berthing loads per client request as this was deemed excessive. For the operational condition, the assumed design barge was given by the client to be 120 ft long x 40 ft wide with a 7 ft draft and determined to be berthing at a design velocity of 0.5 mph. A rubber fender system was selected to absorb at least 8 kip-ft of energy and provide a fender reaction of 24 klf on the steel dock.

3.1.3 Design Criteria

Design live loads are as follows:

Table 5. Design Basis – Live Loads

Live Load Criteria	Reference
Design Excavator (Based on CAT 395 Hydraulic Excavator – Tier 4 / Stage V) = 210,000 lbs	Table 4.3-1 (ASCE 7)
Walkways & Elevated Platforms = 60 psf	Table 4.3-1 (ASCE 7)
Handrails & Guards Live Loads: 50 lbs/ft linear load and a 200-lb concentrated load	Section 4.5.1 (ASCE 7)

Design snow load is defined as follows:

Table 6. Design Basis – Snow Loads

Snow Load Criteria	Reference
Ground Snow Load, p_g = 50 psf	Figure 1609.2 (BCNYS)

Design wind loading is defined as follows:

Table 7. Design Basis – Wind Loads

Wind Load Criteria	Reference
Ultimate 3-second wind gust speed = 109 mph	Figure 26.5-1B (ASCE 7)
Exposure category: D	26.7.3 (ASCE 7)

Design seismic loading is defined as follows:

Table 8. Design Basis – Seismic Loads

Seismic Load Criteria	Reference
Site class: D	Assumed value to be confirmed by geotechnical review of existing soil data at site

Seismic Load Criteria	Reference
Mapped spectral acceleration at short period, S_S = 0.178	Figure 22-1 (ASCE 7)
Mapped spectral acceleration at 1-sec Period, S_1 = 0.058	Figure 22-2 (ASCE 7)
Site Coefficient, F_a = 1.6	Table 11.4-1 (ASCE 7)
Site Coefficient, F_v = 2.4	Table 11.4-2 (ASCE 7)
Maximum Considered EQ Spectral Response Accel, S_{MS} = 0.285	Eq. 11.4-1 (ASCE 7)
Maximum Considered EQ Spectral Response Accel, S_{M1} = 0.138	Eq. 11.4-2 (ASCE 7)
Design Spectral Response, S_{DS} = 0.19	Eq. 11.4-3 (ASCE 7)
Design Spectral Response, S_{D1} = 0.092	Eq. 11.4-4 (ASCE 7)
Seismic importance factor: I_E = 1.0	Table 1.5-2 (ASCE 7)
Seismic Design Category: B	Section 11.6 (ASCE 7)

Design ice loading is defined as follows:

Table 9. Design Basis – Ice Loads

Ice Load Criteria	Reference
Nominal Ice Thickness, t = 1.00 in	Figure 10.4-2 (ASCE 7)
Ice importance factor: I_i = 1.0	Table 1.5-2 (ASCE 7)
Concurrent Temperature, 5 deg F	Figure 10.6-1 (ASCE 7)
Wind-on-Ice Gust Speed, 40 mph	Figure 10.4-2 (ASCE 7)

Design barge berthing loading is defined as follows:

Table 10. Design Basis – Barge Berthing Loads

Barge Impact Load Criteria	Reference
Design Barge Size, 120 ft	Client Provided Information
Design Barge Weight, 1,158 tons	Client Provided Information
Operational Berthing Speed, 0.5 mph	Assumed

Material Properties

Table 11. Design Basis – Concrete

Element	Value
Cast-in-place Concrete:	
Minimum 28-day compressive strength	f'_c = 4,000 psi
Maximum water-cement ratio	0.45
Aggregate	ASTM C33, 1″ max.
Slump	4″ to 6″
Air entrainment (where applicable)	3% to 6%

Table 12. Design Basis – Structural Steel and Accessories

Element	Value
Structural Steel:	
Wide-flange shapes:	ASTM A992, f_y – 50 ksi
Channels, angles	ASTM A36, f_y – 36 ksi
Pipe shapes	A53 Gr. B, f_y – 35 ksi
Accessories:	
High-Strength Bolts	ASTM A3125, Gr.A325

Element	Value
Weld Electrode	E70

Table 13. Design Basis – Wood

Element	Value
Wood:	
8" Thick Deck	Southern Yellow Pine, No. 1
2x Board	Southern Yellow Pine, No. 1 OR Fir, No. 1

3.2 Pile Foundation

Based on the results of the pre-design investigation and the loading criteria detailed above, the proposed loading/unloading platforms will be constructed upon deep pile foundations. To evaluate the required pile foundation, Ramboll utilized the computer design software programs APile v2023 and LPiles v2022, developed by Ensoft Inc.

Per the structural design criteria above, the piles are designed based on a maximum axial load of 92 kips. A minimum factor of safety of 2.5 was utilized in accordance with Table 4.1 *Factor of Safety for Pile Capacity* from *Design of Pile Foundations,* Technical Engineering and Design Guides as Adapted from the United States Army Corps of Engineers (USACE) No. 1, by the American Society of Civil Engineers (ASCE), assuming that the load is verified utilizing a pile driving analyzer during installation.

Closed end pipe piles with an outside diameter of 18 inches were evaluated for the two loading platforms. It is assumed that the piles will be filled with concrete with a minimum compressive strength of 4,000 psi. The top of pile elevation at the Dump Site and UDS Platforms are 406.87 ft and 405.87 ft, respectively. Based on a required ultimate load of 230 kips, the required pile length at the Dump Site and UDS is 110 ft (tip elevation of 296.87 ft) and 56 ft (tip elevation of 349.87 ft), respectively.

The lateral capacity of the resulting piles was evaluated for each loading platform. Assuming a pile wall thickness of 0.375 inches, results show that the lateral capacity of the dock system at the Dump Site and UDS Site can support lateral load of approximately 380 and 485 kips, respectively.

4. Summary

This report details the basis of design of the proposed loading and unloading platforms to be constructed at the Dump Site and UDS #4-26 to facilitate the transportation of dredge material. Use of the platforms shall not exceed the design criteria utilized in the design. Changes to the final design may be warranted if the subsurface conditions differ from those observed in the soil borings, or if the required loading criteria differs from the one detailed above.

ATTACHMENT 1
BORING LOCATION PLAN



NORTH

200' 0 200'

UTICA DUMP PROPOSED SOIL BORING LOCATION PLAN

UTICA CITY DUMP

UTICA CITY DUMP
UTICA, NY
REGION 6: ONEIDA COUNTY

FIGURE 1

RAMBOLL US CORPORATION

RAMBOLL



NORTH

150' 0 150'

UDS AREA PROPOSED SOIL BORING LOCATION PLAN

UTICA CITY DUMP

UTICA CITY DUMP
UTICA, NY
REGION 6: ONEIDA COUNTY

FIGURE 2

RAMBOLL US CORPORATION

RAMBOLL

ATTACHMENT 2
SOIL BORING LOGS

RAMBOLL

SOIL BORING LOG

BORING ID: RSB-11
INSPECTOR: CDW

PROJECT: Utica City Dump | SITE LOC: Utica, NY | DATE: 8/5/2024
JOB #: 190101207 | BORING LOC.: RSB-11 | Water Level (ft):

DRILLING CONT.: LaBella | DRILLING METHOD: HSA/SS
FOREMAN: Mike Deyette | HAMMER / FALL: 140lb / 30"
RIG TYPE: Geoprobe | SAMPLER TYPE: 2"

Sample No.	Sample Start Depth (ft.)	Sample End Depth (ft.)	Penetration / Recovery	Blows/6"	"N" Value	MATERIAL DESCRIPTION	General Stratum Descrip.	Field Testing Pp (tsf)	Field Testing Tv (tsf)
S1	0	2	1.45	49	79	Grey angular gravel, some dry brown/grey	Fill		
				33		silt			
				46					
				36					
S2	2	4	1.4	37	42	Grey/Brown silt, some angular grey gravel	Fill		
				27		some bits of asphalt			
				15					
				21					
S3	4	6	0.55	16	11	Grey/Brown Silt, some asphalt and angular	Fill		
				8		grey gravel			
				3					
				4					
S4	6	8	0.15	6	6	Grey Brown Silt, little angular grey gravel	Fill		
				3		some asphalt			
				3					
				3					
S5	8	10	1.6	2	4	Dark Brown Clay, little angular grey gravel	Cl	1.25	4.8
				2		damp			
				2					
				2					
S6	10	12	1.95	1	2	Dark Brown Clay, little silt and angular	Cl	1.0	3.6
				1		gravel			
				1					
				1					

NOTES:
Pp = Pocket Penetrometer; Tv = Tore Vane

RAMBOLL

SOIL BORING LOG

BORING ID: RSB-11

INSPECTOR: CDW

Sample No.	Sample Start Depth (ft.)	Sample End Depth (ft.)	Penetration / Recovery	Blows/6"	"N" Value	MATERIAL DESCRIPTION	General Stratum Descrip.	Field Testing Pp	Field Testing Tv
S7	12	14	2.0	1	2	Dark Brown Clay, damp	Cl	1.0	4.0
				1					
				1					
				2					
S8	14	16	2.0	WH	1	Dark Brown Damp Clay, some organics	Cl	0.75	3.5
				WH					
				1					
				3					
S9	16	18	2.0	1	3	Dark Brown Damp Clay, some organics	Cl	0.75	3.5
				1					
				2					
				3					
S10	18	20	2.0	WR	0	Dark Brown Damp Clay, some organics	Cl	0.5	3.1
				WR					
				WR					
				3					
S11	20	22	1.6	WR	0	Dark Brown Damp Clay, some organics	Cl	0.6	2.5
				WR					
				WR					
				2					
S12	22	24	2.0	WR	0	Dark Brown Wet Clay, some organics	Cl	1.0	4.1
				WR					
				WR					
				4					
S13	24	26	1.1	WR	0	Dark Brown Clay, Wet Black Sand with	SM	0.4	1.1
				WR		some clay bottom 0.3 feet			
				WR					
				3					

NOTES:

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RAMBOLL

SOIL BORING LOG

BORING ID: RSB-11

INSPECTOR: CDW

Sample No.	Sample Start Depth	Sample End Depth	Penetration / Recove	Blows/6"	"N" Value	MATERIAL DESCRIPTION	General Stratum Descrip.	Field Testing Pp	Field Testing Tv
S1	26	28	2.0	WR	0	Black Wet Fine Sand, little clay		0.5	0.5
				WR					
				WR					
				WR					
ST-	28	30	2.0	WR	0	28.0 - 28.4 Black Wet Sand, little clay	SC		
				WR		28.4 - 30.0 Black Clay, sittle silt	Cl	0.4	2.0
				WR					
				WR					
S1	30	32	2.0	WR	0	Black Wet Clay, some fine sand	Cl	0.3	1.1
				WR					
				WR					
				WR					
S1	32	34	2.0	WR	0	Black Wet Clay, some fine sand in top	Cl	0.5	2.6
				WR		0.3 ft of spoon			
				WR					
				WR					
S1	34	36	1.7	WR	3	Black to Light Grey, Wet Silt, some clay,	ML-CL	0.8	4.2
				WR		little fine sand			
				3					
				5					
S1	36	38	1.7	3	10	Grey medium dense fine sand, little silt,	SP	1.2	4.4
				4		wet			
				6					
				6					
S2	38	40	2.0	WR	0	Light Grey Wet Soft Clay, trace silt	CL	0.3	2.6
				WR					
				WR					
				WR					

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RAMBOLL

SOIL BORING LOG

BORING ID: RSB-11

INSPECTOR: CDW

Sample No.	Sample Start Depth	Sample End Depth	Penetration / Recove	Blows/6"	"N" Value	MATERIAL DESCRIPTION	General Stratum Descrip.	Field Testing Pp	Field Testing Tv
S2	40	42	2.0	WR	0	Light Grey Wet Soft Clay	Cl	0.4	2.0
				WR					
				WR					
				WR					
S2	45	47	1.9	WR	4	Light Grey Wet Soft Clay, trace silt	Cl	0.8	3.0
				WR					
				4					
				4					
S2	50	52	2.0	WR	4	Light Grey Wet Soft Clay, trace silt	Cl	0.8	3.3
				WR					
				4					
				4					
S2	55	57	2.0	WR	3	Light Grey Wet Soft Clay, trace silt	Cl	0.9	3.0
				WR					
				3					
				4					
S2	60	62	2.0	WR	5	Light Grey Wet Soft Clay, trace silt	Cl	0.5	3.0
				WR					
				5					
				11					
S2	65	67	1.9	WR	13	Light Frey Wet Firm Clay, some silt	ML-CL	0.8	2.4
				6					
				7					
				1					
S2	70	72	2.0	WR	7	Light Grey Wet Firm Clay, some silt	ML-CL	1.5	3.1
				WR					
				7					
				8					

NOTES:

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RAMBOLL

SOIL BORING LOG

BORING ID: RSB-11

INSPECTOR: CDW

Sample No.	Sample Start Depth	Sample End Depth	Penetration / Recove	Blows/6"	"N" Value	MATERIAL DESCRIPTION	General Stratum Descrip.	Field Testing Pp	Field Testing Tv
S2	75	77	1.7	WR	8	Light Grey Wet Firm Silt, some clay,	ML-CL	0.5	2.2
				WR		little sand			
				8					
				19					
S2	80	82	1.8	WR	16	Light Grey Damp Stiff Silt, some clay	ML-CL	1.5	2.7
				6					
				10					
				15					
S3	85	87	1.5	WR	12	Light Grey Damp Stiff Silt, some clay	ML-CL	1.1	2.1
				5					
				7					
				13					
S3	90	92	1.8	10	25	Light Grey Wet Stiff Silt, some clay	ML-CL	2.0	2.1
				12					
				13					
				17					
S3	95	97	2.0	WR	0	Light Grey Wet Firm Clay, some silt	ML-CL	0.75	3.2
				WR					
				WR					
				WR					
S3	100	102	2.0	WR	6	Light Grey Wet Firm Clay, some silt	ML-CL	0.8	3.8
				WR					
				6					
				8					
S3	105	107	2.0	WR	6	Light Grey Wet Firm Clay, some silt	ML-CL	0.75	3.3
				WR					
				6					
				7					

NOTES:

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RAMBOLL

SOIL BORING LOG

BORING ID: RSB-13
INSPECTOR: CDW

PROJECT: Utica City Dump | SITE LOC: Utica, NY | DATE: 8/6/2024
JOB #: 190101207 | BORING LOC.: RSB-13 | Water Level (ft):

DRILLING CONT.: LaBella | DRILLING METHOD: HSA/SS
FOREMAN: Mike Deyette | HAMMER / FALL: 140lb / 30"
RIG TYPE: Geoprobe | SAMPLER TYPE: 2"

Sample No.	Sample Start Depth (ft.)	Sample End Depth (ft.)	Penetration / Recovery	Blows/6"	"N" Value	MATERIAL DESCRIPTION	General Stratum Descrip.	Field Testing Pp	Field Testing Tv
S1	0	2	0.6	46	100	Grey angular gravel, some dry brown/grey	Fill		
				50/1"		silt			
S2	2	4	0.9	10	10	Dark Brown Damp Stiff Clay, some grey	Fill	1.5	4.9
				8		angular gravel, trace asphalt			
				2					
				2					
S3	4	6	0.5	2	2	Dark Brown Damp Stiff Clay	CL	2.1	5.0
				1					
				1					
				2					
S4	6	8	1.1	2	2	Dark Brown Damp Soft Clay	CL	0.75	4.0
				1					
				1					
				3					
S5	8	10	1.6	1	3	Dark Brown Damp Soft Clay	Cl	1.25	4.6
				1					
				2					
				2					
S6	10	12	1.3	1	2	Dark Brown Damp Soft Clay	Cl	1.1	4.1
				1					
				1					
				2					

NOTES:
Pp = Pocket Penetrometer; Tv = Tore Vane

RAMBOLL

SOIL BORING LOG

BORING ID: RSB-13

INSPECTOR: CDW

Sample No.	Sample Start Depth (ft.)	Sample End Depth (ft.)	Penetration / Recovery	Blows/6"	"N" Value	MATERIAL DESCRIPTION	General Stratum Descrip.	Field Testing Pp	Field Testing Tv
S7	12	14	2.0	1	4	Dark Brown Damp Soft Clay, trace organics	Cl	1.1	4.1
				1					
				3					
				3					
S8	14	16	2.0	WR	6	Dark Brown Damp Soft Clay, some	Cl	1.2	4.0
				3		organics			
				3					
				5					
S9	16	18	2.0	WR	5	Dark Brown Damp Soft Clay, some organics	Cl	1.3	4.5
				2					
				3					
				4					
S10	18	20	2.0	WR	4	Dark Brown Damp Clay, little silt, trace	Cl	0.5	2.3
				2		organics			
				2					
				4					
S11	20	22	2.0	WR	2	Dark Brown Moist Clay, trace organics	Cl	0.8	3.2
				WR					
				2					
				3					
S12	22	24	2.0	WR	0	Dark Brown Moist Clay, trace organics	Cl	0.8	3.2
				WR					
				WR					
				WR					
S13	24	26	2.0	WR	0	Dark Brown Moist to Wet Soft Silt, some	Ml	1.2	3.3
				WR		sand, little clay			
				WR					
				3					

NOTES:

RAMBOLL

SOIL BORING LOG

BORING ID: RSB-13

INSPECTOR: CDW

Sample No.	Sample Start Depth	Sample End Depth	Penetration / Recove	Blows/6"	"N" Value	MATERIAL DESCRIPTION	General Stratum Descrip.	Field Testing Pp	Field Testing Tv
S1	26	28	1.9	WR	0	Dark Brown Wet Soft Clay, some silt, little	Cl	0.4	2.1
				WR		fine sand			
				WR					
				WR					
ST-	28	30	1.8	WR	0	28.0 - 28.4 Black Wet Loose Sand	SM		
				WR		28.4 - 30.0 Black Clay, some silt	Cl	0.5	2.1
				WR					
				WR					
S1	30	32	-	-	-	Shelby Tube Collected			
S1	32	34	1.3	WR	0	Dark Brown Wet Soft Clay, some fine sand	Cl	0.2	1.1
				WR					
				WR					
				3					
S1	34	36	1.3	WR	4	Dark Brown Wet Firm Clay, some fine	Cl	1.75	4.5
				WR		sand, little gravel			
				4					
				3					
S1	36	38	2.0	WR	11	Light Grey Moist Stiff Clay	Cl	2.6	5.5
				5					
				6					
				9					
S2	38	40	2.0	WR	6	Light Grey Moist Stiff Clay	Cl	0.5	3.4
				3					
				3					
				5					

NOTES:

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RAMBOLL

SOIL BORING LOG

BORING ID: RSB-13

INSPECTOR: CDW

Sample No.	Sample Start Depth	Sample End Depth	Penetration / Recove	Blows/6"	"N" Value	MATERIAL DESCRIPTION	General Stratum Descrip.	Field Testing Pp	Field Testing Tv
S2	40	42	2.0	WR	3	Light Grey Wet Soft Clay	Cl	0.5	2.8
				WR					
				3					
				3					
S2	45	47	2.0	WR	4	Light Grey Wet Soft Clay, little silt	Cl-Ml	0.6	1.6
				WR					
				4					
				3					
S2	50	52	1.7	WR	11	Light Grey Wet Stiff Silt, some clay	Cl-Ml	1.8	3.9
				5					
				6					
				7					
S2	55	57	1.8	2	14	Light Grey Wet Stiff Silt, some clay	Cl-Ml	2.4	3.4
				4					
				10					
				8					
S2	60	62	-	-	-	Shelby Tube Attempted. No Recovery			
S2	65	67	-	-	-	Shelby Tube Collected			
S2	70	72	1.9	WR	19	Light Grey Wet Stiff Silt, some clay	ML-CL	1.6	3.0
				9					
				10					
				25					

NOTES:

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RAMBOLL

SOIL BORING LOG

BORING ID: RSB-13

INSPECTOR: CDW

Sample No	Sample Start Depth	Sample End Depth	Penetration / Recove	Blows/6"	"N" Value	MATERIAL DESCRIPTION	General Stratum Descrip.	Field Testing Pp	Field Testing Tv
S2	75	77	0.5	2	8	Light Grey Wet Soft Silt, some clay	ML-CL	0.5	1.9
				3					
				5					
				6					
S2	80	82	1.8	WR	18	Light Grey Wet Stiff Silt, some clay	ML-CL	1.4	3.2
				7					
				11					
				14					
S3	85	87	1.75	6	17	Light grey Wet Stiff Clay and Silt	ML-CL	0.5	1.9
				8					
				9					
				14					
S3	90	92	1	11	12	Light Grey Wet Firm Silt, some clay	ML-CL	1.7	1.2
				7					
				5					
				4					
S3	95	97	1.2	23	46	Light Grey Damp Hard Silt, little clay	ML	1.6	1.8
				19					
				27					
				19					
S3	100	102	2.0	12	4	Light Grey Wet Soft Clay, some silt	ML-CL	0.5	2.9
				2					
				2					
				7					

NOTES:

PAGE:

RAMBOLL

SOIL BORING LOG

BORING ID: RSB-UDS-1
INSPECTOR: CJN

PROJECT: Utica City Dump | SITE LOC: Utica, NY | DATE: 8/12/2024
JOB #: 190101207 | BORING LOC.: UDS-1 | Water Level (ft): 5'

DRILLING CONT.: LaBella | DRILLING METHOD: HSA/SS
FOREMAN: Mike Deyette | HAMMER / FALL: 140lb / 30"
RIG TYPE: Geoprobe | SAMPLER TYPE: 2"

Sample No.	Sample Start Depth (ft.)	Sample End Depth (ft.)	Penetration / Recovery	Blows/6"	"N" Value	MATERIAL DESCRIPTION	General Stratum Descrip.	Field Testing Pp (tsf)	Field Testing Tv (tsf)
1	0	2	14"	2	8	4 inches of topsoil , dark, brown silty sandy	Fill		
				4		fill, some gravel			
				4					
				5					
2	2	4	14"	4	8	Dark brown silty sandy fill, some clay, little	Fill		
				4		gravel, moist			
				4					
				3					
3	4	6	18"	2	2	Brown/grey loose fine silty sand, some clay	SM		
				1		wet at 5'			
				1					
				2					
4	6	8	10"	1	3	Grey soft clayey silt, little fine sand, moist	CL-ML	1.3	3.5
				1					
				2					
				2					
5	8	10	0"	1	4	No recovery			
				2					
				2					
				2					
6	10	12	10"	2	4	Grey soft silty lean clay, trace sand, moist	CL	1.4	3.25
				2					
				2					
				2					

NOTES: Came back on Thursday, August 15 offset 4 feet from the original hole to collect a Shelby to from 18-20 feet, to sample within the clay layer. Shelby tube ST-2, rec approximately 22". Sample appeared to be clay as expected.

Pp = Pocket Penetrometer; Tv = Tore Vane

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RAMBOLL

SOIL BORING LOG

BORING ID: RSB-UDS-1

INSPECTOR: CJN

Sample No.	Sample Start Depth (ft.)	Sample End Depth (ft.)	Penetration / Recovery	Blows/6"	"N" Value	MATERIAL DESCRIPTION	General Stratum Descrip.	Field Testing Pp (tsf)	Field Testing Tv (tsf)
7	12	14	24"	WOR	0	Grey soft lean clay, some silt, trace sand,	CL	0.75	2
				WOR		moist			
				WOR					
				2					
8	14	16	12"	WOR	3	Grey soft lean clay, some silt, trace sand,	CL	0.5	2.5
				WOR		moist			
				3					
				2					
9	16	18	5"	WOR	0	Grey soft lean clay, some silt, trace sand,	CL	0.65	2.75
				WOR		moist			
				WOR					
				WOR					
10	18	20	10"	WOR	2	Grey soft lean clay, some silt, trace sand,	CL	1.25	4.5
				WOR		moist			
				2					
				2					
11	20	22	6"	WOR	0	Grey Loose fine sand, some silt, little clay	SM	1	3
				WOR		moist			
				WOR					
				2					
12	22	24	18"	WOR	0	Grey soft silty clay, some fine sand,	CL-ML	1	3
				WOR		wet			
				WOR					
				WOR					
13	24	26	22"	WOR	0	Grey soft clayey silt, little fine sand, wet	CL-ML	1	2.25
				WOR					
				WOR					
				WOR					

NOTES:

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RAMBOLL

SOIL BORING LOG

BORING ID: RSB-UDS-1

INSPECTOR: CJN

Sample No.	Sample Start Depth	Sample End Depth	Penetration / Recove	Blows/6"	"N" Value	MATERIAL DESCRIPTION	General Stratum Descrip.	Field Testing Pp (tsf)	Field Testing Tv (tsf)
14	26	28	20"	WOR	0	Grey soft clayey silt, little fine sand, wet	CL-ML	1.5	3.75
				WOR					
				WOR					
				WOR					
15	28	30		WOR	8	Grey soft lean clay, some silt, some fine sand,	CL	1.25	2.75
				WOR		moist			
				8		4" of tree wood in bottom			
				4					
16	30	32		3	2	4" of tree wood in bottom		0.75	2.25
				1		Grey soft clayey silt, little fine sand, wet	CL-ML		
				1					
				4					
17	32	34	18"	5	20	Grey dense sand, some silt, little gravel, wet	SW		
				10					
				10					
				8					
18	34	36	18"	5	18	Grey dense CMF sand, some silt, little gravel,	SW		
				6		wet			
				12					
				11					
S19	36	38	24"	8	23	Grey dense CMF sand, little silt, little gravel	SW		
				9		Wet, bottom 4" sandy gravel till like material			
				14					
				21					
S20	38	40	14"	8	18	Grey dense CMF sand, some gravel little silt,	SW		
				9		Wet			
				9					
				9					
S21	40	42	18"	6	31	Top 14" grey dense CMF sand, some gravel	SW		
				9		Little silt, wet bottom 4" grey very dense	GW		
				19		4" grey very dense, Sandy gravel, trace silt, wet			
				32					

NOTES:

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RAMBOLL

SOIL BORING LOG

BORING ID: RBS-UDS-1

INSPECTOR: NVP

Sample No.	Sample Start Depth	Sample End Depth	Penetration / Recove	Blows/6"	"N" Value	MATERIAL DESCRIPTION	General Stratum Descrip.	Field Testing Pp (tsf)	Field Testing Tv (tsf)
S22	45	47	18"	7	11	Top 14" grey m. dense CMF sand, some gravel	SW		
				8		Little silt, wet			
				3		Bottom 4" till like material, silty sandy gravel	GW		
				14					
S23	50	52	16"	4	37	Top 8" grey dense MF sand, some gravel	SW		
				18		Little silt, wet			
				19		Bottom 8" grey dense gravel, some sand	GW		
				24		Little silt, wet			
S24	55	57	24"	15	96	Grey very dense CMF sand, wet	SW		
				37					
				59					
				71					
S25	60	62	18"	12	38	Top 14"	SW		
				14		Grey dense CMF sand, wet			
				22		Bottom 4" grey dense gravel, little sand,	GW		
				19		Trace silt, wet			
S26	65	67	None	9	56	No sample recovered see note below.			
				21					
				35					
				50/5"					

NOTES: Split spoon lost at bottom of hole and unable to be recovered.
Informed Vic and decided to move to next hole.
S25 resumed on 8/13/2024

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RAMBOLL

SOIL BORING LOG

BORING ID: RSB-UDS-2
INSPECTOR: NVP

PROJECT: Utica City Dump | SITE LOC: Utica, NY | DATE: 8/13/2024
JOB #: 190101207 | BORING LOC.: UDS-2 | Water Level (ft): 15'

DRILLING CONT.: LaBella | DRILLING METHOD: HSA/SS
FOREMAN: Mike Deyette | HAMMER / FALL: 140lb / 30"
RIG TYPE: Geoprobe | SAMPLER TYPE: 2"

Sample No.	Sample Start Depth (ft.)	Sample End Depth (ft.)	Penetration / Recovery	Blows/6"	"N" Value	MATERIAL DESCRIPTION	General Stratum Descrip.	Field Testing Pp (tsf)	Field Testing Tv (tsf)
S1	0	2	14"	3	13	2 inches of topsoil , dark, brown silty sandy	Fill		
				5		fill, some gravel			
				8					
				11					
S2	2	4	14"	9	7	Dark brown silty sandy fill, some clay, little	Fill		
				5		gravel, moist			
				2					
				2					
S3	4	6	14"	2	5	Brown/grey loose fine silty sand, some clay	SM		
				2		Moist			
				3					
				3					
S4	6	8	14"	3	4	Grey soft lean clay, some silt, trace fine sand	ML-CL	1.75	4.25
				2		Moist			
				2					
				4					
S5	8	10	24"	2	5	Top 12" grey soft silt, some clay, trace sand,	ML-CL	2.25	2.75
				2		moist			
				3		Bottom 12" dark brown silt, some clay, trace			
				4		sand, moist			
S6	10	12	14"	WOR		Top 10" grey very soft silt, some clay, moist	ML-CL	0.75	2.75
				WOR		Bottom 4"grey very soft silt, some clay, some			
				WOR		CMF sand, wet			
				2					

NOTES:
Pp = Pocket Penetrometer; Tv = Tore Vane

RAMBOLL

SOIL BORING LOG

BORING ID: RSB-UDS-2
INSPECTOR: NVP

Sample No.	Sample Start Depth (ft.)	Sample End Depth (ft.)	Penetration / Recovery	Blows/6"	"N" Value	MATERIAL DESCRIPTION	General Stratum Descrip.	Field Testing Pp (tsf)	Field Testing Tv (tsf)
S7	12	14	18"	WOR	3	Top 8" grey very soft silt, some clay, moist	ML-CL	0.75	3
				2		Middle 2" black soft silt, some sand, little gravel			
				1		Moist			
				1		Bottom 8" wood			
S8	14	16	14"	5	14	Top 7" Grey medium dense CMF sand, wet	SW		
				6		Bottom 7" grey medium dense gravel, some CMF			
				8		sand, trace silt, wet			
				6		Water level at 15'			
S9	16	18	6"	3	4	Grey loose CMF sand, trace silt and gravel,	SW		
				3		wet			
				1					
				1					
S10	18	20	12"	5	3	Top 6" grey soft silt, some MF sand, little	ML-CL	1	2.5
				2		Gravel, moist			
				1		Bottom 6"grey soft lean clay, some silt,			
				2		Little fine sand, Moist			
S11	20	22	12"	3	4	Top 6" grey soft silt, some MF sand, little	ML-CL	0.5	2.25
				2		gravel, moist			
				2		Bottom 6" grey soft silt, some clay, wet			
				2					
S12	22	24	14"	WOR	0	Grey soft lean clay, some silt, little fine sand,	CL	1.5	2.5
				WOR		wet			
				WOR					
				2					
S13	24	26	24"	WOR	0	Top 18" grey soft lean clay, some silt, little	CL-ML	0.75	1.75
				WOR		fine sand, trace gravel, wet			
				WOR		Bottom 6" grey soft silt, some clay, little MF			
				WOR		sand, wet			

NOTES: Split spoon unrecoverable in original location. Offset 5' SE (further down access road, away from entrance)
Split spoon unrecoverable during the 18'-20' sample. 18'-20' and deeper from offset location.

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RAMBOLL

SOIL BORING LOG

BORING ID: RSB-UDS-2

INSPECTOR: NVP

Sample No.	Sample Start Depth (ft.)	Sample End Depth	Penetration / Recove	Blows/6"	"N" Value	MATERIAL DESCRIPTION	General Stratum Descrip.	Field Testing Pp (tsf)	Field Testing Tv (tsf)
S14	26	28	20"	WOR	0	Top 16" grey soft lean clay, some silt,		0.25	2.25
				WOR		Little fine sand, Trace gravel, wet	CL-ML		
				WOR		Bottom 4"grey lean clay, some silt, moist			
				2					
S15	28	30	20"	WOR	0	Top 16" grey lean clay, some silt, wet	CL	0.75	2.25
				WOR		Bottom 4" wood			
				WOR					
				3					
S16	30	32	18"	WOR	18	Top 15" medium dense sand, some silt, trace	SW		
				6		gravel, wet	GW		
				13		Bottom 3" m. dense gravel, little MF sand			
				15		Trace silt, wet			
S17	32	34	12"	7	15	Grey dense CMF sand, some silt, wet	SW		
				6					
				9					
				8					
S18	34	36	18"	12	15	Grey m. dense CMF sand, little silt, trace gravel	SW		
				6		Wet			
				9					
				16					
S19	36	38	18"	3	9	Grey loose CMF sand, little gravel, trace silt, wet	SW		
				4					
				5					
				11					
S20	38	40	24"	7	16	Grey m. dense CMF sand, trace gravel, wet	SW		
				9					
				7					
				9					

NOTES:

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SOIL BORING LOG

BORING ID: RSB-UDS-2

INSPECTOR: NVP

Sample No.	Sample Start Depth (ft.)	Sample End Depth	Penetration / Recovery	Blows/6"	"N" Value	MATERIAL DESCRIPTION	General Stratum Descrip.	Field Testing Pp (tsf)	Field Testing Tv (tsf)
S21	40	42	24"	7	27	Top 12" Grey m. dense CMF sand, wet			
				12		Bottom 12" grey m. dense gravel, little mf sand			
				15		wet			
				13					
S22	45	47	18"	3	14	Grey m. dense CMF sand, trace gravel, wet			
				5					
				9					
				23					
S23	50	52	18"	14	41	Top 9" grey dense CMF sand, wet			
				23		Bottom 9" till like material, silty sandy gravel			
				18					
				36					
S24	55	57	4"	14	46	Grey dense till like material, silty sandy gravel			
				17					
				29					
				46					
S25	60	62	12"	30	38	Grey dense till like material, silty sandy gravel			
				21					
				17					
				19					

NOTES:

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SOIL BORING LOG

BORING ID: RSB-UDS-3
INSPECTOR: NVP

PROJECT: Utica City Dump | SITE LOC: Utica, NY | DATE: 8/14/2024
JOB #: 190101207 | BORING LOC.: UDS-3 | Water Level (ft): 9.5

DRILLING CONT.: LaBella | DRILLING METHOD: HSA/SS
FOREMAN: Mike Deyette | HAMMER / FALL: 140lb / 30"
RIG TYPE: Geoprobe | SAMPLER TYPE: 2"

Sample No.	Sample Start Depth (ft.)	Sample End Depth (ft.)	Penetration / Recovery	Blows/6"	"N" Value	MATERIAL DESCRIPTION	General Stratum Descrip.	Field Testing Pp (tsf)	Field Testing Tv (tsf)
S1	0	2	10"	3	14	1 inch of topsoil, dark brown silty sandy	Fill		
				6		fill, some gravel			
				8					
				8					
S2	2	4	14"	4	4	Dark brown silty sandy fill, some clay, little	Fill		
				2		gravel, moist			
				2					
				4					
S3	4	6	12"	4	7	Brown medium stiff lean clay, trace fine	Cl	2.25	6.25
				3		sand, moist			
				4					
				4					
S4	6	8	16"	3	6	Brown medium stiff lean clay, trace fine	CL	1.75	4.25
				3		sand, moist			
				3					
				4					
S5	8	10	12"	2	9	Top 8" brown stiff lean clay, some silt,	Cl	1.25	3
				3		some fine sand, moist			
				6		Bottom 4" loose gravel, some silt, wet			
				8		Water level at 9.5 ft			
S6	10	12	8"	6	20	Brown loose gravel, some silt, little clay,	GM		
				11		little medium fine sand, wet			
				9					
				6					

NOTES:
Pp = Pocket Penetrometer; Tv = Tore Vane

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RAMBOLL

SOIL BORING LOG

BORING ID: RSB-UDS-3

INSPECTOR: NVP

Sample No.	Sample Start Depth (ft.)	Sample End Depth (ft.)	Penetration / Recovery	Blows/6"	"N" Value	MATERIAL DESCRIPTION	General Stratum Descrip.	Field Testing	
								Pp (tsf)	Tv (tsf)
S7	12	14	12"	4	6	Brown loose gravel, some coarse sand,	GM		
				3		some silt, trace clay, wet			
				3					
				5					
S8	14	16	0	6	19	No recovery			
				9					
				10					
				9					
S9	16	18	12"	3	9	Grey loose gravel, some coarse sand, trace	GW		
				3		silt, wet			
				6					
				5					
S10	18	20	12"	2	4	Grey loose CMF sand and gravel, trace silt	GW		
				1		Wet			
				3					
				4					
S11	20	22	12"	3	9	Grey loose coarse sand, some gravel, trace	SW		
				5		silt and clay, wet			
				4					
				5					
S12	22	24	24"	3	2	Top 10" grey very loose CMF sand, wet	SW	0.75	2
				1		Bottom 14" grey soft silt and clay, wet	CL-ML		
				1					
				1					
S13	24	26	18"	1		Grey Soft Wet Silt, some sand, little clay	ML	1.25	2.25
				1					
				1					
				1					

NOTES:

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SOIL BORING LOG

BORING ID: RSB-UDS-3

INSPECTOR: CJN

Sample No	Sample Start Depth	Sample End Depth	Penetration / Recover	Blows/6"	"N" Value	MATERIAL DESCRIPTION	General Stratum Descrip.	Field Testing Pp (tsf)	Field Testing Tv (tsf)
S1	26	28	16"	2	2	Grey soft sandy silt, some clay, wet	ML	0.75	1.75
				1		More clay content in bottom 3"			
				1					
				1					
ST-	28	30	20"	N/A	N/A	Shelby tune taken from 28-30'			
						Bottom is grey silt with clay, some sand	CL-ML		
S1	30	32	14"	2	10	Grey loose silty sand, some gravel, trace clay	SM		
				4		wet			
				6					
				5					
S1	32	34	14"	2	7	Grey loose fine sand, little silt, wet	SP		
				3					
				4					
				5					
S1	34	36	20"	3	19	Grey medium dense fine sand, some silt,	SM		
				9		little gravel, wet			
				10					
				7					
S1	36	38	24"	5	14	Grey medium dense fine sand, little silt,	SP		
				5		wet			
				9					
				7					
S2	38	40		5	16	Grey medium dense fine sand, little silt,	SP		
				7		trace gravel, wet			
				9					
				21					

NOTES:

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SOIL BORING LOG

BORING ID: RSB-UDS-3

INSPECTOR: CJN

Sample No.	Sample Start Depth	Sample End Depth	Penetration / Recover	Blows/6"	"N" Value	MATERIAL DESCRIPTION	General Stratum Descrip.	Field Testing Pp (tsf)	Field Testing Tv (tsf)
S2	40	42	20"	5	34	Grey dense fine sand, little silt, little gravel,	SP		
				17		wet			
				17					
				13					
S2	45	47	18"	24	34	Grey dense silty sand with gravel, trace	SM		
				18		clay, wet			
				16		Till material			
				17					
S2	50	52	14"	10	43	Grey medium dense fine sand, little silt,	SP		
				18		wet			
				23					
				27					
S2	55	57	0"	15	70	No recovery			
				36					
				34					
				24					
S2	60	62	10"	8	32	Grey silty sandy gravel, trace clay wet	GW		
				15		Till material			
				16					
				23					
S2	65	67	15"	20	100+	Grey silty sandy gravel, trace clay wet	GW		
				43		Till material	Till		
				50/3"					
						Boring terminated at 67 feet.			

NOTES:

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ATTACHMENT 3
LABORATORY TESTING RESULTS

3348 Route 208, Campbell Hall, NY 10916
Phone: 845-496-1600 Fax: 845-496-1398
12960 Commerce Lake Drive, A14, Fort Myers, FL 33913
42 Day Farm Road, West Stockbridge, MA 01266
1813 State Route 7, Harpursville, NY 13787

Client:	Labella Associates	**Project:**	Utica City Dump
Material:	RSB-11 S-5	**Project Number:**	241280
Source:	La Bella- Site No. 633015	**Lab Number:**	24-1065A
Location:	In-Place	**Item Number:**	ASTM D2216
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/12/2024	**Tested By:**	Carson Becker

Report of Natural Moisture Content of Soil and Rock
Test Method: ASTM D2216

Wet Weight (g):	284.8
Dry Weight (g):	213.1
% Nat. Moisture:	**33.6**

Specification:

Comments:

Report Reviewed By: Emily J. Rodriguez

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1813 State Route 7, Harpursville, NY 13787

Client:	Labella Associates	**Project:**	Utica City Dump
Material:	RSB-11 S-12	**Project Number:**	241280
Source:	La Bella- Site No. 633015	**Lab Number:**	24-1065B
Location:	In-Place	**Item Number:**	ASTM D2216
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/12/2024	**Tested By:**	Carson Becker

Report of Natural Moisture Content of Soil and Rock
Test Method: ASTM D2216

Wet Weight (g):	365.0
Dry Weight (g):	269.2
% Nat. Moisture:	**35.6**

Specification:

Comments:

Emily J. Rodriguez

Report Reviewed By:

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1813 State Route 7, Harpursville, NY 13787

Client:	Labella Associates	**Project:**	Utica City Dump
Material:	RSB-11 S-20	**Project Number:**	241280
Source:	La Bella- Site No. 633015	**Lab Number:**	24-1065C
Location:	In-Place	**Item Number:**	ASTM D2216
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/12/2024	**Tested By:**	Carson Becker

Report of Natural Moisture Content of Soil and Rock
Test Method: ASTM D2216

Wet Weight (g):	412.6
Dry Weight (g):	351.1
% Nat. Moisture:	**17.5**

Specification:

Comments:

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1813 State Route 7, Harpursville, NY 13787

Client:	Labella Associates	**Project:**	Utica City Dump
Material:	RSB-11 S-26	**Project Number:**	241280
Source:	La Bella- Site No. 633015	**Lab Number:**	24-1065D
Location:	In-Place	**Item Number:**	ASTM D2216
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/12/2024	**Tested By:**	Carson Becker

Report of Natural Moisture Content of Soil and Rock
Test Method: ASTM D2216

Wet Weight (g):	435.6
Dry Weight (g):	359.5
% Nat. Moisture:	**21.2**

Specification:

Comments:

Report Reviewed By: Emily J. Rodriguez

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1813 State Route 7, Harpursville, NY 13787

Client:	Labella Associates	**Project:**	Utica City Dump
Material:	RSB-11 S-31	**Project Number:**	241280
Source:	La Bella- Site No. 633015	**Lab Number:**	24-1065E
Location:	In-Place	**Item Number:**	ASTM D2216
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/12/2024	**Tested By:**	Carson Becker

Report of Natural Moisture Content of Soil and Rock
Test Method: ASTM D2216

Wet Weight (g):	395.5
Dry Weight (g):	330.8
% Nat. Moisture:	**19.6**

Specification:

Comments:

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1813 State Route 7, Harpursville, NY 13787

Client:	Labella Associates	**Project:**	Utica City Dump
Material:	RSB-13 S-7	**Project Number:**	241280
Source:	La Bella- Site No. 633015	**Lab Number:**	24-1065F
Location:	In-Place	**Item Number:**	ASTM D2216
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/12/2024	**Tested By:**	Carson Becker

Report of Natural Moisture Content of Soil and Rock
Test Method: ASTM D2216

Wet Weight (g):	394.5
Dry Weight (g):	176.7
% Nat. Moisture:	**123.3**

Specification:

Comments:

Emily J. Rodriguez

Report Reviewed By:

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Client:	Labella Associates	**Project:**	Utica City Dump
Material:	RSB-13 S-24	**Project Number:**	241280
Source:	La Bella- Site No. 633015	**Lab Number:**	24-1065H
Location:	In-Place	**Item Number:**	ASTM D2216
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/12/2024	**Tested By:**	Carson Becker

Report of Natural Moisture Content of Soil and Rock
Test Method: ASTM D2216

Wet Weight (g):	367.0
Dry Weight (g):	309.0
% Nat. Moisture:	**18.8**

Specification:

Comments:

Emily J. Rodriguez

Report Reviewed By:

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Client:	Labella Associates	**Project:**	Utica City Dump
Material:	RSB-13 S-28	**Project Number:**	241280
Source:	La Bella- Site No. 633015	**Lab Number:**	24-1065I
Location:	In-Place	**Item Number:**	ASTM D2216
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/12/2024	**Tested By:**	Carson Becker

Report of Natural Moisture Content of Soil and Rock
Test Method: ASTM D2216

Wet Weight (g):	397.7
Dry Weight (g):	330.8
% Nat. Moisture:	**20.2**

Specification:

Comments:

Emily J. Rodriguez

Report Reviewed By:

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Client:	Labella Associates	**Project:**	Utica City Dump
Material:	RSB-13 S-32	**Project Number:**	241280
Source:	La Bella- Site No. 633015	**Lab Number:**	24-1065J
Location:	In-Place	**Item Number:**	ASTM D2216
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/12/2024	**Tested By:**	Carson Becker

Report of Natural Moisture Content of Soil and Rock
Test Method: ASTM D2216

Wet Weight (g):	410.8
Dry Weight (g):	322.6
% Nat. Moisture:	**27.3**

Specification:

Comments:

Emily J. Rodriguez

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Client:	Labella Associates	**Project:**	Utica City Dump
Material:	RSB-UDS-1 S-4	**Project Number:**	241280
Source:	La Bella- Site No. 633015	**Lab Number:**	24-1065K
Location:	In-Place	**Item Number:**	ASTM D2216
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/12/2024	**Tested By:**	Carson Becker

Report of Natural Moisture Content of Soil and Rock
Test Method: ASTM D2216

Wet Weight (g):	199.3
Dry Weight (g):	158.0
% Nat. Moisture:	**26.1**

Specification:

Comments:

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Client:	Labella Associates	**Project:**	Utica City Dump
Material:	RSB-UDS-1 S-13	**Project Number:**	241280
Source:	La Bella- Site No. 633015	**Lab Number:**	24-1065L
Location:	In-Place	**Item Number:**	ASTM D2216
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/12/2024	**Tested By:**	Carson Becker

Report of Natural Moisture Content of Soil and Rock
Test Method: ASTM D2216

Wet Weight (g):	332.5
Dry Weight (g):	241.6
% Nat. Moisture:	**37.6**

Specification:

Comments:

Emily J. Rodriguez

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Client:	Labella Associates	**Project:**	Utica City Dump
Material:	RSB-UDS-1 S-16	**Project Number:**	241280
Source:	La Bella- Site No. 633015	**Lab Number:**	24-1065M
Location:	In-Place	**Item Number:**	ASTM D2216
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/12/2024	**Tested By:**	Carson Becker

Report of Natural Moisture Content of Soil and Rock
Test Method: ASTM D2216

Wet Weight (g):	283.8
Dry Weight (g):	198.0
% Nat. Moisture:	**43.3**

Specification:

Comments:

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Client:	Labella Associates	**Project:**	Utica City Dump
Material:	RSB-UDS-1 S-23	**Project Number:**	241280
Source:	La Bella- Site No. 633015	**Lab Number:**	24-1065N
Location:	In-Place	**Item Number:**	ASTM D2216
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/12/2024	**Tested By:**	Carson Becker

Report of Natural Moisture Content of Soil and Rock
Test Method: ASTM D2216

Wet Weight (g):	327.6
Dry Weight (g):	288.7
% Nat. Moisture:	**13.5**

Specification:

Comments:

Emily J. Rodriguez

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Client:	Labella Associates	**Project:**	Utica City Dump
Material:	RSB-UDS-2 S-5	**Project Number:**	241280
Source:	La Bella- Site No. 633015	**Lab Number:**	24-1065O
Location:	In-Place	**Item Number:**	ASTM D2216
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/12/2024	**Tested By:**	Carson Becker

Report of Natural Moisture Content of Soil and Rock
Test Method: ASTM D2216

Wet Weight (g):	282.0
Dry Weight (g):	177.3
% Nat. Moisture:	**59.1**

Specification:

Comments:

Emily J. Rodriguez

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Client:	Labella Associates	**Project:**	Utica City Dump
Material:	RSB-UDS-2 S-12	**Project Number:**	241280
Source:	La Bella- Site No. 633015	**Lab Number:**	24-1065P
Location:	In-Place	**Item Number:**	ASTM D2216
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/12/2024	**Tested By:**	Carson Becker

Report of Natural Moisture Content of Soil and Rock
Test Method: ASTM D2216

Wet Weight (g):	299.5
Dry Weight (g):	214.9
% Nat. Moisture:	**39.4**

Specification:

Comments:

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Client:	Labella Associates	**Project:**	Utica City Dump
Material:	RSB-UDS-2 S-15	**Project Number:**	241280
Source:	La Bella- Site No. 633015	**Lab Number:**	24-1065Q
Location:	In-Place	**Item Number:**	ASTM D2216
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/12/2024	**Tested By:**	Carson Becker

Report of Natural Moisture Content of Soil and Rock
Test Method: ASTM D2216

Wet Weight (g):	331.4
Dry Weight (g):	246.9
% Nat. Moisture:	**34.2**

Specification:

Comments:

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Client:	Labella Associates	**Project:**	Utica City Dump
Material:	RSB-UDS-3 S-4	**Project Number:**	241280
Source:	La Bella- Site No. 633015	**Lab Number:**	24-1065R
Location:	In-Place	**Item Number:**	ASTM D2216
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/12/2024	**Tested By:**	Carson Becker

Report of Natural Moisture Content of Soil and Rock
Test Method: ASTM D2216

Wet Weight (g):	256.3
Dry Weight (g):	184.7
% Nat. Moisture:	**38.8**

Specification:

Comments:

Emily J. Rodriguez

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Client:	Labella Associates	**Project:**	Utica City Dump
Material:	RSB-UDS-3 S-13	**Project Number:**	241280
Source:	La Bella- Site No. 633015	**Lab Number:**	24-1065S
Location:	In-Place	**Item Number:**	ASTM D2216
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/12/2024	**Tested By:**	Carson Becker

Report of Natural Moisture Content of Soil and Rock
Test Method: ASTM D2216

Wet Weight (g):	331.0
Dry Weight (g):	241.2
% Nat. Moisture:	**37.2**

Specification:

Comments:

Emily J. Rodriguez

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Client:	Labella Associates	**Project:**	Utica City Dump
Material:	RSB-UDS-3 S-19	**Project Number:**	241280
Source:	La Bella- Site No. 633015	**Lab Number:**	24-1065T
Location:	In-Place	**Item Number:**	ASTM D2216
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/12/2024	**Tested By:**	Carson Becker

Report of Natural Moisture Content of Soil and Rock
Test Method: ASTM D2216

Wet Weight (g):	324.0
Dry Weight (g):	268.7
% Nat. Moisture:	**20.6**

Specification:

Comments:

Emily J. Rodriguez

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Client:	Labella Associates	**Project:**	Utica City Dump
Material:	RSB-11 S-19	**Project #:**	241280
Source:	La Bella- Site No. 633015	**Lab No.:**	24-1066A
Location:	In-Place	**Item Number:**	ASTM D4318
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/11/24	**Tested By:**	Isabella Pollina

REPORT OF ATTERBERG LIMITS TEST RESULTS

TEST METHOD: ASTM D4318; LL Method B

Lab Number:	24-1066A	**Specification**
Liquid Limit:	27	
Plastic Limit:	17	
Plasticity Index:	10	

Notes: Values shown are percent moisture.
Customary procedure is to round results to the nearest whole number.

Comments:

Report Reviewed By: Emily J. Rodriguez

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Client:	Labella Associates	**Project:**	Utica City Dump
Material:	RSB-11 S-30	**Project #:**	241280
Source:	La Bella- Site No. 633015	**Lab No.:**	24-1066B
Location:	In-Place	**Item Number:**	ASTM D4318
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/11/24	**Tested By:**	Isabella Pollina

REPORT OF ATTERBERG LIMITS TEST RESULTS

TEST METHOD: ASTM D4318; LL Method B

Lab Number:	24-1066B	**Specification**
Liquid Limit:	23	
Plastic Limit:	17	
Plasticity Index:	6	

Notes: Values shown are percent moisture.
Customary procedure is to round results to the nearest whole number.

Comments:

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Client:	Labella Associates	**Project:**	Utica City Dump
Material:	RSB-13 S-14	**Project #:**	241280
Source:	La Bella- Site No. 633015	**Lab No.:**	24-1066C
Location:	In-Place	**Item Number:**	ASTM D4318
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/11/24	**Tested By:**	Isabella Pollina

REPORT OF ATTERBERG LIMITS TEST RESULTS

TEST METHOD: ASTM D4318; LL Method B

Lab Number:	24-1066C	**Specification**
Liquid Limit:	N/A	
Plastic Limit:	N/A	
Plasticity Index:	Non-Plastic	

Notes: The soil characteristics of this sample do not allow for the liquid limit or plastic limit to be determined. Therefore, the plasticity index for the sample is 'non-plastic.'

Comments:

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Client:	Labella Associates	**Project:**	Utica City Dump
Material:	RSB-13 S-27	**Project #:**	241280
Source:	La Bella- Site No. 633015	**Lab No.:**	24-1066D
Location:	In-Place	**Item Number:**	ASTM D4318
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/11/24	**Tested By:**	Isabella Pollina

REPORT OF ATTERBERG LIMITS TEST RESULTS

TEST METHOD: ASTM D4318; LL Method B

Lab Number:	24-1066D	**Specification**
Liquid Limit:	20	
Plastic Limit:	18	
Plasticity Index:	2	

Notes: Values shown are percent moisture.
Customary procedure is to round results to the nearest whole number.

Comments:

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Client:	Labella Associates	**Project:**	Utica City Dump
Material:	RSB-USD-1 S-12	**Project #:**	241280
Source:	La Bella- Site No. 633015	**Lab No.:**	24-1066E
Location:	In-Place	**Item Number:**	ASTM D4318
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/12/24	**Tested By:**	Isabella Pollina

REPORT OF ATTERBERG LIMITS TEST RESULTS

TEST METHOD: ASTM D4318; LL Method B

Lab Number:	24-1066E	**Specification**
Liquid Limit:	N/A	
Plastic Limit:	N/A	
Plasticity Index:	Non-Plastic	

Notes: The soil characteristics of this sample do not allow for the liquid limit or plastic limit to be determined. Therefore, the plasticity index for the sample is 'non-plastic.'

Comments:

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Client:	Labella Associates	**Project:**	Utica City Dump
Material:	RSB-USD-3 S-14	**Project #:**	241280
Source:	La Bella- Site No. 633015	**Lab No.:**	24-1066F
Location:	In-Place	**Item Number:**	ASTM D4318
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/11/24	**Tested By:**	Isabella Pollina

REPORT OF ATTERBERG LIMITS TEST RESULTS

TEST METHOD: ASTM D4318; LL Method B

Lab Number:	24-1066F	**Specification**
Liquid Limit:	29	
Plastic Limit:	20	
Plasticity Index:	9	

Notes: Values shown are percent moisture.
Customary procedure is to round results to the nearest whole number.

Comments:

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Client:	Labella Associates	**Project:**	Utica City Dump
Item:	RSB-11 S-18	**Project Number:**	241280
Source:	La Bella- Site No. 633015	**Lab Number:**	24-1065U
Location:	In-Place	**Item Number:**	ASTM D422
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/14/2024-09/15/2024	**Tested By:**	William Soha

PARTICLE SIZE ANALYSIS BY SIEVE AND HYDROMETER METHOD

Test Method: ASTM D422

Sieve Size	Particle Diameter, mm	Percent Passing	Specification
3/8"	9.50	100.0	
#4	4.75	99.2	
#10	2.00	98.1	
#40	0.425	97.1	
#200	0.075	94.7	
Hydrometer Analysis Results	0.050	90.4	
	0.020	74.1	
	0.010	56.4	
	0.005	39.9	
	0.002	24.2	

SOIL SPECIFIC GRAVITY: 2.67 (As reported separately, or estimated.)

DISPERSION METHOD: Mechanical, 1 min.

SAND & GRAVEL PARTICLES: Hard subrounded to subangular particles

Comments:

COMPOSITION SUMMARY (USDA SIZE DESIGNATIONS)		
Gravel	(3 inches to #10)	1.9%
	Fraction Passing #10:	
Sand	(#10 to 0.05 mm)	7.8%
Silt	(0.05 mm to 0.002 mm)	67.5%
Clay	(Less than 0.002 mm)	24.7%
Total		100.0%
USDA Soil Textural Class		Silt Loam

REPORT REVIEWED BY: Emily J. Rodriguez

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Client:	Labella Associates	**Project:**	Utica City Dump
Item:	RSB-11 S-29	**Project Number:**	241280
Source:	La Bella- Site No. 633015	**Lab Number:**	24-1065V
Location:	In-Place	**Item Number:**	ASTM D422
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/14/2024-09/15/2024	**Tested By:**	William Soha

PARTICLE SIZE ANALYSIS BY SIEVE AND HYDROMETER METHOD

Test Method: ASTM D422

Sieve Size	Particle Diameter, mm	Percent Passing	Specification
3/8"	9.50	100.0	
#4	4.75	100.0	
#10	2.00	100.0	
#40	0.425	100.0	
#200	0.075	99.8	
Hydrometer Analysis Results	0.050	93.0	
	0.020	64.8	
	0.010	45.0	
	0.005	28.2	
	0.002	15.4	

SOIL SPECIFIC GRAVITY: 2.67 (As reported separately, or estimated.)

DISPERSION METHOD: Mechanical, 1 min.

SAND & GRAVEL PARTICLES: Hard/Weak subrounded to subangular particles

Comments:

COMPOSITION SUMMARY (USDA SIZE DESIGNATIONS)		
Gravel	(3 inches to #10)	0.0%
	Fraction Passing #10:	
Sand	(#10 to 0.05 mm)	7.0%
Silt	(0.05 mm to 0.002 mm)	77.6%
Clay	(Less than 0.002 mm)	15.4%
Total		100.0%
USDA Soil Textural Class		Silt Loam

REPORT REVIEWED BY:_____

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42 Day Farm Road, West Stockbridge, MA 01266
1813 State Route 7, Harpursville, NY 13787

Client:	Labella Associates	**Project:**	Utica City Dump
Item:	RSB-13 ; S-13	**Project Number:**	241280
Source:	La Bella- Site No. 633015	**Lab Number:**	24-1065W
Location:	In-Place	**Item Number:**	ASTM D422
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/14/2024-09/15/2024	**Tested By:**	William Soha

PARTICLE SIZE ANALYSIS BY SIEVE AND HYDROMETER METHOD

Test Method: ASTM D422

Sieve Size	Particle Diameter, mm	Percent Passing	Specification
3/8"	9.50	100.0	
#4	4.75	100.0	
#10	2.00	100.0	
#40	0.425	94.5	
#200	0.075	73.6	
Hydrometer Analysis Results	0.050	62.8	
	0.020	34.5	
	0.010	23.0	
	0.005	13.0	
	0.002	5.8	
	0.001		

SOIL SPECIFIC GRAVITY: 2.67 (As reported separately, or estimated.)

DISPERSION METHOD: Mechanical, 1 min.

SAND & GRAVEL PARTICLES: Weak Subangular

Comments:

COMPOSITION SUMMARY (USDA SIZE DESIGNATIONS)		
Gravel	(3 inches to #10)	0.0%
	Fraction Passing #10:	
Sand	(#10 to 0.05 mm)	37.2%
Silt	(0.05 mm to 0.002 mm)	57.0%
Clay	(Less than 0.002 mm)	5.8%
Total		100.0%
USDA Soil Textural Class		Silt Loam

REPORT REVIEWED BY: Emily J. Rodriguez

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Client:	Labella Associates	**Project:**	Utica City Dump
Item:	RSB-13 S-26	**Project Number:**	241280
Source:	La Bella- Site No. 633015	**Lab Number:**	24-1065X
Location:	In-Place	**Item Number:**	ASTM D422
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/14/2024-09/15/2024	**Tested By:**	William Soha

PARTICLE SIZE ANALYSIS BY SIEVE AND HYDROMETER METHOD

Test Method: ASTM D422

Sieve Size	Particle Diameter, mm	Percent Passing	Specification
3/8"	9.50	100.0	
#4	4.75	96.5	
#10	2.00	93.4	
#40	0.425	91.2	
#200	0.075	87.5	
Hydrometer Analysis Results	0.050	76.0	
	0.020	41.1	
	0.010	26.2	
	0.005	15.3	
	0.002	8.3	

SOIL SPECIFIC GRAVITY: 2.67 (As reported separately, or estimated.)
DISPERSION METHOD: Mechanical, 1 min.
SAND & GRAVEL PARTICLES: Weak Subangular

Comments:

COMPOSITION SUMMARY (USDA SIZE DESIGNATIONS)		
Gravel	(3 inches to #10)	6.6%
	Fraction Passing #10:	
Sand	(#10 to 0.05 mm)	18.6%
Silt	(0.05 mm to 0.002 mm)	72.5%
Clay	(Less than 0.002 mm)	8.9%
Total		100.0%
USDA Soil Textural Class		Silt Loam

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Client:	Labella Associates	**Project:**	Utica City Dump
Item:	RSB-USD-1 S-11	**Project Number:**	241280
Source:	La Bella- Site No. 633015	**Lab Number:**	24-1065Y
Location:	In-Place	**Item Number:**	ASTM D422
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/17/2024-09/18/2024	**Tested By:**	William Soha

PARTICLE SIZE ANALYSIS BY SIEVE AND HYDROMETER METHOD

Test Method: ASTM D422

Sieve Size	Particle Diameter, mm	Percent Passing	Specification
3/8"	9.50	100.0	
#4	4.75	100.0	
#10	2.00	100.0	
#40	0.425	96.2	
#200	0.075	50.7	
Hydrometer Analysis Results	0.050	42.0	
	0.020	27.7	
	0.010	22.9	
	0.005	14.0	
	0.002	8.2	

SOIL SPECIFIC GRAVITY: 2.67 (As reported separately, or estimated.)
DISPERSION METHOD: Mechanical, 1 min.
SAND & GRAVEL PARTICLES: Weak Subangular

Comments:

COMPOSITION SUMMARY (USDA SIZE DESIGNATIONS)		
Gravel	(3 inches to #10)	0.0%
	Fraction Passing #10:	
Sand	(#10 to 0.05 mm)	58.0%
Silt	(0.05 mm to 0.002 mm)	33.8%
Clay	(Less than 0.002 mm)	8.2%
Total		100.0%
USDA Soil Textural Class		Sandy Loam

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Client:	Labella Associates	**Project:**	Utica City Dump
Item:	RSB-UDS-3 S-13	**Project Number:**	241280
Source:	La Bella- Site No. 633015	**Lab Number:**	24-1065S
Location:	In-Place	**Item Number:**	ASTM D2216
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/16/2024-09/17/2024	**Tested By:**	William Soha

PARTICLE SIZE ANALYSIS BY SIEVE AND HYDROMETER METHOD

Test Method: ASTM D422

Sieve Size	Particle Diameter, mm	Percent Passing	Specification
3/8"	9.50	100.0	
#4	4.75	100.0	
#10	2.00	99.7	
#40	0.425	97.7	
#200	0.075	84.5	
Hydrometer Analysis Results	0.050	78.1	
	0.020	56.1	
	0.010	38.2	
	0.005	21.5	
	0.002	8.2	

SOIL SPECIFIC GRAVITY: 2.67 (As reported separately, or estimated.)

DISPERSION METHOD: Mechanical, 1 min.

SAND & GRAVEL PARTICLES: Hard/Weak subrounded to subangular particles

Comments:

COMPOSITION SUMMARY (USDA SIZE DESIGNATIONS)		
Gravel	(3 inches to #10)	0.3%
	Fraction Passing #10:	
Sand	(#10 to 0.05 mm)	21.7%
Silt	(0.05 mm to 0.002 mm)	70.1%
Clay	(Less than 0.002 mm)	8.2%
Total		100.0%
USDA Soil Textural Class		Silt Loam

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Client:	Labella Associates	**Project:**	Utica City Dump
Item:	RSB-13 S-25 (30-32)	**Project #:**	241280
Source:	La Bella- Site No. 633015	**Lab #:**	24-1066G-1
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/13/2024	**Tested By:**	John Brinsfield

Report of Triaxial Shear Test - Consolidated Undrained

Test Method: ASTM D4767

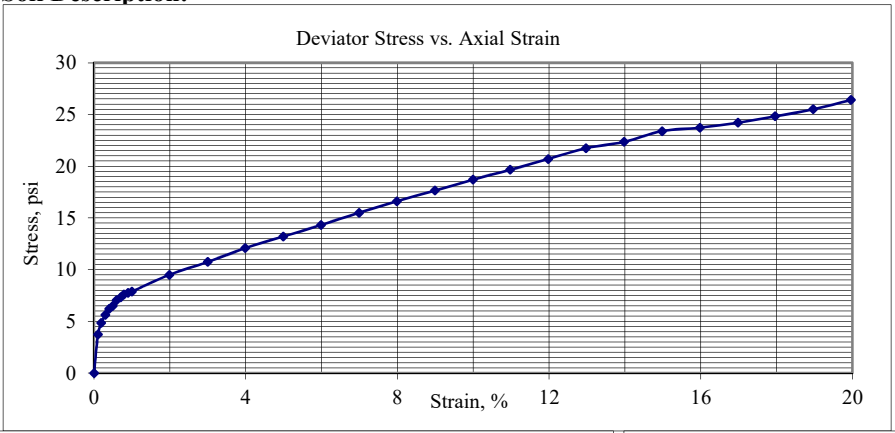
Specimen Properties	Dry Density, pcf	Void Ratio	% moist.	% Saturation	Height, in.	Diam., in.	X-Sect Area in.2
Initial	86.62	0.92	38.12	110.11	5.686	2.848	6.370
After Consolidation	86.35	0.93	37.27	106.95	5.695	2.850	6.380

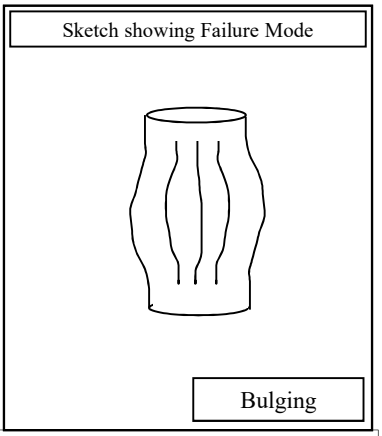
Consolidation	Total Back Pressure, psi	Pore Press. B after Sat.	Eff. Consol. Stress, psi	t50, min
	11.2	0.91	15.6	8

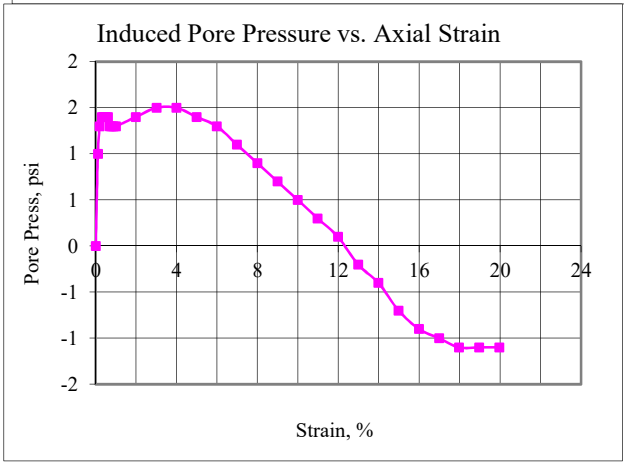
Specific Gravity:	2.67
Strain Rate, %/min:	1.00

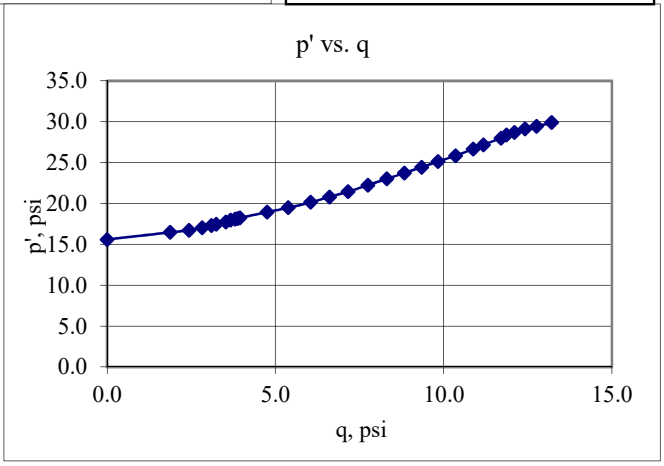
At Failure	Deviator Stress, psi:	23.4	Axial Strain, %:	15.0

Soil Description:









Note: *If applicable sieve analysis, classification, minimum and maximum density reported separately*

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877 US-4, Schuylerville, NY 12871

Client:	Labella Associates	**Project:**	Utica City Dump
Item:	RSB-13 S25 (30-35)	**Project #:**	241280
Source:	Labella Associates	**Lab #:**	24-1066G
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/13/2024	**Tested By:**	John Brinsfield

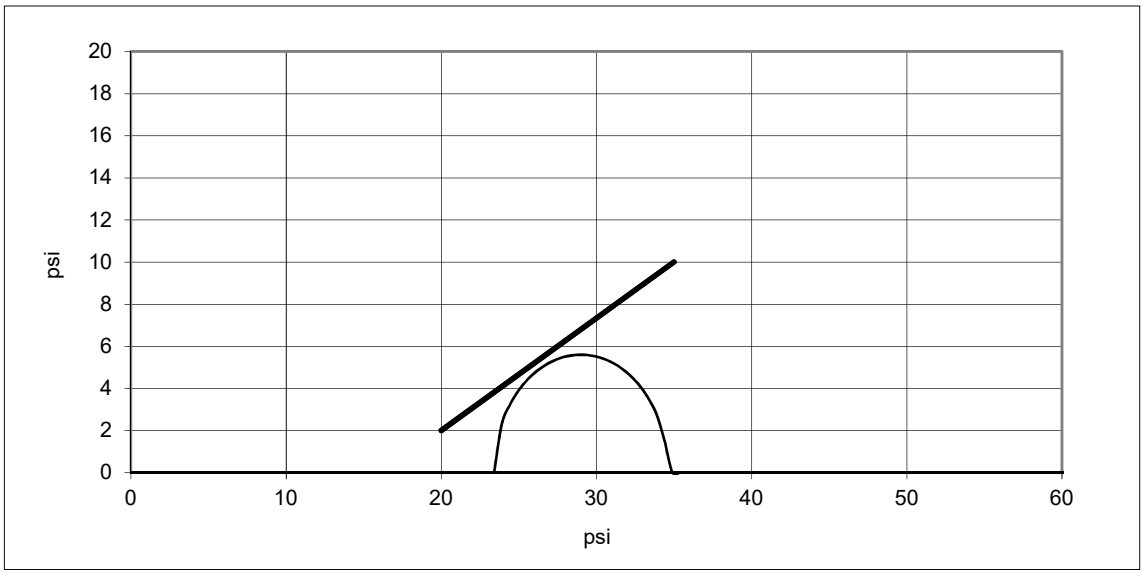
Report of Triaxial Shear Test - Consolidated Undrained

Test Method: ASTM D4767

Summary of Test Results

Trial No.	Major Eff Stress psi		Major Eff Stress psf	Minor Eff Stress psi		Minor Eff Stress psf
1	34.6		4982	23.4		3370

Test Results	
ANGLE OF INTERNAL FRICTION, Ø, DEGREES	
TANGENT Ø (phi)	
COHESION, psi	



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Client:	Labella Associates	**Project:**	Utica City Dump
Item:	RSB-13 S-25 (65-67)	**Project #:**	241280
Source:	La Bella- Site No. 633015	**Lab #:**	24-1066H-1
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/16/2024	**Tested By:**	John Brinsfield

Report of Triaxial Shear Test - Consolidated Undrained

Test Method: ASTM D4767

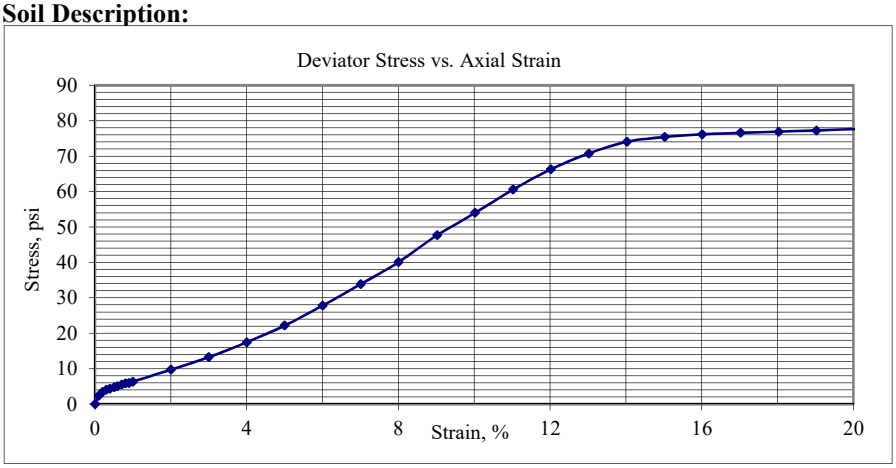
Specimen Properties	Dry Density, pcf	Void Ratio	% moist.	% Saturation	Height, in.	Diam., in.	X-Sect Area in.2
Initial	111.66	0.49	20.47	110.93	6.106	2.850	6.378
After Consolidation	112.03	0.49	19.14	104.75	6.096	2.847	6.367

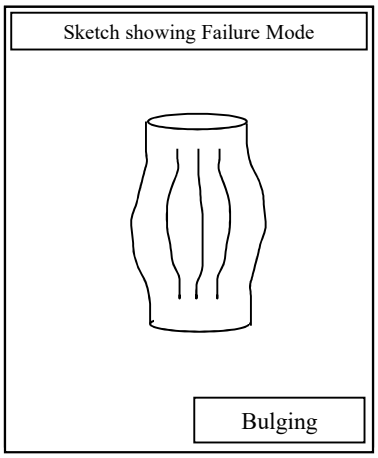
Consolidation	Total Back Pressure, psi	Pore Press. B after Sat.	Eff. Consol. Stress, psi	t50, min
	10.0	0.73	31.3	8

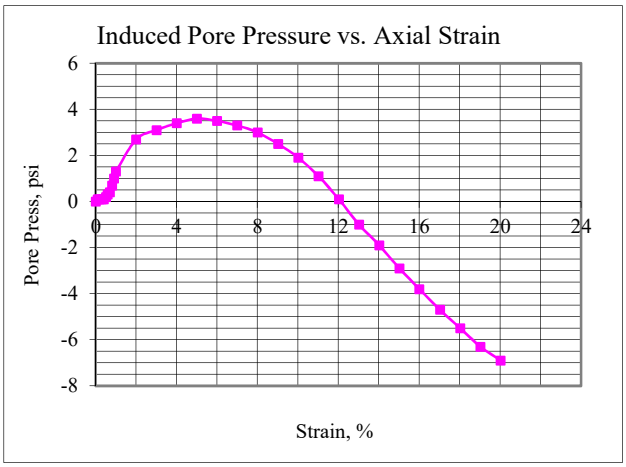
Specific Gravity:	2.67
Strain Rate, %/min:	1.00

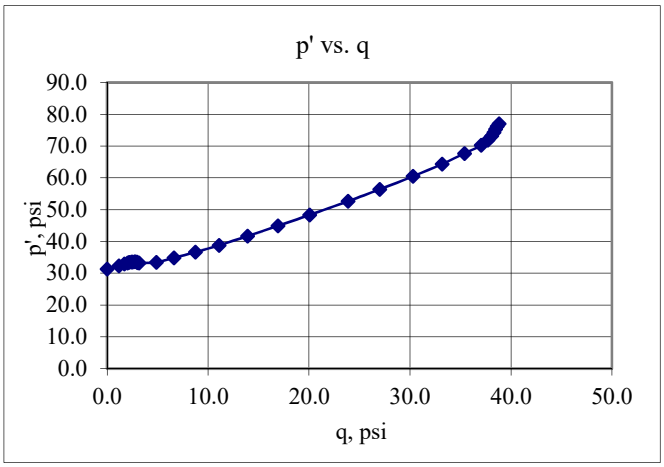
At Failure	Deviator Stress, psi:	74.0	Axial Strain, %:	14.0

Soil Description:









Note: *If applicable sieve analysis, classification, minimum and maximum density reported separately*

Report Reviewed By: Emily J. Rodriguez

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1813 State Route 7, Harpursville, NY 13787

Client:	Labella Associates	**Project:**	Utica City Dump
Item:	RSB-13 S-25 (65-67)	**Project #:**	241280
Source:	La Bella- Site No. 633015	**Lab #:**	24-1066H-2
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/16/2024	**Tested By:**	John Brinsfield

Report of Triaxial Shear Test - Consolidated Undrained

Test Method: ASTM D4767

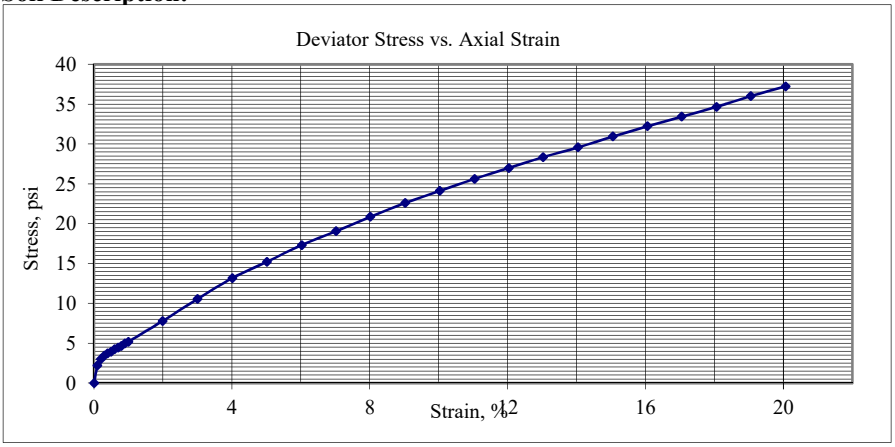
Specimen Properties	Dry Density, pcf	Void Ratio	% moist.	% Saturation	Height, in.	Diam., in.	X-Sect Area in.2
Initial	108.39	0.54	22.67	112.56	6.044	2.804	6.173
After Consolidation	109.11	0.53	21.43	108.43	6.024	2.799	6.152

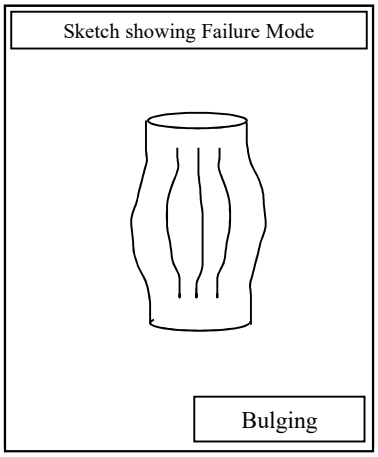
Consolidation	Total Back Pressure, psi	Pore Press. B after Sat.	Eff. Consol. Stress, psi	t50, min
	26.6	0.92	31.3	8

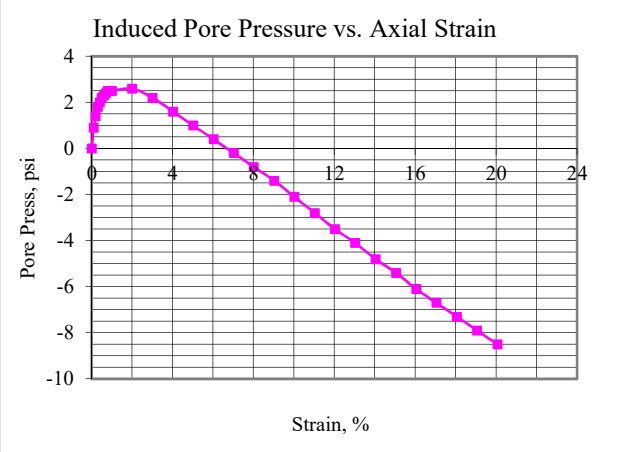
Specific Gravity:	2.67
Strain Rate, %/min:	1.00

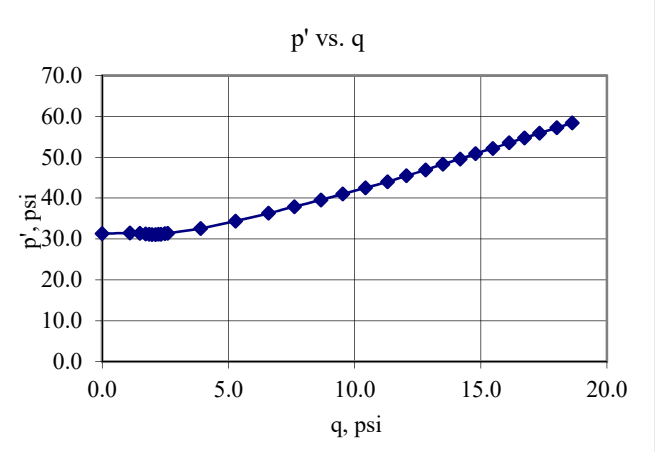
At Failure	Deviator Stress, psi:	34.7	Axial Strain, %:	18.0

Soil Description:









Note: *If applicable sieve analysis, classification, minimum and maximum density reported separately*

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1813 State Route 7, Harpursville, NY 13787

Client:	Labella Associates	**Project:**	Utica City Dump
Item:	RSB-13 S-25 (65-67)	**Project #:**	241280
Source:	La Bella- Site No. 633015	**Lab #:**	24-1066H-3
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/18/2024	**Tested By:**	John Brinsfield

Report of Triaxial Shear Test - Consolidated Undrained

Test Method: ASTM D4767

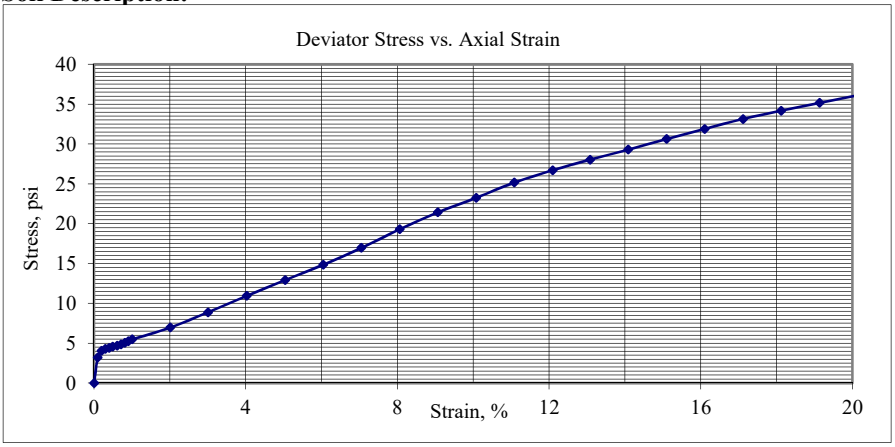
Specimen Properties	Dry Density, pcf	Void Ratio	% moist.	% Saturation	Height, in.	Diam., in.	X-Sect Area in.2
Initial	105.32	0.58	22.85	104.73	6.096	2.843	6.348
After Consolidation	106.83	0.56	22.10	105.32	6.053	2.833	6.303

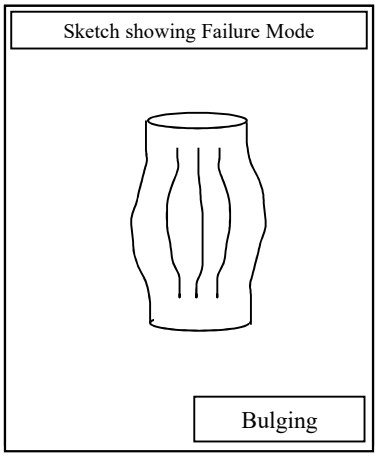
Consolidation	Total Back Pressure, psi	Pore Press. B after Sat.	Eff. Consol. Stress, psi	t50, min
	55.5	0.91	62.5	8

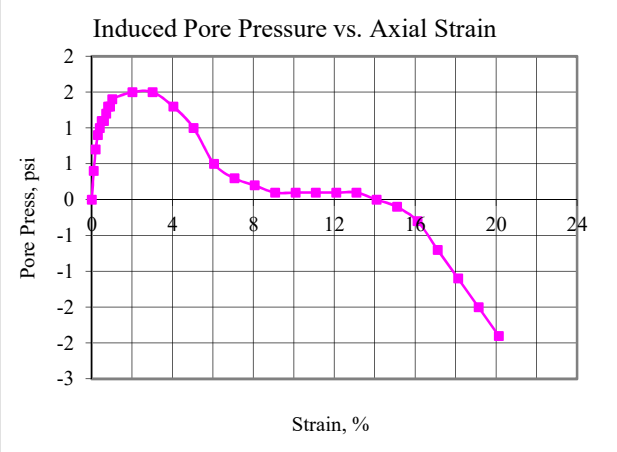
Specific Gravity:	2.67
Strain Rate, %/min:	1.00

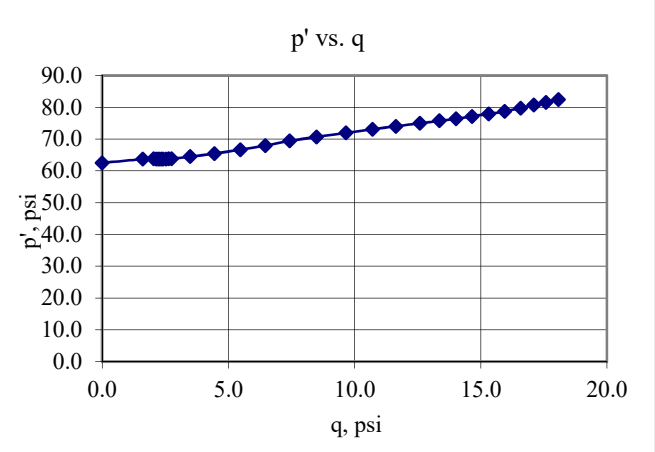
At Failure	Deviator Stress, psi:	36.4	Axial Strain, %:	20.0

Soil Description:









Note: *If applicable sieve analysis, classification, minimum and maximum density reported separately*

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877 US-4, Schuylerville, NY 12871

Client:	Labella Associates	**Project:**	Utica City Dump
Item:	RSB-13 S-25 (65-67)	**Project #:**	241280
Source:	Labella Associates	**Lab #:**	24-1066H
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/16/2024	**Tested By:**	John Brinsfield

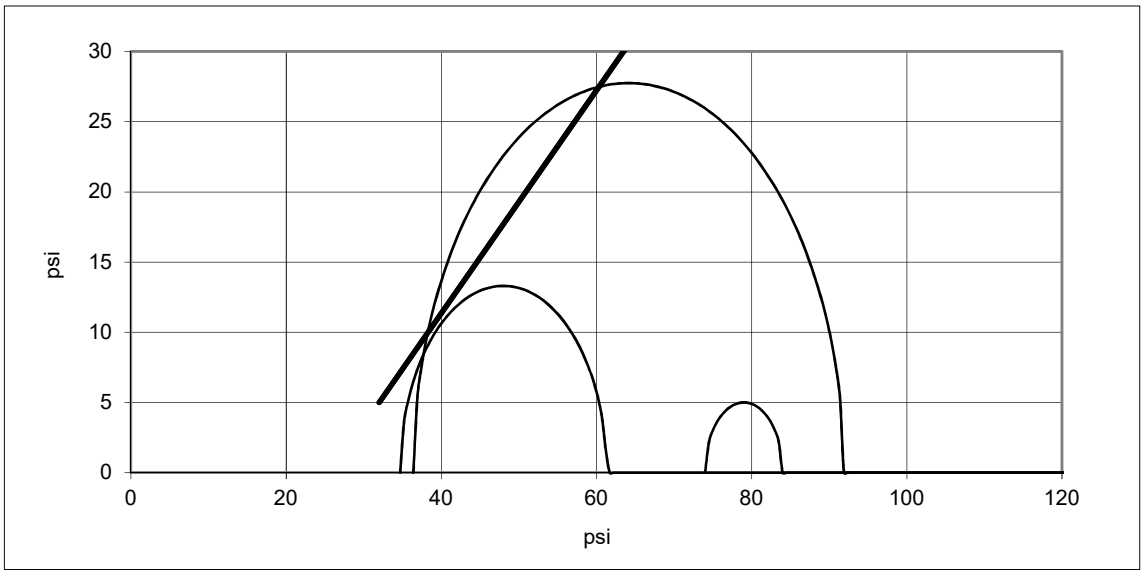
Report of Triaxial Shear Test - Consolidated Undrained

Test Method: ASTM D4767

Summary of Test Results

Trial No.	Major Eff Stress psi		Major Eff Stress psf	Minor Eff Stress psi		Minor Eff Stress psf
1	84.0		12096	74.0		10656
2	61.3		8827	34.7		4997
3	91.9		13234	36.4		5242

Test Results	
ANGLE OF INTERNAL FRICTION, Ø, DEGREES	0.0
TANGENT Ø (phi)	
COHESION, psi	



PRELIMINARY

Report Reviewed By: _____

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1813 State Route 7, Harpursville, NY 13787

Client:	Labella Associates	**Project:**	Utica City Dump
Item:	RSB-USD-1 ST-2	**Project #:**	241280
Source:	La Bella- Site No. 633015	**Lab #:**	24-1066i-1
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/18/2024	**Tested By:**	John Brinsfield

Report of Triaxial Shear Test - Consolidated Undrained

Test Method: ASTM D4767

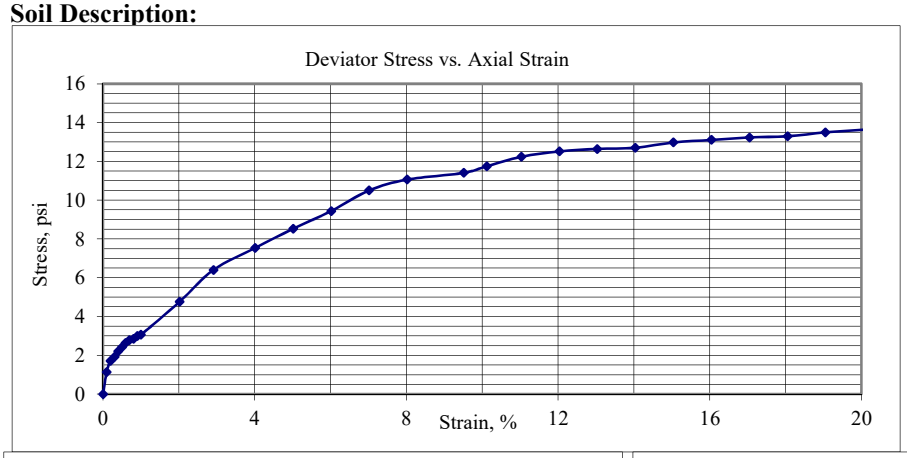
Specimen Properties	Dry Density, pcf	Void Ratio	% moist.	% Saturation	Height, in.	Diam., in.	X-Sect Area in.2
Initial	73.17	1.28	48.78	101.90	6.201	2.836	6.317
After Consolidation	73.62	1.26	49.08	103.67	6.182	2.832	6.298

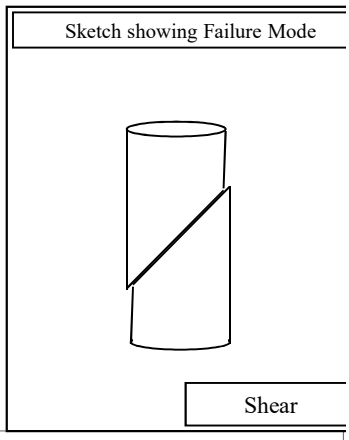
Consolidation	Total Back Pressure, psi	Pore Press. B after Sat.	Eff. Consol. Stress, psi	t50, min
	5.4	0.83	10.4	8

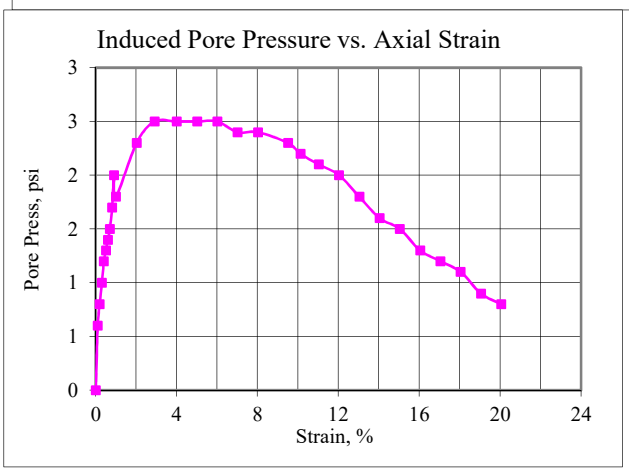
Specific Gravity:	2.67
Strain Rate, %/min:	1.00

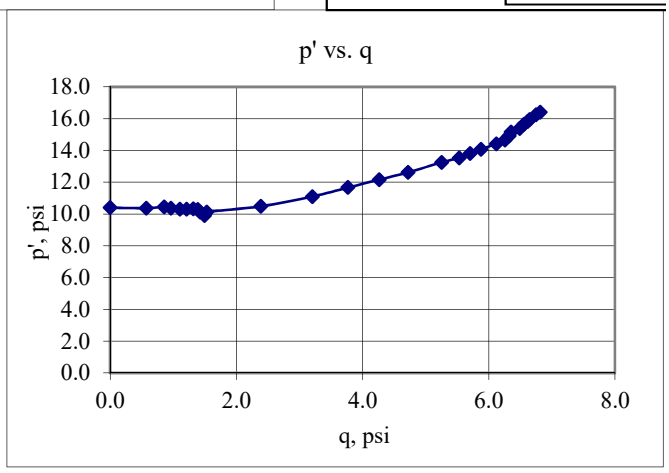
At Failure	Deviator Stress, psi:	13.0	Axial Strain, %:	15.0

Soil Description:









Note: *If applicable sieve analysis, classification, minimum and maximum density reported separately*

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42 Day Farm Road, West Stockbridge, MA 01266
1813 State Route 7, Harpursville, NY 13787

Client:	Labella Associates	**Project:**	Utica City Dump
Item:	RSB-USD-1 ST-2	**Project #:**	241280
Source:	La Bella- Site No. 633015	**Lab #:**	24-1066i-2
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/20/2024	**Tested By:**	John Brinsfield

Report of Triaxial Shear Test - Consolidated Undrained

Test Method: ASTM D4767

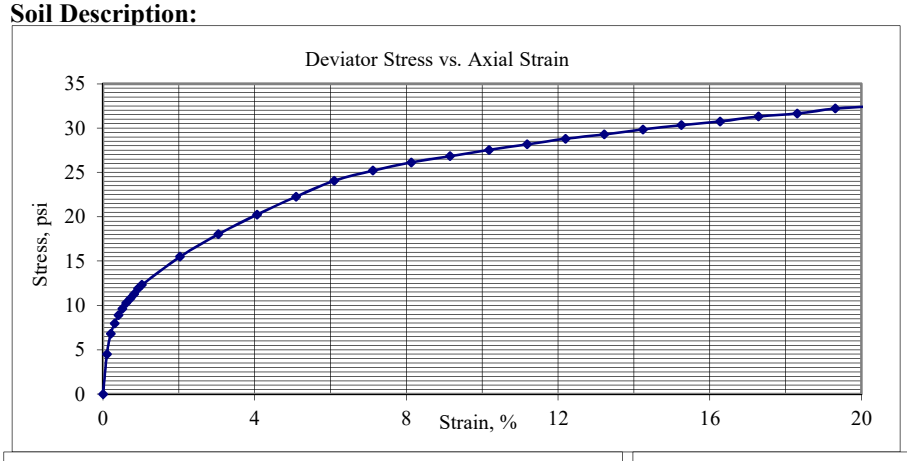
Specimen Properties	Dry Density, pcf	Void Ratio	% moist.	% Saturation	Height, in.	Diam., in.	X-Sect Area in.2
Initial	96.34	0.73	26.95	98.53	5.955	2.834	6.308
After Consolidation	99.66	0.67	25.42	100.91	5.855	2.810	6.202

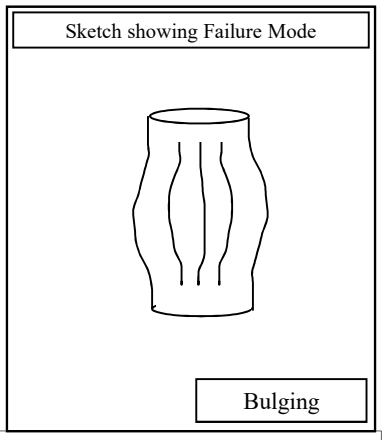
Consolidation	Total Back Pressure, psi	Pore Press. B after Sat.	Eff. Consol. Stress, psi	t50, min
	15.9	0.76	20.8	8

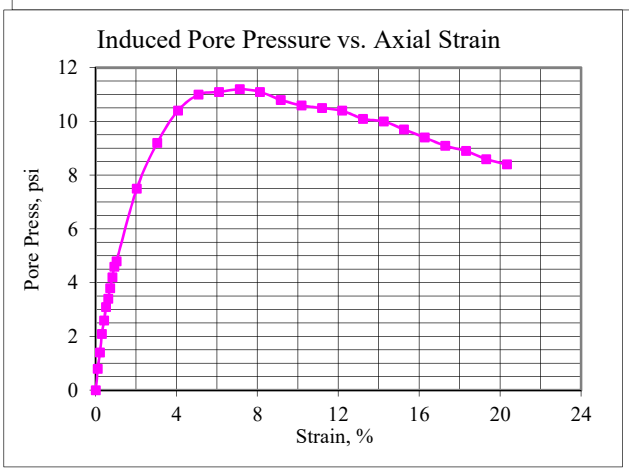
Specific Gravity:	2.67
Strain Rate, %/min:	1.00

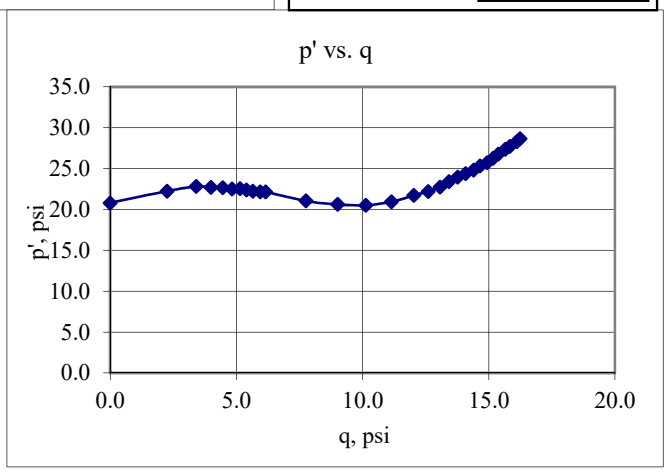
At Failure	Deviator Stress, psi:	30.0	Axial Strain, %:	15.3

Soil Description:









Note: *If applicable sieve analysis, classification, minimum and maximum density reported separately*

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42 Day Farm Road, West Stockbridge, MA 01266
1813 State Route 7, Harpursville, NY 13787

Client:	Labella Associates	**Project:**	Utica City Dump
Item:	RSB-USD-1 ST-2	**Project #:**	241280
Source:	La Bella- Site No. 633015	**Lab #:**	24-1066i-3
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/20/2024	**Tested By:**	John Brinsfield

Report of Triaxial Shear Test - Consolidated Undrained

Test Method: ASTM D4767

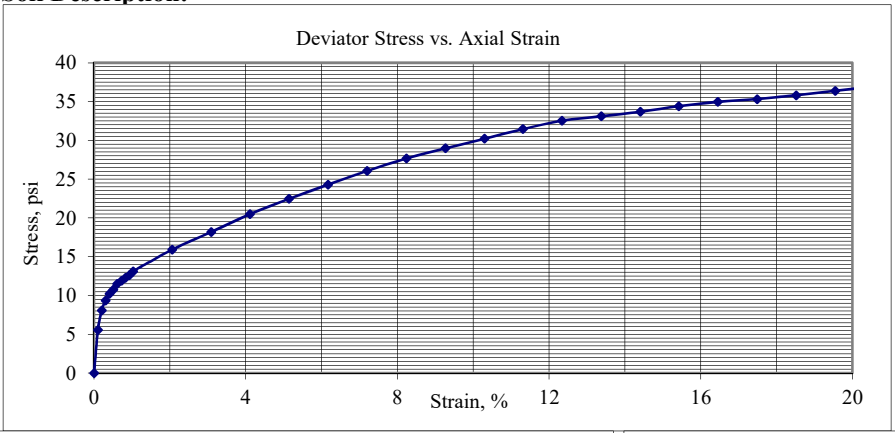
Specimen Properties	Dry Density, pcf	Void Ratio	% moist.	% Saturation	Height, in.	Diam., in.	X-Sect Area in.2
Initial	92.19	0.81	31.36	103.62	6.086	2.820	6.244
After Consolidation	97.67	0.71	26.90	101.63	5.913	2.779	6.067

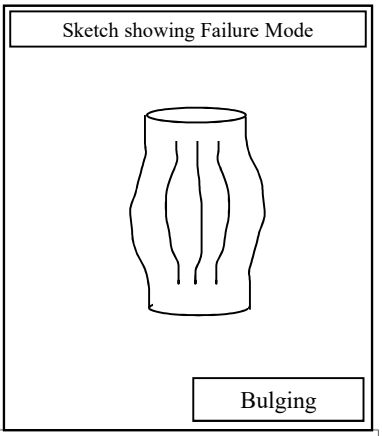
Consolidation	Total Back Pressure, psi	Pore Press. B after Sat.	Eff. Consol. Stress, psi	t50, min
	35.2	0.58	41.7	8

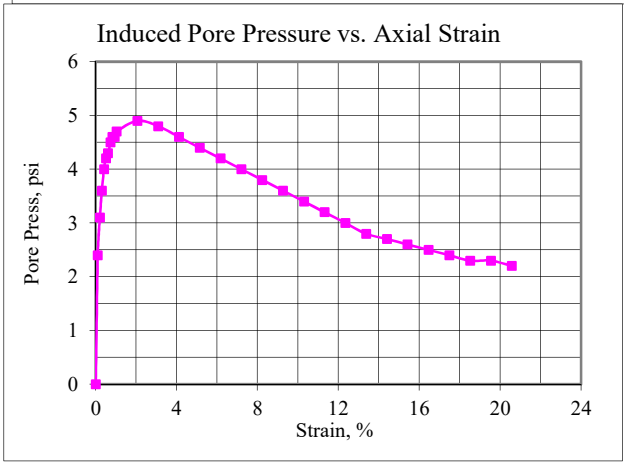
Specific Gravity:	2.67
Strain Rate, %/min:	1.00

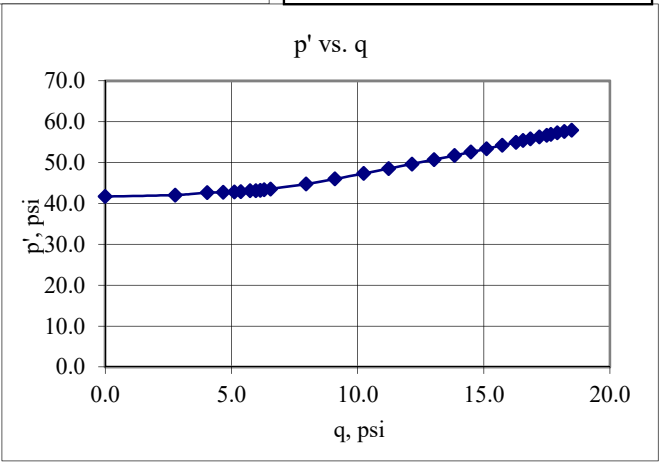
At Failure	Deviator Stress, psi:	35.0	Axial Strain, %:	16.5

Soil Description:









Note: *If applicable sieve analysis, classification, minimum and maximum density reported separately*

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42 Day Farm Road, West Stockbridge, MA 01266
1813 State Route 7, Harpursville, NY 13787
877 US-4, Schuylerville, NY 12871

Client:	Labella Associates	**Project:**	Utica City Dump
Item:	RSB-USD-1 ; ST-2	**Project #:**	241280
Source:	Labella Associates	**Lab #:**	24-1066i
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/20/2024	**Tested By:**	John Brinsfield

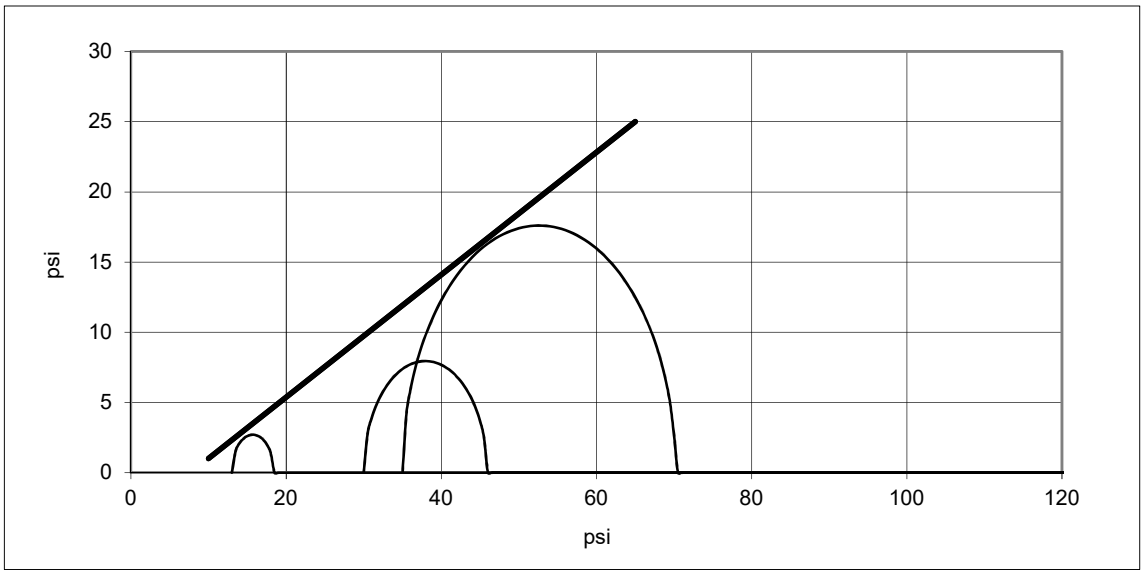
Report of Triaxial Shear Test - Consolidated Undrained

Test Method: ASTM D4767

Summary of Test Results

Trial No.	Major Eff Stress psi		Major Eff Stress psf	Minor Eff Stress psi		Minor Eff Stress psf
1	18.4		2650	13.0		1872
2	45.9		6610	30.0		4320
3	70.2		10109	35.0		5040

Test Results	
ANGLE OF INTERNAL FRICTION, Ø, DEGREES	23.6
TANGENT Ø (phi)	0.4364
COHESION, psi	3.4



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1813 State Route 7, Harpursville, NY 13787

Client:	Labella Associates	**Project:**	Utica City Dump
Item:	RSB-USD-3 ST-1	**Project #:**	241280
Source:	La Bella- Site No. 633015	**Lab #:**	24-1066J-1
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/20/2024	**Tested By:**	John Brinsfield

Report of Triaxial Shear Test - Consolidated Undrained

Test Method: ASTM D4767

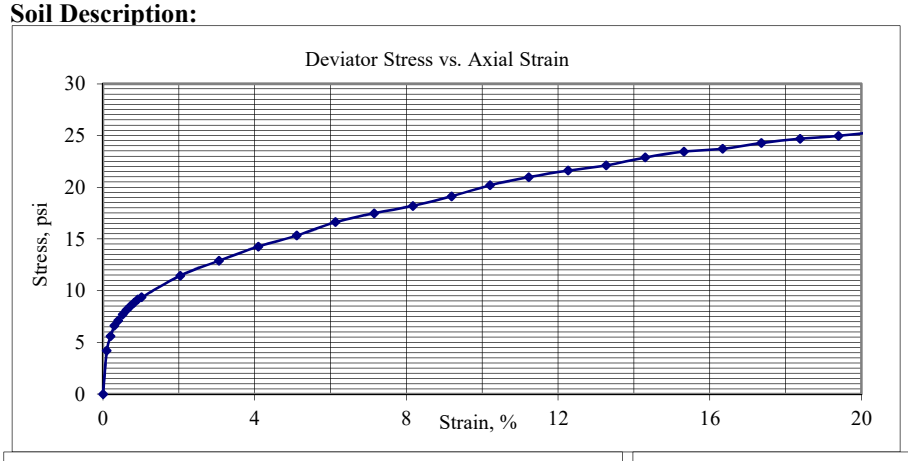
Specimen Properties	Dry Density, pcf	Void Ratio	% moist.	% Saturation	Height, in.	Diam., in.	X-Sect Area in.2
Initial	94.56	0.76	29.75	104.14	6.113	2.838	6.327
After Consolidation	98.65	0.69	25.33	98.03	5.985	2.808	6.194

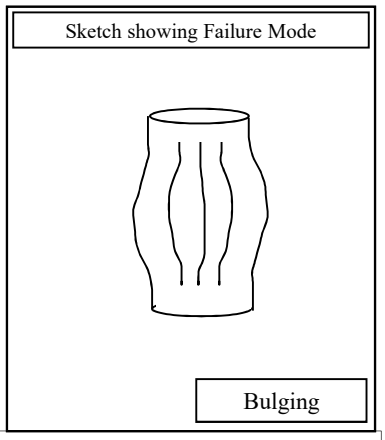
Consolidation	Total Back Pressure, psi	Pore Press. B after Sat.	Eff. Consol. Stress, psi	t50, min
	7.2	0.79	13.9	8

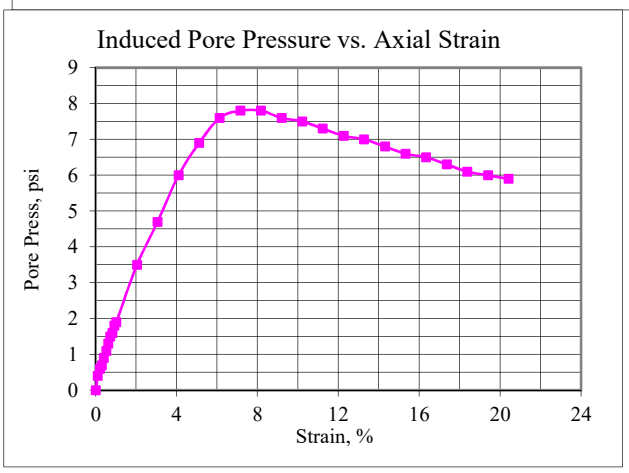
Specific Gravity:	2.67
Strain Rate, %/min:	1.00

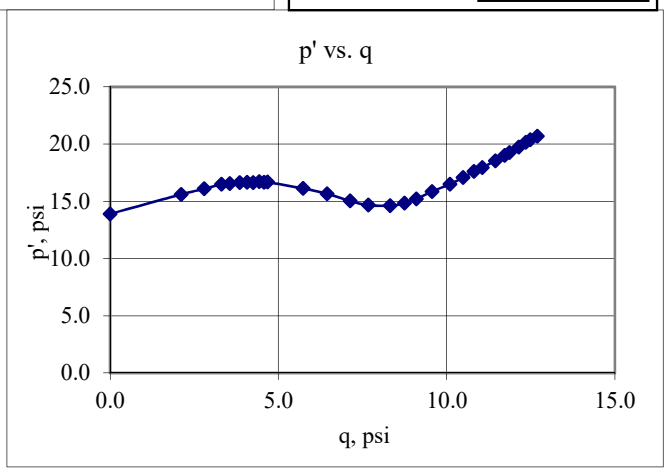
At Failure	Deviator Stress, psi:	24.0	Axial Strain, %:	17.0

Soil Description:









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1813 State Route 7, Harpursville, NY 13787

Client:	Labella Associates	**Project:**	Utica City Dump
Item:	RSB-USD-3 ST-1	**Project #:**	241280
Source:	La Bella- Site No. 633015	**Lab #:**	24-1066J-2
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/20/2024	**Tested By:**	John Brinsfield

Report of Triaxial Shear Test - Consolidated Undrained

Test Method: ASTM D4767

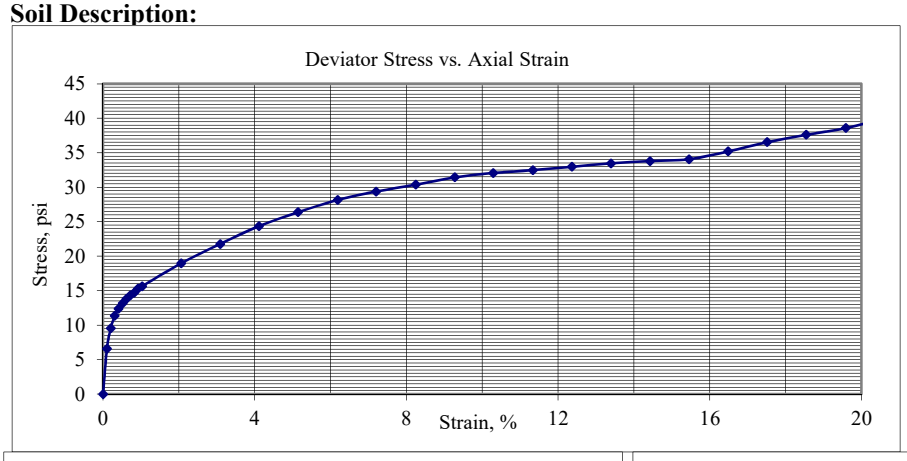
Specimen Properties	Dry Density, pcf	Void Ratio	% moist.	% Saturation	Height, in.	Diam., in.	X-Sect Area in.2
Initial	108.36	0.54	22.01	109.18	6.009	2.854	6.398
After Consolidation	115.15	0.45	17.92	106.94	5.829	2.811	6.206

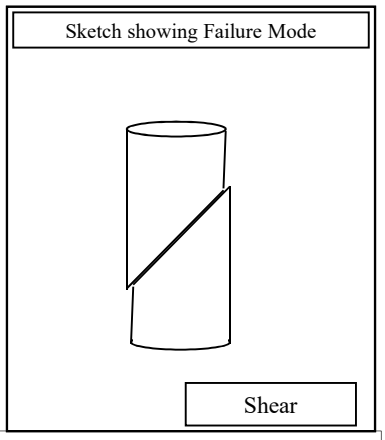
Consolidation	Total Back Pressure, psi	Pore Press. B after Sat.	Eff. Consol. Stress, psi	t50, min
	15.0	0.56	27.8	8

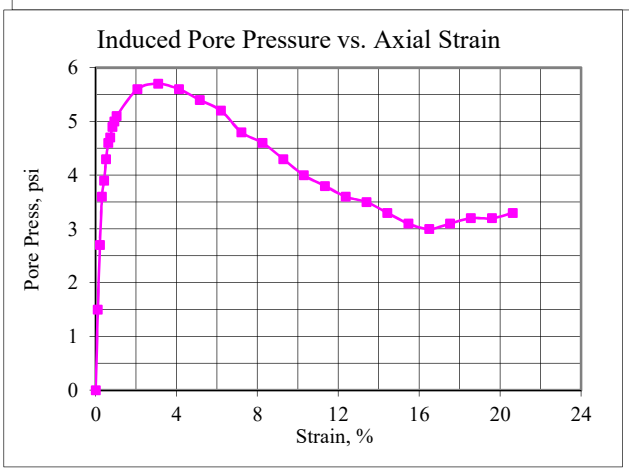
Specific Gravity:	2.67
Strain Rate, %/min:	1.00

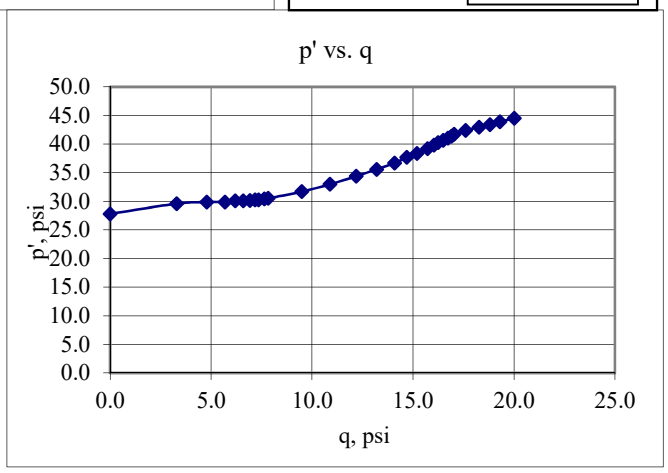
At Failure	Deviator Stress, psi:	33.8	Axial Strain, %:	14.4

Soil Description:









Note: *Sample contained a 2.5 x 3 inch piece of aggregate in the middle of the extracted sample.*

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1813 State Route 7, Harpursville, NY 13787
877 US-4, Schuylerville, NY 12871

Client:	Labella Associates	**Project:**	Utica City Dump
Item:	RSB-USD-3 ST-1	**Project #:**	241280
Source:	Labella Associates	**Lab #:**	24-1066J
Date Sampled:	9/4/2024	**Sampled By:**	Client
Date Tested:	9/20/2024	**Tested By:**	John Brinsfield

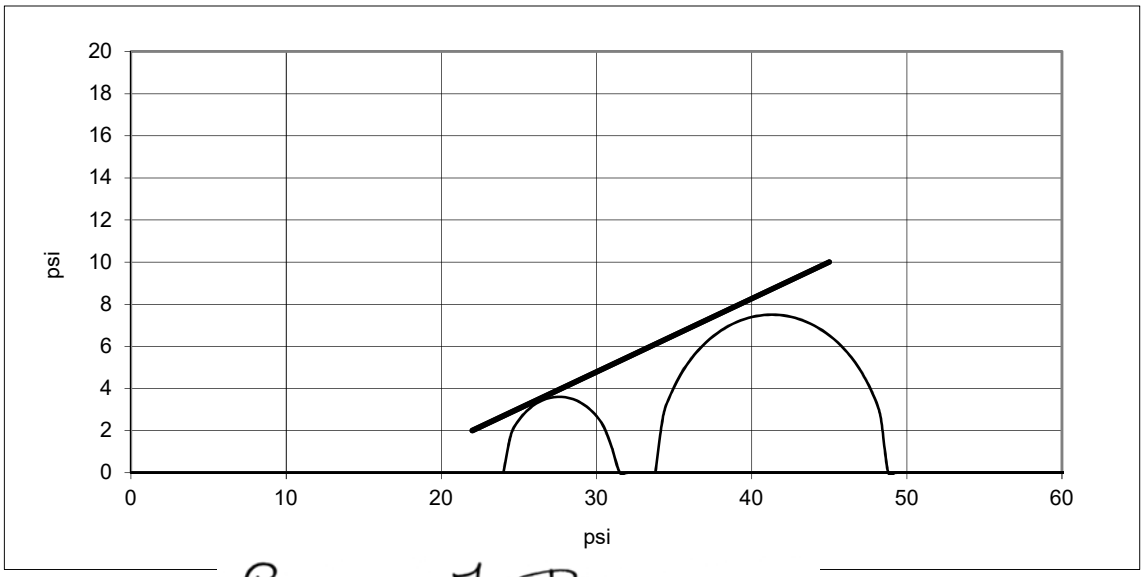
Report of Triaxial Shear Test - Consolidated Undrained

Test Method: ASTM D4767

Summary of Test Results

Trial No.	Major Eff Stress psi		Major Eff Stress psf	Minor Eff Stress psi		Minor Eff Stress psf
1	31.2		4493	24.0		3456
2	48.8		7027	33.8		4867

Test Results	
ANGLE OF INTERNAL FRICTION, Ø, DEGREES	19.2
TANGENT Ø (phi)	0.3478
COHESION, psi	5.7



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Appendix 9
Slope Stability Analysis

Slope Stability Evaluation – Former Utica City Dump

Appendix

Project name	**Utica City Dump Remedial Design**
Project no.	**1940101207**
Recipient	**NYS DEC**
Document type	**Appendix**
Version	**01**
Date	**April 11, 2025**
Prepared by	**Russell Graziano**
Checked by	**Victor Warner**
Approved by	**Dave Farber**
Description	**Slope Stability Evaluation – 100% BOD**

1. Introduction

The former Utica City Dump (Site #6-33-015) is located in the City of Utica, Oneida County, New York. The Site is defined in New York State Department of Environmental Conservation (NYSDEC) Record of Decision (ROD) as the portion of the landfill that reportedly received hazardous waste and is approximately 74 acres in size. Ramboll Americas Engineering Solutions, Inc. (Ramboll), in consultation with the NYSDEC, have submitted an application to the ROD to include the closure of the entire dump site which is approximately 126 acres in size.

Based on public tax maps, of the 126 acre dump site, approximately 113.8 acres of the dump are owned by the City of Utica (City) and approximately 12.2 acres are privately owned. The Site is located east of Leland Ave. along Incinerator Road, between the Erie Canal to the north and the Mohawk River to the east and south. The total amount of land bordered by the road and the two water bodies is about 200 acres.

In accordance with the proposed NYSDEC Explanation of Significant Differences (ESD), approximately 103 acres of the former dump will be closed through the implementation of an evapotranspiration (ET) cover system. This report summarizes the results of the slope stability evaluation associated with the proposed cover system.

2. Geotechnical Data Used for Slope Analysis

The subsurface conditions were evaluated based on the results of a series of investigations that have been performed at the site. From 1998-1999, Lawler, Matusky & Skelly Engineers LLP (LMS) and Clough, Harbour & Associates, LLP, (CHA) completed a Remedial Investigation (RI) that included the completion of 11 soil borings, 80 test pits, and the installation of 8 groundwater monitoring wells. The locations of the soil borings and monitoring wells can be found on Figure 3-6 Monitoring Well, Piezometer, and Staff Gauge Locations in the RI report by LMS and CHA dated August 2000. The locations of the test pits can be found on Figures 3-3 Test Pit Excavations in Magnetometer Survey Locations and 3-4 Test Pit Locations provided in the RI report. Based on the boring and test pit logs, the top 10 to 20 feet of the subsurface is a mixture of a Sand and Waste. Beneath the Sand and Waste layer, the native soil observed by CHA was

a gray Silt and Clay mixture that continued to the maximum depth reached in any of the CHA borings, 80 feet below the ground surface.

In 2022 and 2023, Ramboll performed soil boring and test pitting activities to further delineate the extent of the waste. In total, Ramboll completed 10 geotechnical soil boring and excavated 138 test pits at locations shown in Figures 1 and 2, provided in Appendix 1. The test pits generally confirmed CHA data regarding groundwater levels and the horizontal and vertical extents of waste.

3. Slope Stability Evaluation

In accordance with the NYSDEC Part 363-4.3 regulations, a landfill facility must be designed to prevent deep-seated slope failures. The required factors of safety for slope stability are as follows:

- Deep-Seated Failures
  - Static analysis: FS ≥ 1.50
  - Seismic analysis: FS ≥ 1.00

The final design of the former Utica City Dump generally has slopes of 5% (1v:20h) leading from the top of the proposed cap to the top of perimeter drainage swales with 33% side slopes (1v:3h) that then lead to the 33% slopes down to the toe of the landfill and the proposed wetland area. To evaluate the stability of the slopes on the site, Ramboll utilized the software program Slope/W 2012 by Geo-Slope International Ltd. The stability of the site is directly related to the strength of the soils that makeup the site system. The strength of the materials used in the slope stability analysis was based on the boring information obtained during drilling. The following is a summary of the strength of the materials used in the slope stability analysis:

Table 1: Material Properties

Material	Unit Weight (pcf)	Cohesion (psf)	Internal Friction Angle (degrees)
Sand and Waste	105	0	30
Native Clay and Silt	115	250	28
Granular Fill	115	0	32

Table 2 provides a summary of the safety factors that have been calculated for the steepest sloped area of the landfill. The location of the cross section is presented in Figure 2, provided in Appendix 2. It should be noted that the most critical failure surface originating in the top 5% (1V:20H) slope fails through the toe. That failure surface has a factor of safety much greater than the other more critical surfaces in the toe and swale and is included in the table below for a comprehensive understanding of the landfill cap surface. The detailed model results from the SLOPE/W stability model are provided in Appendix 3.

Table 2: Summary of Deep-Seated Slope Stability Results

Section	Analysis Type	Top (5%)	Swale Bank (33%)	Toe (33%)
1	Static	4.429	1.878	1.838

	Seismic[1]	2.414	1.627	1.552

Notes:

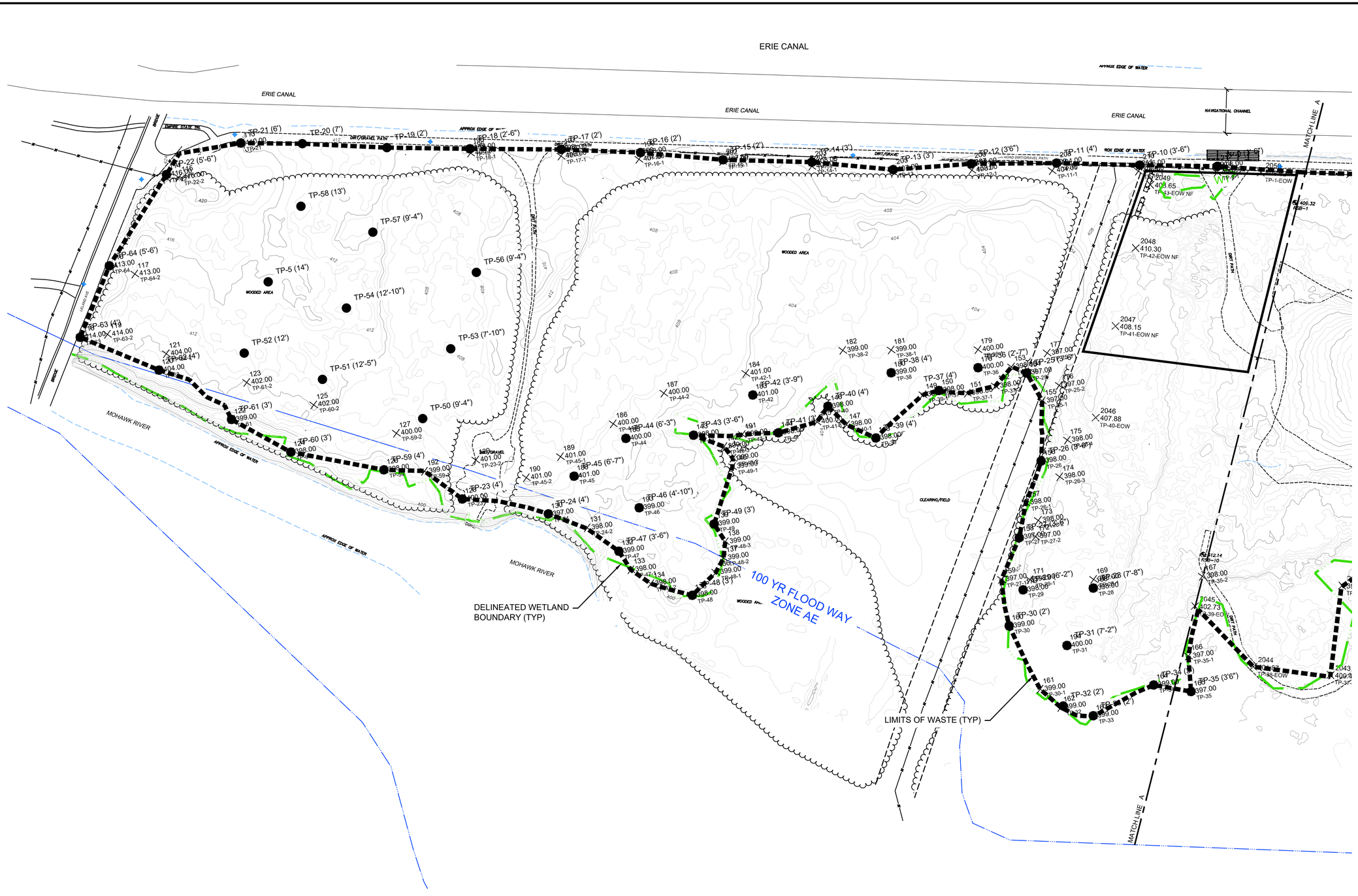
1. Seismic analysis used 0.0477g seismic coefficients (one-half of the free field peak ground acceleration of 0.0954g from the USGS Unified Hazard Tool data for the former Utica City Dump location).

4. Conclusion

This slope stability evaluation report has been prepared by Ramboll for use in the design of the former Utica City Dump located in Utica, New York. The slope stability analysis indicates that the global stability of the site will meet the recommended minimum factors of safety. The recommendations in this report are based on the information obtained from the subsurface investigation and the proposed cap design. Changes to the recommendations may be warranted if actual subsurface conditions vary from those anticipated based on the soil borings, or if the proposed construction activities vary from those discussed in this report. In addition, construction operations at or adjacent to the site and natural events such as floods, earthquakes, or ground water fluctuations may also affect subsurface conditions.

APPENDIX 1
RAMBOLL SUBSURFACE INVESTIGATION LOCATION PLAN

SAVED: 4/10/24 9:40 AM



PARTIAL INVESTIGATION PLAN - SHEET 1 OF 2

120 0 120

SCALE: 1"=120'

LEGEND

● TEST PIT LOCATION

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER, TO ALTER THIS DOCUMENT.

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR TO DETERMINE THE ACTUAL SIZE. DRAWING IS NOT SCALABLE IF NO SCALE BAR IS PRESENT.

CLIENT
NYSDEC - DIVISION OF ENVIRONMENTAL REMEDIATION

NO.	DATE	REVISION	INT.

DESIGNER / PROFESSIONAL ENGINEER RESPONSIBLE
DAVID T. FARBER

DESIGNED BY MWH
CHECKED BY VJW
DRAWN BY MWH
PROJECT NO. 1087815:1940101207
DATE FEBRUARY 2024

CERTIFICATE OF AUTHORIZATION:
RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.
SYRACUSE, NEW YORK

PROJECT
FORMER UTICA CITY DUMP - REMEDIAL DESIGN

ADDRESS
CITY OF UTICA, ONEIDA COUNTY, NEW YORK

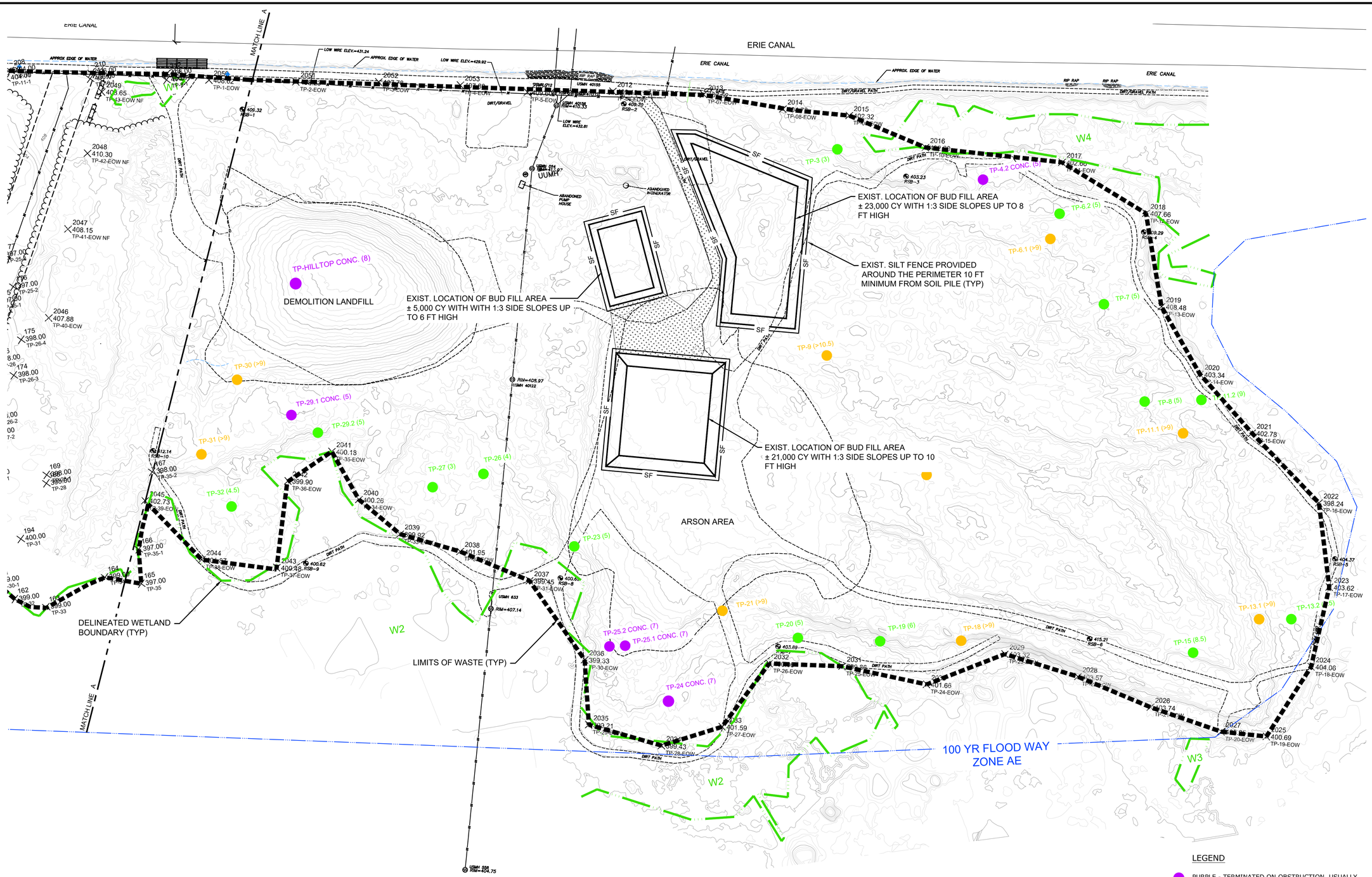
SHEET DESCRIPTION
PARTIAL INVESTIGATION PLAN - SHEET 1 OF 2

DRAWING LOCATION
FORMER UTICA CITY DUMP

FIG 1

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SAVED: 4/10/24 9:40 AM



PARTIAL INVESTIGATION PLAN -SHEET 2 OF 2

120 0 120

SCALE: 1"=120'

LEGEND

- PURPLE - TERMINATED ON OBSTRUCTION, USUALLY CONCRETE
- ORANGE - PIT DID NOT REACH NATIVE SOIL/BOTTOM OF WASTE
- GREEN - PIT REACHED NATIVE SOIL

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER, TO ALTER THIS DOCUMENT.

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CLIENT
NYSDEC - DIVISION OF ENVIRONMENTAL REMEDIATION

NO.	DATE	REVISION	INT.

DESIGNER / PROFESSIONAL ENGINEER RESPONSIBLE
DAVID T. FARBER

DESIGNED BY MWH
CHECKED BY VJW
DRAWN BY MWH
PROJECT NO. 1087815:1940101207
DATE FEBRUARY 2024

CERTIFICATE OF AUTHORIZATION:
RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.
SYRACUSE, NEW YORK

PROJECT
FORMER UTICA CITY DUMP - REMEDIAL DESIGN

ADDRESS
CITY OF UTICA, ONEIDA COUNTY, NEW YORK

SHEET DESCRIPTION
PARTIAL INVESTIGATION PLAN -SHEET 2 OF 2

DRAWING LOCATION
FORMER UTICA CITY DUMP

FIG 2

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APPENDIX 2
SLOPE STABILITY CROSS-SECTION LOCATION PLAN



LEGEND

SLOPE STABILITY CROSS-SECTION

300' 0 300'

SLOPE STABILITY CROSS-SECTION LOCATION PLAN

FORMER UTICA CITY DUMP
INCINERATOR ROAD
UTICA, NY

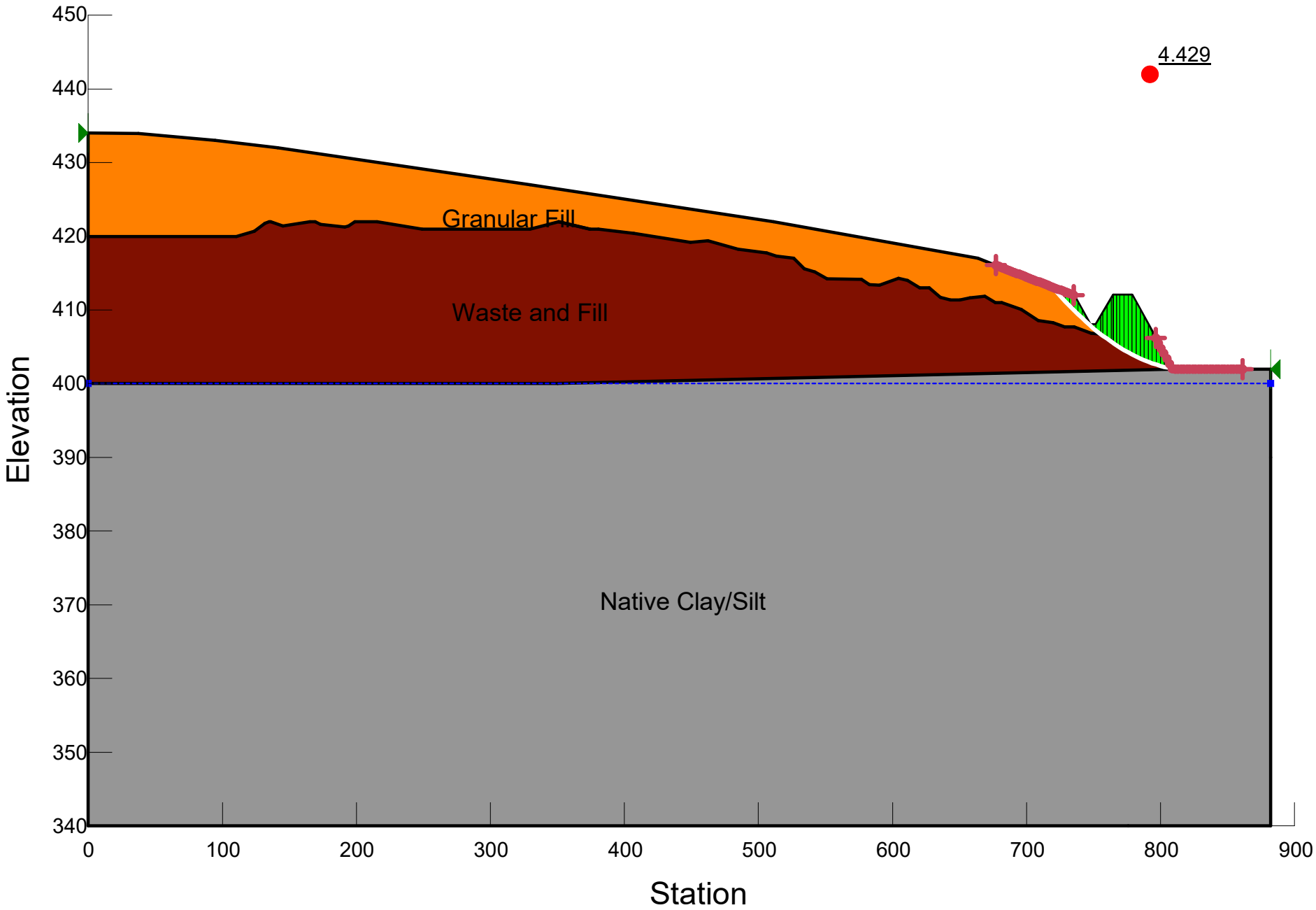
FIGURE 1

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

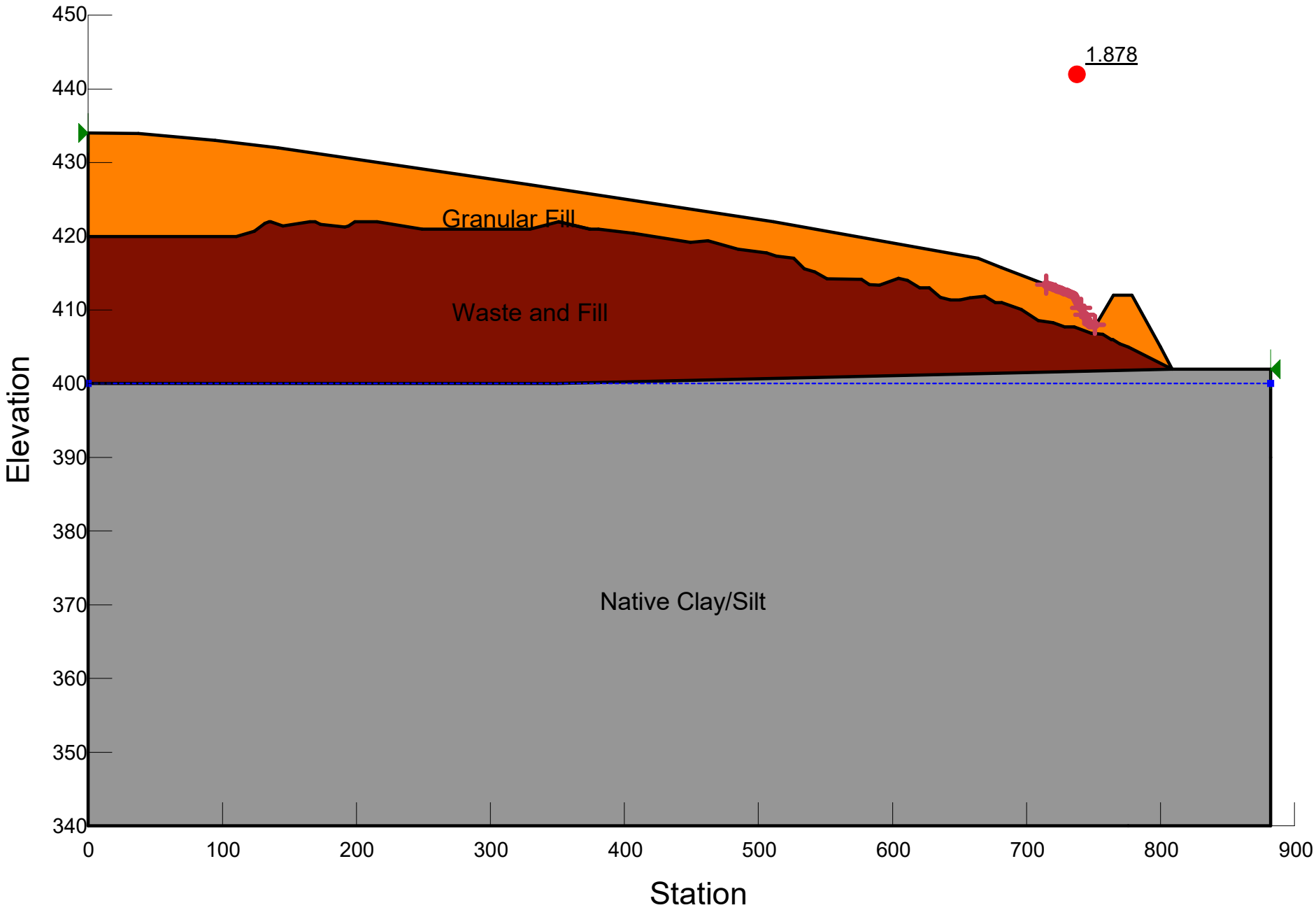
RAMBOLL

APPENDIX 3
SLOPE/W MODEL RESULTS

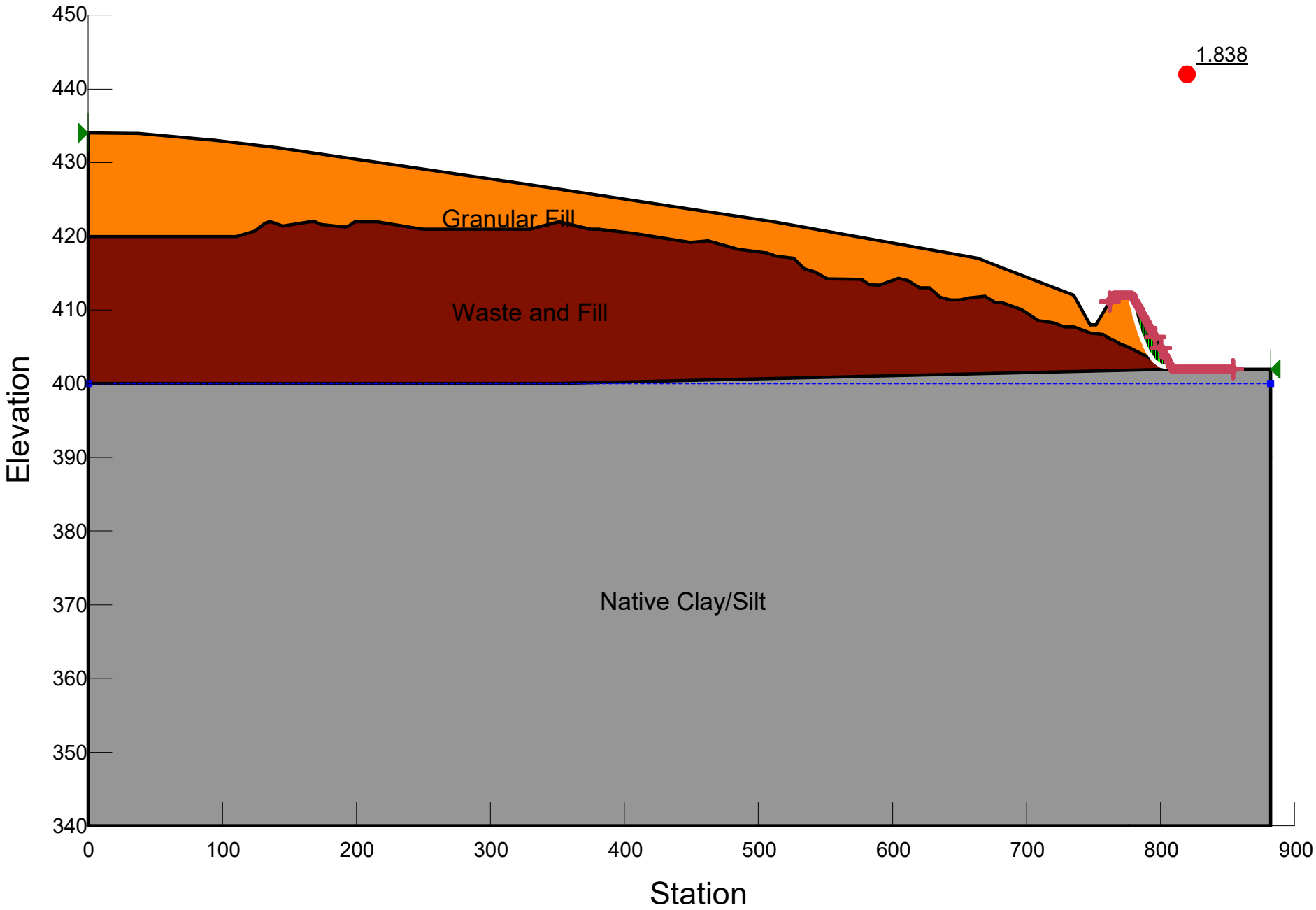
Project: Utica City Dump Remedial Design
Project Number: 1940101207
Client: NYSDEC
Analysis Name: Static_Top



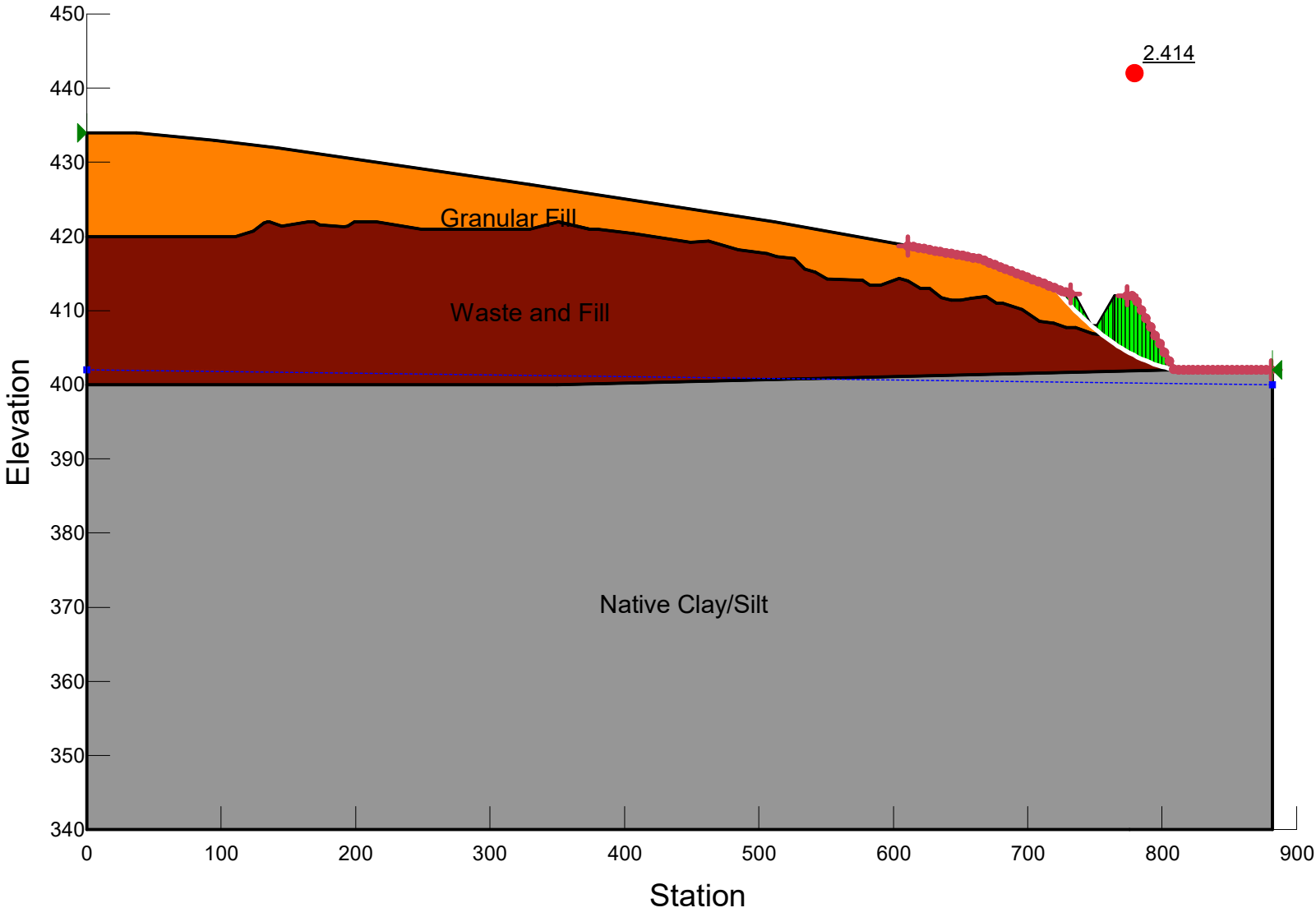
Project: Utica City Dump Remedial Design
Project Number: 1940101207
Client: NYSDEC
Analysis Name: Static_Swale



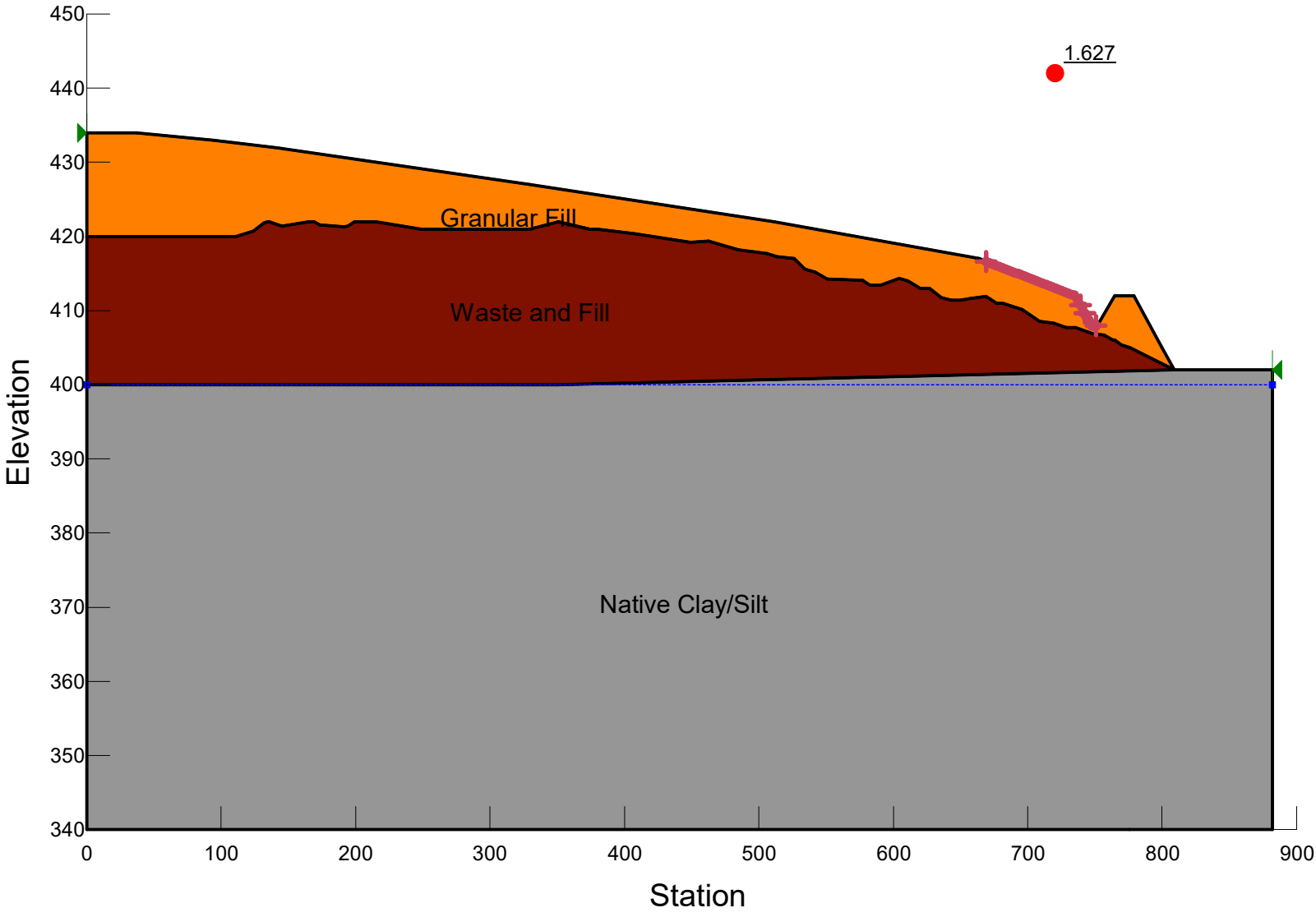
Project: Utica City Dump Remedial Design
Project Number: 1940101207
Client: NYSDEC
Analysis Name: Static_Toe



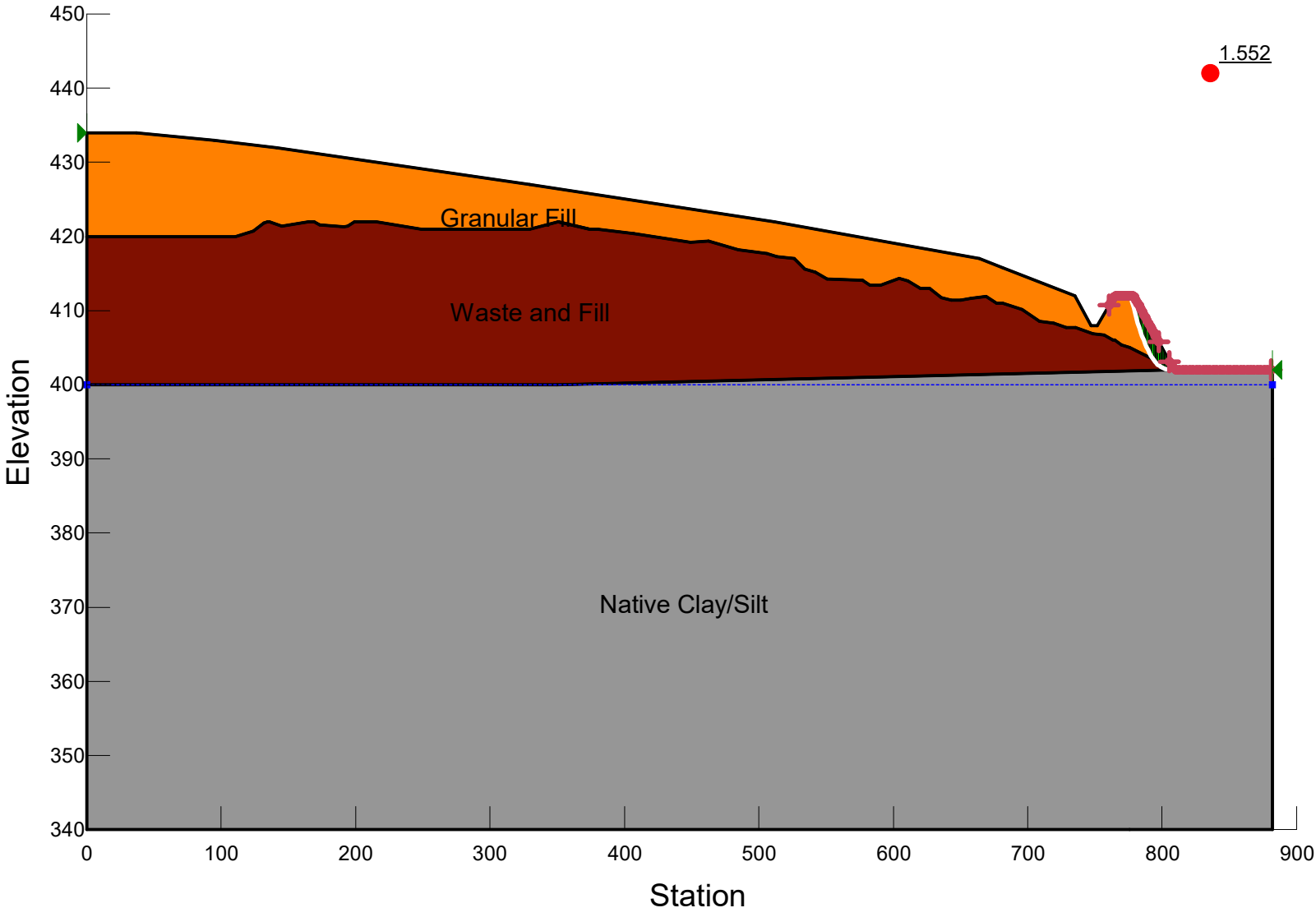
Project: Utica City Dump Remedial Design
Project Number: 1940101207
Client: NYSDEC
Analysis Name: Seismic_Top



Project: Utica City Dump Remedial Design
Project Number: 1940101207
Client: NYSDEC
Analysis Name: Seismic_Swale



Project: Utica City Dump Remedial Design
Project Number: 1940101207
Client: NYSDEC
Analysis Name: Seismic_Toe



Appendix 10
Stormwater Evaluation Report

RAMBOLL

ENVIRONMENT
& HEALTH

FORMER UTICA CITY DUMP – STORMWATER EVALUATION REPORT APPENDIX

Project name	**Utica City Dump Remedial Design**
Project no.	**1940101207**
Document type	**Appendix**
Date	**June 17, 2025**
Prepared by	**Colin Stockdale**
Checked by	**Victor Warner**
Approved by	**Victor Warner**
Description	**Stormwater Model Summary**

1. Introduction

The former Utica City Dump in Utica, New York (Site #6-33-015) is undergoing implementation of a selected site remedy. The Site is defined in New York State Department of Environmental Conservation's (NYSDEC) Record of Decision (ROD) as the 74-acre portion of the landfill that reportedly received hazardous waste. The NYSDEC in consultation with Ramboll Americas Engineering Solutions, Inc. (Ramboll), has developed an Explanation of Significant Differences (ESD) to amend the ROD to include the closure of the entire dump site that is approximately 126 acres. Based on public tax maps, a 113.4-acre portion of the dump is owned by the City of Utica (City) and 12.6-acres are privately owned. The Site is located east of Leland Avenue along Incinerator Road and is bordered by the Erie Canal (to the north) and the Mohawk River (to the east and south). In accordance with the NYSDEC selected remedy recorded in the ROD and the ESD, the Site remedy includes construction of a modified evapotranspiration cover (ET Cover) over a consolidated waste footprint of 103 acres.

2. Objective

The primary objective of the work summarized in this appendix is to evaluate sizing of the proposed Site stormwater management structures. The proposed stormwater conveyance structures include vegetated swales with erosion control liners, smooth-interior polypropylene (PP) culverts, and outlet protection. Temporary berms around the Site perimeter are proposed to manage stormwater and sediment during construction. The primary objective of this appendix is to summarize the results of the proposed conditions and construction conditions stormwater models.

3. Existing and Proposed Conditions

Under existing conditions, stormwater runoff exits the Site and discharges into the Erie Canal to the north and the Mohawk River to the east and south.

Proposed conditions include an ET Cover design selected in the site remedy. The proposed cover system will be comprised of a 6-inch vegetated topsoil layer, 18-inch dredge material layer, and 8-oz geotextile separation layer.

Following implementation of the selected site remedy, vegetated swales will convey stormwater to fifteen smooth-interior culverts (two in the north, one in the east, and twelve in the south of the Site).

Stormwater passing through the culverts will be released onto outlet protection and exit the Site into the Mohawk River (east and south).

4. Methodology

4A. Modeling Program

Ramboll has developed two hydrologic models of the site using the Autodesk Storm and Sanitary Analysis (ASSA) software. One model evaluates stormwater conveyance through the Site for post-development conditions (final grades, established cap vegetation) and the other evaluates conditions during construction (final grades, cap vegetation not established). The Natural Resources Conservation Service (NRCS) Soil Conservation Service (SCS) Technical Release No. 55 (TR-55) hydrology method and NRCS SCS Technical Release No. 20 (TR-20) time of concentration (TOC) method were used to calculate proposed stormwater runoff rates.

4B. Model Inputs

4B-I. Drainage Areas

Site drainage areas were delineated in AutoCAD Civil 3D using the final grading plan of the Contract Drawings. The drainage areas were delineated based on their downstream stormwater conveyance structure and are shown on **Figure 1** and **Figure 2**. The ID and acreage of each drainage area are presented in **Table A** on **Figure 1** and **Table B** on **Figure 2**.

4B-II. Land Cover Type

Post-development land cover type was characterized using the proposed ET Cover for the Site referenced in **Section 3** of this memorandum. The cover was characterized as meadow based on the proposed vegetated topsoil layer. Land cover type during construction was characterized as newly graded cover.

4B-III. Hydrologic Soil Group

Hydrologic soil group (HSG) for the Site drainage areas was assumed to be soil group D. Soil group D was used as a conservative approach for sizing the stormwater system because it assumes the highest runoff potential.

4B-IV. Curve Number

Runoff curve number is a function of the land cover type and hydrologic soil. The post-development curve number for each drainage area is 78. The curve number representing conditions during construction is 94.

4B-V. Precipitation Event

The proposed Site stormwater features were evaluated for post-development conditions using a projected 100-year, 24-hour storm that would occur under the highest greenhouse gas emission scenario by the year 2070. The projected 100-yr, 24-hr storm was developed from the Northeast Regional Climate Center's Future Projections for Changing Climate Intensity Duration Frequency Curves for New York State (NRCC, 2015) (see **Attachment 1**). The intensity-duration-frequency

curve was created based on the projected rainfall intensity increase as a result of climate change from future greenhouse gas emission scenarios. Four different emission scenarios were developed by the Intergovernmental Panel on Climate Change (IPCC). The scenarios exemplify representative concentration pathways (RCPs) as greenhouse gas concentration trajectories. For the post-development stormwater model developed by Ramboll, the highest greenhouse gas emission scenario (RCP 8.5) was evaluated for the year 2070. The year 2070 was selected as a conservative approach because it was the furthest projected future intensity-duration-frequency curve available. The high RCP 8.5 100-year, 24-hour storm precipitation depth is 8.16 inches. The proposed stormwater conveyance structure sizing was evaluated using the high RCP 8.5 100-year, 24-hour storm as a conservative approach anticipating the most severe storm event.

The present-day, 2-year, 10-year, and 25-year, 24-hour storms were used to evaluate stormwater conveyance structures during construction conditions. The 24-hour precipitation depths for the 2-year, 10-year, and 25-year storms for Utica, NY are 2.46 inches, 3.50 inches, and 4.27 inches, respectively. Present-day precipitation depths were sourced from the Northeast Regional Climate Center Extreme Precipitation Tables (see **Attachment 2**). This information was used to generate precipitation intensity curves for the site. Storm intensity data for Oneida County, New York, was used from ASSA assuming an SCS Type II 24-hour storm distribution.

4B-V. Conveyance Structures

Vegetated conveyance swales are proposed to be installed with erosion control liners that remain in place until vegetation is established. Therefore, the model representing conditions during construction assumes that the swales are lined with an erosion control blanket (manning's roughness of 0.022) and the model representing conditions post-development assumes grass-lined swales (manning's roughness of 0.030).

The vegetated swales were sized in accordance with the following constraints, based on the design drawings:

- Height between 1 ft and 5 ft.
- Bottom width of 3 ft.
- Side slope (V:H) of 1:3.
- Permissible max velocity of 5 ft/s (USEPA, 2021).

5. Results

The ASSA American Standard Code for Information Interchange (ASCII) output report for post-development conditions under the high RCP 8.5 100-year, 24-hour storm is included as **Attachment 3**. The ASSA ASCII output reports for conditions during construction for the 2-year, 10-year, and 25-year, 24-hour storms are included as **Attachment 4**, **Attachment 5**, and **Attachment 6**, respectively.

Dimensions and post-development model results for the vegetated swales and smooth-interior culverts, based on the high RCP 8.5 100-year, 24-hour storm, are displayed in **Table 5-1** and **Table 5-2**, respectively.

Table 5-1: Vegetated Swales – Attributes and Model Results (High RCP 8.5 100-yr, 24-hr Storm)

Swale ID #	Height (ft)	Bottom Width (ft)	Side Slope (V:H) (ft)	Max Velocity (ft/s)	Max Flow (cfs)	Max/Design Flow Capacity (%)	Self-Cleaning Velocity (2-yr Storm) (ft/s)
1A	1.0	3.0	1:3	3.4	9	34	1.9
1B	2.0	3.0	1:3	3.0	33	53	1.8
1C	3.5	3.0	1:3	3.6	81	38	2.2
2	2.0	3.0	1:3	3.3	31	43	1.9
3	1.0	3.0	1:3	2.9	7	32	1.6
4A	1.5	3.0	1:3	3.1	31	85	1.8
4B	2.0	3.0	1:3	3.0	46	82	1.8
5	1.0	3.0	1:3	2.3	5	27	1.2
6	2.0	3.0	1:3	3.0	18	23	1.8
7	2.0	3.0	1:3	3.5	22	25	2.0
8	2.0	3.0	1:3	2.8	21	33	1.7
9	2.0	3.0	1:3	3.0	24	34	1.8
10	2.0	3.0	1:3	3.0	20	26	1.8
11A	1.5	3.0	1:3	3.2	31	86	1.9
11B	2.0	3.0	1:3	3.0	43	72	1.8
12	1.0	3.0	1:3	2.7	10	52	1.5
13	1.0	3.0	1:3	3.0	16	85	1.7
14	2.0	3.0	1:3	3.3	41	64	1.9
15	1.5	3.0	1:3	3.3	20	45	1.9
16	1.0	3.0	1:3	4.8	14	35	2.6
17	1.0	3.0	1:3	3.7	5	12	1.9
19A	1.5	3.0	1:3	3.0	22	61	1.8
19B	3.0	3.0	1:3	3.2	32	18	1.9
20A	1.0	3.0	1:3	2.2	8	52	1.3
20B	2.0	3.0	1:3	3.1	25	36	1.8
21	3.0	3.0	1:3	2.7	17	10	1.6
22	3.0	3.0	1:3	2.5	11	6	1.4
23A	1.0	3.0	1:3	2.2	8	49	1.2
23B	3.0	3.0	1:3	2.6	23	16	1.5
24	1.5	3.0	1:3	2.8	18	49	1.7
25	3.0	3.0	1:3	2.6	37	30	1.6
26	2.0	3.0	1:3	2.9	16	20	1.7
27	2.0	3.0	1:3	2.7	11	14	1.6
28	1.0	3.0	1:3	2.3	7	40	1.3
29	1.0	3.0	1:3	3.5	16	72	2.0
30	2.0	3.0	1:3	3.1	4	2	1.6
31	2.0	3.0	1:3	2.2	3	3	1.1
32A	1.0	3.0	1:3	2.3	7	40	1.3
32B	2.0	3.0	1:3	3.7	17	16	2.1
33A	1.0	3.0	1:3	2.2	8	48	1.3
33B	2.0	3.0	1:3	3.2	40	54	1.9
34	3.0	3.0	1:3	1.8	3	2	1.0
35	3.0	3.0	1:3	1.7	3	1	0.9
36	2.0	3.0	1:3	2.3	9	13	1.3

Table 5-2: Smooth HDPE Culverts – Dimensions and Attributes (High RCP 8.5 100-yr, 24-hr Storm)

Culvert #	Barrels	Nominal ID (in)	Outer Diam. (in)	Inner Diam. (in)	Cover Depth (ft)	Max Velocity (ft/s)	Max Flow (cfs)	Max/Design Flow Capacity (%)	Self-Cleaning Velocity (2-yr Storm) (ft/s)
1A-1B-1C-2	2	36	41.50	36.00	3.0	7.6	81	85	4.5
3-4A-4B-5	1	36	41.50	36.00	1.0	15.0	59	58	8.7
6-7	1	36	41.50	36.00	1.0	13.8	40	39	7.8
8-9	1	36	41.50	36.00	1.0	14.2	45	43	8.1
10-11A-11B-12	1	36	41.50	36.00	1.0	15.7	72	70	9.2
13-14-15	1	36	41.50	36.00	1.0	16.1	77	74	9.5
16-17	1	24	28.00	24.10	1.7	11.8	19	50	6.7
19A-19B-22	1	36	41.50	36.00	3.5	10.6	43	60	6.1
20A-20B-21	1	36	41.50	36.00	2.5	13.0	42	45	7.4
23A-23B-27	1	36	41.50	36.00	2.5	12.6	34	35	7.1
24-25-26-28_31	1	36	41.50	36.00	2.5	14.3	56	58	8.2
29-30	2	18	21.40	18.20	1.2	10.7	20	52	6.1
32A-32B	1	18	21.40	18.20	1.2	12.1	17	90	7.3
35-36	1	24	28.00	24.10	3.7	9.6	12	35	5.5
33A-33B-34-18	2	24	28.00	24.10	1.7	10.7	43	69	6.2

6. Discussion

6A. Self-Cleaning Velocity

The proposed stormwater conveyance system is considered a "dry" system because it does not experience a constant water flow. When a stormwater system is dry, conveyance structures (such as swales and culverts) can accumulate sediment and debris.

To address the potential build-up, conveyance structures were evaluated to determine if they achieve a self-cleaning velocity greater than 2 ft/s during the present-day 2-yr, 24-hr storm event, for post-development conditions. As shown in **Table 5-1**, most vegetated swales do not achieve the 2 ft/s self-cleaning velocity. While these swales are not expected to accumulate noticeable build-up post-development, future maintenance and cleaning may be required. As shown in **Table 5-2**, all the smooth-interior culverts achieve the 2 ft/s self-cleaning velocity for the 2-yr, 24-hr storm.

6B. Temporary Perimeter Berms

Prior to grading of the proposed ET cover system, it is proposed that permanent and temporary perimeter berms be constructed to contain the Site runoff volume up to the 10-year, 24-hour storm. Perimeter berms are proposed as an erosion and sediment control alternative to sediment traps and sediment basins, driven by the Site topography. Permanent berms shall be constructed to final grade elevations of the proposed access road, as shown the Contract Drawings. Temporary berms shall be constructed in addition to the permanent berms at select locations and shall remain in place until vegetation has been established on the Site. The locations of the proposed temporary perimeter berms are shown on **Figure 1** and **Figure 2**. The maximum elevation, height, top width, and side slope for each temporary berm are provided in **Table 6-1**. Maximum temporary berm height is relative to final grade elevations.

Table 6-1: Temporary Perimeter Berms – Dimensions and Attributes

Berm ID	Max Elevation (ft)	Max Height (ft)	Top Width (ft)	Side Slope (V:H)	Length (ft)
TB-1	406.00	1.00	3.0	1:3	175
TB-2	409.00	5.00	3.0	1:3	410
TB-3	410.00	3.00	3.0	1:3	75
TB-4	407.75	1.75	3.0	1:3	370
TB-5	412.00	0.50	3.0	1:3	6,120

7. Conclusion

The proposed stormwater conveyance system comprised of vegetated swales and smooth-interior culverts is sufficiently sized for the projected high RCP 8.5 100-yr, 24-hr storm for post-construction conditions. The stormwater conveyance system is also sufficiently sized for conditions during construction.

8. References

NRCC. 2015. *Intensity Duration Frequency Curves for New York State. Future Projections for a Changing Climate.* http://ny-idf-projections.nrcc.cornell.edu/. Accessed March 2023.

NYSDOT. 2015. *Geotechnical Design Procedure: Bank and Channel Protective Lining Design Procedures. GDP-10, Revision #3.* https://www.dot.ny.gov/divisions/engineering/technical-services/technical-services-repository/GDP-10b.pdf. Accessed March 2023

USEPA. 2021. *Stormwater Best Management Practice. Grass-lined Channels.* https://www.epa.gov/system/files/documents/2021-11/bmp-grass-lined-channels.pdf. Accessed March 2023.

C:\Div7\Utica Dump\Design Drawings\Stotmwater Model\194010\1207- Stormwater Drainage Area Fig 1- Fig2-2.dwg

DESIGNER: HULLMW

DATED: 4/4/2025

PROJECT: 194010207

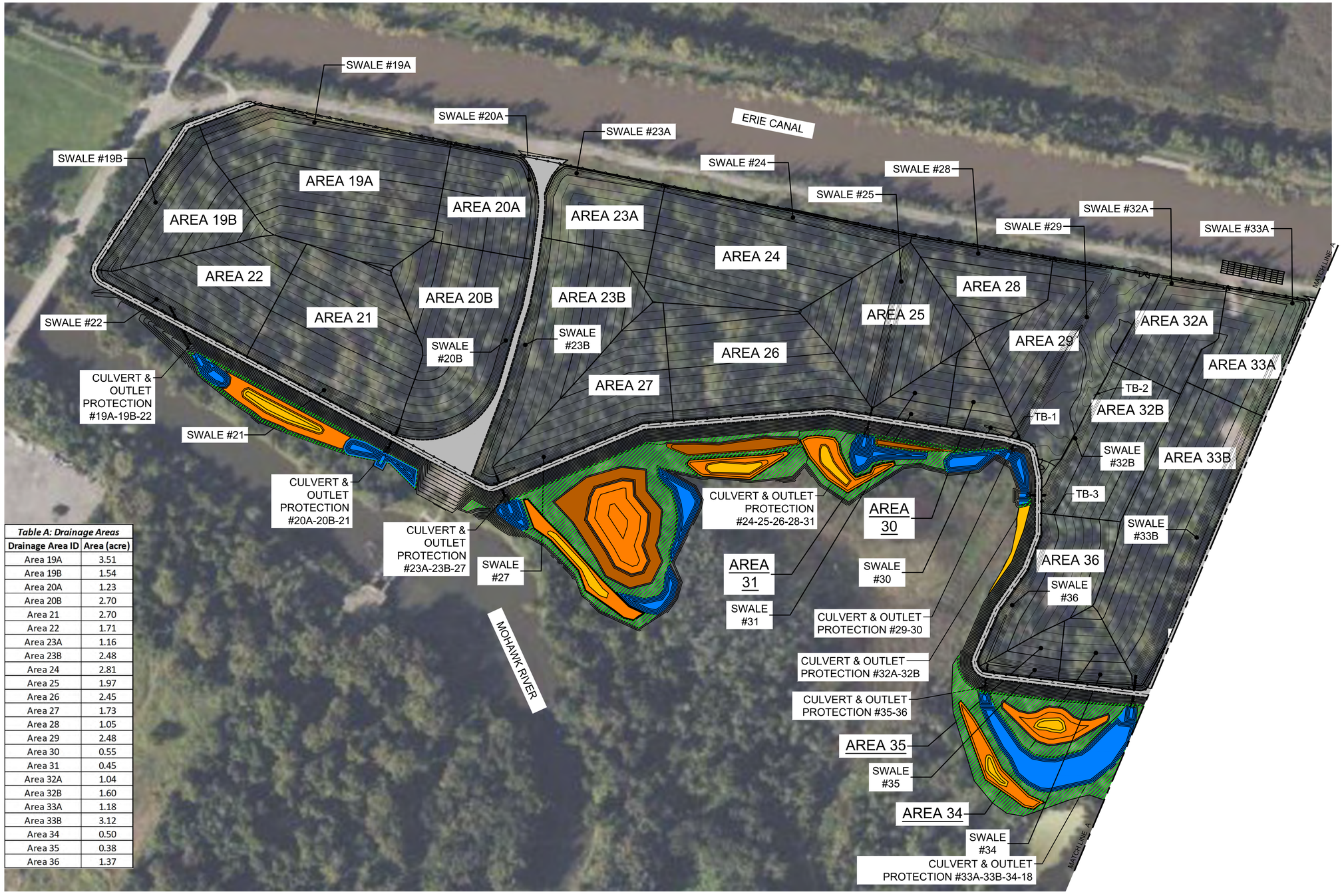


Table A: Drainage Areas	
Drainage Area ID	**Area (acre)**
Area 19A	3.51
Area 19B	1.54
Area 20A	1.23
Area 20B	2.70
Area 21	2.70
Area 22	1.71
Area 23A	1.16
Area 23B	2.48
Area 24	2.81
Area 25	1.97
Area 26	2.45
Area 27	1.73
Area 28	1.05
Area 29	2.48
Area 30	0.55
Area 31	0.45
Area 32A	1.04
Area 32B	1.60
Area 33A	1.18
Area 33B	3.12
Area 34	0.50
Area 35	0.38
Area 36	1.37

STORMWATER DRAINAGE AREA NOTES:

1. TEMPORARY BERMS SHALL BE CONSTRUCTED. THE BERMS SHALL REMAIN IN PLACE UNTIL VEGETATION HAS BEEN ESTABLISHED

60 0 60 60
SCALE IN FEET

LEGEND

- CULVERT
- VEGETATIVE SWALE
- PROPOSED ACCESS ROAD
- PROPOSED CONTOUR
- RIP-RAP SWALE
- TB-1 TEMPORARY BERM
- ZONE A - SHALLOW EMERGENT MARSH
- ZONE B - WET MEADOW
- ZONE C - SCRUB SHRUB WETLAND
- ZONE D - FLOODPLAIN FOREST
- ZONE E - SUBAQUEOUS WETLAND

PROPOSED STORMWATER DRAINAGE AREAS AND FEATURES

UTICA CITY DUMP REMEDIAL DESIGN

FORMER UTICA CITY DUMP
ONEIDA COUNTY, NEW YORK

FIGURE 1

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

RAMBOLL

C:\Div7\1\Utica Dump\Design Drawings\Stotmwater Model\1940101207- Stormwater Drainage Area Fig 1- Fig2-2.dwg

DESIGNER: HULLMW

DATED: 4/4/2025

PROJECT: 1940101207

MATCH LINE A

MATCH LINE A

SWALE #1A
SWALE #1B
TB-5
SWALE #1C
ERIE CANAL
STORMWATER TRANSFER PIPES #38 - 39
CULVERT & OUTLET PROTECTION #1A-1B-1C-2
SWALE #3
CULVERT & RIP-RAP APRON #3-4A-4B-5
SWALE #5
SWALE #6
SWALE #2
STORMWATER TRANSFER PIPE #37
SWALE #14
SWALE #4B
SWALE #4A
CULVERT & OUTLET PROTECTION #6-7
SWALE #7
SWALE #16
TB-4
TB-5
SWALE #17
CULVERT & OUTLET PROTECTION #16-17
SWALE #15
CULVERT & OUTLET PROTECTION #13-14-15
SWALE #11A
SWALE #11B
SWALE #8
SWALE #13
SWALE #12
CULVERT & OUTLET PROTECTION #10-11A-11B-12
SWALE #10
TB-5
CULVERT & OUTLET PROTECTION #8-9
SWALE #9

AREA 1A
AREA 1B
AREA 1C
AREA 18
AREA 2
AREA 3
AREA 4B
AREA 5
AREA 16
AREA 15
AREA 17
AREA 14
AREA 4A
AREA 6
AREA 11A
AREA 7
AREA 13
AREA 12
AREA 11B
AREA 8
AREA 10
AREA 9

Table B: Drainage Areas

Drainage Area ID	Area (acre)
Area 1A	1.45
Area 1B	3.76
Area 1C	2.90
Area 2	4.94
Area 3	1.15
Area 4A	4.96
Area 4B	2.41
Area 5	0.80
Area 6	2.83
Area 7	3.59
Area 8	3.45
Area 9	3.81
Area 10	3.16
Area 11A	5.05
Area 11B	1.73
Area 12	1.54
Area 13	2.52
Area 14	6.54
Area 15	3.20
Area 16	2.17
Area 17	0.76
Area 18	1.91

STORMWATER DRAINAGE AREA NOTES:

1. TEMPORARY BERMS SHALL BE CONSTRUCTED. THE BERMS SHALL REMAIN IN PLACE UNTIL VEGETATION HAS BEEN ESTABLISHED

120 0 120 120
SCALE IN FEET

LEGEND

- CULVERT
- VEGETATIVE SWALE
- PROPOSED ACCESS ROAD
- PROPOSED CONTOUR
- RIP-RAP SWALE
- TB-1 TEMPORARY BERM
- ZONE A - SHALLOW EMERGENT MARSH
- ZONE B - WET MEADOW
- ZONE C - SCRUB SHRUB WETLAND
- ZONE D - FLOODPLAIN FOREST
- ZONE E - SUBAQUEOUS WETLAND

PROPOSED STORMWATER DRAINAGE AREAS AND FEATURES

UTICA CITY DUMP REMEDIAL DESIGN

FORMER UTICA CITY DUMP
ONEIDA COUNTY, NEW YORK

FIGURE 2

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

RAMBOLL

ATTACHMENTS

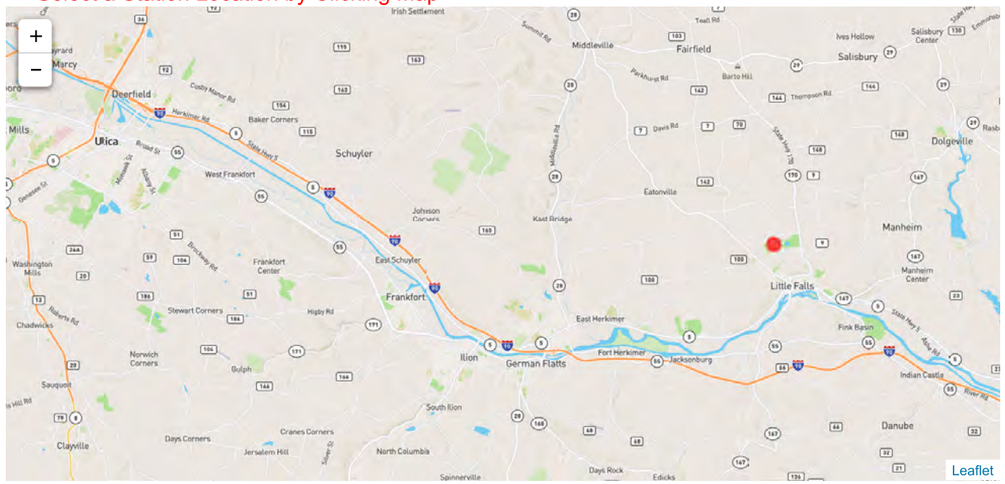
ATTACHMENT 1 - NY PROJECTED IDF CURVES
ATTACHMENT 2 - EXTREME PRECIPITATION TABLES
ATTACHMENT 3 - ASSA OUTPUT REPORT - POST-DEVELOPMENT - PROJECTED HIGH RCP 8.5 100-YR, 24-HR STORM
ATTACHMENT 4 - ASSA OUTPUT REPORT - DURING CONSTRUCTION - 2-YR, 24-HR STORM
ATTACHMENT 5 - ASSA OUTPUT REPORT - DURING CONSTRUCTION - 10-YR, 24-HR STORM
ATTACHMENT 6 - ASSA OUTPUT REPORT - DURING CONSTRUCTION - 25-YR, 24-HR STORM

ATTACHMENT 1
NY PROJECTED IDF CURVES



Station-specific IDF Graphs | Statewide Maps of Projected Changes | Probability of Occurrence | Technical Document

Select a Station Location by Clicking Map



Select a RETURN PERIOD

○ 2-yr ○ 5-yr ○ 10-yr ○ 25-yr ○ 50-yr ◉ 100-yr

Select an EMISSION SCENARIO

◉ High RCP 8.5 ⓘ
○ Low RCP 4.5 ⓘ

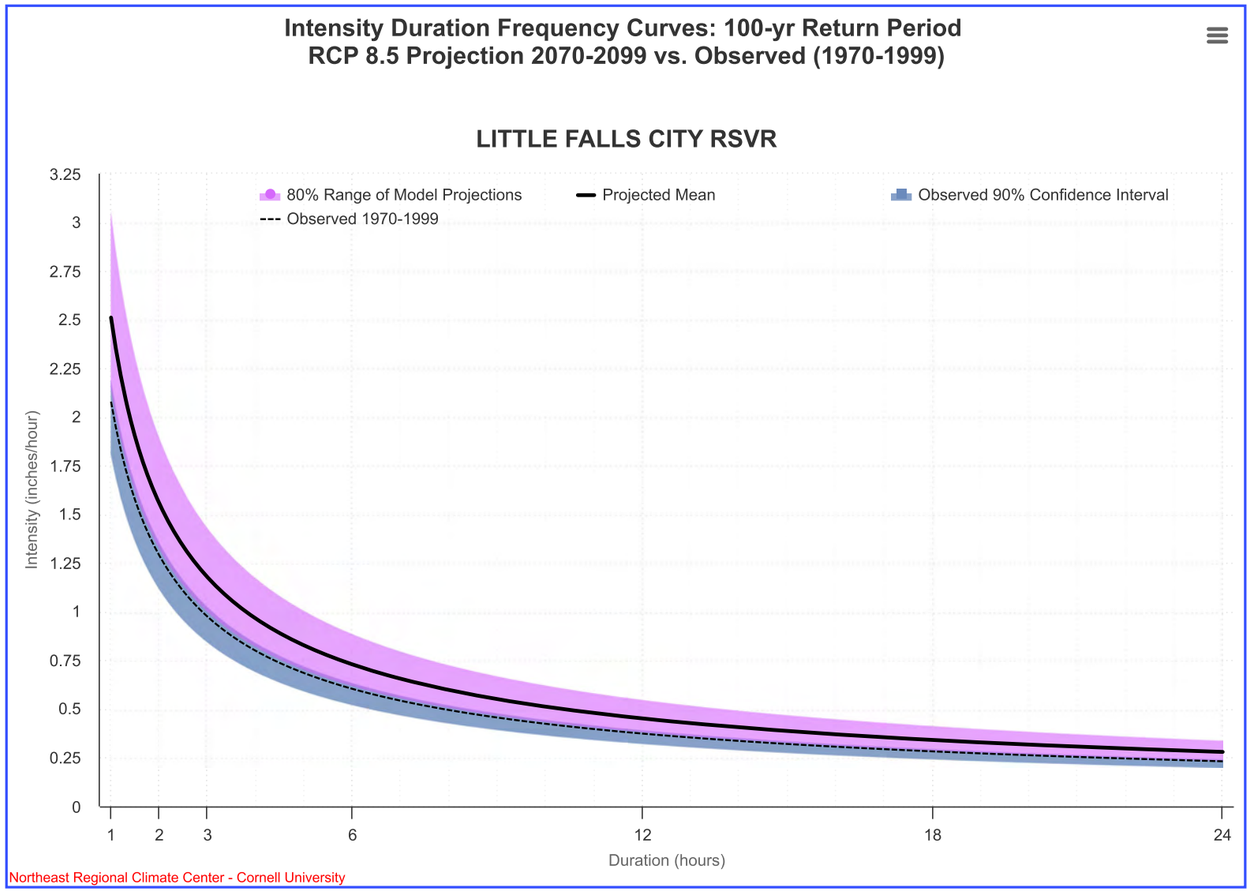
Select a TIME PERIOD

○ 2010-2039
○ 2040-2069
◉ 2070-2099

Show NOAA Atlas 14 IDF ⓘ ☐

Need Help? View an Instructional Video

About this Project Numerous studies have documented significant increases in both the frequency and magnitude of extreme precipitation in the northeastern U.S. since the mid-to-late 20th century. The most recent assessment from the Intergovernmental Panel on Climate Change (IPCC) suggests that the frequency and magnitude of extreme precipitation in this region will likely continue to increase throughout the 21st century. Such changes could greatly exacerbate the societal impacts of extreme precipitation in the future. In consideration of these impacts, the Northeast Regional Climate Center (NRCC) has partnered with the New York State Energy Research and Development Authority (NYSERDA) to downscale global climate model output and create extreme precipitation projections that will ultimately be incorporated into climate change adaptation planning for New York State. Read more...



	Projected 2070-2099 Intensity Ensemble Member ⓘ			Observed 1970-1999 Intensity with Confidence Interval (CI) Bounds ⓘ		
Duration (hrs)	10th	Mean	90th	Low CI	Mean	High CI
1	2.14	2.51	3.06	1.80	2.08	2.19
2	1.33	1.56	1.89	1.12	1.29	1.36
3	1.00	1.18	1.43	0.84	0.97	1.03
6	0.62	0.73	0.89	0.52	0.60	0.64
12	0.38	0.45	0.55	0.32	0.37	0.39
18	0.29	0.34	0.42	0.24	0.28	0.30
24	0.24	0.28	0.34	0.20	0.23	0.24

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1123 Bradfield Hall, Cornell University,
Ithaca, NY 14853 | Phone: 607-255-1751

NEW YORK STATE OF OPPORTUNITY. NYSERDA Supported

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ATTACHMENT 2
EXTREME PRECIPITATION TABLES

Extreme Precipitation in New York & New England

An Interactive Web Tool for Extreme Precipitation Analysis

About this Project | **Data & Products** | **Daily Monitoring** | **Documentation**

Select Product

- Extreme Precipitation Tables - HTML
- Extreme Precipitation Tables - Text/CSV
- Partial Duration Series - by Point
- Partial Duration Series - by Station
- Distribution Curves - Graphical
- Distribution Curves - Text/TBL
- Intensity Frequency Duration Graphs
- Precipitation Frequency Duration Graphs
- GIS Data Files
- Regional/State Maps

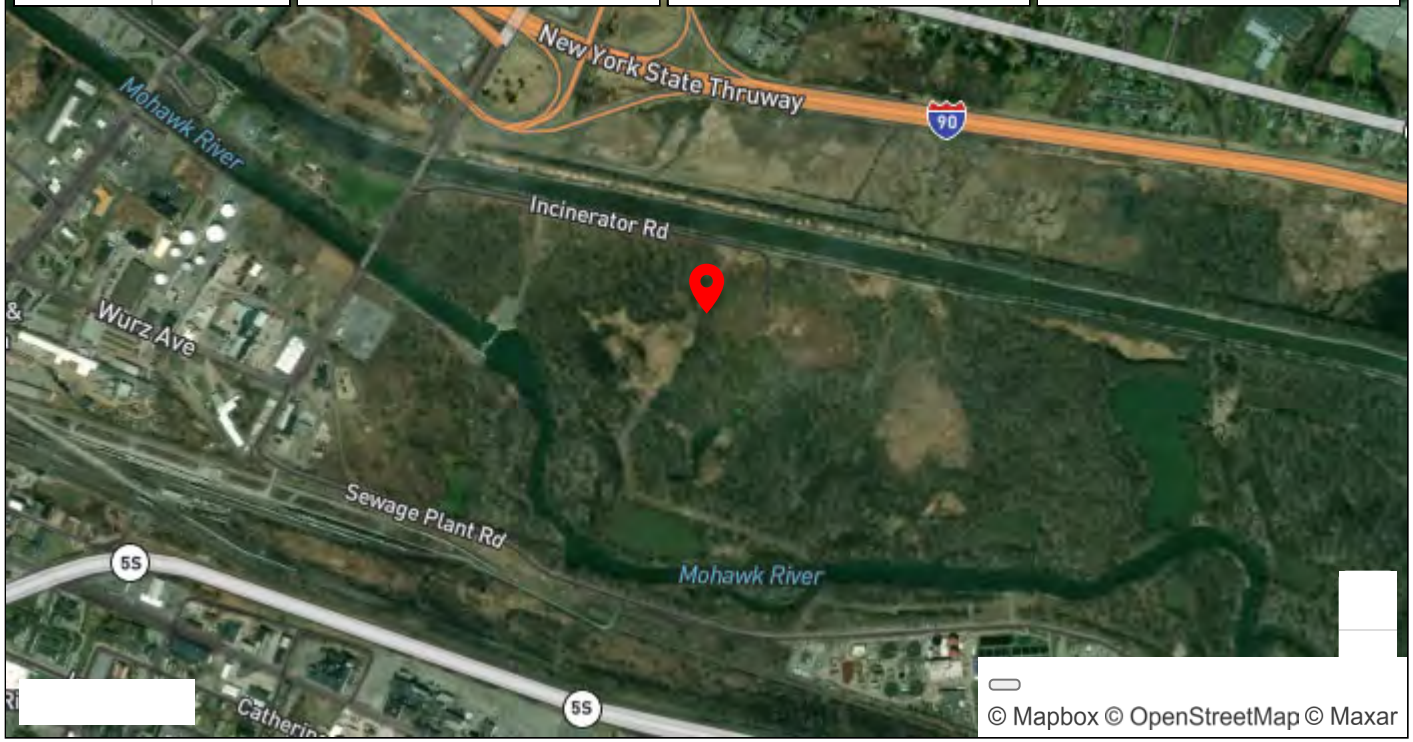
Select Location *Double-click map to place a marker, or enter address or latitude/longitude.*

Hybrid | Map | Satellite | Terrain

Locate by Address

Locate by Lat/Lon 43.10(°N -75.20 °W

Locate by State/County



Select Options

Smoothing Yes

Delivery Popup

Submit

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Metadata for Point

Smoothing	Yes
State	New York
Location	New York, United States
Latitude	43.107 degrees North
Longitude	75.202 degrees West
Elevation	120 feet
Date/Time	Thu Apr 04 2024 10:05:03 GMT-0400 (Eastern Daylight Time)

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.27	0.42	0.52	0.69	0.86	1.06	**1yr**	0.74	0.95	1.21	1.48	1.79	2.16	2.47	**1yr**	1.91	2.38	2.82	3.41	4.05	**1yr**
2yr	0.33	0.50	0.62	0.82	1.03	1.28	**2yr**	0.89	1.14	1.45	1.75	2.08	2.46	2.76	**2yr**	2.18	2.65	3.15	3.81	4.41	**2yr**
5yr	0.39	0.61	0.76	1.02	1.31	1.62	**5yr**	1.13	1.43	1.84	2.20	2.59	3.01	3.39	**5yr**	2.66	3.26	3.81	4.52	5.21	**5yr**
10yr	0.45	0.70	0.89	1.21	1.57	1.95	**10yr**	1.35	1.70	2.21	2.62	3.05	3.50	3.97	**10yr**	3.10	3.82	4.40	5.14	5.91	**10yr**
25yr	0.54	0.86	1.09	1.51	2.00	2.49	**25yr**	1.72	2.14	2.81	3.30	3.79	4.27	4.89	**25yr**	3.78	4.70	5.33	6.10	6.98	**25yr**
50yr	0.61	0.99	1.27	1.78	2.40	2.99	**50yr**	2.07	2.55	3.38	3.93	4.46	4.97	5.72	**50yr**	4.40	5.50	6.17	6.94	7.92	**50yr**
100yr	0.72	1.16	1.49	2.11	2.88	3.58	**100yr**	2.48	3.03	4.04	4.67	5.25	5.79	6.70	**100yr**	5.13	6.44	7.14	7.89	8.99	**100yr**
200yr	0.83	1.35	1.75	2.51	3.46	4.31	**200yr**	2.99	3.61	4.84	5.55	6.18	6.75	7.84	**200yr**	5.97	7.54	8.26	8.99	10.20	**200yr**
500yr	1.02	1.67	2.18	3.16	4.41	5.48	**500yr**	3.81	4.56	6.13	6.96	7.66	8.26	9.66	**500yr**	7.31	9.29	10.02	10.67	12.06	**500yr**

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.22	0.34	0.41	0.55	0.68	0.77	**1yr**	0.59	0.75	0.93	1.26	1.49	1.81	2.16	**1yr**	1.61	2.07	2.63	3.09	3.75	**1yr**
2yr	0.31	0.49	0.60	0.81	1.00	1.14	**2yr**	0.86	1.11	1.25	1.56	1.90	2.39	2.68	**2yr**	2.11	2.58	3.07	3.73	4.32	**2yr**
5yr	0.35	0.55	0.68	0.93	1.18	1.32	**5yr**	1.02	1.29	1.48	1.82	2.20	2.77	3.12	**5yr**	2.45	3.00	3.57	4.25	4.93	**5yr**
10yr	0.38	0.59	0.73	1.02	1.32	1.48	**10yr**	1.14	1.45	1.67	2.05	2.47	3.07	3.48	**10yr**	2.72	3.35	3.97	4.70	5.44	**10yr**
25yr	0.43	0.66	0.82	1.17	1.54	1.70	**25yr**	1.33	1.66	1.94	2.38	2.85	3.53	4.05	**25yr**	3.13	3.89	4.55	5.36	6.19	**25yr**
50yr	0.47	0.71	0.88	1.27	1.71	1.89	**50yr**	1.48	1.85	2.19	2.67	3.19	3.93	4.52	**50yr**	3.48	4.35	5.06	5.95	6.84	**50yr**
100yr	0.51	0.77	0.96	1.39	1.90	2.09	**100yr**	1.64	2.05	2.45	2.97	3.57	4.40	5.06	**100yr**	3.89	4.86	5.65	6.58	7.55	**100yr**
200yr	0.54	0.82	1.04	1.50	2.10	2.32	**200yr**	1.81	2.26	2.76	3.31	4.00	4.91	5.66	**200yr**	4.34	5.44	6.27	7.30	8.35	**200yr**
500yr	0.61	0.90	1.16	1.69	2.40	2.64	**500yr**	2.07	2.58	3.21	3.77	4.66	5.68	6.54	**500yr**	5.03	6.29	7.22	8.41	9.53	**500yr**

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.31	0.49	0.59	0.80	0.98	1.13	**1yr**	0.85	1.10	1.25	1.55	1.81	2.31	2.65	**1yr**	2.05	2.55	3.00	3.69	4.35	**1yr**
2yr	0.35	0.54	0.66	0.89	1.10	1.24	**2yr**	0.95	1.21	1.36	1.68	2.04	2.57	2.87	**2yr**	2.27	2.76	3.26	3.92	4.53	**2yr**
5yr	0.43	0.67	0.83	1.14	1.45	1.61	**5yr**	1.25	1.57	1.75	2.20	2.66	3.30	3.68	**5yr**	2.92	3.54	4.08	4.81	5.52	**5yr**
10yr	0.52	0.80	0.99	1.38	1.78	1.98	**10yr**	1.54	1.94	2.15	2.71	3.24	3.99	4.46	**10yr**	3.54	4.29	4.85	5.62	6.42	**10yr**
25yr	0.67	1.02	1.27	1.81	2.38	2.63	**25yr**	2.06	2.57	2.84	3.59	4.22	5.15	5.75	**25yr**	4.56	5.53	6.12	6.88	7.83	**25yr**
50yr	0.82	1.24	1.55	2.22	2.99	3.27	**50yr**	2.58	3.20	3.49	4.46	5.15	6.25	6.98	**50yr**	5.53	6.71	7.28	8.04	9.10	**50yr**
100yr	1.00	1.51	1.89	2.74	3.75	4.06	**100yr**	3.24	3.97	4.31	5.54	6.29	7.58	8.48	**100yr**	6.71	8.16	8.69	9.38	10.57	**100yr**
200yr	1.22	1.84	2.33	3.37	4.71	5.05	**200yr**	4.06	4.94	5.31	6.90	7.70	9.19	10.31	**200yr**	8.13	9.92	10.38	10.94	12.26	**200yr**

ATTACHMENT 3
ASSA OUTPUT REPORT - POST-DEVELOPMENT - 100-YR, 24-HR HIGH RCP 8.5 STORM

Autodesk® Storm and Sanitary Analysis 2016 - Version 13.4.133 (Build 0)

****
Project Description
****
File Name ..... Proposed _Landfill_SW_60 Percent Design_100-yr_Future_High RCP.SPF
Description ..... Post-Devel., 100-yr 24-hr, High RCP 8.5

****
Analysis Options
****
Flow Units ..... cfs
Subbasin Hydrograph Method. SCS TR-20
Time of Concentration..... SCS TR-55
Link Routing Method ..... Kinematic Wave
Storage Node Exfiltration.. Constant rate, wetted area
Starting Date FEB-01-2024 00:00:00
Ending Date FEB-02-2024 00:00:00
Report Time Step 00:01:00

****
Element Count
****
Number of rain gages 0
Number of subbasins 45
Number of nodes 76
Number of links 59

****
Subbasin Summary
****

Subbasin ID	Total Area acres	Peak Rate Factor
Area_10	3.16	484.00
Area_11A	5.05	484.00
Area_11B	1.73	484.00
Area_12	1.54	484.00
Area_13	2.52	484.00
Area_14	6.54	484.00
Area_15	3.20	484.00
Area_16	2.17	484.00
Area_17	0.76	484.00
Area_18	1.91	484.00
Area_19A	3.51	484.00
Area_19B	1.54	484.00
Area_1A	1.45	484.00
Area_1B	3.76	484.00
Area_1C	2.90	484.00
Area_2	4.94	484.00
Area_20A	1.24	484.00
Area_20B	2.70	484.00
Area_21	2.69	484.00
Area_22	1.71	484.00
Area_23A	1.16	484.00
Area_23B	2.48	484.00
Area_24	2.81	484.00
Area_25	1.97	484.00
Area_26	2.45	484.00
Area_27	1.73	484.00
Area_28	1.05	484.00

Area_29	2.48	484.00
Area_3	1.15	484.00
Area_30	0.55	484.00
Area_31	0.45	484.00
Area_32A	1.04	484.00
Area_32B	1.60	484.00
Area_33A	1.18	484.00
Area_33B	3.12	484.00
Area_34	0.50	484.00
Area_35	0.38	484.00
Area_36	1.37	484.00
Area_4A	4.96	484.00
Area_4B	2.41	484.00
Area_5	0.80	484.00
Area_6	2.83	484.00
Area_7	3.58	484.00
Area_8	3.44	484.00
Area_9	3.81	484.00

****
Node Summary
****

Node ID	Element Type	Invert Elevation ft	Maximum Elev. ft	Ponded Area ft²	External Inflow
Node_ISW_10	JUNCTION	410.00	412.00	0.00	
Node_ISW_11A	JUNCTION	409.00	410.50	0.00	
Node_ISW_11B	JUNCTION	408.00	410.00	0.00	
Node_ISW_12	JUNCTION	410.00	411.00	0.00	
Node_ISW_13	JUNCTION	410.00	411.00	0.00	
Node_ISW_14	JUNCTION	409.00	411.00	0.00	
Node_ISW_15	JUNCTION	411.00	412.50	0.00	
Node_ISW_16	JUNCTION	410.00	411.00	0.00	
Node_ISW_17	JUNCTION	405.00	406.00	0.00	
Node_ISW_19A	JUNCTION	410.00	411.50	0.00	
Node_ISW_19B	JUNCTION	407.00	410.00	0.00	
Node_ISW_1A	JUNCTION	415.00	416.00	0.00	
Node_ISW_1B	JUNCTION	409.00	411.00	0.00	
Node_ISW_1C	JUNCTION	406.50	410.00	0.00	
Node_ISW_2	JUNCTION	409.00	411.00	0.00	
Node_ISW_20A	JUNCTION	410.00	411.00	0.00	
Node_ISW_20B	JUNCTION	408.00	410.00	0.00	
Node_ISW_21	JUNCTION	407.00	410.00	0.00	
Node_ISW_22	JUNCTION	407.00	410.00	0.00	
Node_ISW_23A	JUNCTION	409.00	410.00	0.00	
Node_ISW_23B	JUNCTION	407.00	410.00	0.00	
Node_ISW_24	JUNCTION	409.00	410.50	0.00	
Node_ISW_25	JUNCTION	406.00	410.00	0.00	
Node_ISW_26	JUNCTION	408.00	410.00	0.00	
Node_ISW_27	JUNCTION	408.00	410.00	0.00	
Node_ISW_28	JUNCTION	408.00	409.00	0.00	
Node_ISW_29	JUNCTION	408.00	409.00	0.00	
Node_ISW_3	JUNCTION	410.00	411.00	0.00	
Node_ISW_30	JUNCTION	407.00	409.00	0.00	
Node_ISW_31	JUNCTION	407.00	409.00	0.00	
Node_ISW_32A	JUNCTION	409.00	410.00	0.00	
Node_ISW_32B	JUNCTION	407.00	409.00	0.00	
Node_ISW_33A	JUNCTION	409.00	410.00	0.00	
Node_ISW_33B	JUNCTION	407.00	409.00	0.00	
Node_ISW_34	JUNCTION	406.00	409.00	0.00	
Node_ISW_35	JUNCTION	406.00	409.00	0.00	
Node_ISW_36	JUNCTION	407.00	409.00	0.00	
Node_ISW_4A	JUNCTION	409.00	410.50	0.00	
Node_ISW_4B	JUNCTION	408.00	410.00	0.00	
Node_ISW_5	JUNCTION	410.00	411.00	0.00	

Node_ISW_6	JUNCTION	410.00	412.00	0.00
Node_ISW_7	JUNCTION	410.00	412.00	0.00
Node_ISW_8	JUNCTION	410.00	412.00	0.00
Node_ISW_9	JUNCTION	410.00	412.00	0.00
Node_P_10_11_12	JUNCTION	407.00	410.00	0.00
Node_P_13_14_15	JUNCTION	407.00	410.00	0.00
Node_P_16_17	JUNCTION	402.00	405.00	0.00
Node_P_19A_19B_22	JUNCTION	405.00	408.00	0.00
Node_P_1A_1B_1C_2	JUNCTION	405.00	408.50	0.00
Node_P_20A_20B_21	JUNCTION	405.00	408.00	0.00
Node_P_23A_23B_27	JUNCTION	405.00	408.00	0.00
Node_P_24_25_26_28_31	JUNCTION	405.00	408.00	0.00
Node_P_29_30	JUNCTION	402.00	405.00	0.00
Node_P_3_4A_4B_5	JUNCTION	407.00	410.00	0.00
Node_P_32A_32B	JUNCTION	402.00	405.00	0.00
Node_P_33A_33B_34_18	JUNCTION	404.00	408.00	0.00
Node_P_35_36	JUNCTION	405.00	408.00	0.00
Node_P_6_7	JUNCTION	407.00	410.00	0.00
Node_P_8_9	JUNCTION	407.00	410.00	0.00
Out_18	OUTFALL	0.00	0.00	0.00
P_10_11_12	OUTFALL	406.00	409.00	0.00
P_13_14_15	OUTFALL	406.00	409.00	0.00
P_16_17	OUTFALL	401.00	403.01	0.00
P_19A_19B_22	OUTFALL	404.00	407.00	0.00
P_1A_1B_1C_2	OUTFALL	404.00	407.00	0.00
P_20A_20B_21	OUTFALL	404.00	407.00	0.00
P_23A_23B_27	OUTFALL	404.00	407.00	0.00
P_24_25_26_28_31	OUTFALL	404.00	407.00	0.00
P_29_30	OUTFALL	401.00	402.52	0.00
P_3_4A_4B_5	OUTFALL	406.00	409.00	0.00
P_32A_32B	OUTFALL	401.00	402.52	0.00
P_33A_33B_34_18	OUTFALL	403.00	405.01	0.00
P_35_36	OUTFALL	404.00	406.01	0.00
P_6_7	OUTFALL	406.00	409.00	0.00
P_8-9	OUTFALL	406.00	409.00	0.00
Swale Storage	STORAGE	0.00	6.00	0.00

****
Link Summary
****

Link ID	From Node	To Node	Element Type	Length ft	Slope %	Manning's Roughness
ISW_10	Node_ISW_10	Node_P_10_11_12	CHANNEL	515.0	0.5825	0.0300
ISW_11A	Node_ISW_11A	Node_ISW_11B	CHANNEL	200.0	0.5000	0.0300
ISW_11B	Node_ISW_11B	Node_P_10_11_12	CHANNEL	275.0	0.3636	0.0300
ISW_12	Node_ISW_12	Node_P_10_11_12	CHANNEL	405.0	0.7407	0.0300
ISW_13	Node_ISW_13	Node_P_13_14_15	CHANNEL	420.0	0.7143	0.0300
ISW_14	Node_ISW_14	Node_P_13_14_15	CHANNEL	460.0	0.4348	0.0300
ISW_15	Node_ISW_15	Node_P_13_14_15	CHANNEL	555.0	0.7207	0.0300
ISW_16	Node_ISW_16	Node_P_16_17	CHANNEL	265.0	3.0189	0.0300
ISW_17	Node_ISW_17	Node_P_16_17	CHANNEL	90.0	3.3333	0.0300
ISW_19A	Node_ISW_19A	Node_ISW_19B	CHANNEL	600.0	0.5000	0.0300
ISW_19B	Node_ISW_19B	Node_P_19A_19B_22	CHANNEL	390.0	0.5128	0.0300
ISW_1A	Node_ISW_1A	Node_ISW_1B	CHANNEL	390.0	1.5385	0.0300
ISW_1B	Node_ISW_1B	Node_ISW_1C	CHANNEL	630.0	0.3968	0.0300
ISW_1C	Node_ISW_1C	Node_P_1A_1B_1C_2	CHANNEL	415.0	0.3614	0.0300
ISW_2	Node_ISW_2	Node_ISW_1C	CHANNEL	370.0	0.5405	0.0300
ISW_20A	Node_ISW_20A	Node_ISW_20B	CHANNEL	405.0	0.4938	0.0300
ISW_20B	Node_ISW_20B	Node_P_20A_20B_21	CHANNEL	580.0	0.5172	0.0300
ISW_21	Node_ISW_21	Node_P_20A_20B_21	CHANNEL	400.0	0.5000	0.0300
ISW_22	Node_ISW_22	Node_P_19A_19B_22	CHANNEL	375.0	0.5333	0.0300
ISW_23A	Node_ISW_23A	Node_ISW_23B	CHANNEL	410.0	0.4878	0.0300
ISW_23B	Node_ISW_23B	Node_P_23A_23B_27	CHANNEL	615.0	0.3252	0.0300
ISW_24	Node_ISW_24	Node_ISW_25	CHANNEL	595.0	0.5042	0.0300
ISW_25	Node_ISW_25	Node_P_24_25_26_28_31	CHANNEL	400.0	0.2500	

```
0.0300
  ISW_26          Node_ISW_26     Node_P_24_25_26_28_31CHANNEL          475.0    0.6316
0.0300
  ISW_27          Node_ISW_27     Node_P_23A_23B_27CHANNEL          445.0    0.6742      0.0300
  ISW_28          Node_ISW_28     Node_ISW_25     CHANNEL          340.0    0.5882      0.0300
  ISW_29          Node_ISW_29     Node_P_29_30    CHANNEL          575.0    1.0435      0.0300
  ISW_3           Node_ISW_3      Node_P_3_4A_4B_5CHANNEL          270.0    1.1111      0.0300
  ISW_30          Node_ISW_30     Node_P_29_30    CHANNEL          160.0    2.5000      0.0300
  ISW_31          Node_ISW_31     Node_P_24_25_26_28_31CHANNEL          180.0    1.1111
0.0300
  ISW_32A         Node_ISW_32A    Node_ISW_32B    CHANNEL          325.0    0.6154      0.0300
  ISW_32B         Node_ISW_32B    Node_P_32A_32B  CHANNEL          330.0    1.2121      0.0300
  ISW_33A         Node_ISW_33A    Node_ISW_33B    CHANNEL          390.0    0.5128      0.0300
  ISW_33B         Node_ISW_33B    Node_P_33A_33B_34_18CHANNEL          685.0    0.4380
0.0300
  ISW_34          Node_ISW_34     Node_P_33A_33B_34_18CHANNEL          175.0    0.5714
0.0300
  ISW_35          Node_ISW_35     Node_P_35_36    CHANNEL          170.0    0.5882      0.0300
  ISW_36          Node_ISW_36     Node_P_35_36    CHANNEL          385.0    0.5195      0.0300
  ISW_4A          Node_ISW_4A     Node_ISW_4B     CHANNEL          200.0    0.5000      0.0300
  ISW_4B          Node_ISW_4B     Node_P_3_4A_4B_5CHANNEL          300.0    0.3333      0.0300
  ISW_5           Node_ISW_5      Node_P_3_4A_4B_5CHANNEL          270.0    0.7407      0.0300
  ISW_6           Node_ISW_6      Node_P_6_7      CHANNEL          480.0    0.6250      0.0300
  ISW_7           Node_ISW_7      Node_P_6_7      CHANNEL          360.0    0.8333      0.0300
  ISW_8           Node_ISW_8      Node_P_8_9      CHANNEL          675.0    0.4444      0.0300
  ISW_9           Node_ISW_9      Node_P_8_9      CHANNEL          590.0    0.5085      0.0300
  P_10_11_12      Node_P_10_11_12 P_10_11_12      CONDUIT           50.0    2.0000      0.0120
  P_13_14_15      Node_P_13_14_15 P_13_14_15      CONDUIT           48.0    2.0833      0.0120
  P_16_17         Node_P_16_17    P_16_17         CONDUIT           44.0    2.2727      0.0120
  P_19A_19B_22    Node_P_19A_19B_22P_19A_19B_22    CONDUIT          102.0    0.9804      0.0120
  P_1A_1B_1C_2    Node_P_1A_1B_1C_2P_1A_1B_1C_2    CONDUIT          230.0    0.4348      0.0120
  P_20A_20B_21    Node_P_20A_20B_21P_20A_20B_21    CONDUIT           58.0    1.7241      0.0120
  P_23A_23B_27    Node_P_23A_23B_27P_23A_23B_27    CONDUIT           55.0    1.8182      0.0120
  P_24_25_26_28_31Node_P_24_25_26_28_31P_24_25_26_28_31CONDUIT          55.0    1.8182
0.0120
  P_29_30         Node_P_29_30    P_29_30         CONDUIT           38.0    2.6316      0.0120
  P_3_4A_4B_5     Node_P_3_4A_4B_5P_3_4A_4B_5     CONDUIT           50.0    2.0000      0.0120
  P_32A_32B       Node_P_32A_32B  P_32A_32B       CONDUIT           37.0    2.7027      0.0120
  P_33A_33B_34_18 Node_P_33A_33B_34_18P_33A_33B_34_18 CONDUIT          62.0    1.6129
0.0120
  P_35_36         Node_P_35_36    P_35_36         CONDUIT           55.0    1.8182      0.0120
  P_6_7           Node_P_6_7      P_6_7           CONDUIT           48.0    2.0833      0.0120
  P_8-9           Node_P_8_9      P_8-9           CONDUIT           48.0    2.0833      0.0120


  ********************
  Cross Section Summary
  ********************
  Link            Shape           Depth/       Width       No. of       Cross    Full Flow
Design
  ID                              Diameter                 Barrels    Sectional    Hydraulic
Flow
                                                                        Area       Radius
Capacity
                                       ft          ft                    ft²          ft
cfs

-------------------------------------------------------------------------------------------
---------
  ISW_10          TRAPEZOIDAL       2.00       15.00           1       18.00        1.15
74.70
  ISW_11A         TRAPEZOIDAL       1.50       12.00           1       11.25        0.90
36.76
  ISW_11B         TRAPEZOIDAL       2.00       15.00           1       18.00        1.15
59.02
  ISW_12          TRAPEZOIDAL       1.00        9.00           1        6.00        0.64
19.06
```

ISW_13	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
18.72						
ISW_14	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
64.54						
ISW_15	TRAPEZOIDAL	1.50	12.00	1	11.25	0.90
44.13						
ISW_16	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
38.49						
ISW_17	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
40.44						
ISW_19A	TRAPEZOIDAL	1.50	12.00	1	11.25	0.90
36.76						
ISW_19B	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
177.47						
ISW_1A	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
27.48						
ISW_1B	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
61.66						
ISW_1C	TRAPEZOIDAL	3.50	24.00	1	47.25	1.88
214.32						
ISW_2	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
71.96						
ISW_20A	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
15.57						
ISW_20B	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
70.39						
ISW_21	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
175.23						
ISW_22	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
180.98						
ISW_23A	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
15.47						
ISW_23B	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
141.32						
ISW_24	TRAPEZOIDAL	1.50	12.00	1	11.25	0.90
36.91						
ISW_25	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
123.91						
ISW_26	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
77.79						
ISW_27	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
80.37						
ISW_28	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
16.99						
ISW_29	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
22.63						
ISW_3	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
23.35						
ISW_30	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
154.76						
ISW_31	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
103.17						
ISW_32A	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
17.38						
ISW_32B	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
107.76						
ISW_33A	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
15.86						
ISW_33B	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
64.77						
ISW_34	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
187.33						
ISW_35	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
190.07						
ISW_36	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
70.55						
ISW_4A	TRAPEZOIDAL	1.50	12.00	1	11.25	0.90

36.76						
ISW_4B	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
56.51						
ISW_5	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
19.06						
ISW_6	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
77.38						
ISW_7	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
89.35						
ISW_8	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
65.25						
ISW_9	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
69.80						
P_10_11_12	CIRCULAR	3.00	3.00	1	7.07	0.75
102.19						
P_13_14_15	CIRCULAR	3.00	3.00	1	7.07	0.75
104.29						
P_16_17	CIRCULAR	2.01	2.01	1	3.17	0.50
37.36						
P_19A_19B_22	CIRCULAR	3.00	3.00	1	7.07	0.75
71.54						
P_1A_1B_1C_2	CIRCULAR	3.00	3.00	2	7.07	0.75
47.64						
P_20A_20B_21	CIRCULAR	3.00	3.00	1	7.07	0.75
94.88						
P_23A_23B_27	CIRCULAR	3.00	3.00	1	7.07	0.75
97.43						
P_24_25_26_28_31	CIRCULAR	3.00	3.00	1	7.07	0.75
97.43						
P_29_30	CIRCULAR	1.52	1.52	2	1.81	0.38
19.01						
P_3_4A_4B_5	CIRCULAR	3.00	3.00	1	7.07	0.75
102.19						
P_32A_32B	CIRCULAR	1.52	1.52	1	1.81	0.38
19.27						
P_33A_33B_34_18	CIRCULAR	2.01	2.01	2	3.17	0.50
31.47						
P_35_36	CIRCULAR	2.01	2.01	1	3.17	0.50
33.41						
P_6_7	CIRCULAR	3.00	3.00	1	7.07	0.75
104.29						
P_8-9	CIRCULAR	3.00	3.00	1	7.07	0.75
104.29						

**********	Volume	Depth
Runoff Quantity Continuity	acre-ft	inches
**********	---	---
Total Precipitation	70.895	8.153
Surface Runoff	0.800	0.092
Continuity Error (%)	-0.000	

**********	Volume	Volume
Flow Routing Continuity	acre-ft	Mgallons
**********	---	---
External Inflow	0.000	0.000
External Outflow	47.846	15.591
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.150	0.049
Continuity Error (%)	-0.000	

****
Composite Curve Number Computations Report
****

Subbasin Area_10

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	3.16	D	78.00
Composite Area & Weighted CN	3.16		78.00

Subbasin Area_11A

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	5.05	D	78.00
Composite Area & Weighted CN	5.05		78.00

Subbasin Area_11B

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	1.73	D	78.00
Composite Area & Weighted CN	1.73		78.00

Subbasin Area_12

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	1.54	D	78.00
Composite Area & Weighted CN	1.54		78.00

Subbasin Area_13

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	2.52	D	78.00
Composite Area & Weighted CN	2.52		78.00

Subbasin Area_14

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	6.54	D	78.00
Composite Area & Weighted CN	6.54		78.00

Subbasin Area_15

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	3.20	D	78.00
Composite Area & Weighted CN	3.20		78.00

Subbasin Area_16

Soil/Surface Description	Area	Soil

Soil/Surface Description	(acres)	Group	CN
Meadow, non-grazed	2.17	D	78.00
Composite Area & Weighted CN	2.17		78.00

Subbasin Area_17

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	0.76	D	78.00
Composite Area & Weighted CN	0.76		78.00

Subbasin Area_18

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	1.91	D	78.00
Composite Area & Weighted CN	1.91		78.00

Subbasin Area_19A

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	3.51	D	78.00
Composite Area & Weighted CN	3.51		78.00

Subbasin Area_19B

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	1.54	D	78.00
Composite Area & Weighted CN	1.54		78.00

Subbasin Area_1A

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	1.45	D	78.00
Composite Area & Weighted CN	1.45		78.00

Subbasin Area_1B

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	3.76	D	78.00
Composite Area & Weighted CN	3.76		78.00

Subbasin Area_1C

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	2.90	D	78.00
Composite Area & Weighted CN	2.90		78.00

Subbasin Area_2

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	4.94	D	78.00
Composite Area & Weighted CN	4.94		78.00

Subbasin Area_20A

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	1.24	D	78.00
Composite Area & Weighted CN	1.24		78.00

Subbasin Area_20B

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	2.70	D	78.00
Composite Area & Weighted CN	2.70		78.00

Subbasin Area_21

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	2.69	D	78.00
Composite Area & Weighted CN	2.69		78.00

Subbasin Area_22

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	1.71	D	78.00
Composite Area & Weighted CN	1.71		78.00

Subbasin Area_23A

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	1.16	D	78.00
Composite Area & Weighted CN	1.16		78.00

Subbasin Area_23B

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	2.48	D	78.00
Composite Area & Weighted CN	2.48		78.00

Subbasin Area_24

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	2.81	D	78.00
Composite Area & Weighted CN	2.81		78.00

Subbasin Area_25

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	1.97	D	78.00
Composite Area & Weighted CN	1.97		78.00

Subbasin Area_26

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	2.45	D	78.00
Composite Area & Weighted CN	2.45		78.00

Subbasin Area_27

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	1.73	D	78.00
Composite Area & Weighted CN	1.73		78.00

Subbasin Area_28

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	1.05	D	78.00
Composite Area & Weighted CN	1.05		78.00

Subbasin Area_29

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	2.48	D	78.00
Composite Area & Weighted CN	2.48		78.00

Subbasin Area_3

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	1.15	D	78.00
Composite Area & Weighted CN	1.15		78.00

Subbasin Area_30

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	0.55	D	78.00

Composite Area & Weighted CN	0.55		78.00

Subbasin Area_31

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	0.45	D	78.00
Composite Area & Weighted CN	0.45		78.00

Subbasin Area_32A

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	1.04	D	78.00
Composite Area & Weighted CN	1.04		78.00

Subbasin Area_32B

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	1.60	D	78.00
Composite Area & Weighted CN	1.60		78.00

Subbasin Area_33A

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	1.18	D	78.00
Composite Area & Weighted CN	1.18		78.00

Subbasin Area_33B

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	3.12	D	78.00
Composite Area & Weighted CN	3.12		78.00

Subbasin Area_34

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	0.50	D	78.00
Composite Area & Weighted CN	0.50		78.00

Subbasin Area_35

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	0.39	D	78.00
Composite Area & Weighted CN	0.39		78.00

Subbasin Area_36

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	1.37	D	78.00
Composite Area & Weighted CN	1.37		78.00

Subbasin Area_4A

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	4.96	D	78.00
Composite Area & Weighted CN	4.96		78.00

Subbasin Area_4B

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	2.41	D	78.00
Composite Area & Weighted CN	2.41		78.00

Subbasin Area_5

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	0.80	D	78.00
Composite Area & Weighted CN	0.80		78.00

Subbasin Area_6

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	2.83	D	78.00
Composite Area & Weighted CN	2.83		78.00

Subbasin Area_7

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	3.58	D	78.00
Composite Area & Weighted CN	3.58		78.00

Subbasin Area_8

Soil/Surface Description	Area (acres)	Soil Group	CN
Meadow, non-grazed	3.44	D	78.00
Composite Area & Weighted CN	3.44		78.00

Subbasin Area_9

Soil/Surface Description	Area (acres)	Soil Group	CN

Meadow, non-grazed	3.81	D	78.00
Composite Area & Weighted CN	3.81		78.00

****
SCS TR-55 Time of Concentration Computations Report
****

Sheet Flow Equation

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where:

Tc = Time of Concentration (hrs)
n = Manning's Roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hrs)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hrs)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft²)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's Roughness

Subbasin Area_10

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C

Manning's Roughness:	0.40	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	3.12	0.00	0.00
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.07	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	320.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	1.57	0.00	0.00
Computed Flow Time (minutes):	3.40	0.00	0.00

Total TOC (minutes):	18.47

Subbasin Area_11A

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.40	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	3.12	0.00	0.00
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.07	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	320.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	1.57	0.00	0.00

```
          Computed Flow Time (minutes):              3.40               0.00
0.00

=============================================================================================
          Total TOC (minutes):                      18.47

=============================================================================================


  --------------------
  Subbasin Area_11B
  --------------------

  Sheet Flow Computations
  -----------------------
                                              Subarea A          Subarea B          Subarea
C
          Manning's Roughness:                     0.40               0.00
0.00
          Flow Length (ft):                      100.00               0.00
0.00
          Slope (%):                               5.00               0.00
0.00
          2 yr, 24 hr Rainfall (in):               3.12               0.00
0.00
          Velocity (ft/sec):                       0.11               0.00
0.00
          Computed Flow Time (minutes):           15.07               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                              Subarea A          Subarea B          Subarea
C
          Flow Length (ft):                      160.00               0.00
0.00
          Slope (%):                               5.00               0.00
0.00
          Surface Type:                  Grass pasture             Unpaved
Unpaved
          Velocity (ft/sec):                       1.57               0.00
0.00
          Computed Flow Time (minutes):            1.70               0.00
0.00

=============================================================================================
          Total TOC (minutes):                      16.77

=============================================================================================


  -------------------
  Subbasin Area_12
  -------------------

  Sheet Flow Computations
  -----------------------
                                              Subarea A          Subarea B          Subarea
C
          Manning's Roughness:                     0.40               0.00
0.00
          Flow Length (ft):                      100.00               0.00
0.00
          Slope (%):                               5.00               0.00
0.00
          2 yr, 24 hr Rainfall (in):               3.12               0.00
0.00
```

```
          Velocity (ft/sec):                          0.11               0.00
0.00
          Computed Flow Time (minutes):              15.07               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                              Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                      180.00               0.00
0.00
          Slope (%):                               5.00               0.00
0.00
          Surface Type:                  Grass pasture             Unpaved
Unpaved
          Velocity (ft/sec):                       1.57               0.00
0.00
          Computed Flow Time (minutes):            1.91               0.00
0.00

================================================================================================
          Total TOC (minutes):                    16.98

================================================================================================


  -------------------
  Subbasin Area_13
  -------------------

  Sheet Flow Computations
  -----------------------
                                              Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                     0.40               0.00
0.00
          Flow Length (ft):                      100.00               0.00
0.00
          Slope (%):                               5.00               0.00
0.00
          2 yr, 24 hr Rainfall (in):               3.12               0.00
0.00
          Velocity (ft/sec):                       0.11               0.00
0.00
          Computed Flow Time (minutes):           15.07               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                              Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                      260.00               0.00
0.00
          Slope (%):                               5.00               0.00
0.00
          Surface Type:                  Grass pasture             Unpaved
Unpaved
          Velocity (ft/sec):                       1.57               0.00
0.00
          Computed Flow Time (minutes):            2.76               0.00
0.00

================================================================================================
          Total TOC (minutes):                    17.83

================================================================================================
```

```
  ------------------
  Subbasin Area_14
  ------------------

  Sheet Flow Computations
  -----------------------
                                              Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                     0.40                0.00
0.00
          Flow Length (ft):                      100.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):               3.12                0.00
0.00
          Velocity (ft/sec):                       0.11                0.00
0.00
          Computed Flow Time (minutes):           15.07                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                              Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                      280.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          Surface Type:                  Grass pasture              Unpaved
Unpaved
          Velocity (ft/sec):                       1.57                0.00
0.00
          Computed Flow Time (minutes):            2.97                0.00
0.00

================================================================================================
          Total TOC (minutes):                    18.05

================================================================================================


  ------------------
  Subbasin Area_15
  ------------------

  Sheet Flow Computations
  -----------------------
                                              Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                     0.40                0.00
0.00
          Flow Length (ft):                      100.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):               3.12                0.00
0.00
          Velocity (ft/sec):                       0.11                0.00
0.00
          Computed Flow Time (minutes):           15.07                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                              Subarea A           Subarea B           Subarea
```

C			
	Flow Length (ft):	300.00	0.00
0.00			
	Slope (%):	5.00	0.00
0.00			
	Surface Type:	Grass pasture	Unpaved
Unpaved			
	Velocity (ft/sec):	1.57	0.00
0.00			
	Computed Flow Time (minutes):	3.18	0.00
0.00			

	Total TOC (minutes):	18.26

Subbasin Area_16

Sheet Flow Computations

		Subarea A	Subarea B	Subarea
C				
	Manning's Roughness:	0.40	0.00	
0.00				
	Flow Length (ft):	100.00	0.00	
0.00				
	Slope (%):	5.00	0.00	
0.00				
	2 yr, 24 hr Rainfall (in):	3.12	0.00	
0.00				
	Velocity (ft/sec):	0.11	0.00	
0.00				
	Computed Flow Time (minutes):	15.07	0.00	
0.00				

Shallow Concentrated Flow Computations

		Subarea A	Subarea B	Subarea
C				
	Flow Length (ft):	280.00	0.00	
0.00				
	Slope (%):	5.00	0.00	
0.00				
	Surface Type:	Grass pasture	Unpaved	
Unpaved				
	Velocity (ft/sec):	1.57	0.00	
0.00				
	Computed Flow Time (minutes):	2.97	0.00	
0.00				

	Total TOC (minutes):	18.05

Subbasin Area_17

Sheet Flow Computations

		Subarea A	Subarea B	Subarea

```
C
          Manning's Roughness:                        0.40               0.00
0.00
          Flow Length (ft):                         100.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          2 yr, 24 hr Rainfall (in):                  3.12               0.00
0.00
          Velocity (ft/sec):                          0.11               0.00
0.00
          Computed Flow Time (minutes):              15.07               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A          Subarea B          Subarea
C
          Flow Length (ft):                         183.00               0.00
0.00
          Slope (%):                                  4.37               0.00
0.00
          Surface Type:                      Grass pasture             Unpaved
Unpaved
          Velocity (ft/sec):                          1.46               0.00
0.00
          Computed Flow Time (minutes):               2.09               0.00
0.00

=============================================================================================
          Total TOC (minutes):                       17.16

=============================================================================================


  -------------------
  Subbasin Area_18
  -------------------

  Sheet Flow Computations
  -----------------------
                                                 Subarea A          Subarea B          Subarea
C
          Manning's Roughness:                        0.40               0.00
0.00
          Flow Length (ft):                         100.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          2 yr, 24 hr Rainfall (in):                  3.12               0.00
0.00
          Velocity (ft/sec):                          0.11               0.00
0.00
          Computed Flow Time (minutes):              15.07               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A          Subarea B          Subarea
C
          Flow Length (ft):                         220.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          Surface Type:                      Grass pasture             Unpaved
Unpaved
          Velocity (ft/sec):                          1.57               0.00
```

0.00

Computed Flow Time (minutes):	2.34	0.00	

0.00

Total TOC (minutes):	17.41		

Subbasin Area_19A

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.40	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	3.12	3.12	3.12
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.07	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	200.25	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	1.56	0.00	0.00
Computed Flow Time (minutes):	2.14	0.00	0.00

Total TOC (minutes):	17.21		

Subbasin Area_19B

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.40	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	3.12	2.50	

```
2.50
          Velocity (ft/sec):                          0.11               0.00
0.00
          Computed Flow Time (minutes):              15.07               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                         140.17               0.00
0.00
          Slope (%):                                  4.99               0.00
0.00
          Surface Type:                      Grass pasture             Unpaved
Unpaved
          Velocity (ft/sec):                          1.56               0.00
0.00
          Computed Flow Time (minutes):               1.50               0.00
0.00

=============================================================================================
          Total TOC (minutes):                       16.57

=============================================================================================


  -------------------
  Subbasin Area_1A
  -------------------

  Sheet Flow Computations
  -----------------------
                                                 Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                        0.40               0.00
0.00
          Flow Length (ft):                         100.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          2 yr, 24 hr Rainfall (in):                  3.12               0.00
0.00
          Velocity (ft/sec):                          0.11               0.00
0.00
          Computed Flow Time (minutes):              15.07               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                         200.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          Surface Type:                      Grass pasture             Unpaved
Unpaved
          Velocity (ft/sec):                          1.57               0.00
0.00
          Computed Flow Time (minutes):               2.12               0.00
0.00

=============================================================================================
          Total TOC (minutes):                       17.20

=============================================================================================
```

```
  ------------------
  Subbasin Area_1B
  ------------------

  Sheet Flow Computations
  -----------------------
                                                Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                       0.40                0.00
0.00
          Flow Length (ft):                        100.00                0.00
0.00
          Slope (%):                                 5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):                 3.12                0.00
0.00
          Velocity (ft/sec):                         0.11                0.00
0.00
          Computed Flow Time (minutes):             15.07                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                        300.00                0.00
0.00
          Slope (%):                                 5.00                0.00
0.00
          Surface Type:                    Grass pasture             Unpaved
Unpaved
          Velocity (ft/sec):                         1.57                0.00
0.00
          Computed Flow Time (minutes):              3.18                0.00
0.00

=============================================================================================
          Total TOC (minutes):                      18.26

=============================================================================================


  ------------------
  Subbasin Area_1C
  ------------------

  Sheet Flow Computations
  -----------------------
                                                Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                       0.40                0.00
0.00
          Flow Length (ft):                        100.00                0.00
0.00
          Slope (%):                                 5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):                 3.12                0.00
0.00
          Velocity (ft/sec):                         0.11                0.00
0.00
          Computed Flow Time (minutes):             15.07                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
```

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	280.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	1.57	0.00	0.00
Computed Flow Time (minutes):	2.97	0.00	0.00

Total TOC (minutes): 18.05

Subbasin Area_2

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.40	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	3.12	2.50	2.50
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.07	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	300.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	1.57	0.00	0.00
Computed Flow Time (minutes):	3.18	0.00	0.00

Total TOC (minutes): 18.26

Subbasin Area_20A

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.40	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	3.12	2.50	2.50
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.07	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	100.12	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	1.56	0.00	0.00
Computed Flow Time (minutes):	1.07	0.00	0.00

Total TOC (minutes):	16.14

Subbasin Area_20B

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.40	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	3.12	2.50	2.50
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.07	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	196.46	0.00	0.00
Slope (%):	5.09	0.00	0.00
Surface Type:	Grass pasture	Grass pasture	Grass pasture

Velocity (ft/sec):	1.58	0.00	0.00
Computed Flow Time (minutes):	2.07	0.00	0.00
Total TOC (minutes):	17.15		

Subbasin Area_21

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.40	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	3.12	3.12	3.12
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.07	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	200.25	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	1.56	0.00	0.00
Computed Flow Time (minutes):	2.14	0.00	0.00
Total TOC (minutes):	17.21		

Subbasin Area_22

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.40	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00

2 yr, 24 hr Rainfall (in):	3.12	3.12	3.12
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.07	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	160.20	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	1.56	0.00	0.00
Computed Flow Time (minutes):	1.71	0.00	0.00

Total TOC (minutes): 16.79

Subbasin Area_23A

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.40	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	3.12	2.50	2.50
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.07	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	120.15	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	1.56	0.00	0.00
Computed Flow Time (minutes):	1.28	0.00	0.00

Total TOC (minutes): 16.36

==========

Subbasin Area_23B

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.40	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	3.12	2.50	2.50
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.07	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	160.20	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	1.56	0.00	0.00
Computed Flow Time (minutes):	1.71	0.00	0.00

==========

Total TOC (minutes): 16.79

==========

Subbasin Area_24

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.40	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	3.12	2.50	2.50
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.07	0.00	0.00

Shallow Concentrated Flow Computations

```
  ------------------------------------
                                              Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                      140.17                0.00
0.00
          Slope (%):                               4.99                0.00
0.00
          Surface Type:                  Grass pasture              Unpaved
Unpaved
          Velocity (ft/sec):                       1.56                0.00
0.00
          Computed Flow Time (minutes):            1.50                0.00
0.00

=============================================================================================
          Total TOC (minutes):                    16.57

=============================================================================================


  -------------------
  Subbasin Area_25
  -------------------

  Sheet Flow Computations
  -----------------------
                                              Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                     0.40                0.00
0.00
          Flow Length (ft):                      100.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):               3.12                2.50
2.50
          Velocity (ft/sec):                       0.11                0.00
0.00
          Computed Flow Time (minutes):           15.07                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                              Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                      100.12                0.00
0.00
          Slope (%):                               4.99                0.00
0.00
          Surface Type:                  Grass pasture              Unpaved
Unpaved
          Velocity (ft/sec):                       1.56                0.00
0.00
          Computed Flow Time (minutes):            1.07                0.00
0.00

=============================================================================================
          Total TOC (minutes):                    16.14

=============================================================================================


  -------------------
  Subbasin Area_26
  -------------------

  Sheet Flow Computations
```

```
  ----------------------
                                                Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                       0.40                0.00
0.00
          Flow Length (ft):                        100.00                0.00
0.00
          Slope (%):                                 5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):                 3.12                2.50
2.50
          Velocity (ft/sec):                         0.11                0.00
0.00
          Computed Flow Time (minutes):             15.07                0.00
0.00

  Shallow Concentrated Flow Computations
  -------------------------------------
                                                Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                        140.17                0.00
0.00
          Slope (%):                                 4.99                0.00
0.00
          Surface Type:                     Grass pasture             Unpaved
Unpaved
          Velocity (ft/sec):                         1.56                0.00
0.00
          Computed Flow Time (minutes):              1.50                0.00
0.00

================================================================================================
          Total TOC (minutes):                      16.57

================================================================================================


  -------------------
  Subbasin Area_27
  -------------------

  Sheet Flow Computations
  ----------------------
                                                Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                       0.40                0.00
0.00
          Flow Length (ft):                        100.00                0.00
0.00
          Slope (%):                                 5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):                 3.12                2.50
2.50
          Velocity (ft/sec):                         0.11                0.00
0.00
          Computed Flow Time (minutes):             15.07                0.00
0.00

  Shallow Concentrated Flow Computations
  -------------------------------------
                                                Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                        140.17                0.00
0.00
          Slope (%):                                 4.99                0.00
0.00
          Surface Type:                     Grass pasture             Unpaved
```

```
Unpaved
          Velocity (ft/sec):                          1.56               0.00
0.00
          Computed Flow Time (minutes):               1.50               0.00
0.00

=============================================================================================
          Total TOC (minutes):                       16.57

=============================================================================================


  -------------------
  Subbasin Area_28
  -------------------

  Sheet Flow Computations
  -----------------------
                                                 Subarea A          Subarea B          Subarea
C
          Manning's Roughness:                        0.40               0.00
0.00
          Flow Length (ft):                         100.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          2 yr, 24 hr Rainfall (in):                  3.12               2.50
2.50
          Velocity (ft/sec):                          0.11               0.00
0.00
          Computed Flow Time (minutes):              15.07               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A          Subarea B          Subarea
C
          Flow Length (ft):                          80.10               0.00
0.00
          Slope (%):                                  4.99               0.00
0.00
          Surface Type:                       Grass pasture            Unpaved
Unpaved
          Velocity (ft/sec):                          1.56               0.00
0.00
          Computed Flow Time (minutes):               0.86               0.00
0.00

=============================================================================================
          Total TOC (minutes):                       15.93

=============================================================================================


  -------------------
  Subbasin Area_29
  -------------------

  Sheet Flow Computations
  -----------------------
                                                 Subarea A          Subarea B          Subarea
C
          Manning's Roughness:                        0.40               0.00
0.00
          Flow Length (ft):                         100.00               0.00
0.00
          Slope (%):                                  5.00               0.00
```

0.00

2 yr, 24 hr Rainfall (in):	3.12	2.50	2.50
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.07	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	80.26	0.00	0.00
Slope (%):	4.98	0.00	0.00
Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	1.56	0.00	0.00
Computed Flow Time (minutes):	0.86	0.00	0.00

Total TOC (minutes):	15.93

Subbasin Area_3

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.40	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	3.12	0.00	0.00
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.07	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	200.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	1.57	0.00	0.00
Computed Flow Time (minutes):	2.12	0.00	0.00

Total TOC (minutes):	17.20

==========

Subbasin Area_30

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.40	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	3.12	2.50	2.50
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.07	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	80.31	0.00	0.00
Slope (%):	4.98	0.00	0.00
Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	1.56	0.00	0.00
Computed Flow Time (minutes):	0.86	0.00	0.00

==========

Total TOC (minutes): 15.93

==========

Subbasin Area_31

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.40	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	3.12	2.50	2.50
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.07	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	40.05	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	1.56	0.00	0.00
Computed Flow Time (minutes):	0.43	0.00	0.00

Total TOC (minutes): 15.50

Subbasin Area_32A

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.40	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	3.12	2.50	2.50
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.07	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	60.06	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	1.56	0.00	0.00
Computed Flow Time (minutes):	0.64	0.00	0.00

Total TOC (minutes): 15.72

Subbasin Area_32B

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.40	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	3.12	2.50	2.50
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.07	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	60.18	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	1.56	0.00	0.00
Computed Flow Time (minutes):	0.64	0.00	0.00

Total TOC (minutes):	15.72

Subbasin Area_33A

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.40	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	3.12	2.50	2.50
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.07	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	60.12	0.00	0.00
Slope (%):	4.99	0.00	0.00

Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	1.56	0.00	0.00
Computed Flow Time (minutes):	0.64	0.00	0.00
Total TOC (minutes):	15.72		

Subbasin Area_33B

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.40	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	3.12	2.50	2.50
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.07	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	60.12	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	1.56	0.00	0.00
Computed Flow Time (minutes):	0.64	0.00	0.00
Total TOC (minutes):	15.72		

Subbasin Area_34

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.40	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00

Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	3.12	2.50	2.50
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.07	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	40.05	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	1.56	0.00	0.00
Computed Flow Time (minutes):	0.43	0.00	0.00

Total TOC (minutes): 15.50

Subbasin Area_35

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.40	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	3.12	2.50	2.50
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.07	0.00	0.00

Total TOC (minutes): 15.07

Subbasin Area_36

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.40	0.00	0.00

Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	3.12	2.50	2.50
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.07	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	40.05	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	1.56	0.00	0.00
Computed Flow Time (minutes):	0.43	0.00	0.00

Total TOC (minutes):	15.50

Subbasin Area_4A

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.40	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	3.12	0.00	0.00
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.07	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	280.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	1.57	0.00	0.00
Computed Flow Time (minutes):	2.97	0.00	0.00

```
==============================================================================================
          Total TOC (minutes):                      18.05
==============================================================================================


  -------------------
  Subbasin Area_4B
  -------------------

  Sheet Flow Computations
  -----------------------
                                              Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                     0.40                0.00
0.00
          Flow Length (ft):                      100.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):               3.12                0.00
0.00
          Velocity (ft/sec):                       0.11                0.00
0.00
          Computed Flow Time (minutes):           15.07                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                              Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                      280.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          Surface Type:                  Grass pasture              Unpaved
Unpaved
          Velocity (ft/sec):                       1.57                0.00
0.00
          Computed Flow Time (minutes):            2.97                0.00
0.00

==============================================================================================
          Total TOC (minutes):                      18.05
==============================================================================================


  ------------------
  Subbasin Area_5
  ------------------

  Sheet Flow Computations
  -----------------------
                                              Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                     0.40                0.00
0.00
          Flow Length (ft):                      100.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):               3.12                0.00
0.00
          Velocity (ft/sec):                       0.11                0.00
0.00
```

Computed Flow Time (minutes):	15.07	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	110.00	0.00	0.00
Slope (%):	5.46	0.00	0.00
Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	1.63	0.00	0.00
Computed Flow Time (minutes):	1.12	0.00	0.00

Total TOC (minutes):	16.20

Subbasin Area_6

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.40	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	3.12	0.00	0.00
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.07	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	220.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	1.57	0.00	0.00
Computed Flow Time (minutes):	2.34	0.00	0.00

Total TOC (minutes):	17.41

Subbasin Area_7

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.40	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	3.12	0.00	0.00
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.07	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	320.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	1.57	0.00	0.00
Computed Flow Time (minutes):	3.40	0.00	0.00

Total TOC (minutes):	18.47

Subbasin Area_8

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.40	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	3.12	0.00	0.00
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.07	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	280.00	0.00	

```
0.00
          Slope (%):                                  5.00               0.00
0.00
          Surface Type:                      Grass pasture             Unpaved
Unpaved
          Velocity (ft/sec):                          1.57               0.00
0.00
          Computed Flow Time (minutes):               2.97               0.00
0.00

================================================================================================
          Total TOC (minutes):                      18.05

================================================================================================


  ------------------
  Subbasin Area_9
  ------------------

  Sheet Flow Computations
  -----------------------
                                                 Subarea A          Subarea B          Subarea
C
          Manning's Roughness:                        0.40               0.00
0.00
          Flow Length (ft):                         100.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          2 yr, 24 hr Rainfall (in):                  3.12               0.00
0.00
          Velocity (ft/sec):                          0.11               0.00
0.00
          Computed Flow Time (minutes):              15.07               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A          Subarea B          Subarea
C
          Flow Length (ft):                         300.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          Surface Type:                      Grass pasture             Unpaved
Unpaved
          Velocity (ft/sec):                          1.57               0.00
0.00
          Computed Flow Time (minutes):               3.18               0.00
0.00

================================================================================================
          Total TOC (minutes):                      18.26

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  **********************
  Subbasin Runoff Summary
  **********************

  ------------------------------------------------------------------------
  Subbasin             Total     Total      Peak  Weighted           Time of
  ID                  Precip    Runoff    Runoff     Curve     Concentration
                         in        in       cfs    Number    days  hh:mm:ss
  ------------------------------------------------------------------------
```

Area_10	8.16	5.54	19.68	78.000	0	00:18:28
Area_11A	8.16	5.54	31.50	78.000	0	00:18:28
Area_11B	8.16	5.54	11.26	78.000	0	00:16:46
Area_12	8.16	5.54	9.97	78.000	0	00:16:58
Area_13	8.16	5.54	16.02	78.000	0	00:17:49
Area_14	8.16	5.54	41.25	78.000	0	00:18:03
Area_15	8.16	5.54	20.07	78.000	0	00:18:15
Area_16	8.16	5.54	13.68	78.000	0	00:18:03
Area_17	8.16	5.54	4.91	78.000	0	00:17:09
Area_18	8.16	5.54	12.21	78.000	0	00:17:24
Area_19A	8.16	5.54	22.57	78.000	0	00:17:12
Area_19B	8.16	5.54	10.07	78.000	0	00:16:34
Area_1A	8.16	5.54	9.35	78.000	0	00:17:12
Area_1B	8.16	5.54	23.57	78.000	0	00:18:15
Area_1C	8.16	5.54	18.28	78.000	0	00:18:03
Area_2	8.16	5.54	30.99	78.000	0	00:18:15
Area_20A	8.16	5.54	8.15	78.000	0	00:16:08
Area_20B	8.16	5.54	17.41	78.000	0	00:17:09
Area_21	8.16	5.54	17.34	78.000	0	00:17:12
Area_22	8.16	5.54	11.15	78.000	0	00:16:47
Area_23A	8.16	5.54	7.64	78.000	0	00:16:21
Area_23B	8.16	5.54	16.10	78.000	0	00:16:47
Area_24	8.16	5.54	18.39	78.000	0	00:16:34
Area_25	8.16	5.54	13.01	78.000	0	00:16:08
Area_26	8.16	5.54	16.01	78.000	0	00:16:34
Area_27	8.16	5.54	11.33	78.000	0	00:16:34
Area_28	8.16	5.54	6.92	78.000	0	00:15:55
Area_29	8.16	5.54	16.47	78.000	0	00:15:55
Area_3	8.16	5.54	7.42	78.000	0	00:17:12
Area_30	8.16	5.54	3.65	78.000	0	00:15:55
Area_31	8.16	5.54	3.00	78.000	0	00:15:30
Area_32A	8.16	5.54	6.95	78.000	0	00:15:43
Area_32B	8.16	5.54	10.61	78.000	0	00:15:43
Area_33A	8.16	5.54	7.88	78.000	0	00:15:43
Area_33B	8.16	5.54	20.80	78.000	0	00:15:43
Area_34	8.16	5.54	3.39	78.000	0	00:15:30
Area_35	8.16	5.54	2.60	78.000	0	00:15:04
Area_36	8.16	5.54	9.13	78.000	0	00:15:30
Area_4A	8.16	5.54	31.28	78.000	0	00:18:03
Area_4B	8.16	5.54	15.22	78.000	0	00:18:03
Area_5	8.16	5.54	5.26	78.000	0	00:16:12
Area_6	8.16	5.54	18.11	78.000	0	00:17:24
Area_7	8.16	5.54	22.36	78.000	0	00:18:28
Area_8	8.16	5.54	21.71	78.000	0	00:18:03
Area_9	8.16	5.54	23.89	78.000	0	00:18:15

****
Node Depth Summary
****

Node ID	Average Depth Attained ft	Maximum Depth Attained ft	Maximum HGL Attained ft	Time of Max Occurrence days	Time of Max Occurrence hh:mm	Total Flooded Volume acre-in	Total Time Flooded minutes	Retention Time hh:mm:ss
Node_ISW_10	0.13	1.08	411.08	0	12:05	0	0	0:00:00
Node_ISW_11A	0.17	1.40	410.40	0	12:05	0	0	0:00:00
Node_ISW_11B	0.22	1.73	409.73	0	12:05	0	0	0:00:00
Node_ISW_12	0.08	0.72	410.72	0	12:04	0	0	0:00:00
Node_ISW_13	0.11	0.93	410.93	0	12:05	0	0	0:00:00
Node_ISW_14	0.21	1.63	410.63	0	12:05	0	0	0:00:00
Node_ISW_15	0.12	1.03	412.03	0	12:05	0	0	0:00:00
Node_ISW_16	0.06	0.59	410.59	0	12:05	0	0	0:00:00
Node_ISW_17	0.03	0.33	405.33	0	12:04	0	0	0:00:00

Node_ISW_19A	0.14	1.19	411.19	0	12:05	0	0	0:00:00
Node_ISW_19B	0.17	1.40	408.40	0	12:06	0	0	0:00:00
Node_ISW_1A	0.06	0.58	415.58	0	12:04	0	0	0:00:00
Node_ISW_1B	0.19	1.50	410.50	0	12:05	0	0	0:00:00
Node_ISW_1C	0.67	2.30	408.80	0	12:06	0	0	0:00:00
Node_ISW_2	0.17	1.36	410.36	0	12:05	0	0	0:00:00
Node_ISW_20A	0.08	0.72	410.72	0	12:04	0	0	0:00:00
Node_ISW_20B	0.15	1.25	409.25	0	12:05	0	0	0:00:00
Node_ISW_21	0.12	1.05	408.05	0	12:05	0	0	0:00:00
Node_ISW_22	0.09	0.83	407.83	0	12:04	0	0	0:00:00
Node_ISW_23A	0.08	0.70	409.70	0	12:04	0	0	0:00:00
Node_ISW_23B	0.16	1.35	408.35	0	12:05	0	0	0:00:00
Node_ISW_24	0.12	1.08	410.08	0	12:04	0	0	0:00:00
Node_ISW_25	0.22	1.78	407.78	0	12:05	0	0	0:00:00
Node_ISW_26	0.11	0.95	408.95	0	12:04	0	0	0:00:00
Node_ISW_27	0.09	0.79	408.79	0	12:04	0	0	0:00:00
Node_ISW_28	0.07	0.64	408.64	0	12:04	0	0	0:00:00
Node_ISW_29	0.09	0.85	408.85	0	12:04	0	0	0:00:00
Node_ISW_3	0.06	0.56	410.56	0	12:04	0	0	0:00:00
Node_ISW_30	0.03	0.31	407.31	0	12:04	0	0	0:00:00
Node_ISW_31	0.03	0.34	407.34	0	12:04	0	0	0:00:00
Node_ISW_32A	0.07	0.63	409.63	0	12:04	0	0	0:00:00
Node_ISW_32B	0.09	0.85	407.85	0	12:04	0	0	0:00:00
Node_ISW_33A	0.08	0.70	409.70	0	12:04	0	0	0:00:00
Node_ISW_33B	0.20	1.62	408.62	0	12:04	0	0	0:00:00
Node_ISW_34	0.04	0.44	406.44	0	12:04	0	0	0:00:00
Node_ISW_35	0.04	0.38	406.38	0	12:03	0	0	0:00:00
Node_ISW_36	0.08	0.76	407.76	0	12:04	0	0	0:00:00
Node_ISW_4A	0.17	1.39	410.39	0	12:05	0	0	0:00:00
Node_ISW_4B	0.24	1.83	409.83	0	12:05	0	0	0:00:00
Node_ISW_5	0.05	0.52	410.52	0	12:04	0	0	0:00:00
Node_ISW_6	0.12	1.02	411.02	0	12:05	0	0	0:00:00
Node_ISW_7	0.12	1.05	411.05	0	12:05	0	0	0:00:00
Node_ISW_8	0.14	1.20	411.20	0	12:05	0	0	0:00:00
Node_ISW_9	0.15	1.22	411.22	0	12:05	0	0	0:00:00
Node_P_10_11_12	0.23	1.86	408.86	0	12:06	0	0	0:00:00
Node_P_13_14_15	0.23	1.92	408.92	0	12:06	0	0	0:00:00
Node_P_16_17	0.13	1.00	403.00	0	12:05	0	0	0:00:00
Node_P_19A_19B_22	0.21	1.67	406.67	0	12:07	0	0	0:00:00
Node_P_1A_1B_1C_2	0.31	2.30	407.30	0	12:08	0	0	0:00:00
Node_P_20A_20B_21	0.18	1.40	406.40	0	12:06	0	0	0:00:00
Node_P_23A_23B_27	0.17	1.34	406.34	0	12:07	0	0	0:00:00
Node_P_24_25_26_28_31	0.22	1.77	406.77	0	12:07	0	0	0:00:00
Node_P_29_30	1.03	1.31	403.31	0	12:04	0	0	0:00:00
Node_P_3_4A_4B_5	1.06	1.83	408.83	0	12:06	0	0	0:00:00
Node_P_32A_32B	1.09	1.85	403.85	0	12:05	0	0	0:00:00
Node_P_33A_33B_34_18	1.05	1.61	405.61	0	12:07	0	0	0:00:00
Node_P_35_36	0.11	0.82	405.82	0	12:05	0	0	0:00:00
Node_P_6_7	0.17	1.29	408.29	0	12:06	0	0	0:00:00
Node_P_8_9	0.18	1.38	408.38	0	12:07	0	0	0:00:00
Out_18	0.00	0.00	0.00	0	00:00	0	0	0:00:00
P_10_11_12	0.23	1.86	407.86	0	12:06	0	0	0:00:00
P_13_14_15	0.23	1.92	407.92	0	12:06	0	0	0:00:00
P_16_17	0.13	1.00	402.00	0	12:05	0	0	0:00:00
P_19A_19B_22	0.21	1.67	405.67	0	12:07	0	0	0:00:00
P_1A_1B_1C_2	0.25	2.12	406.12	0	12:08	0	0	0:00:00
P_20A_20B_21	0.18	1.40	405.40	0	12:06	0	0	0:00:00
P_23A_23B_27	0.16	1.23	405.23	0	12:07	0	0	0:00:00
P_24_25_26_28_31	0.20	1.63	405.63	0	12:06	0	0	0:00:00
P_29_30	0.10	0.78	401.78	0	12:05	0	0	0:00:00
P_3_4A_4B_5	0.21	1.63	407.63	0	12:06	0	0	0:00:00
P_32A_32B	0.13	1.13	402.13	0	12:05	0	0	0:00:00
P_33A_33B_34_18	0.15	1.23	404.23	0	12:06	0	0	0:00:00
P_35_36	0.11	0.82	404.82	0	12:05	0	0	0:00:00
P_6_7	0.17	1.29	407.29	0	12:06	0	0	0:00:00
P_8-9	0.18	1.38	407.38	0	12:07	0	0	0:00:00
Swale Storage	0.00	0.00	0.00	0	00:00	0	0	0:00:00

****
Node Flow Summary
****

Node ID	Element Type	Maximum Lateral Inflow cfs	Peak Inflow cfs	Time of Peak Inflow Occurrence days	Time of Peak Inflow Occurrence hh:mm	Maximum Flooding Overflow cfs	Time of Peak Flooding Occurrence days	Time of Peak Flooding Occurrence hh:mm
Node_ISW_10	JUNCTION	19.68	19.68	0	12:05	0.00		
Node_ISW_11A	JUNCTION	31.49	31.49	0	12:05	0.00		
Node_ISW_11B	JUNCTION	11.26	42.57	0	12:05	0.00		
Node_ISW_12	JUNCTION	9.94	9.94	0	12:04	0.00		
Node_ISW_13	JUNCTION	16.01	16.01	0	12:05	0.00		
Node_ISW_14	JUNCTION	41.21	41.21	0	12:05	0.00		
Node_ISW_15	JUNCTION	20.06	20.06	0	12:05	0.00		
Node_ISW_16	JUNCTION	13.67	13.67	0	12:05	0.00		
Node_ISW_17	JUNCTION	4.89	4.89	0	12:04	0.00		
Node_ISW_19A	JUNCTION	22.49	22.49	0	12:05	0.00		
Node_ISW_19B	JUNCTION	10.06	31.98	0	12:06	0.00		
Node_ISW_1A	JUNCTION	9.33	9.33	0	12:04	0.00		
Node_ISW_1B	JUNCTION	23.55	32.82	0	12:05	0.00		
Node_ISW_1C	JUNCTION	18.27	81.03	0	12:06	0.00		
Node_ISW_2	JUNCTION	30.97	30.97	0	12:05	0.00		
Node_ISW_20A	JUNCTION	8.15	8.15	0	12:04	0.00		
Node_ISW_20B	JUNCTION	17.37	25.38	0	12:05	0.00		
Node_ISW_21	JUNCTION	17.28	17.28	0	12:05	0.00		
Node_ISW_22	JUNCTION	11.13	11.13	0	12:04	0.00		
Node_ISW_23A	JUNCTION	7.63	7.63	0	12:04	0.00		
Node_ISW_23B	JUNCTION	16.06	23.51	0	12:05	0.00		
Node_ISW_24	JUNCTION	18.36	18.36	0	12:04	0.00		
Node_ISW_25	JUNCTION	13.01	37.65	0	12:05	0.00		
Node_ISW_26	JUNCTION	15.98	15.98	0	12:04	0.00		
Node_ISW_27	JUNCTION	11.32	11.32	0	12:04	0.00		
Node_ISW_28	JUNCTION	6.91	6.91	0	12:04	0.00		
Node_ISW_29	JUNCTION	16.45	16.45	0	12:04	0.00		
Node_ISW_3	JUNCTION	7.40	7.40	0	12:04	0.00		
Node_ISW_30	JUNCTION	3.65	3.65	0	12:04	0.00		
Node_ISW_31	JUNCTION	2.99	2.99	0	12:04	0.00		
Node_ISW_32A	JUNCTION	6.93	6.93	0	12:04	0.00		
Node_ISW_32B	JUNCTION	10.60	17.40	0	12:04	0.00		
Node_ISW_33A	JUNCTION	7.87	7.87	0	12:04	0.00		
Node_ISW_33B	JUNCTION	32.92	40.54	0	12:04	0.00		
Node_ISW_34	JUNCTION	3.38	3.38	0	12:04	0.00		
Node_ISW_35	JUNCTION	2.59	2.59	0	12:03	0.00		
Node_ISW_36	JUNCTION	9.11	9.11	0	12:04	0.00		
Node_ISW_4A	JUNCTION	31.25	31.25	0	12:05	0.00		
Node_ISW_4B	JUNCTION	15.20	46.35	0	12:05	0.00		
Node_ISW_5	JUNCTION	5.26	5.26	0	12:04	0.00		
Node_ISW_6	JUNCTION	18.07	18.07	0	12:05	0.00		
Node_ISW_7	JUNCTION	22.35	22.35	0	12:05	0.00		
Node_ISW_8	JUNCTION	21.70	21.70	0	12:05	0.00		
Node_ISW_9	JUNCTION	23.87	23.87	0	12:05	0.00		
Node_P_10_11_12	JUNCTION	0.00	71.92	0	12:06	0.00		
Node_P_13_14_15	JUNCTION	0.00	76.88	0	12:06	0.00		
Node_P_16_17	JUNCTION	0.00	18.53	0	12:05	0.00		
Node_P_19A_19B_22	JUNCTION	0.00	42.84	0	12:07	0.00		
Node_P_1A_1B_1C_2	JUNCTION	0.00	80.83	0	12:08	0.00		
Node_P_20A_20B_21	JUNCTION	0.00	42.32	0	12:06	0.00		
Node_P_23A_23B_27	JUNCTION	0.00	34.31	0	12:07	0.00		
Node_P_24_25_26_28_31	JUNCTION	0.00	56.05	0	12:06	0.00		
Node_P_29_30	JUNCTION	0.00	19.95	0	12:05	0.00		
Node_P_3_4A_4B_5	JUNCTION	0.00	58.78	0	12:06	0.00		
Node_P_32A_32B	JUNCTION	0.00	17.38	0	12:05	0.00		

Node_P_33A_33B_34_18	JUNCTION	0.00	43.42	0	12:06	0.00
Node_P_35_36	JUNCTION	0.00	11.64	0	12:05	0.00
Node_P_6_7	JUNCTION	0.00	40.27	0	12:06	0.00
Node_P_8_9	JUNCTION	0.00	45.15	0	12:07	0.00
Out_18	OUTFALL	0.00	0.00	0	00:00	0.00
P_10_11_12	OUTFALL	0.00	71.92	0	12:06	0.00
P_13_14_15	OUTFALL	0.00	76.88	0	12:06	0.00
P_16_17	OUTFALL	0.00	18.53	0	12:05	0.00
P_19A_19B_22	OUTFALL	0.00	42.84	0	12:07	0.00
P_1A_1B_1C_2	OUTFALL	0.00	80.81	0	12:08	0.00
P_20A_20B_21	OUTFALL	0.00	42.32	0	12:06	0.00
P_23A_23B_27	OUTFALL	0.00	34.31	0	12:07	0.00
P_24_25_26_28_31	OUTFALL	0.00	56.05	0	12:06	0.00
P_29_30	OUTFALL	0.00	19.95	0	12:05	0.00
P_3_4A_4B_5	OUTFALL	0.00	58.78	0	12:06	0.00
P_32A_32B	OUTFALL	0.00	17.38	0	12:05	0.00
P_33A_33B_34_18	OUTFALL	0.00	43.42	0	12:06	0.00
P_35_36	OUTFALL	0.00	11.64	0	12:05	0.00
P_6_7	OUTFALL	0.00	40.27	0	12:06	0.00
P_8-9	OUTFALL	0.00	45.15	0	12:07	0.00
Swale Storage	STORAGE	0.00	0.00	0	00:00	0.00

Storage Node Summary

Storage Node ID	Maximum Ponded Volume 1000 ft³	Maximum Ponded (%)	Time of Max Ponded days hh:mm	Average Ponded Volume 1000 ft³	Average Ponded (%)	Maximum Storage Node Outflow cfs	Maximum Exfiltration Rate cfm	Time of Max. Exfiltration Rate hh:mm:ss	Total Exfiltrated Volume 1000 ft³
Swale Storage	0.000	0	0 00:00	0.000	0	0.00	0.00	0:00:00	0.000

Outfall Loading Summary

Outfall Node ID	Flow Frequency (%)	Average Flow cfs	Peak Inflow cfs
Out_18	0.00	0.00	0.00
P_10_11_12	75.29	3.53	71.92
P_13_14_15	75.51	3.76	76.88
P_16_17	75.87	0.89	18.53
P_19A_19B_22	74.97	2.08	42.84
P_1A_1B_1C_2	74.43	4.05	80.81
P_20A_20B_21	75.21	2.04	42.32
P_23A_23B_27	74.92	1.66	34.31
P_24_25_26_28_31	75.21	2.68	56.05
P_29_30	75.39	0.93	19.95
P_3_4A_4B_5	75.39	2.86	58.78
P_32A_32B	75.31	0.81	17.38
P_33A_33B_34_18	75.09	2.07	43.42

P_35_36	75.02	0.54	11.64
P_6_7	75.53	1.96	40.27
P_8-9	75.03	2.23	45.15
System	70.51	32.09	657.21

****
Link Flow Summary
****

Link ID	Element Type	Time of Peak Flow Occurrence	Maximum Velocity Attained	Length Factor	Peak Flow during Analysis	Design Flow Capacity	Ratio of Maximum /Design Flow	Ratio of Maximum Flow	Total Time	Reported Condition	Surcharged Depth	minutes
		days hh:mm	ft/sec		cfs	cfs						
ISW_10	CHANNEL	0 12:07	3.00	1.00	19.58	74.70	0.26	0.54	0	Calculated		
ISW_11A	CHANNEL	0 12:06	3.15	1.00	31.47	36.76	0.86	0.93	0	Calculated		
ISW_11B	CHANNEL	0 12:06	3.04	1.00	42.51	59.02	0.72	0.86	0	Calculated		
ISW_12	CHANNEL	0 12:06	2.71	1.00	9.91	19.06	0.52	0.72	0	Calculated		
ISW_13	CHANNEL	0 12:06	3.04	1.00	15.95	18.72	0.85	0.92	0	Calculated		
ISW_14	CHANNEL	0 12:06	3.25	1.00	41.02	64.54	0.64	0.81	0	Calculated		
ISW_15	CHANNEL	0 12:07	3.26	1.00	19.95	44.13	0.45	0.68	0	Calculated		
ISW_16	CHANNEL	0 12:05	4.83	1.00	13.65	38.49	0.35	0.59	0	Calculated		
ISW_17	CHANNEL	0 12:05	3.69	1.00	4.89	40.44	0.12	0.33	0	Calculated		
ISW_19A	CHANNEL	0 12:07	2.96	1.00	22.32	36.76	0.61	0.79	0	Calculated		
ISW_19B	CHANNEL	0 12:07	3.22	1.00	31.88	177.47	0.18	0.46	0	Calculated		
ISW_1A	CHANNEL	0 12:05	3.43	1.00	9.31	27.48	0.34	0.58	0	Calculated		
ISW_1B	CHANNEL	0 12:07	3.01	1.00	32.56	61.66	0.53	0.75	0	Calculated		
ISW_1C	CHANNEL	0 12:08	3.59	1.00	80.83	214.32	0.38	0.66	0	Calculated		
ISW_2	CHANNEL	0 12:06	3.25	1.00	30.89	71.96	0.43	0.68	0	Calculated		
ISW_20A	CHANNEL	0 12:06	2.23	1.00	8.09	15.57	0.52	0.72	0	Calculated		
ISW_20B	CHANNEL	0 12:07	3.09	1.00	25.19	70.39	0.36	0.62	0	Calculated		
ISW_21	CHANNEL	0 12:06	2.73	1.00	17.23	175.23	0.10	0.35	0	Calculated		
ISW_22	CHANNEL	0 12:06	2.48	1.00	11.07	180.98	0.06	0.28	0	Calculated		
ISW_23A	CHANNEL	0 12:06	2.18	1.00	7.58	15.47	0.49	0.70	0	Calculated		
ISW_23B	CHANNEL	0 12:07	2.58	1.00	23.24	141.32	0.16	0.44	0	Calculated		

ISW_24	CHANNEL	0	12:06	2.83	1.00	18.20	36.91	0.49	0.71	0	Calculated
ISW_25	CHANNEL	0	12:07	2.59	1.00	37.46	123.91	0.30	0.59	0	Calculated
ISW_26	CHANNEL	0	12:06	2.92	1.00	15.90	77.79	0.20	0.47	0	Calculated
ISW_27	CHANNEL	0	12:06	2.72	1.00	11.25	80.37	0.14	0.39	0	Calculated
ISW_28	CHANNEL	0	12:05	2.25	1.00	6.88	16.99	0.40	0.63	0	Calculated
ISW_29	CHANNEL	0	12:05	3.54	1.00	16.35	22.63	0.72	0.85	0	Calculated
ISW_3	CHANNEL	0	12:05	2.85	1.00	7.39	23.35	0.32	0.56	0	Calculated
ISW_30	CHANNEL	0	12:04	3.05	1.00	3.64	154.76	0.02	0.15	0	Calculated
ISW_31	CHANNEL	0	12:04	2.18	1.00	2.99	103.17	0.03	0.17	0	Calculated
ISW_32A	CHANNEL	0	12:05	2.29	1.00	6.90	17.38	0.40	0.63	0	Calculated
ISW_32B	CHANNEL	0	12:05	3.73	1.00	17.38	107.76	0.16	0.42	0	Calculated
ISW_33A	CHANNEL	0	12:05	2.24	1.00	7.82	15.86	0.49	0.70	0	Calculated
ISW_33B	CHANNEL	0	12:07	3.31	1.00	40.17	64.77	0.62	0.80	0	Calculated
ISW_34	CHANNEL	0	12:04	1.79	1.00	3.37	187.33	0.02	0.15	0	Calculated
ISW_35	CHANNEL	0	12:04	1.67	1.00	2.59	190.07	0.01	0.13	0	Calculated
ISW_36	CHANNEL	0	12:05	2.34	1.00	9.07	70.55	0.13	0.38	0	Calculated
ISW_4A	CHANNEL	0	12:06	3.14	1.00	31.19	36.76	0.85	0.93	0	Calculated
ISW_4B	CHANNEL	0	12:06	3.01	1.00	46.27	56.51	0.82	0.91	0	Calculated
ISW_5	CHANNEL	0	12:05	2.25	1.00	5.24	19.06	0.27	0.52	0	Calculated
ISW_6	CHANNEL	0	12:06	3.00	1.00	17.99	77.38	0.23	0.51	0	Calculated
ISW_7	CHANNEL	0	12:06	3.49	1.00	22.29	89.35	0.25	0.52	0	Calculated
ISW_8	CHANNEL	0	12:08	2.84	1.00	21.46	65.25	0.33	0.60	0	Calculated
ISW_9	CHANNEL	0	12:07	3.02	1.00	23.71	69.80	0.34	0.61	0	Calculated
P_10_11_12	CONDUIT	0	12:06	15.65	1.00	71.92	102.19	0.70	0.62	0	Calculated
P_13_14_15	CONDUIT	0	12:06	16.14	1.00	76.88	104.29	0.74	0.64	0	Calculated
P_16_17	CONDUIT	0	12:05	11.76	1.00	18.53	37.36	0.50	0.50	0	Calculated
P_19A_19B_22	CONDUIT	0	12:07	10.57	1.00	42.84	71.54	0.60	0.56	0	Calculated
P_1A_1B_1C_2	CONDUIT	0	12:08	7.57	1.00	80.81	95.29	0.85	0.71	0	Calculated
P_20A_20B_21	CONDUIT	0	12:06	13.04	1.00	42.32	94.88	0.45	0.47	0	Calculated
P_23A_23B_27	CONDUIT	0	12:07	12.57	1.00	34.31	97.43	0.35	0.41	0	Calculated
P_24_25_26_28_31	CONDUIT	0	12:06	14.26	1.00	56.05	97.43	0.58	0.54	0	Calculated
P_29_30	CONDUIT	0	12:05	10.65	1.00	19.95	38.02	0.52	0.51	0	Calculated
P_3_4A_4B_5	CONDUIT	0	12:06	14.95	1.00	58.78	102.19	0.58	0.54	0	Calculated
P_32A_32B	CONDUIT	0	12:05	12.06	1.00	17.38	19.27	0.90			

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0.74           0  Calculated
  P_33A_33B_34_18      CONDUIT      0  12:06     10.71    1.00       43.42       62.94      0.69
0.61           0  Calculated
  P_35_36              CONDUIT      0  12:05      9.59    1.00       11.64       33.41      0.35
0.41           0  Calculated
  P_6_7                CONDUIT      0  12:06     13.80    1.00       40.27      104.29      0.39
0.43           0  Calculated
  P_8-9                CONDUIT      0  12:07     14.22    1.00       45.15      104.29      0.43
0.46           0  Calculated


  ******************************
  Highest Flow Instability Indexes
  ******************************
  All links are stable.


  Analysis began on:  Thu Apr  4 13:15:43 2024
  Analysis ended on:  Thu Apr  4 13:15:54 2024
  Total elapsed time: 00:00:11
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ATTACHMENT 4
ASSA OUTPUT REPORT - DURING CONSTRUCTION - 2-YR, 24-HR STORM

Autodesk® Storm and Sanitary Analysis 2016 - Version 13.4.133 (Build 0)

****
Project Description
****
File Name ..... Proposed _Landfill_SW_60 Percent Design_During Construction.SPF
Description ..... During Construction 2-yr, 24-hr Storm

****
Analysis Options
****
Flow Units ..... cfs
Subbasin Hydrograph Method. SCS TR-20
Time of Concentration..... SCS TR-55
Link Routing Method ..... Kinematic Wave
Storage Node Exfiltration.. Constant rate, wetted area
Starting Date FEB-01-2024 00:00:00
Ending Date FEB-02-2024 00:00:00
Report Time Step 00:01:00

****
Element Count
****
Number of rain gages 0
Number of subbasins 45
Number of nodes 76
Number of links 59

****
Subbasin Summary
****

Subbasin ID	Total Area acres	Peak Rate Factor
Area_10	3.16	484.00
Area_11A	5.05	484.00
Area_11B	1.73	484.00
Area_12	1.54	484.00
Area_13	2.52	484.00
Area_14	6.54	484.00
Area_15	3.20	484.00
Area_16	2.17	484.00
Area_17	0.76	484.00
Area_18	1.91	484.00
Area_19A	3.51	484.00
Area_19B	1.54	484.00
Area_1A	1.45	484.00
Area_1B	3.76	484.00
Area_1C	2.90	484.00
Area_2	4.94	484.00
Area_20A	1.24	484.00
Area_20B	2.70	484.00
Area_21	2.69	484.00
Area_22	1.71	484.00
Area_23A	1.16	484.00
Area_23B	2.48	484.00
Area_24	2.81	484.00
Area_25	1.97	484.00
Area_26	2.45	484.00
Area_27	1.73	484.00
Area_28	1.05	484.00

Area_29	2.48	484.00
Area_3	1.15	484.00
Area_30	0.55	484.00
Area_31	0.45	484.00
Area_32A	1.04	484.00
Area_32B	1.60	484.00
Area_33A	1.18	484.00
Area_33B	3.12	484.00
Area_34	0.50	484.00
Area_35	0.38	484.00
Area_36	1.37	484.00
Area_4A	4.96	484.00
Area_4B	2.41	484.00
Area_5	0.80	484.00
Area_6	2.83	484.00
Area_7	3.58	484.00
Area_8	3.44	484.00
Area_9	3.81	484.00

****
Node Summary
****

Node ID	Element Type	Invert Elevation ft	Maximum Elev. ft	Ponded Area ft²	External Inflow
Jun-53	JUNCTION	407.00	409.00	0.00	
Jun-54	JUNCTION	407.00	409.00	0.00	
Node_ISW_10	JUNCTION	410.00	412.00	0.00	
Node_ISW_11A	JUNCTION	409.00	410.50	0.00	
Node_ISW_11B	JUNCTION	408.00	410.00	0.00	
Node_ISW_12	JUNCTION	410.00	411.00	0.00	
Node_ISW_13	JUNCTION	410.00	411.00	0.00	
Node_ISW_14	JUNCTION	409.00	411.00	0.00	
Node_ISW_15	JUNCTION	411.00	412.50	0.00	
Node_ISW_16	JUNCTION	410.00	411.00	0.00	
Node_ISW_17	JUNCTION	405.00	406.00	0.00	
Node_ISW_19A	JUNCTION	410.00	411.50	0.00	
Node_ISW_19B	JUNCTION	407.00	410.00	0.00	
Node_ISW_1A	JUNCTION	415.00	416.00	0.00	
Node_ISW_1B	JUNCTION	409.00	411.00	0.00	
Node_ISW_1C	JUNCTION	406.50	410.00	0.00	
Node_ISW_2	JUNCTION	409.00	411.00	0.00	
Node_ISW_20A	JUNCTION	410.00	411.00	0.00	
Node_ISW_20B	JUNCTION	408.00	410.00	0.00	
Node_ISW_21	JUNCTION	407.00	410.00	0.00	
Node_ISW_22	JUNCTION	407.00	410.00	0.00	
Node_ISW_23A	JUNCTION	409.00	410.00	0.00	
Node_ISW_23B	JUNCTION	407.00	410.00	0.00	
Node_ISW_24	JUNCTION	409.00	410.50	0.00	
Node_ISW_25	JUNCTION	406.00	410.00	0.00	
Node_ISW_26	JUNCTION	408.00	410.00	0.00	
Node_ISW_27	JUNCTION	408.00	410.00	0.00	
Node_ISW_28	JUNCTION	408.00	409.00	0.00	
Node_ISW_29	JUNCTION	408.00	409.00	0.00	
Node_ISW_3	JUNCTION	410.00	411.00	0.00	
Node_ISW_32A	JUNCTION	409.00	410.00	0.00	
Node_ISW_32B	JUNCTION	407.00	409.00	0.00	
Node_ISW_33A	JUNCTION	409.00	410.00	0.00	
Node_ISW_33B	JUNCTION	407.00	409.00	0.00	
Node_ISW_34	JUNCTION	406.00	409.00	0.00	
Node_ISW_35	JUNCTION	406.00	409.00	0.00	
Node_ISW_36	JUNCTION	407.00	409.00	0.00	
Node_ISW_4A	JUNCTION	409.00	410.50	0.00	
Node_ISW_4B	JUNCTION	408.00	410.00	0.00	
Node_ISW_5	JUNCTION	410.00	411.00	0.00	

Node_ISW_6	JUNCTION	410.00	412.00	0.00
Node_ISW_7	JUNCTION	410.00	412.00	0.00
Node_ISW_8	JUNCTION	410.00	412.00	0.00
Node_ISW_9	JUNCTION	410.00	412.00	0.00
Node_P_10_11_12	JUNCTION	407.00	410.00	0.00
Node_P_13_14_15	JUNCTION	407.00	410.00	0.00
Node_P_16_17	JUNCTION	402.00	405.00	0.00
Node_P_19A_19B_22	JUNCTION	405.00	408.00	0.00
Node_P_1A_1B_1C_2	JUNCTION	405.00	408.50	0.00
Node_P_20A_20B_21	JUNCTION	405.00	408.00	0.00
Node_P_23A_23B_27	JUNCTION	405.00	408.00	0.00
Node_P_24_25_26_28_31	JUNCTION	405.00	408.00	0.00
Node_P_29_30	JUNCTION	402.00	405.00	0.00
Node_P_3_4A_4B_5	JUNCTION	407.00	410.00	0.00
Node_P_32A_32B	JUNCTION	402.00	405.00	0.00
Node_P_33A_33B_34_18	JUNCTION	404.00	408.00	0.00
Node_P_35_36	JUNCTION	405.00	408.00	0.00
Node_P_6_7	JUNCTION	407.00	410.00	0.00
Node_P_8_9	JUNCTION	407.00	410.00	0.00
Out_18	OUTFALL	0.00	0.00	0.00
P_10_11_12	OUTFALL	406.00	409.00	0.00
P_13_14_15	OUTFALL	406.00	409.00	0.00
P_16_17	OUTFALL	401.00	403.01	0.00
P_19A_19B_22	OUTFALL	404.00	407.00	0.00
P_1A_1B_1C_2	OUTFALL	404.00	407.00	0.00
P_20A_20B_21	OUTFALL	404.00	407.00	0.00
P_23A_23B_27	OUTFALL	404.00	407.00	0.00
P_24_25_26_28_31	OUTFALL	404.00	407.00	0.00
P_29_30	OUTFALL	401.00	402.52	0.00
P_3_4A_4B_5	OUTFALL	406.00	409.00	0.00
P_32A_32B	OUTFALL	401.00	402.52	0.00
P_33A_33B_34_18	OUTFALL	403.00	405.01	0.00
P_35_36	OUTFALL	404.00	406.01	0.00
P_6_7	OUTFALL	406.00	409.00	0.00
P_8-9	OUTFALL	406.00	409.00	0.00
Swale Storage	STORAGE	0.00	6.00	0.00

****
Link Summary
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Link ID	From Node	To Node	Element Type	Length ft	Slope %	Manning's Roughness
ISW_10	Node_ISW_10	Node_P_10_11_12	CHANNEL	515.0	0.5825	0.0220
ISW_11A	Node_ISW_11A	Node_ISW_11B	CHANNEL	200.0	0.5000	0.0220
ISW_11B	Node_ISW_11B	Node_P_10_11_12	CHANNEL	275.0	0.3636	0.0220
ISW_12	Node_ISW_12	Node_P_10_11_12	CHANNEL	405.0	0.7407	0.0220
ISW_13	Node_ISW_13	Node_P_13_14_15	CHANNEL	420.0	0.7143	0.0220
ISW_14	Node_ISW_14	Node_P_13_14_15	CHANNEL	460.0	0.4348	0.0220
ISW_15	Node_ISW_15	Node_P_13_14_15	CHANNEL	555.0	0.7207	0.0220
ISW_16	Node_ISW_16	Node_P_16_17	CHANNEL	265.0	3.0189	0.0220
ISW_17	Node_ISW_17	Node_P_16_17	CHANNEL	90.0	3.3333	0.0220
ISW_19A	Node_ISW_19A	Node_ISW_19B	CHANNEL	600.0	0.5000	0.0220
ISW_19B	Node_ISW_19B	Node_P_19A_19B_22	CHANNEL	390.0	0.5128	0.0220
ISW_1A	Node_ISW_1A	Node_ISW_1B	CHANNEL	390.0	1.5385	0.0220
ISW_1B	Node_ISW_1B	Node_ISW_1C	CHANNEL	630.0	0.3968	0.0220
ISW_1C	Node_ISW_1C	Node_P_1A_1B_1C_2	CHANNEL	415.0	0.3614	0.0220
ISW_2	Node_ISW_2	Node_ISW_1C	CHANNEL	370.0	0.5405	0.0220
ISW_20A	Node_ISW_20A	Node_ISW_20B	CHANNEL	405.0	0.4938	0.0220
ISW_20B	Node_ISW_20B	Node_P_20A_20B_21	CHANNEL	580.0	0.5172	0.0220
ISW_21	Node_ISW_21	Node_P_20A_20B_21	CHANNEL	400.0	0.5000	0.0220
ISW_22	Node_ISW_22	Node_P_19A_19B_22	CHANNEL	375.0	0.5333	0.0220
ISW_23A	Node_ISW_23A	Node_ISW_23B	CHANNEL	410.0	0.4878	0.0220
ISW_23B	Node_ISW_23B	Node_P_23A_23B_27	CHANNEL	615.0	0.3252	0.0220
ISW_24	Node_ISW_24	Node_ISW_25	CHANNEL	595.0	0.5042	0.0220
ISW_25	Node_ISW_25	Node_P_24_25_26_28_31	CHANNEL	400.0	0.2500	

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0.0220
  ISW_26          Node_ISW_26     Node_P_24_25_26_28_31CHANNEL          475.0    0.6316
0.0220
  ISW_27          Node_ISW_27     Node_P_23A_23B_27CHANNEL          445.0    0.6742      0.0220
  ISW_28          Node_ISW_28     Node_ISW_25     CHANNEL          340.0    0.5882      0.0220
  ISW_29          Node_ISW_29     Node_P_29_30    CHANNEL          575.0    1.0435      0.0220
  ISW_3           Node_ISW_3      Node_P_3_4A_4B_5CHANNEL          270.0    1.1111      0.0220
  ISW_30          Jun-54          Node_P_29_30    CHANNEL          160.0    2.5000      0.0220
  ISW_31          Jun-53          Node_P_24_25_26_28_31CHANNEL          180.0    1.1111
0.0220
  ISW_32A         Node_ISW_32A    Node_ISW_32B    CHANNEL          325.0    0.6154      0.0220
  ISW_32B         Node_ISW_32B    Node_P_32A_32B  CHANNEL          330.0    1.2121      0.0220
  ISW_33A         Node_ISW_33A    Node_ISW_33B    CHANNEL          390.0    0.5128      0.0220
  ISW_33B         Node_ISW_33B    Node_P_33A_33B_34_18CHANNEL          685.0    0.4380
0.0220
  ISW_34          Node_ISW_34     Node_P_33A_33B_34_18CHANNEL          175.0    0.5714
0.0220
  ISW_35          Node_ISW_35     Node_P_35_36    CHANNEL          170.0    0.5882      0.0220
  ISW_36          Node_ISW_36     Node_P_35_36    CHANNEL          385.0    0.5195      0.0220
  ISW_4A          Node_ISW_4A     Node_ISW_4B     CHANNEL          200.0    0.5000      0.0220
  ISW_4B          Node_ISW_4B     Node_P_3_4A_4B_5CHANNEL          300.0    0.3333      0.0220
  ISW_5           Node_ISW_5      Node_P_3_4A_4B_5CHANNEL          270.0    0.7407      0.0220
  ISW_6           Node_ISW_6      Node_P_6_7      CHANNEL          480.0    0.6250      0.0220
  ISW_7           Node_ISW_7      Node_P_6_7      CHANNEL          360.0    0.8333      0.0220
  ISW_8           Node_ISW_8      Node_P_8_9      CHANNEL          675.0    0.4444      0.0220
  ISW_9           Node_ISW_9      Node_P_8_9      CHANNEL          590.0    0.5085      0.0220
  P_10_11_12      Node_P_10_11_12 P_10_11_12      CONDUIT           50.0    2.0000      0.0120
  P_13_14_15      Node_P_13_14_15 P_13_14_15      CONDUIT           48.0    2.0833      0.0120
  P_16_17         Node_P_16_17    P_16_17         CONDUIT           44.0    2.2727      0.0120
  P_19A_19B_22    Node_P_19A_19B_22P_19A_19B_22    CONDUIT          102.0    0.9804      0.0120
  P_1A_1B_1C_2    Node_P_1A_1B_1C_2P_1A_1B_1C_2    CONDUIT          230.0    0.4348      0.0120
  P_20A_20B_21    Node_P_20A_20B_21P_20A_20B_21    CONDUIT           58.0    1.7241      0.0120
  P_23A_23B_27    Node_P_23A_23B_27P_23A_23B_27    CONDUIT           55.0    1.8182      0.0120
  P_24_25_26_28_31Node_P_24_25_26_28_31P_24_25_26_28_31CONDUIT          55.0    1.8182
0.0120
  P_29_30         Node_P_29_30    P_29_30         CONDUIT           38.0    2.6316      0.0120
  P_3_4A_4B_5     Node_P_3_4A_4B_5P_3_4A_4B_5     CONDUIT           50.0    2.0000      0.0120
  P_32A_32B       Node_P_32A_32B  P_32A_32B       CONDUIT           37.0    2.7027      0.0120
  P_33A_33B_34_18 Node_P_33A_33B_34_18P_33A_33B_34_18 CONDUIT          62.0    1.6129
0.0120
  P_35_36         Node_P_35_36    P_35_36         CONDUIT           55.0    1.8182      0.0120
  P_6_7           Node_P_6_7      P_6_7           CONDUIT           48.0    2.0833      0.0120
  P_8-9           Node_P_8_9      P_8-9           CONDUIT           48.0    2.0833      0.0120


  ********************
  Cross Section Summary
  ********************
  Link            Shape           Depth/       Width       No. of       Cross    Full Flow
Design
  ID                              Diameter                 Barrels    Sectional    Hydraulic
Flow
                                                                        Area       Radius
Capacity
                                       ft          ft                    ft²          ft
cfs

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  ISW_10          TRAPEZOIDAL       2.00       15.00           1       18.00        1.15
101.87
  ISW_11A         TRAPEZOIDAL       1.50       12.00           1       11.25        0.90
50.12
  ISW_11B         TRAPEZOIDAL       2.00       15.00           1       18.00        1.15
80.49
  ISW_12          TRAPEZOIDAL       1.00        9.00           1        6.00        0.64
26.00
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ISW_13	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
25.53						
ISW_14	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
88.01						
ISW_15	TRAPEZOIDAL	1.50	12.00	1	11.25	0.90
60.18						
ISW_16	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
52.48						
ISW_17	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
55.15						
ISW_19A	TRAPEZOIDAL	1.50	12.00	1	11.25	0.90
50.12						
ISW_19B	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
242.00						
ISW_1A	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
37.47						
ISW_1B	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
84.08						
ISW_1C	TRAPEZOIDAL	3.50	24.00	1	47.25	1.88
292.25						
ISW_2	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
98.13						
ISW_20A	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
21.23						
ISW_20B	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
95.99						
ISW_21	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
238.96						
ISW_22	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
246.79						
ISW_23A	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
21.10						
ISW_23B	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
192.71						
ISW_24	TRAPEZOIDAL	1.50	12.00	1	11.25	0.90
50.33						
ISW_25	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
168.97						
ISW_26	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
106.07						
ISW_27	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
109.59						
ISW_28	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
23.17						
ISW_29	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
30.86						
ISW_3	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
31.84						
ISW_30	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
211.04						
ISW_31	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
140.69						
ISW_32A	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
23.70						
ISW_32B	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
146.95						
ISW_33A	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
21.63						
ISW_33B	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
88.33						
ISW_34	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
255.45						
ISW_35	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
259.18						
ISW_36	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
96.20						
ISW_4A	TRAPEZOIDAL	1.50	12.00	1	11.25	0.90

50.12						
ISW_4B	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
77.06						
ISW_5	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
26.00						
ISW_6	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
105.52						
ISW_7	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
121.84						
ISW_8	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
88.98						
ISW_9	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
95.18						
P_10_11_12	CIRCULAR	3.00	3.00	1	7.07	0.75
102.19						
P_13_14_15	CIRCULAR	3.00	3.00	1	7.07	0.75
104.29						
P_16_17	CIRCULAR	2.01	2.01	1	3.17	0.50
37.36						
P_19A_19B_22	CIRCULAR	3.00	3.00	1	7.07	0.75
71.54						
P_1A_1B_1C_2	CIRCULAR	3.00	3.00	2	7.07	0.75
47.64						
P_20A_20B_21	CIRCULAR	3.00	3.00	1	7.07	0.75
94.88						
P_23A_23B_27	CIRCULAR	3.00	3.00	1	7.07	0.75
97.43						
P_24_25_26_28_31	CIRCULAR	3.00	3.00	1	7.07	0.75
97.43						
P_29_30	CIRCULAR	1.52	1.52	2	1.81	0.38
19.01						
P_3_4A_4B_5	CIRCULAR	3.00	3.00	1	7.07	0.75
102.19						
P_32A_32B	CIRCULAR	1.52	1.52	1	1.81	0.38
19.27						
P_33A_33B_34_18	CIRCULAR	2.01	2.01	2	3.17	0.50
31.47						
P_35_36	CIRCULAR	2.01	2.01	1	3.17	0.50
33.41						
P_6_7	CIRCULAR	3.00	3.00	1	7.07	0.75
104.29						
P_8-9	CIRCULAR	3.00	3.00	1	7.07	0.75
104.29						

**********	Volume	Depth
Runoff Quantity Continuity	acre-ft	inches
**********	---------	-------
Total Precipitation	21.373	2.458
Surface Runoff	0.265	0.030
Continuity Error (%)	-0.000	

**********	Volume	Volume
Flow Routing Continuity	acre-ft	Mgallons
**********	---------	---------
External Inflow	0.000	0.000
External Outflow	15.842	5.162
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.059	0.019
Continuity Error (%)	-0.000	

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Composite Curve Number Computations Report
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Subbasin Area_10

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	3.16	D	94.00
Composite Area & Weighted CN	3.16		94.00

Subbasin Area_11A

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	5.05	D	94.00
Composite Area & Weighted CN	5.05		94.00

Subbasin Area_11B

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.73	D	94.00
Composite Area & Weighted CN	1.73		94.00

Subbasin Area_12

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.54	D	94.00
Composite Area & Weighted CN	1.54		94.00

Subbasin Area_13

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.52	D	94.00
Composite Area & Weighted CN	2.52		94.00

Subbasin Area_14

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	6.54	D	94.00
Composite Area & Weighted CN	6.54		94.00

Subbasin Area_15

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	3.20	D	94.00
Composite Area & Weighted CN	3.20		94.00

Subbasin Area_16

Soil/Surface Description	Area	Soil

Soil/Surface Description	(acres)	Group	CN
Newly graded area	2.17	D	94.00
Composite Area & Weighted CN	2.17		94.00

Subbasin Area_17

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	0.76	D	94.00
Composite Area & Weighted CN	0.76		94.00

Subbasin Area_18

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.91	D	94.00
Composite Area & Weighted CN	1.91		94.00

Subbasin Area_19A

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	3.51	D	94.00
Composite Area & Weighted CN	3.51		94.00

Subbasin Area_19B

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.54	D	94.00
Composite Area & Weighted CN	1.54		94.00

Subbasin Area_1A

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.45	D	94.00
Composite Area & Weighted CN	1.45		94.00

Subbasin Area_1B

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	3.76	D	94.00
Composite Area & Weighted CN	3.76		94.00

Subbasin Area_1C

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.90	D	94.00
Composite Area & Weighted CN	2.90		94.00

Subbasin Area_2

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	4.94	D	94.00
Composite Area & Weighted CN	4.94		94.00

Subbasin Area_20A

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.24	D	94.00
Composite Area & Weighted CN	1.24		94.00

Subbasin Area_20B

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.70	D	94.00
Composite Area & Weighted CN	2.70		94.00

Subbasin Area_21

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.69	D	94.00
Composite Area & Weighted CN	2.69		94.00

Subbasin Area_22

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.71	D	94.00
Composite Area & Weighted CN	1.71		94.00

Subbasin Area_23A

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.16	D	94.00
Composite Area & Weighted CN	1.16		94.00

Subbasin Area_23B

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.48	D	94.00
Composite Area & Weighted CN	2.48		94.00

Subbasin Area_24

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.81	D	94.00
Composite Area & Weighted CN	2.81		94.00

Subbasin Area_25

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.97	D	94.00
Composite Area & Weighted CN	1.97		94.00

Subbasin Area_26

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.45	D	94.00
Composite Area & Weighted CN	2.45		94.00

Subbasin Area_27

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.73	D	94.00
Composite Area & Weighted CN	1.73		94.00

Subbasin Area_28

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.05	D	94.00
Composite Area & Weighted CN	1.05		94.00

Subbasin Area_29

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.48	D	94.00
Composite Area & Weighted CN	2.48		94.00

Subbasin Area_3

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.15	D	94.00
Composite Area & Weighted CN	1.15		94.00

Subbasin Area_30

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	0.55	D	94.00

Composite Area & Weighted CN	0.55		94.00

Subbasin Area_31

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	0.45	D	94.00
Composite Area & Weighted CN	0.45		94.00

Subbasin Area_32A

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.04	D	94.00
Composite Area & Weighted CN	1.04		94.00

Subbasin Area_32B

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.60	D	94.00
Composite Area & Weighted CN	1.60		94.00

Subbasin Area_33A

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.18	D	94.00
Composite Area & Weighted CN	1.18		94.00

Subbasin Area_33B

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	3.12	D	94.00
Composite Area & Weighted CN	3.12		94.00

Subbasin Area_34

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	0.50	D	94.00
Composite Area & Weighted CN	0.50		94.00

Subbasin Area_35

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	0.39	D	94.00
Composite Area & Weighted CN	0.39		94.00

Subbasin Area_36

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.37	D	94.00
Composite Area & Weighted CN	1.37		94.00

Subbasin Area_4A

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	4.96	D	94.00
Composite Area & Weighted CN	4.96		94.00

Subbasin Area_4B

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.41	D	94.00
Composite Area & Weighted CN	2.41		94.00

Subbasin Area_5

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	0.80	D	94.00
Composite Area & Weighted CN	0.80		94.00

Subbasin Area_6

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.83	D	94.00
Composite Area & Weighted CN	2.83		94.00

Subbasin Area_7

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	3.58	D	94.00
Composite Area & Weighted CN	3.58		94.00

Subbasin Area_8

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	3.44	D	94.00
Composite Area & Weighted CN	3.44		94.00

Subbasin Area_9

Soil/Surface Description	Area (acres)	Soil Group	CN

Newly graded area	3.81	D	94.00
Composite Area & Weighted CN	3.81		94.00

****
SCS TR-55 Time of Concentration Computations Report
****

Sheet Flow Equation

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where:

Tc = Time of Concentration (hrs)
n = Manning's Roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hrs)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hrs)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft²)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's Roughness

Subbasin Area_10

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C

Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	320.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00
Computed Flow Time (minutes):	2.38	0.00	0.00

Total TOC (minutes):	7.98

Subbasin Area_11A

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	320.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00

```
          Computed Flow Time (minutes):               2.38               0.00
0.00

==========================================================================================================
          Total TOC (minutes):                        7.98

==========================================================================================================


  --------------------
  Subbasin Area_11B
  --------------------

  Sheet Flow Computations
  -----------------------
                                                 Subarea A          Subarea B          Subarea
C
          Manning's Roughness:                        0.10               0.00
0.00
          Flow Length (ft):                         100.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          2 yr, 24 hr Rainfall (in):                  2.46               0.00
0.00
          Velocity (ft/sec):                          0.30               0.00
0.00
          Computed Flow Time (minutes):               5.60               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A          Subarea B          Subarea
C
          Flow Length (ft):                         160.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          Surface Type:                    Bare & untilled            Unpaved
Unpaved
          Velocity (ft/sec):                          2.24               0.00
0.00
          Computed Flow Time (minutes):               1.19               0.00
0.00

==========================================================================================================
          Total TOC (minutes):                        6.79

==========================================================================================================


  -------------------
  Subbasin Area_12
  -------------------

  Sheet Flow Computations
  -----------------------
                                                 Subarea A          Subarea B          Subarea
C
          Manning's Roughness:                        0.10               0.00
0.00
          Flow Length (ft):                         100.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          2 yr, 24 hr Rainfall (in):                  2.46               0.00
0.00
```

```
          Velocity (ft/sec):                          0.30               0.00
0.00
          Computed Flow Time (minutes):               5.60               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A          Subarea B          Subarea
C
          Flow Length (ft):                         180.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          Surface Type:                    Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                          2.24               0.00
0.00
          Computed Flow Time (minutes):               1.34               0.00
0.00

================================================================================================
          Total TOC (minutes):                        6.94

================================================================================================


  -------------------
  Subbasin Area_13
  -------------------

  Sheet Flow Computations
  -----------------------
                                                 Subarea A          Subarea B          Subarea
C
          Manning's Roughness:                        0.10               0.00
0.00
          Flow Length (ft):                         100.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          2 yr, 24 hr Rainfall (in):                  2.46               0.00
0.00
          Velocity (ft/sec):                          0.30               0.00
0.00
          Computed Flow Time (minutes):               5.60               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A          Subarea B          Subarea
C
          Flow Length (ft):                         260.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          Surface Type:                    Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                          2.24               0.00
0.00
          Computed Flow Time (minutes):               1.93               0.00
0.00

================================================================================================
          Total TOC (minutes):                        7.53

================================================================================================
```

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  ------------------
  Subbasin Area_14
  ------------------

  Sheet Flow Computations
  -----------------------
                                                Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                       0.10                0.00
0.00
          Flow Length (ft):                        100.00                0.00
0.00
          Slope (%):                                 5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):                 2.46                0.00
0.00
          Velocity (ft/sec):                         0.30                0.00
0.00
          Computed Flow Time (minutes):              5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                        280.00                0.00
0.00
          Slope (%):                                 5.00                0.00
0.00
          Surface Type:                   Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                         2.24                0.00
0.00
          Computed Flow Time (minutes):              2.08                0.00
0.00

================================================================================================
          Total TOC (minutes):                       7.68

================================================================================================


  ------------------
  Subbasin Area_15
  ------------------

  Sheet Flow Computations
  -----------------------
                                                Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                       0.10                0.00
0.00
          Flow Length (ft):                        100.00                0.00
0.00
          Slope (%):                                 5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):                 2.46                0.00
0.00
          Velocity (ft/sec):                         0.30                0.00
0.00
          Computed Flow Time (minutes):              5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                Subarea A           Subarea B           Subarea
```

```
C
          Flow Length (ft):                          300.00                0.00
0.00
          Slope (%):                                   5.00                0.00
0.00
          Surface Type:                     Bare & untilled              Unpaved
Unpaved
          Velocity (ft/sec):                           2.24                0.00
0.00
          Computed Flow Time (minutes):                2.23                0.00
0.00

=============================================================================================
          Total TOC (minutes):                         7.83

=============================================================================================


  -------------------
  Subbasin Area_16
  -------------------

  Sheet Flow Computations
  -----------------------
                                                  Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                         0.10                0.00
0.00
          Flow Length (ft):                          100.00                0.00
0.00
          Slope (%):                                   5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):                   2.46                0.00
0.00
          Velocity (ft/sec):                           0.30                0.00
0.00
          Computed Flow Time (minutes):                5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                  Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                          280.00                0.00
0.00
          Slope (%):                                   5.00                0.00
0.00
          Surface Type:                     Bare & untilled              Unpaved
Unpaved
          Velocity (ft/sec):                           2.24                0.00
0.00
          Computed Flow Time (minutes):                2.08                0.00
0.00

=============================================================================================
          Total TOC (minutes):                         7.68

=============================================================================================


  -------------------
  Subbasin Area_17
  -------------------

  Sheet Flow Computations
  -----------------------
                                                  Subarea A           Subarea B           Subarea
```

C			
	Manning's Roughness:	0.10	0.00
0.00			
	Flow Length (ft):	100.00	0.00
0.00			
	Slope (%):	5.00	0.00
0.00			
	2 yr, 24 hr Rainfall (in):	2.46	0.00
0.00			
	Velocity (ft/sec):	0.30	0.00
0.00			
	Computed Flow Time (minutes):	5.60	0.00
0.00			

Shallow Concentrated Flow Computations

		Subarea A	Subarea B	Subarea
C			
	Flow Length (ft):	183.00	0.00
0.00			
	Slope (%):	4.37	0.00
0.00			
	Surface Type:	Bare & untilled	Unpaved
Unpaved			
	Velocity (ft/sec):	2.09	0.00
0.00			
	Computed Flow Time (minutes):	1.46	0.00
0.00			

	Total TOC (minutes):	7.06

Subbasin Area_18

Sheet Flow Computations

		Subarea A	Subarea B	Subarea
C			
	Manning's Roughness:	0.10	0.00
0.00			
	Flow Length (ft):	100.00	0.00
0.00			
	Slope (%):	5.00	0.00
0.00			
	2 yr, 24 hr Rainfall (in):	2.46	0.00
0.00			
	Velocity (ft/sec):	0.30	0.00
0.00			
	Computed Flow Time (minutes):	5.60	0.00
0.00			

Shallow Concentrated Flow Computations

		Subarea A	Subarea B	Subarea
C			
	Flow Length (ft):	220.00	0.00
0.00			
	Slope (%):	5.00	0.00
0.00			
	Surface Type:	Bare & untilled	Unpaved
Unpaved			
	Velocity (ft/sec):	2.24	0.00

```
0.00
          Computed Flow Time (minutes):               1.64                0.00
0.00

=============================================================================================================
          Total TOC (minutes):                        7.24

=============================================================================================================


  --------------------
  Subbasin Area_19A
  --------------------

  Sheet Flow Computations
  -----------------------
                                                   Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                          0.10                0.00
0.00
          Flow Length (ft):                           100.00                0.00
0.00
          Slope (%):                                    5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):                    2.46                0.00
0.00
          Velocity (ft/sec):                            0.30                0.00
0.00
          Computed Flow Time (minutes):                 5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                   Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                           200.25                0.00
0.00
          Slope (%):                                    5.00                0.00
0.00
          Surface Type:                      Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                            2.24                0.00
0.00
          Computed Flow Time (minutes):                 1.49                0.00
0.00

=============================================================================================================
          Total TOC (minutes):                        7.09

=============================================================================================================


  --------------------
  Subbasin Area_19B
  --------------------

  Sheet Flow Computations
  -----------------------
                                                   Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                          0.10                0.00
0.00
          Flow Length (ft):                           100.00                0.00
0.00
          Slope (%):                                    5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):                    2.46                0.00
```

```
0.00
          Velocity (ft/sec):                          0.30               0.00
0.00
          Computed Flow Time (minutes):               5.60               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                              Subarea A          Subarea B          Subarea
C
          Flow Length (ft):                      140.17               0.00
0.00
          Slope (%):                                4.99               0.00
0.00
          Surface Type:                  Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                        2.23               0.00
0.00
          Computed Flow Time (minutes):             1.05               0.00
0.00

=============================================================================================
          Total TOC (minutes):                      6.65

=============================================================================================


  -------------------
  Subbasin Area_1A
  -------------------

  Sheet Flow Computations
  -----------------------
                                              Subarea A          Subarea B          Subarea
C
          Manning's Roughness:                      0.10               0.00
0.00
          Flow Length (ft):                      100.00               0.00
0.00
          Slope (%):                                5.00               0.00
0.00
          2 yr, 24 hr Rainfall (in):                2.46               0.00
0.00
          Velocity (ft/sec):                        0.30               0.00
0.00
          Computed Flow Time (minutes):             5.60               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                              Subarea A          Subarea B          Subarea
C
          Flow Length (ft):                      200.00               0.00
0.00
          Slope (%):                                5.00               0.00
0.00
          Surface Type:                  Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                        2.24               0.00
0.00
          Computed Flow Time (minutes):             1.49               0.00
0.00

=============================================================================================
          Total TOC (minutes):                      7.09

=============================================================================================
```

```
  ------------------
  Subbasin Area_1B
  ------------------

  Sheet Flow Computations
  -----------------------
                                                Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                       0.10                0.00
0.00
          Flow Length (ft):                        100.00                0.00
0.00
          Slope (%):                                 5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):                 2.46                0.00
0.00
          Velocity (ft/sec):                         0.30                0.00
0.00
          Computed Flow Time (minutes):              5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                        300.00                0.00
0.00
          Slope (%):                                 5.00                0.00
0.00
          Surface Type:                   Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                         2.24                0.00
0.00
          Computed Flow Time (minutes):              2.23                0.00
0.00

=============================================================================================
          Total TOC (minutes):                       7.83

=============================================================================================


  ------------------
  Subbasin Area_1C
  ------------------

  Sheet Flow Computations
  -----------------------
                                                Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                       0.10                0.00
0.00
          Flow Length (ft):                        100.00                0.00
0.00
          Slope (%):                                 5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):                 2.46                0.00
0.00
          Velocity (ft/sec):                         0.30                0.00
0.00
          Computed Flow Time (minutes):              5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
```

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	280.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00
Computed Flow Time (minutes):	2.08	0.00	0.00

Total TOC (minutes): 7.68

Subbasin Area_2

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	300.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00
Computed Flow Time (minutes):	2.23	0.00	0.00

Total TOC (minutes): 7.83

Subbasin Area_20A

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	100.12	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.75	0.00	0.00

Total TOC (minutes):	6.35

Subbasin Area_20B

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	196.46	0.00	0.00
Slope (%):	5.09	0.00	0.00
Surface Type:	Bare & untilled	Grass pasture	Grass pasture

```
          Velocity (ft/sec):                          2.26                0.00
0.00
          Computed Flow Time (minutes):               1.45                0.00
0.00

=============================================================================================
          Total TOC (minutes):                        7.05

=============================================================================================


  -------------------
  Subbasin Area_21
  -------------------

  Sheet Flow Computations
  -----------------------
                                                   Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                        0.10                0.00
0.00
          Flow Length (ft):                         100.00                0.00
0.00
          Slope (%):                                  5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):                  2.46                0.00
0.00
          Velocity (ft/sec):                          0.30                0.00
0.00
          Computed Flow Time (minutes):               5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                   Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                         200.25                0.00
0.00
          Slope (%):                                  4.99                0.00
0.00
          Surface Type:                    Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                          2.23                0.00
0.00
          Computed Flow Time (minutes):               1.50                0.00
0.00

=============================================================================================
          Total TOC (minutes):                        7.10

=============================================================================================


  -------------------
  Subbasin Area_22
  -------------------

  Sheet Flow Computations
  -----------------------
                                                   Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                        0.10                0.00
0.00
          Flow Length (ft):                         100.00                0.00
0.00
          Slope (%):                                  5.00                0.00
0.00
```

```
          2 yr, 24 hr Rainfall (in):                  2.46                0.00
0.00
          Velocity (ft/sec):                          0.30                0.00
0.00
          Computed Flow Time (minutes):               5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                             Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                     160.20                0.00
0.00
          Slope (%):                              4.99                0.00
0.00
          Surface Type:                 Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                      2.23                0.00
0.00
          Computed Flow Time (minutes):           1.20                0.00
0.00

================================================================================================
          Total TOC (minutes):                    6.80

================================================================================================


  --------------------
  Subbasin Area_23A
  --------------------

  Sheet Flow Computations
  -----------------------
                                             Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                    0.10                0.00
0.00
          Flow Length (ft):                     100.00                0.00
0.00
          Slope (%):                              5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):              2.46                0.00
0.00
          Velocity (ft/sec):                      0.30                0.00
0.00
          Computed Flow Time (minutes):           5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                             Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                     120.15                0.00
0.00
          Slope (%):                              4.99                0.00
0.00
          Surface Type:                 Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                      2.23                0.00
0.00
          Computed Flow Time (minutes):           0.90                0.00
0.00

================================================================================================
          Total TOC (minutes):                    6.50
```

==========

Subbasin Area_23B

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	160.20	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	1.20	0.00	0.00

==========

Total TOC (minutes): 6.80

==========

Subbasin Area_24

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

```
  ------------------------------------
                                              Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                      140.17                0.00
0.00
          Slope (%):                               4.99                0.00
0.00
          Surface Type:                  Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                       2.23                0.00
0.00
          Computed Flow Time (minutes):            1.05                0.00
0.00

=============================================================================================
          Total TOC (minutes):                     6.65

=============================================================================================


  -------------------
  Subbasin Area_25
  -------------------

  Sheet Flow Computations
  -----------------------
                                              Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                     0.10                0.00
0.00
          Flow Length (ft):                      100.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):               2.46                0.00
0.00
          Velocity (ft/sec):                       0.30                0.00
0.00
          Computed Flow Time (minutes):            5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                              Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                      100.12                0.00
0.00
          Slope (%):                               4.99                0.00
0.00
          Surface Type:                  Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                       2.23                0.00
0.00
          Computed Flow Time (minutes):            0.75                0.00
0.00

=============================================================================================
          Total TOC (minutes):                     6.35

=============================================================================================


  -------------------
  Subbasin Area_26
  -------------------

  Sheet Flow Computations
```

```
  ----------------------
                                                Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                       0.10                0.00
0.00
          Flow Length (ft):                        100.00                0.00
0.00
          Slope (%):                                 5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):                 2.46                0.00
0.00
          Velocity (ft/sec):                         0.30                0.00
0.00
          Computed Flow Time (minutes):              5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  -------------------------------------
                                                Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                        140.17                0.00
0.00
          Slope (%):                                 4.99                0.00
0.00
          Surface Type:                   Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                         2.23                0.00
0.00
          Computed Flow Time (minutes):              1.05                0.00
0.00

================================================================================================
          Total TOC (minutes):                       6.65

================================================================================================


  -------------------
  Subbasin Area_27
  -------------------

  Sheet Flow Computations
  ----------------------
                                                Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                       0.10                0.00
0.00
          Flow Length (ft):                        100.00                0.00
0.00
          Slope (%):                                 5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):                 2.46                0.00
0.00
          Velocity (ft/sec):                         0.30                0.00
0.00
          Computed Flow Time (minutes):              5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  -------------------------------------
                                                Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                        140.17                0.00
0.00
          Slope (%):                                 4.99                0.00
0.00
          Surface Type:                   Bare & untilled             Unpaved
```

```
Unpaved
          Velocity (ft/sec):                          2.23               0.00
0.00
          Computed Flow Time (minutes):               1.05               0.00
0.00

=============================================================================================
          Total TOC (minutes):                        6.65

=============================================================================================


  -------------------
  Subbasin Area_28
  -------------------

  Sheet Flow Computations
  -----------------------
                                                 Subarea A          Subarea B          Subarea
C
          Manning's Roughness:                        0.10               0.00
0.00
          Flow Length (ft):                         100.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          2 yr, 24 hr Rainfall (in):                  2.46               0.00
0.00
          Velocity (ft/sec):                          0.30               0.00
0.00
          Computed Flow Time (minutes):               5.60               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A          Subarea B          Subarea
C
          Flow Length (ft):                          80.10               0.00
0.00
          Slope (%):                                  4.99               0.00
0.00
          Surface Type:                    Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                          2.23               0.00
0.00
          Computed Flow Time (minutes):               0.60               0.00
0.00

=============================================================================================
          Total TOC (minutes):                        6.20

=============================================================================================


  -------------------
  Subbasin Area_29
  -------------------

  Sheet Flow Computations
  -----------------------
                                                 Subarea A          Subarea B          Subarea
C
          Manning's Roughness:                        0.10               0.00
0.00
          Flow Length (ft):                         100.00               0.00
0.00
          Slope (%):                                  5.00               0.00
```

```
0.00
          2 yr, 24 hr Rainfall (in):                  2.46                0.00
0.00
          Velocity (ft/sec):                          0.30                0.00
0.00
          Computed Flow Time (minutes):               5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                         80.26                0.00
0.00
          Slope (%):                                 4.98                0.00
0.00
          Surface Type:                    Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                         2.23                0.00
0.00
          Computed Flow Time (minutes):              0.60                0.00
0.00

==============================================================================================
          Total TOC (minutes):                       6.20

==============================================================================================


  ------------------
  Subbasin Area_3
  ------------------

  Sheet Flow Computations
  -----------------------
                                                 Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                       0.10                0.00
0.00
          Flow Length (ft):                        100.00                0.00
0.00
          Slope (%):                                 5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):                 2.46                0.00
0.00
          Velocity (ft/sec):                         0.30                0.00
0.00
          Computed Flow Time (minutes):              5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                        200.00                0.00
0.00
          Slope (%):                                 5.00                0.00
0.00
          Surface Type:                    Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                         2.24                0.00
0.00
          Computed Flow Time (minutes):              1.49                0.00
0.00

==============================================================================================
          Total TOC (minutes):                       7.09
```

==========

Subbasin Area_30

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	80.31	0.00	0.00
Slope (%):	4.98	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.60	0.00	0.00

==========

Total TOC (minutes): 6.20

==========

Subbasin Area_31

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	40.05	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.30	0.00	0.00
Total TOC (minutes):	5.90		

Subbasin Area_32A

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	60.06	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.45	0.00	0.00
Total TOC (minutes):	6.05		

Subbasin Area_32B

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	60.18	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.45	0.00	0.00

Total TOC (minutes):	6.05

Subbasin Area_33A

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	60.12	0.00	0.00
Slope (%):	4.99	0.00	0.00

Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.45	0.00	0.00

Total TOC (minutes): 6.05

Subbasin Area_33B

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	60.12	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.45	0.00	0.00

Total TOC (minutes): 6.05

Subbasin Area_34

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00

Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	40.05	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.30	0.00	0.00

Total TOC (minutes):	5.90

Subbasin Area_35

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Total TOC (minutes):	5.60

Subbasin Area_36

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00

Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	40.05	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.30	0.00	0.00

Total TOC (minutes):	5.90

Subbasin Area_4A

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	280.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00
Computed Flow Time (minutes):	2.08	0.00	0.00

```
==============================================================================================
          Total TOC (minutes):                        7.68

==============================================================================================


  -------------------
  Subbasin Area_4B
  -------------------

  Sheet Flow Computations
  -----------------------
                                              Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                     0.10                0.00
0.00
          Flow Length (ft):                      100.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):               2.46                0.00
0.00
          Velocity (ft/sec):                       0.30                0.00
0.00
          Computed Flow Time (minutes):            5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                              Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                      280.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          Surface Type:                 Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                       2.24                0.00
0.00
          Computed Flow Time (minutes):            2.08                0.00
0.00

==============================================================================================
          Total TOC (minutes):                        7.68

==============================================================================================


  ------------------
  Subbasin Area_5
  ------------------

  Sheet Flow Computations
  -----------------------
                                              Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                     0.10                0.00
0.00
          Flow Length (ft):                      100.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):               2.46                0.00
0.00
          Velocity (ft/sec):                       0.30                0.00
0.00
```

Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	110.00	0.00	0.00
Slope (%):	5.46	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.34	0.00	0.00
Computed Flow Time (minutes):	0.78	0.00	0.00

Total TOC (minutes): 6.38

Subbasin Area_6

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	220.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00
Computed Flow Time (minutes):	1.64	0.00	0.00

Total TOC (minutes): 7.24

Subbasin Area_7

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	320.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00
Computed Flow Time (minutes):	2.38	0.00	0.00

Total TOC (minutes): 7.98

Subbasin Area_8

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	280.00	0.00	

```
0.00
          Slope (%):                                  5.00                0.00
0.00
          Surface Type:                     Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                          2.24                0.00
0.00
          Computed Flow Time (minutes):               2.08                0.00
0.00

=============================================================================================
          Total TOC (minutes):                        7.68

=============================================================================================


  ------------------
  Subbasin Area_9
  ------------------

  Sheet Flow Computations
  -----------------------
                                                 Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                        0.10                0.00
0.00
          Flow Length (ft):                         100.00                0.00
0.00
          Slope (%):                                  5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):                  2.46                0.00
0.00
          Velocity (ft/sec):                          0.30                0.00
0.00
          Computed Flow Time (minutes):               5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                         300.00                0.00
0.00
          Slope (%):                                  5.00                0.00
0.00
          Surface Type:                     Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                          2.24                0.00
0.00
          Computed Flow Time (minutes):               2.23                0.00
0.00

=============================================================================================
          Total TOC (minutes):                        7.83

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  **********************
  Subbasin Runoff Summary
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  ---------------------------------------------------------------------------
  Subbasin             Total     Total      Peak  Weighted           Time of
  ID                  Precip    Runoff    Runoff     Curve     Concentration
                         in        in       cfs    Number    days  hh:mm:ss
  ---------------------------------------------------------------------------
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Area_10	2.46	1.83	8.17	94.000	0	00:07:58
Area_11A	2.46	1.83	13.07	94.000	0	00:07:58
Area_11B	2.46	1.83	4.64	94.000	0	00:06:47
Area_12	2.46	1.83	4.11	94.000	0	00:06:56
Area_13	2.46	1.83	6.62	94.000	0	00:07:31
Area_14	2.46	1.83	17.06	94.000	0	00:07:40
Area_15	2.46	1.83	8.31	94.000	0	00:07:49
Area_16	2.46	1.83	5.66	94.000	0	00:07:40
Area_17	2.46	1.83	2.02	94.000	0	00:07:03
Area_18	2.46	1.83	5.03	94.000	0	00:07:14
Area_19A	2.46	1.83	9.30	94.000	0	00:07:05
Area_19B	2.46	1.83	4.14	94.000	0	00:06:39
Area_1A	2.46	1.83	3.85	94.000	0	00:07:05
Area_1B	2.46	1.83	9.76	94.000	0	00:07:49
Area_1C	2.46	1.83	7.56	94.000	0	00:07:40
Area_2	2.46	1.83	12.83	94.000	0	00:07:49
Area_20A	2.46	1.83	3.34	94.000	0	00:06:21
Area_20B	2.46	1.83	7.17	94.000	0	00:07:03
Area_21	2.46	1.83	7.14	94.000	0	00:07:06
Area_22	2.46	1.83	4.59	94.000	0	00:06:48
Area_23A	2.46	1.83	3.14	94.000	0	00:06:30
Area_23B	2.46	1.83	6.62	94.000	0	00:06:48
Area_24	2.46	1.83	7.56	94.000	0	00:06:39
Area_25	2.46	1.83	5.34	94.000	0	00:06:21
Area_26	2.46	1.83	6.58	94.000	0	00:06:39
Area_27	2.46	1.83	4.66	94.000	0	00:06:39
Area_28	2.46	1.83	2.84	94.000	0	00:06:12
Area_29	2.46	1.83	6.75	94.000	0	00:06:12
Area_3	2.46	1.83	3.05	94.000	0	00:07:05
Area_30	2.46	1.83	1.50	94.000	0	00:06:12
Area_31	2.46	1.83	1.23	94.000	0	00:05:54
Area_32A	2.46	1.83	2.85	94.000	0	00:06:03
Area_32B	2.46	1.83	4.35	94.000	0	00:06:03
Area_33A	2.46	1.83	3.23	94.000	0	00:06:03
Area_33B	2.46	1.83	8.53	94.000	0	00:06:03
Area_34	2.46	1.83	1.39	94.000	0	00:05:54
Area_35	2.46	1.83	1.06	94.000	0	00:05:36
Area_36	2.46	1.83	3.74	94.000	0	00:05:54
Area_4A	2.46	1.83	12.93	94.000	0	00:07:40
Area_4B	2.46	1.83	6.29	94.000	0	00:07:40
Area_5	2.46	1.83	2.16	94.000	0	00:06:22
Area_6	2.46	1.83	7.47	94.000	0	00:07:14
Area_7	2.46	1.83	9.27	94.000	0	00:07:58
Area_8	2.46	1.83	8.98	94.000	0	00:07:40
Area_9	2.46	1.83	9.89	94.000	0	00:07:49

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Node Depth Summary
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Node ID	Average Depth Attained ft	Maximum Depth Attained ft	Maximum HGL Attained ft	Time of Max Occurrence days	Time of Max Occurrence hh:mm	Total Flooded Volume acre-in	Total Time Flooded minutes	Retention Time hh:mm:ss
Jun-53	0.01	0.17	407.17	0	11:57	0	0	0:00:00
Jun-54	0.01	0.15	407.15	0	11:57	0	0	0:00:00
Node_ISW_10	0.06	0.59	410.59	0	11:58	0	0	0:00:00
Node_ISW_11A	0.08	0.78	409.78	0	11:58	0	0	0:00:00
Node_ISW_11B	0.10	0.98	408.98	0	11:58	0	0	0:00:00
Node_ISW_12	0.04	0.38	410.38	0	11:57	0	0	0:00:00
Node_ISW_13	0.05	0.50	410.50	0	11:58	0	0	0:00:00
Node_ISW_14	0.09	0.93	409.93	0	11:58	0	0	0:00:00
Node_ISW_15	0.05	0.56	411.56	0	11:58	0	0	0:00:00

Node_ISW_16	0.03	0.31	410.31	0	11:58	0	0	0:00:00
Node_ISW_17	0.01	0.17	405.17	0	11:57	0	0	0:00:00
Node_ISW_19A	0.06	0.66	410.66	0	11:57	0	0	0:00:00
Node_ISW_19B	0.08	0.77	407.77	0	11:59	0	0	0:00:00
Node_ISW_1A	0.03	0.30	415.30	0	11:57	0	0	0:00:00
Node_ISW_1B	0.09	0.84	409.84	0	11:58	0	0	0:00:00
Node_ISW_1C	0.58	1.33	407.83	0	11:59	0	0	0:00:00
Node_ISW_2	0.08	0.76	409.76	0	11:58	0	0	0:00:00
Node_ISW_20A	0.03	0.38	410.38	0	11:57	0	0	0:00:00
Node_ISW_20B	0.07	0.69	408.69	0	11:58	0	0	0:00:00
Node_ISW_21	0.05	0.57	407.57	0	11:57	0	0	0:00:00
Node_ISW_22	0.04	0.45	407.45	0	11:57	0	0	0:00:00
Node_ISW_23A	0.03	0.37	409.37	0	11:57	0	0	0:00:00
Node_ISW_23B	0.07	0.74	407.74	0	11:58	0	0	0:00:00
Node_ISW_24	0.06	0.59	409.59	0	11:57	0	0	0:00:00
Node_ISW_25	0.10	1.00	407.00	0	11:58	0	0	0:00:00
Node_ISW_26	0.05	0.52	408.52	0	11:57	0	0	0:00:00
Node_ISW_27	0.04	0.42	408.42	0	11:57	0	0	0:00:00
Node_ISW_28	0.03	0.33	408.33	0	11:57	0	0	0:00:00
Node_ISW_29	0.04	0.46	408.46	0	11:57	0	0	0:00:00
Node_ISW_3	0.03	0.29	410.29	0	11:57	0	0	0:00:00
Node_ISW_32A	0.03	0.33	409.33	0	11:57	0	0	0:00:00
Node_ISW_32B	0.04	0.45	407.45	0	11:57	0	0	0:00:00
Node_ISW_33A	0.03	0.37	409.37	0	11:57	0	0	0:00:00
Node_ISW_33B	0.09	0.91	407.91	0	11:57	0	0	0:00:00
Node_ISW_34	0.02	0.23	406.23	0	11:57	0	0	0:00:00
Node_ISW_35	0.02	0.19	406.19	0	11:56	0	0	0:00:00
Node_ISW_36	0.04	0.40	407.40	0	11:57	0	0	0:00:00
Node_ISW_4A	0.08	0.78	409.78	0	11:58	0	0	0:00:00
Node_ISW_4B	0.11	1.05	409.05	0	11:58	0	0	0:00:00
Node_ISW_5	0.02	0.27	410.27	0	11:57	0	0	0:00:00
Node_ISW_6	0.05	0.55	410.55	0	11:58	0	0	0:00:00
Node_ISW_7	0.06	0.58	410.58	0	11:58	0	0	0:00:00
Node_ISW_8	0.07	0.67	410.67	0	11:58	0	0	0:00:00
Node_ISW_9	0.07	0.68	410.68	0	11:58	0	0	0:00:00
Node_P_10_11_12	0.14	1.10	408.10	0	11:59	0	0	0:00:00
Node_P_13_14_15	0.14	1.13	408.13	0	11:59	0	0	0:00:00
Node_P_16_17	0.08	0.62	402.62	0	11:58	0	0	0:00:00
Node_P_19A_19B_22	0.13	1.00	406.00	0	12:00	0	0	0:00:00
Node_P_1A_1B_1C_2	0.15	1.33	406.33	0	12:01	0	0	0:00:00
Node_P_20A_20B_21	0.11	0.86	405.86	0	11:59	0	0	0:00:00
Node_P_23A_23B_27	0.10	0.76	405.76	0	12:00	0	0	0:00:00
Node_P_24_25_26_28_31	0.12	0.99	405.99	0	12:00	0	0	0:00:00
Node_P_29_30	1.01	1.15	403.15	0	11:57	0	0	0:00:00
Node_P_3_4A_4B_5	1.02	1.27	408.27	0	11:58	0	0	0:00:00
Node_P_32A_32B	1.04	1.45	403.45	0	11:58	0	0	0:00:00
Node_P_33A_33B_34_18	1.02	1.22	405.22	0	11:57	0	0	0:00:00
Node_P_35_36	0.06	0.51	405.51	0	11:58	0	0	0:00:00
Node_P_6_7	0.10	0.81	407.81	0	11:59	0	0	0:00:00
Node_P_8_9	0.11	0.85	407.85	0	12:00	0	0	0:00:00
Out_18	0.00	0.00	0.00	0	00:00	0	0	0:00:00
P_10_11_12	0.14	1.10	407.10	0	11:59	0	0	0:00:00
P_13_14_15	0.14	1.13	407.13	0	11:59	0	0	0:00:00
P_16_17	0.08	0.62	401.62	0	11:58	0	0	0:00:00
P_19A_19B_22	0.13	1.00	405.00	0	12:00	0	0	0:00:00
P_1A_1B_1C_2	0.15	1.21	405.21	0	12:01	0	0	0:00:00
P_20A_20B_21	0.11	0.86	404.86	0	11:59	0	0	0:00:00
P_23A_23B_27	0.10	0.76	404.76	0	12:00	0	0	0:00:00
P_24_25_26_28_31	0.12	0.98	404.98	0	12:00	0	0	0:00:00
P_29_30	0.06	0.47	401.47	0	11:58	0	0	0:00:00
P_3_4A_4B_5	0.12	0.99	406.99	0	11:59	0	0	0:00:00
P_32A_32B	0.08	0.63	401.63	0	11:58	0	0	0:00:00
P_33A_33B_34_18	0.09	0.72	403.72	0	11:59	0	0	0:00:00
P_35_36	0.06	0.51	404.51	0	11:58	0	0	0:00:00
P_6_7	0.10	0.81	406.81	0	11:59	0	0	0:00:00
P_8-9	0.11	0.85	406.85	0	12:00	0	0	0:00:00
Swale Storage	0.00	0.00	0.00	0	00:00	0	0	0:00:00

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Node Flow Summary
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Node ID	Element Type	Maximum Lateral Inflow cfs	Peak Inflow cfs	Time of Peak Inflow Occurrence days	Time of Peak Inflow Occurrence hh:mm	Maximum Flooding Overflow cfs	Time of Peak Flooding Occurrence days	Time of Peak Flooding Occurrence hh:mm
Jun-53	JUNCTION	1.22	1.22	0	11:57	0.00		
Jun-54	JUNCTION	1.50	1.50	0	11:57	0.00		
Node_ISW_10	JUNCTION	8.16	8.16	0	11:58	0.00		
Node_ISW_11A	JUNCTION	13.07	13.07	0	11:58	0.00		
Node_ISW_11B	JUNCTION	4.63	17.53	0	11:58	0.00		
Node_ISW_12	JUNCTION	4.10	4.10	0	11:57	0.00		
Node_ISW_13	JUNCTION	6.61	6.61	0	11:58	0.00		
Node_ISW_14	JUNCTION	17.03	17.03	0	11:58	0.00		
Node_ISW_15	JUNCTION	8.30	8.30	0	11:58	0.00		
Node_ISW_16	JUNCTION	5.65	5.65	0	11:58	0.00		
Node_ISW_17	JUNCTION	2.02	2.02	0	11:57	0.00		
Node_ISW_19A	JUNCTION	9.28	9.28	0	11:57	0.00		
Node_ISW_19B	JUNCTION	4.14	12.89	0	11:59	0.00		
Node_ISW_1A	JUNCTION	3.84	3.84	0	11:57	0.00		
Node_ISW_1B	JUNCTION	9.75	13.52	0	11:58	0.00		
Node_ISW_1C	JUNCTION	7.55	32.92	0	11:59	0.00		
Node_ISW_2	JUNCTION	12.81	12.81	0	11:58	0.00		
Node_ISW_20A	JUNCTION	3.34	3.34	0	11:57	0.00		
Node_ISW_20B	JUNCTION	7.15	10.31	0	11:58	0.00		
Node_ISW_21	JUNCTION	7.13	7.13	0	11:57	0.00		
Node_ISW_22	JUNCTION	4.58	4.58	0	11:57	0.00		
Node_ISW_23A	JUNCTION	3.14	3.14	0	11:57	0.00		
Node_ISW_23B	JUNCTION	6.61	9.52	0	11:58	0.00		
Node_ISW_24	JUNCTION	7.56	7.56	0	11:57	0.00		
Node_ISW_25	JUNCTION	5.33	15.11	0	11:58	0.00		
Node_ISW_26	JUNCTION	6.58	6.58	0	11:57	0.00		
Node_ISW_27	JUNCTION	4.65	4.65	0	11:57	0.00		
Node_ISW_28	JUNCTION	2.84	2.84	0	11:57	0.00		
Node_ISW_29	JUNCTION	6.75	6.75	0	11:57	0.00		
Node_ISW_3	JUNCTION	3.05	3.05	0	11:57	0.00		
Node_ISW_32A	JUNCTION	2.84	2.84	0	11:57	0.00		
Node_ISW_32B	JUNCTION	4.34	7.05	0	11:57	0.00		
Node_ISW_33A	JUNCTION	3.22	3.22	0	11:57	0.00		
Node_ISW_33B	JUNCTION	13.52	16.50	0	11:57	0.00		
Node_ISW_34	JUNCTION	1.38	1.38	0	11:57	0.00		
Node_ISW_35	JUNCTION	1.06	1.06	0	11:56	0.00		
Node_ISW_36	JUNCTION	3.73	3.73	0	11:57	0.00		
Node_ISW_4A	JUNCTION	12.92	12.92	0	11:58	0.00		
Node_ISW_4B	JUNCTION	6.28	19.12	0	11:58	0.00		
Node_ISW_5	JUNCTION	2.16	2.16	0	11:57	0.00		
Node_ISW_6	JUNCTION	7.44	7.44	0	11:58	0.00		
Node_ISW_7	JUNCTION	9.27	9.27	0	11:58	0.00		
Node_ISW_8	JUNCTION	8.96	8.96	0	11:58	0.00		
Node_ISW_9	JUNCTION	9.88	9.88	0	11:58	0.00		
Node_P_10_11_12	JUNCTION	0.00	29.45	0	11:59	0.00		
Node_P_13_14_15	JUNCTION	0.00	31.47	0	11:59	0.00		
Node_P_16_17	JUNCTION	0.00	7.64	0	11:58	0.00		
Node_P_19A_19B_22	JUNCTION	0.00	17.20	0	12:00	0.00		
Node_P_1A_1B_1C_2	JUNCTION	0.00	32.73	0	12:01	0.00		
Node_P_20A_20B_21	JUNCTION	0.00	17.05	0	11:59	0.00		
Node_P_23A_23B_27	JUNCTION	0.00	13.64	0	12:00	0.00		
Node_P_24_25_26_28_31	JUNCTION	0.00	22.34	0	12:00	0.00		
Node_P_29_30	JUNCTION	0.00	8.07	0	11:58	0.00		
Node_P_3_4A_4B_5	JUNCTION	0.00	24.11	0	11:59	0.00		
Node_P_32A_32B	JUNCTION	0.00	7.03	0	11:58	0.00		

Node_P_33A_33B_34_18	JUNCTION	0.00	17.35	0	11:59	0.00
Node_P_35_36	JUNCTION	0.00	4.70	0	11:58	0.00
Node_P_6_7	JUNCTION	0.00	16.54	0	11:59	0.00
Node_P_8_9	JUNCTION	0.00	18.31	0	12:00	0.00
Out_18	OUTFALL	0.00	0.00	0	00:00	0.00
P_10_11_12	OUTFALL	0.00	29.45	0	11:59	0.00
P_13_14_15	OUTFALL	0.00	31.47	0	11:59	0.00
P_16_17	OUTFALL	0.00	7.64	0	11:58	0.00
P_19A_19B_22	OUTFALL	0.00	17.20	0	12:00	0.00
P_1A_1B_1C_2	OUTFALL	0.00	32.72	0	12:01	0.00
P_20A_20B_21	OUTFALL	0.00	17.05	0	11:59	0.00
P_23A_23B_27	OUTFALL	0.00	13.64	0	12:00	0.00
P_24_25_26_28_31	OUTFALL	0.00	22.34	0	12:00	0.00
P_29_30	OUTFALL	0.00	8.07	0	11:58	0.00
P_3_4A_4B_5	OUTFALL	0.00	24.11	0	11:59	0.00
P_32A_32B	OUTFALL	0.00	7.03	0	11:58	0.00
P_33A_33B_34_18	OUTFALL	0.00	17.35	0	11:59	0.00
P_35_36	OUTFALL	0.00	4.70	0	11:58	0.00
P_6_7	OUTFALL	0.00	16.54	0	11:59	0.00
P_8-9	OUTFALL	0.00	18.31	0	12:00	0.00
Swale Storage	STORAGE	0.00	0.00	0	00:00	0.00

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Storage Node Summary
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Storage Node ID	Maximum Ponded Volume 1000 ft³	Maximum Ponded (%)	Time of Max Ponded days hh:mm	Average Ponded Volume 1000 ft³	Average Ponded (%)	Maximum Storage Node Outflow cfs	Maximum Exfiltration Rate cfm	Time of Max. Exfiltration Rate hh:mm:ss	Total Exfiltrated Volume 1000 ft³
Swale Storage	0.000	0	0 00:00	0.000	0	0.00	0.00	0:00:00	0.000

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Outfall Loading Summary
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Outfall Node ID	Flow Frequency (%)	Average Flow cfs	Peak Inflow cfs
Out_18	0.00	0.00	0.00
P_10_11_12	79.95	1.10	29.45
P_13_14_15	80.14	1.17	31.47
P_16_17	80.29	0.28	7.64
P_19A_19B_22	79.42	0.65	17.20
P_1A_1B_1C_2	78.85	1.26	32.72
P_20A_20B_21	79.70	0.64	17.05
P_23A_23B_27	79.36	0.52	13.64
P_24_25_26_28_31	79.62	0.84	22.34
P_29_30	79.63	0.29	8.07
P_3_4A_4B_5	79.96	0.89	24.11
P_32A_32B	79.64	0.25	7.03
P_33A_33B_34_18	79.51	0.65	17.35

P_35_36	79.02	0.17	4.70
P_6_7	80.07	0.61	16.54
P_8-9	79.56	0.70	18.31
System	74.67	10.03	265.40

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Link Flow Summary
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Link ID	Element Type	Time of Peak Flow Occurrence	Maximum Velocity Attained	Length Factor	Peak Flow during Analysis	Design Flow Capacity	Ratio of Maximum /Design Flow	Ratio of Maximum Flow	Total Time	Reported Condition	Surcharged Depth	minutes
		days hh:mm	ft/sec		cfs	cfs						
ISW_10	CHANNEL	0 12:00	3.00	1.00	8.01	101.87	0.08	0.29	0	Calculated		
ISW_11A	CHANNEL	0 11:58	3.13	1.00	13.02	50.12	0.26	0.52	0	Calculated		
ISW_11B	CHANNEL	0 11:59	3.02	1.00	17.44	80.49	0.22	0.49	0	Calculated		
ISW_12	CHANNEL	0 11:59	2.62	1.00	4.04	26.00	0.16	0.38	0	Calculated		
ISW_13	CHANNEL	0 11:59	2.96	1.00	6.53	25.53	0.26	0.50	0	Calculated		
ISW_14	CHANNEL	0 11:59	3.26	1.00	16.81	88.01	0.19	0.46	0	Calculated		
ISW_15	CHANNEL	0 11:59	3.23	1.00	8.15	60.18	0.14	0.37	0	Calculated		
ISW_16	CHANNEL	0 11:58	4.62	1.00	5.64	52.48	0.11	0.31	0	Calculated		
ISW_17	CHANNEL	0 11:57	3.41	1.00	2.01	55.15	0.04	0.17	0	Calculated		
ISW_19A	CHANNEL	0 11:59	3.04	1.00	9.05	50.12	0.18	0.43	0	Calculated		
ISW_19B	CHANNEL	0 12:00	3.17	1.00	12.81	242.00	0.05	0.26	0	Calculated		
ISW_1A	CHANNEL	0 11:58	3.27	1.00	3.81	37.47	0.10	0.30	0	Calculated		
ISW_1B	CHANNEL	0 12:00	3.10	1.00	13.18	84.08	0.16	0.42	0	Calculated		
ISW_1C	CHANNEL	0 12:01	3.58	1.00	32.73	292.25	0.11	0.38	0	Calculated		
ISW_2	CHANNEL	0 11:59	3.21	1.00	12.69	98.13	0.13	0.38	0	Calculated		
ISW_20A	CHANNEL	0 11:59	2.20	1.00	3.26	21.23	0.15	0.38	0	Calculated		
ISW_20B	CHANNEL	0 12:00	3.12	1.00	10.08	95.99	0.10	0.34	0	Calculated		
ISW_21	CHANNEL	0 11:59	2.70	1.00	7.03	238.96	0.03	0.19	0	Calculated		
ISW_22	CHANNEL	0 11:58	2.41	1.00	4.51	246.79	0.02	0.15	0	Calculated		
ISW_23A	CHANNEL	0 11:59	2.15	1.00	3.06	21.10	0.14	0.37	0	Calculated		
ISW_23B	CHANNEL	0 12:00	2.68	1.00	9.20	192.71	0.05	0.24	0	Calculated		

ISW_24	CHANNEL	0	11:59	2.90	1.00	7.33	50.33	0.15	0.39	0	Calculated
ISW_25	CHANNEL	0	12:00	2.59	1.00	14.91	168.97	0.09	0.33	0	Calculated
ISW_26	CHANNEL	0	11:59	2.89	1.00	6.45	106.07	0.06	0.26	0	Calculated
ISW_27	CHANNEL	0	11:59	2.66	1.00	4.56	109.59	0.04	0.21	0	Calculated
ISW_28	CHANNEL	0	11:58	2.15	1.00	2.79	23.17	0.12	0.33	0	Calculated
ISW_29	CHANNEL	0	11:58	3.52	1.00	6.61	30.86	0.21	0.45	0	Calculated
ISW_3	CHANNEL	0	11:58	2.72	1.00	3.03	31.84	0.10	0.29	0	Calculated
ISW_30	CHANNEL	0	11:57	2.81	1.00	1.49	211.04	0.01	0.08	0	Calculated
ISW_31	CHANNEL	0	11:57	2.02	1.00	1.22	140.69	0.01	0.09	0	Calculated
ISW_32A	CHANNEL	0	11:58	2.19	1.00	2.81	23.70	0.12	0.33	0	Calculated
ISW_32B	CHANNEL	0	11:58	3.62	1.00	7.03	146.95	0.05	0.22	0	Calculated
ISW_33A	CHANNEL	0	11:58	2.20	1.00	3.15	21.63	0.15	0.37	0	Calculated
ISW_33B	CHANNEL	0	11:59	3.45	1.00	16.06	88.33	0.18	0.45	0	Calculated
ISW_34	CHANNEL	0	11:57	1.69	1.00	1.37	255.45	0.01	0.07	0	Calculated
ISW_35	CHANNEL	0	11:57	1.56	1.00	1.05	259.18	0.00	0.06	0	Calculated
ISW_36	CHANNEL	0	11:58	2.29	1.00	3.66	96.20	0.04	0.20	0	Calculated
ISW_4A	CHANNEL	0	11:58	3.12	1.00	12.88	50.12	0.26	0.52	0	Calculated
ISW_4B	CHANNEL	0	11:59	3.00	1.00	19.01	77.06	0.25	0.52	0	Calculated
ISW_5	CHANNEL	0	11:58	2.13	1.00	2.14	26.00	0.08	0.27	0	Calculated
ISW_6	CHANNEL	0	11:59	2.97	1.00	7.34	105.52	0.07	0.27	0	Calculated
ISW_7	CHANNEL	0	11:59	3.42	1.00	9.20	121.84	0.08	0.29	0	Calculated
ISW_8	CHANNEL	0	12:00	2.94	1.00	8.67	88.98	0.10	0.33	0	Calculated
ISW_9	CHANNEL	0	12:00	3.08	1.00	9.65	95.18	0.10	0.33	0	Calculated
P_10_11_12	CONDUIT	0	11:59	12.50	1.00	29.45	102.19	0.29	0.37	0	Calculated
P_13_14_15	CONDUIT	0	11:59	12.91	1.00	31.47	104.29	0.30	0.38	0	Calculated
P_16_17	CONDUIT	0	11:58	9.26	1.00	7.64	37.36	0.20	0.31	0	Calculated
P_19A_19B_22	CONDUIT	0	12:00	8.32	1.00	17.20	71.54	0.24	0.33	0	Calculated
P_1A_1B_1C_2	CONDUIT	0	12:01	6.12	1.00	32.72	95.29	0.34	0.40	0	Calculated
P_20A_20B_21	CONDUIT	0	11:59	10.15	1.00	17.05	94.88	0.18	0.29	0	Calculated
P_23A_23B_27	CONDUIT	0	12:00	9.71	1.00	13.64	97.43	0.14	0.25	0	Calculated
P_24_25_26_28_31	CONDUIT	0	12:00	11.18	1.00	22.34	97.43	0.23	0.33	0	Calculated
P_29_30	CONDUIT	0	11:58	8.35	1.00	8.07	38.02	0.21	0.31	0	Calculated
P_3_4A_4B_5	CONDUIT	0	11:59	11.82	1.00	24.11	102.19	0.24	0.33	0	Calculated
P_32A_32B	CONDUIT	0	11:58	9.82	1.00	7.03	19.27	0.36			

```
0.42           0  Calculated
  P_33A_33B_34_18      CONDUIT      0  11:59      8.48    1.00       17.35       62.94      0.28
0.36           0  Calculated
  P_35_36              CONDUIT      0  11:58      7.44    1.00        4.70       33.41      0.14
0.25           0  Calculated
  P_6_7                CONDUIT      0  11:59     10.78    1.00       16.54      104.29      0.16
0.27           0  Calculated
  P_8-9                CONDUIT      0  12:00     11.09    1.00       18.31      104.29      0.18
0.28           0  Calculated


  *******************************
  Highest Flow Instability Indexes
  *******************************
  All links are stable.


  Analysis began on:  Thu Apr  4 13:17:38 2024
  Analysis ended on:  Thu Apr  4 13:17:51 2024
  Total elapsed time: 00:00:13
```

RAMBOLL

ATTACHMENT 5
ASSA OUTPUT REPORT - DURING CONSTRUCTION - 10-YR, 24-HR STORM

Autodesk® Storm and Sanitary Analysis 2016 - Version 13.4.133 (Build 0)

****
Project Description
****
File Name ..... Proposed _Landfill_SW_60 Percent Design_During Construction.SPF
Description ..... During Construction 10-yr, 24-hr Storm

****
Analysis Options
****
Flow Units ..... cfs
Subbasin Hydrograph Method. SCS TR-20
Time of Concentration..... SCS TR-55
Link Routing Method ..... Kinematic Wave
Storage Node Exfiltration.. Constant rate, wetted area
Starting Date FEB-01-2024 00:00:00
Ending Date FEB-02-2024 00:00:00
Report Time Step 00:01:00

****
Element Count
****
Number of rain gages 0
Number of subbasins 45
Number of nodes 76
Number of links 59

****
Subbasin Summary
****

Subbasin ID	Total Area acres	Peak Rate Factor
Area_10	3.16	484.00
Area_11A	5.05	484.00
Area_11B	1.73	484.00
Area_12	1.54	484.00
Area_13	2.52	484.00
Area_14	6.54	484.00
Area_15	3.20	484.00
Area_16	2.17	484.00
Area_17	0.76	484.00
Area_18	1.91	484.00
Area_19A	3.51	484.00
Area_19B	1.54	484.00
Area_1A	1.45	484.00
Area_1B	3.76	484.00
Area_1C	2.90	484.00
Area_2	4.94	484.00
Area_20A	1.24	484.00
Area_20B	2.70	484.00
Area_21	2.69	484.00
Area_22	1.71	484.00
Area_23A	1.16	484.00
Area_23B	2.48	484.00
Area_24	2.81	484.00
Area_25	1.97	484.00
Area_26	2.45	484.00
Area_27	1.73	484.00
Area_28	1.05	484.00

Area_29	2.48	484.00
Area_3	1.15	484.00
Area_30	0.55	484.00
Area_31	0.45	484.00
Area_32A	1.04	484.00
Area_32B	1.60	484.00
Area_33A	1.18	484.00
Area_33B	3.12	484.00
Area_34	0.50	484.00
Area_35	0.38	484.00
Area_36	1.37	484.00
Area_4A	4.96	484.00
Area_4B	2.41	484.00
Area_5	0.80	484.00
Area_6	2.83	484.00
Area_7	3.58	484.00
Area_8	3.44	484.00
Area_9	3.81	484.00

****
Node Summary
****

Node ID	Element Type	Invert Elevation ft	Maximum Elev. ft	Ponded Area ft²	External Inflow
Jun-53	JUNCTION	407.00	409.00	0.00	
Jun-54	JUNCTION	407.00	409.00	0.00	
Node_ISW_10	JUNCTION	410.00	412.00	0.00	
Node_ISW_11A	JUNCTION	409.00	410.50	0.00	
Node_ISW_11B	JUNCTION	408.00	410.00	0.00	
Node_ISW_12	JUNCTION	410.00	411.00	0.00	
Node_ISW_13	JUNCTION	410.00	411.00	0.00	
Node_ISW_14	JUNCTION	409.00	411.00	0.00	
Node_ISW_15	JUNCTION	411.00	412.50	0.00	
Node_ISW_16	JUNCTION	410.00	411.00	0.00	
Node_ISW_17	JUNCTION	405.00	406.00	0.00	
Node_ISW_19A	JUNCTION	410.00	411.50	0.00	
Node_ISW_19B	JUNCTION	407.00	410.00	0.00	
Node_ISW_1A	JUNCTION	415.00	416.00	0.00	
Node_ISW_1B	JUNCTION	409.00	411.00	0.00	
Node_ISW_1C	JUNCTION	406.50	410.00	0.00	
Node_ISW_2	JUNCTION	409.00	411.00	0.00	
Node_ISW_20A	JUNCTION	410.00	411.00	0.00	
Node_ISW_20B	JUNCTION	408.00	410.00	0.00	
Node_ISW_21	JUNCTION	407.00	410.00	0.00	
Node_ISW_22	JUNCTION	407.00	410.00	0.00	
Node_ISW_23A	JUNCTION	409.00	410.00	0.00	
Node_ISW_23B	JUNCTION	407.00	410.00	0.00	
Node_ISW_24	JUNCTION	409.00	410.50	0.00	
Node_ISW_25	JUNCTION	406.00	410.00	0.00	
Node_ISW_26	JUNCTION	408.00	410.00	0.00	
Node_ISW_27	JUNCTION	408.00	410.00	0.00	
Node_ISW_28	JUNCTION	408.00	409.00	0.00	
Node_ISW_29	JUNCTION	408.00	409.00	0.00	
Node_ISW_3	JUNCTION	410.00	411.00	0.00	
Node_ISW_32A	JUNCTION	409.00	410.00	0.00	
Node_ISW_32B	JUNCTION	407.00	409.00	0.00	
Node_ISW_33A	JUNCTION	409.00	410.00	0.00	
Node_ISW_33B	JUNCTION	407.00	409.00	0.00	
Node_ISW_34	JUNCTION	406.00	409.00	0.00	
Node_ISW_35	JUNCTION	406.00	409.00	0.00	
Node_ISW_36	JUNCTION	407.00	409.00	0.00	
Node_ISW_4A	JUNCTION	409.00	410.50	0.00	
Node_ISW_4B	JUNCTION	408.00	410.00	0.00	
Node_ISW_5	JUNCTION	410.00	411.00	0.00	

Node_ISW_6	JUNCTION	410.00	412.00	0.00
Node_ISW_7	JUNCTION	410.00	412.00	0.00
Node_ISW_8	JUNCTION	410.00	412.00	0.00
Node_ISW_9	JUNCTION	410.00	412.00	0.00
Node_P_10_11_12	JUNCTION	407.00	410.00	0.00
Node_P_13_14_15	JUNCTION	407.00	410.00	0.00
Node_P_16_17	JUNCTION	402.00	405.00	0.00
Node_P_19A_19B_22	JUNCTION	405.00	408.00	0.00
Node_P_1A_1B_1C_2	JUNCTION	405.00	408.50	0.00
Node_P_20A_20B_21	JUNCTION	405.00	408.00	0.00
Node_P_23A_23B_27	JUNCTION	405.00	408.00	0.00
Node_P_24_25_26_28_31	JUNCTION	405.00	408.00	0.00
Node_P_29_30	JUNCTION	402.00	405.00	0.00
Node_P_3_4A_4B_5	JUNCTION	407.00	410.00	0.00
Node_P_32A_32B	JUNCTION	402.00	405.00	0.00
Node_P_33A_33B_34_18	JUNCTION	404.00	408.00	0.00
Node_P_35_36	JUNCTION	405.00	408.00	0.00
Node_P_6_7	JUNCTION	407.00	410.00	0.00
Node_P_8_9	JUNCTION	407.00	410.00	0.00
Out_18	OUTFALL	0.00	0.00	0.00
P_10_11_12	OUTFALL	406.00	409.00	0.00
P_13_14_15	OUTFALL	406.00	409.00	0.00
P_16_17	OUTFALL	401.00	403.01	0.00
P_19A_19B_22	OUTFALL	404.00	407.00	0.00
P_1A_1B_1C_2	OUTFALL	404.00	407.00	0.00
P_20A_20B_21	OUTFALL	404.00	407.00	0.00
P_23A_23B_27	OUTFALL	404.00	407.00	0.00
P_24_25_26_28_31	OUTFALL	404.00	407.00	0.00
P_29_30	OUTFALL	401.00	402.52	0.00
P_3_4A_4B_5	OUTFALL	406.00	409.00	0.00
P_32A_32B	OUTFALL	401.00	402.52	0.00
P_33A_33B_34_18	OUTFALL	403.00	405.01	0.00
P_35_36	OUTFALL	404.00	406.01	0.00
P_6_7	OUTFALL	406.00	409.00	0.00
P_8-9	OUTFALL	406.00	409.00	0.00
Swale Storage	STORAGE	0.00	6.00	0.00

****
Link Summary
****

Link ID	From Node	To Node	Element Type	Length ft	Slope %	Manning's Roughness
ISW_10	Node_ISW_10	Node_P_10_11_12	CHANNEL	515.0	0.5825	0.0220
ISW_11A	Node_ISW_11A	Node_ISW_11B	CHANNEL	200.0	0.5000	0.0220
ISW_11B	Node_ISW_11B	Node_P_10_11_12	CHANNEL	275.0	0.3636	0.0220
ISW_12	Node_ISW_12	Node_P_10_11_12	CHANNEL	405.0	0.7407	0.0220
ISW_13	Node_ISW_13	Node_P_13_14_15	CHANNEL	420.0	0.7143	0.0220
ISW_14	Node_ISW_14	Node_P_13_14_15	CHANNEL	460.0	0.4348	0.0220
ISW_15	Node_ISW_15	Node_P_13_14_15	CHANNEL	555.0	0.7207	0.0220
ISW_16	Node_ISW_16	Node_P_16_17	CHANNEL	265.0	3.0189	0.0220
ISW_17	Node_ISW_17	Node_P_16_17	CHANNEL	90.0	3.3333	0.0220
ISW_19A	Node_ISW_19A	Node_ISW_19B	CHANNEL	600.0	0.5000	0.0220
ISW_19B	Node_ISW_19B	Node_P_19A_19B_22	CHANNEL	390.0	0.5128	0.0220
ISW_1A	Node_ISW_1A	Node_ISW_1B	CHANNEL	390.0	1.5385	0.0220
ISW_1B	Node_ISW_1B	Node_ISW_1C	CHANNEL	630.0	0.3968	0.0220
ISW_1C	Node_ISW_1C	Node_P_1A_1B_1C_2	CHANNEL	415.0	0.3614	0.0220
ISW_2	Node_ISW_2	Node_ISW_1C	CHANNEL	370.0	0.5405	0.0220
ISW_20A	Node_ISW_20A	Node_ISW_20B	CHANNEL	405.0	0.4938	0.0220
ISW_20B	Node_ISW_20B	Node_P_20A_20B_21	CHANNEL	580.0	0.5172	0.0220
ISW_21	Node_ISW_21	Node_P_20A_20B_21	CHANNEL	400.0	0.5000	0.0220
ISW_22	Node_ISW_22	Node_P_19A_19B_22	CHANNEL	375.0	0.5333	0.0220
ISW_23A	Node_ISW_23A	Node_ISW_23B	CHANNEL	410.0	0.4878	0.0220
ISW_23B	Node_ISW_23B	Node_P_23A_23B_27	CHANNEL	615.0	0.3252	0.0220
ISW_24	Node_ISW_24	Node_ISW_25	CHANNEL	595.0	0.5042	0.0220
ISW_25	Node_ISW_25	Node_P_24_25_26_28_31	CHANNEL	400.0	0.2500	

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0.0220
  ISW_26          Node_ISW_26     Node_P_24_25_26_28_31CHANNEL          475.0    0.6316
0.0220
  ISW_27          Node_ISW_27     Node_P_23A_23B_27CHANNEL          445.0    0.6742      0.0220
  ISW_28          Node_ISW_28     Node_ISW_25     CHANNEL          340.0    0.5882      0.0220
  ISW_29          Node_ISW_29     Node_P_29_30    CHANNEL          575.0    1.0435      0.0220
  ISW_3           Node_ISW_3      Node_P_3_4A_4B_5CHANNEL          270.0    1.1111      0.0220
  ISW_30          Jun-54          Node_P_29_30    CHANNEL          160.0    2.5000      0.0220
  ISW_31          Jun-53          Node_P_24_25_26_28_31CHANNEL          180.0    1.1111
0.0220
  ISW_32A         Node_ISW_32A    Node_ISW_32B    CHANNEL          325.0    0.6154      0.0220
  ISW_32B         Node_ISW_32B    Node_P_32A_32B  CHANNEL          330.0    1.2121      0.0220
  ISW_33A         Node_ISW_33A    Node_ISW_33B    CHANNEL          390.0    0.5128      0.0220
  ISW_33B         Node_ISW_33B    Node_P_33A_33B_34_18CHANNEL          685.0    0.4380
0.0220
  ISW_34          Node_ISW_34     Node_P_33A_33B_34_18CHANNEL          175.0    0.5714
0.0220
  ISW_35          Node_ISW_35     Node_P_35_36    CHANNEL          170.0    0.5882      0.0220
  ISW_36          Node_ISW_36     Node_P_35_36    CHANNEL          385.0    0.5195      0.0220
  ISW_4A          Node_ISW_4A     Node_ISW_4B     CHANNEL          200.0    0.5000      0.0220
  ISW_4B          Node_ISW_4B     Node_P_3_4A_4B_5CHANNEL          300.0    0.3333      0.0220
  ISW_5           Node_ISW_5      Node_P_3_4A_4B_5CHANNEL          270.0    0.7407      0.0220
  ISW_6           Node_ISW_6      Node_P_6_7      CHANNEL          480.0    0.6250      0.0220
  ISW_7           Node_ISW_7      Node_P_6_7      CHANNEL          360.0    0.8333      0.0220
  ISW_8           Node_ISW_8      Node_P_8_9      CHANNEL          675.0    0.4444      0.0220
  ISW_9           Node_ISW_9      Node_P_8_9      CHANNEL          590.0    0.5085      0.0220
  P_10_11_12      Node_P_10_11_12 P_10_11_12      CONDUIT           50.0    2.0000      0.0120
  P_13_14_15      Node_P_13_14_15 P_13_14_15      CONDUIT           48.0    2.0833      0.0120
  P_16_17         Node_P_16_17    P_16_17         CONDUIT           44.0    2.2727      0.0120
  P_19A_19B_22    Node_P_19A_19B_22P_19A_19B_22    CONDUIT          102.0     0.9804      0.0120
  P_1A_1B_1C_2    Node_P_1A_1B_1C_2P_1A_1B_1C_2    CONDUIT          230.0    0.4348      0.0120
  P_20A_20B_21    Node_P_20A_20B_21P_20A_20B_21    CONDUIT           58.0    1.7241      0.0120
  P_23A_23B_27    Node_P_23A_23B_27P_23A_23B_27    CONDUIT           55.0    1.8182      0.0120
  P_24_25_26_28_31Node_P_24_25_26_28_31P_24_25_26_28_31CONDUIT          55.0    1.8182
0.0120
  P_29_30         Node_P_29_30    P_29_30         CONDUIT          38.0    2.6316      0.0120
  P_3_4A_4B_5     Node_P_3_4A_4B_5P_3_4A_4B_5     CONDUIT          50.0    2.0000      0.0120
  P_32A_32B       Node_P_32A_32B  P_32A_32B       CONDUIT          37.0    2.7027      0.0120
  P_33A_33B_34_18 Node_P_33A_33B_34_18P_33A_33B_34_18 CONDUIT          62.0    1.6129
0.0120
  P_35_36         Node_P_35_36    P_35_36         CONDUIT          55.0    1.8182      0.0120
  P_6_7           Node_P_6_7      P_6_7           CONDUIT          48.0    2.0833      0.0120
  P_8-9           Node_P_8_9      P_8-9           CONDUIT          48.0    2.0833      0.0120


  ********************
  Cross Section Summary
  ********************
  Link            Shape           Depth/       Width       No. of       Cross    Full Flow
Design
  ID                              Diameter                 Barrels    Sectional    Hydraulic
Flow
                                                                        Area       Radius
Capacity
                                       ft          ft                    ft²          ft
cfs

-------------------------------------------------------------------------------------------
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  ISW_10          TRAPEZOIDAL       2.00        15.00           1        18.00        1.15
101.87
  ISW_11A         TRAPEZOIDAL       1.50        12.00           1        11.25        0.90
50.12
  ISW_11B         TRAPEZOIDAL       2.00        15.00           1        18.00        1.15
80.49
  ISW_12          TRAPEZOIDAL       1.00         9.00           1         6.00        0.64
26.00
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ISW_13	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
25.53						
ISW_14	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
88.01						
ISW_15	TRAPEZOIDAL	1.50	12.00	1	11.25	0.90
60.18						
ISW_16	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
52.48						
ISW_17	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
55.15						
ISW_19A	TRAPEZOIDAL	1.50	12.00	1	11.25	0.90
50.12						
ISW_19B	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
242.00						
ISW_1A	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
37.47						
ISW_1B	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
84.08						
ISW_1C	TRAPEZOIDAL	3.50	24.00	1	47.25	1.88
292.25						
ISW_2	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
98.13						
ISW_20A	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
21.23						
ISW_20B	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
95.99						
ISW_21	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
238.96						
ISW_22	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
246.79						
ISW_23A	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
21.10						
ISW_23B	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
192.71						
ISW_24	TRAPEZOIDAL	1.50	12.00	1	11.25	0.90
50.33						
ISW_25	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
168.97						
ISW_26	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
106.07						
ISW_27	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
109.59						
ISW_28	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
23.17						
ISW_29	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
30.86						
ISW_3	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
31.84						
ISW_30	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
211.04						
ISW_31	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
140.69						
ISW_32A	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
23.70						
ISW_32B	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
146.95						
ISW_33A	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
21.63						
ISW_33B	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
88.33						
ISW_34	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
255.45						
ISW_35	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
259.18						
ISW_36	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
96.20						
ISW_4A	TRAPEZOIDAL	1.50	12.00	1	11.25	0.90

50.12						
ISW_4B	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
77.06						
ISW_5	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
26.00						
ISW_6	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
105.52						
ISW_7	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
121.84						
ISW_8	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
88.98						
ISW_9	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
95.18						
P_10_11_12	CIRCULAR	3.00	3.00	1	7.07	0.75
102.19						
P_13_14_15	CIRCULAR	3.00	3.00	1	7.07	0.75
104.29						
P_16_17	CIRCULAR	2.01	2.01	1	3.17	0.50
37.36						
P_19A_19B_22	CIRCULAR	3.00	3.00	1	7.07	0.75
71.54						
P_1A_1B_1C_2	CIRCULAR	3.00	3.00	2	7.07	0.75
47.64						
P_20A_20B_21	CIRCULAR	3.00	3.00	1	7.07	0.75
94.88						
P_23A_23B_27	CIRCULAR	3.00	3.00	1	7.07	0.75
97.43						
P_24_25_26_28_31	CIRCULAR	3.00	3.00	1	7.07	0.75
97.43						
P_29_30	CIRCULAR	1.52	1.52	2	1.81	0.38
19.01						
P_3_4A_4B_5	CIRCULAR	3.00	3.00	1	7.07	0.75
102.19						
P_32A_32B	CIRCULAR	1.52	1.52	1	1.81	0.38
19.27						
P_33A_33B_34_18	CIRCULAR	2.01	2.01	2	3.17	0.50
31.47						
P_35_36	CIRCULAR	2.01	2.01	1	3.17	0.50
33.41						
P_6_7	CIRCULAR	3.00	3.00	1	7.07	0.75
104.29						
P_8-9	CIRCULAR	3.00	3.00	1	7.07	0.75
104.29						

Runoff Quantity Continuity	Volume acre-ft	Depth inches
Total Precipitation	30.408	3.497
Surface Runoff	0.410	0.047
Continuity Error (%)	-0.000	

Flow Routing Continuity	Volume acre-ft	Volume Mgallons
External Inflow	0.000	0.000
External Outflow	24.552	8.001
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.074	0.024
Continuity Error (%)	-0.000	

****
Composite Curve Number Computations Report
****

Subbasin Area_10

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	3.16	D	94.00
Composite Area & Weighted CN	3.16		94.00

Subbasin Area_11A

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	5.05	D	94.00
Composite Area & Weighted CN	5.05		94.00

Subbasin Area_11B

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.73	D	94.00
Composite Area & Weighted CN	1.73		94.00

Subbasin Area_12

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.54	D	94.00
Composite Area & Weighted CN	1.54		94.00

Subbasin Area_13

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.52	D	94.00
Composite Area & Weighted CN	2.52		94.00

Subbasin Area_14

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	6.54	D	94.00
Composite Area & Weighted CN	6.54		94.00

Subbasin Area_15

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	3.20	D	94.00
Composite Area & Weighted CN	3.20		94.00

Subbasin Area_16

Soil/Surface Description	Area	Soil

Soil/Surface Description	(acres)	Group	CN
Newly graded area	2.17	D	94.00
Composite Area & Weighted CN	2.17		94.00

Subbasin Area_17

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	0.76	D	94.00
Composite Area & Weighted CN	0.76		94.00

Subbasin Area_18

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.91	D	94.00
Composite Area & Weighted CN	1.91		94.00

Subbasin Area_19A

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	3.51	D	94.00
Composite Area & Weighted CN	3.51		94.00

Subbasin Area_19B

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.54	D	94.00
Composite Area & Weighted CN	1.54		94.00

Subbasin Area_1A

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.45	D	94.00
Composite Area & Weighted CN	1.45		94.00

Subbasin Area_1B

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	3.76	D	94.00
Composite Area & Weighted CN	3.76		94.00

Subbasin Area_1C

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.90	D	94.00
Composite Area & Weighted CN	2.90		94.00

Subbasin Area_2

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	4.94	D	94.00
Composite Area & Weighted CN	4.94		94.00

Subbasin Area_20A

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.24	D	94.00
Composite Area & Weighted CN	1.24		94.00

Subbasin Area_20B

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.70	D	94.00
Composite Area & Weighted CN	2.70		94.00

Subbasin Area_21

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.69	D	94.00
Composite Area & Weighted CN	2.69		94.00

Subbasin Area_22

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.71	D	94.00
Composite Area & Weighted CN	1.71		94.00

Subbasin Area_23A

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.16	D	94.00
Composite Area & Weighted CN	1.16		94.00

Subbasin Area_23B

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.48	D	94.00
Composite Area & Weighted CN	2.48		94.00

Subbasin Area_24

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.81	D	94.00
Composite Area & Weighted CN	2.81		94.00

Subbasin Area_25

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.97	D	94.00
Composite Area & Weighted CN	1.97		94.00

Subbasin Area_26

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.45	D	94.00
Composite Area & Weighted CN	2.45		94.00

Subbasin Area_27

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.73	D	94.00
Composite Area & Weighted CN	1.73		94.00

Subbasin Area_28

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.05	D	94.00
Composite Area & Weighted CN	1.05		94.00

Subbasin Area_29

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.48	D	94.00
Composite Area & Weighted CN	2.48		94.00

Subbasin Area_3

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.15	D	94.00
Composite Area & Weighted CN	1.15		94.00

Subbasin Area_30

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	0.55	D	94.00

Composite Area & Weighted CN	0.55		94.00

Subbasin Area_31

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	0.45	D	94.00
Composite Area & Weighted CN	0.45		94.00

Subbasin Area_32A

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.04	D	94.00
Composite Area & Weighted CN	1.04		94.00

Subbasin Area_32B

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.60	D	94.00
Composite Area & Weighted CN	1.60		94.00

Subbasin Area_33A

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.18	D	94.00
Composite Area & Weighted CN	1.18		94.00

Subbasin Area_33B

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	3.12	D	94.00
Composite Area & Weighted CN	3.12		94.00

Subbasin Area_34

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	0.50	D	94.00
Composite Area & Weighted CN	0.50		94.00

Subbasin Area_35

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	0.39	D	94.00
Composite Area & Weighted CN	0.39		94.00

Subbasin Area_36

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.37	D	94.00
Composite Area & Weighted CN	1.37		94.00

Subbasin Area_4A

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	4.96	D	94.00
Composite Area & Weighted CN	4.96		94.00

Subbasin Area_4B

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.41	D	94.00
Composite Area & Weighted CN	2.41		94.00

Subbasin Area_5

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	0.80	D	94.00
Composite Area & Weighted CN	0.80		94.00

Subbasin Area_6

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.83	D	94.00
Composite Area & Weighted CN	2.83		94.00

Subbasin Area_7

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	3.58	D	94.00
Composite Area & Weighted CN	3.58		94.00

Subbasin Area_8

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	3.44	D	94.00
Composite Area & Weighted CN	3.44		94.00

Subbasin Area_9

Soil/Surface Description	Area (acres)	Soil Group	CN

Newly graded area	3.81	D	94.00
Composite Area & Weighted CN	3.81		94.00

****
SCS TR-55 Time of Concentration Computations Report
****

Sheet Flow Equation

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where:

Tc = Time of Concentration (hrs)
n = Manning's Roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hrs)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hrs)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft²)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's Roughness

Subbasin Area_10

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C

Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	320.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00
Computed Flow Time (minutes):	2.38	0.00	0.00

Total TOC (minutes):	7.98

Subbasin Area_11A

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	320.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00

Computed Flow Time (minutes):	2.38	0.00	0.00

==========

Total TOC (minutes):	7.98

==========

Subbasin Area_11B

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	160.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00
Computed Flow Time (minutes):	1.19	0.00	0.00

==========

Total TOC (minutes):	6.79

==========

Subbasin Area_12

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00

```
          Velocity (ft/sec):                          0.30               0.00
0.00
          Computed Flow Time (minutes):               5.60               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A          Subarea B          Subarea
C
          Flow Length (ft):                         180.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          Surface Type:                    Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                          2.24               0.00
0.00
          Computed Flow Time (minutes):               1.34               0.00
0.00

=============================================================================================
          Total TOC (minutes):                        6.94

=============================================================================================


  -------------------
  Subbasin Area_13
  -------------------

  Sheet Flow Computations
  -----------------------
                                                 Subarea A          Subarea B          Subarea
C
          Manning's Roughness:                        0.10               0.00
0.00
          Flow Length (ft):                         100.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          2 yr, 24 hr Rainfall (in):                  2.46               0.00
0.00
          Velocity (ft/sec):                          0.30               0.00
0.00
          Computed Flow Time (minutes):               5.60               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A          Subarea B          Subarea
C
          Flow Length (ft):                         260.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          Surface Type:                    Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                          2.24               0.00
0.00
          Computed Flow Time (minutes):               1.93               0.00
0.00

=============================================================================================
          Total TOC (minutes):                        7.53

=============================================================================================
```

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  ------------------
  Subbasin Area_14
  ------------------

  Sheet Flow Computations
  -----------------------
                                              Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                     0.10                0.00
0.00
          Flow Length (ft):                      100.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):               2.46                0.00
0.00
          Velocity (ft/sec):                       0.30                0.00
0.00
          Computed Flow Time (minutes):            5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                              Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                      280.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          Surface Type:                Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                       2.24                0.00
0.00
          Computed Flow Time (minutes):            2.08                0.00
0.00

================================================================================================
          Total TOC (minutes):                     7.68

================================================================================================


  ------------------
  Subbasin Area_15
  ------------------

  Sheet Flow Computations
  -----------------------
                                              Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                     0.10                0.00
0.00
          Flow Length (ft):                      100.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):               2.46                0.00
0.00
          Velocity (ft/sec):                       0.30                0.00
0.00
          Computed Flow Time (minutes):            5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                              Subarea A           Subarea B           Subarea
```

```
C
          Flow Length (ft):                          300.00               0.00
0.00
          Slope (%):                                   5.00               0.00
0.00
          Surface Type:                     Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                           2.24               0.00
0.00
          Computed Flow Time (minutes):                2.23               0.00
0.00

=============================================================================================
          Total TOC (minutes):                         7.83

=============================================================================================


  -------------------
  Subbasin Area_16
  -------------------

  Sheet Flow Computations
  -----------------------
                                                  Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                         0.10               0.00
0.00
          Flow Length (ft):                          100.00               0.00
0.00
          Slope (%):                                   5.00               0.00
0.00
          2 yr, 24 hr Rainfall (in):                   2.46               0.00
0.00
          Velocity (ft/sec):                           0.30               0.00
0.00
          Computed Flow Time (minutes):                5.60               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                  Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                          280.00               0.00
0.00
          Slope (%):                                   5.00               0.00
0.00
          Surface Type:                     Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                           2.24               0.00
0.00
          Computed Flow Time (minutes):                2.08               0.00
0.00

=============================================================================================
          Total TOC (minutes):                         7.68

=============================================================================================


  -------------------
  Subbasin Area_17
  -------------------

  Sheet Flow Computations
  -----------------------
                                                  Subarea A           Subarea B           Subarea
```

```
C
          Manning's Roughness:                        0.10               0.00
0.00
          Flow Length (ft):                         100.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          2 yr, 24 hr Rainfall (in):                  2.46               0.00
0.00
          Velocity (ft/sec):                          0.30               0.00
0.00
          Computed Flow Time (minutes):               5.60               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A          Subarea B          Subarea
C
          Flow Length (ft):                         183.00               0.00
0.00
          Slope (%):                                  4.37               0.00
0.00
          Surface Type:                    Bare & untilled            Unpaved
Unpaved
          Velocity (ft/sec):                          2.09               0.00
0.00
          Computed Flow Time (minutes):               1.46               0.00
0.00

================================================================================================
          Total TOC (minutes):                        7.06

================================================================================================


  -------------------
  Subbasin Area_18
  -------------------

  Sheet Flow Computations
  -----------------------
                                                 Subarea A          Subarea B          Subarea
C
          Manning's Roughness:                        0.10               0.00
0.00
          Flow Length (ft):                         100.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          2 yr, 24 hr Rainfall (in):                  2.46               0.00
0.00
          Velocity (ft/sec):                          0.30               0.00
0.00
          Computed Flow Time (minutes):               5.60               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A          Subarea B          Subarea
C
          Flow Length (ft):                         220.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          Surface Type:                    Bare & untilled            Unpaved
Unpaved
          Velocity (ft/sec):                          2.24               0.00
```

0.00
Computed Flow Time (minutes): 1.64 0.00
0.00

Total TOC (minutes): 7.24

Subbasin Area_19A

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	200.25	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00
Computed Flow Time (minutes):	1.49	0.00	0.00

Total TOC (minutes): 7.09

Subbasin Area_19B

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	

```
0.00
          Velocity (ft/sec):                          0.30               0.00
0.00
          Computed Flow Time (minutes):               5.60               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                              Subarea A          Subarea B          Subarea
C
          Flow Length (ft):                      140.17               0.00
0.00
          Slope (%):                                4.99               0.00
0.00
          Surface Type:                  Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                        2.23               0.00
0.00
          Computed Flow Time (minutes):             1.05               0.00
0.00

=============================================================================================
          Total TOC (minutes):                      6.65

=============================================================================================


  -------------------
  Subbasin Area_1A
  -------------------

  Sheet Flow Computations
  -----------------------
                                              Subarea A          Subarea B          Subarea
C
          Manning's Roughness:                      0.10               0.00
0.00
          Flow Length (ft):                      100.00               0.00
0.00
          Slope (%):                                5.00               0.00
0.00
          2 yr, 24 hr Rainfall (in):                2.46               0.00
0.00
          Velocity (ft/sec):                        0.30               0.00
0.00
          Computed Flow Time (minutes):             5.60               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                              Subarea A          Subarea B          Subarea
C
          Flow Length (ft):                      200.00               0.00
0.00
          Slope (%):                                5.00               0.00
0.00
          Surface Type:                  Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                        2.24               0.00
0.00
          Computed Flow Time (minutes):             1.49               0.00
0.00

=============================================================================================
          Total TOC (minutes):                      7.09

=============================================================================================
```

Subbasin Area_1B

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	300.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00
Computed Flow Time (minutes):	2.23	0.00	0.00

==========

Total TOC (minutes): 7.83

==========

Subbasin Area_1C

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	280.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00
Computed Flow Time (minutes):	2.08	0.00	0.00

Total TOC (minutes): 7.68

Subbasin Area_2

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	300.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00
Computed Flow Time (minutes):	2.23	0.00	0.00

Total TOC (minutes): 7.83

Subbasin Area_20A

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	100.12	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.75	0.00	0.00

Total TOC (minutes):	6.35

Subbasin Area_20B

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	196.46	0.00	0.00
Slope (%):	5.09	0.00	0.00
Surface Type:	Bare & untilled	Grass pasture	Grass pasture

Velocity (ft/sec):	2.26	0.00	0.00
Computed Flow Time (minutes):	1.45	0.00	0.00
Total TOC (minutes):	7.05		

Subbasin Area_21

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	200.25	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	1.50	0.00	0.00
Total TOC (minutes):	7.10		

Subbasin Area_22

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00

2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	160.20	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	1.20	0.00	0.00

Total TOC (minutes): 6.80

Subbasin Area_23A

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	120.15	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.90	0.00	0.00

Total TOC (minutes): 6.50

==========

Subbasin Area_23B

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	160.20	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	1.20	0.00	0.00

==========

Total TOC (minutes): 6.80

==========

Subbasin Area_24

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

```
  ------------------------------------
                                              Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                      140.17                0.00
0.00
          Slope (%):                               4.99                0.00
0.00
          Surface Type:                  Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                       2.23                0.00
0.00
          Computed Flow Time (minutes):            1.05                0.00
0.00

=============================================================================================
          Total TOC (minutes):                     6.65

=============================================================================================


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  Subbasin Area_25
  -------------------

  Sheet Flow Computations
  -----------------------
                                              Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                     0.10                0.00
0.00
          Flow Length (ft):                      100.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):               2.46                0.00
0.00
          Velocity (ft/sec):                       0.30                0.00
0.00
          Computed Flow Time (minutes):            5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                              Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                      100.12                0.00
0.00
          Slope (%):                               4.99                0.00
0.00
          Surface Type:                  Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                       2.23                0.00
0.00
          Computed Flow Time (minutes):            0.75                0.00
0.00

=============================================================================================
          Total TOC (minutes):                     6.35

=============================================================================================


  -------------------
  Subbasin Area_26
  -------------------

  Sheet Flow Computations
```

```
  ----------------------
                                              Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                     0.10                0.00
0.00
          Flow Length (ft):                      100.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):               2.46                0.00
0.00
          Velocity (ft/sec):                       0.30                0.00
0.00
          Computed Flow Time (minutes):            5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  -------------------------------------
                                              Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                      140.17                0.00
0.00
          Slope (%):                               4.99                0.00
0.00
          Surface Type:                 Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                       2.23                0.00
0.00
          Computed Flow Time (minutes):            1.05                0.00
0.00

================================================================================================
          Total TOC (minutes):                     6.65

================================================================================================


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  Subbasin Area_27
  -------------------

  Sheet Flow Computations
  ----------------------
                                              Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                     0.10                0.00
0.00
          Flow Length (ft):                      100.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):               2.46                0.00
0.00
          Velocity (ft/sec):                       0.30                0.00
0.00
          Computed Flow Time (minutes):            5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  -------------------------------------
                                              Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                      140.17                0.00
0.00
          Slope (%):                               4.99                0.00
0.00
          Surface Type:                 Bare & untilled             Unpaved
```

```
Unpaved
          Velocity (ft/sec):                          2.23               0.00
0.00
          Computed Flow Time (minutes):               1.05               0.00
0.00

=============================================================================================
          Total TOC (minutes):                        6.65

=============================================================================================


  -------------------
  Subbasin Area_28
  -------------------

  Sheet Flow Computations
  -----------------------
                                                  Subarea A          Subarea B          Subarea
C
          Manning's Roughness:                        0.10               0.00
0.00
          Flow Length (ft):                         100.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          2 yr, 24 hr Rainfall (in):                  2.46               0.00
0.00
          Velocity (ft/sec):                          0.30               0.00
0.00
          Computed Flow Time (minutes):               5.60               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                  Subarea A          Subarea B          Subarea
C
          Flow Length (ft):                          80.10               0.00
0.00
          Slope (%):                                  4.99               0.00
0.00
          Surface Type:                    Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                          2.23               0.00
0.00
          Computed Flow Time (minutes):               0.60               0.00
0.00

=============================================================================================
          Total TOC (minutes):                        6.20

=============================================================================================


  -------------------
  Subbasin Area_29
  -------------------

  Sheet Flow Computations
  -----------------------
                                                  Subarea A          Subarea B          Subarea
C
          Manning's Roughness:                        0.10               0.00
0.00
          Flow Length (ft):                         100.00               0.00
0.00
          Slope (%):                                  5.00               0.00
```

```
0.00
          2 yr, 24 hr Rainfall (in):                 2.46                0.00
0.00
          Velocity (ft/sec):                         0.30                0.00
0.00
          Computed Flow Time (minutes):              5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                         80.26                0.00
0.00
          Slope (%):                                 4.98                0.00
0.00
          Surface Type:                    Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                         2.23                0.00
0.00
          Computed Flow Time (minutes):              0.60                0.00
0.00

=============================================================================================
          Total TOC (minutes):                       6.20

=============================================================================================


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  Subbasin Area_3
  ------------------

  Sheet Flow Computations
  -----------------------
                                                 Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                       0.10                0.00
0.00
          Flow Length (ft):                        100.00                0.00
0.00
          Slope (%):                                 5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):                 2.46                0.00
0.00
          Velocity (ft/sec):                         0.30                0.00
0.00
          Computed Flow Time (minutes):              5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                        200.00                0.00
0.00
          Slope (%):                                 5.00                0.00
0.00
          Surface Type:                    Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                         2.24                0.00
0.00
          Computed Flow Time (minutes):              1.49                0.00
0.00

=============================================================================================
          Total TOC (minutes):                       7.09
```

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Subbasin Area_30

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	80.31	0.00	0.00
Slope (%):	4.98	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.60	0.00	0.00

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Total TOC (minutes): 6.20

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Subbasin Area_31

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	40.05	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.30	0.00	0.00
Total TOC (minutes):	5.90		

Subbasin Area_32A

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	60.06	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.45	0.00	0.00
Total TOC (minutes):	6.05		

Subbasin Area_32B

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	60.18	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.45	0.00	0.00

Total TOC (minutes): 6.05

Subbasin Area_33A

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	60.12	0.00	0.00
Slope (%):	4.99	0.00	0.00

Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.45	0.00	0.00

Total TOC (minutes): 6.05

Subbasin Area_33B

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	60.12	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.45	0.00	0.00

Total TOC (minutes): 6.05

Subbasin Area_34

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00

Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	40.05	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.30	0.00	0.00

Total TOC (minutes):	5.90

Subbasin Area_35

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Total TOC (minutes):	5.60

Subbasin Area_36

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00

Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	40.05	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.30	0.00	0.00

Total TOC (minutes):	5.90

Subbasin Area_4A

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	280.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00
Computed Flow Time (minutes):	2.08	0.00	0.00

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==============================================================================================
          Total TOC (minutes):                        7.68

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  Subbasin Area_4B
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  Sheet Flow Computations
  -----------------------
                                              Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                     0.10                0.00
0.00
          Flow Length (ft):                      100.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):               2.46                0.00
0.00
          Velocity (ft/sec):                       0.30                0.00
0.00
          Computed Flow Time (minutes):            5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                              Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                      280.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          Surface Type:                 Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                       2.24                0.00
0.00
          Computed Flow Time (minutes):            2.08                0.00
0.00

==============================================================================================
          Total TOC (minutes):                        7.68

==============================================================================================


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  Subbasin Area_5
  ------------------

  Sheet Flow Computations
  -----------------------
                                              Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                     0.10                0.00
0.00
          Flow Length (ft):                      100.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):               2.46                0.00
0.00
          Velocity (ft/sec):                       0.30                0.00
0.00
```

Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	110.00	0.00	0.00
Slope (%):	5.46	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.34	0.00	0.00
Computed Flow Time (minutes):	0.78	0.00	0.00

Total TOC (minutes):	6.38

Subbasin Area_6

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	220.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00
Computed Flow Time (minutes):	1.64	0.00	0.00

Total TOC (minutes):	7.24

Subbasin Area_7

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	320.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00
Computed Flow Time (minutes):	2.38	0.00	0.00

Total TOC (minutes): 7.98

Subbasin Area_8

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	280.00	0.00	

0.00

Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00
Computed Flow Time (minutes):	2.08	0.00	0.00

Total TOC (minutes): 7.68

Subbasin Area_9

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	300.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00
Computed Flow Time (minutes):	2.23	0.00	0.00

Total TOC (minutes): 7.83

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Subbasin Runoff Summary

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Subbasin ID	Total Precip in	Total Runoff in	Peak Runoff cfs	Weighted Curve Number	Time of Concentration days	hh:mm:ss

Area_10	3.50	2.84	12.35	94.000	0	00:07:58
Area_11A	3.50	2.84	19.76	94.000	0	00:07:58
Area_11B	3.50	2.84	7.01	94.000	0	00:06:47
Area_12	3.50	2.84	6.21	94.000	0	00:06:56
Area_13	3.50	2.84	10.02	94.000	0	00:07:31
Area_14	3.50	2.84	25.81	94.000	0	00:07:40
Area_15	3.50	2.84	12.58	94.000	0	00:07:49
Area_16	3.50	2.84	8.56	94.000	0	00:07:40
Area_17	3.50	2.83	3.06	94.000	0	00:07:03
Area_18	3.50	2.84	7.62	94.000	0	00:07:14
Area_19A	3.50	2.84	14.07	94.000	0	00:07:05
Area_19B	3.50	2.84	6.27	94.000	0	00:06:39
Area_1A	3.50	2.84	5.83	94.000	0	00:07:05
Area_1B	3.50	2.84	14.76	94.000	0	00:07:49
Area_1C	3.50	2.84	11.44	94.000	0	00:07:40
Area_2	3.50	2.84	19.42	94.000	0	00:07:49
Area_20A	3.50	2.84	5.06	94.000	0	00:06:21
Area_20B	3.50	2.84	10.85	94.000	0	00:07:03
Area_21	3.50	2.84	10.81	94.000	0	00:07:06
Area_22	3.50	2.84	6.93	94.000	0	00:06:48
Area_23A	3.50	2.84	4.75	94.000	0	00:06:30
Area_23B	3.50	2.84	10.01	94.000	0	00:06:48
Area_24	3.50	2.84	11.44	94.000	0	00:06:39
Area_25	3.50	2.84	8.07	94.000	0	00:06:21
Area_26	3.50	2.84	9.96	94.000	0	00:06:39
Area_27	3.50	2.84	7.04	94.000	0	00:06:39
Area_28	3.50	2.84	4.29	94.000	0	00:06:12
Area_29	3.50	2.84	10.21	94.000	0	00:06:12
Area_3	3.50	2.84	4.62	94.000	0	00:07:05
Area_30	3.50	2.83	2.26	94.000	0	00:06:12
Area_31	3.50	2.83	1.86	94.000	0	00:05:54
Area_32A	3.50	2.84	4.31	94.000	0	00:06:03
Area_32B	3.50	2.84	6.58	94.000	0	00:06:03
Area_33A	3.50	2.84	4.89	94.000	0	00:06:03
Area_33B	3.50	2.84	12.89	94.000	0	00:06:03
Area_34	3.50	2.83	2.10	94.000	0	00:05:54
Area_35	3.50	2.83	1.61	94.000	0	00:05:36
Area_36	3.50	2.84	5.65	94.000	0	00:05:54
Area_4A	3.50	2.84	19.58	94.000	0	00:07:40
Area_4B	3.50	2.84	9.52	94.000	0	00:07:40
Area_5	3.50	2.83	3.27	94.000	0	00:06:22
Area_6	3.50	2.84	11.30	94.000	0	00:07:14
Area_7	3.50	2.84	14.03	94.000	0	00:07:58
Area_8	3.50	2.84	13.59	94.000	0	00:07:40
Area_9	3.50	2.84	14.97	94.000	0	00:07:49

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Node Depth Summary
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Node ID	Average Depth Attained ft	Maximum Depth Attained ft	Maximum HGL Attained ft	Time of Max Occurrence days	Time of Max Occurrence hh:mm	Total Flooded Volume acre-in	Total Time Flooded minutes	Retention Time hh:mm:ss
Jun-53	0.02	0.22	407.22	0	11:57	0	0	0:00:00
Jun-54	0.02	0.20	407.20	0	11:57	0	0	0:00:00
Node_ISW_10	0.08	0.73	410.73	0	11:58	0	0	0:00:00
Node_ISW_11A	0.10	0.96	409.96	0	11:58	0	0	0:00:00
Node_ISW_11B	0.13	1.20	409.20	0	11:58	0	0	0:00:00
Node_ISW_12	0.05	0.48	410.48	0	11:57	0	0	0:00:00
Node_ISW_13	0.06	0.62	410.62	0	11:58	0	0	0:00:00
Node_ISW_14	0.12	1.13	410.13	0	11:58	0	0	0:00:00
Node_ISW_15	0.07	0.70	411.70	0	11:58	0	0	0:00:00

Node_ISW_16	0.04	0.39	410.39	0	11:58	0	0	0:00:00
Node_ISW_17	0.02	0.21	405.21	0	11:57	0	0	0:00:00
Node_ISW_19A	0.08	0.81	410.81	0	11:57	0	0	0:00:00
Node_ISW_19B	0.10	0.95	407.95	0	11:58	0	0	0:00:00
Node_ISW_1A	0.04	0.38	415.38	0	11:57	0	0	0:00:00
Node_ISW_1B	0.11	1.04	410.04	0	11:58	0	0	0:00:00
Node_ISW_1C	0.60	1.62	408.12	0	11:59	0	0	0:00:00
Node_ISW_2	0.10	0.94	409.94	0	11:58	0	0	0:00:00
Node_ISW_20A	0.05	0.48	410.48	0	11:57	0	0	0:00:00
Node_ISW_20B	0.09	0.85	408.85	0	11:58	0	0	0:00:00
Node_ISW_21	0.07	0.71	407.71	0	11:57	0	0	0:00:00
Node_ISW_22	0.05	0.56	407.56	0	11:57	0	0	0:00:00
Node_ISW_23A	0.04	0.47	409.47	0	11:57	0	0	0:00:00
Node_ISW_23B	0.10	0.92	407.92	0	11:57	0	0	0:00:00
Node_ISW_24	0.07	0.73	409.73	0	11:57	0	0	0:00:00
Node_ISW_25	0.14	1.22	407.22	0	11:58	0	0	0:00:00
Node_ISW_26	0.06	0.64	408.64	0	11:57	0	0	0:00:00
Node_ISW_27	0.05	0.53	408.53	0	11:57	0	0	0:00:00
Node_ISW_28	0.04	0.42	408.42	0	11:57	0	0	0:00:00
Node_ISW_29	0.06	0.57	408.57	0	11:57	0	0	0:00:00
Node_ISW_3	0.03	0.37	410.37	0	11:57	0	0	0:00:00
Node_ISW_32A	0.04	0.41	409.41	0	11:57	0	0	0:00:00
Node_ISW_32B	0.05	0.56	407.56	0	11:57	0	0	0:00:00
Node_ISW_33A	0.04	0.47	409.47	0	11:57	0	0	0:00:00
Node_ISW_33B	0.12	1.12	408.12	0	11:57	0	0	0:00:00
Node_ISW_34	0.03	0.28	406.28	0	11:57	0	0	0:00:00
Node_ISW_35	0.02	0.24	406.24	0	11:56	0	0	0:00:00
Node_ISW_36	0.05	0.50	407.50	0	11:57	0	0	0:00:00
Node_ISW_4A	0.10	0.96	409.96	0	11:58	0	0	0:00:00
Node_ISW_4B	0.14	1.28	409.28	0	11:58	0	0	0:00:00
Node_ISW_5	0.03	0.34	410.34	0	11:57	0	0	0:00:00
Node_ISW_6	0.07	0.69	410.69	0	11:57	0	0	0:00:00
Node_ISW_7	0.07	0.71	410.71	0	11:58	0	0	0:00:00
Node_ISW_8	0.09	0.82	410.82	0	11:58	0	0	0:00:00
Node_ISW_9	0.09	0.83	410.83	0	11:58	0	0	0:00:00
Node_P_10_11_12	0.18	1.39	408.39	0	11:59	0	0	0:00:00
Node_P_13_14_15	0.18	1.43	408.43	0	11:59	0	0	0:00:00
Node_P_16_17	0.10	0.77	402.77	0	11:58	0	0	0:00:00
Node_P_19A_19B_22	0.16	1.26	406.26	0	11:59	0	0	0:00:00
Node_P_1A_1B_1C_2	0.20	1.61	406.61	0	12:00	0	0	0:00:00
Node_P_20A_20B_21	0.14	1.07	406.07	0	11:59	0	0	0:00:00
Node_P_23A_23B_27	0.12	0.94	405.94	0	11:59	0	0	0:00:00
Node_P_24_25_26_28_31	0.16	1.22	406.22	0	11:59	0	0	0:00:00
Node_P_29_30	1.02	1.20	403.20	0	11:57	0	0	0:00:00
Node_P_3_4A_4B_5	1.03	1.34	408.34	0	11:58	0	0	0:00:00
Node_P_32A_32B	1.05	1.56	403.56	0	11:58	0	0	0:00:00
Node_P_33A_33B_34_18	1.03	1.28	405.28	0	11:57	0	0	0:00:00
Node_P_35_36	0.08	0.63	405.63	0	11:58	0	0	0:00:00
Node_P_6_7	0.13	1.00	408.00	0	11:59	0	0	0:00:00
Node_P_8_9	0.14	1.06	408.06	0	12:00	0	0	0:00:00
Out_18	0.00	0.00	0.00	0	00:00	0	0	0:00:00
P_10_11_12	0.17	1.39	407.39	0	11:59	0	0	0:00:00
P_13_14_15	0.18	1.43	407.43	0	11:59	0	0	0:00:00
P_16_17	0.10	0.77	401.77	0	11:58	0	0	0:00:00
P_19A_19B_22	0.16	1.26	405.26	0	11:59	0	0	0:00:00
P_1A_1B_1C_2	0.19	1.54	405.54	0	12:01	0	0	0:00:00
P_20A_20B_21	0.14	1.07	405.07	0	11:59	0	0	0:00:00
P_23A_23B_27	0.12	0.94	404.94	0	11:59	0	0	0:00:00
P_24_25_26_28_31	0.16	1.22	405.22	0	11:59	0	0	0:00:00
P_29_30	0.07	0.59	401.59	0	11:58	0	0	0:00:00
P_3_4A_4B_5	0.16	1.24	407.24	0	11:59	0	0	0:00:00
P_32A_32B	0.10	0.81	401.81	0	11:58	0	0	0:00:00
P_33A_33B_34_18	0.11	0.91	403.91	0	11:59	0	0	0:00:00
P_35_36	0.08	0.63	404.63	0	11:58	0	0	0:00:00
P_6_7	0.13	1.00	407.00	0	11:59	0	0	0:00:00
P_8-9	0.14	1.06	407.06	0	12:00	0	0	0:00:00
Swale Storage	0.00	0.00	0.00	0	00:00	0	0	0:00:00

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Node Flow Summary
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Node ID	Element Type	Maximum Lateral Inflow cfs	Peak Inflow cfs	Time of Peak Inflow Occurrence days	Time of Peak Inflow Occurrence hh:mm	Maximum Flooding Overflow cfs	Time of Peak Flooding Occurrence days	Time of Peak Flooding Occurrence hh:mm
Jun-53	JUNCTION	1.85	1.85	0	11:57	0.00		
Jun-54	JUNCTION	2.26	2.26	0	11:57	0.00		
Node_ISW_10	JUNCTION	12.34	12.34	0	11:58	0.00		
Node_ISW_11A	JUNCTION	19.74	19.74	0	11:58	0.00		
Node_ISW_11B	JUNCTION	7.01	26.52	0	11:58	0.00		
Node_ISW_12	JUNCTION	6.21	6.21	0	11:57	0.00		
Node_ISW_13	JUNCTION	9.99	9.99	0	11:58	0.00		
Node_ISW_14	JUNCTION	25.75	25.75	0	11:58	0.00		
Node_ISW_15	JUNCTION	12.56	12.56	0	11:58	0.00		
Node_ISW_16	JUNCTION	8.54	8.54	0	11:58	0.00		
Node_ISW_17	JUNCTION	3.05	3.05	0	11:57	0.00		
Node_ISW_19A	JUNCTION	14.06	14.06	0	11:57	0.00		
Node_ISW_19B	JUNCTION	6.26	19.64	0	11:58	0.00		
Node_ISW_1A	JUNCTION	5.82	5.82	0	11:57	0.00		
Node_ISW_1B	JUNCTION	14.74	20.49	0	11:58	0.00		
Node_ISW_1C	JUNCTION	11.41	50.07	0	11:59	0.00		
Node_ISW_2	JUNCTION	19.38	19.38	0	11:58	0.00		
Node_ISW_20A	JUNCTION	5.05	5.05	0	11:57	0.00		
Node_ISW_20B	JUNCTION	10.83	15.62	0	11:58	0.00		
Node_ISW_21	JUNCTION	10.79	10.79	0	11:57	0.00		
Node_ISW_22	JUNCTION	6.93	6.93	0	11:57	0.00		
Node_ISW_23A	JUNCTION	4.75	4.75	0	11:57	0.00		
Node_ISW_23B	JUNCTION	10.01	14.44	0	11:57	0.00		
Node_ISW_24	JUNCTION	11.44	11.44	0	11:57	0.00		
Node_ISW_25	JUNCTION	8.07	23.01	0	11:58	0.00		
Node_ISW_26	JUNCTION	9.96	9.96	0	11:57	0.00		
Node_ISW_27	JUNCTION	7.04	7.04	0	11:57	0.00		
Node_ISW_28	JUNCTION	4.29	4.29	0	11:57	0.00		
Node_ISW_29	JUNCTION	10.21	10.21	0	11:57	0.00		
Node_ISW_3	JUNCTION	4.62	4.62	0	11:57	0.00		
Node_ISW_32A	JUNCTION	4.30	4.30	0	11:57	0.00		
Node_ISW_32B	JUNCTION	6.56	10.71	0	11:57	0.00		
Node_ISW_33A	JUNCTION	4.87	4.87	0	11:57	0.00		
Node_ISW_33B	JUNCTION	20.45	25.06	0	11:57	0.00		
Node_ISW_34	JUNCTION	2.09	2.09	0	11:57	0.00		
Node_ISW_35	JUNCTION	1.60	1.60	0	11:56	0.00		
Node_ISW_36	JUNCTION	5.62	5.62	0	11:57	0.00		
Node_ISW_4A	JUNCTION	19.53	19.53	0	11:58	0.00		
Node_ISW_4B	JUNCTION	9.50	28.94	0	11:58	0.00		
Node_ISW_5	JUNCTION	3.27	3.27	0	11:57	0.00		
Node_ISW_6	JUNCTION	11.24	11.24	0	11:57	0.00		
Node_ISW_7	JUNCTION	14.01	14.01	0	11:58	0.00		
Node_ISW_8	JUNCTION	13.56	13.56	0	11:58	0.00		
Node_ISW_9	JUNCTION	14.94	14.94	0	11:58	0.00		
Node_P_10_11_12	JUNCTION	0.00	44.63	0	11:59	0.00		
Node_P_13_14_15	JUNCTION	0.00	47.78	0	11:59	0.00		
Node_P_16_17	JUNCTION	0.00	11.55	0	11:58	0.00		
Node_P_19A_19B_22	JUNCTION	0.00	26.22	0	11:59	0.00		
Node_P_1A_1B_1C_2	JUNCTION	0.00	49.82	0	12:00	0.00		
Node_P_20A_20B_21	JUNCTION	0.00	25.92	0	11:59	0.00		
Node_P_23A_23B_27	JUNCTION	0.00	20.85	0	11:59	0.00		
Node_P_24_25_26_28_31	JUNCTION	0.00	34.07	0	11:59	0.00		
Node_P_29_30	JUNCTION	0.00	12.26	0	11:58	0.00		
Node_P_3_4A_4B_5	JUNCTION	0.00	36.53	0	11:59	0.00		
Node_P_32A_32B	JUNCTION	0.00	10.65	0	11:58	0.00		

Node_P_33A_33B_34_18	JUNCTION	0.00	26.44	0	11:59	0.00
Node_P_35_36	JUNCTION	0.00	7.13	0	11:58	0.00
Node_P_6_7	JUNCTION	0.00	25.04	0	11:59	0.00
Node_P_8_9	JUNCTION	0.00	27.85	0	12:00	0.00
Out_18	OUTFALL	0.00	0.00	0	00:00	0.00
P_10_11_12	OUTFALL	0.00	44.63	0	11:59	0.00
P_13_14_15	OUTFALL	0.00	47.78	0	11:59	0.00
P_16_17	OUTFALL	0.00	11.55	0	11:58	0.00
P_19A_19B_22	OUTFALL	0.00	26.22	0	11:59	0.00
P_1A_1B_1C_2	OUTFALL	0.00	49.80	0	12:01	0.00
P_20A_20B_21	OUTFALL	0.00	25.92	0	11:59	0.00
P_23A_23B_27	OUTFALL	0.00	20.85	0	11:59	0.00
P_24_25_26_28_31	OUTFALL	0.00	34.07	0	11:59	0.00
P_29_30	OUTFALL	0.00	12.26	0	11:58	0.00
P_3_4A_4B_5	OUTFALL	0.00	36.53	0	11:59	0.00
P_32A_32B	OUTFALL	0.00	10.65	0	11:58	0.00
P_33A_33B_34_18	OUTFALL	0.00	26.44	0	11:59	0.00
P_35_36	OUTFALL	0.00	7.13	0	11:58	0.00
P_6_7	OUTFALL	0.00	25.04	0	11:59	0.00
P_8-9	OUTFALL	0.00	27.85	0	12:00	0.00
Swale Storage	STORAGE	0.00	0.00	0	00:00	0.00

****
Storage Node Summary
****

Storage Node ID	Maximum Ponded Volume 1000 ft³	Maximum Ponded (%)	Time of Max Ponded days hh:mm	Average Ponded Volume 1000 ft³	Average Ponded (%)	Maximum Storage Node Outflow cfs	Maximum Exfiltration Rate cfm	Time of Max. Exfiltration Rate hh:mm:ss	Total Exfiltrated Volume 1000 ft³
Swale Storage	0.000	0	0 00:00	0.000	0	0.00	0.00	0:00:00	0.000

****
Outfall Loading Summary
****

Outfall Node ID	Flow Frequency (%)	Average Flow cfs	Peak Inflow cfs
Out_18	0.00	0.00	0.00
P_10_11_12	84.88	1.61	44.63
P_13_14_15	85.11	1.71	47.78
P_16_17	85.30	0.41	11.55
P_19A_19B_22	84.48	0.95	26.22
P_1A_1B_1C_2	83.93	1.84	49.80
P_20A_20B_21	84.73	0.93	25.92
P_23A_23B_27	84.38	0.76	20.85
P_24_25_26_28_31	84.64	1.22	34.07
P_29_30	84.64	0.43	12.26
P_3_4A_4B_5	84.89	1.30	36.53
P_32A_32B	84.81	0.37	10.65
P_33A_33B_34_18	84.63	0.94	26.44

P_35_36	84.29	0.25	7.13
P_6_7	85.06	0.90	25.04
P_8-9	84.59	1.02	27.85
System	79.40	14.62	403.88

****
Link Flow Summary
****

Link ID	Element Type	Time of Peak Flow Occurrence days hh:mm	Maximum Velocity Attained ft/sec	Length Factor	Peak Flow during Analysis cfs	Design Flow Capacity cfs	Ratio of Maximum /Design Flow	Ratio of Maximum Flow	Total Time Surcharged minutes	Reported Condition	Depth
ISW_10	CHANNEL	0 11:59	3.33	1.00	12.16	101.87	0.12	0.36	0	Calculated	
ISW_11A	CHANNEL	0 11:58	3.49	1.00	19.68	50.12	0.39	0.64	0	Calculated	
ISW_11B	CHANNEL	0 11:59	3.37	1.00	26.41	80.49	0.33	0.60	0	Calculated	
ISW_12	CHANNEL	0 11:58	2.94	1.00	6.13	26.00	0.24	0.48	0	Calculated	
ISW_13	CHANNEL	0 11:59	3.32	1.00	9.91	25.53	0.39	0.62	0	Calculated	
ISW_14	CHANNEL	0 11:59	3.60	1.00	25.50	88.01	0.29	0.56	0	Calculated	
ISW_15	CHANNEL	0 11:59	3.60	1.00	12.39	60.18	0.21	0.46	0	Calculated	
ISW_16	CHANNEL	0 11:58	5.25	1.00	8.53	52.48	0.16	0.39	0	Calculated	
ISW_17	CHANNEL	0 11:57	3.92	1.00	3.05	55.15	0.06	0.21	0	Calculated	
ISW_19A	CHANNEL	0 11:59	3.36	1.00	13.76	50.12	0.27	0.53	0	Calculated	
ISW_19B	CHANNEL	0 12:00	3.54	1.00	19.53	242.00	0.08	0.32	0	Calculated	
ISW_1A	CHANNEL	0 11:58	3.71	1.00	5.77	37.47	0.15	0.38	0	Calculated	
ISW_1B	CHANNEL	0 12:00	3.42	1.00	20.06	84.08	0.24	0.51	0	Calculated	
ISW_1C	CHANNEL	0 12:00	3.98	1.00	49.82	292.25	0.17	0.46	0	Calculated	
ISW_2	CHANNEL	0 11:59	3.59	1.00	19.24	98.13	0.20	0.47	0	Calculated	
ISW_20A	CHANNEL	0 11:58	2.46	1.00	4.97	21.23	0.23	0.47	0	Calculated	
ISW_20B	CHANNEL	0 11:59	3.44	1.00	15.36	95.99	0.16	0.42	0	Calculated	
ISW_21	CHANNEL	0 11:58	3.00	1.00	10.66	238.96	0.04	0.24	0	Calculated	
ISW_22	CHANNEL	0 11:58	2.70	1.00	6.84	246.79	0.03	0.18	0	Calculated	
ISW_23A	CHANNEL	0 11:58	2.40	1.00	4.65	21.10	0.22	0.46	0	Calculated	
ISW_23B	CHANNEL	0 12:00	2.96	1.00	14.08	192.71	0.07	0.30	0	Calculated	

ISW_24	CHANNEL	0	11:59	3.21	1.00	11.15	50.33	0.22	0.48	0	Calculated
ISW_25	CHANNEL	0	12:00	2.87	1.00	22.74	168.97	0.13	0.41	0	Calculated
ISW_26	CHANNEL	0	11:58	3.21	1.00	9.80	106.07	0.09	0.32	0	Calculated
ISW_27	CHANNEL	0	11:58	2.97	1.00	6.93	109.59	0.06	0.26	0	Calculated
ISW_28	CHANNEL	0	11:58	2.44	1.00	4.23	23.17	0.18	0.41	0	Calculated
ISW_29	CHANNEL	0	11:58	3.90	1.00	10.05	30.86	0.33	0.56	0	Calculated
ISW_3	CHANNEL	0	11:58	3.09	1.00	4.60	31.84	0.14	0.37	0	Calculated
ISW_30	CHANNEL	0	11:57	3.23	1.00	2.26	211.04	0.01	0.10	0	Calculated
ISW_31	CHANNEL	0	11:57	2.31	1.00	1.85	140.69	0.01	0.11	0	Calculated
ISW_32A	CHANNEL	0	11:58	2.48	1.00	4.25	23.70	0.18	0.41	0	Calculated
ISW_32B	CHANNEL	0	11:58	4.08	1.00	10.65	146.95	0.07	0.28	0	Calculated
ISW_33A	CHANNEL	0	11:58	2.45	1.00	4.79	21.63	0.22	0.46	0	Calculated
ISW_33B	CHANNEL	0	11:59	3.80	1.00	24.47	88.33	0.28	0.55	0	Calculated
ISW_34	CHANNEL	0	11:57	1.92	1.00	2.08	255.45	0.01	0.09	0	Calculated
ISW_35	CHANNEL	0	11:57	1.79	1.00	1.59	259.18	0.01	0.08	0	Calculated
ISW_36	CHANNEL	0	11:58	2.56	1.00	5.56	96.20	0.06	0.25	0	Calculated
ISW_4A	CHANNEL	0	11:58	3.49	1.00	19.49	50.12	0.39	0.64	0	Calculated
ISW_4B	CHANNEL	0	11:59	3.35	1.00	28.80	77.06	0.37	0.64	0	Calculated
ISW_5	CHANNEL	0	11:58	2.42	1.00	3.24	26.00	0.12	0.34	0	Calculated
ISW_6	CHANNEL	0	11:59	3.30	1.00	11.12	105.52	0.11	0.34	0	Calculated
ISW_7	CHANNEL	0	11:59	3.85	1.00	13.92	121.84	0.11	0.36	0	Calculated
ISW_8	CHANNEL	0	12:00	3.25	1.00	13.19	88.98	0.15	0.40	0	Calculated
ISW_9	CHANNEL	0	11:59	3.40	1.00	14.67	95.18	0.15	0.41	0	Calculated
P_10_11_12	CONDUIT	0	11:59	13.97	1.00	44.63	102.19	0.44	0.46	0	Calculated
P_13_14_15	CONDUIT	0	11:59	14.43	1.00	47.78	104.29	0.46	0.48	0	Calculated
P_16_17	CONDUIT	0	11:58	10.39	1.00	11.55	37.36	0.31	0.38	0	Calculated
P_19A_19B_22	CONDUIT	0	11:59	9.33	1.00	26.22	71.54	0.37	0.42	0	Calculated
P_1A_1B_1C_2	CONDUIT	0	12:01	6.82	1.00	49.80	95.29	0.52	0.51	0	Calculated
P_20A_20B_21	CONDUIT	0	11:59	11.43	1.00	25.92	94.88	0.27	0.36	0	Calculated
P_23A_23B_27	CONDUIT	0	11:59	10.97	1.00	20.85	97.43	0.21	0.31	0	Calculated
P_24_25_26_28_31	CONDUIT	0	11:59	12.55	1.00	34.07	97.43	0.35	0.41	0	Calculated
P_29_30	CONDUIT	0	11:58	9.38	1.00	12.26	38.02	0.32	0.39	0	Calculated
P_3_4A_4B_5	CONDUIT	0	11:59	13.24	1.00	36.53	102.19	0.36	0.41	0	Calculated
P_32A_32B	CONDUIT	0	11:58	10.93	1.00	10.65	19.27	0.55			

```
0.53           0  Calculated
  P_33A_33B_34_18      CONDUIT      0  11:59      9.50    1.00       26.44       62.94      0.42
0.45           0  Calculated
  P_35_36              CONDUIT      0  11:58      8.39    1.00        7.13       33.41      0.21
0.31           0  Calculated
  P_6_7                CONDUIT      0  11:59     12.12    1.00       25.04      104.29      0.24
0.33           0  Calculated
  P_8-9                CONDUIT      0  12:00     12.49    1.00       27.85      104.29      0.27
0.35           0  Calculated


  ******************************
  Highest Flow Instability Indexes
  ******************************
  All links are stable.


  Analysis began on:  Thu Apr  4 13:19:00 2024
  Analysis ended on:  Thu Apr  4 13:19:13 2024
  Total elapsed time: 00:00:13
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RAMBOLL

ATTACHMENT 6
ASSA OUTPUT REPORT - DURING CONSTRUCTION - 25-YR, 24-HR STORM

Autodesk® Storm and Sanitary Analysis 2016 - Version 13.4.133 (Build 0)

****
Project Description
****
File Name ..... Proposed _Landfill_SW_60 Percent Design_During Construction.SPF
Description ..... During Construction 25-yr, 24-hr Storm

****
Analysis Options
****
Flow Units ..... cfs
Subbasin Hydrograph Method. SCS TR-20
Time of Concentration..... SCS TR-55
Link Routing Method ..... Kinematic Wave
Storage Node Exfiltration.. Constant rate, wetted area
Starting Date FEB-01-2024 00:00:00
Ending Date FEB-02-2024 00:00:00
Report Time Step 00:01:00

****
Element Count
****
Number of rain gages 0
Number of subbasins 45
Number of nodes 76
Number of links 59

****
Subbasin Summary
****

Subbasin ID	Total Area acres	Peak Rate Factor
Area_10	3.16	484.00
Area_11A	5.05	484.00
Area_11B	1.73	484.00
Area_12	1.54	484.00
Area_13	2.52	484.00
Area_14	6.54	484.00
Area_15	3.20	484.00
Area_16	2.17	484.00
Area_17	0.76	484.00
Area_18	1.91	484.00
Area_19A	3.51	484.00
Area_19B	1.54	484.00
Area_1A	1.45	484.00
Area_1B	3.76	484.00
Area_1C	2.90	484.00
Area_2	4.94	484.00
Area_20A	1.24	484.00
Area_20B	2.70	484.00
Area_21	2.69	484.00
Area_22	1.71	484.00
Area_23A	1.16	484.00
Area_23B	2.48	484.00
Area_24	2.81	484.00
Area_25	1.97	484.00
Area_26	2.45	484.00
Area_27	1.73	484.00
Area_28	1.05	484.00

Area_29	2.48	484.00
Area_3	1.15	484.00
Area_30	0.55	484.00
Area_31	0.45	484.00
Area_32A	1.04	484.00
Area_32B	1.60	484.00
Area_33A	1.18	484.00
Area_33B	3.12	484.00
Area_34	0.50	484.00
Area_35	0.38	484.00
Area_36	1.37	484.00
Area_4A	4.96	484.00
Area_4B	2.41	484.00
Area_5	0.80	484.00
Area_6	2.83	484.00
Area_7	3.58	484.00
Area_8	3.44	484.00
Area_9	3.81	484.00

****
Node Summary
****

Node ID	Element Type	Invert Elevation ft	Maximum Elev. ft	Ponded Area ft²	External Inflow
Jun-53	JUNCTION	407.00	409.00	0.00	
Jun-54	JUNCTION	407.00	409.00	0.00	
Node_ISW_10	JUNCTION	410.00	412.00	0.00	
Node_ISW_11A	JUNCTION	409.00	410.50	0.00	
Node_ISW_11B	JUNCTION	408.00	410.00	0.00	
Node_ISW_12	JUNCTION	410.00	411.00	0.00	
Node_ISW_13	JUNCTION	410.00	411.00	0.00	
Node_ISW_14	JUNCTION	409.00	411.00	0.00	
Node_ISW_15	JUNCTION	411.00	412.50	0.00	
Node_ISW_16	JUNCTION	410.00	411.00	0.00	
Node_ISW_17	JUNCTION	405.00	406.00	0.00	
Node_ISW_19A	JUNCTION	410.00	411.50	0.00	
Node_ISW_19B	JUNCTION	407.00	410.00	0.00	
Node_ISW_1A	JUNCTION	415.00	416.00	0.00	
Node_ISW_1B	JUNCTION	409.00	411.00	0.00	
Node_ISW_1C	JUNCTION	406.50	410.00	0.00	
Node_ISW_2	JUNCTION	409.00	411.00	0.00	
Node_ISW_20A	JUNCTION	410.00	411.00	0.00	
Node_ISW_20B	JUNCTION	408.00	410.00	0.00	
Node_ISW_21	JUNCTION	407.00	410.00	0.00	
Node_ISW_22	JUNCTION	407.00	410.00	0.00	
Node_ISW_23A	JUNCTION	409.00	410.00	0.00	
Node_ISW_23B	JUNCTION	407.00	410.00	0.00	
Node_ISW_24	JUNCTION	409.00	410.50	0.00	
Node_ISW_25	JUNCTION	406.00	410.00	0.00	
Node_ISW_26	JUNCTION	408.00	410.00	0.00	
Node_ISW_27	JUNCTION	408.00	410.00	0.00	
Node_ISW_28	JUNCTION	408.00	409.00	0.00	
Node_ISW_29	JUNCTION	408.00	409.00	0.00	
Node_ISW_3	JUNCTION	410.00	411.00	0.00	
Node_ISW_32A	JUNCTION	409.00	410.00	0.00	
Node_ISW_32B	JUNCTION	407.00	409.00	0.00	
Node_ISW_33A	JUNCTION	409.00	410.00	0.00	
Node_ISW_33B	JUNCTION	407.00	409.00	0.00	
Node_ISW_34	JUNCTION	406.00	409.00	0.00	
Node_ISW_35	JUNCTION	406.00	409.00	0.00	
Node_ISW_36	JUNCTION	407.00	409.00	0.00	
Node_ISW_4A	JUNCTION	409.00	410.50	0.00	
Node_ISW_4B	JUNCTION	408.00	410.00	0.00	
Node_ISW_5	JUNCTION	410.00	411.00	0.00	

Node_ISW_6	JUNCTION	410.00	412.00	0.00
Node_ISW_7	JUNCTION	410.00	412.00	0.00
Node_ISW_8	JUNCTION	410.00	412.00	0.00
Node_ISW_9	JUNCTION	410.00	412.00	0.00
Node_P_10_11_12	JUNCTION	407.00	410.00	0.00
Node_P_13_14_15	JUNCTION	407.00	410.00	0.00
Node_P_16_17	JUNCTION	402.00	405.00	0.00
Node_P_19A_19B_22	JUNCTION	405.00	408.00	0.00
Node_P_1A_1B_1C_2	JUNCTION	405.00	408.50	0.00
Node_P_20A_20B_21	JUNCTION	405.00	408.00	0.00
Node_P_23A_23B_27	JUNCTION	405.00	408.00	0.00
Node_P_24_25_26_28_31	JUNCTION	405.00	408.00	0.00
Node_P_29_30	JUNCTION	402.00	405.00	0.00
Node_P_3_4A_4B_5	JUNCTION	407.00	410.00	0.00
Node_P_32A_32B	JUNCTION	402.00	405.00	0.00
Node_P_33A_33B_34_18	JUNCTION	404.00	408.00	0.00
Node_P_35_36	JUNCTION	405.00	408.00	0.00
Node_P_6_7	JUNCTION	407.00	410.00	0.00
Node_P_8_9	JUNCTION	407.00	410.00	0.00
Out_18	OUTFALL	0.00	0.00	0.00
P_10_11_12	OUTFALL	406.00	409.00	0.00
P_13_14_15	OUTFALL	406.00	409.00	0.00
P_16_17	OUTFALL	401.00	403.01	0.00
P_19A_19B_22	OUTFALL	404.00	407.00	0.00
P_1A_1B_1C_2	OUTFALL	404.00	407.00	0.00
P_20A_20B_21	OUTFALL	404.00	407.00	0.00
P_23A_23B_27	OUTFALL	404.00	407.00	0.00
P_24_25_26_28_31	OUTFALL	404.00	407.00	0.00
P_29_30	OUTFALL	401.00	402.52	0.00
P_3_4A_4B_5	OUTFALL	406.00	409.00	0.00
P_32A_32B	OUTFALL	401.00	402.52	0.00
P_33A_33B_34_18	OUTFALL	403.00	405.01	0.00
P_35_36	OUTFALL	404.00	406.01	0.00
P_6_7	OUTFALL	406.00	409.00	0.00
P_8-9	OUTFALL	406.00	409.00	0.00
Swale Storage	STORAGE	0.00	6.00	0.00

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Link Summary
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Link ID	From Node	To Node	Element Type	Length ft	Slope %	Manning's Roughness
ISW_10	Node_ISW_10	Node_P_10_11_12	CHANNEL	515.0	0.5825	0.0220
ISW_11A	Node_ISW_11A	Node_ISW_11B	CHANNEL	200.0	0.5000	0.0220
ISW_11B	Node_ISW_11B	Node_P_10_11_12	CHANNEL	275.0	0.3636	0.0220
ISW_12	Node_ISW_12	Node_P_10_11_12	CHANNEL	405.0	0.7407	0.0220
ISW_13	Node_ISW_13	Node_P_13_14_15	CHANNEL	420.0	0.7143	0.0220
ISW_14	Node_ISW_14	Node_P_13_14_15	CHANNEL	460.0	0.4348	0.0220
ISW_15	Node_ISW_15	Node_P_13_14_15	CHANNEL	555.0	0.7207	0.0220
ISW_16	Node_ISW_16	Node_P_16_17	CHANNEL	265.0	3.0189	0.0220
ISW_17	Node_ISW_17	Node_P_16_17	CHANNEL	90.0	3.3333	0.0220
ISW_19A	Node_ISW_19A	Node_ISW_19B	CHANNEL	600.0	0.5000	0.0220
ISW_19B	Node_ISW_19B	Node_P_19A_19B_22	CHANNEL	390.0	0.5128	0.0220
ISW_1A	Node_ISW_1A	Node_ISW_1B	CHANNEL	390.0	1.5385	0.0220
ISW_1B	Node_ISW_1B	Node_ISW_1C	CHANNEL	630.0	0.3968	0.0220
ISW_1C	Node_ISW_1C	Node_P_1A_1B_1C_2	CHANNEL	415.0	0.3614	0.0220
ISW_2	Node_ISW_2	Node_ISW_1C	CHANNEL	370.0	0.5405	0.0220
ISW_20A	Node_ISW_20A	Node_ISW_20B	CHANNEL	405.0	0.4938	0.0220
ISW_20B	Node_ISW_20B	Node_P_20A_20B_21	CHANNEL	580.0	0.5172	0.0220
ISW_21	Node_ISW_21	Node_P_20A_20B_21	CHANNEL	400.0	0.5000	0.0220
ISW_22	Node_ISW_22	Node_P_19A_19B_22	CHANNEL	375.0	0.5333	0.0220
ISW_23A	Node_ISW_23A	Node_ISW_23B	CHANNEL	410.0	0.4878	0.0220
ISW_23B	Node_ISW_23B	Node_P_23A_23B_27	CHANNEL	615.0	0.3252	0.0220
ISW_24	Node_ISW_24	Node_ISW_25	CHANNEL	595.0	0.5042	0.0220
ISW_25	Node_ISW_25	Node_P_24_25_26_28_31	CHANNEL	400.0	0.2500	

```
0.0220
  ISW_26          Node_ISW_26     Node_P_24_25_26_28_31CHANNEL          475.0    0.6316
0.0220
  ISW_27          Node_ISW_27     Node_P_23A_23B_27CHANNEL          445.0    0.6742      0.0220
  ISW_28          Node_ISW_28     Node_ISW_25     CHANNEL          340.0    0.5882      0.0220
  ISW_29          Node_ISW_29     Node_P_29_30    CHANNEL          575.0    1.0435      0.0220
  ISW_3           Node_ISW_3      Node_P_3_4A_4B_5CHANNEL          270.0    1.1111      0.0220
  ISW_30          Jun-54          Node_P_29_30    CHANNEL          160.0    2.5000      0.0220
  ISW_31          Jun-53          Node_P_24_25_26_28_31CHANNEL          180.0    1.1111
0.0220
  ISW_32A         Node_ISW_32A    Node_ISW_32B    CHANNEL          325.0    0.6154      0.0220
  ISW_32B         Node_ISW_32B    Node_P_32A_32B  CHANNEL          330.0    1.2121      0.0220
  ISW_33A         Node_ISW_33A    Node_ISW_33B    CHANNEL          390.0    0.5128      0.0220
  ISW_33B         Node_ISW_33B    Node_P_33A_33B_34_18CHANNEL          685.0    0.4380
0.0220
  ISW_34          Node_ISW_34     Node_P_33A_33B_34_18CHANNEL          175.0    0.5714
0.0220
  ISW_35          Node_ISW_35     Node_P_35_36    CHANNEL          170.0    0.5882      0.0220
  ISW_36          Node_ISW_36     Node_P_35_36    CHANNEL          385.0    0.5195      0.0220
  ISW_4A          Node_ISW_4A     Node_ISW_4B     CHANNEL          200.0    0.5000      0.0220
  ISW_4B          Node_ISW_4B     Node_P_3_4A_4B_5CHANNEL          300.0    0.3333      0.0220
  ISW_5           Node_ISW_5      Node_P_3_4A_4B_5CHANNEL          270.0    0.7407      0.0220
  ISW_6           Node_ISW_6      Node_P_6_7      CHANNEL          480.0    0.6250      0.0220
  ISW_7           Node_ISW_7      Node_P_6_7      CHANNEL          360.0    0.8333      0.0220
  ISW_8           Node_ISW_8      Node_P_8_9      CHANNEL          675.0    0.4444      0.0220
  ISW_9           Node_ISW_9      Node_P_8_9      CHANNEL          590.0    0.5085      0.0220
  P_10_11_12      Node_P_10_11_12 P_10_11_12      CONDUIT           50.0    2.0000      0.0120
  P_13_14_15      Node_P_13_14_15 P_13_14_15      CONDUIT           48.0    2.0833      0.0120
  P_16_17         Node_P_16_17    P_16_17         CONDUIT           44.0    2.2727      0.0120
  P_19A_19B_22    Node_P_19A_19B_22P_19A_19B_22    CONDUIT          102.0     0.9804      0.0120
  P_1A_1B_1C_2    Node_P_1A_1B_1C_2P_1A_1B_1C_2    CONDUIT          230.0    0.4348      0.0120
  P_20A_20B_21    Node_P_20A_20B_21P_20A_20B_21    CONDUIT           58.0    1.7241      0.0120
  P_23A_23B_27    Node_P_23A_23B_27P_23A_23B_27    CONDUIT           55.0    1.8182      0.0120
  P_24_25_26_28_31Node_P_24_25_26_28_31P_24_25_26_28_31CONDUIT          55.0    1.8182
0.0120
  P_29_30         Node_P_29_30    P_29_30         CONDUIT          38.0    2.6316      0.0120
  P_3_4A_4B_5     Node_P_3_4A_4B_5P_3_4A_4B_5     CONDUIT          50.0    2.0000      0.0120
  P_32A_32B       Node_P_32A_32B  P_32A_32B       CONDUIT          37.0    2.7027      0.0120
  P_33A_33B_34_18 Node_P_33A_33B_34_18P_33A_33B_34_18 CONDUIT          62.0    1.6129
0.0120
  P_35_36         Node_P_35_36    P_35_36         CONDUIT          55.0    1.8182      0.0120
  P_6_7           Node_P_6_7      P_6_7           CONDUIT          48.0    2.0833      0.0120
  P_8-9           Node_P_8_9      P_8-9           CONDUIT          48.0    2.0833      0.0120


  ********************
  Cross Section Summary
  ********************
  Link            Shape           Depth/       Width       No. of       Cross    Full Flow
Design
  ID                              Diameter                 Barrels    Sectional    Hydraulic
Flow
                                                                        Area       Radius
Capacity
                                     ft          ft                     ft²          ft
cfs

-------------------------------------------------------------------------------------------
---------
  ISW_10          TRAPEZOIDAL       2.00       15.00           1       18.00        1.15
101.87
  ISW_11A         TRAPEZOIDAL       1.50       12.00           1       11.25        0.90
50.12
  ISW_11B         TRAPEZOIDAL       2.00       15.00           1       18.00        1.15
80.49
  ISW_12          TRAPEZOIDAL       1.00        9.00           1        6.00        0.64
26.00
```

ISW_13	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
25.53						
ISW_14	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
88.01						
ISW_15	TRAPEZOIDAL	1.50	12.00	1	11.25	0.90
60.18						
ISW_16	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
52.48						
ISW_17	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
55.15						
ISW_19A	TRAPEZOIDAL	1.50	12.00	1	11.25	0.90
50.12						
ISW_19B	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
242.00						
ISW_1A	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
37.47						
ISW_1B	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
84.08						
ISW_1C	TRAPEZOIDAL	3.50	24.00	1	47.25	1.88
292.25						
ISW_2	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
98.13						
ISW_20A	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
21.23						
ISW_20B	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
95.99						
ISW_21	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
238.96						
ISW_22	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
246.79						
ISW_23A	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
21.10						
ISW_23B	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
192.71						
ISW_24	TRAPEZOIDAL	1.50	12.00	1	11.25	0.90
50.33						
ISW_25	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
168.97						
ISW_26	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
106.07						
ISW_27	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
109.59						
ISW_28	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
23.17						
ISW_29	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
30.86						
ISW_3	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
31.84						
ISW_30	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
211.04						
ISW_31	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
140.69						
ISW_32A	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
23.70						
ISW_32B	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
146.95						
ISW_33A	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
21.63						
ISW_33B	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
88.33						
ISW_34	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
255.45						
ISW_35	TRAPEZOIDAL	3.00	21.00	1	36.00	1.64
259.18						
ISW_36	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
96.20						
ISW_4A	TRAPEZOIDAL	1.50	12.00	1	11.25	0.90

50.12						
ISW_4B	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
77.06						
ISW_5	TRAPEZOIDAL	1.00	9.00	1	6.00	0.64
26.00						
ISW_6	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
105.52						
ISW_7	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
121.84						
ISW_8	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
88.98						
ISW_9	TRAPEZOIDAL	2.00	15.00	1	18.00	1.15
95.18						
P_10_11_12	CIRCULAR	3.00	3.00	1	7.07	0.75
102.19						
P_13_14_15	CIRCULAR	3.00	3.00	1	7.07	0.75
104.29						
P_16_17	CIRCULAR	2.01	2.01	1	3.17	0.50
37.36						
P_19A_19B_22	CIRCULAR	3.00	3.00	1	7.07	0.75
71.54						
P_1A_1B_1C_2	CIRCULAR	3.00	3.00	2	7.07	0.75
47.64						
P_20A_20B_21	CIRCULAR	3.00	3.00	1	7.07	0.75
94.88						
P_23A_23B_27	CIRCULAR	3.00	3.00	1	7.07	0.75
97.43						
P_24_25_26_28_31	CIRCULAR	3.00	3.00	1	7.07	0.75
97.43						
P_29_30	CIRCULAR	1.52	1.52	2	1.81	0.38
19.01						
P_3_4A_4B_5	CIRCULAR	3.00	3.00	1	7.07	0.75
102.19						
P_32A_32B	CIRCULAR	1.52	1.52	1	1.81	0.38
19.27						
P_33A_33B_34_18	CIRCULAR	2.01	2.01	2	3.17	0.50
31.47						
P_35_36	CIRCULAR	2.01	2.01	1	3.17	0.50
33.41						
P_6_7	CIRCULAR	3.00	3.00	1	7.07	0.75
104.29						
P_8-9	CIRCULAR	3.00	3.00	1	7.07	0.75
104.29						

**********	Volume	Depth
Runoff Quantity Continuity	acre-ft	inches
**********	---	---
Total Precipitation	37.098	4.266
Surface Runoff	0.519	0.060
Continuity Error (%)	-0.000	

**********	Volume	Volume
Flow Routing Continuity	acre-ft	Mgallons
**********	---	---
External Inflow	0.000	0.000
External Outflow	31.085	10.129
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.085	0.028
Continuity Error (%)	-0.000	

****
Composite Curve Number Computations Report
****

Subbasin Area_10

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	3.16	D	94.00
Composite Area & Weighted CN	3.16		94.00

Subbasin Area_11A

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	5.05	D	94.00
Composite Area & Weighted CN	5.05		94.00

Subbasin Area_11B

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.73	D	94.00
Composite Area & Weighted CN	1.73		94.00

Subbasin Area_12

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.54	D	94.00
Composite Area & Weighted CN	1.54		94.00

Subbasin Area_13

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.52	D	94.00
Composite Area & Weighted CN	2.52		94.00

Subbasin Area_14

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	6.54	D	94.00
Composite Area & Weighted CN	6.54		94.00

Subbasin Area_15

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	3.20	D	94.00
Composite Area & Weighted CN	3.20		94.00

Subbasin Area_16

Soil/Surface Description	Area	Soil

Soil/Surface Description	(acres)	Group	CN
Newly graded area	2.17	D	94.00
Composite Area & Weighted CN	2.17		94.00

Subbasin Area_17

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	0.76	D	94.00
Composite Area & Weighted CN	0.76		94.00

Subbasin Area_18

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.91	D	94.00
Composite Area & Weighted CN	1.91		94.00

Subbasin Area_19A

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	3.51	D	94.00
Composite Area & Weighted CN	3.51		94.00

Subbasin Area_19B

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.54	D	94.00
Composite Area & Weighted CN	1.54		94.00

Subbasin Area_1A

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.45	D	94.00
Composite Area & Weighted CN	1.45		94.00

Subbasin Area_1B

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	3.76	D	94.00
Composite Area & Weighted CN	3.76		94.00

Subbasin Area_1C

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.90	D	94.00
Composite Area & Weighted CN	2.90		94.00

Subbasin Area_2

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	4.94	D	94.00
Composite Area & Weighted CN	4.94		94.00

Subbasin Area_20A

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.24	D	94.00
Composite Area & Weighted CN	1.24		94.00

Subbasin Area_20B

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.70	D	94.00
Composite Area & Weighted CN	2.70		94.00

Subbasin Area_21

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.69	D	94.00
Composite Area & Weighted CN	2.69		94.00

Subbasin Area_22

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.71	D	94.00
Composite Area & Weighted CN	1.71		94.00

Subbasin Area_23A

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.16	D	94.00
Composite Area & Weighted CN	1.16		94.00

Subbasin Area_23B

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.48	D	94.00
Composite Area & Weighted CN	2.48		94.00

Subbasin Area_24

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.81	D	94.00
Composite Area & Weighted CN	2.81		94.00

Subbasin Area_25

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.97	D	94.00
Composite Area & Weighted CN	1.97		94.00

Subbasin Area_26

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.45	D	94.00
Composite Area & Weighted CN	2.45		94.00

Subbasin Area_27

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.73	D	94.00
Composite Area & Weighted CN	1.73		94.00

Subbasin Area_28

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.05	D	94.00
Composite Area & Weighted CN	1.05		94.00

Subbasin Area_29

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.48	D	94.00
Composite Area & Weighted CN	2.48		94.00

Subbasin Area_3

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.15	D	94.00
Composite Area & Weighted CN	1.15		94.00

Subbasin Area_30

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	0.55	D	94.00

Composite Area & Weighted CN	0.55		94.00

Subbasin Area_31

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	0.45	D	94.00
Composite Area & Weighted CN	0.45		94.00

Subbasin Area_32A

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.04	D	94.00
Composite Area & Weighted CN	1.04		94.00

Subbasin Area_32B

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.60	D	94.00
Composite Area & Weighted CN	1.60		94.00

Subbasin Area_33A

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.18	D	94.00
Composite Area & Weighted CN	1.18		94.00

Subbasin Area_33B

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	3.12	D	94.00
Composite Area & Weighted CN	3.12		94.00

Subbasin Area_34

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	0.50	D	94.00
Composite Area & Weighted CN	0.50		94.00

Subbasin Area_35

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	0.39	D	94.00
Composite Area & Weighted CN	0.39		94.00

Subbasin Area_36

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	1.37	D	94.00
Composite Area & Weighted CN	1.37		94.00

Subbasin Area_4A

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	4.96	D	94.00
Composite Area & Weighted CN	4.96		94.00

Subbasin Area_4B

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.41	D	94.00
Composite Area & Weighted CN	2.41		94.00

Subbasin Area_5

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	0.80	D	94.00
Composite Area & Weighted CN	0.80		94.00

Subbasin Area_6

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	2.83	D	94.00
Composite Area & Weighted CN	2.83		94.00

Subbasin Area_7

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	3.58	D	94.00
Composite Area & Weighted CN	3.58		94.00

Subbasin Area_8

Soil/Surface Description	Area (acres)	Soil Group	CN
Newly graded area	3.44	D	94.00
Composite Area & Weighted CN	3.44		94.00

Subbasin Area_9

Soil/Surface Description	Area (acres)	Soil Group	CN

```
  Newly graded area                                    3.81            D       94.00
  Composite Area & Weighted CN                         3.81                    94.00


  ************************************************
  SCS TR-55 Time of Concentration Computations Report
  ************************************************

  Sheet Flow Equation
  -------------------

          Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

          Where:

          Tc = Time of Concentration (hrs)
          n  = Manning's Roughness
          Lf = Flow Length (ft)
          P  = 2 yr, 24 hr Rainfall (inches)
          Sf = Slope (ft/ft)

  Shallow Concentrated Flow Equation
  ----------------------------------

          V  = 16.1345 * (Sf^0.5) (unpaved surface)
          V  = 20.3282 * (Sf^0.5) (paved surface)
          V  = 15.0 * (Sf^0.5) (grassed waterway surface)
          V  = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
          V  = 9.0 * (Sf^0.5) (cultivated straight rows surface)
          V  = 7.0 * (Sf^0.5) (short grass pasture surface)
          V  = 5.0 * (Sf^0.5) (woodland surface)
          V  = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
          Tc = (Lf / V) / (3600 sec/hr)

          Where:

          Tc = Time of Concentration (hrs)
          Lf = Flow Length (ft)
          V  = Velocity (ft/sec)
          Sf = Slope (ft/ft)

  Channel Flow Equation
  ---------------------

          V  = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
          R  = Aq / Wp
          Tc = (Lf / V) / (3600 sec/hr)

          Where:

          Tc = Time of Concentration (hrs)
          Lf = Flow Length (ft)
          R  = Hydraulic Radius (ft)
          Aq = Flow Area (ft²)
          Wp = Wetted Perimeter (ft)
          V  = Velocity (ft/sec)
          Sf = Slope (ft/ft)
          n  = Manning's Roughness

  -------------------
  Subbasin Area_10
  -------------------

  Sheet Flow Computations
  -----------------------
                                                    Subarea A           Subarea B           Subarea
C
```

Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	320.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00
Computed Flow Time (minutes):	2.38	0.00	0.00

Total TOC (minutes):	7.98

Subbasin Area_11A

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	320.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00

Computed Flow Time (minutes):	2.38	0.00	0.00

Total TOC (minutes):	7.98

Subbasin Area_11B

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	160.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00
Computed Flow Time (minutes):	1.19	0.00	0.00

Total TOC (minutes):	6.79

Subbasin Area_12

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00

```
          Velocity (ft/sec):                          0.30               0.00
0.00
          Computed Flow Time (minutes):               5.60               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A          Subarea B          Subarea
C
          Flow Length (ft):                         180.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          Surface Type:                    Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                          2.24               0.00
0.00
          Computed Flow Time (minutes):               1.34               0.00
0.00

=============================================================================================
          Total TOC (minutes):                        6.94

=============================================================================================


  -------------------
  Subbasin Area_13
  -------------------

  Sheet Flow Computations
  -----------------------
                                                 Subarea A          Subarea B          Subarea
C
          Manning's Roughness:                        0.10               0.00
0.00
          Flow Length (ft):                         100.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          2 yr, 24 hr Rainfall (in):                  2.46               0.00
0.00
          Velocity (ft/sec):                          0.30               0.00
0.00
          Computed Flow Time (minutes):               5.60               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A          Subarea B          Subarea
C
          Flow Length (ft):                         260.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          Surface Type:                    Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                          2.24               0.00
0.00
          Computed Flow Time (minutes):               1.93               0.00
0.00

=============================================================================================
          Total TOC (minutes):                        7.53

=============================================================================================
```

```
  ------------------
  Subbasin Area_14
  ------------------

  Sheet Flow Computations
  -----------------------
                                              Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                     0.10                0.00
0.00
          Flow Length (ft):                      100.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):               2.46                0.00
0.00
          Velocity (ft/sec):                       0.30                0.00
0.00
          Computed Flow Time (minutes):            5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                              Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                      280.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          Surface Type:                 Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                       2.24                0.00
0.00
          Computed Flow Time (minutes):            2.08                0.00
0.00

================================================================================================
          Total TOC (minutes):                     7.68

================================================================================================


  ------------------
  Subbasin Area_15
  ------------------

  Sheet Flow Computations
  -----------------------
                                              Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                     0.10                0.00
0.00
          Flow Length (ft):                      100.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):               2.46                0.00
0.00
          Velocity (ft/sec):                       0.30                0.00
0.00
          Computed Flow Time (minutes):            5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                              Subarea A           Subarea B           Subarea
```

```
C
          Flow Length (ft):                          300.00                0.00
0.00
          Slope (%):                                   5.00                0.00
0.00
          Surface Type:                     Bare & untilled              Unpaved
Unpaved
          Velocity (ft/sec):                           2.24                0.00
0.00
          Computed Flow Time (minutes):                2.23                0.00
0.00

=============================================================================================
          Total TOC (minutes):                         7.83

=============================================================================================


  -------------------
  Subbasin Area_16
  -------------------

  Sheet Flow Computations
  -----------------------
                                                  Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                         0.10                0.00
0.00
          Flow Length (ft):                          100.00                0.00
0.00
          Slope (%):                                   5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):                   2.46                0.00
0.00
          Velocity (ft/sec):                           0.30                0.00
0.00
          Computed Flow Time (minutes):                5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                  Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                          280.00                0.00
0.00
          Slope (%):                                   5.00                0.00
0.00
          Surface Type:                     Bare & untilled              Unpaved
Unpaved
          Velocity (ft/sec):                           2.24                0.00
0.00
          Computed Flow Time (minutes):                2.08                0.00
0.00

=============================================================================================
          Total TOC (minutes):                         7.68

=============================================================================================


  -------------------
  Subbasin Area_17
  -------------------

  Sheet Flow Computations
  -----------------------
                                                  Subarea A           Subarea B           Subarea
```

```
C
          Manning's Roughness:                        0.10               0.00
0.00
          Flow Length (ft):                         100.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          2 yr, 24 hr Rainfall (in):                  2.46               0.00
0.00
          Velocity (ft/sec):                          0.30               0.00
0.00
          Computed Flow Time (minutes):               5.60               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A          Subarea B          Subarea
C
          Flow Length (ft):                         183.00               0.00
0.00
          Slope (%):                                  4.37               0.00
0.00
          Surface Type:                    Bare & untilled            Unpaved
Unpaved
          Velocity (ft/sec):                          2.09               0.00
0.00
          Computed Flow Time (minutes):               1.46               0.00
0.00

================================================================================================
          Total TOC (minutes):                        7.06

================================================================================================


  -------------------
  Subbasin Area_18
  -------------------

  Sheet Flow Computations
  -----------------------
                                                 Subarea A          Subarea B          Subarea
C
          Manning's Roughness:                        0.10               0.00
0.00
          Flow Length (ft):                         100.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          2 yr, 24 hr Rainfall (in):                  2.46               0.00
0.00
          Velocity (ft/sec):                          0.30               0.00
0.00
          Computed Flow Time (minutes):               5.60               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A          Subarea B          Subarea
C
          Flow Length (ft):                         220.00               0.00
0.00
          Slope (%):                                  5.00               0.00
0.00
          Surface Type:                    Bare & untilled            Unpaved
Unpaved
          Velocity (ft/sec):                          2.24               0.00
```

```
0.00
          Computed Flow Time (minutes):               1.64                0.00
0.00

================================================================================================
          Total TOC (minutes):                        7.24

================================================================================================


  --------------------
  Subbasin Area_19A
  --------------------

  Sheet Flow Computations
  -----------------------
                                                 Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                        0.10                0.00
0.00
          Flow Length (ft):                         100.00                0.00
0.00
          Slope (%):                                  5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):                  2.46                0.00
0.00
          Velocity (ft/sec):                          0.30                0.00
0.00
          Computed Flow Time (minutes):               5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                         200.25                0.00
0.00
          Slope (%):                                  5.00                0.00
0.00
          Surface Type:                    Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                          2.24                0.00
0.00
          Computed Flow Time (minutes):               1.49                0.00
0.00

================================================================================================
          Total TOC (minutes):                        7.09

================================================================================================


  --------------------
  Subbasin Area_19B
  --------------------

  Sheet Flow Computations
  -----------------------
                                                 Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                        0.10                0.00
0.00
          Flow Length (ft):                         100.00                0.00
0.00
          Slope (%):                                  5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):                  2.46                0.00
```

```
0.00
          Velocity (ft/sec):                          0.30               0.00
0.00
          Computed Flow Time (minutes):               5.60               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                              Subarea A          Subarea B          Subarea
C
          Flow Length (ft):                      140.17               0.00
0.00
          Slope (%):                                4.99               0.00
0.00
          Surface Type:                  Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                        2.23               0.00
0.00
          Computed Flow Time (minutes):             1.05               0.00
0.00

=============================================================================================
          Total TOC (minutes):                      6.65

=============================================================================================


  -------------------
  Subbasin Area_1A
  -------------------

  Sheet Flow Computations
  -----------------------
                                              Subarea A          Subarea B          Subarea
C
          Manning's Roughness:                      0.10               0.00
0.00
          Flow Length (ft):                      100.00               0.00
0.00
          Slope (%):                                5.00               0.00
0.00
          2 yr, 24 hr Rainfall (in):                2.46               0.00
0.00
          Velocity (ft/sec):                        0.30               0.00
0.00
          Computed Flow Time (minutes):             5.60               0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                              Subarea A          Subarea B          Subarea
C
          Flow Length (ft):                      200.00               0.00
0.00
          Slope (%):                                5.00               0.00
0.00
          Surface Type:                  Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                        2.24               0.00
0.00
          Computed Flow Time (minutes):             1.49               0.00
0.00

=============================================================================================
          Total TOC (minutes):                      7.09

=============================================================================================
```

Subbasin Area_1B

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	300.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00
Computed Flow Time (minutes):	2.23	0.00	0.00

==========

Total TOC (minutes): 7.83

==========

Subbasin Area_1C

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	280.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00
Computed Flow Time (minutes):	2.08	0.00	0.00

Total TOC (minutes): 7.68

Subbasin Area_2

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	300.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00
Computed Flow Time (minutes):	2.23	0.00	0.00

Total TOC (minutes): 7.83

Subbasin Area_20A

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	100.12	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.75	0.00	0.00

Total TOC (minutes):	6.35

Subbasin Area_20B

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	196.46	0.00	0.00
Slope (%):	5.09	0.00	0.00
Surface Type:	Bare & untilled	Grass pasture	Grass pasture

Velocity (ft/sec):	2.26	0.00	0.00
Computed Flow Time (minutes):	1.45	0.00	0.00
Total TOC (minutes):	7.05		

Subbasin Area_21

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	200.25	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	1.50	0.00	0.00
Total TOC (minutes):	7.10		

Subbasin Area_22

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00

2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	160.20	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	1.20	0.00	0.00

Total TOC (minutes): 6.80

Subbasin Area_23A

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	120.15	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.90	0.00	0.00

Total TOC (minutes): 6.50

==========

Subbasin Area_23B

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	160.20	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	1.20	0.00	0.00

==========

Total TOC (minutes): 6.80

==========

Subbasin Area_24

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

```
  -------------------------------------
                                              Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                      140.17                0.00
0.00
          Slope (%):                               4.99                0.00
0.00
          Surface Type:                  Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                       2.23                0.00
0.00
          Computed Flow Time (minutes):            1.05                0.00
0.00

=============================================================================================
          Total TOC (minutes):                     6.65

=============================================================================================


  -------------------
  Subbasin Area_25
  -------------------

  Sheet Flow Computations
  -----------------------
                                              Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                     0.10                0.00
0.00
          Flow Length (ft):                      100.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):               2.46                0.00
0.00
          Velocity (ft/sec):                       0.30                0.00
0.00
          Computed Flow Time (minutes):            5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                              Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                      100.12                0.00
0.00
          Slope (%):                               4.99                0.00
0.00
          Surface Type:                  Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                       2.23                0.00
0.00
          Computed Flow Time (minutes):            0.75                0.00
0.00

=============================================================================================
          Total TOC (minutes):                     6.35

=============================================================================================


  -------------------
  Subbasin Area_26
  -------------------

  Sheet Flow Computations
```

```
  ----------------------
                                                Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                       0.10                0.00
0.00
          Flow Length (ft):                        100.00                0.00
0.00
          Slope (%):                                 5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):                 2.46                0.00
0.00
          Velocity (ft/sec):                         0.30                0.00
0.00
          Computed Flow Time (minutes):              5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  -------------------------------------
                                                Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                        140.17                0.00
0.00
          Slope (%):                                 4.99                0.00
0.00
          Surface Type:                   Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                         2.23                0.00
0.00
          Computed Flow Time (minutes):              1.05                0.00
0.00

================================================================================================
          Total TOC (minutes):                       6.65

================================================================================================


  -------------------
  Subbasin Area_27
  -------------------

  Sheet Flow Computations
  ----------------------
                                                Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                       0.10                0.00
0.00
          Flow Length (ft):                        100.00                0.00
0.00
          Slope (%):                                 5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):                 2.46                0.00
0.00
          Velocity (ft/sec):                         0.30                0.00
0.00
          Computed Flow Time (minutes):              5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  -------------------------------------
                                                Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                        140.17                0.00
0.00
          Slope (%):                                 4.99                0.00
0.00
          Surface Type:                   Bare & untilled             Unpaved
```

Unpaved			
	Velocity (ft/sec):	2.23	0.00
0.00			
	Computed Flow Time (minutes):	1.05	0.00
0.00			
	Total TOC (minutes):	6.65	

Subbasin Area_28

Sheet Flow Computations

		Subarea A	Subarea B	Subarea C
	Manning's Roughness:	0.10	0.00	0.00
	Flow Length (ft):	100.00	0.00	0.00
	Slope (%):	5.00	0.00	0.00
	2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
	Velocity (ft/sec):	0.30	0.00	0.00
	Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	80.10	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.60	0.00	0.00
Total TOC (minutes):	6.20		

Subbasin Area_29

Sheet Flow Computations

		Subarea A	Subarea B	Subarea C
	Manning's Roughness:	0.10	0.00	0.00
	Flow Length (ft):	100.00	0.00	0.00
	Slope (%):	5.00	0.00	

```
0.00
          2 yr, 24 hr Rainfall (in):                 2.46                0.00
0.00
          Velocity (ft/sec):                         0.30                0.00
0.00
          Computed Flow Time (minutes):              5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                         80.26                0.00
0.00
          Slope (%):                                 4.98                0.00
0.00
          Surface Type:                    Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                         2.23                0.00
0.00
          Computed Flow Time (minutes):              0.60                0.00
0.00

================================================================================================
          Total TOC (minutes):                       6.20

================================================================================================


  ------------------
  Subbasin Area_3
  ------------------

  Sheet Flow Computations
  -----------------------
                                                 Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                       0.10                0.00
0.00
          Flow Length (ft):                        100.00                0.00
0.00
          Slope (%):                                 5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):                 2.46                0.00
0.00
          Velocity (ft/sec):                         0.30                0.00
0.00
          Computed Flow Time (minutes):              5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                        200.00                0.00
0.00
          Slope (%):                                 5.00                0.00
0.00
          Surface Type:                    Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                         2.24                0.00
0.00
          Computed Flow Time (minutes):              1.49                0.00
0.00

================================================================================================
          Total TOC (minutes):                       7.09
```

==========

Subbasin Area_30

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	80.31	0.00	0.00
Slope (%):	4.98	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.60	0.00	0.00

==========

Total TOC (minutes): 6.20

==========

Subbasin Area_31

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	40.05	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.30	0.00	0.00
Total TOC (minutes):	5.90		

Subbasin Area_32A

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	60.06	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.45	0.00	0.00
Total TOC (minutes):	6.05		

Subbasin Area_32B

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	60.18	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.45	0.00	0.00

Total TOC (minutes): 6.05

Subbasin Area_33A

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	60.12	0.00	0.00
Slope (%):	4.99	0.00	0.00

Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.45	0.00	0.00

Total TOC (minutes): 6.05

Subbasin Area_33B

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	60.12	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.45	0.00	0.00

Total TOC (minutes): 6.05

Subbasin Area_34

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00

Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	40.05	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.30	0.00	0.00

Total TOC (minutes):	5.90

Subbasin Area_35

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Total TOC (minutes):	5.60

Subbasin Area_36

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00

Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	40.05	0.00	0.00
Slope (%):	4.99	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.23	0.00	0.00
Computed Flow Time (minutes):	0.30	0.00	0.00

Total TOC (minutes):	5.90

Subbasin Area_4A

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	280.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00
Computed Flow Time (minutes):	2.08	0.00	0.00

```
==============================================================================================
          Total TOC (minutes):                        7.68
==============================================================================================


  -------------------
  Subbasin Area_4B
  -------------------

  Sheet Flow Computations
  -----------------------
                                              Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                     0.10                0.00
0.00
          Flow Length (ft):                      100.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):               2.46                0.00
0.00
          Velocity (ft/sec):                       0.30                0.00
0.00
          Computed Flow Time (minutes):            5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                              Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                      280.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          Surface Type:                 Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                       2.24                0.00
0.00
          Computed Flow Time (minutes):            2.08                0.00
0.00

==============================================================================================
          Total TOC (minutes):                        7.68
==============================================================================================


  ------------------
  Subbasin Area_5
  ------------------

  Sheet Flow Computations
  -----------------------
                                              Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                     0.10                0.00
0.00
          Flow Length (ft):                      100.00                0.00
0.00
          Slope (%):                               5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):               2.46                0.00
0.00
          Velocity (ft/sec):                       0.30                0.00
0.00
```

Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	110.00	0.00	0.00
Slope (%):	5.46	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.34	0.00	0.00
Computed Flow Time (minutes):	0.78	0.00	0.00

Total TOC (minutes): 6.38

Subbasin Area_6

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	220.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00
Computed Flow Time (minutes):	1.64	0.00	0.00

Total TOC (minutes): 7.24

Subbasin Area_7

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	320.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
Surface Type:	Bare & untilled	Unpaved	Unpaved
Velocity (ft/sec):	2.24	0.00	0.00
Computed Flow Time (minutes):	2.38	0.00	0.00

Total TOC (minutes): 7.98

Subbasin Area_8

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.10	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	5.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	2.46	0.00	0.00
Velocity (ft/sec):	0.30	0.00	0.00
Computed Flow Time (minutes):	5.60	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	280.00	0.00	

```
0.00
          Slope (%):                                  5.00                0.00
0.00
          Surface Type:                     Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                          2.24                0.00
0.00
          Computed Flow Time (minutes):               2.08                0.00
0.00

================================================================================================
          Total TOC (minutes):                        7.68

================================================================================================


  ------------------
  Subbasin Area_9
  ------------------

  Sheet Flow Computations
  -----------------------
                                                 Subarea A           Subarea B           Subarea
C
          Manning's Roughness:                        0.10                0.00
0.00
          Flow Length (ft):                         100.00                0.00
0.00
          Slope (%):                                  5.00                0.00
0.00
          2 yr, 24 hr Rainfall (in):                  2.46                0.00
0.00
          Velocity (ft/sec):                          0.30                0.00
0.00
          Computed Flow Time (minutes):               5.60                0.00
0.00

  Shallow Concentrated Flow Computations
  --------------------------------------
                                                 Subarea A           Subarea B           Subarea
C
          Flow Length (ft):                         300.00                0.00
0.00
          Slope (%):                                  5.00                0.00
0.00
          Surface Type:                     Bare & untilled             Unpaved
Unpaved
          Velocity (ft/sec):                          2.24                0.00
0.00
          Computed Flow Time (minutes):               2.23                0.00
0.00

================================================================================================
          Total TOC (minutes):                        7.83

================================================================================================


  **********************
  Subbasin Runoff Summary
  **********************

  ------------------------------------------------------------------------
  Subbasin             Total     Total      Peak  Weighted           Time of
  ID                  Precip    Runoff    Runoff     Curve     Concentration
                         in        in       cfs    Number    days  hh:mm:ss
  ------------------------------------------------------------------------
```

Area_10	4.27	3.59	15.43	94.000	0	00:07:58
Area_11A	4.27	3.59	24.69	94.000	0	00:07:58
Area_11B	4.27	3.59	8.76	94.000	0	00:06:47
Area_12	4.27	3.59	7.76	94.000	0	00:06:56
Area_13	4.27	3.59	12.50	94.000	0	00:07:31
Area_14	4.27	3.59	32.24	94.000	0	00:07:40
Area_15	4.27	3.59	15.71	94.000	0	00:07:49
Area_16	4.27	3.59	10.69	94.000	0	00:07:40
Area_17	4.27	3.59	3.82	94.000	0	00:07:03
Area_18	4.27	3.59	9.51	94.000	0	00:07:14
Area_19A	4.27	3.59	17.56	94.000	0	00:07:05
Area_19B	4.27	3.59	7.82	94.000	0	00:06:39
Area_1A	4.27	3.59	7.28	94.000	0	00:07:05
Area_1B	4.27	3.59	18.44	94.000	0	00:07:49
Area_1C	4.27	3.59	14.29	94.000	0	00:07:40
Area_2	4.27	3.59	24.25	94.000	0	00:07:49
Area_20A	4.27	3.59	6.32	94.000	0	00:06:21
Area_20B	4.27	3.59	13.54	94.000	0	00:07:03
Area_21	4.27	3.59	13.49	94.000	0	00:07:06
Area_22	4.27	3.59	8.67	94.000	0	00:06:48
Area_23A	4.27	3.59	5.93	94.000	0	00:06:30
Area_23B	4.27	3.59	12.51	94.000	0	00:06:48
Area_24	4.27	3.59	14.28	94.000	0	00:06:39
Area_25	4.27	3.59	10.08	94.000	0	00:06:21
Area_26	4.27	3.59	12.43	94.000	0	00:06:39
Area_27	4.27	3.59	8.80	94.000	0	00:06:39
Area_28	4.27	3.59	5.36	94.000	0	00:06:12
Area_29	4.27	3.59	12.75	94.000	0	00:06:12
Area_3	4.27	3.59	5.77	94.000	0	00:07:05
Area_30	4.27	3.59	2.83	94.000	0	00:06:12
Area_31	4.27	3.59	2.32	94.000	0	00:05:54
Area_32A	4.27	3.59	5.38	94.000	0	00:06:03
Area_32B	4.27	3.59	8.21	94.000	0	00:06:03
Area_33A	4.27	3.59	6.10	94.000	0	00:06:03
Area_33B	4.27	3.59	16.10	94.000	0	00:06:03
Area_34	4.27	3.59	2.62	94.000	0	00:05:54
Area_35	4.27	3.59	2.00	94.000	0	00:05:36
Area_36	4.27	3.59	7.05	94.000	0	00:05:54
Area_4A	4.27	3.59	24.45	94.000	0	00:07:40
Area_4B	4.27	3.59	11.89	94.000	0	00:07:40
Area_5	4.27	3.59	4.09	94.000	0	00:06:22
Area_6	4.27	3.59	14.11	94.000	0	00:07:14
Area_7	4.27	3.59	17.52	94.000	0	00:07:58
Area_8	4.27	3.59	16.97	94.000	0	00:07:40
Area_9	4.27	3.59	18.69	94.000	0	00:07:49

****
Node Depth Summary
****

Node ID	Average Depth Attained ft	Maximum Depth Attained ft	Maximum HGL Attained ft	Time of Max Occurrence days	Time of Max Occurrence hh:mm	Total Flooded Volume acre-in	Total Time Flooded minutes	Retention Time hh:mm:ss
Jun-53	0.02	0.25	407.25	0	11:57	0	0	0:00:00
Jun-54	0.02	0.22	407.22	0	11:57	0	0	0:00:00
Node_ISW_10	0.09	0.82	410.82	0	11:58	0	0	0:00:00
Node_ISW_11A	0.12	1.07	410.07	0	11:58	0	0	0:00:00
Node_ISW_11B	0.15	1.33	409.33	0	11:58	0	0	0:00:00
Node_ISW_12	0.05	0.54	410.54	0	11:57	0	0	0:00:00
Node_ISW_13	0.07	0.70	410.70	0	11:58	0	0	0:00:00
Node_ISW_14	0.14	1.26	410.26	0	11:58	0	0	0:00:00
Node_ISW_15	0.08	0.78	411.78	0	11:58	0	0	0:00:00

Node_ISW_16	0.04	0.44	410.44	0	11:58	0	0	0:00:00
Node_ISW_17	0.02	0.24	405.24	0	11:57	0	0	0:00:00
Node_ISW_19A	0.10	0.91	410.91	0	11:57	0	0	0:00:00
Node_ISW_19B	0.12	1.06	408.06	0	11:58	0	0	0:00:00
Node_ISW_1A	0.04	0.43	415.43	0	11:57	0	0	0:00:00
Node_ISW_1B	0.13	1.15	410.15	0	11:58	0	0	0:00:00
Node_ISW_1C	0.62	1.79	408.29	0	11:59	0	0	0:00:00
Node_ISW_2	0.12	1.04	410.04	0	11:58	0	0	0:00:00
Node_ISW_20A	0.05	0.54	410.54	0	11:57	0	0	0:00:00
Node_ISW_20B	0.10	0.95	408.95	0	11:57	0	0	0:00:00
Node_ISW_21	0.08	0.80	407.80	0	11:57	0	0	0:00:00
Node_ISW_22	0.06	0.62	407.62	0	11:57	0	0	0:00:00
Node_ISW_23A	0.05	0.52	409.52	0	11:57	0	0	0:00:00
Node_ISW_23B	0.11	1.02	408.02	0	11:57	0	0	0:00:00
Node_ISW_24	0.09	0.82	409.82	0	11:57	0	0	0:00:00
Node_ISW_25	0.16	1.36	407.36	0	11:58	0	0	0:00:00
Node_ISW_26	0.07	0.72	408.72	0	11:57	0	0	0:00:00
Node_ISW_27	0.06	0.59	408.59	0	11:57	0	0	0:00:00
Node_ISW_28	0.05	0.47	408.47	0	11:57	0	0	0:00:00
Node_ISW_29	0.06	0.64	408.64	0	11:57	0	0	0:00:00
Node_ISW_3	0.04	0.41	410.41	0	11:57	0	0	0:00:00
Node_ISW_32A	0.05	0.47	409.47	0	11:57	0	0	0:00:00
Node_ISW_32B	0.06	0.63	407.63	0	11:57	0	0	0:00:00
Node_ISW_33A	0.05	0.52	409.52	0	11:57	0	0	0:00:00
Node_ISW_33B	0.14	1.24	408.24	0	11:57	0	0	0:00:00
Node_ISW_34	0.03	0.32	406.32	0	11:57	0	0	0:00:00
Node_ISW_35	0.03	0.27	406.27	0	11:56	0	0	0:00:00
Node_ISW_36	0.06	0.56	407.56	0	11:57	0	0	0:00:00
Node_ISW_4A	0.12	1.07	410.07	0	11:58	0	0	0:00:00
Node_ISW_4B	0.17	1.42	409.42	0	11:58	0	0	0:00:00
Node_ISW_5	0.04	0.38	410.38	0	11:57	0	0	0:00:00
Node_ISW_6	0.08	0.77	410.77	0	11:57	0	0	0:00:00
Node_ISW_7	0.09	0.80	410.80	0	11:58	0	0	0:00:00
Node_ISW_8	0.10	0.92	410.92	0	11:58	0	0	0:00:00
Node_ISW_9	0.10	0.93	410.93	0	11:58	0	0	0:00:00
Node_P_10_11_12	0.20	1.58	408.58	0	11:59	0	0	0:00:00
Node_P_13_14_15	0.20	1.63	408.63	0	11:59	0	0	0:00:00
Node_P_16_17	0.11	0.87	402.87	0	11:58	0	0	0:00:00
Node_P_19A_19B_22	0.18	1.43	406.43	0	11:59	0	0	0:00:00
Node_P_1A_1B_1C_2	0.23	1.79	406.79	0	12:00	0	0	0:00:00
Node_P_20A_20B_21	0.16	1.21	406.21	0	11:59	0	0	0:00:00
Node_P_23A_23B_27	0.14	1.06	406.06	0	11:59	0	0	0:00:00
Node_P_24_25_26_28_31	0.18	1.39	406.39	0	11:59	0	0	0:00:00
Node_P_29_30	1.02	1.22	403.22	0	11:57	0	0	0:00:00
Node_P_3_4A_4B_5	1.04	1.41	408.41	0	11:59	0	0	0:00:00
Node_P_32A_32B	1.06	1.63	403.63	0	11:58	0	0	0:00:00
Node_P_33A_33B_34_18	1.03	1.32	405.32	0	11:57	0	0	0:00:00
Node_P_35_36	0.09	0.71	405.71	0	11:57	0	0	0:00:00
Node_P_6_7	0.15	1.13	408.13	0	11:58	0	0	0:00:00
Node_P_8_9	0.16	1.19	408.19	0	11:59	0	0	0:00:00
Out_18	0.00	0.00	0.00	0	00:00	0	0	0:00:00
P_10_11_12	0.20	1.58	407.58	0	11:59	0	0	0:00:00
P_13_14_15	0.20	1.63	407.63	0	11:59	0	0	0:00:00
P_16_17	0.11	0.87	401.87	0	11:58	0	0	0:00:00
P_19A_19B_22	0.18	1.43	405.43	0	11:59	0	0	0:00:00
P_1A_1B_1C_2	0.22	1.77	405.77	0	12:00	0	0	0:00:00
P_20A_20B_21	0.16	1.21	405.21	0	11:59	0	0	0:00:00
P_23A_23B_27	0.14	1.06	405.06	0	11:59	0	0	0:00:00
P_24_25_26_28_31	0.18	1.39	405.39	0	11:59	0	0	0:00:00
P_29_30	0.09	0.67	401.67	0	11:58	0	0	0:00:00
P_3_4A_4B_5	0.18	1.41	407.41	0	11:58	0	0	0:00:00
P_32A_32B	0.11	0.93	401.93	0	11:58	0	0	0:00:00
P_33A_33B_34_18	0.13	1.04	404.04	0	11:59	0	0	0:00:00
P_35_36	0.09	0.71	404.71	0	11:57	0	0	0:00:00
P_6_7	0.15	1.13	407.13	0	11:58	0	0	0:00:00
P_8-9	0.16	1.19	407.19	0	11:59	0	0	0:00:00
Swale Storage	0.00	0.00	0.00	0	00:00	0	0	0:00:00

****
Node Flow Summary
****

Node ID	Element Type	Maximum Lateral Inflow cfs	Peak Inflow cfs	Time of Peak Inflow Occurrence days	Time of Peak Inflow Occurrence hh:mm	Maximum Flooding Overflow cfs	Time of Peak Flooding Occurrence days	Time of Peak Flooding Occurrence hh:mm
Jun-53	JUNCTION	2.31	2.31	0	11:57	0.00		
Jun-54	JUNCTION	2.82	2.82	0	11:57	0.00		
Node_ISW_10	JUNCTION	15.40	15.40	0	11:58	0.00		
Node_ISW_11A	JUNCTION	24.65	24.65	0	11:58	0.00		
Node_ISW_11B	JUNCTION	8.76	33.12	0	11:58	0.00		
Node_ISW_12	JUNCTION	7.76	7.76	0	11:57	0.00		
Node_ISW_13	JUNCTION	12.46	12.46	0	11:58	0.00		
Node_ISW_14	JUNCTION	32.14	32.14	0	11:58	0.00		
Node_ISW_15	JUNCTION	15.68	15.68	0	11:58	0.00		
Node_ISW_16	JUNCTION	10.66	10.66	0	11:58	0.00		
Node_ISW_17	JUNCTION	3.81	3.81	0	11:57	0.00		
Node_ISW_19A	JUNCTION	17.56	17.56	0	11:57	0.00		
Node_ISW_19B	JUNCTION	7.82	24.61	0	11:58	0.00		
Node_ISW_1A	JUNCTION	7.27	7.27	0	11:57	0.00		
Node_ISW_1B	JUNCTION	18.40	25.60	0	11:58	0.00		
Node_ISW_1C	JUNCTION	14.25	62.69	0	11:59	0.00		
Node_ISW_2	JUNCTION	24.19	24.19	0	11:58	0.00		
Node_ISW_20A	JUNCTION	6.31	6.31	0	11:57	0.00		
Node_ISW_20B	JUNCTION	13.53	19.52	0	11:57	0.00		
Node_ISW_21	JUNCTION	13.49	13.49	0	11:57	0.00		
Node_ISW_22	JUNCTION	8.66	8.66	0	11:57	0.00		
Node_ISW_23A	JUNCTION	5.93	5.93	0	11:57	0.00		
Node_ISW_23B	JUNCTION	12.51	18.08	0	11:57	0.00		
Node_ISW_24	JUNCTION	14.28	14.28	0	11:57	0.00		
Node_ISW_25	JUNCTION	10.07	28.80	0	11:58	0.00		
Node_ISW_26	JUNCTION	12.43	12.43	0	11:57	0.00		
Node_ISW_27	JUNCTION	8.80	8.80	0	11:57	0.00		
Node_ISW_28	JUNCTION	5.35	5.35	0	11:57	0.00		
Node_ISW_29	JUNCTION	12.75	12.75	0	11:57	0.00		
Node_ISW_3	JUNCTION	5.77	5.77	0	11:57	0.00		
Node_ISW_32A	JUNCTION	5.36	5.36	0	11:57	0.00		
Node_ISW_32B	JUNCTION	8.19	13.39	0	11:57	0.00		
Node_ISW_33A	JUNCTION	6.08	6.08	0	11:57	0.00		
Node_ISW_33B	JUNCTION	25.53	31.33	0	11:57	0.00		
Node_ISW_34	JUNCTION	2.60	2.60	0	11:57	0.00		
Node_ISW_35	JUNCTION	2.00	2.00	0	11:56	0.00		
Node_ISW_36	JUNCTION	7.02	7.02	0	11:57	0.00		
Node_ISW_4A	JUNCTION	24.37	24.37	0	11:58	0.00		
Node_ISW_4B	JUNCTION	11.86	36.16	0	11:58	0.00		
Node_ISW_5	JUNCTION	4.08	4.08	0	11:57	0.00		
Node_ISW_6	JUNCTION	14.05	14.05	0	11:57	0.00		
Node_ISW_7	JUNCTION	17.49	17.49	0	11:58	0.00		
Node_ISW_8	JUNCTION	16.92	16.92	0	11:58	0.00		
Node_ISW_9	JUNCTION	18.65	18.65	0	11:58	0.00		
Node_P_10_11_12	JUNCTION	0.00	55.80	0	11:59	0.00		
Node_P_13_14_15	JUNCTION	0.00	59.72	0	11:59	0.00		
Node_P_16_17	JUNCTION	0.00	14.44	0	11:58	0.00		
Node_P_19A_19B_22	JUNCTION	0.00	32.87	0	11:59	0.00		
Node_P_1A_1B_1C_2	JUNCTION	0.00	62.40	0	12:00	0.00		
Node_P_20A_20B_21	JUNCTION	0.00	32.46	0	11:59	0.00		
Node_P_23A_23B_27	JUNCTION	0.00	26.15	0	11:59	0.00		
Node_P_24_25_26_28_31	JUNCTION	0.00	42.72	0	11:59	0.00		
Node_P_29_30	JUNCTION	0.00	15.33	0	11:58	0.00		
Node_P_3_4A_4B_5	JUNCTION	0.00	45.66	0	11:58	0.00		
Node_P_32A_32B	JUNCTION	0.00	13.34	0	11:58	0.00		

Node_P_33A_33B_34_18	JUNCTION	0.00	33.12	0	11:59	0.00
Node_P_35_36	JUNCTION	0.00	8.92	0	11:57	0.00
Node_P_6_7	JUNCTION	0.00	31.29	0	11:58	0.00
Node_P_8_9	JUNCTION	0.00	34.85	0	11:59	0.00
Out_18	OUTFALL	0.00	0.00	0	00:00	0.00
P_10_11_12	OUTFALL	0.00	55.79	0	11:59	0.00
P_13_14_15	OUTFALL	0.00	59.72	0	11:59	0.00
P_16_17	OUTFALL	0.00	14.44	0	11:58	0.00
P_19A_19B_22	OUTFALL	0.00	32.87	0	11:59	0.00
P_1A_1B_1C_2	OUTFALL	0.00	62.38	0	12:00	0.00
P_20A_20B_21	OUTFALL	0.00	32.46	0	11:59	0.00
P_23A_23B_27	OUTFALL	0.00	26.15	0	11:59	0.00
P_24_25_26_28_31	OUTFALL	0.00	42.72	0	11:59	0.00
P_29_30	OUTFALL	0.00	15.33	0	11:58	0.00
P_3_4A_4B_5	OUTFALL	0.00	45.66	0	11:58	0.00
P_32A_32B	OUTFALL	0.00	13.34	0	11:58	0.00
P_33A_33B_34_18	OUTFALL	0.00	33.12	0	11:59	0.00
P_35_36	OUTFALL	0.00	8.92	0	11:57	0.00
P_6_7	OUTFALL	0.00	31.29	0	11:58	0.00
P_8-9	OUTFALL	0.00	34.85	0	11:59	0.00
Swale Storage	STORAGE	0.00	0.00	0	00:00	0.00

Storage Node Summary

Storage Node ID	Maximum Ponded Volume 1000 ft³	Maximum Ponded (%)	Time of Max Ponded days hh:mm	Average Ponded Volume 1000 ft³	Average Ponded (%)	Maximum Storage Node Outflow cfs	Maximum Exfiltration Rate cfm	Time of Max. Exfiltration Rate hh:mm:ss	Total Exfiltrated Volume 1000 ft³
Swale Storage	0.000	0	0 00:00	0.000	0	0.00	0.00	0:00:00	0.000

Outfall Loading Summary

Outfall Node ID	Flow Frequency (%)	Average Flow cfs	Peak Inflow cfs
Out_18	0.00	0.00	0.00
P_10_11_12	87.16	1.98	55.79
P_13_14_15	87.37	2.11	59.72
P_16_17	87.60	0.50	14.44
P_19A_19B_22	86.83	1.17	32.87
P_1A_1B_1C_2	86.29	2.27	62.38
P_20A_20B_21	87.02	1.14	32.46
P_23A_23B_27	86.75	0.93	26.15
P_24_25_26_28_31	86.98	1.51	42.72
P_29_30	87.08	0.52	15.33
P_3_4A_4B_5	87.24	1.61	45.66
P_32A_32B	87.12	0.45	13.34
P_33A_33B_34_18	86.91	1.16	33.12

P_35_36	86.64	0.30	8.92
P_6_7	87.36	1.10	31.29
P_8-9	86.92	1.25	34.85
System	81.58	18.02	505.62

****
Link Flow Summary
****

Link ID	Element Type	Time of Peak Flow Occurrence	Maximum Velocity Attained	Length Factor	Peak Flow during Analysis	Design Flow Capacity	Ratio of Maximum /Design Flow	Ratio of Maximum Flow	Total Time	Reported Condition	Surcharged Depth	minutes
		days hh:mm	ft/sec		cfs	cfs						
ISW_10	CHANNEL	0 11:59	3.51	1.00	15.21	101.87	0.15	0.41	0	Calculated		
ISW_11A	CHANNEL	0 11:58	3.71	1.00	24.59	50.12	0.49	0.71	0	Calculated		
ISW_11B	CHANNEL	0 11:59	3.57	1.00	33.01	80.49	0.41	0.66	0	Calculated		
ISW_12	CHANNEL	0 11:58	3.14	1.00	7.66	26.00	0.29	0.54	0	Calculated		
ISW_13	CHANNEL	0 11:59	3.53	1.00	12.37	25.53	0.48	0.70	0	Calculated		
ISW_14	CHANNEL	0 11:59	3.81	1.00	31.88	88.01	0.36	0.63	0	Calculated		
ISW_15	CHANNEL	0 11:59	3.81	1.00	15.49	60.18	0.26	0.52	0	Calculated		
ISW_16	CHANNEL	0 11:58	5.61	1.00	10.66	52.48	0.20	0.44	0	Calculated		
ISW_17	CHANNEL	0 11:57	4.21	1.00	3.81	55.15	0.07	0.24	0	Calculated		
ISW_19A	CHANNEL	0 11:59	3.56	1.00	17.23	50.12	0.34	0.60	0	Calculated		
ISW_19B	CHANNEL	0 12:00	3.76	1.00	24.48	242.00	0.10	0.35	0	Calculated		
ISW_1A	CHANNEL	0 11:58	3.97	1.00	7.23	37.47	0.19	0.43	0	Calculated		
ISW_1B	CHANNEL	0 12:00	3.60	1.00	25.13	84.08	0.30	0.57	0	Calculated		
ISW_1C	CHANNEL	0 12:00	4.21	1.00	62.40	292.25	0.21	0.51	0	Calculated		
ISW_2	CHANNEL	0 11:58	3.81	1.00	24.04	98.13	0.24	0.52	0	Calculated		
ISW_20A	CHANNEL	0 11:58	2.59	1.00	6.20	21.23	0.29	0.53	0	Calculated		
ISW_20B	CHANNEL	0 11:59	3.64	1.00	19.27	95.99	0.20	0.47	0	Calculated		
ISW_21	CHANNEL	0 11:58	3.17	1.00	13.32	238.96	0.06	0.26	0	Calculated		
ISW_22	CHANNEL	0 11:58	2.88	1.00	8.55	246.79	0.03	0.21	0	Calculated		
ISW_23A	CHANNEL	0 11:58	2.55	1.00	5.83	21.10	0.28	0.52	0	Calculated		
ISW_23B	CHANNEL	0 12:00	3.12	1.00	17.65	192.71	0.09	0.34	0	Calculated		

ISW_24	CHANNEL	0	11:59	3.38	1.00	13.95	50.33	0.28	0.54	0	Calculated
ISW_25	CHANNEL	0	11:59	3.03	1.00	28.52	168.97	0.17	0.45	0	Calculated
ISW_26	CHANNEL	0	11:58	3.39	1.00	12.25	106.07	0.12	0.36	0	Calculated
ISW_27	CHANNEL	0	11:58	3.15	1.00	8.67	109.59	0.08	0.29	0	Calculated
ISW_28	CHANNEL	0	11:58	2.60	1.00	5.30	23.17	0.23	0.47	0	Calculated
ISW_29	CHANNEL	0	11:58	4.12	1.00	12.55	30.86	0.41	0.63	0	Calculated
ISW_3	CHANNEL	0	11:58	3.30	1.00	5.73	31.84	0.18	0.41	0	Calculated
ISW_30	CHANNEL	0	11:57	3.47	1.00	2.82	211.04	0.01	0.11	0	Calculated
ISW_31	CHANNEL	0	11:57	2.48	1.00	2.31	140.69	0.02	0.12	0	Calculated
ISW_32A	CHANNEL	0	11:57	2.64	1.00	5.31	23.70	0.22	0.46	0	Calculated
ISW_32B	CHANNEL	0	11:58	4.35	1.00	13.34	146.95	0.09	0.32	0	Calculated
ISW_33A	CHANNEL	0	11:58	2.61	1.00	6.01	21.63	0.28	0.52	0	Calculated
ISW_33B	CHANNEL	0	11:59	4.00	1.00	30.66	88.33	0.35	0.61	0	Calculated
ISW_34	CHANNEL	0	11:57	2.06	1.00	2.60	255.45	0.01	0.11	0	Calculated
ISW_35	CHANNEL	0	11:57	1.92	1.00	1.99	259.18	0.01	0.09	0	Calculated
ISW_36	CHANNEL	0	11:58	2.70	1.00	6.94	96.20	0.07	0.28	0	Calculated
ISW_4A	CHANNEL	0	11:58	3.70	1.00	24.35	50.12	0.49	0.71	0	Calculated
ISW_4B	CHANNEL	0	11:59	3.55	1.00	36.00	77.06	0.47	0.71	0	Calculated
ISW_5	CHANNEL	0	11:58	2.59	1.00	4.05	26.00	0.16	0.38	0	Calculated
ISW_6	CHANNEL	0	11:59	3.52	1.00	13.91	105.52	0.13	0.38	0	Calculated
ISW_7	CHANNEL	0	11:58	4.09	1.00	17.40	121.84	0.14	0.40	0	Calculated
ISW_8	CHANNEL	0	12:00	3.42	1.00	16.52	88.98	0.19	0.45	0	Calculated
ISW_9	CHANNEL	0	11:59	3.59	1.00	18.35	95.18	0.19	0.46	0	Calculated
P_10_11_12	CONDUIT	0	11:59	14.77	1.00	55.79	102.19	0.55	0.53	0	Calculated
P_13_14_15	CONDUIT	0	11:59	15.24	1.00	59.72	104.29	0.57	0.54	0	Calculated
P_16_17	CONDUIT	0	11:58	11.03	1.00	14.44	37.36	0.39	0.43	0	Calculated
P_19A_19B_22	CONDUIT	0	11:59	9.91	1.00	32.87	71.54	0.46	0.48	0	Calculated
P_1A_1B_1C_2	CONDUIT	0	12:00	7.19	1.00	62.38	95.29	0.65	0.59	0	Calculated
P_20A_20B_21	CONDUIT	0	11:59	12.15	1.00	32.46	94.88	0.34	0.40	0	Calculated
P_23A_23B_27	CONDUIT	0	11:59	11.68	1.00	26.15	97.43	0.27	0.35	0	Calculated
P_24_25_26_28_31	CONDUIT	0	11:59	13.33	1.00	42.72	97.43	0.44	0.46	0	Calculated
P_29_30	CONDUIT	0	11:58	9.96	1.00	15.33	38.02	0.40	0.44	0	Calculated
P_3_4A_4B_5	CONDUIT	0	11:58	14.05	1.00	45.66	102.19	0.45	0.47	0	Calculated
P_32A_32B	CONDUIT	0	11:58	11.51	1.00	13.34	19.27	0.69			

```
0.61           0  Calculated
  P_33A_33B_34_18      CONDUIT      0  11:59     10.06    1.00       33.12       62.94      0.53
0.52           0  Calculated
  P_35_36              CONDUIT      0  11:57      8.93    1.00        8.92       33.41      0.27
0.35           0  Calculated
  P_6_7                CONDUIT      0  11:58     12.89    1.00       31.29      104.29      0.30
0.38           0  Calculated
  P_8-9                CONDUIT      0  11:59     13.28    1.00       34.85      104.29      0.33
0.40           0  Calculated


  ******************************
  Highest Flow Instability Indexes
  ******************************
  All links are stable.


  Analysis began on:  Thu Apr  4 13:19:51 2024
  Analysis ended on:  Thu Apr  4 13:20:04 2024
  Total elapsed time: 00:00:13
```

Appendix 11
Climate Resiliency Assessment

Intended for

New York State Department of Environmental Protection

Document type

Report

Date

June, 2025

FORMER UTICA CITY DUMP

CLIMATE RESILIENCY ASSESSMENT REPORT

FORMER UTICA CITY DUMP
CLIMATE RESILIENCY ASSESSMENT REPORT

Project name	**Utica City Dump Remedial Design**
Project no.	**194010207**
Recipient	**NYS DEC**
Document type	**Report**
Version	**02**
Date	**June 18, 2025**
Prepared by	**Shelby Smith, Simon Kates**
Checked by	**Victor Warner**
Approved by	**Dave Farber**
Description	**Climate Resiliency Assessment report**

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EXECUTIVE SUMMARY

The following Climate Resiliency Assessment was completed by Ramboll under contract to the New York State Department of Environmental Conservation. This assessment was completed the Former Utica City Dump site (NYCDEC Site Number: 6-33-015). The Climate Resiliency Assessment provides an overview of site conditions and contaminants of concern, a description of the post remedial action conceptual site plan, projected impacts of climate change, possible climate-associated sensitivities and vulnerabilities on the site, and possible adaptation measures that could be undertaken to address these vulnerabilities. Due to the evolving understanding about climate hazards and projected changes over time, the information in this report should be revisited in the future, as projected changes in climate hazards are updated.

The Former Utica Dump site is located in the City of Utica, in Oneida County, NY. The total site area is approximately 200 acres. The portion of the site that reportedly has received waste is approximately 126 acres. The site is located along Incinerator Road, east of Leland Avenue, and is bordered by the Erie Canal and the Mohawk River. NYSDEC issued an Explanation of Significant Differences (ESD) in 2025 which included the following remedial actions for the site:

- Dump closure (103 acres east of Leland Ave) implementing an evapotranspiration (ET) cover system to prevent exposure to surface soils and to reduce the generation of dump leachate.
- Selected waste consolidation with placement under the cover, to limit potential exposure to waste.
- Demolition and disposal of the onsite incinerator and surrounding structure(s) in order to construct the cover.
- Fencing to prevent trespassing.
- Monitoring to confirm the effectiveness of the remedial actions.

Impacts of climate hazards are projected to increase in the future due to climate change. The climate hazards evaluated in this report include precipitation, riverine flooding, temperature, and wind. As the impacts of climate change led to more extreme weather in the future, increased monitoring of the remedial actions of this site may be needed.

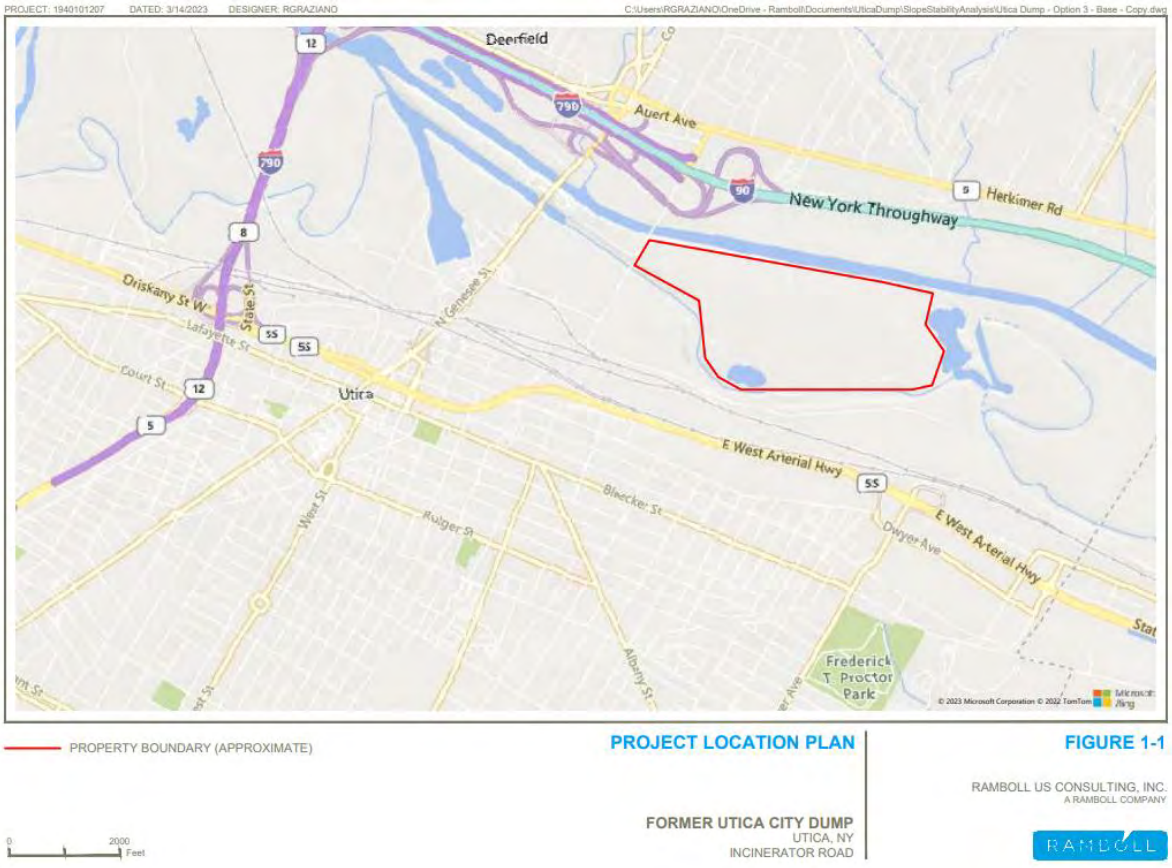
Several components of the site design will help to prevent extreme weather events from causing contaminants on site to impact the surroundings. These include consolidating and capping the dump, expanding wetlands along the shoreline, installing vegetated swales and buffers, and planting resilient native species.

Further adaptation strategies will be considered as applicable or warranted to address the projected impacts of climate hazards. This Climate Resiliency Assessment identifies vulnerable components of the remedial action, the climate change hazards that are projected to impact these components, and recommended adaptation measures to mitigate against climate impacts and ensure that the actions are resilient to extreme weather events.

1. INTRODUCTION AND PROJECT OVERVIEW

Ramboll Americas Engineering Solutions, Inc. (Ramboll) under Contract to the New York State Department of Environmental Conservation (NYSDEC) (Work Assignment Number [No.] D007624-26) was tasked to complete a Climate Resiliency Assessment for the Utica City Dump site (NYSDEC Site No. 6-33-015) located in Utica, Oneida County, New York (Figure 1-1). The site is listed as Class 2 in the State Registry of Inactive Hazardous Waste Sites (list of State Superfund sites).

Figure 1-1. Former Utica City Dump Location Map



The Site is defined in New York State Department of Environmental Conservation's ESD as the portion of the dump that reportedly received waste and is approximately 126 acres in size. A 113.4 acre portion of the dump is entirely owned by the City of Utica (City) and a 12.6 acre portion is owned by the City of Utica (City). The Site is located east of Leland Ave. along Incinerator Road, between the Erie Canal to the north and the Mohawk River to the east and south. The total amount of land bordered by the road and the two water bodies is about 200 acres.

The intent of this report is to provide an assessment of the projected impacts of climate change to the subject site including the ongoing remedial action as well as remaining contaminants of

concern (COC). These projected impacts are then reviewed to assess possible climate-associated sensitivities and vulnerabilities. The report provides a list of possible adaptation measures that could be undertaken now or in the future to address identified vulnerabilities. This resiliency plan along with the site management program will employ a strategic monitoring approach to stay coordinated and maintain schedule.

It is important to note that this report is reflective of the current climate impact projections. Due to the evolving understanding of projected climate-associated impacts and of climate change, the information provided within the report will need to be revisited as projections are updated. In that regard, the document can be viewed as a living document in which different portions may be updated to reflect future projections. The timeframe for performing updates to the report, if desired, should be based upon updates to climate change projections. It is suggested that a 5-year time frame be considered for such a revision as part of periodic review process during site management.

2. PROJECT SITE CHARACTERIZATION

2.1 Existing Conditions

The Utica City Dump is located within the city limits of Utica, Oneida County, New York. The portion of the site that reportedly received s waste is approximately 126 acres. It is located east of Leland Ave. along Incinerator Road, between the Erie Canal (to the north) and the Mohawk River (to the east and south). This total amount of land bordered by the road and the two water bodies is about 200 acres. The surrounding setting is urban (Figure 2-1).

Figure 2-1. Former Utica City Dump Location Map



The waste at the Site is 10 to 15 feet deep in most areas. Two sewer lines traverse the Site through the fill area in a north south direction and cross under the Mohawk River and the Barge Canal. One of the lines has been abandoned and the other is still active. Information obtained pertaining to construction of the sewer lines suggests that they are at an approximate elevation of 386 ft above mean sea level and around 12 to 20 ft below grade depending on location.

2.1.1 Site Geology and Hydrology

The site is located within the Mohawk River Valley and is underlain by Utica Shale Formation in excess of 100 feet below ground surface (bgs). The site geology consists of glacial till, outwash and lake sediments. The glacial outwash deposits consist of interbedded sand and gravel deposits. The glacial lacustrine sediments consist of silt and clay deposits. Recent floodplain sediments of the Mohawk River cap the glacial deposits and represent the current undisturbed surface. There is a thin soil cover over most of the site but is absent in many locations.

The waste layer is about 10 to 15 feet thick and stored below grade. Below the waste is a 100-foot layer of fluvial deposits consisting of the low permeability silts and clays described above. The Utica Shale underlies this deposit.

The local groundwater is located from 1 to 15 feet below the ground surface at the site. Some waste in the dump exists below the water table and is saturated. The groundwater flow at the site is influenced by the seasonal water level changes in the Erie Canal and the Mohawk River.

2.2 HISTORY OF OPERATIONS

The area was operated as an open dump from 1930 through the 1970s. The City operated a trash incinerator at the dump between 1930 and 1960. Municipal waste continued to be dumped at the site by the City through 1997. A list summarizing the operational and disposal history of the site presented within the shod is presented below.

- C. 1930 - Incinerator begins operation; ash disposed on nearby farms.
- 1930-1960 - Gradual expansion of ash disposal area; use of land as an open dump.
- 1960 - Incinerator shut down.
- 1960s-1972 - Waste is placed on eastern end of site using the trench method.
- 1972 - Old dump closes (55 acres).
- 1972-1997 - Hardfill Area ("Leland Ave. Dump") - 7 acres is used for disposal of construction and demolition debris, brush and leaves.
- 1977 - NYSDEC grants permit for disposal in the Hardfill Area.
- 1983 - NYSDEC cites City of Utica for presence of drums of unknown liquids, crankcase oil, and refuse in Hardfill Area, plus a lack of security.
- 1985 - NYSDEC denies City of Utica's request for a new permit for the Hardfill Area, citing violations of State dump regulations.
- 1986-1996 - NYSDEC negotiates with the City of Utica for closure of the Hardfill Area.

2.3 CONTAMINANTS OF CONCERN

Contaminants of concern found at the Site that exceed their environmental SCGs included inorganics (metals), pesticides, polychlorinated biphenyls (PCBs), volatile organic compounds (VOCs), and semivolitale organic compounds (SVOCs).

The inorganic contaminants of concern are arsenic, aluminum, barium, cadmium, copper, lead, iron, manganese, mercury, and nickel. The volatile organic contaminants of concern are benzene, chlorobenzene, 1,2- dichloroethene, and vinyl chloride. The semi-volatile organic contaminants of

concern are benzo (a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, dibenzofuran, fluoranthene, indenol(1,2,3-cd)pyrene, dibenzo (a,h) anthracene, and bis(2-ethylhexyl)phthalate. Other contaminants of concern are pesticides (4,4'-DDD and 4,4'-DDT) and PCBs (Aroclor 1242, 1248 and 1254).

The contaminants of concern were found in several of the media sampled. The concentrations of PCBs and metals exceeded criteria values per the NYSDEC guidance values in the sediment of the Mohawk River along the southeast side of the dump. Metals were also found in the surface soils, groundwater, and leachate. SVOCs are above the cleanup criteria in the surface water, surface soils, and sediment at the dump.

2.4 REMEDIAL ACTION

A Remedial investigation/ Feasibility Study was performed by NYS DEC from 1997-2000. The NYS DEC issued the ESD. In this document, the NYS DEC selected the following remedy for the Site:

- Dump closure (104 acres East from Leland Ave) implementing a ET cover system to prevent exposure to surface soils and to reduce the generation of dump leachate.
- Selected waste consolidation with placement under the cover, to limit potential exposure to waste.
- Demolition and disposal of the onsite incinerator and surrounding structure(s) in order to construct the cover.
- Fencing to prevent trespassing.
- Monitoring to confirm the effectiveness of the remedial actions.

The remedial design for the Former Utica Dump site includes consolidation of waste and the installation of a ET cover system. The dump will be graded to have slopes that range from 5% to transition to slopes as steep as 33%. A passive gas ventilation system comprising of passive vents will be installed on a grid having a density of approximately 1 vent per acre.

Remediation of the Former Utica City Dump includes expansion and restoration of wetlands and aquatic habitats. Seed and plant mixtures shall be applied to areas of the site based on a planting plan developed in coordination with NYSDEC.

Vegetated buffers will be strategically planted around the capped system to provide shading, erosion control, and wind breaks. Vegetated bioswales will provide bioretention to increase stormwater retention capability. Additionally, the land will be graded to allow for future photovoltaic panel installations

3. POST REMEDIAL ACTION CONCEPTUAL SITE

3.1 RESIDUAL CONTAMINATION

Residual contaminants at the Utica City Dump site will remain onsite covered with the ET cover system to prevent human contact and erosion of the capped material. Long-term monitoring of the site will be conducted to evaluate potential for contamination migration.

Contaminants that will be capped by ET cover system will include inorganics (metals), pesticides, polychlorinated biphenyls (PCBs), volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs).

The inorganic contaminants of concern are arsenic, aluminum, barium, cadmium, copper, lead, iron, manganese, mercury, and nickel. The volatile organic contaminants of concern are benzene, chlorobenzene, 1,2- dichloroethene, and vinyl chloride. The semi-volatile organic contaminants of concern arebenzo (a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, dibenzofuran, fluoranthene, indenol(1,2,3-cd)pyrene, dibenzo (a,h) anthracene, and bis(2-ethylhexyl)phthalate. Other contaminants of concern are pesticides (4,4'-DDD and 4,4'-DDT) and PCBs (Aroclor 1242, 1248 and 1254).

3.2 POSSIBLE EXPOSURE PATHWAYS

3.2.1 Human Health Risk Assessment

Post remedial action, risks to human health are low. Human exposure to COCs through inhalation, touch, or ingestion is limited as the majority of impacted material will be stabilized in place under the ET cover system. These documents will require maintenance of the ET cover, and NYSDEC notification and approval for soil disturbance. Additionally, contaminated groundwater will be under a long-term monitoring program to ensure that it does not impact public health or environment. An Operation and Maintenance Plan will be developed in accordance with the ESD and NYSDEC Part 363-9 to maintain the integrity of the remedial design elements.

3.2.2 Ecological Risk Assessment

Post remedial action risks to fish and wildlife are low. Animal and plant exposure to residual contaminants is limited as the impacted material will be capped beneath the ET cover system. The Utica Marsh and Mohawk River are considered Environmentally Sensitive Areas and Significant Fish and Wildlife Habitats. The Mohawk River is directly adjacent to the project site, while the Utica Marsh is just west of the site.

The Utica Marsh is an urban wetland encompassing approximately 213 acres within the floodplain of the Mohawk River. Habitat in the marsh includes cattails wetlands, wet meadows, open water pools, and flooded willows. The Utica Marsh is managed by NYSDEC as the Utica March Wildlife Management Area. According to the NYSDEC Environmental Resource Mapper, the Sedge Wren (a threatened bird species) and the Marsh Valerian (an endangered rare plant) have been documented in the area.

4. CLIMATE CHANGE PROJECTIONS

A desktop review of projected future climate impacts was conducted to assess the potential vulnerabilities of the remediation system over the coming decades, and to inform the recommended adaptation measures. The climate hazards investigated as part of this assessment include precipitation, riverine flooding, temperature, drought, and wind. These hazards were selected as they are considered the most relevant for the study area based on existing regional climate assessments and geographic context (i.e., sea level rise was excluded due to the sites distance from the coast).

The climate change projections used in this analysis for precipitation, temperature, and drought are primarily derived from the U.S. Environmental Protection Agency's (EPA) Climate Change Indicators in the United States Fifth Edition report from 2024, a New York State (NYS) climate change report prepared by the NYS Department of Environmental Conservation (DEC) in 2021 and a report from the Northeast Regional Climate Center in 2015. Riverine flooding information is provided by FEMA and wind projections were derived from a 2013 report from Knuston et. al. based on the Coupled Model Intercomparison Project Phase 5 (CMIP5) downscaled model. These reports include historical baselines, as well as current and future projected time horizons extending into the 2080s.

These modeling efforts are provided based on a range of projections (low/middle/high) that refer to different representative concentration pathways (PCRs), which correspond to greenhouse gas emission (GHG) trajectories as per the Intergovernmental Panel on Climate Change (IPCC) approach. RCP2.6, which would likely limit global temperature rise to 3.6°F by 2100, is considered a "very stringent" pathway and represents the low-emissions or low-range scenario. RCP8.5 is considered the "worst-case" emissions scenario, as it assumes emissions will continue to rise throughout the 21st century, corresponding to a likely 4.7 to 8.6°F global temperature increases by 2100. The remaining RCPs, which include RCP4.5 and RCP6, are included in the middle-range projections in this report. At this point, the low-emissions estimate has a 10 percent probability to be met, the middle-range scenarios have a 25 to 75 percent probability that actual future condition will be met or exceeded, and the high-emissions estimate has a 10 percent probability that actual future conditions will be met or exceeded.

For the most part, these climate projections are provided at a regional (state) or semi-regional (district) level. The riverine flooding evaluation was conducted at the site-level to account for site-specific conditions, such as the Mohawk River and Erie Canal, to assess flooding impacts more accurately.

4.1 PRECIPITATION

Due to the natural variability in precipitation, future rainfall projections tend to be less certain than those for temperature (NYSDEC 2021). Statewide, however, an increase in average annual precipitation over the last century has been observed in most regions of New York. Based on the middle range estimate, average annual precipitation is expected to increase to between 50.1 to 53.6 inches by the end of the 2020s, between 51.6 to 55.1 inches by the 2050s, and 52.1 to 56.1 inches by the 2080s, as compared to the 1971 – 2000 baseline of 49.7 inches per year (Table 4-1).

Table 4-1. Projected Changes in Average Annual Precipitation Based on ClimAID for Region 4 Compared to 1971 – 2000 Baseline (49.7")

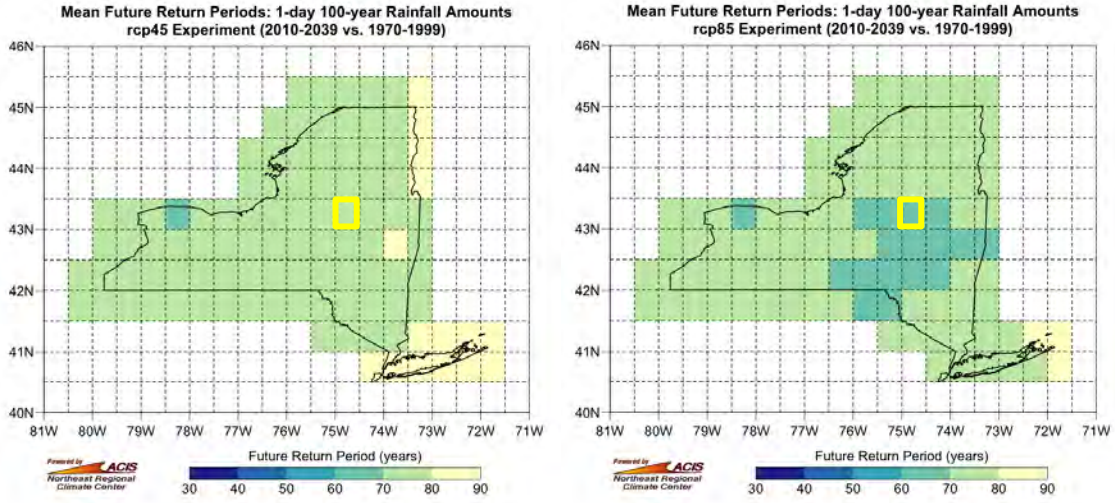
Time Horizons	Low Estimate (10th percentile)	Middle Range (25th to 75th percentile)	High Estimate (90th percentile)
2020s	-1%	+1 to +8%	+10%
2050s	+1%	+4% to +11%	+13%
2080s	+2%	+5% to +13%	+19%

Source: NYS DEC 2021

In addition to changes in the average annual precipitation levels, a nationwide trend of increasingly frequent extreme precipitation events is projected (EPA 2024). This trend is particularly pronounced in the Northeast, which experienced a 55 percent increase in the proportion of total annual precipitation falling in the heaviest 1 percent of rainfall events (over 1 inch of rainfall in a 24-hour period) between 1958 – 2016 (NCA4 Ch. 2), which indicates longer periods of drought with short, intense periods of precipitation.

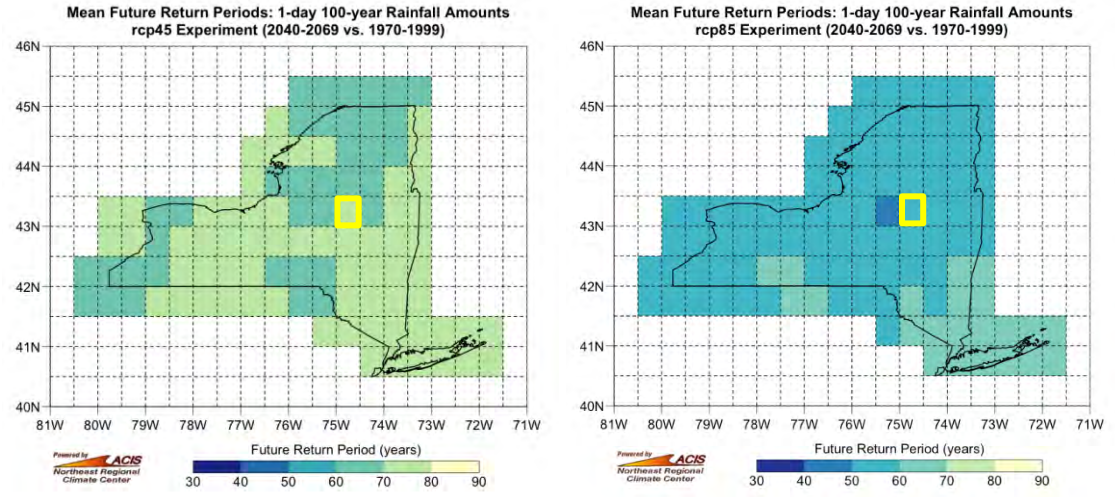
To assess extreme precipitation, this report references the increase in 100-year rainfall events. A 100-year rainfall event equates to a 1-percent annual chance storm. Based on future climate projections for the Utica region (highlighted in yellow in Figure 4-1), the current 100-year rainfall event is projected to equal between a 60- to 80-year rainfall event by 2039. Similarly, by 2069, the 100-year rainfall event could equate to a 50- to 80-year rainfall event, depending on a range of emissions scenarios (Figure 4-2). This indicates that the frequency of extreme rainfall events will become between 20- and 50- percent more frequent in this region over the coming decade.

Figure 4-1. Mean future return period: 1-day 100-year rainfall amounts, low and high emissions scenarios, 1970 – 1999 versus 2010 – 2039



Source: Northeast Regional Climate Center 2015

Figure 4-2. Mean future return period: 1-day 100-year rainfall amounts, low and high emissions scenarios, 1970 – 1999 versus 2040 - 2069



Source: Northeast Regional Climate Center 2015

RIVERINE FLOODING

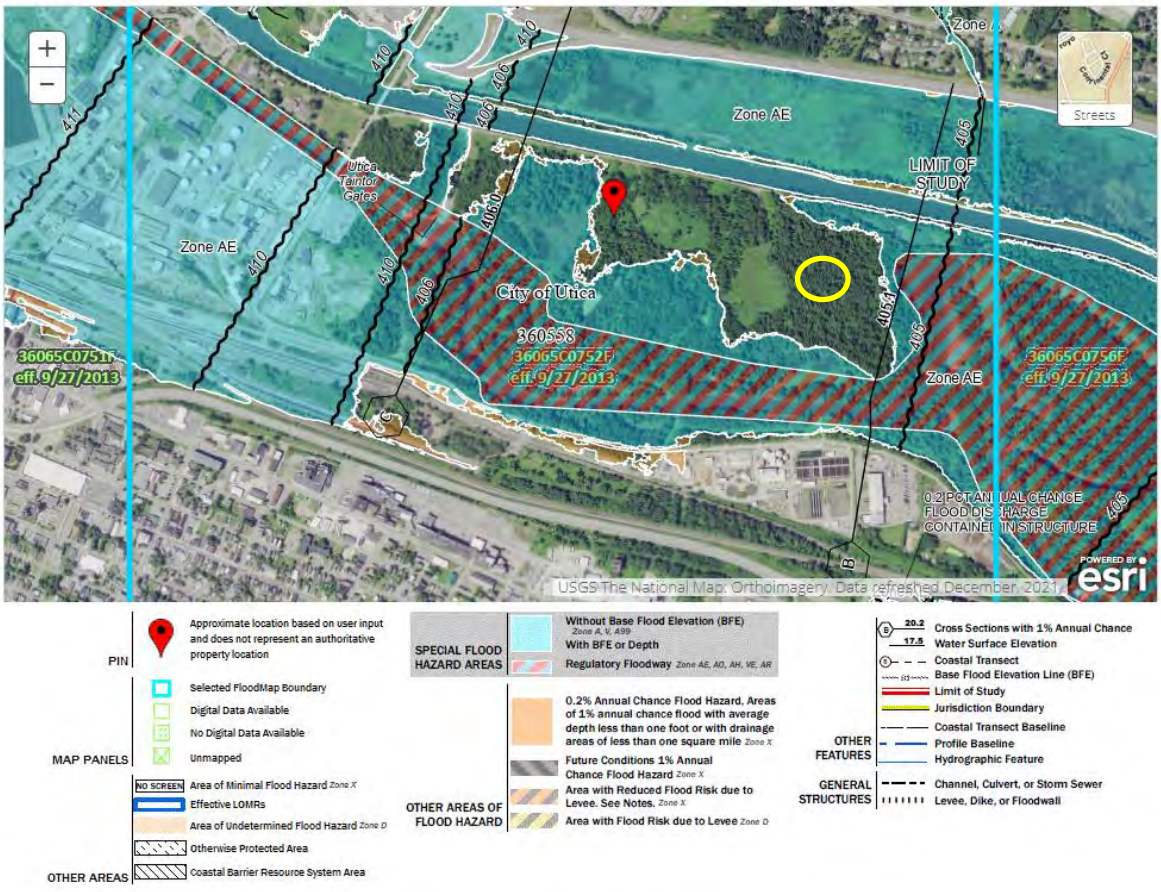
As the remediation site is near waterways, with the Erie Canal to the north and the Mohawk River running directly through the project site, riverine flooding must be assessed. Historically, the Mohawk River experienced the worst flooding in the late 1800s and early 1900s, where flooding events up to 15 feet occurred eight times in the span of 45 years (Scheller et. al, 2008). The greatest flood on record in this area occurred in 1907, during which the closest flood gauge, located near North Genesee Street, recorded flood extents up to an elevation of 411 feet (NOAA, n.d.). Since the mid-20th century, there has been a decline in the frequency and magnitude of flooding in this area, with recent flooding reaching between 403 and 405 feet of elevation between 2014 and 2016 (Scheller et. al, 2008 and NOAA, n.d.).

In general, flooding in the Mohawk River is associated with two main types of flooding, "free water" events and "break-up" events. Free-water flooding typically occurs in late summer and early fall and is associated with large amounts of precipitation resulting from hurricanes. Break-up events result from ice and snow melt, due to rising temperatures, and are more common in late winter and early spring (Scheller et. al, 2008). Given that hurricanes and extreme storms are expected to become more frequent, and temperatures are projected to continue rising over the coming century, these types of flooding events could become more common.

The below map (Figure 4-3) was obtained from FEMA's Flood Map Service Center (MSC). FEMA has identified various flood zones nationwide to inform the Flood Insurance Rate Map (FIRMs). This map demonstrates that a large portion of the project site is within the Mohawk River base flood or 100-year flood zone (equating to a 1-percent annual chance flood). Furthermore, a small portion of the site is within the 500-year flood zone (equating to a 0.2 percent annual chance flood). However, the location of the actual dump (approximately delineated in yellow in Figure 4-

3) is at a higher elevation, between 410 and 420 feet above elevation, which is outside of the 100-year and 500-year flood plain.

Figure 4-3. FEMA Flood Map Depicting the 100- and 500-Year Storm Extents



Source: FEMA 2021

4.2 INCREASING TEMPERATURE

Over the past century, average temperatures in New York State have risen at a rate of 0.25°F per decade since 1900 (Horton et al. 2014). However, this trend has accelerated in recent decades, increasing to a rate of 0.6°F per decade, with winter warming exceeding 1.1°F per decade (Rosenzweig et al. 2011). Statewide, climate change models predict an annual average temperature increase of between 4.1°F and 6.1°F by the 2080s (NYS DEC 2021).

On a more regional basis, ClimAID modeling shows that NYS Region 4, which includes Oneida County, will likely experience between a 2.0°F to 2.9°F increase in average annual temperature from the 1971 – 2000 baseline of 47.7°F, as per the middle range projections. By the 2050s, this region could experience between a 4.1°F to 5.7°F increase in average annual temperatures from the same baseline, based on the middle projection range. By the 2080s, this modeling suggests that an increase of 5.3°F to 8.8°F is likely to occur (Table 4-2).

Table 4-2. Projected changes in average annual temperatures based on ClimAID for Region 4

Time Horizons	Low Estimate (10th percentile)	Middle Range (25th to 75th percentile)	High Estimate (90th percentile)
2020s	+1.5°F	+2.0 to 2.9°F	+3.2°F
2050s	+3.1°F	+4.1 to 5.7°F	+6.6°F
2080s	+3.8°F	+5.3 to 8.8°F	+10.3°F

Source: NYS DEC 2021

In addition to an increase in average annual temperatures, it is widely believed that the annual frequency and duration of heatwaves are expected to increase in NYS over the coming century. In this region, extreme heat days are defined as days exceeding a maximum temperature of 90°F, and heat waves are defined as periods of three or more consecutive extreme heat days (NYS DEC 2021). Based on the ClimAID model for this region, by the end of the 2020s, the number of annual extreme heat days will likely increase from the 1971 − 2000 baseline of 8 days to between 26 to 31, based on the middle range projections (Table 4-3).

Similarly, by the 2050s, the number of extreme heat days per year will increase to between 30 to 52 days over 90°F, and between 44 to 76 days by the 2080s. During the same time intervals, the number of heat waves will increase from the baseline of 0.7 per year to 4 days in the 2020s, 5 to 7 days in the 2050s, and 6 to 9 days by the 2080s, all based on the middle range projection. The duration of heat waves is also anticipated to increase, between 5 consecutive days over 90°F in the 2020s and up to 7 days in the 2080s (Table 4-3).

Conversely, the number of extreme cold days is projected to decrease. Extreme cold days are defined as days with a maximum temperature not exceeding 32°F. An average annual count of 133 cold days was observed during the 1971 − 2000 baseline and could decrease to between 30 and 42 days by the 2080s, according to the middle range estimate (NYS DEC 2021). Overall, summers are projected to become warmer, and winters will become milder (Horton et al. 2014).

Table 4-3. Projected changes in annual frequency of extreme temperature events based on ClimAID for Region 4

	2020s			2050s			2080s		
	Low Estimate (10th Percentile)	Middle Range (15th to 75th Percentile)	High Estimate (90th Percentile)	Low Estimate (10th Percentile)	Middle Range (15th to 75th Percentile)	High Estimate (90th Percentile)	Low Estimate (10th Percentile)	Middle Range (15th to 75th Percentile)	High Estimate (90th Percentile)
Days over 90°F (8 days)	24	26 - 31	33	32	39 – 52	57	38	44 – 76	87
# of Heat Waves (0.7 heat waves)	3	3 - 4	4	4	5 – 7	7	5	6 – 9	9
Duration of Heat Waves (4 days)	5	5 - 5	5	5	5 – 6	6	5	5 – 7	8
Days below 32°F (133 days)	50	52 - 58	60	37	42 - 48	52	25	30 - 42	49

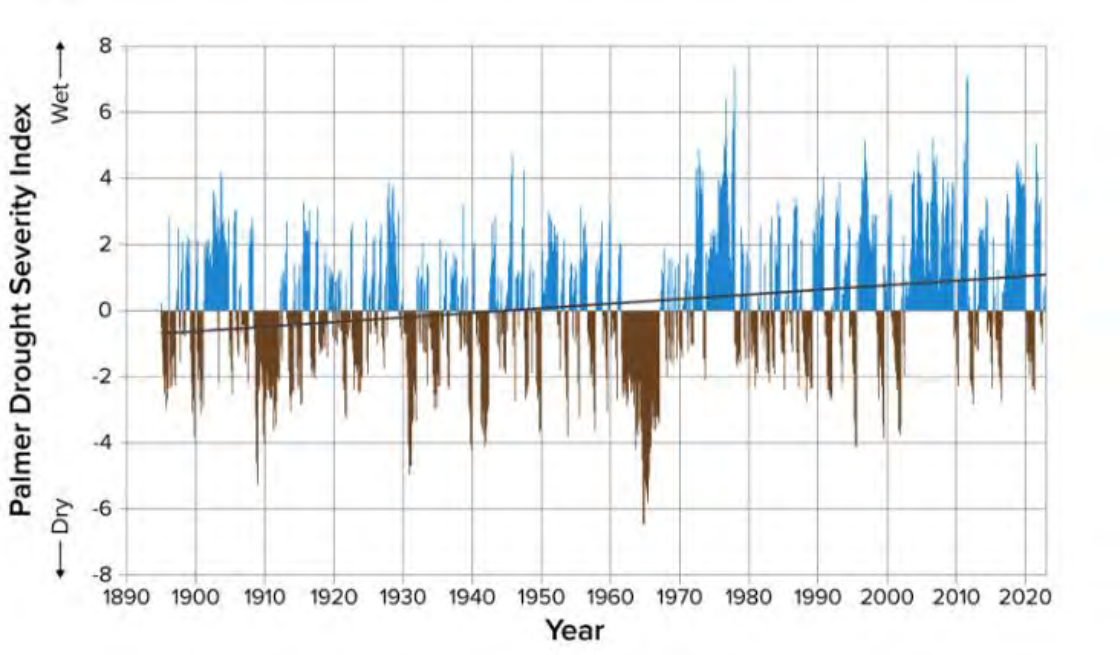
Source: NYS DEC 2021

4.3 DROUGHT

Drought is a prolonged period of abnormally low precipitation compared to local and regional averages, resulting in water shortages. Drought conditions occur in almost all climatic zones, yet the characteristics of drought can vary from one region to another since it is relative to normal precipitation in that region. Elevated evapotranspiration and reduced soil moisture are exacerbated by warmer and drier conditions. Throughout a prolonged growing season these conditions may lead to more frequent and prolonged droughts.

Throughout its history, New York State has experienced cycles of varying water availability, shifting between periods of moderate water stress and drought (Lamie et al. 2024). Figure 4-4 illustrates the monthly drought conditions in New York based on the Palmer Drought Severity Index from 1895 to 2022. Positive index values denote wetter-than-average conditions, whereas negative values indicate drier-than-average conditions. Specifically, values between −2 and −3 signal moderate drought, −3 to −4 signify severe drought, and levels of −4 or lower reflect extreme drought. Within the observed record, the multiyear drought that occurred in the 1960s is identified as the "drought of record," and may have been the most severe drought in this region in the last 500 years, if not longer (Lamie et al. 2024). While the duration and severity of the 1960s drought is an outlier, shorter periods of drought continue to occur in New York state, particularly during the summer months.

Figure 4-4. Monthly drought conditions in New York State according to the Palmer Drought Severity Index, 1895 – 2022



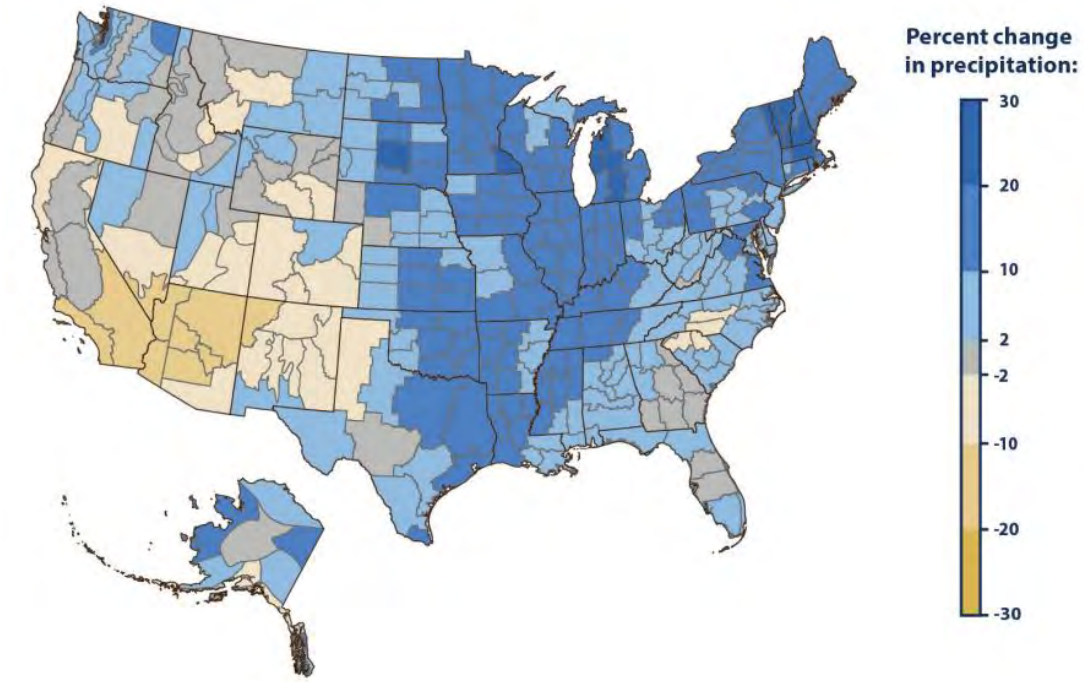
Source: Lamie et al. 2024. Data from NOAA (2023).

In general, future drought conditions are difficult to forecast given the complex confluence of precipitation, wind, temperature, and evapotranspiration, which are all components of a drought. Although projections of drought have not been widely quantified for New York state, there is consensus among practitioners that late summer, short-term droughts will become more frequent toward the end of the century (Horton et al. 2011; Lamie et al. 2024). This occurs for a few reasons (Lamie et al. 2024):

- Changes in the distribution of rain events, which could imply longer dry spells in between larger events
- Higher temperatures in the warmer months causing increased evapotranspiration
- Reduced snow cover and earlier spring melt increasing the risk in summer as soil dries out earlier

While short-term seasonal droughts are widely expected to increase in frequency, the risk of multiyear droughts in New York are less understood. The EPA's considers drought to primarily be a risk in the Southwest, based on the Climate Change Indicators in the United States Fifth Edition report (EPA 2024). By observing projected changes over timescales, the projected increases in total annual precipitation in New York suggest that the risk of extended, multiyear droughts will not increase (Lamie et al. 2024). The map in Figure 4-5 shows the total change in drought conditions across the contiguous 48 states, based on the long-term average rate of change in the five-year Standardized Precipitation Evapotranspiration Index (SPEI) from 1900 to 2023 (EPA 2024). Blue areas represent increased moisture; brown areas represent decreased moisture or drier conditions. The study area is located in a climate division that has an SPEI of +1.5.

Figure 4-5. Average Change in Drought (Five-Year SPEI) in the Contiguous 48 States, 1900–2023



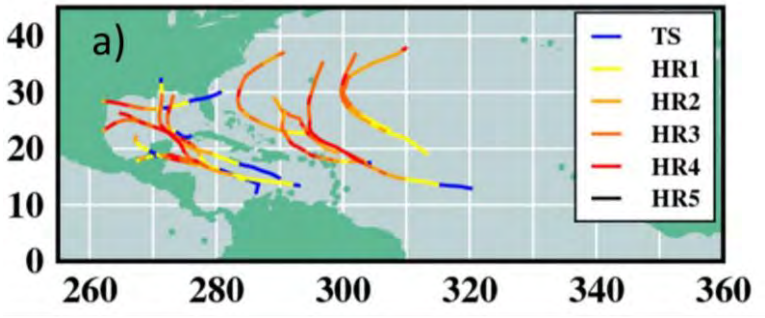
Source: EPA 2024, Data sources: Abatzoglou et al., 2017; Western Regional Climate Center, 2024.

4.4 WIND

In general, future wind trends are very challenging to forecast given the unpredictable and shifting atmospheric conditions which cause high wind events. However, given the projected rising temperatures and pursuant ocean warming, high wind events such as hurricanes, tropical cyclones, and extratropical cyclones (nor'easters) are expected to increase in the North Atlantic over the coming years. This trend has already been observed in recent decades, as approximately 65 tropical or subtropical cyclones have struck New York since the mid-nineteenth century, 12 of which have made landfall as hurricanes (NYS DEC 2021).

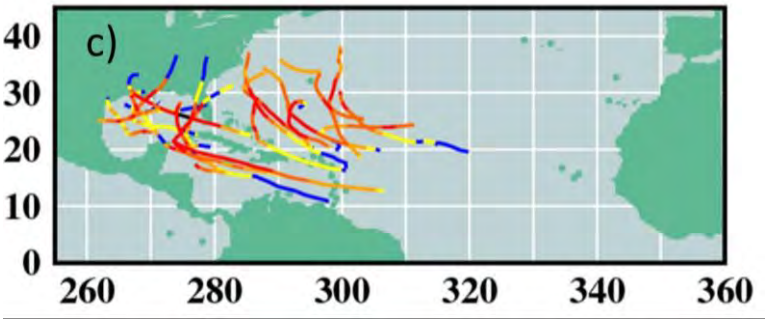
According to dynamic downscaling projections of 21st century Atlantic hurricane activity based on the CMIP5 scenarios, (Figure 4-4 – Figure 4-6) category 4 and 5 hurricanes could increase as much as 43 percent during the early 21st century (Knutson et al. 2013). The first image shows the baseline (1980 – 2006) period during which 14 category 4 and 5 hurricanes were observed. By the early 21st century, as many as 20 category 4 and 5 hurricanes are projected based on the CMIP5 model. By the late 20th century, 19 hurricanes of this magnitude are projected over the same period.

Figure 4-4. Baseline (1980 – 2006) Category 4 and 5 Hurricanes – 14 Storms



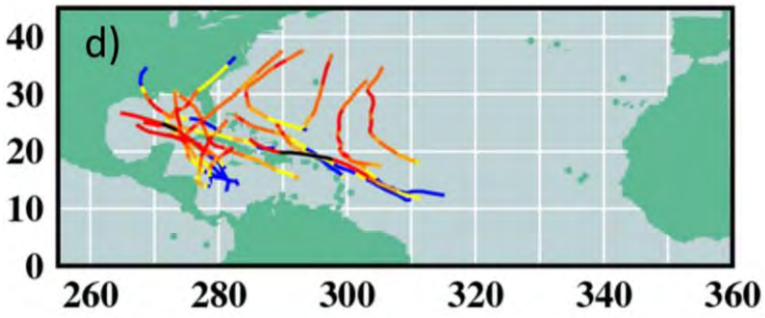
Source: Knutson et al. 2013

Figure 4-5. Projected (Early 21st Century) Category 4 and 5 Hurricanes – 20 Storms



Source: Knutson et al. 2013

Figure 4-6. Projected (Late 21st Century) Category 4 and 5 Hurricanes – 19 Storms

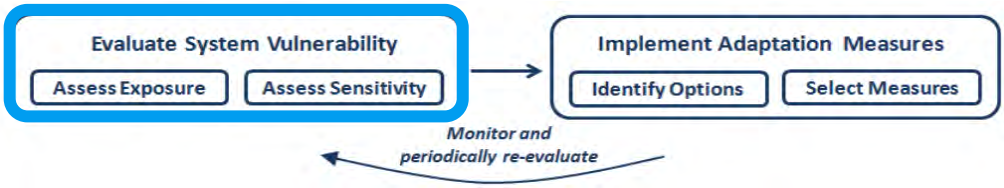


Source: Knutson et al. 2013

5. CLIMATE CHANGE SENSITIVITY ASSESSMENT

Based on a review of the existing site conditions and an assessment of the projected climate change scenarios and resulting impacts in this region, the project team has assembled a list of climate-related system vulnerabilities. According to the EPA (2015), effective climate change adaptation management with regards to contaminated sediment and groundwater involve an assessment of exposure and sensitivities to evaluate system vulnerabilities (highlighted in blue), which in turn inform the identification of adaptation measures and continued monitoring and re-evaluation (Figure 5-1). The sensitivity assessment includes a review of existing and proposed site components, a description of the potential impacts to those components based on future climate hazards, and the potential impacts to COCs. The potential vulnerabilities of the different remedial system components are discussed in section 5.1 and the possible impacts to COCs are discussed in section 5.3.

Figure 5-1. Climate Change Adaptation Management Process – Evaluate Vulnerabilities



Source: EPA 2015

5.1 REMEDIATION SYSTEM COMPONENTS

Climate change and extreme weather events can impact the ongoing remedial efforts at the Former Utica City Dump site by damaging system assets, which reduce the effectiveness of site remediation design. Potential impacts to the system components resulting from climate hazards identified in Section 4 are provided in Table 5-1 and discussed in detail below.

Table 5-1. Summary of Possible Climate Change Impacts on System Components

System Components		Climate Impact Vulnerability			
	Precipitation	Riverine Flooding	Temperature	Drought	Wind
Capping System	Physical damage, scour, degradation of protective barriers	Scour from surface water flow velocity	Scour of the soil cover, or underlying sediment	Compaction and stability issues	Physical damage, scour
Stormwater Discharge Pipes	Backup due to heavy rains / debris	N/A	N/A	Increased sedimentation and siltation	Backup of discharge due to fallen debris
Chain Link Fence	N/A	Reduced access and/or physical damage from inundation	N/A	N/A	Physical damage
Deciduous Planting	Increased infiltration, physical damage	Reduced resilience, loss of vegetation	Reduced resilience, loss of vegetation	Reduced resilience, loss of vegetation	Physical damage
Access Roads	N/A	Lack of access due to inundation	N/A	N/A	Lack of access due to fallen debris

Source: Bebb and Kersey 2003; EPA 2015.

5.1.1 Extreme Weather

Precipitation

The swales will be designed to protect against a 100-year storm event, as per NYS DEC requirements. However, the projections indicate that a 100-year storm will become between 20 to 50 percent more frequent towards the second half of the century. These heavy rainfall events could cause scour of the cover system and degrade system integrity. Additionally, consecutive extreme precipitation events can cause erosion and possible backup of the stormwater drain due to lack of drainage capacity in low lying areas.

Riverine Flooding

Based on the 60% Design Drawings for the Utica Remediation project, the dump will be located outside of the 100-year and 500-year flood zone, and therefore largely protected from present-

day riverine flooding. Hydrologic modeling to assess future riverine flooding that incorporates increased precipitation should be conducted to better assess climate change impacts over the coming century.

Other components of the remediation system, such as the site plantings and the access paths are within the 100- and 500-year flood extents. As such, mitigation measures should be put in place to protect these components against future inundation.

Increasing Temperature

Increased occurrence of extreme heat and sustained changes in average temperatures can potentially result in scour of the ET cover land underlying sediment (EPA 2015). Furthermore, higher temperatures can alter pH and place increased stress on the site's plantings, reducing vegetative resilience.

Drought

Through drought is not a primary climate risk is this geography; season droughts do occur and are expected to increase towards the end of the century. Prolonged periods of drought can cause soil instability and, in extreme cases, subsidence (EPA 2014). Drought may also result in dry or low-flow conditions that promote sediment settling within stormwater pipes. When storms eventually occur, these sediments can be dislodged, causing blockages. Similar to extreme heat, drought can result in vegetative loss.

Wind

Extreme wind events can result in scour of the ET cover and underlying dredge soils. Additionally, heavy winds can cause debris to fall, which could clog the stormwater discharge pipes and limit access to the site until cleared.

5.2 REMEDIATION OPERATIONS

There will not be any long-term active remedial system operations in place at the site.

5.3 CONTAMINANTS OF CONCERN

As noted in section 3.1, the primary residual COCs on-site include inorganics (metals), pesticides, PCBs, VOCs, and SVOCs. Metals were found in the surface soils, groundwater, and leachate. SVOCs were found in the surface water, and surface soils at the dump. Therefore, as we look to assess the climate change sensitivities with regard to remediation efforts, climate hazards that impact the surface water, groundwater, or leachate need to be considered. Changes in the climate can also impact contaminant toxicity, exposure, organism sensitivity, transport, and long-term remediation efforts (Maco et. al. 2018; Bebb and Kersey 2003). Table 5-2 provides a summary of the possible climate change impacts to residual COCs of concern, specific to this project site.

Table 5-2. Summary of Possible Climate Change Impacts on Residual COCs

Climate Impact	Secondary Effect	Relevant Remediation Effect
Increased precipitation	Increased rainfall, extreme precipitation events, increased runoff and infiltration	Mobilization of COCs in low-lying areas in ground- or surface-water due to degradation of protective barriers
		Increased concentration of contaminants in groundwater due to scour of cover system
Riverine flooding	Scour from surface water flow velocity, flooding, and increased infiltration	Possible dilution (lower contaminant concentration/export), or compromised site with mixing or loss of contaminated materials, damage to cover systems
		Increased discharge of groundwater metal and SVOCs concentrations
Increasing temperature	Altered degradation	Increased toxicity
	Decreased dissolved oxygen/anoxic conditions	Altered transformation, decreased species resilience
	Extreme heat	Mobilization of contaminants from site through soil and air
	Increased species heat stress and associated conditions	Increased sensitivity to contaminants
Drought	Decreased precipitation / Reduced water availability	Insufficient water for remediation; Overuse of groundwater
		Altered site hydrology and leachate production/dilution
	Reduced surface runoff	Reduced mobilization of COCs resulting in higher contaminant persistence
	Ground subsidence	Damage to site integrity, cover systems
Extreme Wind	Scour from wind	Damage to site integrity, cover systems

Source: Maco et. al. 2018; Bebb and Kersey 2003; EPA 2015; EA Engineering 2021.

5.3.1 Extreme Weather

Precipitation

The increase in intensity, frequency, and duration of storm events that is projected to occur can result in higher volumes of surface runoff, increased infiltration, and on-site incident flooding. Higher volumes of surface runoff can mobilize residual COCs causing concentration in soils or surface waters in low-lying areas of the site, increasing COC concentrations to the Mohawk River (EPA 2015). Heavy rains could also cause scour to the capping system, which will in turn lead to increased infiltration that can dilute and mobilize COCs into the groundwater for a prolonged period (Maco et al. 2018). A high volume of infiltration and on-site flooding may lead to an inadequate capture of targeted groundwater due to low aquifer storage capacity, which could also

lead to COCs entering the underlaying sediment and groundwater (EPA 2015). Additionally, low precipitation can cause unexpected desiccation in the containment/treatment zone (EPA 2015).

Riverine Flooding

Based on the 60% Design Drawings for the Utica remediation, the dump will be located outside of the 100-year and 500-year flood zone, and therefore largely protected from present-day riverine flooding. Hydrologic modeling to assess future riverine flooding that incorporates increased precipitation should be conducted to better assess climate change impacts over the coming century.

Increasing Temperature

Higher temperature and lower pH can potentially increase the concentration of COCs in the environment. For example, the transport of persistent organic contaminants changes with temperature and precipitation (EA Engineering 2021). Similarly, the sensitivity of organisms and ecosystems can be affected by environmental change. Higher temperatures increase the metabolic rate of certain organisms, which can increase the rate at which they absorb or process contaminants (Noyes et al. 2009).

Drought

Drought conditions can lead to decreased precipitation and overall reduced water availability, which can significantly impact remediation efforts (EPA 2014). Insufficient water resources hinder the ability to carry out necessary remediation activities and lead to the overuse of groundwater, potentially depleting aquifers. Furthermore, drought may alter contaminant form/volatility (EPA 2014). Altered site hydrology and decreased leachate production or dilution occur due to the lack of surface water flow, which can affect the natural attenuation of contaminants (EA Engineering 2021).

Additionally, reduced surface runoff diminishes the mobilization of contaminants of concern (COCs), resulting in increased persistence of pollutants within the site environment (EA Engineering 2021). Drought can also cause ground subsidence as soils dry out and shrink, risking damage to site integrity and the stability of cover systems essential for containment and safety.

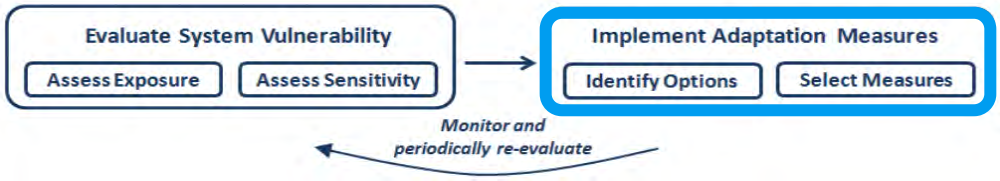
Wind

As noted, extreme wind events can result in scour of the remediation cover, which in turn can release COCs into the soil. Additionally, high wind can lead to increased turbidity of surface water located near the treatment zone as waste or debris from upland is mobilized (EPA 2015).

6. ADAPTATION MEASURES

As discussed, climate change adaptation for a cover system involves the evaluation of system vulnerabilities to future climate conditions, which in turn inform recommended adaptation measures (Figure 6-1). Based on the climate hazards identified in section 4 and the system and COC vulnerabilities discussed in section 5, the project team has compiled a list of adaptation measures for the Former Utica City Dump site. These adaptation measures are provided in Sections 6.1 – 6.3, and a comprehensive adaptation plan is provided in Section 6.4, which summarizes recommended measures and incorporates thresholds and monitoring strategies per adaptation approach.

Figure 6-1. Climate Change Adaptation Management Process – Implement Adaptation Measures



Source: EPA 2015

6.1 REMEDIATION SYSTEM COMPONENTS

Based on the assessment in Section 5.1, several remediation system components are vulnerable to future climate hazards. Recommended strategies and potential vulnerabilities that they are intended to address are provided in Table 6-1.

Table 6-1. Recommended Adaptation Strategies for System Components

Adaptation Strategy	Sensitivities/Vulnerabilities Addressed
Armor/Stabilize ET Cover	Physical damage and scour of the capping system from precipitation, flooding, and wind, as well as compaction and stability issues from drought
Maintain Storm Drain	Backups due to clogged storm drains from precipitation, wind, and drought
Resilient Planting Selection	Loss of vegetation due to increased infiltration, high temperatures, drought, and wind
Vegetated Buffers	Physical damage and scour of the capping system from precipitation and wind
Vegetated Swales	Increased drainage capacity on-site to prevent inundation and ameliorate increased infiltration
Expanded Wetlands	Conveys water away from dump to mitigate flooding

Armor/Stabilize ET Cover

The capping system is vulnerable to several impacts associated with precipitation, riverine flooding, and wind, primarily resulting in erosion, damage, or scour of the cover and underlying sediment. Drought can also cause instability and threaten the integrity of the capping system. Climate hazard related damages to the cover can enable the mobilization of COCs as the integrity of the system is reduced. Therefore, increasing the resilience of the capping system to the elements is a strongly recommended adaptation measure at the Utica Remediation site.

Since scour is a primary concern, fortification of the capping system is key. This can be accomplished through armoring the ET cover by adding additional layers of stone and/or gravel above a sand base (EPA 2015). Additionally, following heavy precipitation events, cleaning backfill materials and replacing dislodged stone and sediment can help prevent long-term damage to the capping system.

Maintain Storm Drain

Given the partially wooded area within which the dump is located, high wind events and extreme precipitation could cause debris to fall and cause a backup in the storm discharge pipes. Conversely, low-flow conditions can increase sedimentation and siltation, causing blockages. Active maintenance by assessing the drainage pipes and clearing any debris on a regular basis, and particularly following a storm event, will help prevent backups.

Resilient Planting Selection

Selecting native and adaptive grasses, shrubs, trees, and other deep-rooted vegetation will provide greater resilience to drought, increased temperatures, riverine flooding, and wind. Additionally, choosing species that can withstand periods of increased infiltration will provide greater protection against future inundation and more frequent storms.

Vegetated Buffers

Vegetation, such as large trees and dense shrubbery, should be strategically planted around the cover system as a localize buffer to providing shading, erosion control, and wind breaks (EPA 2015).

Vegetated Swales

Vegetated bioswales are a form of bioretention used to convey stormwater, which will increase stormwater retention capability to alleviate upland on-site flooding in the event of heavy precipitation. This strategy has the added benefit of partially treating surface water quality.

Wetland Expansion

By consolidating the dump upland and expanding the wetlands in the lower-lying areas of the site, the project team will be altering the elevation on site to promote better drainage by conveying water away from the capped dump. Further, the expansion of wetlands will provide a

greater overall drainage capacity on-site, which will help mitigate against increased precipitation and extreme rainfall events. This strategy also provides ecological benefits to the site which will promote vegetative and habitat resilience and partially treat surface water.

6.2 REMEDIATION SYSTEM OPERATIONS

There will not be any long-term active remedial system operations in place at the site.

6.3 CONTAMINANTS OF CONCERN

Strategies offered in this section are focused on the containment of COCs. Potential residual COCs are described in Section 3-1. Table 6-2 provides a strategy to minimize vulnerabilities associated to those residual COCs.

Table 6-2. Recommended Adaptation Strategies for COCs

Adaptation Strategy	Sensitivities/Vulnerabilities Addressed
Monitoring of COCs	Increased bioavailability of contaminants, mobilization of contaminants, increased concentration of contaminants in groundwater or underlying sediment

Monitoring of COCs
Following a weather event, such as a high wind event or intense precipitation, the site should be monitored to assess whether any damage or degradation to the reinforced cover system has occurred. Monitoring can involve a post-storm inspection of the covered areas to evaluate signs to erosion, and if needed, a post-storm survey of the covered areas (EA Engineering 2021). If damage has occurred, additional sediment and/or ground- and surface-water testing may be warranted.

6.4 CLIMATE ADAPTATION PLAN

Based on the desktop review of projected climate impacts and an assessment of the system component vulnerabilities and possible impacts to the remediation system, a climate adaptation plan is provided in Table 6-3. This adaptation plan focuses on adaptation strategies discussed in the prior sections. These measures are intended to either provide resistance or protection; promote adaptation; or provide a response-based action (EA Engineering 2021).

As climate change occurs on a temporal scale that involves shifting conditions, an effective adaptation strategy must involve an iterative process. Climate change projections will become more precise over time as the level of GHG emissions determines the RCP and resulting climate impacts over the coming century. Therefore, an effective adaptation strategy includes monitoring of the implemented measures and periodically re-evaluating the system's vulnerabilities to assess climate change impacts and identify and incorporate new measures as needed (EPA 2015). Therefore, in addition to the recommended measure, a robust resilience approach for each measure is provided that identifies threshold levels, monitoring guidance for each threshold, and subsequent measures to implement, if needed, to provide an iterative approach at the project site. Those indicators are defined below:

Threshold Level
The threshold levels identify parameters under which the adaptation measures are no longer effective, indicating that further assessment is required.

Monitoring
Monitoring is used to evaluate if the given threshold level has been met or exceeded.

Success Measure
The success measure indicates that the system components integrity remains intact. If the success measure result is negative, subsequent action should be taken.

Subsequent Action
Following an event that meets or exceeds the threshold level and, upon inspection, results in a negative success measure, a specific action to assess site conditions, limit risks, and minimize adverse outcomes should be executed. A subsequent action could involve further testing, repair, reassessment, and possibility new or additional adaptation strategies to better address the climate hazards.

Table 6-3. Climate Adaptation Plan

Item	Vulnerable Components	Climate Change Hazards	Potential Impact	Mitigation Approach	Adaptation Measure	Threshold Level	Monitoring for Threshold	Success Measure	Subsequent Action
1	ET Cover system	Precipitation, increasing temperatures, drought, and wind	Scour/physical damage and weakened system integrity	Provide resistance or protection	Armor/stabilize cover Vegetated buffer	The threshold is any event exceeding a 100-year event, defined as 5.76 inches within a 24-hour period	Review NOAA Weather Station at GRIFFISS AIR FORCE BASE / ROME (KRME) before and after major storm events to assess if threshold is surpassed	An assessment of the ET cover system reveals minimal erosion	Repair the ET cover to prevent long-term erosion and/or consider additional stabilization measures
2	Site planting	Precipitation, riverine flooding, increasing temperature, drought, and wind	Reduced resilience and loss of vegetation	Adaptation	Resilient planting selection	The threshold is any event exceeding a 100-year event, defined as 5.76 inches within a 24-hour period. Additionally, consecutive heat waves and/or a period of extended drought should be monitored for		An assessment of the site's vegetation does not indicate wilting or chlorosis	Implement landscape monitoring to track wilting, chlorosis, presence of infestation or infection, and evaluate overall community composition to make sure that the species are developing as intended
3	Stormwater drain backup	Precipitation and clogged drain due to fallen debris or sediment build up	Backup due to debris clogs	Response-based strategies	Maintain stormwater drain	The threshold is any event exceeding a 100-year event, defined as 5.76 inches within a 24-hour period		An assessment of the stormwater drain reveals unclogged conditions	Increase maintenance regime or investigate new filter device
4	Flooded access roads, inundation of capped dump	Precipitation, flooding, and wind	Lack of access due to inundation, flooding in upland areas due to limited drainage capacity	Adaptation	Vegetated bioswales Expanded wetland			Upon post-storm inspection, access roads are properly drained	If recurring inundation occurs, consider reevaluating adaptation strategy to provide greater retention capacity
5	COCs (metals, VOCs, and SVOCs)	Precipitation, temperature, and wind	Movement of COCs outside of capped cell due to flooding, infiltration, and runoff	Response-based strategies	Monitoring of COCs			An assessment of the cover system reveals minimal erosion	Testing and monitoring of COC concentration in sediment, groundwater, and surface water following a flooding event

7. SUMMARY AND CONCLUSIONS

Based on future projections, climate change impacts are expected to increase over the coming century and may affect the remediation system at the Former Utica City Dump site. Hurricanes and extreme rainfall events are expected to become more frequent and intense. Summers are expected to become hotter with more frequent and prolonged heatwaves. Further, these climate hazards could lead to more flooding as ice continues to melt and average annual rainfall increases. The recommended adaptation measures offered in this report should be further evaluated and considered for implementation to provide improved resilience against these projected future climate impacts.

To be most effective, however, the adaptation approach to the Former Utica City Dump site should be iterative and flexible to account for shifting climate conditions. This involves periodic re-evaluation of the cover system, continued monitoring of implemented measures, and incorporation of newly identified strategies to better respond to the actual impacts of the changing climate as they unfold throughout the 21st century.

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Appendix 12
Green and Sustainable Remediation Metrics Assessment

Appendix 12: Green and Sustainable Remediation Assessment
SiteWise Inputs and Results
Utica Dump Site
Cover System Comparison

Component			Remedy Task	Item	Quantity	Units	Quantity	Units	Assumptions	SiteWise Input Cell
Component 1- Evapotranspiration Cover System Installation and Transportation of Materials	Excavation/Material Handling	Site Restoration	Evapotranspiration Cover	Dozer for Material Placement and Grading	252,000	CY	403,200	tons	1.6 tons/CY density of material. See constants and assumptions.	D110
				Compaction of Dredge Material	252,000	CY	--	--	N/A	E110
				Dozer for Topsoil Placement and Grading	84,000	CY	113,400	tons	1.35 tons/CY density of topsoil. See constants and assumptions.	F110
	Material Construction	Site Restoration	Evapotranspiration Cover	Geotextile Demarcation Layer	500,000	SY	4,500,000	SQFT	LDPE fabric. See constants and assumptions tab	D54-56
					0.0000459	ft thick	75	tons		
	Transportation	Material Transportation	Import Geotextile Demarcation Fabric	Geotextile Demarcation Layer	20	tons per trip	20	one way miles	Geotextile for the Evapotranspiration Cover	D85-86
					4	trips	80	total miles one way		

Appendix 12: Green and Sustainable Remediation Assessment
SiteWise Inputs and Results
Utica Dump Site
Cover System Comparison

Component			Remedy Task	Item	Quantity	Units	Quantity	Units	Assumptions	SiteWise Input Cell
Component 2- Traditional Cover System Installation and Transportation of Materials	Excavation/Material Handling	Site Restoration	Traditional Cover	Dozer for granular material (stone) Placement and Grading	166,666	CY	249,999	tons	1.5 tons/CY density of material.	D110
				Compaction for granular material (stone) Placement and Grading	166,666	CY	--	--	N/A	E110
				Placement of Dredge Material	252,000	CY	403,200	tons	1.6 tons/CY density of material.	F110
				Compaction of Dredge Material	252,000	CY	--	--	N/A	G110
				Dozer for Topsoil Placement and Grading	84,000	CY	113,400	tons	1.35 tons/CY density of topsoil. See constants and assumptions.	H110
	Materials Construction	Site Restoration	Traditional Cover	Non-woven geotextile demarcation layer	500,000	SY	4,500,000	SQFT	LDPE/HDPE fabric. See constants and assumptions tab	D54-56
					0.0000459	ft thick	75	tons		
				60-mil HDPE geomembrane	500,000	SY	4,500,000	SQFT		E54-56
					0.0019685	ft thick	75	tons		
				Geotextile composite layer	500,000	SY	4,500,000	SQFT		F54-56
					0.0000459	ft thick	75	tons		
	Transportation	Material Transportation	Import Granular Material (Stone)	Stone	20	tons per trip	20	one way miles	Dedicated Load Road.	D85-86
					12,500	trips	250,000	total miles one way		
			Import Fabric/Liner Layers (Demarcation, HDPE, Geotextile)	All fabrics	20	tons per trip	20	one way miles	Includes all fabric/liner layers. Assume all come from same facility.	E85-86
					13	trips	260	total miles one way		

Appendix 12: Green and Sustainable Remediation Assessment
SiteWise Inputs and Results
Utica Dump Site
Cover System Comparison

Remedial Alternatives	GHG Emissions	Total energy Used	Water Consumption	Electricity Usage	Onsite NO_x Emissions	Onsite SO_x Emissions	Onsite PM_{10} Emissions	Total NO_x Emissions	Total SO_x Emissions	Total PM_{10} Emissions	Accident Risk Fatality	Accident Risk Injury
	metric ton	MMBTU	gallons	MWH	metric ton	metric ton	metric ton	metric ton	metric ton	metric ton		
Evapotranspiration Cover Sys	281	7540	0.00	0.00	1.14	0.26	0.08	1.60	0.90	0.22	0.00	0.01
Traditional Cover System	1465	30380	0.00	0.00	1.79	0.41	0.13	3.20	2.03	0.46	0.00	0.18

Additional Sustainability Metrics

Remedial Alternatives	Non-Hazardous Waste Landfill Space	Hazardous Waste Landfill Space	Topsoil Consumption	Costing	Lost Hours - Injury	Percent Electricity from Renewable Sources	Final Cost with Footprint Reduction
	tons	tons	cubic yards	$		%	$
Evapotranspiration Cover Sys	0.00	0.00	0.00	0.00	0.11	0.0%	0.00
Traditional Cover System	0.00	0.00	0.00	0.00	1.42	0.0%	0.00

Relative Impact

Remedial Alternatives	GHG Emissions	Energy Usage	Water Usage	Electricity Usage	Onsite NOx Emissions	Onsite SOx Emissions	Onsite PM10 Emissions	Total NOx emissions	Total SOx Emissions	Total PM10 Emissions	*Accident Risk Fatality	*Accident Risk Injury	Community Impacts	Resources Lost
Evapotranspiration Cover Sys	Low	Low	Low	Low	Medium	Medium	Medium	Medium	Medium	Medium	Low	Low	user select	user select
Traditional Cover System	High	High	Low	Low	High	High	High	High	High	High	Low	Low	user select	user select

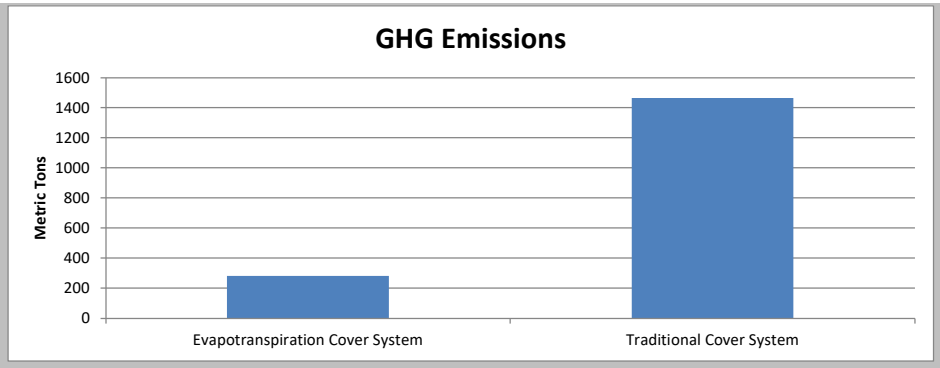
Relative Impact (User Override)

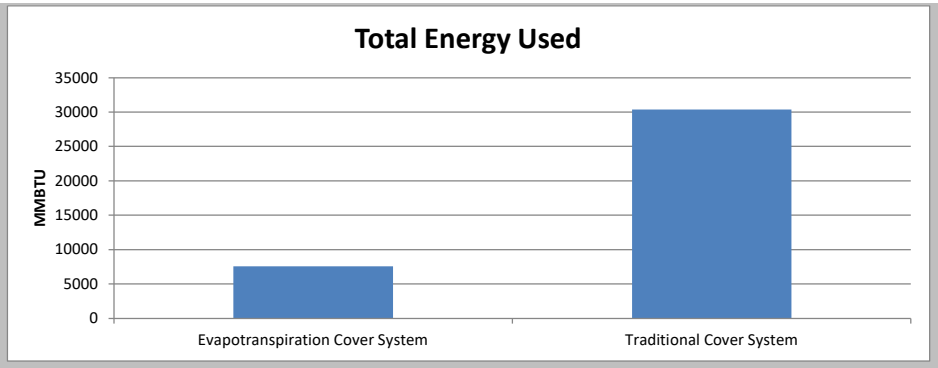
Appendix 12: Green and Sustainable Remediation Assessment
SiteWise Inputs and Results
Utica Dump Site
Cover System Comparison

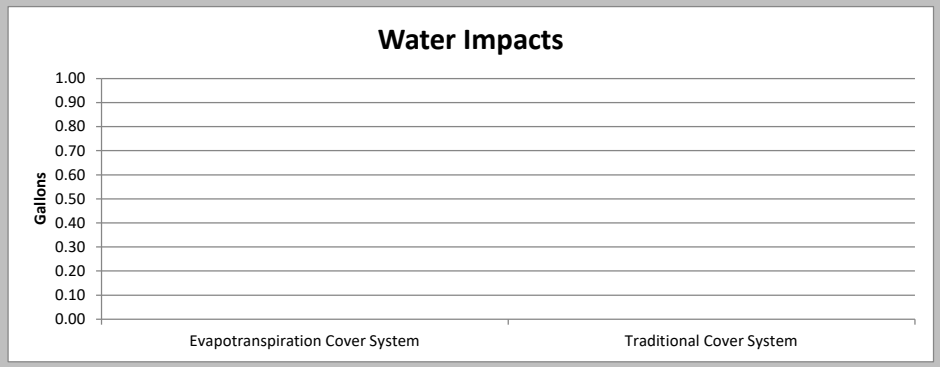
Remedial Alternatives	GHG Emissions	Energy Usage	Water Usage	Electricity Usage	Onsite NOx Emissions	Onsite SOx Emissions	Onsite PM10 Emissions	Total NOx Emissions	Total SOx Emissions	Total PM10 Emissions	*Accident Risk Fatality	*Accident Risk Injury	Community Impacts	Resources Lost
Evapotranspiration Cover Sys	Low	Low	Low	Low	Medium	Medium	Medium	Medium	Medium	Medium	Low	Low	user select	user select
Traditional Cover System	High	High	Low	Low	High	High	High	High	High	High	Low	Low	user select	user select

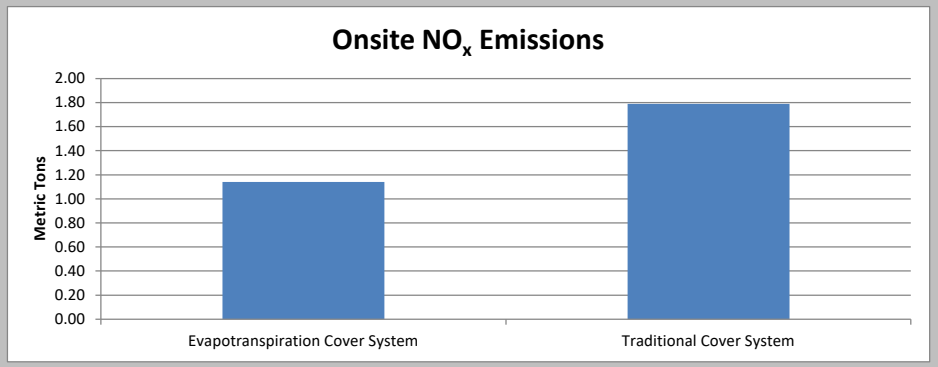
*Accident Risk is an estimate of how many accidents may occur. This risk is not the same as Cancer Risk, which is the probablity (for a single person) of getting cancer. Accident risk is not comparable to Cancer Risk due to inherent fundamental differences.

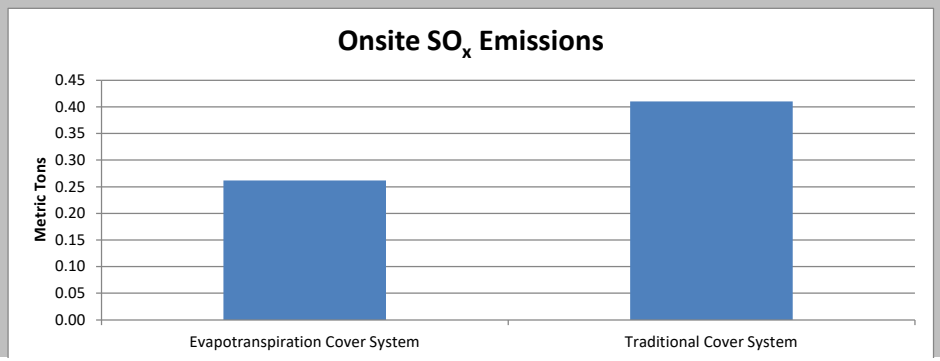
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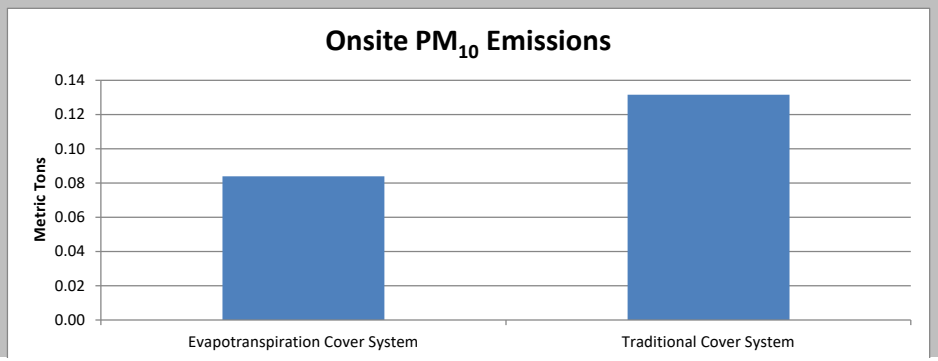




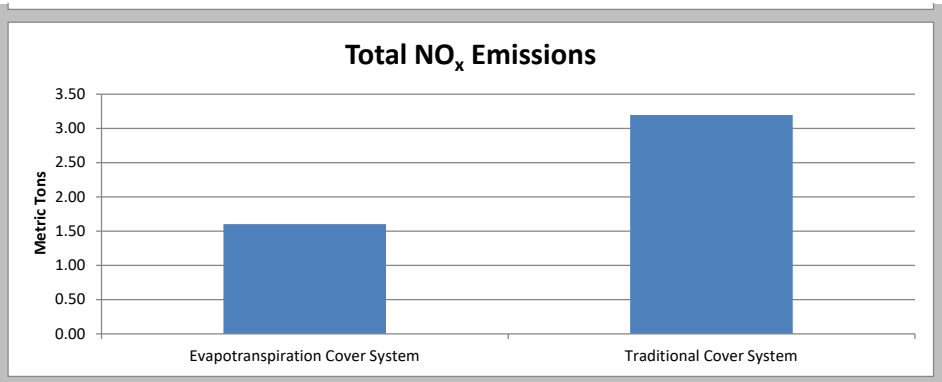


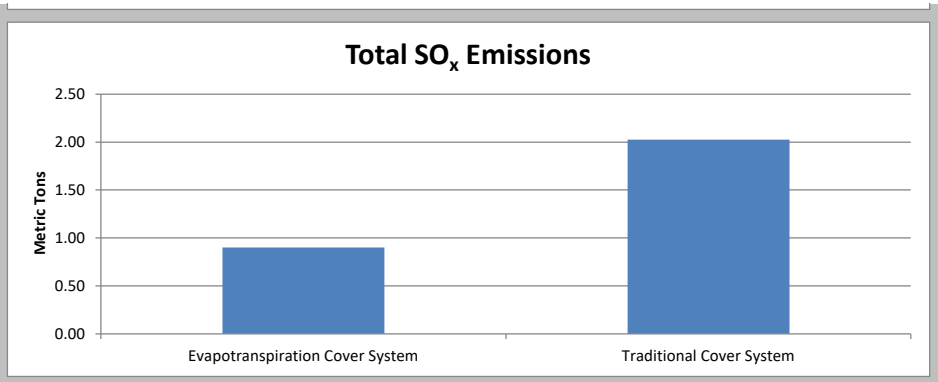


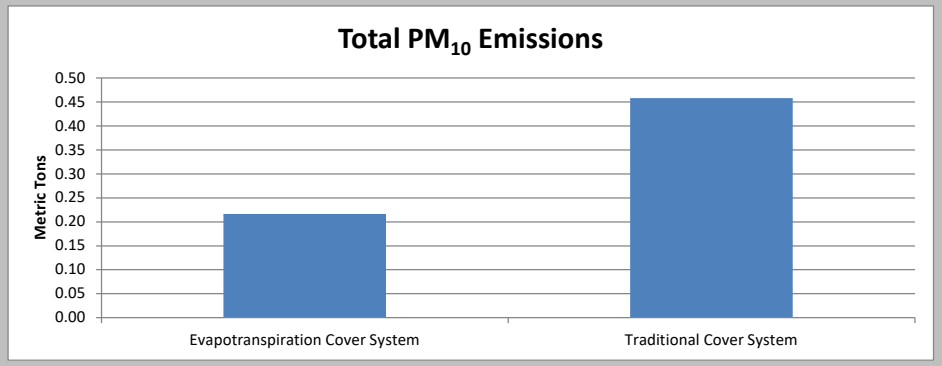


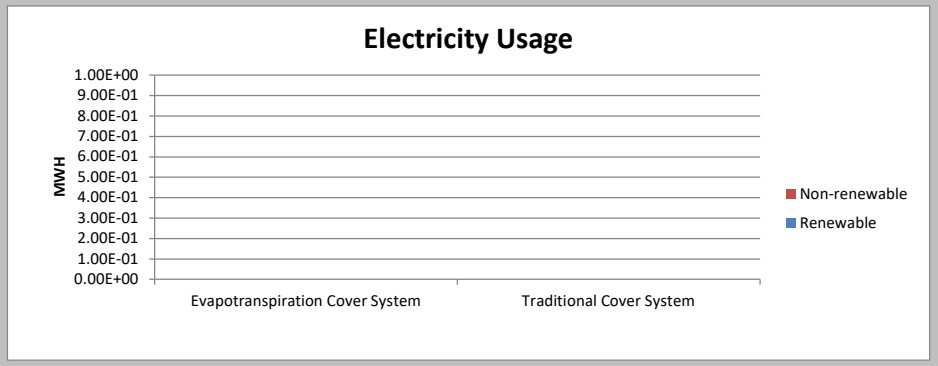


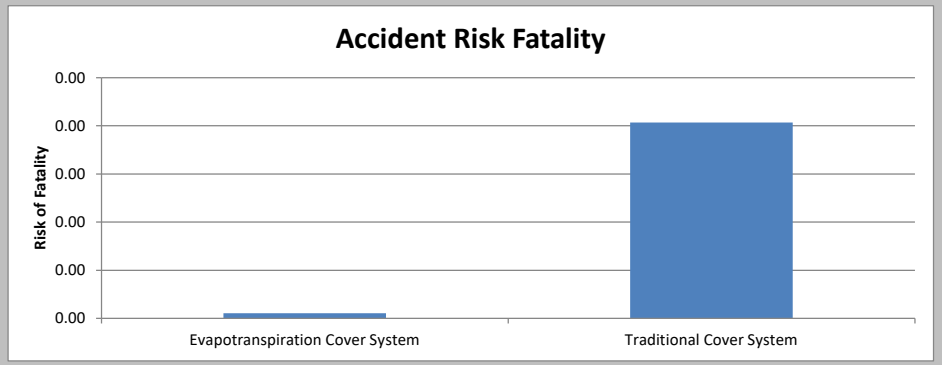
Appendix 12: Green and Sustainable Remediation Assessment
SiteWise Inputs Results
Utica Dump Site
Cover System Comparison

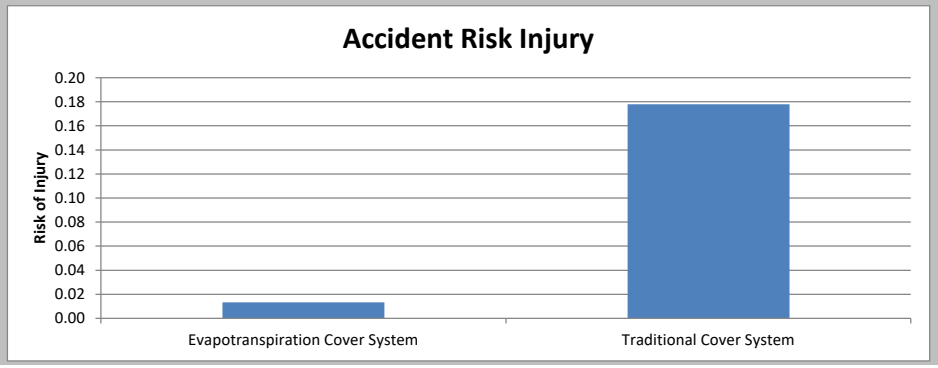




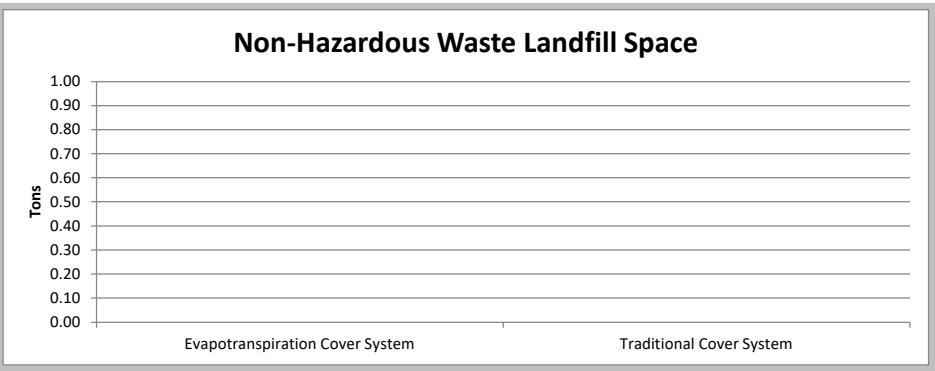


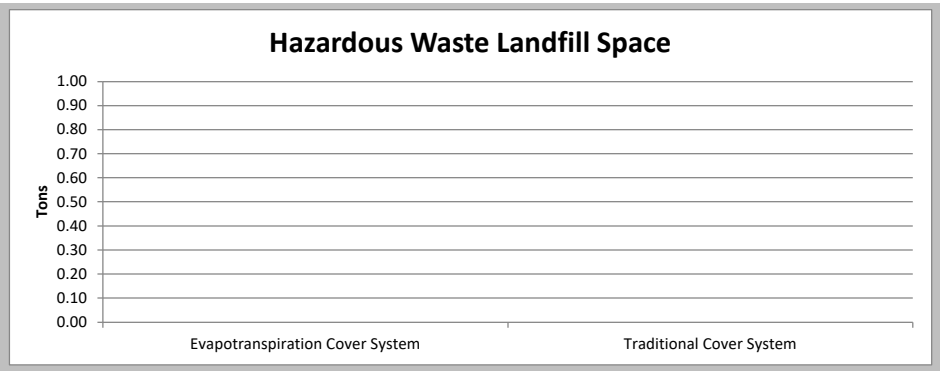


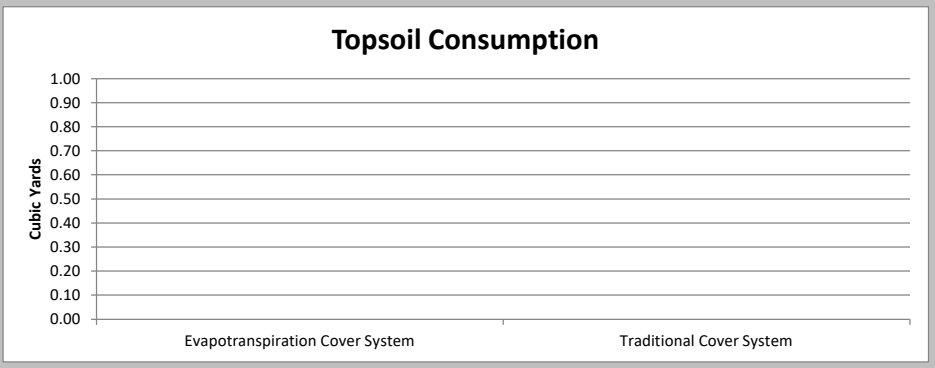


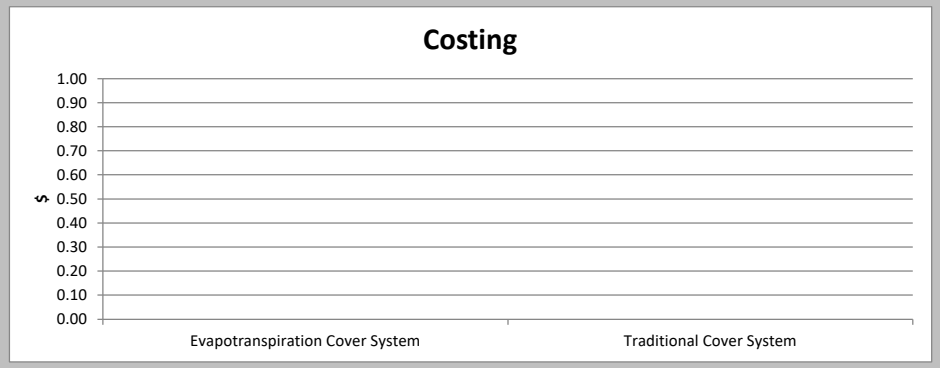


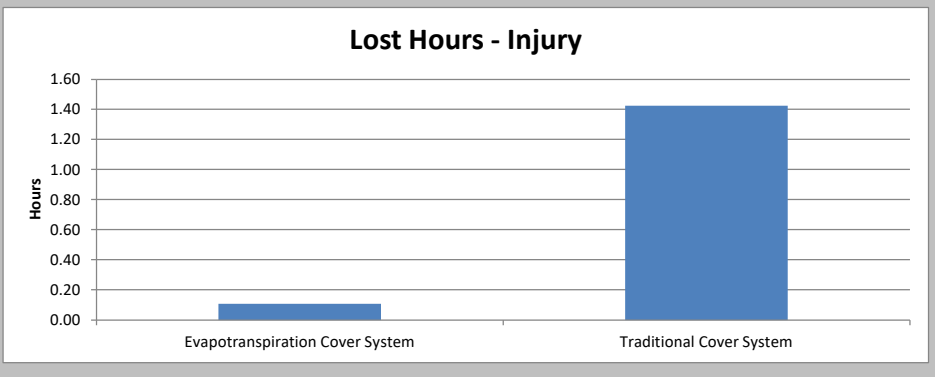
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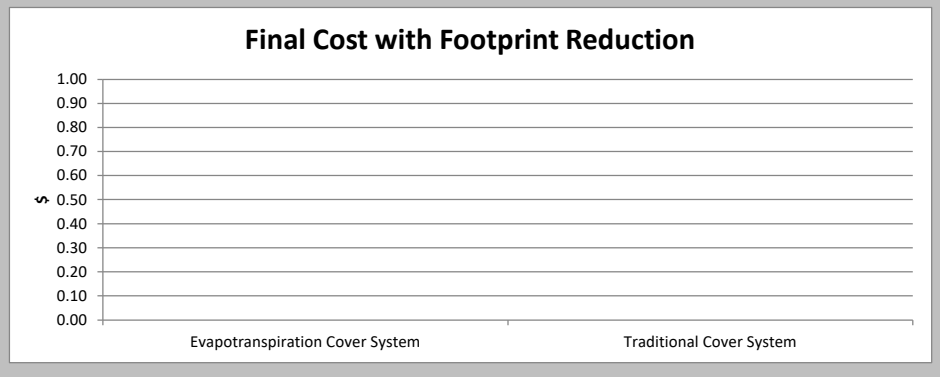




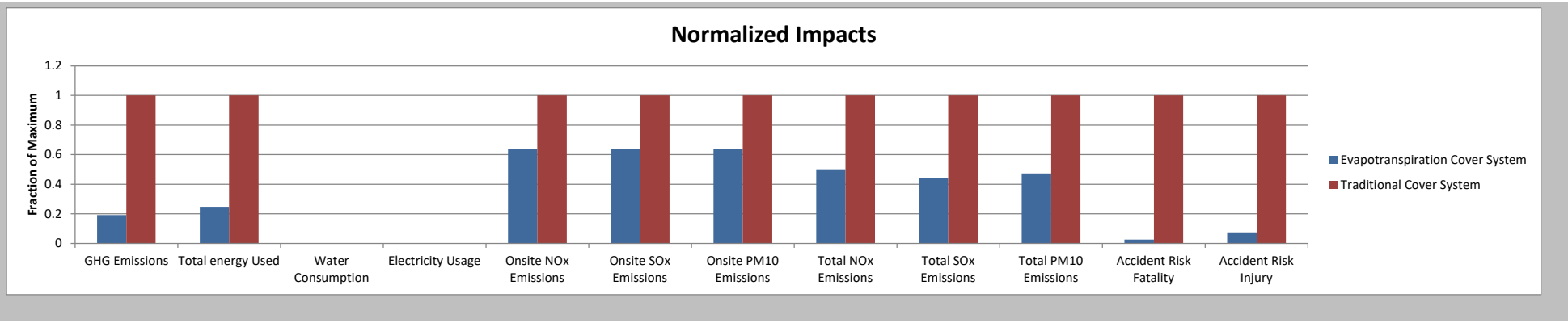








Appendix 12: Green and Sustainable Remediation Assessment
SiteWise Inputs and Results
Utica Dump Site
Cover System Comparison



Appendix 12: Green and Sustainable Remediation Assessment
SiteWise Inputs and Results
Utica Dump Site
Remedial Design

INPUTTED AS COMPONENT 1 IN SITEWISE

Component			Remedy Task	Item	Quantity	Units	Quantity	Units	Assumptions	SiteWise Input Cell
Component 1 - Onsite Remedial Actions	Excavation/Material Handling	Site Preparation	Site Brush Clearing	Dozer for clearing and grubbing	103	acres	103	days	1 acre cleared/day	D276
							1030	hours	10 hour work days, 65 HP Dozer	
			Contractor Staging Area	Subgrade Grading	6700	CY	--	--	Dozer	D110
				Placement and Grading of Stone	6700	CY	9497	ton	Dozer. Density of Dry gravel (1.4175 tons/CY). See constants and assumptions tab	E110
				Compaction of Stone	6700	CY	--	--	Roller	F110
			Perimeter Access Road	Subgrade Grading	6800	CY	--	--	Dozer	D110
				Placement and Grading of Stone	6800	CY	9639	ton	Dozer	E110
				Compaction of Stone	6800	CY	--	--	Roller	F110
			Incinerator Road Improvements	Placement and Grading of Stone	9000	CY	12758	ton	Dozer. Density of Dry gravel (1.4175 tons/CY). See constants and assumptions tab	E110
			Drainage Swales and Discharge System	Placement of Riprap outlet protection	1000	CY	1418	ton	Excavator	G110
			Demolition	Incinerator/Building Demolition	2000	CY	4000	ton	Excavator, assume 2 tons/cy	G110
				Building Demo - C&D Loading	2000	CY	4000	ton	Loader, assume 2 tons/cy	H110
				C&D Relocation	4000	tons	0.25	miles each way	Assume 2 tons/cy, 1/4 mile trip, diesel	D85-86
					200	trips	50	miles one way total	Assume 20 tons per trip, empty return trip	
				C&D Placement and Grading	2000	CY			Dozer for grading of dumped C&D Material	E110
		Site Remediation	Waste Relocation	Waste Excavation and loading	252500	CY	176750.0	tons	Excavator to truck, 0.7 tons/CY	I110
				Waste Relocation	20	tons per trip	0.25	miles each way	Onsite relocation of waste consolidation. 1/4 mile transport, empty return trip	E85-86
					8838	trips	2,210	miles one way total		
				Waste Placement and Grading	252500	CY	--	--	Dozer	J110
		Site Restoration	Evapotranspiration Cover	Dozer for Material Placement and Grading	252000	CY	403,200	tons	1.6 tons/CY density of material. See constants and assumptions.	J110
				Compaction of Dredge Material	252000	CY	--	--	Roller	K110
				Dozer for Topsoil Placement and Grading	84000	CY	113,400	tons	1.35 tons/CY density of topsoil. See constants and assumptions.	J110
			Perimeter Slopes, grading outside limits of Cover to Wetland	Dozer for placement and grading	96000	CY	136,080	tons	Dozer. Density of Dry gravel (1.4175 tons/CY). See constants and assumptions tab	J110
				Compaction of material	96000	CY	--	--	Roller	K110
				Sterling Creek Gravel Transport	20	tons per trip	0.25	miles each way	Onsite relocation of waste consolidation. 1/4 mile transport	F85, 86
					6,804	trips	1,701	miles one way total		
		Wetland Construction	Wetland Excavation Material	Wetland Material Excavation	59500	CY	80,325	tons	Excavator, 1.35 tons/CY density of wetland soil	I110
				Wetland Material Placement and Grading	24500	CY	33,075	tons	Dozer, Fill using the same material from the wetland excavation	J110
				Wetland Material Compaction	24500	CY	--	--	Roller	K110
				Wetland Material placed under ET Cover	35000	CY	47,250	tons	Dozer	J110
				Wetland Material Transport	20	tons per trip	0.25	miles each way	Dump truck for onsite relocation of excavated material, 1/4 mile transport	G85-86
					2363	trips	591	miles one way total		
				Wetland Topsoil Placement and Grading	28,500	CY	38,475	tons	Dozer, placement of topsoil (amended UDS material)	J110
		Waste	Loading of Waste Tires	Loading of Waste Tires for offsite disposal	5.005	CY	5	tons	Excavator, .999 tons/CY density of tire	G110
	Material Construction	Site Preparation	Contractor Staging Area	Placement of Stone	6,700	CY	9,497	tons	Density of Dry gravel (1.4175 tons/CY). See constants and assumptions tab	D54-56
				Geotextile Demarcation Layer	19,955	SY	179,595	SQFT	1 SY to 9 SQFT. 4.8 oz/SY. LDPE fabric. See constants and assumptions tab	E54-56
					0.0000459	ft thick	3	tons		
			Perimeter Access Road	Perimeter Access Roads - Stone	6800	CY	9,639	tons	Density of Dry gravel (1.4175 tons/CY). See constants and assumptions tab	D54-56
				Geotextile Demarcation Layer	19,900	SY	179,100	SQFT	1 SY to 9 SQFT. See constants and assumptions tab	E54-56
					0.0000459	ft thick	3	tons		
			Incinerator Road Improvements	Stone	9,000	CY	12758	ton	Excavator. Density of Dry gravel (1.4175 tons/CY). See constants and assumptions tab	D54-56
				Geogrid Fabric	12,000	SY	108,000	SQFT	1 SY to 9 SQFT. 4.8 oz/SY. LDPE fabric. See constants and assumptions tab	E54-56
					0.0000459	ft thick	2	tons		
			Drainage Swales and Discharge System	Rip Rap Outlet Protection	1,000	CY	1,418	tons	Density of Dry gravel (1.4175 tons/CY). See constants and assumptions tab	D54-56
				Storm Pipe - HDPE 36" Culvert	1,160	linear foot	12	tons	20lbs/ft. Includes measurements for 18" and 24" culvert. See constants and assumptions tab	F54-56
				Biodegradable Erosion Control Blanket	46,800	SY	421,200	SQFT	0.81 oz/SY. See constants and assumptions tab. Input as very low impact material	G54-56
					0.0275833	ft thick	1	tons		
		Site Restoration	Evapotranspiration Cover	Geotextile Demarcation Layer	500,000	SY	4,500,000	SQFT	1 SY to 9 SQFT. 4.8 oz/SY. LDPE fabric. See constants and assumptions tab	E54-56
					0.0000459	ft thick	75	tons		
		Wetland Construction	Wetland Restoration	Geotextile Demarcation Fabric	132,000	SY	1,188,000	SQFT	1 SY to 9 SQFT. 4.8 oz/SY. LDPE fabric. See constants and assumptions tab	E54-56
					0.0000459	ft thick	20	tons		
		Site Protection	Fencing	Fence Materials - Steel	12,916	lf	14	tons	Includes gates in total linear footage. Steel fence with zinc coating, average 2.2 lbs/lf. See constants and assumptions tab	H54-56
	Transportation	Material Transportation	Import Stone	Stone	20	tons per trip	20	one way miles	Includes stone from Contractor staging area, perimeter access road, incinerator road improvements. Dedicated Load Road.	H85-86
					1595	trips	31900	total miles one way		
			Drainage Swales and Discharge System	Rip Rap Outlet Protection	20	tons per trip	20	one way miles	Dedicated road load. See constants and assumptions tab.	I85-86
					71	trips	1420	total miles one way		
				Storm Pipe - HDPE 36" Culvert	20	tons per trip	20	one way miles	Dedicated road load. See constants and assumptions tab.	J85-86
					1	trips	20	total miles one way		
				Biodegradable Erosion Control Blanket	20	tons per trip	20	one way miles	Dedicated road load. See constants and assumptions tab. Assumed to be included in the shipment for the geotextile demarcation fabric.	N/A
					1	trips	20	total miles one way		
			Import Geotextile Demarcation Fabric	Geotextile Demarcation Layer	20	tons per trip	20	one way miles	Includes geotextile and geogrid fabric from the contractor staging area, perimeter access road, Evapotranspiration Cover, and wetland restoration.	K85-86
					7	trips	140	total miles one way		
			Fencing Installation	Fencing	20	tons per trip	20	miles one way	Dedicated road load. See constants and assumptions tab.	L85-86
					1	trips	20	miles one way total		
		Equipment Transportation	Equipment Transportation	Excavator to Site	20	tons per trip	20	one way mileage	Dedicated road load. See constants and assumptions tab.	M85-86
					8	# of equipment	160	total one way miles		
				Dozer to Site	20	tons per trip	20	one way mileage	Dedicated road load. See constants and assumptions tab.	N85-86
					4	# of equipment	80	total one way miles		
				Offroad Dump trucks to Site	20	tons per trip	20	one way mileage	Dedicated road load. See constants and assumptions tab.	O85-86
					8	# of equipment	160	total one way miles		

Appendix 12: Green and Sustainable Remediation Assessment
SiteWise Inputs and Results
Utica Dump Site
Remedial Design

Excavation/Material Handling

Totals to be inputted into SiteWise

D110	13,500	CY	Dozer
E110	24,500	CY	Dozer
F110	13,500	CY	Roller
G110	11,005	CY	Excavator
H110	2,000	CY	Loader
I110	312,000	CY	Excavator
J110	772,500	CY	Dozer
K110	372,500	CY	Roller

Remedy Task	Item	Quantity	Unit	Input Cell
Contractor Staging Area	Subgrade Grading - Dozer	6700	CY	
Perimeter Access Road	Subgrade Grading - Dozer	6800	CY	D110
Contractor Staging Area	Placement and Grading Stone - Dozer	6700	CY	
Perimeter Access Road	Placement and Grading Stone - Dozer	6800	CY	
Inc Road Improv	Placement and Grading Stone - Dozer	9000	CY	
Demolition	C&D Placement and grading	2000	CY	E110
Contractor Staging Area	Compaction of Stone	6700	CY	
Perimeter Access Road	Compaction of Stone	6800	CY	F110
Inc Road Improv	Placement of Stone - Excavator	9000	CY	
Demolition	Incinerator/Building Demo- Excavator	2000	CY	G110
Waste	Loading of Waste Tires	5	CY	
Demolition	Building Demo - Loader	2000	CY	H110
Waste Relocation	Waste excavation and loading - Excavator	252500	CY	
wetland Constr.	wetland material excavation - Excavator	59500	CY	I110
Waste Relocation	waste placement and grading - dozer	252500	CY	
ET Cover	Material placement and grading - Dozer	252000	CY	
ET Cover	Topsoil placement and grading - Dozer	84000	CY	
Perimeter Slopes	Placement and grading - dozer	96000	CY	J110
wetland Constr.	wetland material placement and grading - dozer	24500	CY	
wetland Constr.	wetland material grading under ET cover - dozer	35000	CY	
wetland Constr.	wetland topsoil graded	28,500	CY	
ET Cover	Compaction of material - roller	252000	CY	
Perimeter Slopes	Compaction of material - roller	96000	CY	
wetland Constr.	Compaction of material - roller	24500	CY	K110

Materials for Construction

Totals to be inputted into SiteWise

Input Cell	Material	Quantity	Unit
D54-56	Stone	66,622,500	pounds
E54-56	LDPE	205,157	pounds
F54-56	HDPE	23,200	pounds
G54-56	Very low impact material	2,369	pounds
H54-56	Steel	28,415	pounds

Remedy Task	Item	Quantity	Unit	Input Cell
Contractor Staging	Placement of Stone	9,497	Tons	
Perimeter Access	Placement of Stone	9,639	Tons	D54-56
Incinerator Road	Placement of Stone	12758	Tons	
Drainage swales	Rip rap outlet	1,418	Tons	
Contractor Staging	Geotextile Stab. Fabric	3	Tons	
Perimeter Access	Geotextile Stab. Fabric	3	Tons	
Incinerator Road	Geogrid Fabric	2	Tons	E54-56
ET Cover	Geotextile Stab. Fabric	75	Tons	
Wetland Restoration	Geotextile Stab. Fabric	20	Tons	
Drainage Swales	Storm Pipe	12	Tons	F54-56
Drainage Swales	Biodegradable erosion control blanket	1	Tons	G54-56
Fencing	Steel	14	Tons	H54-56

Appendix 12: Green and Sustainable Remediation Assessment
SiteWise Inputs and Results
Utica Dump Site
Remedial Design

INPUTTED AS COMPONENT 2 IN SITEWISE

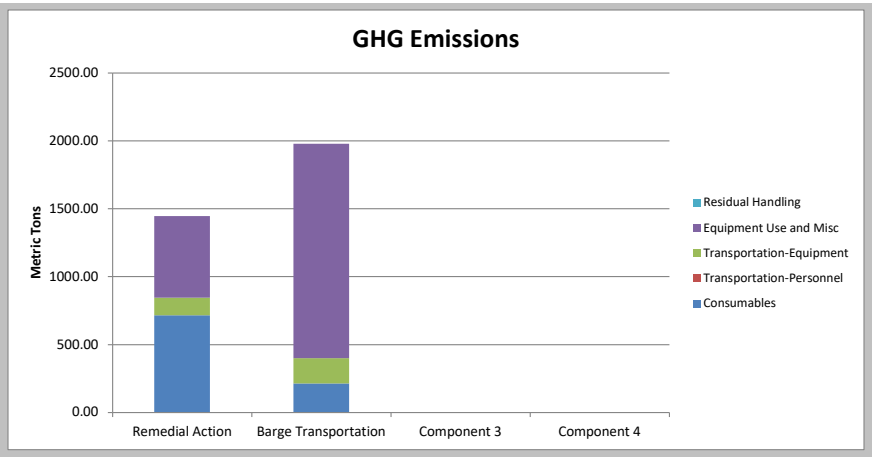
Remedy Task		Item	Quantity	Units	Quantity	Units	Assumptions	SiteWise Input Cell	Input Notes
Utica Dump 100 pct SW Summary	Site Preparation	Clamshell for dredging for bulkhead and barge unloading areas	1800	CY	--	--	Mechanical, Crawler Crane, 25 ton, 1 CY	D125, D127	Assume mechanical dredging, assume no support vessels, simple project
		Stone (rip/rap//bedding) placement for two loading/unloading area protection	733	CY	1039.5	tons	Excavator. Density of Dry gravel (1.4175 tons/CY). See constants and assumptions tab	J110	
		Crane Operation for pile driving	66	piles	22	days	3 piles/day Assume 10 hour work days, Mechanical Crawler Crane, 25 ton, 1 CY	D276	
			3	piles/day	220	hours			
		Crane Operation for steel beam placement	402	beams	171.7948718	hours	2.34 beams per hour, 10 hour work days, Mechanical Crawler Crane, 25 ton, 1 CY	F276	
			2.34	beams/hour	--	--			
	Dredge Material Removal and Loading	Dozer from dredge material removal area	401,500	CY	--	--	1 round of volume from dozer	D110	
		Excavator from dredge material removal area direct load into trucks for transport to landfill	401,500	CY	--	--	1 round of volume from excavator	E110	
		Off-road dump trucks to barge loading area	487,823	tons of material	35	tons per trip	1.215 tons/CY material density. 1/4 mile trucking distance for offload dump truck. See constants and assumptions	D85-86	
			13,938	# of trips	3484.5	total one way miles			
		Material handling loading into Barge	401,500	CY			Assume excavator/loader	F110	
		Barge/Tugboat transport to unloading area (full)	790	tons of material per barge	618	# of trips	1.215 tons/CY material density. See constants and assumptions tab	D101-102	
			2781	Total One Way Miles	1,010	total tonnage of barge	Barge weighs 220 tons and travels 4.5 miles. See constants and assumptions tab		
		Barge/Tugboat transport to loading area (empty)	220	tons of empty barge	--	--	Empty Barge tonnage. See constants and assumptions tab.	E100-E102	
			2,781	Total One Way Miles	--	--	--		
	Dredge Material Unloading, Mixing, Drying	Material handler unloading into offroad dump truck	401,500	CY	--	--	--	G110	assume material handler is excavator
		Off-road dump trucks to dredge material drying area	487,823	tons of material	35	tons per trip	Assume material in truck twice to get to drying area, once to get to landfill.	E85-E86	
			13,938	# of trips	3484.5	total one way miles			
		dredge material drying	401,500	CY	--	--	Dozer for dredge material mixing for drying	H110	
		Material handler unloading into offroad dump truck	401,500	CY	--	--	--	I110	
	Dredge Material Material Placement	Off-road dump trucks to landfill	487,823	tons of material	35	tons per trip	Assume material in truck twice to get to drying area, once to get to landfill.	F85-F86	
			13,938	# of trips	3484.5	total one way miles			
Materials for Construction	Loading/Unloading Dock	Stone for bank protections	733	CY	1040	tons	Assume 33 ft in wide, 150 ft long, 24" thick stone. Multiplied by two for both areas. Density of Dry gravel (1.4175 tons/CY). See Constants and Assumptions tab	D54-56	
			1,466,667	pounds	--	--			
		Steel Platform	--	CY	126	tons	Two platforms, 63 tons each steel	E54-56	
			252,000	pounds	--	--			
Transportation	Equipment Transportation	Crane to Site	20	tons per trip	20	one way mileage	Dedicated road load, 1 piece of equipment per transportation	G85-86	
			1	# of equipment	20	total one way miles			
		Tug-boat & barges to Site	220	tons per trip	100	one way mileage	Barge delivered from Albany via waterway. See constants and assumptions	F101, F102	
			2	# of equipment	200	total one way miles			
	Material Transportation	Steel beams to Site for dock frames	20	tons per trip	20	one way mileage	63 tons per steel platform.	H85-86	
			7	trips	140	total one way miles			
		Stone to/from Site for dock installation	20	tons per trip	20	one way mileage	--	I85-86	
			52	trips	1040	total one way miles			

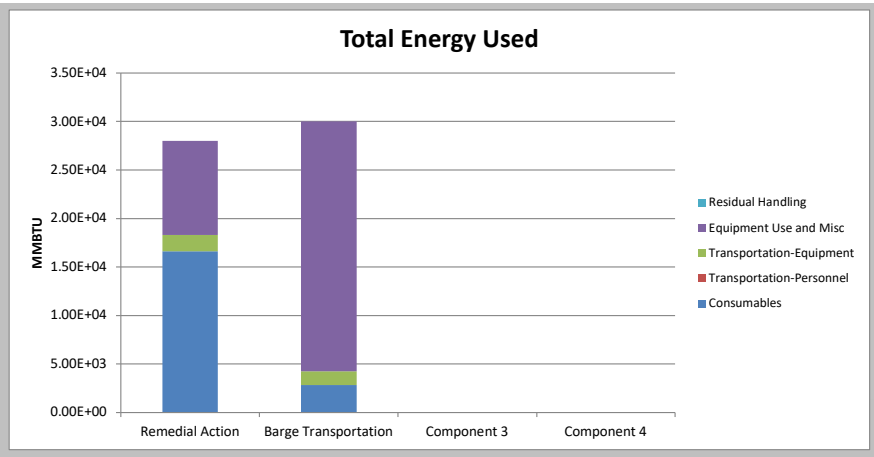
Sustainable Remediation - Environmental Footprint Summary
Utica Dump 100 pct design Appendix 13

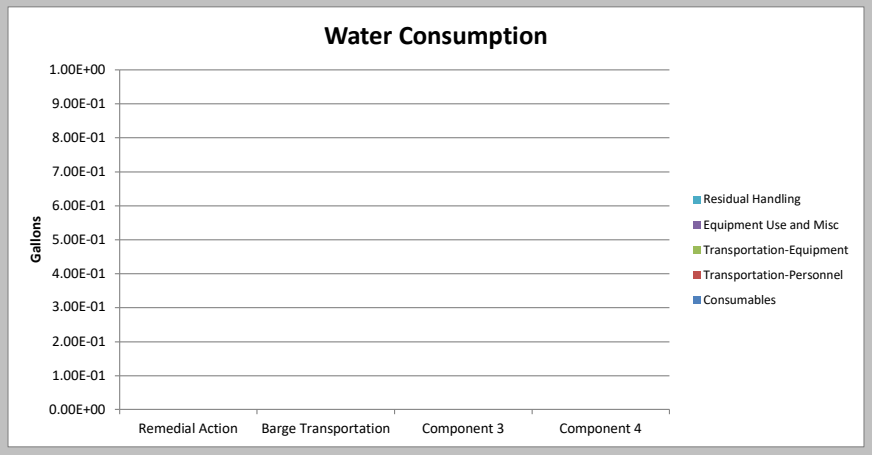
Phase	Activities	GHG Emissions	Total Energy Used	Water Consumption	Electricity Usage	Onsite NOx Emissions	Onsite SOx Emissions	Onsite PM10 Emissions	Total NOx Emissions	Total SOx Emissions	Total PM10 Emissions	Accident Risk Fatality	Accident Risk Injury
		metric ton	MMBTU	gallons	MWH	metric ton	metric ton	metric ton	metric ton	metric ton	metric ton		
Remedial Action	Consumables	716	16,621	NA	NA	NA	NA	NA	2.64	3.53	1.22	NA	NA
	Transportation-Personnel	0.00	0.00	NA	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00
	Transportation-Equipment	129	1,682	NA	NA	NA	NA	NA	0.04	0.00	0.00	0.00	0.02
	Equipment Use and Misc	603	9,709	0.00	0.00	3.98	0.94	0.29	4.42	1.17	0.36	0.00	0.08
	Residual Handling	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sub-Total	1,447	28012	0.00	0.00	3.98	0.94	0.29	7.10	4.70	1.58	0.00	0.10
Barge Transportation	Consumables	214	2833	NA	NA	NA	NA	NA	0.65	1.07	0.22	NA	NA
	Transportation-Personnel	0.00	0.00	NA	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00
	Transportation-Equipment	186	1410	NA	NA	NA	NA	NA	3.97	0.84	0.11	0.00	0.01
	Equipment Use and Misc	1,579	25757	0.00	0.00	10.93	2.47	0.73	12.10	3.08	0.91	0.00	0.20
	Residual Handling	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sub-Total	1979	29999	0.00	0.00	10.93	2.47	0.73	16.72	4.99	1.24	0.00	0.21
Component 3	Consumables	0.00	0.00	NA	NA	NA	NA	NA	0.00	0.00	0.00	NA	NA
	Transportation-Personnel	0.00	0.00	NA	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00
	Transportation-Equipment	0.00	0.00	NA	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00
	Equipment Use and Misc	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Residual Handling	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sub-Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Component 4	Consumables	0.00	0.00	NA	NA	NA	NA	NA	0.00	0.00	0.00	NA	NA
	Transportation-Personnel	0.00	0.00	NA	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00
	Transportation-Equipment	0.00	0.00	NA	NA	NA	NA	NA	0.00	0.00	0.00	0.00	0.00
	Equipment Use and Misc	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Residual Handling	0.00	0.00	NA	NA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sub-Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		**3427**	**58011**	**0.00**	**0.00**	**14.91**	**3.41**	**1.02**	**23.82**	**9.69**	**2.81**	**0.00**	**0.31**

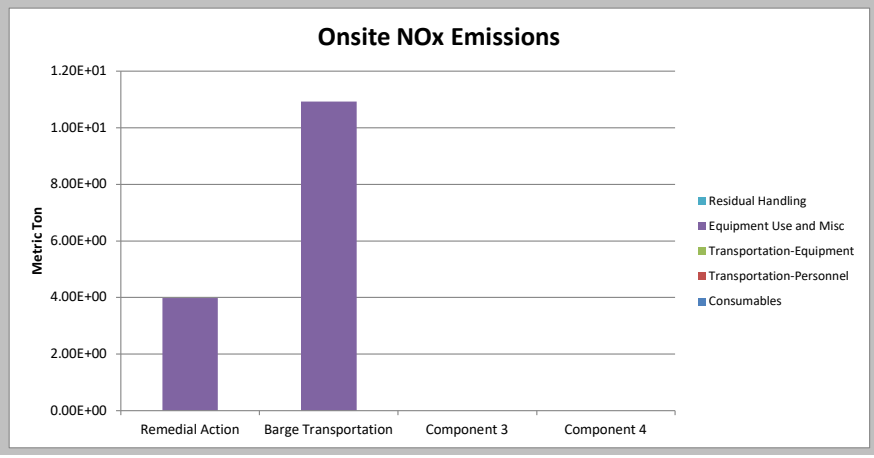
Remedial Alternative Phase	Non-Hazardous Waste Landfill Space	Hazardous Waste Landfill Space	Topsoil Consumption	Costing	Lost Hours - Injury	Percent electricity from renewable sources	Total Cost with Footprint Reduction
	tons	tons	cubic yards	$		%	
Remedial Action	0.00	0.00	0.00	0	0.80	0.0%	
Barge Transportation	0.00	0.00	0.00	0	1.65	0.0%	
Component 3	0.00	0.00	0.00	0	0.00	0.0%	$0
Component 4	0.00	0.00	0.00	0	0.00	0.0%	
Total	**0.00**	**0.00**	**0.00**	**$0**	**2.45**	**0.0%**	

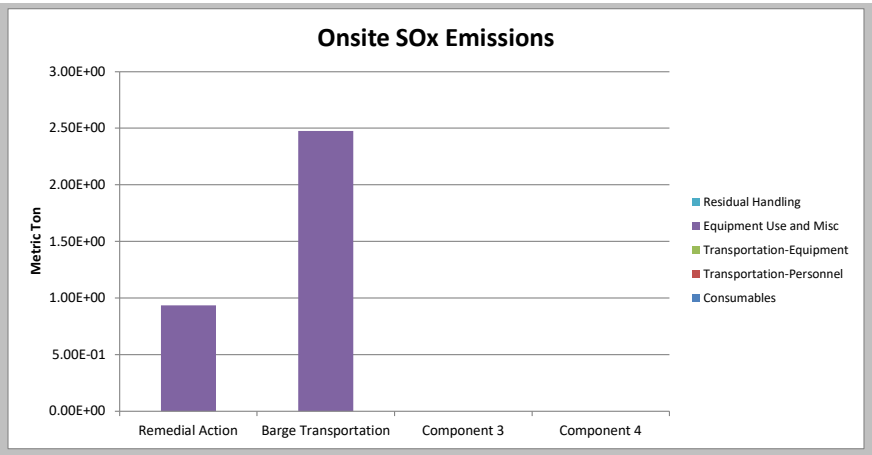
Appendix 12: Green and Sustainable Remediation Assessment
SiteWise Inputs and Results
Utica Dump Site
Remedial Design

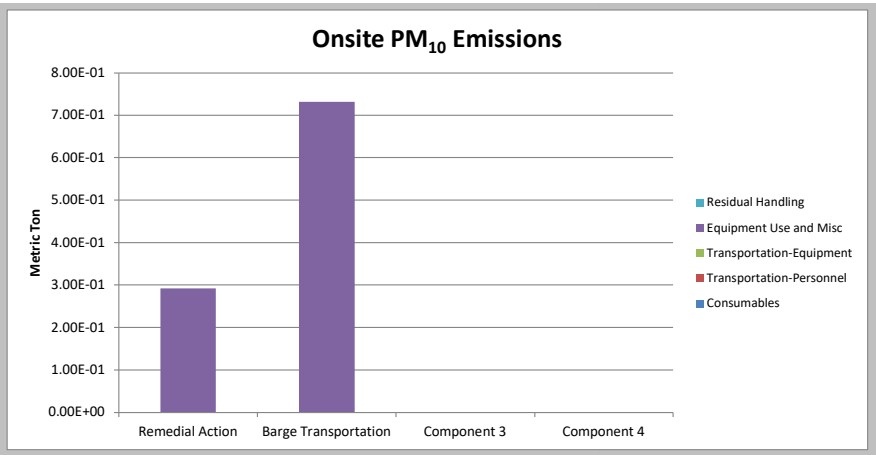


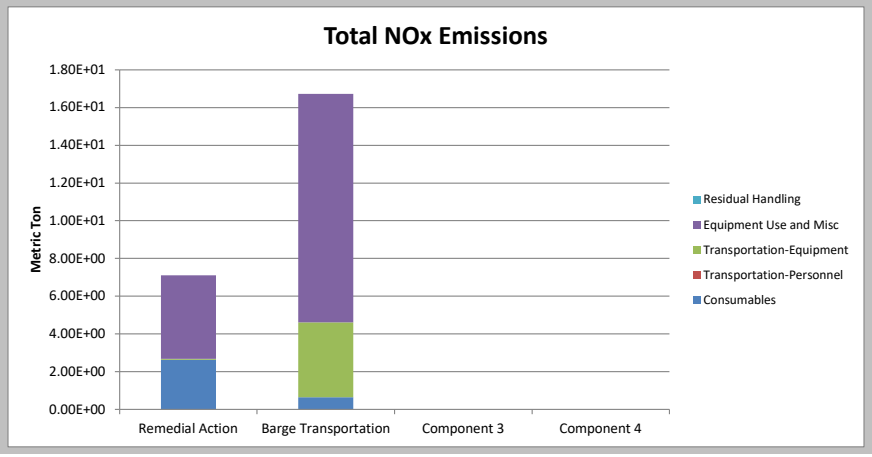


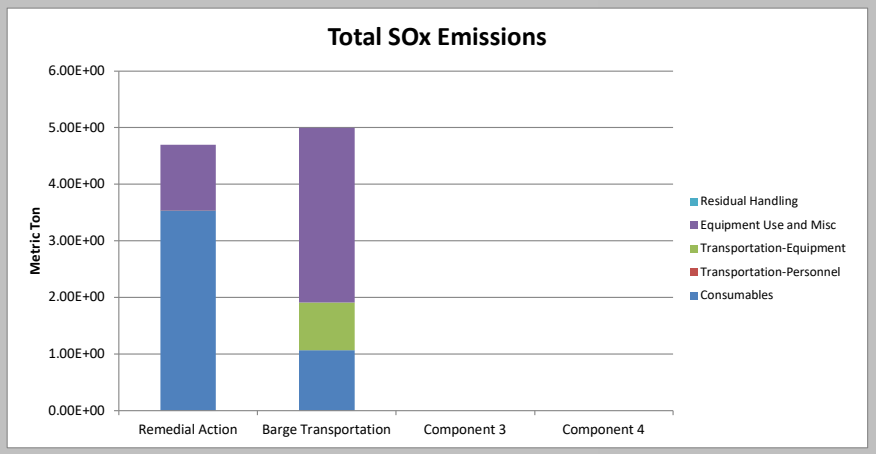




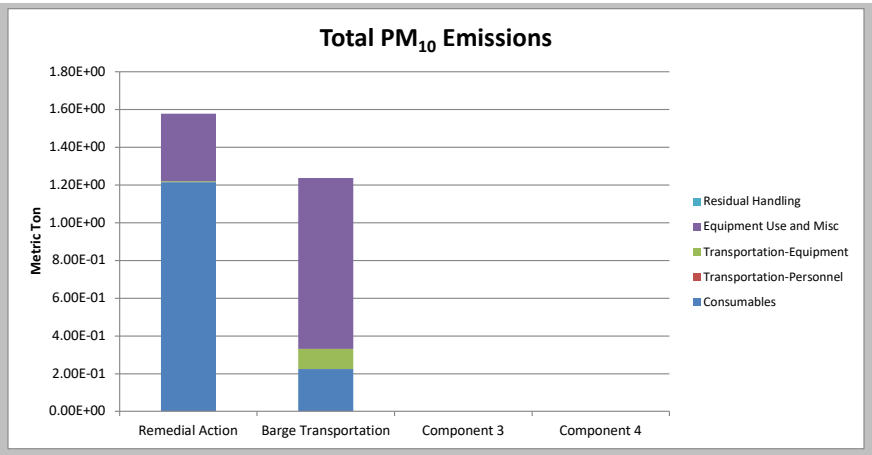

Onsite SOx Emissions
Metric Ton
3.00E+00
2.50E+00
2.00E+00
1.50E+00
1.00E+00
5.00E-01
0.00E+00
Remedial Action
Barge Transportation
Component 3
Component 4
Residual Handling
Equipment Use and Misc
Transportation-Equipment
Transportation-Personnel
Consumables

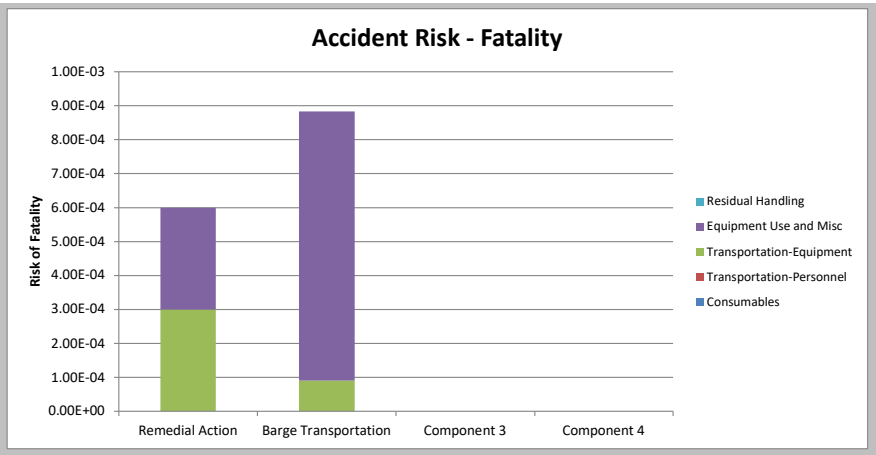

Onsite PM10 Emissions
Metric Ton
8.00E-01
7.00E-01
6.00E-01
5.00E-01
4.00E-01
3.00E-01
2.00E-01
1.00E-01
0.00E+00
Remedial Action
Barge Transportation
Component 3
Component 4
Residual Handling
Equipment Use and Misc
Transportation-Equipment
Transportation-Personnel
Consumables

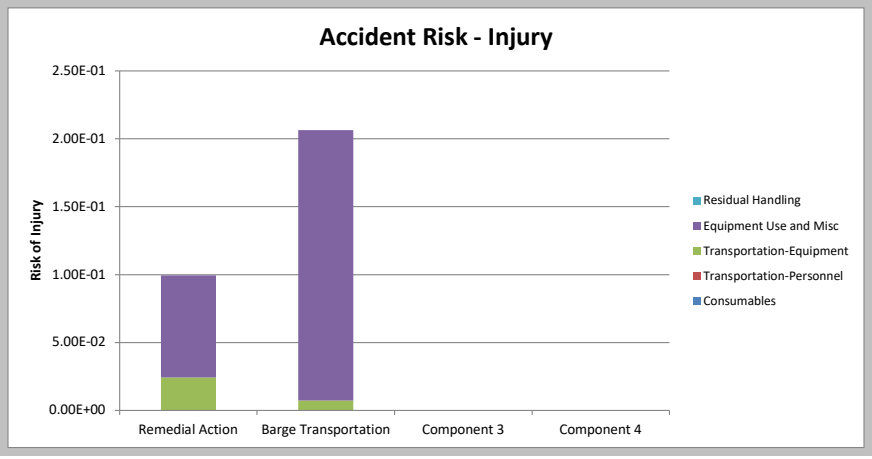

Total NOx Emissions
Metric Ton
1.80E+01
1.60E+01
1.40E+01
1.20E+01
1.00E+01
8.00E+00
6.00E+00
4.00E+00
2.00E+00
0.00E+00
Remedial Action
Barge Transportation
Component 3
Component 4
Residual Handling
Equipment Use and Misc
Transportation-Equipment
Transportation-Personnel
Consumables

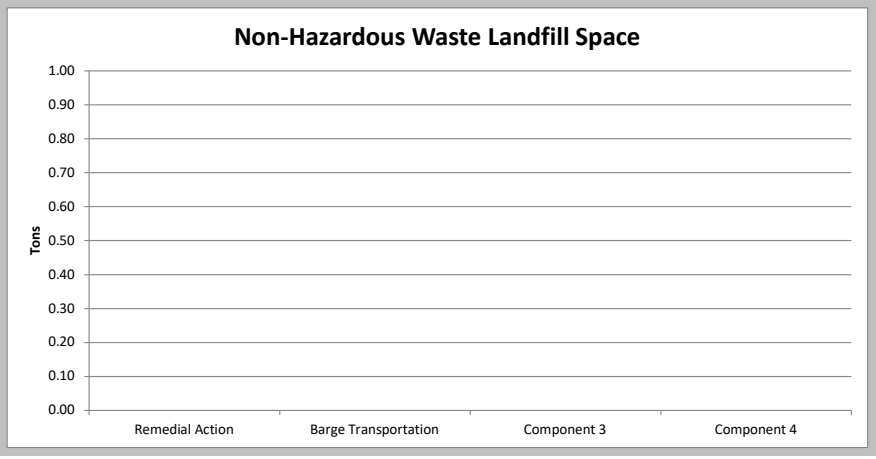

Total SOx Emissions
Metric Ton
6.00E+00
5.00E+00
4.00E+00
3.00E+00
2.00E+00
1.00E+00
0.00E+00
Remedial Action
Barge Transportation
Component 3
Component 4
Residual Handling
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Transportation-Equipment
Transportation-Personnel
Consumables

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